Taxing multinationals:
Preventing tax base erosion through the reform of cross-border intercompany deductions

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**Abstract 350 words maximum:**

Thin capitalisation rules are widely perceived as an anti-avoidance mechanism that limit tax base erosion from cross-border intercompany activities. Despite this perception, the legal basis for these rules does not reconcile with the economic basis, because these complex and ad-hoc rules present only imperfect solutions to the problem of the ‘debt bias’. The economic literature generally assumes that a fundamental reform eliminating the debt bias would also eliminate the need for thin capitalisation rules. However, the current paradigm of the ‘debt/equity all-or-nothing’ approach overlooks the fungibility of intercompany capital flows. Accordingly, this thesis introduces the concept of ‘cross-border funding neutrality’, which is utilised in conjunction with other criteria as a rubric for the subsequent practical- and conceptual-level analysis.

In doing so, this reform-orientated thesis bridges the gap between pure economic theory, practical optimisation modelling and applied legal research. This research consists of both a legal comparative analysis featuring case studies of the Belgian and Italian ACE-variants and the Australian thin capitalisation rules, as well as a simulation analysis of a tax-minimising multinational enterprise’s behavioural responses to existing and proposed tax regimes. By simulating cross-border intercompany tax planning scenarios the model developed ‘makes the invisible visible’.

This leads to the novel finding that, in order to minimise opportunities for cross-border tax planning by MNEs, it is necessary for governments to equalise the tax treatment of fungible intercompany funding activities. Even though obtaining full tax neutrality is nearly impossible without international tax coordination, the measures proposed and tested in this thesis provide ‘second-best’ alternatives that may be more effective at eliminating opportunities for cross-border tax planning than existing policy responses – even when applied unilaterally.

This dissertation makes a significant contribution to both tax law and policy analysis. The challenge it presents to conventional understandings of thin capitalisation rules, and the tax treatment of cross-border intercompany activities in general, reveals new insights into the importance of applying economic first-principles in tax design.

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ABSTRACT

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However, the current paradigm of the ‘debt/equity all-or-nothing’ approach overlooks the fungibility of intercompany capital flows. Accordingly, this thesis introduces the concept of ‘cross-border funding neutrality’, which is utilised in conjunction with other criteria as a rubric for the subsequent practical- and conceptual-level analysis.

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This thesis is dedicated to my husband, my parents and my sister.
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PUBLICATIONS AND PRESENTATIONS

Refereed Journal Publications


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Conference Papers


Kayis-Kumar A, ‘What’s BEPS Got to Do with It? Exploring the Effectiveness of Thin Capitalisation Rules’ (Paper presented at the 12th International Conference on Tax Administration, UNSW Business School, Sydney, 31 March 2016)


Kayis-Kumar A, ‘Political Challenges to Implementing and Sustaining Fundamental Reform: A Comparative Case Study Analysis of ACE in Practice’ (Paper presented at the 26th Australasian Tax Teachers’ Association Conference, Griffith University, Brisbane 20 January 2014)

**Posters and Presentations**


**Application to Learning & Teaching Technologies**

The novel optimisation model developed in this thesis inspired the development of a gamified e-book called ‘PlayTax: Adventures in International Tax Planning’. This is educational software that uses the theory of gameplay to boost student engagement and improve academic performance. It is designed to teach international tax planning concepts to both undergraduate and postgraduate students studying International Business Taxation (Course Code: TABL2756/TABL5583). This project is a collaboration between UNSW Australia’s School of Taxation & Business Law and LionsHeart Studios Pty Ltd.
LIST OF ABBREVIATIONS

ACC  allowance for corporate capital
ACE  allowance for corporate equity
AETR average effective tax rates
ATO  Australian Taxation Office
BEIT business enterprises income tax
Belgian NID Belgian notional interest deduction
BEPS base erosion and profit shifting
BTWG Business Tax Working Group
CBIT comprehensive business income tax
CEN capital export neutrality
CFC controlled foreign company
CGT capital gains tax
CIN capital import neutrality
CIT corporate income tax
combined This is reform comprising a partial ACE and a partial CBIT
ACE-CBIT
CON capital ownership neutrality
Cplex IBM® ILOG® CPLEX® for Microsoft® Excel software
cross-border The novel proposal of a combined ACE-CBIT, applied only in the cross-border
ACE-CBIT context to all cross-border intercompany funding activities
DPT diverted profits tax
EATR effective average tax rate
EBIT earnings before interest and taxes
EBITDA earnings before interest, taxes, depreciation and amortisation
ECJ European Court of Justice
EMTR effective marginal tax rate
FDI foreign direct investment
FIRB Foreign Investment Review Board
FITO foreign income tax offset
FSI Financial System Inquiry
FTC foreign tax credit
GFC global financial crisis
GST goods and services tax
IFRS International Financial Reporting Standards
<table>
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<tr>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<tr>
<td>IP</td>
<td>intellectual property</td>
</tr>
<tr>
<td>ITAA36</td>
<td>Income Tax Assessment Act 1936 (Cth)</td>
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<tr>
<td>ITAA97</td>
<td>Income Tax Assessment Act 1997 (Cth)</td>
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<tr>
<td>Italian ACE</td>
<td>Italian Aiuto alla Crescita Economica</td>
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<td>Italian DIT</td>
<td>Italian Dual Income Tax</td>
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<tr>
<td>MNE</td>
<td>multinational enterprise</td>
</tr>
<tr>
<td>NANE</td>
<td>non-assessable non-exempt</td>
</tr>
<tr>
<td>NPBT</td>
<td>net profit before tax</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>PE</td>
<td>permanent establishment</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>research and development</td>
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<tr>
<td>SME</td>
<td>small to medium enterprise</td>
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<tr>
<td>TOFA</td>
<td>Taxation of Financial Arrangements</td>
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<tr>
<td>T</td>
<td>total tax payable</td>
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<td>VAT</td>
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1 INTRODUCTION

The use of innovative financial instruments has transcended the traditional financial and legal distinctions between debt and equity. This coupled with the unprecedented mobility of capital has meant that the existing tax treatment of cross-border intercompany funding activities is increasingly disconnected from the economic reality of international business. While the current operation of the international tax system contains widely-accepted international norms,\(^1\) it lacks a principled overall design.\(^2\)

A central premise of this thesis is that, wherever possible, tax-induced reductions in economic efficiency ought to be minimised. This is in line with the tax neutrality principle, which states that tax systems should strive to be neutral such that decisions are made on their economic merits, rather than for tax reasons. This is particularly problematic because economic inefficiencies – or tax-induced distortions – in the tax treatment of cross-border intercompany activities give rise to tax planning opportunities for multinational enterprises (‘MNEs’). As such, there is an urgent imperative for a tax treatment of cross-border intercompany transactions with a strong conceptual basis.

Section 1.1 provides an overview of the research background and the motivation behind this work. Section 1.2 presents the aim, contributions and significance of the study, followed by section 1.3 which notes the assumptions made in, and the scope of, this research. Section 1.4 then presents the research hypotheses, which are designed to provide direction for a holistic, multi-disciplinary analysis. The methodology and methods, and overall structure used in this research, are set out in section 1.5.

1.1 BACKGROUND

Over the past three decades, the rise of MNEs and the prominence – and dominance – of intercompany trade and/or investment as a proportion of global trade has fundamentally shifted the influence of domestic tax policy. Cross-border intercompany transactions account for the

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majority of global trade in terms of value,\(^3\) yet they remain largely absent from a group’s consolidated accounts – and therefore beyond public scrutiny.

The existing international tax framework with its respect for national sovereignty incentivises the location of expenses in higher-tax jurisdictions and income in low- or no-tax jurisdictions, presenting opportunities for tax minimisation by MNEs. Stewart observes that since “passive and active investment (and skilled labour) is increasingly mobile across borders, the ‘fiscal bargain’ is fundamentally changed”\(^4\)

This is further exacerbated by the plethora of jurisdictions for MNEs to choose from, many of which are engaged in a ‘race to the bottom’ on corporate income tax rates. The fungible nature of capital also presents issues for jurisdictions that are too heavily dependent on the financial services industry, for which they may serve as a mere ‘paper’ domicile.\(^5\) Of course, broader based corporate taxes with lower rates promote efficiency, investment and growth. However, if governments narrow their tax bases to attract the rerouting of flows of capital through, rather than to, their economies, this risks exiting the realm of productive competition and entering the terrain of harmful tax competition.\(^6\) At present, MNEs are clearly at an advantage compared to domestic firms, with access to global debt and equity markets, various jurisdictions’ tax rates and various tax systems in general.

Historically, the concern of policymakers has been with mitigating double taxation.\(^7\) However, the emerging issue now is the prevalence of double non-taxation and ‘aggressive’ tax minimisation by some MNEs.\(^8\) The effectiveness of the current tax treatment of cross-border

\(^3\) ICC Commission on Taxation and the ICC Committee on Customs and Trade Regulations, ‘Transfer Pricing and Customs Value’ (Policy Statement, Document No 180/103-6-521, February 2012) 2.
\(^5\) “As several junior and senior expatriate professionals I interviewed in the financial industry informed me, “The brains are in London, Singapore, Hong Kong, and New York. The ideas are formed and constructed abroad and the paperwork is sent to the Cayman Islands to be signed””: Hen H M, Sub-elites as fiduciary gatekeepers of global elites: A fiscal anthropology of the Cayman Islands and offshore financial industry (Masters Thesis, Simon Fraser University, 25 November 2014), 93.
intercompany transactions remains one of the most elusive – and understudied – aspects of international tax law and policy.

A lack of transparency\(^9\) makes it very difficult to observe how an MNE structures its internal affairs in a tax-optimal manner. This is particularly problematic because, as noted by Markle and Shackleford, intercompany transactions are non-trivial and may even exceed the minimisation opportunities presented by unrelated party transactions.\(^{10}\)

At present, policymakers have little information on the size and scope of the problem, making addressing base erosion and profit shifting (‘BEPS’) behaviours even more challenging.\(^{11}\) This sentiment was recently expressed by the Australian Government’s Senate Economics Reference Committee, which observed in its final report on corporate tax avoidance released in April 2016 that:\(^{12}\)

“Debt-related deductions span a number of areas of the corporate tax regime, including thin capitalisation, hybrid mismatching and transfer pricing. One frustration for the committee was the very limited information that was publicly available which outlined ‘real world’ examples of aggressive tax minimisation using debt-related deductions in an Australian context. Hence, it was difficult for the committee to get an appreciation for the size and scope of this problem.”

As noted by the Senate Economics Reference Committee, thin capitalisation rules are commonly utilised by governments to constrain MNEs’ ability to shift expenses across borders. This is because debt financing is usually deductible, in contrast to the cost of equity financing, which is generally not deductible (the ‘debt bias’). However, these rules have been criticised by the literature for being inadequate, internationally inconsistent, arbitrary and complex,\(^{13}\) with a marked absence of specific guidance at an international level.\(^{14}\)

\(^9\) It is important to note that some ethnographic studies do exist which explore offshore financial centres. However, given “the private nature of their professionals who uphold strict codes of confidentiality”, it is difficult to gather details on the specific cross-border intercompany financing structures utilised by MNEs: Hen, above n 5.


\(^{11}\) Markle and Shackleford, above n 10, 417–32.

\(^{12}\) Australian Government, above n 6, 18.

\(^{13}\) Rules are inadequate, internationally inconsistent, arbitrary and complex: “The present system raises little revenue, is complicated, creates incentives for aggressive income shifting, and interferes with companies’ efficient use of capital as they try to avoid the dividend repatriation tax”: Grubert and Altshuler, above n 2, 672.

\(^{14}\) Further, the inadequacy of these regimes has been criticised by the OECD, observing that the “[current] rules provide opportunities to associate more profits with legal constructs and intangible rights and obligations, and to legally shift risk intra-group, with the result of reducing the share of profits associated with substantive operations”: OECD, Action Plan on Base Erosion and Profit Shifting (2013) 5.
Nonetheless, thin capitalisation rules have gained increased attention from governments and policymakers worldwide. This is exemplified by Action 4 of the Organisation for Economic Co-operation and Development’s (‘OECD’s’) Base Erosion and Profit Shifting Project (the ‘BEPS Project’). In particular, the OECD’s BEPS Final Report on Action 4 (‘Action 4 Report’) recommends replacing existing thin capitalisation rules with a fixed ratio rule restricting interest deductibility.\(^{15}\) However, replacing fixed debt-to-equity ratios with net interest-to-EBITDA\(^ {16} \) ratios is an exercise in transitioning between the two key categories of thin capitalisation rules.\(^ {17}\) As noted by Brauner, this approach risks precluding other – more innovative – solutions from being considered.\(^ {18}\)

The OECD makes a distinction between combating BEPS by limiting interest deductibility and reducing distortions between the tax treatment of debt and equity.\(^ {19}\) However, it is the decision of the lawmakers to create a tax-induced debt bias which actually results in the tax base erosion,\(^ {20}\) which thin capitalisation rules attempt to restrict.

As such, the overarching question guiding this thesis is as follows:

> “Given the opportunity to ‘start over’, would existing thin capitalisation rules be retained in their current form or would an alternative reform result in a more neutral tax treatment of cross-border intercompany funding activities?”

In addressing this question, this study explores and bridges the gap between pure economic theory, practical optimisation modelling and applied legal research in relation to the tax treatment of intercompany transactions in the cross-border context. The ‘invisibility’ and ‘fungibility’ of intercompany flows are highlighted as significant hurdles for policymakers. These are exacerbated by the absence of neutrality in the tax treatment of otherwise fungible cross-border intercompany activities (or ‘cross-border funding neutrality’). This lack of cross-border funding neutrality in both the design and evaluation of existing reforms is the central

\(^{15}\) Both interest and financial payments economically equivalent to interest, and other expense incurred in connection with the raising of financing such as arrangement and guarantee fees are being targeted. Upon exploring the ‘fixed ratio’, ‘deemed interest’, ‘interest cap’ rules, the global group-wide test and a combined approach, the OECD recommended the ‘fixed ratio’ approach in its Final Report: OECD, ‘BEPS Action 4: Interest Deductions and other Financial Payments’ (Final Report, 5 October 2015).

\(^{16}\) ‘thin-capitalization rules are characterized either by a ‘safe-harbor’ debt-to-equity ratio for which interest payments are always tax-deductible, or directly by a share of interest payments in relation to EBIT(DA)’: Haufler A, Mardan M and Schindler D, ‘Optimal Policies against Profit Shifting: The Role of Controlled-Foreign-Company Rules’ (CESifo Working Paper No 5850, April 2016) 3.

\(^{17}\) ‘earnings before interest, taxes, depreciation and amortisation (‘EBITDA’).


\(^{19}\) OECD, _Explanatory Statement: 2014 Deliverables_, OECD/G20 Base Erosion and Profit Shifting Project (2014) 47. However, it is clear that the raison d’être of both the OECD’s BEPS Project and the thin capitalisation rules is the protection of national tax revenue bases.

thread of this thesis, which explores whether a fundamental reform grounded in cross-border funding neutrality would result in a more effective tax treatment of cross-border intercompany funding activities. Accordingly, this study presents novel contributions to the literature, as detailed in section 1.2.

1.2 AIM, CONTRIBUTION AND SIGNIFICANCE OF THE STUDY

This thesis explores the increasing popularity of thin capitalisation rules, which is one of the most significant trends in the development of global anti-avoidance rules.

The aim of this thesis is to develop practical measures restricting relief for cross-border intercompany deductions by designing an evaluation framework grounded in the economic principle of tax neutrality. The evaluation framework forms the conceptual foundation for developing tax reform proposals to expand or replace existing thin capitalisation rules.

Thin capitalisation rules are widely perceived as an anti-avoidance mechanism that limit tax base erosion from cross-border intercompany activities. However, despite this perception, relatively little is known about whether thin capitalisation rules are effective at reducing distortions between the tax treatment of otherwise fungible cross-border intercompany funding payments. The importance of the tax neutrality principle (detailed in section 2.2) in the design of cross-border taxation law and policy is the central thread of this thesis, which posits that reducing distortions in the current tax treatment of cross-border intercompany funding activities is more effective at minimising incentives for tax planning than introducing further complex anti-avoidance rules.

This study explores and bridges the gap between pure economic theory, practical optimisation modelling and applied legal research in relation to the tax treatment of intercompany transactions in the cross-border context. In doing so, it makes three key contributions to the international taxation literature, as summarised below.

1. Introducing the concept of the ‘cross-border funding bias’

This thesis explores and expands on two areas of rich literature: international tax law and economic rent taxation. It develops a new approach to addressing the shortcomings of the current tax treatment of cross-border intercompany activities. Specifically, the economic rent taxation literature has primarily focussed on the ‘debt bias’, which arises from the distortion in the tax treatment between debt and equity financing. The novel concept of the ‘cross-border funding bias’ is suggested, which includes licensing and leasing activities in addition to debt and equity financing. This concept is utilised in conjunction with other criteria for successful tax reform to develop an evaluation
framework, which presents the rubric for the subsequent analysis of current approaches and proposals (in both the BEPS Project and those presented in this thesis) to taxing cross-border intercompany funding flows. Traditionally, reforms designed to address the domestic debt bias include only: the allowance for corporate equity (‘ACE’), the comprehensive business income tax (‘CBIT’), the allowance for corporate capital (‘ACC’), or the combined ACE-CBIT.

The international tax law literature has not yet explored whether and how thin capitalisation rules could be expanded to address the ‘funding bias’, or be replaced by a combined ACE-CBIT.

2. Extending the literature through legal comparative analysis of responses to the perceived problem of the debt bias

This study makes the parallel observation that, on one hand, thin capitalisation theory prioritises administrative ease and taxpayer certainty at the expense of economic efficiency. Yet, on the other hand, the fundamental reform literature prioritises economic efficiency but is focussed predominantly on the domestic debt bias without sufficient regard for cross-border intercompany issues. This is despite the literature expressly assuming the existence of an inversely proportional relationship between implementing an ACE-variant and the need for thin capitalisation rules. However, this assumption was untested by the literature.

This research bridges two areas of the literature by highlighting the importance – for transparency and good tax design – of starting from first principles to address the shortcomings in the current tax design of cross-border intercompany funding activities.

While there is much practitioner commentary on, and economic analysis of, the Belgian and Italian ACE-variants, this occurs largely in isolation as this literature has a domestic focus. This study presents a legal analysis of domestic laws, tax treaties, domestic and international case law, academic articles and media literature in relation to ACE-variants. The emphasis is on reviewing legislative drafting, evaluating the underlying policy intentions of amendments over time, and expanding the analysis with a focus on the implications of these reforms for the tax treatment of cross-border intercompany funding activities – not just domestic activities. This extends the literature on ACE-variants.
3. **Expanding the literature by developing a quantitative model to simulate complex cross-border intercompany tax planning strategies**

This study observes that general equilibrium modelling, which is the most prevalent modelling method used in the literature, does not address the issues arising from the invisibility or fungibility of intercompany transactions. This gap arises from the significant barriers to obtaining real data on MNEs’ decisions to minimise taxation for the overall group by utilising various financing structures. However, it is possible to formulate MNEs’ behavioural response of engaging in tax-minimising behaviour as an algorithmic expression, as it is a form of optimisation. Mathematical optimisation is one of the most powerful and widely-used quantitative techniques for making optimal decisions. Yet, despite its suitability, optimisation modelling remains largely unexplored in the international tax context. To date, only two preliminary papers exist in this area amongst the English-language literature. The most sophisticated model thus far utilises Excel Solver in a six-jurisdiction MNE with two constraint functions across two scenarios limited to intercompany debt and equity flows, and subject only to thin capitalisation rules.

Accordingly, a quantitative model is developed to simulate cross-border intercompany tax planning strategies to observe MNEs’ behavioural responses in ‘making optimal decisions’ to minimise taxation for the overall group by utilising various conduit financing structures. Since the research focus is on intercompany funding options, several funding constraints and regulatory limitations directly relevant to intercompany funding decisions are taken into account to ensure the model is sufficiently flexible.

This model is both novel and significant due to its ability to facilitate the analysis of a hypothetical, ‘tax-minimising’ MNE’s behavioural responses to both current and proposed international tax laws. The hypothetical MNE used in the model has entities in four jurisdictions: two high-tax jurisdictions (one capital-exporter and one capital-importer; specifically, a US parent and Australian subsidiary); and two lower-tax jurisdictions (one non-treaty country and one treaty country, Hong Kong and Singapore, respectively).\(^1\)

The results of this research could provide the catalyst for changing the tax treatment of cross-border intercompany transactions. This study shows that targeting economic inefficiencies in

\(^1\) In Australia, Singapore is a relatively more popular jurisdiction than other well-known low-tax jurisdictions, such as Ireland, in terms of the volume of intercompany payments made by Australian companies: Butler B and Wilkins G, ‘Singapore, Ireland Top Havens for Multinational Tax Dodgers’, *The Sydney Morning Herald* (online), 1 May 2014 <http://www.smh.com.au/business/singapore-ireland-top-havens-for-multinational-tax-dodgers-20140430-37hzi.html>.
the design of the international tax system is both a more principled and a more effective basis upon which to tax cross-border intercompany transactions. If implemented multilaterally, attaining cross-border funding neutrality would promote a more efficient climate for foreign investment inflows and outflows, while safeguarding the tax revenue base of small, open economies which are net importers of capital, such as Australia. While eliminating the tax-induced cross-border funding bias could not eliminate the larger problem of the lack of international tax coordination, it would greatly contribute to reducing the cross-border tax planning opportunities currently available to MNEs.

1.3 ASSUMPTIONS AND SCOPE OF THE STUDY

This study starts with the assumption that it is possible for distortions to be either introduced or corrected by taxation. Wherever possible, tax-induced reductions in economic efficiency ought to be minimised on the basis that, as observed by the Australian Treasury:\(^2^2\)

“\textit{Departures from neutrality, whether in the form of concessions or lack of alignment between different taxes, are some of the principal building blocks which so-called ‘tax planners’ use to erect schemes of (legal) tax avoidance, often of a highly artificial kind ... The opportunities for practices of this kind are of concern not only because they do damage to the equity of the system, and the attitudes of other taxpayers to compliance with it, in that certain taxpayers (more predominantly the relatively well-to-do ones) reduce their tax relative to others.”}\(^2^2\)

Even though the cross-border issue cannot be isolated from the rest of the tax system,\(^2^3\) the focus of this study is on tax-induced cross-border distortions because increased international capital mobility has created unprecedented opportunities for tax arbitrage in this context.\(^2^4\)

While there are many ways in which MNEs can shift profits to low-tax jurisdictions, this research focusses on intercompany transactions since these activities are seen as among the most significant\(^2^5\) and least transparent.\(^2^6\)


\(^2^5\) OECD, \textit{Dealing Effectively with the Challenges of Transfer Pricing} (1 March 2012).

\(^2^6\) Markle and Shackleford, above n 10, 415.
An underlying assumption of this thesis is that as long as an MNE can benefit from tax planning opportunities presented by existing rules (including, inter alia, the arm’s length standard, thin capitalisation rules, debt/equity rules, withholding taxes and foreign tax relief), there is a tax incentive to adjust its behaviour to maximise overall deductions in higher-tax jurisdictions to minimise the group-wide tax liability and, in turn, the overall net profit after tax.

It is noteworthy that tax planning is generally encouraged by tax professionals and has at times been statutorily, administratively and judicially condoned. Assuming that an MNE which exhibits tax planning behaviour also makes tax decisions as a global group with the objective of minimising total tax payable worldwide, such an MNE is considered to be ‘tax minimising’. Not all MNEs will fall within this category in practice. However, this study is only concerned with MNEs that are responsive to tax-induced cross-border distortions.

The behaviourally distortive effects of existing and proposed tax rules relating to cross-border intercompany activities are of primary concern in this study. The focus of this thesis is on MNE’s cross-border intercompany transactions relating to passive or highly mobile income – specifically, how tax distortions affect MNE decisions on the funding mix between intercompany financing, licensing and leasing activities. This thesis also assumes that the marginal investor in a small, open economy (such as Australia) is a foreign investor.

A further premise is that countries can gain insight for developing their own tax regimes by examining the tax regimes of other countries. This premise provides the basis for exploring the practical implementation of the ACE as adopted domestically in Belgium and Italy – and considering whether an ACE-variant may be suitable in the Australian context in relation to the taxation of cross-border intercompany financing transactions.

For completeness, the ACE is one of several fundamental reform options which would, in theory, eliminate the debt bias in the corporate tax regime. Other fundamental reform options include the CBIT, the ACC and the combined ACE-CBIT. These fundamental reforms are grounded in economic efficiency. The economic literature observes that it is preferable for

28 "Any one may so arrange his affairs that his taxes shall be as low as possible; he is not bound to choose that pattern which will best pay the Treasury; there is not even a patriotic duty to increase one’s taxes": Helvering v Gregory, 69 F 2d 809 (2d Cir, 1935), 810 (Hand J). However, Seto observes that Justice Hand was reflecting on the appropriate role of judges in enforcing existing law – rather than on principles of sound tax design: Seto, above n 27, 3.
29 The ACE-CBIT literature posits that by providing an equal allowable deduction for both the cost of debt and equity financing, the debt bias can be eliminated while also preserving a jurisdiction’s international competitiveness and its tax revenue base.
MNEs to be subject to economic rent taxation\(^{31}\) because rent taxes are neutral\(^{32}\) and avoid a number of decision-making distortions.\(^{33}\) Admittedly, there are difficulties and uncertainties\(^{34}\) in determining pure profits, which provides an explanation for why corporate taxation is predominantly based on corporate income rather than pure profits.\(^{35}\)

Finally, the lack of international tax coordination due to differentials in various jurisdictions’ tax rates and systems is the ‘larger non-neutrality’, as illustrated in the below Figure 1. This thesis does not purport to address this larger issue. Rather, it focusses on a ‘non-neutrality within the larger non-neutrality’ – namely, the ‘tax-induced cross-border funding bias’. It is possible to address this from a tax point of view by encouraging neutrality between the tax treatment of otherwise fungible forms of cross-border intercompany funding.

The scope of this study is illustrated in the below Figure 1.

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\(^{34}\) Mintz, above n 31, 35.

1.4  HYPOTHESES

Although there is an extensive literature on the debt bias in the domestic setting, relatively little research exists on the debt bias in the cross-border setting. As such, this research is designed to apply a holistic, multi-disciplinary approach to exploring the relationship between the economic rent taxation literature and the international tax rules restricting the deductibility of cross-border intercompany payments. In doing so, it tests one primary null hypothesis (H₀) and two secondary null hypotheses (H₁ and H₂).

1.4.1  Primary null hypothesis (H₀)

Since thin capitalisation rules deny ‘excessive’ interest deductions by MNEs, the literature largely assumes that these rules protect the tax revenue base by mitigating the cross-border debt bias. Simply stated, the primary null hypothesis is:

\[ H₀ – \text{Thin capitalisation rules do not adequately protect the tax revenue base if designed to only mitigate the cross-border debt bias.} \]

If the primary null hypothesis fails to be rejected, the following secondary null hypotheses will be explored by the study.

1.4.2  Secondary null hypothesis (H₁)

Empirically, there appears to be consensus that capital is both mobile and fungible. Nonetheless, the focus of the literature remains limited to the debt bias. This is particularly problematic in the cross-border context. Rather than aiming to mitigate the debt bias, this study suggests that policymakers aim to mitigate the intercompany ‘funding bias’; namely, the bias in the tax treatment of otherwise fungible intercompany financing activities.

This secondary null hypothesis suggests that a conceptualisation broader than the cross-border debt bias (in H₀) is necessary to enable thin capitalisation rules to protect the tax revenue base. This is expressed as follows:

\[ H₁ – \text{Thin capitalisation rules do not adequately protect the tax revenue base if designed to mitigate the broader cross-border intercompany funding bias.} \]

1.4.3  Secondary null hypothesis (H₂)

The literature is clear that thin capitalisation rules would no longer be required (or, at least, could be simplified) under an ACE. However, a research gap that remains in the literature is an applied exploration of the expanded inverted proposition; namely, whether it is possible to address the cross-border funding bias by adapting fundamental reforms into the cross-border
context to improve or replace existing thin capitalisation rules. Accordingly, it is hypothesised as follows:

\[ H_2 \rightarrow \text{Thin capitalisation rules are not required if there is neutral tax treatment of MNEs’ intercompany funding activities.} \]

The evaluation framework against which to test these hypotheses is developed in Chapter 3. The primary research outcomes are contained in Chapters 4 and 5, involving applied legal analysis and optimisation modelling, respectively. Based on the analysis in the previous chapters, Chapter 6 presents proposals for reform, which undergo both comparative and integrity testing.

1.5 METHODOLOGY, METHODS AND STRUCTURE

Tax can be studied from a plethora of disciplines ranging from law, economics and political science\(^{36}\) to accounting, psychology and philosophy.\(^{37}\) This thesis adopts a multi-disciplinary approach, bridging the disciplines of law, economics, political science and accounting. While the latter two disciplines are referenced at various stages of this thesis, it focusses on the legal and economics paradigms. Specifically, Chapter 4 utilises theoretical, doctrinal and reform-oriented legal research methodologies.

Theoretical research is utilised to investigate the conceptual basis for both thin capitalisation rules and ACE-variants, and develop an evaluation framework for evaluating both existing and proposed reforms restricting cross-border intercompany tax deductions. Given the legal focus of this study, the evaluative process is predominantly qualitative in nature – yet this is supplemented by the quantitative measures made available by the mathematical modelling.

Within the doctrinal research method, longitudinal comparative case studies of both ACE and thin capitalisation rules in practice are conducted. A longitudinal, legal analysis of cross-border thin capitalisation rules in Australia, and domestic ACE-variants in Belgium and Italy has not yet been extensively carried out in the literature.

Accordingly, Chapter 4 contains in depth examinations of: first, how these legislative frameworks have been adopted in these jurisdictions; second, how (and why) these provisions


\(^{37}\) McKerchar, above n 36, 5.
have been amended over time, and third, whether these reforms satisfy the criteria developed in the evaluation framework contained in Chapter 3.

This analysis develops the conceptual foundations for the reform-oriented research, which is further explored in the subsequent Chapter 5 and Chapter 6 using a blended approach of legal research and practical optimisation modelling. Specifically, this study models a hypothetical ‘tax-minimising’ MNE with one US parent and three subsidiaries; one in Australia, Hong Kong and Singapore. These four jurisdictions have been chosen to represent a mix of both capital importing and capital exporting, both treaty and non-treaty, and higher- and lower-tax jurisdictions. The optimisation modelling methodology facilitates an exploration of past and present policy responses to the challenges of taxing cross-border intercompany activities. This provides support for the propositions made in the literature review that ACE-variants such as a cross-border ACE-CBIT would successfully attain funding neutrality whilst also protecting governments’ tax revenue base. Principles-based tax reform proposals are developed in Chapter 6, which also highlights the importance of adopting a broader institutional approach in tax design and policy. A diagrammatic representation of the thesis structure is presented in the below Figure 2.

The key outcomes and findings of this research include:

1 Bridging the pure economic theory, practical optimisation modelling and applied legal research literatures by exploring theory, practice and issues in practice.

2 Analysing the effectiveness and shortcomings of the current tax treatment of cross-border intercompany transactions through legal comparative analysis of past and proposed policy responses to the perceived problem of the debt bias.

3 Simulating cross-border intercompany tax planning responses to applied past, present and proposed tax regimes, with the effectiveness of each analysed at varying degrees of tax aggressiveness.

4 Developing practical recommendations for reform by proposing the unilateral implementation of either an extended thin capitalisation rule or a cross-border ACE-CBIT applied in conjunction with an extended thin capitalisation rule.

By simulating cross-border intercompany tax planning scenarios the model developed ‘makes the invisible visible’. This leads to the finding that, in order to minimise opportunities for cross-border tax planning by MNEs, it is necessary for governments to equalise the tax treatment of fungible intercompany funding activities. Even though obtaining full tax neutrality is nearly impossible without international tax coordination, the measures proposed and tested in this thesis provide ‘second-best’ alternatives that may be more effective at eliminating opportunities for cross-border tax planning than existing policy responses – even when applied unilaterally.
This dissertation makes a significant contribution to both tax law and policy analysis. The challenge it presents to conventional understandings of thin capitalisation rules, and the tax treatment of cross-border intercompany activities in general, reveals new insights into the importance of applying economic first-principles in tax design.
Chapter 1
Introduction
Background [1.1]; Aim, contribution and significance [1.2];
Assumptions and scope [1.3]; Hypotheses [1.4]; Methodology, methods and structure [1.5]

Chapter 2
Literature Review
Theoretical framework [2.2]; Thin capitalisation rules’ current practice [2.2], and issues in practice [2.4]; Alternative theoretical approaches to eliminating the debt bias [2.5]

Chapter 3
Evaluation Framework
‘Fungibility’ of cross-border intercompany funding [3.2]; Establishing the evaluation framework [3.3]

Chapters 4 and 5
Legal analysis and Optimisation modelling
Legal analysis utilising theoretical and doctrinal research of ACE-variants [4.2]; Applying the evaluation framework to past and proposed policy responses [4.3]; Operationalising the evaluation framework [5.2]; Developing a model to simulate cross-border intercompany tax planning strategies including ‘tax-minimising’ behavioural responses to the current tax system [5.3], fundamental reform proposals [5.4], existing and proposed policy responses [5.5], and alternative reforms proposed by this thesis [5.6]

Chapter 6
Tax Reform Proposals
Reform-oriented research into two alternative reform proposals; specifically, extended thin capitalisation rules [6.2.1] and a cross-border ACE-CBIT [6.2.2]; Validation testing these proposals through scenario analysis [6.2.3]; Highlighting the importance of adopting a broader institutional approach to tax design and policy [6.2.4]

Chapter 7
Conclusion
Chapter summary [7.1]; Findings and concluding remarks [7.2]; Limitations and directions for further research [7.3]
2 REVIEWING THE THEORETICAL AND APPLIED LITERATURES

2.1 INTRODUCTION

The taxation of MNEs is one of the most prominent issues on governments’ and tax authorities’ agendas. Yet, a long-standing criticism of the existing system for taxing MNEs is that it creates distortions in economic decision-making,\(^{38}\) thereby giving rise to non-neutralities.

This presents a critical challenge for policymakers because non-neutralities create incentives to devote socially wasteful effort to reducing tax payments by changing the form or substance of business activities.\(^{39}\) At present, the cost of debt financing (such as interest) is usually tax deductible whereas cash flows on equity (such as dividends) are generally not.

This creates a tax-induced preference for debt financing (the ‘debt bias’), which is exacerbated at the cross-border level when dealing with MNEs’ intercompany financing flows. Traditionally, governments have relied upon rules restricting the tax deductibility of cross-border intercompany interest payments. This is exemplified by interest limitation rules such as thin capitalisation rules, which have been in place for decades.

However, these rules are insufficiently effective at countering BEPS. Two of the most problematic non-neutralities in this setting are, first, corporate income tax rates and bases differ across jurisdictions, and second, like income is not treated alike for tax purposes – even within the same jurisdiction. The first non-neutrality is beyond the scope of this thesis because it would require full international tax coordination. The second non-neutrality is within the ambit of individual policymakers. While the significance of this non-neutrality is referred to repeatedly throughout this study, there exist theoretical approaches in the literature which specifically target this non-neutrality.

This chapter comprises four main sections. First, section 2.2 presents the theoretical framework for the current tax treatment of MNE’s cross-border intercompany funding flows, with a focus on the importance of neutrality in tax policy.

Second, the history and evolution of thin capitalisation rules are explored in section 2.3 by identifying current practice in the operation, policy and design of these rules. Third, the

\(^{38}\) Devereux M P and Vella J, ‘Are We Heading Towards a Corporate Tax System Fit for the 21\textsuperscript{st} Century?’ (2014) 35(4) Fiscal Studies 449, 450.

emerging issues in practice in the implementation and operation of thin capitalisation regimes are examined in section 2.4. This involves a five-pronged analysis exploring whether these rules address the debt bias and, in turn, satisfy the ‘good’ tax design criteria of economic efficiency. This analysis is followed by an exploration of the economic basis for, and legal design of, these rules. Section 2.4.4 presents a longitudinal legal analysis of Australia’s thin capitalisation regime, while section 2.4.4.3.1 examines alternative reforms proposed in this setting by both commentators and policymakers.

Fourth, section 2.5 introduces alternative theoretical options specifically designed to attain tax neutrality. The most relevant fundamental reforms are the ACE, the CBIT, the ACC and the combined ACE-CBIT. Even though these fundamental reforms present a principled solution to the domestic debt bias, the cross-border implications and applications of these reforms remain largely understudied. On the other hand, the literature relevant to thin capitalisation rules focusses on the cross-border implications of funding decisions but is not based in the economic first-principle of tax neutrality.

These four sections contextualise the overarching question guiding this thesis, namely:

“Given the opportunity to ‘start over’, would existing thin capitalisation rules be retained in their current form or would an alternative reform result in a more neutral tax treatment of cross-border intercompany funding activities?”

This chapter is deliberately broad given the multi-disciplinary nature of the research, which necessitates encompassing many aspects of the legal, taxation and economics disciplines whilst exploring theory, practice and issues in practice. In doing so, research gaps and questions within – and between – these literatures are identified and discussed in detail.

2.2 THEORETICAL FRAMEWORK: THE IMPORTANCE OF NEUTRALITY IN TAX POLICY

This section presents the theoretical framework for the current tax treatment of MNEs’ cross-border intercompany funding flows, exploring the principle of tax neutrality, examining the concept of income and reviewing the historical development of tax neutrality theories.

2.2.1 The principle of tax neutrality

At the core of this thesis is the notion that the principle of tax neutrality should be applied in the policy and design of tax laws, where practicable. This concept is derived from the criteria of ‘economic efficiency’, which is one of the four maxims of taxation contained in Adam Smith’s
seminal work, *An Inquiry into the Nature and Causes of the Wealth of Nations*. For completeness, modern tax policy has generally extended these maxims to reflect current issues and concerns.

While the term ‘tax neutrality’ can be used to refer to quite different concepts, in this study it is used to refer to the principle that tax provisions – and, more generally, tax systems – ought to minimise distortions to economic decision-making and therefore have relatively little impact on the overall allocation of economic resources. As observed by Musgrave and Musgrave, taxes should be designed to minimise interference with economic decisions in otherwise efficient markets. As such, tax policy based on the principle of tax neutrality aims to minimise distortions and therefore minimise welfare loss.

There are three key challenges to attaining neutrality in tax policy design, and a key focus of this study is targeting each of these challenges in the, albeit limited, setting of cross-border intercompany funding activities. These challenges are set out below.

First, there is an inevitable complexity given the range of conflicting benchmarks, as illustrated in Figure 3 below. In particular, one of the most striking trade-offs in the existing design of rules restricting the tax deductibility of cross-border intercompany activities is the conflict between efficiency and simplicity.

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40 “tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the state”: Smith A, *An Inquiry into the Nature and Causes of the Wealth of Nations* (Methuen, first published 1776) Book 5, Chapter 2, Part 2 <https://ebooks.adelaide.edu.au/s/smith/adam/s64w/index.html>.


45 Mirrlees Review, above n 39, 40; see also Warren, above n 43.

46 Warren, above n 41.
Second, it is difficult to measure economic efficiency. Specifically, as noted by Auerbach, “there is no independent measure of economic efficiency”. This presents a fundamental problem from a policymaker’s perspective, because without empirically founded knowledge of the actual effects of a tax on behavioural responses, it is very difficult to test whether a tax policy is *ex post* neutral. This necessitates a review of the historical development of tax neutrality theories, provided in the below section 2.2.2, to arrive at a meaningful and testable benchmark.

Third, it is instructive to acknowledge that all taxes create distortions compared to the pre-tax environment. So, tax policy and design ought to have the ambition of *minimising* tax-induced distortions by treating similar activities in similar ways. This raises the question of identifying distortions in the tax treatment of like income. As noted by Hiort af Ornäs Leijon, when evaluating whether a tax is distortive it is necessary to consider both the tax rates and the tax base, which requires an examination of the concept of ‘income’. Accordingly, this concept is explored in section 2.2.3.

### 2.2.2 The history of tax neutrality theories

The development of the literature on optimal taxation over the past century can be categorised into three, now largely converged, strands: first, the design of commodity taxes,

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49 Warren, above n 43, 58.  
50 Hiort af Ornäs Leijon, above n 48, 24.  
51 Mirrlees Review, above n 39, 40.  
52 Hiort af Ornäs Leijon, above n 48, 23.  
53 Auerbach and Hines, above n 22, Chapter 21, 15.
commencing with the work of Ramsey in the 1920s; second, the role of non-linear income taxes in addressing distributional concerns, exemplified by Mirrlees’ work in the 1970s; and third, the use of taxes to address market failures. Commentators such as Hiort af Ornäs Leijo observe that the economic analysis of law is a relatively newer field, having started with interest in Bentham in the 1940s but remaining relatively undeveloped until the 1960s.

A central goal of economics and the economic analysis of law is efficiency optimisation. However, when applied in the tax law context, the unique complexity of the tax optimisation problem renders the task of designing the optimal tax system immensely more difficult compared to other areas of law such as competition policy, corporate law and securities regulation.

Raskolnikov highlights the three key challenges that give rise to this unique complexity. First, taxation inevitably gives rise to inefficiencies and some taxpayers’ inefficient responses to taxation cannot be fully deterred by legal rules (the ‘undeterrability problem’). Second, it is impossible to fully resolve both the undeterrability problem and the ‘redistribution problem’; however, it is in theory possible to reach a compromise which balances the benefits of redistribution with the inevitable costs of tax-induced distortions. Third, there exists a fundamental disconnect between actual tax regimes and the design of optimal tax rules.

These issues are dramatically amplified in the cross-border setting, where the existing system is “so far from the optimal income tax baseline that the effort to reference it would be decidedly doomed.” Raskolnikov notes that there is no optimal rule for allocating interest expense by MNEs, nor is there an optimal theory of international taxation, corporate tax or capital income taxation.

Beyond Raskolnikov’s assessment, this thesis makes two additional critiques. First, the literature does not consider ‘optimised’ behavioural responses by MNEs in the limited context

57 Hiort af Ornäs Leijo, above n 48, 8–9.
61 Raskolnikov, above n 60, 524–5.
62 Raskolnikov, above n 60, 525–7.
63 Raskolnikov, above n 60, 551.
64 Raskolnikov, above n 60, 551.
of tax minimisation; nor does it anticipate how policymakers could respond to those behavioural responses. Second, the tax neutrality theories that have been introduced as criteria for achieving economic efficiency at the international level are both limited and contested. In the economic literature there is a significant debate between capital import neutrality (‘CIN’), capital export neutrality (‘CEN’), capital ownership neutrality (‘CON’) and the other tax neutrality theories. However, these neutrality benchmarks have also received substantial criticism. Notably, Graetz, Shaviro, and Grubert and Altshuler observe that none of these benchmarks are satisfactory because the arguments supporting them usually rely upon very simple models.

This has led to commentators such as Devereux positing that the neutrality debate should evolve beyond CEN and CIN. Looking beyond CEN and CIN, Warren provides a synthesises of the economic efficiency benchmark criteria for company taxation, as extracted in Figure 4 below:

65 CIN requires that domestic and foreign investors receive the same after-tax rate of return on similar investments in that market. It aims for neutrality in international savings decisions and is embodied in a territorial or source-based tax system; see further, Gravelle J G, ‘Reform of US International Taxation: Alternatives’ (Report No RL34115, Congressional Research Service, 27 December 2012) 5.

66 CEN requires that investors in a country are subject to the same effective tax rate on income from domestic investment and income from foreign investment, such that the allocation of investments between countries is unaffected by tax considerations. It is embodied in a residence-based tax system; see, Gravelle, above n 65, 5; Nicodème G J A, ‘On Recent Developments in Fighting Harmful Tax Practices’ (2009) 62(4) National Tax Journal 755.

67 CON requires that countries not tax the offshore investments of resident companies, focussing instead on taxing domestic source income tax systems. It is neutral towards asset owner changes in that market. It aims for neutrality in international savings decisions and is embodied in a residence-based tax system; see further, Gravelle J G, ‘Reform of US International Taxation: Alternatives’ (Report No RL34115, Congressional Research Service, 27 December 2012) 5.


70 Devereux M P, ‘Taxation of Outbound Direct Investment: Economic Principles and Tax Policy Considerations’ (Oxford University Centre for Business Taxation Working Papers No 02/24, September 2008) 17; Diamond and Mirrlees’ production efficiency theorem provides a rationale for a neutral tax system. This theorem states that, in a competitive economy, an optimal tax structure is characterised by production efficiency so long as all economic activities, and any pure profits, can be taxed. Importantly, production efficiency cannot be achieved by residence- or source-based taxes unless they are fully harmonised because the Diamond and Mirrlees theorem was derived for a closed economy with a single government budget constraint; see further, Nicodème G J A, ‘Corporate Income Tax and Economic Distortions’ (CESifo Working Paper No 2477, November 2008). However, in the absence of international agreement, the question then is which system (source-based or residence-based) generates greater welfare costs. However, decisions of location involve the choice between cross-border investment and trade so any argument in favour of one form of taxation on this basis would be precarious.

Figure 4 – Economic efficiency benchmark criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1    Funding neutrality</td>
<td>Does not distort the decision on how to fund a business (eg debt vs equity)</td>
</tr>
<tr>
<td>2    Risk neutrality</td>
<td>Permits risk offset and adjustment</td>
</tr>
<tr>
<td>3    Business structure</td>
<td>Incorporated and unincorporated companies treated similarly</td>
</tr>
<tr>
<td>4    Net income neutrality</td>
<td>Neutral in its treatment of different income and expenditure sources and asset and liability types</td>
</tr>
<tr>
<td>5    Payout neutrality</td>
<td>Neutral between dividends and retentions; and neutral in its impact on financial innovation (bifurcation vs aggregation)</td>
</tr>
<tr>
<td>6    Taxpayer neutrality</td>
<td>Incentives to different groups should result in the same outcome for individuals, whatever structure is invested in</td>
</tr>
<tr>
<td>7    Capital import/export</td>
<td>Benefit to resident and offshore investors should be similar</td>
</tr>
<tr>
<td>8    Institutional neutrality</td>
<td>No prejudice or favour by government to sectors or groups (and if so, any market intervention should be efficiently targeted, transparent and costed)</td>
</tr>
</tbody>
</table>


Cross-referencing Warren’s conceptual framework with Raskolnikov’s earlier critique, one key aspect that remains missing from the international neutrality debate is that of funding neutrality (listed as criterion 1 in the above Figure 4). This necessitates an exploration of the underlying concept of income, which is provided in the below section 2.2.3.

2.2.3 The concept of income

The literature contains competing concepts of income. These can be grouped by field – accounting, economics, law – and even within one particular field the definition may be unsettled.

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72 “Originally ‘income’ was probably thought of as simply incoming money. Incoming payments of money naturally appeared in sharp contrast with outgoing payments of money. A business man, in his shop, could easily subtract the outgoings from the incomings, call what was left his ‘net income’, and physically take this ‘net income’ out of his business shop into his home. It was called net income because it was the net money coming in to his home from his business. But today such simple accounting has been superseded, or overlaid, by many complicated procedures; modern accountancy has evolved into an elaborate art. It has done so almost without help from economists. The result is that the chasm between accountancy and economics has become wide”: Fisher I, ‘Income in Theory and Income Taxation in Practice’ (1937) 5(1) Econometrica 1, 1.

73 As observed by Parsons: “it is instructive to consider what is meant by income in the thinking of those economists who identify income with ‘accretions to economic power’. These economists would say that
The judicial concept of ‘the income’ has traditionally focussed on the distinction between income as a ‘flow’ and gain as ‘profit’. The seminal work in this context is Fisher’s *The Nature of Capital and Income*, which defines income as a “flow of services through a period of time” and capital as “quantity of wealth existing at a particular instant of time”.74

In the tax law context, the concept of income was largely75 imported from trust law, such that income is “a flow from capital assets”.76 Specifically, Woellner et al delineate the relevant flows from capital as “interest from debts, rents from the lease of property, royalties from the licensing of intellectual property rights, and dividends from shares”.77

Applying the principle of tax neutrality (that, *ceteris paribus*, all like income should be treated alike for tax purposes) to this conceptualisation would result in equalising the extent of tax deductibility (‘t’) between interest, leasing rents, royalties and dividends. This is illustrated in Table 1 below:

<table>
<thead>
<tr>
<th>Scope of the rule</th>
<th>Distortions to funding neutrality</th>
<th>Impact on behavioural responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest</td>
<td>✓</td>
<td>Eliminates</td>
</tr>
<tr>
<td>Dividends</td>
<td>✓</td>
<td>Eliminates</td>
</tr>
<tr>
<td>Royalties</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Rents on leasing</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

*Table 1 – Summary of tax treatment under ‘funding neutrality’*

However, there is currently a different tax treatment across these types of flows under existing domestic laws. This is compounded in the cross-border setting, with each jurisdiction treating each type of income flow differently both under its own domestic laws and in relation to the plethora of potentially applicable bilateral treaties. These two non-neutralities present incentives for MNEs to engage in tax planning behaviour.

To date, governments have enacted rules to limit the magnitude of these incentives in the form of rules restricting the tax deductibility of cross-border intercompany activities relating to

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74 Fisher I, *The Nature of Capital and Income* (Macmillan, 1906) 52; Fisher’s analysis is particularly relevant in the social welfare context, which is beyond the scope of this study.

75 For completeness, commentators such as Prebble have questioned this characterisation and described it as one of “several fundamental problems with the judicial concept of income”: Prebble J, ‘Income Taxation: A Structure Built on Sand’ (2002) 24(3) Sydney Law Review 301, 301.


77 Importantly, the courts have emphasised that the judicial notion of income is “income according to ordinary concepts and usages of mankind”, which are subject to change over time to reflect changes in society; see further, Woellner R H et al, *Australian Taxation Law 2016* (Oxford University Press, 26th ed, 2016) 111–12.
intercompany debt. This is exemplified by the implementation of thin capitalisation rules and, more recently, the exploration in the OECD’s BEPS Project. This is the focus of the remainder of this chapter.

2.3 CURRENT PRACTICE: THE DISTORTIVE TAX TREATMENT OF MNEs’ CROSS-BORDER INTERCOMPANY FUNDING FLOWS

This section contextualises the history and development of the international tax system, and explores the current practice in the design and implementation of thin capitalisation rules.

2.3.1 Background

The current international corporate tax system has its origins in the 1920s. While well suited to the economic needs of a century ago, the current international corporate tax system has been unable to keep pace with developments in the international business setting. This has resulted in widespread criticism that it is now an outdated system.

In particular, the past three decades have seen the rise of MNEs, innovative financial instruments and the prominence (and dominance) of intercompany trade relative to world trade. These developments have disengaged the alignment between the economic reality of international business and the international tax system.

This misalignment can result in arbitrage opportunities, which may either benefit or disadvantage firms nationally and internationally. At present, MNEs are perceived to be in an advantageous position given their ability to access global debt and equity markets, various jurisdictions’ tax rates and various tax systems – unlike their domestic counterparts.

However, only the largest MNEs are best positioned to exploit differences in jurisdictions’ tax systems to minimise their global tax liability. This process of tax arbitrage does not improve productivity; nor does it constitute ‘true’ innovation. This is exemplified by the complexity

79 “How did we get in such a dire need for reform? Surely, the best tax policy minds of the time invested their own careers in this process. Yet, the system they created is flawed … whether it was flawed at inception or whether the nature of the global economy … has changed to the point that the policy framework needs to be re-examined.”; Wells B and Lowell C, ‘Tax Base Erosion and Homeless Income: Collection at Source Is the Linchpin’ (2012) 65(3) Tax Law Review 535, 536; see further, De Wilde M F, Sharing the Pie: Taxing Multinationals in a Global Market (PhD Thesis, Erasmus Universiteit Rotterdam, January 2015); Graetz M J, ‘Can a 20th Century Business Income Tax Regime Serve a 21st Century Economy?’ 30(3) (2015) Australian Tax Forum 551; Devereux and Vella, above n 38.
and fungibility of cross-border intercompany transactions relating to highly mobile income. Using these intercompany transactions, MNEs can shift intercompany expenses to, and intercompany income from, source countries to minimise tax payable with relative ease.⁸¹

In this context, the exponential rise in financial innovation and engineering is particularly problematic given the resulting distortions in the tax treatment of cross-border intercompany financing decisions. As observed by Green, by changing the form and/or substance of business activities MNEs can reduce their tax payments. This goes beyond simply changing the location of investments to manipulating reported sources of income by strategically arranging financial structures and shifting income through intercompany transactions.⁸²

However, despite criticisms of aggressive tax planning behaviour by MNEs, the philosophical framework of free-market capitalism provides the justification for internalising benefits while externalising costs, which includes the minimisation of taxation. The economic literature espouses that this ‘profit motive’ ensures that resources are being allocated efficiently. However, this reasoning hinges on the simplifying theoretical assumptions that MNEs operate in free and competitive markets. These underlying theoretical assumptions do not hold in the current global funding system.

In addition to heightening opportunities for aggressive tax planning by MNEs, the advent of the global digital economy has intensified harmful tax competition between governments. This has become a major concern in the academic and political debate on the future of international taxation, exemplified by the OECD’s BEPS Project, which aims to tax MNEs “where economic activities take place and value is created”.⁸³

This is a particularly pressing issue for small, open economies such as Australia and New Zealand, which are net capital importers of capital. However, this issue extends to all capital importers in general, rendering large capital importers such as the United States,⁸⁴ the United

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⁸¹ “the relative ease with which MNE groups can allocate capital to lowly taxed minimal functional entities (MFEs). This capital can then be invested in assets used within the MNE group, creating base eroding payments to these MNEs”: OECD, Public Discussion Draft, BEPS Action 8, 9 and 10: Discussion Draft on Revisions to Chapter I of the Transfer Pricing Guidelines (Including Risk, Recharacterisation and Special Measures), 1 December 2014 – 6 February 2015, 38. For completeness, residence issues are beyond the scope of this thesis.


⁸³ OECD, above n 19, 7.

⁸⁴ “Until the 1980s, the United States was a significant capital exporter, but that has changed so the United States is now a capital importer”: Mullins P, ‘Moving to Territoriality? Implications for the United States and the Rest of the World’ (IMF Working Paper WP/06/161, Fiscal Affairs Department, June 2006), 11.
Kingdom\textsuperscript{85} and Canada\textsuperscript{86} also within scope. It also raises politically charged issues associated with residence- and source-based taxation, with commentators such as Picciotto observing that source-jurisdictions have been increasingly claiming taxing rights over US-based MNEs’ earnings retained offshore.\textsuperscript{87}

These opportunities are nearly impossible to eliminate without full international tax coordination, which is virtually impossible in itself. So, governments and policymakers are increasingly faced with the competing objectives of remaining internationally competitive and encouraging foreign investment while also maintaining the integrity of their national tax bases.

This presents a conflict that is a legitimate struggle from a policy perspective, because the spirit of tax coordination is at odds with that of tax competition.\textsuperscript{88} Nonetheless, the onus is on governments and policymakers to design tax rules that are appropriate given MNEs’ possible behavioural responses to cross-border corporate tax rules. Instead, the design of the current system is not grounded in a coherent set of concepts – let alone optimality.\textsuperscript{89}

The tax biases that emerge from the design of the current system are quite readily – and most problematically – exploited in the cross-border intercompany context. So, even though the cross-border issue cannot be isolated from the rest of the tax system,\textsuperscript{90} it is the focus of this thesis. Accordingly, the remainder of this chapter analyses policy responses to the tax-induced cross-border debt bias, which distorts MNEs’ corporate financing decisions by incentivising MNEs to take advantage of the distortion in the tax treatment of debt and equity financing.\textsuperscript{91}

2.3.2 Thin capitalisation rules

A key feature of the current international tax treatment of MNEs’ funding activities is that debt financing is usually tax deductible, whereas equity financing is generally not. This gives rise to a tax-induced preference for cross-border debt financing. Specifically, the tax-induced cross-border debt bias incentivises MNEs to finance their high-tax jurisdiction affiliates with

\textsuperscript{85} Picciotto S, ‘The UK’s Diverted Profits Tax: An Admission of Defeat or a Pre-Emptive Strike?’ (2015) 77(3) Tax Notes International 239.
\textsuperscript{87} “The DPT seems to be an assertion of a tax claim from the source country side, pre-empting residence country claims that might result from such stronger CFC rules. The intention may be not only to influence the BEPS process but also to pressure the US Congress to reform the US CFC rules in subpart F”: Picciotto, above n 85, 242.
\textsuperscript{89} Grubert and Altshuler, above n 2, 675.
\textsuperscript{90} Grubert and Altshuler, above n 23, 319–21.
excessive debt, thereby reducing their tax liability in those jurisdictions – and, in turn, reducing the total tax payable by the MNE on a global basis.

International debt shifting through this phenomenon of ‘hidden equity capitalisation’ (or ‘thin capitalisation’) is a pillar of international tax planning, and identified by policymakers as one of the primary risks to the integrity of the tax system.92

Governments have responded to concerns about tax base erosion by implementing specific anti-avoidance measures intended to ensure that corporate groups do not allocate a disproportionate amount of debt to their operations in high-tax jurisdictions. These rules aim to limit the use of ‘excessive’ interest deductions by restricting the quantum of tax deductions.

Thin capitalisation rules are one species of the genus of ‘interest limitation rules’ restricting cross-border interest deductibility.93 Within less than half a century, the global prevalence of these rules has increased exponentially,94 likely due to their strong emphasis on revenue base protection. This trend is illustrated in Figure 5 below:

Figure 5 – Global prevalence of thin capitalisation rules

![Graph showing global prevalence of thin capitalisation rules](source: Author's own)

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92 "The base erosion and profit shifting risks identified by the ATO that relate to profit shifting activities of multinational corporations are well known. The practices that present these risks to the integrity of the tax system are … thin capitalisation (funding Australian operations using excessive debt)”: Australian Government, above n 6, 20.

93 A full synthesis of all cross-border restrictions on interest deductibility is beyond the scope of this thesis; however, a starting point is Dourado A and de la Feria R, ‘Thin Capitalization Rules in the Context of the CCCTB’ (Working Paper 08/04, Oxford University Centre for Business Taxation, 2008).

The remainder of this section outlines current practice in the design and implementation of thin capitalisation regimes, including the operation of these rules, their policy focus on simplicity and pragmatism, and the assumption in the literature that these rules mitigate the debt bias.

2.3.2.1 Operation

Thin capitalisation rules target the ‘excessive’ allocation of deductions in a particular jurisdiction. Since it is difficult to delineate the tests for what constitutes ‘excessive’ deductions, it is necessary to make a three-fold clarification of the operation of these rules.

First, no two thin capitalisation regimes are the same. For example, some jurisdictions consider the leverage ratio only of the local subsidiary on a stand-alone basis, while others apply a worldwide debt-to-capital ratio.

Second, the term ‘thin capitalisation’ itself is not an exact legal term; rather, it has both a narrow and a broad meaning. The narrow interpretation relates to the excessive use of debt financing compared to equity financing (or asset bases). On the other hand, the broad definition casts a wider net to include hybrid financing. The literature has given relatively little attention to the implications for the effectiveness of these rules in relation to the broader


definition.\(^98\) Studies that do exist in this context only focus on the European regimes, and make no mention of jurisdictions such as Australia.\(^99\)

Third, given the prevalence of thin capitalisation reforms, these rules are an exemplar of 20\(^{th}\) century tax policy convergence. However, just as their rise can be attributed to the convergence – mostly – of tax systems in Western democracies, so too can their impending decline. As observed in the OECD’s BEPS Final Report on Action 4 (‘Action 4 Report’), there is currently a trend away from applying fixed debt-to-equity ratios to instead applying fixed net interest-to-EBITDA ratios. This approach is thought to supply a better instrument to combat base erosion and profit shifting, and its emerging popularity is illustrated in the below Figure 6.\(^100\) However, commentators such as Burnett posit that a worldwide leverage ratio limit is preferable to a worldwide interest-to-earnings ratio limit because the latter is more prone to fluctuations caused by factors beyond the MNE’s control.\(^101\)

Figure 6 – Convergence towards fixed interest-to-earnings ratios

<table>
<thead>
<tr>
<th>Fixed interest to earnings (EBITDA) ratios in selected countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland: 25 per cent of EBITD calculated based on the taxable profit and loss account. The calculation is made by entity and adjusted by taking into account group contributions received or made.</td>
</tr>
<tr>
<td>Germany: 30 per cent of taxable EBITDA.</td>
</tr>
<tr>
<td>Greece: 30 per cent of EBITDA. Phased-in system according to which the percentage will reduce from 60 per cent in 2014 to 30 per cent in 2017.</td>
</tr>
<tr>
<td>Italy: 30 per cent of EBITDA, adjusted by adding rental payments under finance lease transactions.</td>
</tr>
<tr>
<td>Norway: 30 per cent of taxable EBITDA.</td>
</tr>
<tr>
<td>Portugal: 30 per cent of EBITDA, adjusted by excluding certain items such as income resulting from shares eligible for the participation exemption or attributable to a permanent establishment outside Portugal to which the option for exemption is applied. Phased-in system according to which the percentage will reduce from 70 per cent in 2013 to 30 per cent in 2017.</td>
</tr>
<tr>
<td>Spain: 30 per cent of operating profits adjusted by adding certain items such as depreciation and amortisation and financial income from equity investments.</td>
</tr>
<tr>
<td>United States: 50 per cent of adjusted taxable income, i.e. EBITDA plus specific deductions taken into account when calculating the taxable income.</td>
</tr>
</tbody>
</table>

Source: OECD (2014)

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\(^{98}\) Although Aschauer et al have extensively examined hybrid finance, thin capitalisation rules are specifically excluded from the scope of their paper: see Aschauer, Eberhartinger and Panny, above n 97, 115–33.

\(^{99}\) Klostermann, above n 97.


\(^{101}\) Burnett, above n 95, 45.
2.3.2.2 Policy focus

Given the difficulty of delineating and testing exactly what constitutes ‘excessive’ deductions, policymakers have typically utilised artificial caps and ratios – including ‘safe harbour’ debt/equity tests, leverage ratios and arm’s length rules – to restrict interest relief.

These artificial caps and ratios reflect a pragmatic policy focus, which prioritises administrative ease and taxpayer certainty. This existing policy focus of thin capitalisation rules’ debt/equity test was similarly articulated by the Action 4 Report, which observed that the ability of the debt/equity test to deliver administrative ease and taxpayer certainty was its main advantage.102

However, it is important to note that guiding principles used to instruct tax design are often in conflict, as emphasised in the above section 2.2.1. In relation to the policy focus of thin capitalisation rules, commentators such as Webber103 and policymakers such as the OECD104 have observed that prioritising administrative ease and taxpayer certainty has come at the expense of economic efficiency.

This is problematic because such non-neutralities create tax-induced distortions which provide the principal building blocks for tax planners.105 Utilising economic efficiency as one of the guiding tax policy criteria in the design of these rules would be consistent with a more principled approach – particularly since thin capitalisation rules are generally conceptualised as forming part of the anti-avoidance framework.

2.3.2.3 Eliminating the debt bias

Given the focus of thin capitalisation rules on restricting debt deductions, there is a general assumption in the literature that these rules are an effective anti-avoidance measure that eliminates the debt bias. This section presents a two-fold analysis of this assumption. First, it explores perceptions of both policymakers and commentators. Second, it reviews whether the effectiveness of these rules in ‘reducing’ the debt bias has been conflated with ‘eliminating’ the debt bias.

2.3.2.3.1 The perceived effectiveness of thin capitalisation rules

Thin capitalisation rules are perceived as effective by both policymakers and commentators, with this notion repeated throughout the empirical literature.

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102 OECD, above n 15, 21. However, determining the level of certainty is largely dependent on the actual rules in place domestically.
104 OECD, above n 15, 21.
105 Australian Government, above n 22.
This is exemplified by statements from policymakers such as Australia’s Board of Taxation, who have observed that “thin capitalisation rules address this ‘debt bias’ by limiting the allowable level of debt deductions for the taxpayer’s borrowings based on the level of debt”. Similarly, the perceived effectiveness of these rules is reflected in empirical studies by commentators such as Buettner et al and Blouin et al, who suggest that thin capitalisation rules remove tax incentives related to debt financing. Empirical studies from commentators such as Weichenrieder and Windischbauer, Overesch and Wamser, and Ruf and Schindler form part of a substantial body of empirical analysis, particularly in the context of the German thin capitalisation rules. However, it is also necessary to acknowledge two limitations of this analysis: first, Weichenrieder and Windischbauer focussed on the German context; second, the German thin capitalisation rules (which utilised a safe harbour debt-to-equity ratio of 3:1) have since been replaced by ‘interest ceiling rules’ (the “Zinssschranke”), which restrict interest relief based on an EBITDA ratio. Nonetheless, these studies consistently find that interest limitation rules are effective in reducing the debt-to-asset ratio of MNEs. The inference is that thin capitalisation rules are therefore effective.

### 2.3.2.3.2 Conflating compliance with effectiveness

It is important not to conflate reducing debt-to-asset ratios of MNEs with eliminating the debt bias. As highlighted by Weichenrieder and Windischbauer and noted by Ruf and Schindler, the ostensible effectiveness of thin capitalisation rules could also be explained by the fact that MNEs may utilise loopholes in regulations allowing them to bypass these limitations and leading to the false impression that the reform has been very effective.

While many studies explore the impacts of profit shifting induced by international tax differences, the behavioural responses induced by thin capitalisation rules on MNEs’ tax

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108 Blouin et al, above n 94.
113 Weichenrieder and Windischbauer, above n 109, 3.
114 Weichenrieder and Windischbauer, above n 109.
115 Ruf and Schindler, above n 112.
profit’ shifting decisions remain unexplored. Specifically, an analysis of thin capitalisation rules’ impact on both tax planning and investment decisions by MNEs is often neglected.\textsuperscript{117} This presents a key research gap which will be examined in subsequent chapters of this thesis.

\section*{2.4 ISSUES IN PRACTICE: UNINTENDED CONSEQUENCES OF UTILISING A PRAGMATIC APPROACH}

This section reviews the issues in practice in the implementation and operation of thin capitalisation regimes. Building on the analysis in the previous section 2.3.2.3.2, section 2.4.1 explores the assumption in the literature that these rules mitigate the debt bias.

This is followed by section 2.4.2, which examines whether, and if so how, thin capitalisation rules result in departures from the principle of economic efficiency. This is supplemented by a review of the economic basis for, and the legal design of, these rules in sections 2.4.3.1 and 2.4.3.2, respectively.

Despite the perceived effectiveness and continued tightening of thin capitalisation rules, the literature is currently lacking a cohesive analysis of the motivations, trends and effectiveness of amendments to Australia’s thin capitalisation regime. This provides the basis for a review in section 2.4.4 of the origins, evolution and impact of this regime since its inception.

Finally, section 2.4.5 reviews alternative reforms proposed to address issues in practice; most notably, the Action 4 Report.

\subsection*{2.4.1 Mitigating the debt bias, rather than eliminating it}

As noted in the above section 2.3.2.3.2, there is a general assumption in the literature that thin capitalisation rules are an effective anti-avoidance measure that eliminates the debt bias.

Several commentators and policymakers characterise these rules as mitigating the debt bias. For example, the literature contains a plethora of statements such as the following (emphasis added):

\begin{quote}
\textit{“Other methods of addressing debt bias ... include implementing/stronger thin capitalization rules”;}\textsuperscript{118} \textit{“The Member States that did broaden their corporate tax base}\end{quote}

\textsuperscript{117} “\textit{there being too few empirical studies investigating the effect of thin capitalisation rules on investment}”: Ruf and Schindler, above n 112, 18; see also, Merlo V, Riedel N and Wamser G, ‘The Impact of Thin Capitalization Rules on the Location of Multinational Firms’ Foreign Affiliates’ (CESifo Working Paper No 5449, July 2015) 2.

mostly focused on limiting interest deductibility to reduce the debt bias";\textsuperscript{119} “Our results indicate that thin capitalization rules mitigate the sensitivity of affiliate leverage ratios to corporate taxation”\textsuperscript{120} “Several policy options are available which could limit the tax bias towards debt financing ... [one] option is to implement thin capitalization rules”\textsuperscript{121} “[debt] bias is reduced by the interest deduction limitation rules”,\textsuperscript{122} and “Many countries have attempted to offset this debt bias ... by imposing thin capitalization rules”\textsuperscript{123}

The literature supports the proposition that thin capitalisation rules reduce debt ratios, which suggests that these rules do impact MNEs’ financing decisions. Buettner et al\textsuperscript{124} analyse the worldwide application of these rules,\textsuperscript{125} and find that their imposition results in a decline in internal debt-to-asset ratios. Despite acknowledging that the magnitude of internal debt shifting is relatively small, Buettner et al find that when thin capitalisation rules are introduced or tightened, the tax sensitivity of the internal debt ratio falls by about one half.\textsuperscript{126} Other empirical studies suggest that the debt-to-asset ratio is marginally tax sensitive.\textsuperscript{127}

However, what appears to have been understated by the literature is that thin capitalisation rules’ ability to reduce debt ratios should not be conflated with a deemed effectiveness at protecting the tax revenue base. There are significant econometric difficulties in consistently recording and identifying the impact of these rules, as noted by Ruf and Schindler.\textsuperscript{128} Also, the existing framework for assessing the tax advantages of debt is limited to using information on tax rates. As such, analysing other differences in tax rules which may impact MNEs’ financing

\begin{footnotesize}
\begin{enumerate}
\item Blouin J et al, ‘Thin Capitalization Rules and Multinational Firm Capital Structure’ (Oxford University Centre for Business Taxation Working Paper WP 13/23, November 2013) 27. It is noteworthy that this statement was removed from an updated version of the same paper published two months later, in Blouin et al, above n 94.
\item Buettner et al, above n 107.
\item Ruf and Schindler, above n 112.
\item Buettner et al, above n 107.
\item Ruf and Schindler, above n 112, 10.
\end{enumerate}
\end{footnotesize}
decisions remains largely understudied.\textsuperscript{129} It follows that the models and estimates of
behavioural elasticities required for judging an international corporate tax system definitively
are beyond the scope of current knowledge.\textsuperscript{130}

Even though there is an extensive and growing literature across a number of disciplines that
analyses corporate tax avoidance,\textsuperscript{131} there is limited research that directly studies the process
and structure of corporate tax planning.\textsuperscript{132} Notably, Mills et al find that MNEs invest more
heavily in tax planning than do domestic firms.\textsuperscript{132} However, the data underlying this research is
now from over two decades ago. Further, exploring compliance with thin capitalisation rules
was not specifically addressed by the research conducted by Mills et al.

Accordingly, this signals a gap in the literature on the question of whether MNEs generally
operate at or near the current legal limits of thin capitalisation rules. The notion that these rules
may simply encourage levels of debt at the specified threshold debt-to-equity ratios is
particularly problematic. If this is the case, then MNEs may be technically complying with thin
capitalisation rules but utilising other means of tax planning, such as hybrid finance, to
minimise their tax liabilities. So, while MNEs’ ability to shift expenses or income may appear to
be constrained by anti-avoidance rules such as transfer pricing or thin capitalisation rules, these
rules may simply result in the behavioural response of allocating financing at the prescribed
ratios.

In other words, there is empirical support for the proposition that thin capitalisation rules
restrict (or mitigate) the incentive to utilise debt financing beyond the allowable limits to claim
interest deductions. This result is illustrated in Table 2 below.

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|c|}
\hline
& \textbf{Scope of the rule} & \textbf{Distortions to funding neutrality} & \textbf{Impact on behavioural responses} \\
\hline
\textbf{Interest} & \checkmark & \checkmark & \checkmark & Unclear & Neglects & Mitigates \\
\textbf{Dividends} & \textbf{\textit{t}}^D = \textbf{\textit{t}}^{\text{capped}} \textbf{\%} & \textbf{\textit{t}}^E = 0\textbf{\%} & \checkmark & & & \\
\textbf{Royalties} & & & & & & \\
\textbf{Rents on leasing} & & & & & & \\
\hline
\end{tabular}
\caption{Summary of tax treatment under thin capitalisation rules}
\end{table}

Source: Author’s own

\begin{flushright}
\textsuperscript{129} Blouin et al, above n 94, 3.
\textsuperscript{130} Grubert and Altshuler, above n 23, 319–21.
\textsuperscript{131} For instance, for an analysis of the impact of corporate governance and executive compensation on tax
avoidance activity, see Desai M A and Dharmapala D, ‘Taxation and Corporate Governance: An
\textsuperscript{132} Desai and Dharmapala, above n 131.
\textsuperscript{133} Mills L, Erickson M E and Maydew E L, ‘Investments in Tax Planning’ (1998) 20(1) \textit{The Journal of
the American Taxation Association} 1, 11.
\end{flushright}
Under thin capitalisation rules the amount of debt deductions are capped ($r^D = r^{\text{capped}}$). On the other hand, equity deductions are effectively denied ($r^E = 0\%$). However, what is not supported by the empirical evidence is the logical extension that, in turn, these rules definitively protect the tax revenue base. Rather, it remains unclear whether these limits have the effect of directing base erosion techniques of MNEs into other deductible payments that are not so constrained.

Similarly, it remains unclear whether these rules address the underlying tax-induced distortion which causes the behavioural response of thinly capitalising entities in higher-taxing jurisdictions. Conceptualised in this way, limiting the deductibility of interest expenses may be misplaced in that such a limitation does not address the tax-induced cross-border funding bias by equalising the tax treatment of economically equivalent financing alternatives.

Accordingly, it is instructive to examine whether, and to what extent, existing regimes satisfy the good tax design criteria. This is the focus of the following section 2.4.2.

### 2.4.2 Departures from economic efficiency

Given the lack of clarity around whether thin capitalisation rules address the underlying tax-induced distortion which causes the behavioural response of thinly capitalising entities in higher-taxing jurisdictions, it is instructive and necessary to further explore the literature, with a focus on the principle of economic efficiency.

Kleinbard\textsuperscript{134} notes that the two most comprehensive and recent overviews of thin capitalisation regimes were conducted by Edgar et al and Webber. Each are dealt with in turn below.

Edgar et al note that the legislative model presently adopted is a preferable form of interest deductibility restriction in a second-best world in which tax policymakers pursue the maximisation of national welfare. This is on the assumption that interest limitation rules achieve a balance between protecting the tax revenue base while simultaneously encouraging both inbound and outbound direct investment flows.\textsuperscript{135} While Edgar et al analyse the possible revenue and efficiency effects of an unrestricted interest expense deduction, this analysis is not similarly carried out in the context of thin capitalisation rules. Further, their efficiency-related analysis is limited to the following three behavioural margins: first, the choice between intercompany debt and equity financing; second, the location of external debt; and third, the location of investment. As such, there is no emphasis on the distortion arising from the wider cross-border funding bias.


Consistent with the wider economic literature referred to in the above section 2.2.2, Webber focuses on the debate in relation to CIN,136 CEN137 and CON.138 By omitting funding neutrality as a relevant benchmark,139 Webber’s analysis reflects the focus of the broader literature.140 This is particularly significant given these rules’ emphasis on delineating the tax treatment of different types of funding.

However, there is no compelling reason why debt should be actively tax-favoured. Although interest limitation rules deny ‘excessive’ interest deductions, they have been widely criticised as essentially ad hoc, and failing to capture all avoidance-related transactions or to acknowledge the differing debt capacities of different companies.141 Even though these rules are generally characterised as part of the anti-avoidance framework, this view is also questionable because they are more akin to structural changes to interest deductibility rather than ‘targeted anti-abuse rules’.142

This is because interest limitation rules prioritise simplicity at the expense of economic efficiency, and by focussing on debt only are too narrow in scope to attain neutrality. On the other hand, if funding neutrality were to be addressed, the resulting neutrality would in theory make these rules redundant.143

Of course, in the absence of international tax coordination, full tax neutrality cannot be obtained, as tax rates and systems will still differ. However, it is still possible to encourage neutrality where practicable as a second-best solution.

Accordingly, two key observations emerge from a review of these studies. First, the literature remains largely silent on the absence of funding neutrality in the design of interest limitation rules. Second, the literature is currently lacking a thorough examination of whether the Australian thin capitalisation regime satisfies the good tax design criteria.144

136 See further, Gravelle, above n 65, 5.
137 See further, Gravelle, above n 65, 5.
138 See further, Desai and Hines, above n 67.
139 See also, Australian Government, above n 22.
140 See, for example, Shaheen, above n 68.
2.4.3 Critiques in economics and law

Burnett and Brown both critique the ‘anti-abuse’ characterisation of thin capitalisation rules, observing that these rules are better described as structural changes aimed at mitigating the ‘excess’ deductibility of interest expenses. De Mooij notes that despite the appearance of compliance by MNEs, these rules may give rise to the unintended consequence of reducing investment. Further, since these rules are ad-hoc and not well targeted, they are often bypassed by MNEs who instead utilised hybrid instruments and international differences in definitions of debt and equity.

Despite their tax design issues, these rules remain understudied in the corporate finance literature. Accordingly, the remainder of this section 2.4.3 explores the key issues in both their economic basis and legal design.

2.4.3.1 Lack of economic basis

Many thin capitalisation regimes currently apply an arm’s length test, among other rules. Accordingly, it is instructive to review the key weaknesses in the arm’s length principle: first, these rules are based on a fundamentally flawed fiction; second, these rules are complex and ineffective; third, these rules have become increasingly difficult to replace with a more transparent system for political reasons, presenting an international tax policy challenge; and fourth, it might be difficult to apply transfer pricing controls solely to cross-border intercompany transactions on the basis of the non-discrimination principle. Each critique is detailed in turn.

2.4.3.1.1 A fundamentally flawed fiction

The international norm of the arm’s length principle enables intercompany transfer prices to be set as if related parties were transacting as unrelated parties in a competitive environment. However, this contradicts the modern theory of the firm, which posits that intercompany

145 Burnett, above n 95, 45.
146 Brown, above n 142, 40-41.
147 De Mooij R A, ‘Written Evidence Submitted by the International Monetary Fund’ (Fiscal Affairs Department, UK Parliamentary Commission for Banking Standards, 24 June 2013) 502.
148 De Mooij, above n 147, 502.
149 Ruf and Schindler, above n 112; Arnold, above n 96, 512; Piltz, above n 96, 89; Dourado and de la Feria, above n 93.
transactions differ significantly from market transactions and that the “raison d’être of multinational firms is that the whole is greater than the sum of the parts”.

Since an MNE would likely prefer to use intercompany transactions when the transaction costs of market transactions are relatively higher, this presents a fundamental flaw in the arm’s length principle. Commentators such as Avi-Yonah, Clausing and Durst observe that, by allowing the application of the arm’s length principle to cross-border intercompany transactions, the current international tax system is built on a fallacy. Benshalom also observes that the current regime is irreparably broken, in part since the arm’s length standard is “so inept at dealing with these transactions”.

Academics, practitioners and policymakers have made similar observations – albeit in the narrower sphere of tax planning using interest deductibility. Commentators including Rectenwald, Benshalom, and Schön and Morse describe the arm’s length principle in the context of cross-border transactions as follows outmoded, lacking a strong theoretical basis, disconnected from commercial rationality, and subject to abuse.

Yet, the notion that arm’s length pricing may be inconsistent with the commercial realities of MNEs’ intercompany transactions is not a new proposition. The seminal work of both

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151 “This logic lies at the heart of Coase (1937) and is central to the remaining modern work on the theory of the firm”: Raboy and Wiggins, above n 150, 348, and references cited therein at footnote 2.


153 “multinational groups of companies arise precisely in order to avoid the inefficiencies that arise when unrelated companies must transact with one another at arm’s length ... the problems with the current system derive not from rules at its periphery, but instead from a fallacy that lies at the system’s central core: namely, the belief that transactions among unrelated parties can be found that are sufficiently comparable to transactions among members of multinational groups that they can be used as meaningful benchmarks for tax compliance and enforcement”: Avi-Yonah R S, Clausing K A and Durst M C, ‘Allocating Business Profits for Tax Purposes: A Proposal to Adopt a Formulary Profit Split’ (2009) 9(5) Florida Tax Review 497, 503.


158 Rectenwald, above n 155, 446.

159 Schön, above n 157, and references cited therein at footnotes 89–91.
Schmalenbach and Hirshleifer over a century ago and over 50 years ago, respectively, showed that the starting point for intercompany optimal transfer pricing should be the ‘marginal cost’ not the ‘market price’. This assessment in both the German and the Anglo-American literature is part of the business discipline – rather than the fields of economics or tax law.

Even though transfer pricing issues are subject to intensive controversies within these disciplines, this scepticism extends beyond the academic realm to policymakers. This is exemplified by both national and international accounting standards approaching arm’s length pricing in the intercompany context with scepticism.

Turning to the OECD, its Action 4 Report observed that, in theory, if intercompany interest rates exceeded those of unrelated party loans, the MNE would reduce internal financing. Schön also makes the observation that deliberate attempts by MNEs to engage in base erosion by manipulating so-called ‘arm’s length’ pricing may be countered by domestic anti-avoidance legislation. For example, in 2013 Australia attempted to address this by introducing the Tax Laws Amendment (Countering Tax Avoidance and Multinational Profit Shifting) Bill 2013 (Cth), which amended the general anti-avoidance rule in Part IVA of the Income Tax Assessment Act 1936 (Cth) and introduced new transfer pricing provisions into Division 815 of the Income Tax Assessment Act 1997 (Cth). For completeness, the Board of Taxation more recently released a number of reports dealing with the debt and equity tax rules, the thin

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160 The original text is in the oldest and most prestigious German business journal: Schmalenbach E, ‘Über Verrechnungspreise’ (1908/09) 3 Zeitschrift für betriebswirtschaftliche Forschung 165.

161 “If the market is imperfectly competitive, or where no market for the transferred commodity exists, the correct procedure is to transfer at marginal cost (given certain simplifying conditions) or at some price between marginal cost and market price in the most general case”: Hirshleifer J, ‘On the Economics of Transfer Pricing’ (1956) 29 Journal of Business 172.

162 Schön, above n 157, and references cited therein at footnotes 89–91.


166 Importantly, the International Tax Agreements Act 1953 (Cth) has long said that Australian tax treaties are subject to Part IVA: “The application and scope of Australia’s tax treaties is subject to the operation of the general anti-avoidance provision, Part IVA of the ITAA 1936 (Part IVA). That is to say, while section 4 of the International Tax Agreements Act 1953 (Agreements Act) incorporates within it the ITAA 1936 and the ITAA 1997, and its provisions have effect notwithstanding anything inconsistent in those Acts, subsection 4(2) of the Agreements Act reserves that position in respect of the operation of Part IVA”: Australian Government, Australian Taxation Office, Income tax: treaty shopping – can Part IVA of the Income Tax Assessment Act 1936 apply to arrangements designed to alter the intended effect of Australia’s International Tax Agreements network?, ATO Taxation Determination TD 2010/20 (1 December 2010) 5.
capitalisation arm’s length debt test and tax arrangements applying to permanent establishments (‘PEs’), among others.\textsuperscript{167}

Nonetheless, interest deductions arising from internal financing are often disproportionately large.\textsuperscript{168} This is exemplified by the facts of the Chevron case,\textsuperscript{169} where the interest rate payable by the Australian borrower on a US$2.5bn loan from a US subsidiary was at a significant mark-up to the funding costs of the US subsidiary; at AUD-LIBOR + 4.14%. The implications of this case are further explored in section 2.4.4.3.

These issues underscore the need to explore new solutions, rather than rely on perceived best practices in arm’s length transactions.\textsuperscript{170}

\textbf{2.4.3.1.2 Political pressures}

The key challenges are two-fold concerning both the amount of debt and the interest rate charged on that debt. On the latter issue, the OECD’s BEPS Project has shown its continued support of the arm’s length principle. Beyond the OECD, international organisations, governments and policymakers including the European Union (‘EU’), the United Nations (‘UN’) and the US Treasury, support arm’s length pricing as an appropriate benchmark when assigning income and deductions at an intercompany level.\textsuperscript{171}

It is also noteworthy that any attempts to replace the arm’s length principle with a more transparent system would likely be prone to substantial resistance from the few large MNEs

\begin{footnotesize}
\begin{itemize}
\item[\textsuperscript{169}]Chevron Australia Holdings Pty Ltd v Commissioner of Taxation (No 4) [2015] FCA 1092 (‘Chevron’).
\item[\textsuperscript{170}]Brauner, above n 18, 24.
\item[\textsuperscript{171}]Morse, above n 156, 1421; see further, “[T]he view of OECD Member countries continues to be that the arm’s length principle should govern the evaluation of transfer prices among associated enterprises ... The arm’s length principle is sound in theory ... [it] reflects the economic realities of the controlled taxpayer’s particular facts and circumstances and adopts as a benchmark the normal operation of the market”: OECD, ‘The Arm’s Length Principle’ in OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations 2009 29; “In determining the true taxable income of a controlled taxpayer, the standard to be applied in every case is that of a taxpayer dealing at arm’s length with an uncontrolled taxpayer”: US Treasury Regulation § 1.482-1(b)(1) (2012); see further, Schön, above n 157, 77, citing Société de Gestion Industrielle SA v Belgium (C-311/08) [2010] ECR I-00487, decided by the European Court of Justice, which referenced the arm’s length standard as an appropriate tool to combat “abusive arrangements”; see also, United Nations, United Nations Model Double Taxation Convention between Developed and Developing Countries (UN Department of Economic and Social Affairs, 2011) 15–16 and 66–7.
\end{itemize}
\end{footnotesize}
capable of benefiting most from the existing system.\textsuperscript{172} This political asymmetry is difficult to overcome.

\subsection*{2.4.3.1.3 Complexities and ineffectiveness}

In the context of the arm’s length debt test, the absence of an active market for intercompany transactions necessitates implementing a complex regulatory framework with burdensome compliance requirements, which has resulted in a lack of administrability. There is a growing body of literature criticising the arm’s length standard as an inadequate approach to taxing MNEs.\textsuperscript{173} MNEs’ unique ability to shift the location of assets, liabilities, profits and expenses by ‘paper transactions’ renders the location of MNEs’ production ambiguous and, at times, unobservable. This impairs the accuracy of the allocation of output and income across countries and geographic regions,\textsuperscript{174} and is in stark contrast to observable market transactions which formed the conceptual basis for the arm’s length principle. This divergence may cause confusion on a theoretical level, and is even more problematic on a practical level when policymakers implement and attempt to administer the concept.

Avi-Yonah, Taylor, and Altshuler and Ackerman highlight the complexity of the current system,\textsuperscript{175} in both design and administration.\textsuperscript{176}

This is exacerbated by the fact that arm’s length pricing may not even be a suitable approach to dealing with BEPS. Vann and Burnett have observed that arm’s length tests are often associated with administrative complexity and a high taxpayer compliance burden, which results in both uncertainty and ineffectiveness.\textsuperscript{177}

Indeed, the current network of transfer pricing rules has spawned a substantial tax planning industry consisting of lawyers, accountants and economists who specialise in MNE transfer pricing planning and compliance.\textsuperscript{178} This is symptomatic of the absence of a theoretically sound,

\begin{thebibliography}{99}
\bibitem{172} “the corporate taxpayers with the greatest pull over tax policy are preoccupied by a culture of tax avoidance”: Rectenwald, above n 155, 449, and references cited therein.
\bibitem{173} See, for example: Rectenwald, above n 155, 427–8.
\bibitem{176} Altshuler R and Ackerman J, ‘International Aspects of Recommendations from the President’s Advisory Panel on Federal Tax Reform’ (International Tax Policy Forum Presentation, 2 December 2005).
\bibitem{177} Vann R and Burnett C, ‘Re: BEPS Action 4 Discussion Draft dated 18 December 2014’ (Comment received on Public Discussion Draft, BEPS Action 4: Interest Deductions and Other Financial Payments, 6 February 2015) 234; see further, Vann, above n 156.
\bibitem{178} Avi-Yonah and Clausing, above n 175, 9.
\end{thebibliography}
principled underpinning for these rules. The broader criticism of arm’s length debt pricing can be extrapolated to arm’s length debt amounts. Such non-neutralities present incentives to devote socially wasteful effort to reducing tax payments by changing the form or substance of business activities.\footnote{Mirrlees Review, above n 39, 40; see also, Dharmapala D, ‘The Economics of Corporate and Business Tax Reform’ (Coase-Sandor Institute for Law and Economics Working Paper No 757, University of Chicago Law School, February 2016).}

\subsection*{2.4.3.2 Legal design weaknesses}

There are five key legal design weaknesses inherent in existing thin capitalisation rules: first, their development is ad hoc; second, they create an unnecessary compliance burden for the majority of MNEs which do not fall within the target group of tax-aggressive MNEs; third, MNEs operating at the legal limits of these interest limitation rules can potentially respond to regulatory tightening by changing their funding mix; fourth, these rules give rise to tax arbitrage opportunities; and fifth, the framework for these rules is exceedingly complicated.

\subsubsection*{2.4.3.2.1 Ad hoc development}

Thin capitalisation rules are typically developed in an ad hoc manner. No two countries have identical interest limitation rules. Further, these regimes appear to be rather unstable – most countries have rewritten theirs at least once. Despite the variability, most countries’ rules sit somewhere along a spectrum which has at one end a stand-alone entity approach, and at the other end a worldwide ratio approach. Burnett questions the appropriateness of a single arm’s length leverage ratio or interest rate for a given subsidiary, or even a workable range of ratios and rates.\footnote{Burnett, above n 95.} Even though empirical evidence supports the proposition that thin capitalisation rules technically restrict internal borrowing by MNEs,\footnote{Overesch M and Wamser G, ‘Bilateral Internal Debt Financing and Tax Planning of Multinational Firms’ (2014) 42(2) Review of Quantitative Finance and Accounting 191; Buettner et al, above n 107; Ruf and Schindler, above n 112.} it is relatively simple for MNEs to circumvent these rules. For example, entities falling outside the threshold levels are openly advised to reassess their thin capitalisation positions by either reducing debt, revaluing assets or recapitalising to prevent the denial of interest expenditure.\footnote{PwC, ‘Tighter Thin Capitalisation Regime to Limit Australian Debt Deductions’ (26 September 2013) <http://www.pwc.com.au/tax/federal-budget/2013/thin-capitalisation.htm>.} Accordingly, thin capitalisation rules are reactionary provisions that fail to effectively target many avoidance-related transactions.\footnote{Cottarelli, above n 141, 13.}
2.4.3.2.2 Unnecessary compliance burden

Ruf and Schindler posit that the empirical evidence supports the proposition that, for the average MNE, there is no need to implement thin capitalisation rules.\(^{184}\) If this is the case then the applicability of these complex rules to non-tax-aggressive MNEs constitutes an unnecessarily onerous administrative burden.

Further, Ruf and Schindler observe that the mismatch between empirical evidence and anecdotal evidence provided by tax consultants and auditors is attributable to the fact that only a few large MNEs engage in aggressive tax planning.\(^{185}\) This evidence remains anecdotal, with other commentators such as Vann observing that new FDI in Australia is often financed at or around the legal limits and that internal debt is often not recorded in FDI statistics, suggesting that what is currently regarded as portfolio debt in Australia is probably disguised FDI.\(^{186}\) This highlights a research gap relating to the proposition that it is common for new FDI in Australia to be financed at or around the debt-to-equity ratio limit.

2.4.3.2.3 Tax arbitrage opportunities

Thin capitalisation rules may be avoided by MNEs that can exploit tax arbitrage opportunities by using hybrid financial instruments and international differences in definitions of debt and equity.\(^{187}\) Despite the literature acknowledging these issues,\(^{188}\) very few empirical papers examine this aspect.\(^{189}\) Burnett suggests that intercompany debt and third-party debt are substitutable.\(^{190}\) However, research in this area lacks surveys or interviews with accounting and law firm partners, and private equity firm managers. This could be the subject of future research.

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\(^{184}\) Ruf and Schindler, above n 112, 24.

\(^{185}\) Ruf and Schindler, above n 112, 24–8.


\(^{187}\) By way of background, the difference between debt and equity stems from the legal, finance and accounting realms, rather than being grounded in tax or economic principles. Unlike finance, neither tax nor economics is concerned with the function of debt as a safeguard for third party liabilities. Accordingly, the non-neutrality in the tax treatment between debt and equity finance (in other words, the tax-induced debt bias) is distortive from a tax perspective, creates complexity, encourages avoidance and adds unnecessary administrative and compliance costs for both MNEs and governments. These issues are exacerbated in the context of cross-border hybrids: OECD, Public Discussion Draft, \textit{BEPS Action 2: Neutralise the Effects of Hybrid Mismatch Arrangements (Recommendations for Domestic Laws)}, 19 March 2014 – 2 May 2014 <http://www.oecd.org/ctp/aggressive/hybrid-mismatch-arrangements-discussion-draft-domestic-laws-recommendations-march-2014.pdf>.


\(^{189}\) The only detailed discussion of the treatment of hybrid finance under thin capitalisation rules appears to be in Klostermann, above n 97.

\(^{190}\) Burnett, above n 95, and studies cited therein.
Instead, the literature analysing thin capitalisation rules focusses on their impact on intercompany loans, and is generally limited to datasets from the United States (‘US’) and the EU. Further, the finance literature often identifies the tax deductibility of debt as the most significant factor governing the choice between third-party debt and equity finance. However, from an economic substance perspective, the reasons put forward to distinguish third-party debt from equity generally do not hold in intercompany situations.

### 2.4.3.2.4 Exceedingly complicated framework

There is also a strong consensus that the existing thin capitalisation framework is highly technical and complicated. There is a wider international tax framework including but not limited to complex debt and equity rules; dividend imputation and corporate shareholder taxation issues; withholding taxes; other jurisdictions’ interest limitation rules; bilateral tax treaties; interactions with the OECD Model Tax Convention, including arts 9(1) and 24(4); OECD Guidelines; and other OECD materials.

For instance, Australia’s existing thin capitalisation regime contained in Division 820 of the ITAA97 currently spans over 150 pages of legislation, with highly technical rules requiring complicated calculations. This calls into question whether these rules (and other associated rules) achieve simplicity and transparency. It is also arguable that the existing legal design of these rules conflicts with the effectiveness and fairness principles. Further, as observed in the above section 2.4.2, a thorough examination of this regime is currently a research gap.

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191 Data was used from the US Bureau of Economic Analysis: Desai, Foley and Hines, above n 127.
192 A large micro-level panel dataset of virtually all German MNEs compiled by Deutsche Bundesbank, which included information about the actual amount of internal debt used by foreign affiliates, distinguished into loans from the parent and loans received from other foreign affiliates: Buettner T and Wamser G, ‘Internal Debt and Multinational Profit Shifting: Empirical Evidence from Firm-Level Panel Data’ (2013) 66(1) National Tax Journal 63, 69.
193 Burnett, above n 95, 57–62. Burnett’s ‘Proposition 1’, that “Intra-group debt is a close or perfect substitute for equity, pre-tax”, is widely accepted among both tax lawyers and economists.
195 Importantly, the Henry Review criticised Australia’s current treatment of foreign debt as complex and distortionary, recommending a reduction in the interest withholding tax rate to zero among tax treaty partners. With an effective interest withholding tax rate of 3.5%, liability for withholding tax would likely not outweigh the advantages of interest deductibility given comparative levels of corporate tax. While the literature has recognised the debt bias as prevalent in the foreign debt context, policymakers have called for the reduction of interest withholding tax to 0% provided appropriate safeguards exist to limit tax avoidance: “Recommendation 34: Consideration should be given to negotiating, in future tax treaties or amendments to treaties, a reduction in interest withholding tax to zero so long as there are appropriate safeguards to limit tax avoidance”: Australian Government, Department of the Treasury, ‘Australia’s Future Tax System: A Report to the Treasurer’, December 2009 (‘Henry Review’), Part 1, 87.
196 Webber, above n 103.
Accordingly, the following section 2.4.4 presents a longitudinal legal analysis of Australia’s past and present thin capitalisation regimes.

2.4.4 Legal analysis of Australia’s thin capitalisation regime

A longitudinal legal analysis of Australia’s thin capitalisation regimes is currently lacking, with the literature containing mostly piecemeal analysis, somewhat reflecting the process of continual development of this regime. By synthesising the motivations, trends and effectiveness of amendments, this section creates a cohesive ‘literature’ on the topic of Australia’s thin capitalisation regime.

2.4.4.1 The 1987 Regime

Even though the current thin capitalisation regime was implemented in Australia in 2001 (the ‘2001 Regime’), interest limitation rules were first implemented in Australia in 1987 (the ‘1987 Regime’) as Division 16F of the Income Tax Assessment Act 1936 (Cth). This section provides a top-level summary of the rationales for reform of the 1987 Regime. This presents the context for, and historical background to, the 2001 Regime.

The 1987 Regime replaced rules administered by the Foreign Investment Review Board (‘FIRB’) requiring inbound non-resident investors to maintain certain debt-to-equity ratios. As such, this regime was unique in that it was the first time legislators had directly addressed in detail accounting balance sheet concepts. The OECD Council had released in November 1986 its recommendation that thin capitalisation rules utilise a flexible case-by-case approach, rather than hard-and-fast debt-to-equity ratios. Yet, in what was described as “flagrant disregard to the recommendations of the OECD Council”, the 1987 Regime centred on the latter approach.

Two of the key definitions were those of “foreign controller” and “foreign debt”. The definition of foreign controller was particularly significant because the 1987 Regime would not apply unless there was a foreign controller of a resident entity. The definition of foreign debt required a calculation by reference solely to the amount in respect of which interest was payable to foreign controllers and non-resident associates thereof.

Described as draconian, complex, unclear and cumbersome by tax practitioners, six key difficulties arose in relation to the 1987 Regime. First, it was criticised by practitioners for

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200 Section 159GZE.
201 Section 159GZF.
202 Williamson, above n 199, 216.
creating an overly onerous compliance burden which could have been avoided by making technical adjustments to the legislation.\textsuperscript{204} This was mostly due to the calculation requirements. For example, the “foreign debt” calculation effectively required a daily conversion.\textsuperscript{205}

Second, strict definitional\textsuperscript{206} and calculation\textsuperscript{207} issues were perceived to give rise to inequities.

Third, the combination of the first two issues invariably gave rise to distortions. For example, on the definition of “foreign controller”, when a company which was not a group company had a foreign controller from which it borrowed interest, if the foreign controller did not have a direct equity interest in the resident company it would automatically fail the thin capitalisation rules.\textsuperscript{208} Similar distortions arose from the bona fide use of intercompany debts, which the Australian Taxation Office (‘ATO’) suggested could be overcome by reducing debt balances at year end. However, practitioners observed that this in itself would constitute tax-driven manipulation which could give rise to the application of Part IVA.\textsuperscript{209}

Fourth, issues of uncertainty arose due to related legislation not being released in a timely manner.\textsuperscript{210}

Fifth, some practitioners argued that due to its form-over-substance approach, the legislation would give rise to a counter-intuitive outcome compared to its underlying policy aims, benefiting non-resident banks rather than foreigners investing on a longer-term basis.\textsuperscript{211}

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\textsuperscript{204} Spence, above n 197, 17.
\textsuperscript{206} “This represents a serious inequity in the legislation … as debt due to the Australian company by its foreign controller and non-resident associates reduces the foreign equity of the Australian company and therefore increases the possibility of the Division applying to preclude a deduction for interest paid to foreign controllers and their non-resident associates”: Williamson, above n 199, 205.
\textsuperscript{207} “It should be emphasised that it is not only a proportion of foreign debt interest paid over the time the company exceeded its ratio but the proportional interest for the whole year that will be disallowed … Surely a more equitable way to calculate interest on the excess debt would be by using average debt figures which would have a far more accurate result”: Horton, above n 203, 20.
\textsuperscript{209} “it is apparent that the legislation as presently drafted will create some substantial anomalies … the thin capitalisation legislation as presently drafted will unnecessarily distort normal commercial arrangements”: Spence, above n 197, 17.
\textsuperscript{210} “A taxpayer may act now to resolve a thin capitalisation anomaly only to find after the debt restructuring legislation is released that they are denied deductions under these new provisions”: Spence, above n 197, 17.
\textsuperscript{211} “The policy favours non-resident banks lending money to residents rather than foreigners investing into the country on a permanent basis … A preferable approach would have been to adopt … a substance over form approach”: Williamson, above n 199, 216.
\end{flushleft}
Finally, the intention of the 1987 Regime was to penalise MNEs if they failed to observe the requisite level of capitalisation of foreign enterprises. Such a penalty did not exist under the previous FIRB rules.\(^\text{212}\) This led to commentators such as Spence questioning whether the 1987 Regime was merely a revenue preservation mechanism, rather than an anti-avoidance measure.\(^\text{213}\)

On the other hand, practitioners such as Williamson observed that if the intention of the legislators was to implement an anti-avoidance measure, the debt bias could have instead been eliminated by equalising the interest and dividend withholding tax rates, rather than implementing the 1987 Regime.\(^\text{214}\)

Turning to the history of the 1987 Regime, there were 12 legislative amendments, at least 8 of which could be characterised as ‘minor’. The only amendments which introduced new sections or enhanced the scope of the rules were the two 1991 amendments and the 1999 amendment.

Enacted in 1987, the originating legislation was implemented to prevent an annual tax revenue loss of over $50 million\(^\text{215}\) by limiting relief on interest deductions “incurred by Australian companies or entities on borrowing from foreign non-arm’s length sources” where the debt-to-equity ratio exceeded 3:1 (or 6:1) for investments (or financial institutions).\(^\text{216}\)

The three subsequent amendments enacted from 1988\(^\text{217}\) to 1990\(^\text{218}\) were relatively minor. The 1988 amendment was enacted “to effect minor changes”,\(^\text{219}\) including clarifying the scope of the rules to remove uncertainties, and was anticipated to have “a negligible impact on revenue”.\(^\text{220}\) These changes arguably ought to have been in the originating legislation. The purposes of the two amendments enacted in 1990 were to broaden the scope of “foreign controller” to include Australian-owned non-resident companies,\(^\text{221}\) and to streamline the


\(^{213}\) “… it has not been suggested that these measures are being introduced to counter ‘tax avoidance or evasion”’: Spence, above n 197, 17. A specific set of anti-avoidance provisions were contained within the 1987 Regime; see further, Murphy T P, ‘Thin Capitalisation’ (1988) 17 Australian Tax Review 164, 173–5.

\(^{214}\) “… that concessional treatment could have been withdrawn with interest payments being subjected to the same rate of withholding tax as dividend payments. By implementing this policy the Government could have eliminated the current debt bias in favour of investing in Australia purely by loan funds rather than a combination of long-term equity and loan investments”: Williamson, above n 199, 216.

\(^{215}\) Explanatory Memorandum, Taxation Laws Amendment Bill (No 4) 1987 (Cth) 4.

\(^{216}\) Taxation Laws Amendment Act (No 4) 1987 (Cth); Explanatory Memorandum, above n 215, 2.

\(^{217}\) Taxation Laws Amendment Act (No 2) 1988 (Cth).

\(^{218}\) Taxation Laws Amendment Act (No 3) 1990 (Cth) (‘TLAA (No 3) 1990’) and Taxation Laws Amendment Act (No 5) 1990 (Cth) (‘TLAA (No 5) 1990’). See also Explanatory Memorandum, above n 219, 4.

\(^{219}\) Explanatory Memorandum, Taxation Laws Amendment Bill (No 2) 1988 (Cth) 2.

\(^{220}\) Explanatory Memorandum, above n 219, 4.

\(^{221}\) TLAA (No 3) 1990, above n 218, s 5.
definition of spouse to include both legally married and de facto spouses pursuant to the *Sex Discrimination Act 1984* (Cth). While it may not have been possible to anticipate the latter, it is arguable that the former ought to have been in the originating legislation even though it was deemed to have “negligible revenue impact”.

The two 1991 amendments introduced two new sections into the 1987 Regime. The first fine-tuned the thin capitalisation calculations, including by adding exemptions for short-term accounts. The second excluded from the scope of ‘foreign debt’ debentures that qualify for the interest withholding tax exemption. Even though the explanatory memorandum anticipated that the financial impact of this change would be “unquantifiable, but not substantial”, it is not clear whether this amendment is consistent with the underlying policy of the originating legislation. This is because, if the exemption applies to debt accessed through the corporate treasury of an MNE, then this will invariably encourage a distortion in how foreign debt is utilised.

In 1992, an amendment removed the section 159GZT requirement for elections to be lodged with the Commissioner, in line with a suite of amendments to assist with self-assessment. Even though this amendment would not assist with the protection of the tax revenue base, it would likely assist with reducing compliance costs.

Substantially more important were the two 1997 amendments to the 1987 Regime. The first of these made consequential amendments to reflect that dual-resident companies should be subject to thin capitalisation rules. Further, the interest withholding tax section in the first 1997 amendment is also pertinent. Even though the interest withholding tax implications for multinational banks are beyond the scope of this study, it is instructive to detail the background to this amendment since it deals with notional deductibility. Specifically, as detailed in the supplementary explanatory memorandum, the definition of interest was streamlined with the interest withholding tax provisions “… to prevent the proposed new section 128F being used to circumvent the notional equity rule the term ‘interest’”: There is little literature on this notional equity rule and whether it could be applied more broadly. Rather, the notional equity rule was removed with the introduction of the 2001

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222 TLAA (No 5) 1990, above n 218.
223 TLAA (No 3) 1990, above n 218, s 4.
224 *Taxation Laws Amendment Act (No 4) 1990* (Cth).
225 *Taxation Laws Amendment Act (No 2) 1991* (Cth).
226 Explanatory Memorandum, Taxation Laws Amendment Bill (No 2) 1991 (Cth) 4.
228 Explanatory Memorandum, Taxation Laws Amendment Bill (No 2) 1997 (Cth) 33. For completeness, it is noteworthy that the dual-resident companies provisions were anticipated to generate a revenue saving of $50–100 million annually: *Taxation Laws Amendment Act (No 2) 1997* (Cth) ss 2–3.
229 See further, Supplementary Explanatory Memorandum, Taxation Laws Amendment Bill (No 2) 1997 (Cth) 12.
Regime.\textsuperscript{230} One remnant of the operation of this provision is contained in the following extract of a Treasury submission to the 1997 Financial System Inquiry (‘FSI’):\textsuperscript{231} “With the interaction of the notional equity rules (which deem 4 per cent of interest payments to be non-deductible), IWT is applied to half of the remaining interest expense”.

The same FSI submission by Treasury also mentions industry’s recommendation for full exemption from interest withholding tax in this context, and the policy rationale for its rejection.\textsuperscript{232} It is noteworthy that this thinking was later bypassed with the aim of making Australia “a regional financial centre”.\textsuperscript{233}

The second 1997 amendment was even more substantial. It reduced the debt-to-equity ratio from 3:1 to 2:1\textsuperscript{234} and streamlined amendments to the definition of “interest” and the repeal of related party safeguards relating to arrangements using intermediaries to give related party transactions the appearance of being transactions between arm’s length parties on the basis that Part IVA was considered sufficiently effective at targeting those arrangements.\textsuperscript{235}

While the purpose of tightening the debt-to-equity ratio is invariably to protect the tax revenue base, the financial impact of the entire suite of seven amendments to the thin capitalisation rules was forecast at $70–75 million annually with “a minor increase in compliance costs”.\textsuperscript{236}

In contrast, both 1998 amendments constituted repealing and substituting definitions which could be characterised as fine-tuning rather than policy developments; for example, substituting “ADI” in place of “financial institution”,\textsuperscript{237} and removing “paid-up value”.\textsuperscript{238}

On the other hand, the 1999 amendment reflected a significant improvement from the foreign bank perspective. The amendment allowed a financial institution to on-lend funds raised under the section 128F exemption such that this did not reduce its foreign equity balance.\textsuperscript{239} While the entire package was estimated to cost $22 million annually,\textsuperscript{240} this seems inconsistent with the Treasury’s FSI submission highlighted above.


\textsuperscript{231} Australian Government, Department of the Treasury, ‘Submission to the Financial System Inquiry by Mike Callaghan (for Mr G R Potts)’ (10 September 1996) 191 <http://fsi.treasury.gov.au/content/downloads/PubSubs/000143.pdf>.

\textsuperscript{232} Australian Government, above n 231, 191.

\textsuperscript{233} \textit{Taxation Laws Amendment Act (No 2) 1999} (Cth).

\textsuperscript{234} Explanatory Memorandum, Taxation Laws Amendment Bill (No 4) 1997 (Cth) 1.

\textsuperscript{235} Explanatory Memorandum, above n 234, 22.

\textsuperscript{236} Explanatory Memorandum, above n 234, 1.

\textsuperscript{237} \textit{Financial Sector Reform (Consequential Amendments) Act} 1998 (Cth).

\textsuperscript{238} \textit{Taxation Laws Amendment (Company Law Review) Act} 1998 (Cth) 1.

\textsuperscript{239} Explanatory Memorandum, Taxation Laws Amendment Bill (No 2) 1999 (Cth) 38–9.

\textsuperscript{240} Explanatory Memorandum, above n 239, 3.
The final amendment enacted to the 1987 Regime before its repeal constituted minor clarification and technical amendments, such as correcting misquoted cross-references and removing erroneous terms.\textsuperscript{241}

2.4.4.2 Origins of the 2001 Regime

This section commences by presenting the context for the implementation of the 2001 Regime, followed by an outline of the key differences between it and the 1987 Regime.

Clark and Varasso note that the 2001 Regime was implemented in response to two key perceived deficiencies; namely, that the 1987 Regime overlooked the operations of resident entities\textsuperscript{242} and overlooked third party debt.\textsuperscript{243} This had previously been highlighted by the Ralph Review,\textsuperscript{244} which provided the impetus for strengthening the thin capitalisation rules with the primary motivation of improving the integrity of the tax system.\textsuperscript{245}

While the explanatory memorandum to the 2001 Regime alluded to the debt bias being distortive, it did not aim to address this distortion. Rather, motivated by the aspiration to protect the national tax base from debt shifting by MNEs, the policy intent of the 2001 Regime is “to prevent the excessive allocation of debt for tax purposes”.\textsuperscript{246}

Indeed, the primary objective of the 2001 Regime is readily discernible from the originating explanatory memorandum. Specifically, the explanatory memorandum outlines the objective of the reform.\textsuperscript{247}

\begin{flushright}
\textsuperscript{241}Explanatory Memorandum, Taxation Laws Amendment Bill (No 8) 1999 (Cth) 75.
\textsuperscript{243}Specifically, under the 1987 Regime, it was possible to avoid the application of the thin capitalisation rules by entering into back-to-back arrangements using intermediaries to give related-party transactions the appearance of being transactions between arm’s length parties: Explanatory Memorandum, Taxation Laws Amendment Bill (No 4) 1997 (Cth) 22. These back-to-back loans did not constitute ‘foreign debt’ for thin capitalisation purposes; “Australia’s current thin capitalisation provisions are not fully effective at preventing an excessive allocation of debt to the Australian operations of multinationals because they refer only to foreign related party debt and foreign debt covered by a formal guarantee rather than total debt”: Ralph Review, above n 242, 659; see further, Clark B and Varasso A, ‘Thin Capitalization: Australia’ (2005) 11(5) Asia-Pacific Tax Bulletin 399, 399.
\textsuperscript{244}Ralph Review, above n 242.
\textsuperscript{245}Implementing a new thin capitalisation regime to “contribute significantly to the fairness and integrity of the tax system by reducing the opportunities to avoid tax which arise from complexities and certain anomalies in the current thin capitalisation legislation”: New Business Tax System (Thin Capitalisation) Bill 2001 (Cth), with the ultimate motivation of creating “an internationally competitive business tax system that will create the environment for achieving higher economic growth, more jobs and improved savings”: New Business Tax System (Integrity and Other Measures) Bill 1999 (Cth).
\textsuperscript{246}Explanatory Memorandum, New Business Tax System (Thin Capitalisation) Bill 2001 (Cth) [3.3].
\textsuperscript{247}Explanatory Memorandum, above n 246, 5.
\end{flushright}
“The objective of the regime is to ensure that multinational entities do not allocate an excessive amount of debt to their Australian operations. This is to prevent multinational entities taking advantage of the differential tax treatment of debt and equity to minimise their Australian tax. More generally, as a measure introduced as part of the New Business Tax System it will also contribute to the fairness and equity of the tax system, by maintaining the integrity of the Australian tax base”

While the government accepted the majority of the Ralph Review recommendations, the eventual changes to the international tax system were relatively minor, because changes were deferred rather than implemented in a complete suite of reforms. D’Ascenzo observes that the current regime would not have been implemented but for the government decision to adopt the debt/equity rules proposed by the Ralph Review. Accordingly, it is also instructive to acknowledge the process leading to the adoption of the debt/equity rules. In this regard, commentators such as Wachtel and Andersen have criticised the haste with which both the debt/equity rules and the 2001 Regime were introduced.

Indeed, academics such as Krever and Hanlon observed that thin capitalisation rules would not be needed if the tax treatment of debt and equity financing were equalised, in terms of both tax deductibility and withholding tax treatment for non-residents.

Further, the 2001 Regime appears to have been undervalued as a standalone rule, initially only amended incidentally in response to wider-scale changes to the international tax system, whether the debt/equity rules or the adoption of the International Financial Reporting Standards (‘IFRS’).

249 “The review needed to reduce its agenda, and as a result, international tax issues have been deferred for further work rather than be subject to wholesale and immediate change. Even so, the extent of recommended change is significant”: Vann R J and Cooper G S, ‘Report of Australia’s Business Tax Review and the Government’s Response’ (1999) 19(14) Tax Notes International 1258, 1269.
251 “The thin capitalisation law and the related law dealing with distinctions between debt and equity were introduced in haste. The measures were first recommended by the RBT and announced by the Government in September 1999 but there was little consultation”: Wachtel M and Andersen A C, ‘Removing Tax Barriers to International Growth: Positioning Australia’s Tax System to Maximise the Potential Growth Opportunities from International Business’ (Andersen Discussion Paper, Business Council of Australia, 11 December 2001) 90.
253 “That is, the erosion of the tax base comes as a result of their own legislative decisions including the following: (a) the differing tax treatment associated with the payment of interest (deductible) as opposed to a distribution of profit in the form of dividends (non-deductible); and (b) the differing withholding tax rates applicable to interest and dividends received by non-residents”: Hanlon, above n 20, 18.
Clark and Varasso note that, despite the potentially significant impact of the thin capitalisation regime, legislative attention was not given to these rules until Australia’s adoption of the IFRS.\textsuperscript{254}

Despite broadly aligning with the OECD’s guidelines on thin capitalisation rules, the 2001 Regime has received substantial criticism. Importantly, as observed by both Ting\textsuperscript{255} and Dimac,\textsuperscript{256} the operation of these rules does not necessarily give effect to some of the foundational policy considerations.

Highly problematic is the deviation from the Ralph Report’s recommendation relating to the method of calculating the maximum allowable gearing ratio,\textsuperscript{257} which under the 2001 Regime is asset-based rather than equity-based. Under an asset-based calculation it would be possible to increase the maximum allowable debt amount without any required increase in the equity of the company, simply by increasing the amount of debt and applying that to the acquisition of assets. Dimac\textsuperscript{258} and Ting\textsuperscript{259} also observe that the government provided no clear justification for changing the calculation method from debt-to-equity to debt-to-assets. They note that this would not result in the same outcome, representing an arguably unnecessary departure from the underlying policy which could give rise to complicated and unintended consequences.\textsuperscript{260}

Further, as observed by Chang and Vann, the thin capitalisation regime’s design resulted in occasionally haphazard application of the regime.\textsuperscript{261} Specifically, despite the scope of thin

\textsuperscript{254} Clark and Varasso, above n 243, 399.
\textsuperscript{256} Dimac, above n 242, 314.
\textsuperscript{257} For example, in its summary table comparing thin capitalisation regimes, the Ralph Review made reference to each jurisdiction’s “Basic gearing ratio (debt:equity)”, above n 242, 662; see further, Dimac, above n 242, 320–1.
\textsuperscript{258} Dimac, above n 242, 321–2.
\textsuperscript{259} “The government does not offer any explicit reason for the change from a statutory gearing limit based on “equity” to one that is based on “assets”. It simply states that the new formula ‘reflects the policy of a maximum gearing ratio for debt to equity of 3:1’”; Ting, above n 255, 96–7.
\textsuperscript{260} Assume that a company has $90 of debt and $10 of equity, reflected by $100 of assets. Under an equity-based calculation, the maximum gearing ratio of 3:1 would equal three times the equity of that company; that is, $30. In contrast, under an asset-based calculation the maximum gearing ratio of 3:1 would equal 75% of the assets of the company; that is, $75: Ting, above n 255, 96. See also, “legislative rules do not always accurately reflect policy. This is clearly evident in the current asset based safe-harbour debt test, which fails to reflect the recommended gearing ratio of 3:1, a ratio which was said to provide a balance between legitimate trading and protection of revenue”; Dimac, above n 242, 347.
\textsuperscript{261} “The position of a foreign PE shows up the somewhat haphazard application of the new outbound rules. Although debt attributable to a foreign PE is effectively excluded from the new regime and subjected to existing law, the mere existence of the PE will subject the debt of the Australian company to the new rules. Similarly, while interests in CFCs will give rise to the application of the rules, interests in Foreign Investment Funds will not (these are the Australian equivalent of PFICs in the United States). Nor will the rules apply to the mere passive holding of assets that give rise to foreign-source income but do not amount to a foreign PE; for example, holding foreign land that gives rise to rental income without a PE. That result is to be contrasted with the inbound situation where the passive holding of land in Australia will lead to application of the rules, even if there is no PE in Australia”: Chang E and Vann R,
capitalisation rules being broadened to include Australian-owned MNEs and branches, there was different treatment of PEs, CFCs and foreign investment funds.

However, even if the legislation were to wholly give effect to the policy considerations, an observation that appears missing in the literature to date is this: even though the concept of substance over form is a valuable one, rules conceptually grounded in the debt/equity distinction are arguably second-best integrity rules since they fail to address the ‘underlying non-neutrality’ which exists in the tax treatment of debt and equity financing in the cross-border context.

Specifically, the tax policy surrounding setting the relevant debt limits involves balancing three factors: simplicity, efficiency and revenue neutrality. However, in practice, these rules have prioritised revenue adequacy over efficiency. Admittedly, the raison d’être of the thin capitalisation regime is to protect the corporate tax base by limiting ‘excessive’ debt deductions in the cross-border setting. The explanatory memorandum to the Bill introducing the 2001 Regime noted the complexities and anomalies inherent in the 1987 Regime.

So, the 2001 Regime is best characterised as focussed on strengthening and broadening the scope of the 1987 Regime to safeguard the integrity of the tax base. As noted by D’Ascenzo, it was thought that by focusing on the relative level of economic risk as the distinguishing feature between debt and equity, the 2001 Regime could minimise the uncertainty associated with the 1987 Regime while simultaneously promoting the integrity of the broader tax system.

Since there already exists substantial academic commentary and practitioner summary of the legislation implementing the 2001 Regime, the purpose of this study is not to repeat such

‘Thin Capitalisation Reform in Australia: Another Milestone or a Millstone?’ (2001) 24(12) Tax Notes International 1209, 1213.

“The perceived deficiencies were that the thin capitalization rules only applied to foreign controlled Australian operations and non-residents deriving Australian assessable income, and that the rules were limited to related party debt”: Clark and Varasso, above n 243, 399; see further, Wachtel M, ‘Australia’s New Thin Capitalization Regime’ [August/September 2003] Bulletin for International Fiscal Documentation 380, 381.

“In a radical change to previous law, the new statute will disallow debt deductions for Australian residents that have offshore investments, in the form of controlled foreign companies (CFCs) or a foreign PE”: Chang and Vann, above n 261, 1212–13.


“minimising unnecessary compliance costs for multinationals”: TSLA Bill, above n 264, 4.

“ensuring that the debt limits do not impede the efficient allocation of capital”: TSLA Bill, above n 264, 4.

“maintaining the integrity of the revenue base”: TSLA Bill, above n 264, 4.

Explanatory Memorandum, above n 246, 5.

“The report recommends strengthening the current thin capitalization measures to apply to total debt used for direct investment in Australia by non-residents, including in branch form. A general debt-equity ratio of 3:1 is to be applied, with an arm’s-length proviso so that the amount of debt can be increased”; Vann and Cooper, above n 249, 1269; “The thin capitalization measures will be strengthened to prevent multinationals from reducing their Australian tax”: McLean, above n 248, 2041–2.

D’Ascenzo, above n 250, 255.
summary. Rather, this section synthesises and extracts three notable features of the 2001 Regime; first, setting a 3:1 safe harbour with an arm’s length provision; second, emphasising economic substance over legal form. Each feature is dealt with in turn below.

2.4.4.2.1 Applying both a safe harbour ratio and an arm’s length rule

The 2001 Regime introduced a general 3:1 safe harbour ratio with an arm’s length provision. At its genesis, the choice offered between the safe harbour and the arm’s length rule was a mere ‘policy concession’ to compensate for widening the scope of the rules.\(^{271}\) This introduction resulted in at least the following two unintended consequences. First, it incentivised loans with a higher risk profile,\(^{272}\) which undoubtedly runs counter to the underlying policy intention of encouraging investment to order to foster a sustainable revenue base.\(^{273}\) Second, a relatively simple method of ‘alleviating the burden’ of the 2001 Regime was to register as a ‘financial entity’, which increased the safe harbour gearing ratio from 3:1 to 20:1.\(^{274}\)

Despite the arm’s length principle being an integrity measure, an MNE falling within the safe harbour is not required to undertake a notional debt-to-equity ratio calculation in order to determine whether its actual debt levels were appropriately priced for transfer pricing purposes.\(^{275}\) The logic underlying this is contained in the explanatory memorandum to the originating legislation. Specifically, it highlights that although the most appropriate method is to apply an arm’s length test, a safe harbour approach was adopted as the rule of general application to minimise MNEs’ compliance costs.\(^{276}\)

However, even where the MNE satisfies the thin capitalisation provisions, the interest deduction may be denied pursuant to the transfer pricing regime.\(^{277}\)

2.4.4.2.2 Emphasising economic substance over legal form

The 2001 Regime reflected the shift towards emphasising economic substance over legal form. As noted by Cooper, this was over a decade in the making.\(^{278}\) Despite aiming to target

\(^{271}\) “Australia has had a thin capitalization regime for over two decades. However, following significant reform, in 2001, Division 820 was introduced, representing a vastly broadened approach towards monitoring thin capitalization levels for Australian taxpayers”: Donga J P and Korganow P, ‘Safe Harbour Not So Safe’ (2010) 16(4) Asia-Pacific Tax Bulletin 284, 284.

\(^{272}\) “The Australian thin capitalization safe harbour provision has worked well since 2001 and has provided taxpayers with certainty and clarity. However, the Australian Taxation Office (ATO) has become increasingly concerned that the safe harbour allows for loans that exceed a normal risk profile and therefore attract a higher risk premium and corresponding interest deductions”: Donga and Korganow, above n 271, 284.

\(^{273}\) Explanatory Memorandum, above n 246, 207.

\(^{274}\) Clark and Varasso, above n 243, 405.

\(^{275}\) Donga and Korganow, above n 271, 285.

\(^{276}\) Explanatory Memorandum, above n 246, 216.

\(^{277}\) As foreshadowed by Chang and Vann in 2001, this interpretation may be the subject of dispute between the ATO and taxpayers: Chang and Vann, above n 261, 1217.
debt-like hybrids\textsuperscript{279} and treating interest-free debt as equity (except where short-term interest-free debt was involved),\textsuperscript{280} the originating legislation defined three related concepts from two different sources.\textsuperscript{281} In the thin capitalisation provisions, ‘debt’ was defined by reference to the new debt-equity rules, ‘equity’ by reference to the financial statements, and ‘assets’ not as understood in financial accounting but rather in its ordinary sense.\textsuperscript{282} For example, in the calculation of the ‘safe harbour debt amount’ the method statement outlined an 8-step calculation which centers on the basic accounting equation (that debt equals assets less equity).\textsuperscript{283}

\subsection*{2.4.4.3 Evolution of the 2001 Regime}

This section provides a longitudinal legal analysis, presented chronologically, of the amendments made to the 2001 Regime from its inception to the present (namely, mid-2016).

From 2002 to 2008, all 12 amendments enacted could be characterised as correcting or streamlining the originating legislation. Each is outlined below in turn.

Two amendments were enacted in 2002; the first aimed to correct and the second aimed to streamline the reform. The first 2002 amendment aimed to prevent an estimated $30 million annual revenue leakage by clarifying the operation of the law; this included preventing manipulation of thin capitalisation calculations, removing unintended consequences regarding

\begin{footnotesize}
\textsuperscript{278} “The Australian government has for some time been trying to move the categorization of debt and equity from one based on legal form to one based more on substance-based tests of the arrangements”: Cooper G S, ‘The Debt-Equity Distinction in Australian Tax Law’ (2003) 57(8/9) Bulletin for International Fiscal Documentation 338, 340.

\textsuperscript{279} “This definition is subject to the debt test, which operates to carve out from the definition the more debt-like hybrids”: D’Ascenzo, above n 250, 255. In this context, it is also important to note that the “definition of debt also constitutes an essential component of the new thin capitalization regime since it is used to determine what deductions may be disallowed. This represents an improvement over the current thin capitalization regime, which relies on a concept of debt based more on legal form than economic substance and thus lacks the ability to deal appropriately with the proliferation in innovative financial arrangements”: D’Ascenzo, above n 250, 256.

\textsuperscript{280} Chang and Vann, above n 261, 1210.

\textsuperscript{281} “Although the new Debt and Equity Act contains detailed rules on the debt equity distinction, it appears that equity here is not related to those definitions but rather is taken from financial statements. Similarly, for assets there is no definition. Although the matter is not perfectly clear it seems that ‘asset’ will be understood in its ordinary sense and not as the concept is applied in financial accounting. It will thus likely exclude know-how but not goodwill or other property or legally recognised rights”: Chang and Vann, above n 261, 1215.

\textsuperscript{282} “In the thin capitalisation provisions the term ‘assets’ is not defined, and accordingly takes its ordinary meaning in law relevant to the context. In this particular context we consider that the term ‘assets’ for the purposes of Division 820 carries its accounting meaning”: Government, Australian Taxation Office, Income tax: Thin Capitalisation – Definition of assets and liabilities for the purposes of Division 820 (30 October 2002) ATO Taxation Ruling TR 2002/20, 2 <https://www.ato.gov.au/law/view/document?docid=TXR/TR200220/NAT/ATO/00001>.

\textsuperscript{283} Section 820-95 of the Income Tax Assessment Act 1997 (Cth) (‘ITAA97’). This reflects the accounting first-principle that A = L + OE (that is, assets equals liabilities plus owners equity), and assumes that this can be rearranged such that A – OE = L.
\end{footnotesize}
control rules of associate entities, ensuring asset threshold rules operated as intended, and ensuring intended meanings apply for associate and controlled foreign entity and debt/equity.284

The second 2002 amendment also aimed to ensure the thin capitalisation regime continued to operate as intended by phasing out existing grouping rules and replacing them with the updated consolidated and MEC group rules.285 This ensured the 2001 Regime kept in line with the wider changes to the tax laws as a result of the consolidation regime.286 However, an effective tax planning tool is to apply thin capitalisation rules to tax consolidated groups on a grouped basis.287

Two amendments to the 2001 Regime were enacted the following year, in 2003. The first was a continuation of the consolidation regime amendments mentioned above.288 The second 2003 amendment aimed to address outstanding policy issues and continued making technical amendments to ensure the legislation operated as intended by making changes including, but not limited to, the following two-fold amendments.289 First, this amendment streamlined the definitions and valuation of “assets” and “liabilities” to be compatible with the accounting standards,290 thereby addressing the inconsistencies in the legislation implementing the 2001 Regime. Second, this amendment aimed to remove the unintended consequence of the debt/equity rules by introducing an “excluded equity interest” integrity measure.291 However, this measure was arguably inadequate because it risks creating a tax incentive for round robin arrangements relating to, for example, financing leasing, while inadvertently catching genuine long-term equity injection.292

Indeed, there are five further areas which are vulnerable to tax planning through the use of accounting standards. First, asset revaluation reserves are included within the scope of an

284 Taxation Laws Amendment Act (No 4) 2002 (Cth).
285 For completeness, a ‘tax consolidated group’ consists of an Australian head company and its wholly owned Australian entities. The consolidation rules also permit two or more resident first-tier wholly owned subsidiaries of a foreign holding company to form a multiple entry consolidated (‘MEC’) group. However, this is beyond the scope of the study.
286 “consolidation regime largely replacing all existing grouping provisions in the ITAA36 and ITAA97”: Explanatory Memorandum, New Business Tax System (Consolidation and Other Measures) Act (No 1) 2002 (Cth).
287 Provided this is feasible beyond the tax benefits: see further, Clark and Varasso, above n 243, 405.
289 There were more amendments but these are beyond the scope of this thesis: see further, Taxation Laws Amendment Act (No 5) 2003 (Cth).
290 These were originally not defined in Division 820 of the ITAA97 so their normal legal meanings applied.
291 In terms of context, “[p]reviously, it was considered that the risk of manipulating the thin capitalisation rules by raising equity would be minimal as issuing shares is a protracted and costly exercise. However, the effect of the debt/equity rules is that some financial instruments commonly regarded as debt are now classified as equity although they do not necessarily have the features of a traditional equity instrument”: Explanatory Memorandum, Taxation Laws Amendment Act (No 5) 2003 (Cth).
292 Ting, above n 255, 103–4.
entity’s equity capital for the purpose of thin capitalisation rules, which makes it possible to inflate the ‘equity’ component by conducting asset revaluations. Second, since averaging methods can be changed annually, this presents a tax planning tool giving MNEs scope to adjust averaging methods to avoid being in breach of the thin capitalisation rules. Third, the issuance of interest-free loans could increase the net asset base because these amounts are not included within the scope of ‘debt’. Fourth, thin capitalisation rules incentivise the use of both debt and equity financing as consideration for acquisitions where only debt may otherwise have been issued. This is likely an unintended consequence of these rules, albeit a largely positive one. Finally, the declaration and payment of dividends can be delayed so that retained earnings are not reduced by the amount of the dividend at the time of the thin capitalisation calculation. This has the most likely unintended consequence of inflating the equity calculation.

In 2005, three amendments were enacted to the 2001 Regime, with at least the first two able to be characterised as mere corrections or streamlining. First, the interest withholding tax concept of “debt interest” was added to references to debentures in the thin capitalisation regime. Second, incorrect references to provisions were corrected in this very minor amendment. Third, separate entity treatment was extended to include Australian branches of foreign financial institutions in addition to Australian branches of foreign banks to improve competition within the financial services sector. The purpose of this was to attract investment while also providing a more neutral treatment of alternative corporate structures. Since this study focusses on the tax treatment of intercompany financing transactions rather than on financial institutions, a detailed critique of the latter is beyond the scope of this research.

In 2006, two further amendments were enacted. One was a minor table numbering correction. The other was the repeal of inoperative provisions following the introduction of the consolidation regime.

Similarly, the two amendments enacted in 2007 were also corrections. The first amendment removed the term “foreign permanent establishment”, which was undefined and not used

293 Provided this is feasible beyond the tax benefits: see further, Clark and Varasso, above n 243, 405.
294 “planning tool may be to change averaging methods where to do so would ensure that the thin capitalization rule is not breached”: Clark and Varasso, above n 243, 406.
295 Clark and Varasso, above n 243, 405.
296 New International Tax Arrangements (Managed Funds and Other Measures) Act 2005 (Cth).
298 New International Tax Arrangements (Foreign-owned Branches and Other Measures) Act 2005 (Cth).
299 These amendments both had no tax revenue base benefit. It is also important to note that they both could have been enacted at the same time as the original amending Acts: see Explanatory Memorandum, Tax Laws Amendment (2006 Measures No 2) Act 2006 (Cth) 6 and Explanatory Memorandum, Tax Laws Amendment (Repeal of Inoperative Provisions) Act 2006 (Cth) 2, respectively.
The second amendment enacted two changes. First, it corrected the concept of “excluded equity interest”, as it captured equity interests that are genuinely intended to be long-term. The unintended consequence of this integrity measure was avoided by allowing equity on issue for a total period of 180 days or more. Second, it implemented a choice mechanism for a particular type of ADI (namely, credit card institutions) to be treated as a financial entity. It is noteworthy that this amendment had an estimated nil financial impact.

For completeness, while not a statutory amendment, of significance in 2007 was the ATO’s release of draft TD 2007/D20 – later replaced by TR 2009/D6, which was finalised as TR 2010/7 – because it presented the ATO’s views on the interaction between the thin capitalisation rules and the transfer pricing rules. This interaction appears to have been an unintended consequence of the policy concession to allow MNEs a choice between safe harbour and arm’s length rules.

Even though the arm’s length principle has historically garnered sweeping support which continues to this day, it is a subjective method of determining the cost of capital and raises issues of uncertainty and complexity. Consistent with the concerns flagged in the above section 2.4.3.1.1, Donga and Korganow observe that only a few highly-g geared taxpayers in certain industries tend to expend the resources necessary to determine their arm’s length debt amount for the purposes of Division 820. This results in the safe harbour method being adopted by the majority of taxpayers in Australia, as anticipated by the above section 2.4.3.2.2. Nonetheless, the ATO’s view in TD 2007/D20 required an arm’s length analysis for taxpayers operating within the safe harbour.

Practitioners such as Donga and Korganow observe that this approach is problematic because the Commissioner is tasked with determining an amount of interest is arm’s length without overriding the principle that the safe harbour amount may exceed the arm’s length debt.

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303 Tax Laws Amendment (2007 Measures No 5) Act 2007 (Cth); see further, “If the choice is made, each specialist credit card institution in the group will be treated, for the purposes of Division 820, as if it was a financial entity during the relevant period(s). The result is that the head company of the group will no longer be classified under section 820-583 as an outward investing entity (ADI) during the period(s), but rather will be classified as either an ‘outward investing entity (non-ADI)’ and an ‘outward investor (financial)’, or an ‘inward investing entity (non-ADI)’ and an ‘inward investment vehicle (financial)’, as the case may be. Hence, Subdivision 820-B or 820-C will apply to the head company instead of Subdivision 820-D”: Explanatory Memorandum, Tax Laws Amendment (2007 Measures No 5) Act 2007 (Cth), 123.
304 Notably, the OECD suggested “a country may continue to apply an arm’s length test alongside the best practice approach”: OECD, OECD, above n 15, 38.
305 Provided this is feasible beyond the tax benefits: see further, Clark and Varasso, above n 243, 405.
306 Donga and Korganow, above n 271, 284–5.
amount. This is both significant and somewhat controversial because it is unclear whether the ATO’s position was supported by law.

In 2008, two amendments to the 2001 Regime were enacted, one minor and one major. The minor amendment was an asterisking correction for the definition of “income tax return”. The major amendment reflected the increased attention given to thin capitalisation rules resulting from Australia’s adoption of the IFRS. Specifically, this measure included the use of accounting standards for identifying and valuing an entity’s assets, liabilities and equity capital, and prohibiting MNEs from recognising, inter alia, tax deferred assets and liabilities. As observed by Nethercott and Hanlon, the introduction of IFRS and the convergence of tax and accounting standards would likely reduce the administrative burden of thin capitalisation rules.

This appears to validate the earlier observation made by Chang and Vann in relation to potential under- or over-inclusions in the scope of such definitions as “debt” and “assets”. For completeness, this remains an issue at present, with the ATO releasing Taxpayer Alert TA 2016/9 in August 2016 highlighting its concern in relation to arrangements where a taxpayer enters into a debt instrument for tax purposes, which may be treated as full or partial equity for accounting purposes, with a view to excluding this instrument from the thin capitalisation calculations.

The 2009 amendment was a result of the implementation of the Taxation of Financial Arrangements (‘TOFA’) reforms through Division 230 of the ITAA97, which aimed to increase efficiency and lower compliance costs. An overlap with the thin capitalisation regime arose from the definition of “financial arrangement” including an equity interest and gains/losses arising from, inter alia, non-assessable non-exempt (‘NANE’) income, private/domestic activities and foreign exchange transactions.

309 Clark and Varasso, above n 243, 399.
313 By way of background, TOFA aims to reduce the influence of tax considerations on how financial arrangements are structured. TOFA also aims to more closely align the taxation recognition of gains and losses on financial arrangements with commercial recognition of gains and losses.
However, thin capitalisation rules have only undergone major changes in response to wide-scale reforms such as the debt-equity rules in 2001, the IFRS in 2008 and the TOFA reforms in 2009. This suggests they are arguably undervalued as a standalone rule. As observed by Taylor and Tower in 2009, the thin capitalisation rules have not been an area of major focus for the Australian government since their enactment in 2001.315

The 2010 amendment modified the 2001 Regime to further reflect the adoption of IFRS, specifically with regard to the valuation of certain assets of ADIs under accounting and prudential standards.316 However, it is unclear why this was not implemented in 2008 with the original IFRS amending Act. Also introduced in 2010 was TR 2010/7, which finalised TR 2009/D9 (which had replaced TD 2007/D20) to clarify the relationship between transfer pricing (specifically, the arm’s length rule) and Division 820 of the ITAA97. Specifically:317

“Division 820 addresses only the amount of debt an entity can have for purposes of deductibility of its debt deductions, while the transfer pricing provisions alone deal with the pricing of the consideration given for this debt.”

This approach taken by the ATO was perceived as controversial and presented practical complexities for taxpayers.318 However, the underlying logic is two-fold, holding, first, that there is generally a correlation between the debt amount and the interest rate, and second, that the higher the risk, the higher the interest rate.

In the two years to follow, taxpayers would win major court cases against the Commissioner of Taxation in relation to the transfer pricing rule (Division 13) and the general anti-avoidance rule (Part IVA).319 This would result in the enactment of retrospective legislation in 2012320 and 2013,321 due to “significant risk to revenue that is inconsistent with the Parliament’s intention”.

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315 Taylor G and Tower G, ‘Impacts of Adoption of IFRS on the Thinly Capitalised Position of Australian Companies’ (2009) 7(1) eJournal of Tax Research 37, 40. However, an alternative inference is that the perceived effectiveness of these rules has resulted in them merely being adjusted to changes in other areas of tax law.

316 Tax Laws Amendment (2010 Measures No 3) Act 2010 (Cth); see also “thin capitalisation rules use the accounting standards as the basis for the identification and valuation of assets, liabilities and equity capital … from 1 January 2005 the Australian GAAP were replaced by the Australian equivalents to IFRS … regarded as having aligned Australia more closely with international accounting practice”: Explanatory Memorandum, Tax Laws Amendment (2010 Measures No 3) Act 2010 (Cth) 14.


These new transfer pricing rules gave rise to consequential amendments to the 2001 Regime. The 2012 and 2013 amendments reflected the two-phase introduction of Subdivision 815-A and thereafter Subdivisions 815-B to 815-D, respectively, into the ITAA97 with the aim of providing direct access to OECD guidance materials to provide legislative guidance on the interaction between the transfer pricing and thin capitalisation regimes. Figure 7 below illustrates both the timing and operative dates of these amendments.

As shown in Figure 7 above, Subdivisions 815-B, 815-C and 815-D of the ITAA97 apply to all taxpayers from 1 July 2013.

However, as observed by Koomen, the amendments did not clearly delineate the scope of the arm’s length principle as they applied in the thin capitalisation context. For example, the explanatory materials to the 2012 amendment noted that “The arm’s length rate may need to be determined by having regard to the conditions which could be expected to operate between entities dealing wholly independently with each other”.

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320 Explanatory Memorandum, Tax Laws Amendment (Cross-Border Transfer Pricing) Bill (No 1) 2012 (Cth) 3 and Explanatory Memorandum, Tax Laws Amendment (Countering Tax Avoidance and Multinational Profit Shifting) Bill 2013 (Cth) 4.
321 Tax Laws Amendment (Countering Tax Avoidance and Multinational Profit Shifting) Act 2013 (Cth).
322 “denial of debt deduction occurs where an entity’s ‘adjusted average debt’ exceeds the ‘maximum allowable debt’ for the entity. The tests commonly used are the safe harbour test, the worldwide gearing test and the arm’s length debt test ... In the ongoing drive to discourage profit shifting, the transfer pricing laws were also modernized over the last two years”: Joseph A, ‘Securitization and Thin Capitalization’ (2014) 16(5) Derivatives and Financial Instruments 234, 234.
323 Specifically, the rate of interest on debt deductions is to be determined under the transfer pricing rules, consistent with OECD guidance, but applied to the amount of the actual debt in place. The thin capitalisation rules may then further reduce the amount of debt deductions where the level of debt exceeds the maximum allowable debt ordinarily based on a 3:1 debt-to-equity ratio. This rule reflects the Commissioner’s administrative approach under TR 2010/7.
326 Further, “in some exceptional cases (as provided by the relevant OECD guidance material), it may be appropriate to determine the arm’s length rate having regard to the amount of debt the entity is likely to
This is particularly problematic because, as observed by McCormack, the interpretation contained in the explanatory memorandum is arguably not supported by the language of the statute. The estimated financial impact for both these amendments is nil – on the basis that they are revenue protection measures. For completeness, the only other 2013 amendment enacted was a correction, asterisking “arm’s length” as it is a defined term.

At the time of writing, the most recently enacted modification to the 2001 Regime is the 2014 amendment. This implements a series of changes, including a tightened safe harbour debt limit (from 75% to 60% of adjusted Australian assets), a new worldwide gearing debt limit for inbound investment, a new worldwide capital amount for outbound investment and a substantial increase to the de minimis threshold.

Despite the thin capitalisation rules having been in operation for over a decade, interest in improving them has only recently heightened. Joseph opines that this is attributable to the current surge of activities to curb profit shifting by MNEs. This is exemplified by the OECD’s BEPS Project and, in the context of thin capitalisation rules, Action 4 is the more relevant action item. The OECD’s recommendation on Action 4, released in October 2015, proposed a fixed ratio rule. This recommendation is discussed in more detail in section 2.4.5.1 below. While the 2001 Regime does not have such an interest barrier rule, the government’s perception is that Australia’s regime was updated by the 2014 amendment and that the current alternative is adequate.

However, tightening the safe harbour rule should not be conflated with strengthening thin capitalisation rules. Rather, as observed by Joseph, as the safe harbour tests are increasingly have had, had the conditions operating between it and its associate(s) been aligned to what they would have been if the entities had been independent of each other?“: Explanatory Memorandum, above n 320, 30 (emphasis added).


328 Tax Laws Amendment (Cross-Border Transfer Pricing) Act (No 1) 2012 (Cth).


331 This is equivalent to tightening the debt-to-equity ratio from 3:1 to 1.5:1.


334 “Australia and New Zealand each have a worldwide ratio alternative within their thin capitalization rules. In Australia it is an alternative test, but it has a renewed significance given the 2013 reduction of the safe harbour from 75% to 60% and the 2014 policy review of the arm’s length alternative test”: Burnett, above n 95, 51.
tightened, it is reasonable to expect more MNEs to turn to the arm’s length debt test.\textsuperscript{335} This is exemplified by the judgement in *Chevron*,\textsuperscript{336} which highlights the controversial, complex and unsettled interaction between the transfer pricing rules and the 2001 Regime.

### 2.4.4.3.1 Operating at the legal limits

The recent move to a 1.5:1 gearing ratio could reasonably be perceived as encouraging a more equal balance of debt and equity financing. However, this section demonstrates that regulatory changes reducing the allowable debt-to-equity ratio should not be conflated with safeguarding the integrity of the tax revenue base.

The following hypothetical scenario is derived from the most relevant examples provided by the ATO, as contained in Taxation Ruling TR 2010/7, and demonstrates the impact of tightening these rules on an MNE which is operating at the legal limits of the regime, as suggested by the anecdotal evidence outlined in section 2.4.3.2.2.

In relation to the intercompany loan shown in Figure 8 below (which assumes an arm’s length interest rate of 12%, thereby allowing $36,000,000 in annual debt deductions),\textsuperscript{337} a 3:1 gearing ratio was permitted until tightened to a 1.5:1 gearing ratio by the *Tax and Superannuation Laws Amendment (2014 Measures No 4) Act 2014* (Cth).

![Figure 8 – Allowable interest deductions with a 3:1 safe harbour rule](image-url)

**Key:** $A = $400M$, $D = $300M \times 15\% = $45M$, $E = $100M$

Source: Author’s own

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\textsuperscript{335} Joseph, above n 332, 177–8; see further, “With the expectation that most businesses would turn to the arm’s length debt test now that the thin capitalization safe harbours are due to become tighter on 1 July 2014, the Discussion Paper suggests that the arm’s length debt test may have to be limited in its application ... The Discussion Paper also suggests consideration of introducing further safe harbour tests on earnings such as EBITDA, so that businesses need not resort to using the arm’s length debt test ... Finally, unlike under transfer pricing rules, thin capitalization rules do not allow consideration of related-party credit support when determining the arm’s length debt amount”: Joseph, above n 332, 179.

\textsuperscript{336} *Chevron*, above n 169.

\textsuperscript{337} Australian Government, above n 317.
This presents a conflict that is a legitimate struggle from a policy perspective. Namely, if a foreign company first goes out of its way to undercapitalise its Australian operations (for example at materially less than a 3:1 gearing ratio) and then lends money to that subsidiary at junk bond (albeit arm’s length) interest rates, this will effectively allow more debt deductions, while presenting a loss of potential FDI flows and a potentially higher risk of bankruptcy.\textsuperscript{338}

This is demonstrated by Figure 9, in which the Australian subsidiary has the option of simply halving debt levels from $300 million to $150 million.

![Figure 9 – Allowable interest deductions with a 1.5:1 safe harbour rule](image)

Key: A = assets, D = debt, E = equity, 15% = intercompany interest rate, 12% = arm’s length rate.
Source: Author’s own

The unintended consequence of reduced FDI flows into Australia, an outcome already anticipated by the literature including commentators such as Buettner et al\textsuperscript{339} and De Mooij,\textsuperscript{340} highlights the risk of taking a predominantly reactive approach to reforming these rules. This concern is in addition to the current need for a clearer and more settled legal framework in the design of interest limitation rules.\textsuperscript{341}

A more proactive approach would be to target the underlying non-neutrality which gives rise to the tax incentive for MNEs to engage in these behaviours – specifically by directly dealing with the cross-border debt bias. Accordingly, the following section 2.4.5 explores alternative proposals contained in the existing literature.


\textsuperscript{339} The link between tightening debt deductions through thin capitalisation rules and reduced investment has been established by Buettner et al, who write “tax policy should take account of the adverse investment effects of restrictions on tax planning by means of debt finance. Imposing restrictions alone does not enable tax policy to escape the fundamental questions concerning the corporation tax realised by the emergence of multinationals”: Buettner et al, above n 107, 32.

\textsuperscript{340} De Mooij, above n 147, 502.

\textsuperscript{341} Donga and Korganow, above n 271, 290.
2.4.5 Alternative proposals reforming interest limitation rules

This section explores the literature on proposals reforming interest limitation rules, with a focus on the OECD’s Action 4 Report.

2.4.5.1 The OECD’s Recommendation

Even though some empirical findings point to BEPS declining over the past decade, leading to scepticism regarding the OECD’s current BEPS Project, the OECD’s focus on transfer pricing reflects policymakers’ and academics’ concerns. Specifically, the OECD’s recently published best practice recommendations for the design of both transfer pricing and thin capitalisation rules, spanning Actions 4 and 8–10, comprised 4 of the 15 action items. These recommendations were almost three decades in the making, with the second most recent OECD report on thin capitalisation rules published in 1986, which omitted guidance on how these rules could best be designed.

The OECD’s Action 4 Report was aimed at improving interest limitation rules. Accordingly, it is the focus of the remainder of this thesis. This report criticised the distortive tax treatment incentivised by the existing thin capitalisation framework. Specifically, it highlighted the relative ease with which MNEs can manipulate the outcome of the debt/equity test by increasing intercompany equity financing.

A central concern of the OECD’s BEPS Project of aligning taxation rights with economic activity was applied in the context of the Action 4 Report, which highlighted the importance of equalising the tax treatment of intragroup interest (and payments economically equivalent to interest) and aligning these deductions with taxable economic activity. However, since tax

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344 Burnett, above n 95.
346 The Public Discussion Draft was released on 18 December 2014, with the Public Consultation meeting scheduled for 17 February 2015: see OECD, above n 100; see further Blouin J et al, Thin capitalisation rules and corporate leverage (29 March 2014, Vox EU) <http://www.voxeu.org/article/thin-capitalisation-rules-and-corporate-leverage>.
348 Traversa, above n 345.
349 OECD, above n 15, 21.
treaties historically refrain from regulating tax deductions, this is a matter for domestic law. As such, the OECD’s Action 4 Report recommended replacing existing thin capitalisation rules with interest limitation rules using an earnings-based cap (specifically, a group ratio rule alongside a fixed ratio rule). There are three notable limitations to this recommendation. Each are dealt with in turn.

First, despite a philosophy of convergence of national rules underlying the Action 4 Report’s support for an EBITDA ratio, a key issue highlighted by Avi-Yonah and Xu is that the success of this action item is entirely dependent on international coordination.

Second, in any event, as observed by the Action 4 Report, despite the global trend towards EBITDA ratios, MNEs still claim interest deductions “significantly in excess” of external borrowing under this alternative method. This casts doubt on the effectiveness of this recommendation.

Third, despite recognising that “[i]t is an empirical matter of fact that money is mobile and fungible”, the OECD’s recommendation is debt-focused and prioritises simplicity, administrative ease and taxpayer certainty at the expense of efficiency. Commentators such as Brauner have observed the OECD has remained fixed in the current paradigm of income taxation with a ‘debt/equity all-or-nothing’ approach, which has precluded innovative solutions from being considered. As such, the tax treatment of financially innovative transactions has not been adequately built into reform recommendations, despite being specifically mentioned in materials and discussions leading up to the Action 4 Report.

As such, the OECD’s recommendation in the Action 4 Report suffers from the same underlying problem highlighted in the above section 2.4.1, namely mitigating – rather than eliminating – the debt bias.

2.4.5.2 Other alternative proposals

In addition to the OECD’s recommendation in the Action 4 Report, commentators have proposed alternative – arguably better – proposals. This section reviews the four that are most

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350 A notable exception is the BEPS recommendation for a rule providing for the denial of deductions by the payer jurisdiction for payments that give rise to a D/NI outcome; that is, where the payment is deductible under the laws of the payer jurisdiction but is not included in ordinary income by any person in the payee jurisdiction: OECD, ‘BEPS Action 2: Neutralising the Effects of Hybrid Mismatch Arrangements’ (Final Report, 5 October 2015), 145.
351 Brauner, above n 18, 23.
353 OECD, above n 15, 21.
354 Brauner, above n 18, 24.
355 “Before the proposal of a fixed cap was adopted, there were also other better proposals”: Avi-Yonah and Xu, above n 168, 34.
relevant: those of Avi-Yonah and Halabi; Wells and Lowell with support from Ting; Fleming, Peroni and Shay; and Benshalom.

2.4.5.2.1 An extended thin capitalisation rule

Avi-Yonah and Halabi’s proposal to extend thin capitalisation rules is at the periphery of the Action 4 Report and has not yet been thoroughly explored by the literature. Specifically, in the context of developing a model treaty for the post-BEPS era, Avi-Yonah and Halabi recommend extending the scope of these rules to other deductible payments including royalties, and incorporating these extended rules into the tax treaty framework to avoid treaty overrides.

2.4.5.2.2 A residual profit-split approach

The residual profit-split method splits the combined profits from sales in a particular jurisdiction by first giving relevant entities a basic return for the functions they perform and then splitting the residual profit on a basis that takes into account the relative contributions made by those entities to the generation of income and the value of the intellectual property (‘IP’) rights, including the trademark and trade name. It is generally accepted by both practitioners and commentators that the residual profit split method works reasonably adequately for transactions involving the development of IP and other intangibles.

Notably, in the US-focused context of cross-border earnings stripping, Wells and Lowell have proposed imposing a US ‘base-protecting surtax’ on all deductible payments to foreign related parties. This is on the basis of econometric modelling which suggests that this approach is less susceptible to tax planning in comparison to existing transfer pricing or pure formulary apportionment regimes based on predetermined factors. Wells and Lowell characterise the following ‘base erosion transactions’ as having the ability to transfer the residual profits out of a particular jurisdiction:

- supply chain transactions;
- lease transfer payments;

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357 Avi-Yonah and Halabi suggested that thin capitalisation rules be further extended to also apply to the cost of goods sold. However, given that the scope of this thesis is limited to intercompany financing flows, this is beyond the scope of the study. This is also the basis for excluding service fees, despite similar suggestions elsewhere in the literature.
358 Wells and Lowell, above n 79, 610.
359 Wells B and Lowell C, ‘Tax Base Erosion: Reformation of Section 482’s Arm’s Length Standard’ (2014) 15(10) Florida Tax Review 737. Although they do not fully state the details, they do indicate that the US payer would withhold the tax at the time of the payment, and the tax would be calibrated to collect up-front the expected US tax that should be due with respect to the residual profits that are represented by the base erosion payment.
• interest transfer payments;
• royalty transfer payments; and
• service transactions.

For completeness, the residual profit-split approach has been extended to the Australian context. For example, Ting recently suggested the implementation of a ‘General Anti-BEPS Rule’ with residual profit splitting.360

2.4.5.2.3 A ‘proportionate allocation’ approach

Fleming, Peroni and Shay present a related but alternative proposal. They acknowledge that the Wells and Lowell proposal would be an improvement compared to existing law, yet they suggest that their proposal for a non-deduction approach is preferable. This ‘proportionate allocation’ approach distinguishes between interest expenses that are deductible as real costs and interest expenses that should be non-deductible because they are ‘costless’ foreign related party payments that do not impact cross-border income allocation. While the authors considered this feasible in the context of interest deductions, they noted that including royalty payments and payments for services would be much more difficult and would also require reliance on transfer pricing law.361

2.4.5.2.4 A denial of all intercompany financing deductions

Benshalom proposes disallowing tax deductions in relation to all intercompany financing activities. Benshalom acknowledges that this prioritises administrative ease at the expense of economic accuracy.362 By aiming to incapacitate MNEs’ ability to use the most mobile class of intercompany assets to attain tax planning objectives,363 it is questionable whether this presents a viable option. This is particularly problematic given the discussion in section 2.4.3.1.2 regarding reform hurdles in the context of MNEs.

This thesis posits that it is important to find and explore a ‘middle ground’ between Benshalom’s proposal and the existing system, one that mitigates issues existing within both options, while also forestalling issues associated with ‘plugging one hole while leaving another exposed’, as anticipated by each of the above proposals.

361 However, Fleming, Peroni and Shay also noted that “Fortunately, these items represent the smaller part of the earnings stripping challenge”: Fleming J C, Peroni R J and Shay S E, ‘Getting Serious about Cross-Border Earnings Stripping: Establishing an Analytical Framework’ (2015) 93 North Carolina Law Review 673, 742.
362 Benshalom, above n 154, 642.
2.5 ALTERNATIVE THEORETICAL APPROACHES TO ADDRESSING THE DEBT BIAS

It is noteworthy that none of the proposals explored in the previous section are specifically designed to attain tax neutrality. So, it is both instructive and necessary to look to the wider economic literature in order to address the underlying non-neutrality of the debt bias.

As shown in Table 3 below, there exists a rich range of alternative theoretical options which aim to eliminate the non-neutrality between debt and equity financing. This is achieved by either providing deductions for the cost of equity financing, disallowing deductions for the cost of debt financing, or allowing deductions for the cost of both debt and equity financing.

The fundamental reforms most relevant to this thesis are the ACE, the CBIT, the ACC and the combined ACE-CBIT. Of these reforms only the ACE has been experimented with in practice. Further, these fundamental reforms are generally focussed on addressing the domestic-level debt bias. It is therefore instructive to consider whether these reform proposals would attain neutrality in the cross-border setting.

Table 3 – Comparison of fundamental reforms’ impact on the debt bias

<table>
<thead>
<tr>
<th>Corporate tax-induced distortions/neutral corporate tax treatment</th>
<th>New equity &gt;&gt; retained earnings</th>
<th>Depreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Corporate tax + personal level taxes (domestic)</td>
<td>Corporate tax + personal level taxes (domestic)</td>
</tr>
<tr>
<td></td>
<td>Corporate level: domestic</td>
<td>Corporate level: international</td>
</tr>
<tr>
<td>CIT in most countries</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Full imputation</td>
<td>D</td>
<td>N/D</td>
</tr>
<tr>
<td>ACE/ACC</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>ACC + PCT</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>CEE</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Shareholder ACE</td>
<td>D</td>
<td>N/D</td>
</tr>
<tr>
<td>CBIT</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Corporate cash-flow</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

D = distorted, N = neutrality, P = possibly neutral, PCT = presumptive capital income tax.
1. Only the host country's corporate tax rate is considered.

Source: OECD (2007)

This section 2.5 outlines the theoretical desirability and practical feasibility of the ACE, the CBIT, the ACC and the combined ACE-CBIT, respectively. For completeness, the combined

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365 The ACE-CBIT literature posits that by providing an equal allowable deduction for both the cost of debt and equity financing, the debt bias can be eliminated while also preserving a jurisdiction’s international competitiveness and its tax revenue base.
ACE-CBIT was not included in the above Table 3 because it is a very recently proposed reform option.366

2.5.1 Allowance for corporate equity (‘ACE’)

The ACE model introduces a deduction for the cost of equity financing. The literature has typically focussed on its application in the domestic context. In its purest form, the ACE system makes equity deductions allowable for the part of company profits that corresponds to a risk-free notional return in the capital market.

In terms of its historical development, the ACE originated in the 1970s with the Meade Committee’s367 proposed alternatives to the UK tax system. This was followed by research published by Boadway and Bruce,368 who established the theoretical foundations for a corporate tax system that is neutral to investment financing decisions by suggesting an allowance for corporate capital (‘ACC’).369 Unlike the ACC explored in section 2.5.3 below, which provides a deduction for the overall cost of capital, this ACE maintains the current deductibility of the actual cost of debt finance and allows a notional return on equity to be deductible against corporate profits. The ACE system regained interest after its implementation was put on the agenda by the IFS Capital Taxes Group,370 who recommended a practical proposal.

Since then, the ACE has been experimented with in practice across various jurisdictions. The below Table 4 provides a brief overview of these ACE-variants, presenting an updated version of that previously compiled by Klemm.371

<table>
<thead>
<tr>
<th>Jurisdiction (Period)</th>
<th>Name</th>
<th>Base</th>
<th>Rate</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria (2000–04)</td>
<td>Notional interest</td>
<td>Book value of new (post-reform) equity</td>
<td>Average return of government bonds in secondary markets plus 0.8%</td>
<td>The notional return is taxed at a reduced rate of 25% instead of 34%</td>
</tr>
</tbody>
</table>

366 On the other hand, the omission from the above Table 3 of the non-corporate shareholder position is symptomatic of the wider literature on the classical corporate tax system.
367 Meade Committee, above n 41.
<table>
<thead>
<tr>
<th>Country</th>
<th>Scheme Description</th>
<th>Calculation</th>
<th>Restrictions and Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>Risk capital deduction / Notional interest deduction</td>
<td>Book value of equity</td>
<td>The notional return is deductible</td>
</tr>
<tr>
<td>(2006–present)</td>
<td></td>
<td>Average monthly government bond rate from 2 years prior, capped at 6.5% and cannot change by more than 1% from year to year. Special SME rate is 0.5% higher</td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>Remuneration of equity</td>
<td>Book value of equity</td>
<td>Up to the level of the notional return, dividends can be paid as “interest on equity”. Deductible for all corporate income taxes and subject to the usual withholding tax on interest</td>
</tr>
<tr>
<td>(1996–present)</td>
<td></td>
<td>Rate applicable to long-term loans</td>
<td></td>
</tr>
<tr>
<td>Croatia</td>
<td>Protective interest</td>
<td>Book value of equity</td>
<td>The notional return is deductible</td>
</tr>
<tr>
<td>(1994–2000)</td>
<td></td>
<td>5% plus inflation rate of industrial goods if positive</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>Dual income tax</td>
<td>Book value of new (post-reform) equity.</td>
<td>The notional return is taxed at a reduced rate of 19%. Other profits are taxed at 37% (34% in 2003). Before 2001, the average tax must be at least 27%</td>
</tr>
<tr>
<td>(1997–2004)</td>
<td></td>
<td>In 2000, 120% of new equity; in 2001, 140% of new equity; then back to 100% of new equity</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>Aid to economic growth</td>
<td>Book value of new (post-reform) equity plus profits made in 2010</td>
<td>The notional return is deductible. Extends to corporations, sole proprietors and partnerships</td>
</tr>
<tr>
<td>(2011–present)</td>
<td></td>
<td>3% (2011–13); 4% (2014); 4.5% (2015); 4.75% (2016). Special SME rate is 0.5% higher</td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s own

In addition to the many different rates and bases utilised by policymakers adopting the above ACE-variants, another aspect that differs widely is the name used for this type of tax measure.
Potential confusions that may arise from such labelling are exemplified by Italy’s first ACE-variant, the ‘dual income tax’. This term has already been popularised by the Nordic countries.\textsuperscript{372} However, the Nordic Dual Income Tax is an altogether different system; it combines a progressive tax on labour income and a lower flat tax on income from capital.\textsuperscript{373}

The remainder of this section details both the theoretical desirability and the practical feasibility of the ACE, in sections 2.5.1.1 and 2.5.1.2, respectively. A key contribution of this thesis is also contextualised in section 2.5.1.1, which outlines the relevance of the economic rent tax literature as a basis for taxing funding activities and highlights that there is presently a disconnect between the ACE and the thin capitalisation literatures. In relation to the practical feasibility of an ACE, section 2.5.1.2 presents a five-fold analysis exploring: first, its effectiveness in practice; second, attempts to safeguard the tax base; third, delineation of the revenue base and scope of the ‘equity’ base; fourth, navigation of the political controversy and legal uncertainty; and fifth, selection of the ACE rate.

The ACE is perceived to eliminate the debt bias by allowing a deduction for the nominal cost of equity financing, in addition to existing debt deductibility, thereby equalising the tax treatment of debt and equity financing (such that $r^D = r^E = r\%$).

As detailed in section 2.5.1.2.1 below, the risk-free interest rate is generally assumed to be the preferred rate for the notional return on equity (‘the ACE rate’). Given this disparate tax treatment between debt and equity financing, the ACE mitigates – rather than eliminates – the debt bias (such that $I^D = I^{uncapped}$ $\neq I^{risk-free} = I^E\%$). In turn, the funding bias would be mitigated only, rather than eliminated. However, traditionally conceptualised as a domestic debt bias solution, a standalone ACE would not be a viable solution to the behaviour of cross-border debt shifting. In this sense, ACE design neglects the potential behavioural responses which may result in unintended consequences. These results are illustrated in the below Table 5:

<table>
<thead>
<tr>
<th>Scope of the rule</th>
<th>Distortions to funding neutrality</th>
<th>Impact on behavioural responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest</td>
<td>Dividends</td>
<td>Royalties</td>
</tr>
<tr>
<td>ACE</td>
<td>$I^D = I^{uncapped}$ $\neq I^{risk-free} = I^E%$</td>
<td>$I^E = I^{risk-free}$</td>
</tr>
</tbody>
</table>

Table 5 – Summary of tax treatment under theoretical ACE

Source: Author’s own

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\textsuperscript{372} Klemm, above n 371, 234.

\textsuperscript{373} See further: Sørensen P B, ‘Dual Income Taxes: A Nordic Tax System’ in Claus I et al (eds), Tax Reform in Open Economies (Edward Elgar, 2010).
2.5.1.1 Theoretical desirability

According to the theoretical literature, the ACE has many desirable theoretical properties. This section begins by exploring the perceived advantages and perceived disadvantages of the ACE, and highlights the key questions most relevant to this study. These questions concern the relevance of the economic rent tax literature and whether the ACE may make thin capitalisation rules redundant.

There are many perceived advantages of the ACE, summarised below.

The most noteworthy and widely accepted of these is that the ACE theoretically eliminates the debt bias at the corporate level.\(^{374}\) This suggestion is supported by an extensive body of literature,\(^ {375}\) which finds that corporate income taxes directly influence capital structure,\(^ {376}\) and that ACE-variants reduce the tax-induced debt bias.\(^ {377}\)

It has also been argued that the ACE would likely bring the tax system significantly closer to attaining CIN and CEN if accompanied by the elimination of withholding taxes.\(^ {378}\) However, complete neutrality will always be difficult as long as jurisdictions apply different tax rates.

The ACE is also assumed to be neutral regarding marginal investment, with Sørensen and Johnson observing “it only taxes economic rents (in excess of normal profits), without distorting

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\(^{378}\) “Whether rates are better harmonised, approximated or left to ‘market forces’ is another matter. Nevertheless, the adoption of the ACE system and the elimination of withholding taxes throughout the Community [the EU] would move the system significantly closer to achieving both CEN and CIN”; Gammie M, ‘Corporate Tax Harmonization: An “ACE” Proposal – Harmonizing European Corporate Taxation through an Allowance for Corporate Equity’ (1991) 31(8) European Taxation Journal 238, 241.
marginal investment decisions”. Even though the ACE can be characterised as a tax on economic rents, it retains a superficial resemblance to an income tax, a factor which would likely improve its prospects of being considered a feasible reform option.

Further desirable properties of the ACE include its investment, capital accumulation and welfare benefits, particularly in the context of small, open economies, and its ability to lower the risk of bankruptcy by encouraging firm capitalisation.

Finally, it has been argued that the ACE system is insensitive to the method of tax depreciation and inflation. This is because accelerated depreciation for tax purposes reduces the book value of assets, decreasing the base on which ACE is calculated. The present value of this latter reduction exactly offsets the benefits of the accelerated depreciation. A similar effect is present for inflation, where an increase in profits because of inflation is offset by a higher notional return.

However, the ACE is not without criticism, with its theoretical disadvantages outlined below. For completeness, hurdles to operationalisation are outlined in section 2.5.1.2.

In theory, the equity deductions allowed under the ACE are applied across all corporate structures. However, since this reform is limited to corporate structures, it risks creating distortions regarding organisational form.

Further, commentators have challenged the efficiency of ACE in complex settings, arguing that issues such as agency problems and credit constraints would reduce its efficiency properties.

Also, an ACE does not operate as a backstop to the personal income tax, resulting in suggestions that the ACE should be extended to the personal income tax system through a

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379 European Commission, above n 119, 64; Sørensen and Johnson, above n 97, 213.
383 De Mooij and Devereux, above n 369, 96.
386 European Commission, above n 119, 64; Sørensen and Johnson, above n 97, 213.
consumption tax regime.\textsuperscript{388} Without these modifications, it is likely that a pure ACE would be seen to not attain policy consistency at the domestic level.

Another issue is that the neutrality property of the ACE has been challenged by commentators such as Schindler et al on the basis that in a market with free entry the ACE would distort the market equilibrium, suggesting that the neutrality property would no longer hold when firms are mobile.\textsuperscript{389} However, one of the limitations of this critique is that, although it refers to empirical evidence, Schindler et al do not cross-reference the experience of ACE in practice and assume that capital is perfectly elastic.

Further, Schindler et al critique the real-world corporate tax rates as too low, alluding to international tax competition generating strong pressure to decrease corporate tax rates.\textsuperscript{390}

Finally, despite its goal of eliminating the debt bias, the ACE literature fails to address the fundamental problem created by the arbitrary distinction in international taxation whereby equity-financed outbound investments are largely taxed abroad while debt-financed outbound investments are taxed at home. This is a fundamental problem with the ACE literature, going to “the heart of the question of where multinationals’ profits should be taxed and whether the international tax system should maintain the existing source-basis rules”.\textsuperscript{391} However, this is beyond the scope of this thesis, which assumes that source-based taxation will remain in place for the foreseeable future.

Despite acknowledging the challenges associated with cross-border flows under an ACE, commentators such as Sørensen continue to advocate in favour of the ACE and maintain that it does address the debt bias.\textsuperscript{392} Indeed, compared to the original proposal by Devereux and Freeman, the only difference is that Sørensen’s calculation of the equity base subtracts net new equity provided to foreign branches to prevent investments that do not generate tax revenue from eroding the domestic tax base. Dividends received from foreign companies are included in the equity base provided they are reinvested in the home country, thereby including all domestic investment in the domestic ACE allowance.\textsuperscript{393} Further, Sørensen acknowledges that, provided


\textsuperscript{390} Schindler et al, above n 389, 17.


\textsuperscript{393} Sørensen, above n 392, 299–302.
there is a lack of international tax coordination, the incentive for MNEs to engage in transfer pricing will always exist.\(^{394}\)

### 2.5.1.1.1 Relevance of the economic rent taxation literature

Taxing only economic rents has long been advocated by economists\(^ {395}\) on the basis that, at least in principle, decisions at the margin are not affected by tax since the marginal investment is not taxed.\(^ {396}\) This is particularly important in the context of a small, open economy where the marginal investor is assumed to be a foreign investor.\(^ {397}\)

Devereux presents a highly comprehensive and concise literature review in the context of the taxation of economic rents from the perspective of a small, capital-importing economy.\(^ {398}\) This review suggests there is little emphasis on the taxation of economic rent in the small, open economy context.\(^ {399}\)

Given the fungibility of certain intercompany activities (to be highlighted in section 3.2) and the issues associated with the arm’s length principle (as highlighted in section 2.4), it is useful to examine the conceptual basis for an alternative method of taxing intercompany financing, licensing and leasing activities – specifically, on their above-normal rents by reference to an imputed allowance for the cost of these activities.

The starting point for this analysis is the seminal work of Hirshleifer, who observed that, where markets are imperfectly competitive or no market exists for that particular commodity, the correct approach is to attribute either the marginal cost or a price between the marginal cost and a general market price.\(^ {400}\) Relevantly, there is an extensive literature suggesting that MNEs

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\(^{394}\) Sørensen, above n 392, 310–11.

\(^{395}\) In terms of its historical development, economic rent taxation proposals originated in the 1970s with the basic economic idea contained in the report of the Meade Committee, which proposed alternatives to the UK tax system: Meade Committee, above n 41; see further elaborations and subsequent research published: Boardway and Bruce, above n 368; IFS, above n 370; Devereux and Freeman, above n 374. An alternative approach is to combine a corporate tax on economic rent with a residence-based individual tax on the normal return, as proposed recently by Kleinbard E D, ‘Rehabilitating the Business Income Tax’ (The Hamilton Project Discussion Paper 2007-09, The Brookings Institution, June 2007).


\(^{399}\) Devereux, above n 398, and references cited therein.

\(^{400}\) For completeness, “This statement is itself an oversimplification, since pricing at marginal cost is a necessary but not a sufficient condition. What is involved is a whole mode of procedure, described below, for finding the optimum price from the point of view of the over-all interests of the firm”: Hirshleifer, above n 161.
typically exist in order to earn economic rents,\textsuperscript{401} and that they bear no substantial economic costs of structuring their internal financial flows one way or the other.\textsuperscript{402} So, from an economic efficiency perspective it is preferable for MNEs to be subject to economic rent taxation\textsuperscript{403} because economic rent taxes are neutral and thereby minimise distortions.\textsuperscript{404}

The key criticism in the literature that is associated with taxing mobile rents through source-based taxation is that this may reduce investment\textsuperscript{405} by simply shifting the investment to a lower tax jurisdiction in order to receive a greater share of the rents.\textsuperscript{406} Given the mobility and fungibility of intercompany activities, this is likely the most significant hurdle on a conceptual level for source jurisdictions. Yet, corporate taxation in general is known to affect investment, so this may not provide a definitive counter-argument.\textsuperscript{407} For example, the Australian corporate income tax system has the highest efficiency cost among Australia’s federal taxes, with efficiency losses from taxing normal returns estimated to be above 40%.\textsuperscript{408} Further, there is strong support in the literature that this criticism is less valid in regard to foreign direct investment (‘FDI’)\textsuperscript{409} compared to portfolio investment.\textsuperscript{410}

This is particularly important given that MNE’s cross-border intercompany flows are included within the scope of FDI, despite the scepticism of key policymakers as to whether these investments are always ‘real’.\textsuperscript{411}


\textsuperscript{403} Bärsch, above n 30, 24; Mintz, above n 31, 34.

\textsuperscript{404} Bird, above n 32, 5; Devereux, above n 33, 3–4; see also, Grubert and Altshuler, above n 2, 674–5.

\textsuperscript{405} Stewart M et al, ‘A Stocktake of the Tax System and Directions for Reform: Five Years after the Henry Review’ (Tax and Transfer Policy Institute, February 2015) 64; “a source-based tax on rent (such as proposed by the Meade Committee) could divert economic activity abroad, where it could face a lower tax rate”: Auerbach A J, Devereux M P and Simpson H D, ‘Taxing Corporate Income’ (NBER Working Paper No 14494, November 2008) 53; Bond S, ‘Corporate Tax’ (Paper presented at the Royal Economic Society Special Session on the Mirrlees Review, University of Warwick, Coventry, 17 March 2008); Auerbach, Devereux and Simpson, above n 382.

\textsuperscript{406} Henry Review, above n 195.


\textsuperscript{409} FDI is usually associated with strategic choices, imperfect competition, and the generation of economic rent; see further, Devereux and Hubbard, above n 401; see also, Caves R E, \textit{Multinational Enterprise and Economic Analysis} (Cambridge University Press, 2\textsuperscript{nd} ed, 1996).

\textsuperscript{410} Avi-Yonah R S, ‘Globalization and Tax Competition: Implications for Developing Countries’ [August 2001] 74 \textit{CEPAL Review} 59, 62–3. See also, Vann, above n 186, 71, who suggests that what is currently regarded as portfolio debt in Australia is probably disguised FDI.

\textsuperscript{411} “Although these flows are booked in FDI due to their intercompany nature, these flows may be considered as non-FDI as [they lack] a real (lasting) investment character”: IMF, Committee on Balance of Payments Statistics and OECD Workshop on International Investment Statistics, Direct Investment
Accordingly, it would be necessary to either achieve a degree of international coordination, for example on tax bases and minimum tax rates, or to ensure that the tax is levied at sufficiently low rates so as not to significantly alter location decisions. Admittedly, international tax coordination is difficult to enforce and sources of rents are unlikely to be very location-specific where activities are inherently very mobile. Nonetheless, the literature does note that it is, in principle, optimal to allow capital-importing countries to use source-based taxes as an indirect way of taxing pure economic rents. In any event, the reform proposals considered and developed in this thesis need only offer a sufficiently improved alternative to the current regime – not a perfect alternative.

So, it is worthwhile to further explore in subsequent chapters whether taxing economic rents presents a sufficient improvement to the existing system of taxing cross-border intercompany transactions.

2.5.1.1.2 Does the ACE make thin capitalisation rules redundant?

The theoretical ACE literature generally assumes that if a fundamental reform proposal such as an ACE were to be adopted, there would then be no need for thin capitalisation rules.

Gammie observes that “ACE clearly reduces thin capitalisation issues”, so if domestic-level fundamental reforms such as the ACE were implemented, there would no longer be any need for thin capitalisation rules because debt and equity would be treated equally under the ACE. The literature contains much support for this proposition, with Fischer and Lohbeck noting that these rules would no longer be required or, at least, could be simplified. De Mooij and Devereux also posit that “the ACE makes thin capitalization rules redundant”; the Henry Review considers that “the more symmetric treatment of debt and equity under an ACE mean that thin capitalisation rules (which guard against excess debt financing) should no longer be


416 Gammie, above n 378, 240.
418 De Mooij and Devereux, above n 369, 96.
required" and the OECD states “thin capitalisation rules are therefore not required under the ACE tax system.” This inference can be extrapolated beyond thin capitalisation rules to also include other interest deduction limitation rules.

However, this position has also been challenged in the literature, with Cooper observing: “This is a bold claim, but it seems implausible ... in a world with ACE but without thin capitalisation rules, Australia gets either less corporate tax or no corporate tax”.

Nonetheless, this is at odds with the findings of Ruf and Schindler who, as noted in section 2.4.1, found that for the average MNE there is no need to implement thin capitalisation rules because of their nominal impact. They observe that the mismatch between anecdotal evidence provided by tax consultants and auditors, and the relatively weak empirical evidence concerning all MNEs is attributable to the fact that most MNEs do not engage in international debt shifting. Rather, they believe that only a few large MNEs engage in aggressive tax planning and that thin capitalisation rules cause significant collateral damage by requiring non tax-aggressive MNEs to bear the administrative burden of these complex rules.

So, even though both policymakers and commentators posit that ACE-inspired reforms may strengthen or replace existing thin capitalisation rules, these two literatures have remained disconnected.

Further, none of the research exploring ACE-variants in practice examines whether the legislators contemplated the relationship between an ACE and thin capitalisation rules. Nor has there yet been an examination of whether a correlation exists between implementing (or reducing the scope of) an ACE-variant and limiting (or tightening) interest limitation rules.

As such, this analysis highlights a key research gap. Specifically, that the literature lacks a detailed exploration of whether it is possible to address the cross-border funding bias by adapting fundamental reforms such as the ACE to the cross-border context to improve or replace existing thin capitalisation rules.

419 Henry Review, above n 195.
420 OECD, above n 364, 157.
422 Cooper, above n 382, 266.
423 Ruf and Schindler, above n 112, 24.
424 Ruf and Schindler, above n 112, 24–8.
2.5.1.2 Practical feasibility

Since its theoretical inception, the ACE has garnered substantial support and increasing interest internationally. Indeed, the ACE is one of the few fundamental reform proposals to have been experimented with in practice, with several countries having tried out ACE-variants, including Austria (2000–04), Croatia (1994–2000), Belgium (2006–today), Brazil (1996–today), Italy (1997–2003 and 2011–today) and Latvia (2009–13). The repeal of each of these ACE-variants, where applicable, was not because of any fundamental problem with the theoretical ACE, nor any technical flaws in the ACE system. Rather, the abolition of these ACE-variants was in line with the dominant trend of reducing headline corporate income tax rates in the context of ‘tax-rate cut cum base broadening’.

425 Keuschnigg, above n 382; Gammie, above n 378; Devereux M P and Sørensen P B, above n 35.
426 Traversa, above n 345.
427 There is limited literature in relation to the Austrian ACE. They observe that the repeal of the Austrian ACE-variant coincided with the reduction in the Austrian corporate income tax rate. Interestingly, Austria cut its 34% corporate income tax rate to the equivalent of a reduced rate on the notional return at 25%: Klemm, above n 371; see further, De Mooij R A and Devereux M P, ‘Alternative Systems of Business Tax in Europe: An Applied Analysis of ACE and CBIT Reforms’ (European Union Taxation Papers, Working Paper No 17, 2009).
428 The Croatian ACE-variant came close to the theoretical ideal. Similarly to the Austrian experience, the reason for its abolition was to facilitate a reduction in the corporate income tax rate from 35% to 20%. Keen and King provide the leading description of the Croatian ACE experience, explaining how the system functioned and discussing different critical views of the Croatian system. They conclude that the Croatian ACE was a well-functioning, technically precise system consistent with the theoretical ideal: Keen M and King J, ‘The Croatian Profit Tax: An ACE in Practice’ (2002) 23(3) Institute for Fiscal Studies 401.
429 While the Brazilian ACE-variant, also known as the ‘Remuneration for Equity’, has not been repealed it is not considered to have been modelled on the theoretical ACE because it is limited to distributed profits, with leading commentators such as Klemm observing that “For most of these firms, the Brazilian system is not an ACE system but rather one of dividend deductibility”: Klemm, above n 371.
430 The Italian DIT reform package was not fully completed due to the change of the government’s coalition following elections in 2001, which resulted in the repeal of the DIT in favour of a single-rate corporate tax scheme. The DIT was criticised as largely benefiting large and profitable firms, who were more likely to issue new equity, while companies in the south and SMEs were less likely to issue equity, despite their higher cost of debt. Ironically, the abolition of the Italian DIT resulted in a higher tax burden for most companies; see further, Oropallo F and Parisi V, ‘Will Italy’s Tax Reform Reduce the Corporate Tax Burden?’ (2007) 1 Rivista di Statistica Ufficiale 31; Santoro A, ‘Ex-Post Evaluation of Tax Reforms: The Case of the Italian Partial ACE’ (Paper presented at XII Meeting of Public Economy, Assessment of Public Policies, Palma de Mallorca, 3–4 February 2005).
431 Staderini provides an empirically evaluation of the initial Italian ACE-variant: Staderini, above n 377.
432 Given the relatively recent repeal of the Latvian ACE-variant, the English-language literature has not directed much attention to outlining the reasons for said repeal. Nonetheless, it has been observed that the Latvian ACE-variant was repealed “in order to compensate [for] a potential loss of tax revenues” following measures increasing tax relief on R&D, investments in new production technologies and investment projects: Eurostat, ‘Taxation Trends in the European Union: Data for the EU Member States, Iceland and Norway’ (European Union, 2014) 108; see also, European Commission, ‘Tax Reforms in EU Member States 2014: Tax Policy Challenges for Economic Growth and Fiscal Sustainability: 2014 Report’, European Economy 6 (European Commission, DG ECFIN and DG TAXUD, October 2014) 36.
433 Klemm, above n 371.
434 Keen and King, above n 428, 417.
435 Keen and King, above n 428.
Importantly, when exploring the literature on ACE in practice, the remainder of this Chapter 2 focuses on the Belgian and Italian ACE-variants. This is for three reasons: first, these two jurisdictions’ ACE-variants are closest to the theoretical ACE; second, their ACE-variants are the only ACE-variants currently in operation; and third, these two jurisdictions’ reforms are relatively well documented, with a substantial amount of information available online, including both extrinsic and intrinsic materials, which greatly assists the process of legal research and analysis set out in Chapter 4.

The tax design criteria that were most consistently adopted by these ACE-variants were economic efficiency (with a focus on funding neutrality), international competitiveness and growth. In the context of the Belgian Notional Interest Deduction (‘Belgian NID’), the literature identifies four key motivations for introducing this reform: regional tax rate competition; improvements in corporations’ solvency by addressing the debt bias; replacement of the coordination centre regime; and tax neutrality. In the Italian context, the primary aims of the Italian Dual Income Tax (‘Italian DIT’) were to lower the effective tax rate by reducing the debt bias and to encourage FDI inflows. Subsequently, the Aiuto alla Crescita Economica (‘Italian ACE’) reform, introduced in 2011, aimed to provide for austerity measures, to stimulate the Italian economy thereby restoring a balanced budget by 2013 and to achieve

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436 The Belgian NID (otherwise known as the “Intérêts notionnels et déduction fiscales pour capital à risque”, “Notionele Interestafrek” or “Capital Risk Deduction”) allows a deduction for the notional cost of equity by multiplying the notional interest rate with the adjusted equity balance. The notional interest rate is based on the average 10-year government bond rate. For qualifying SMEs the notional interest rate is increased by 0.5%. The adjusted equity balance corresponds to the accounting equity balance, as listed on the non-consolidated accounts, adjusted to prevent double counting and potential misuses. However, this calculation has received much criticism in the literature, including that companies do not need to generate new investments to benefit from the Belgian NID.

437 Although inspired by the Nordic DIT, the Italian DIT was very different as it only affected capital income. It split profit into two components: ordinary and above-normal income, taxing the former at 19% and the latter at 37%. The imputation rate was set by reference to market rates on both public and private bonds, with scope to raise this rate up to 3% over market interest rates to compensate for the higher risk of equity finance. The equity base was calculated by reference to the changes in capital contributions and retained profits, with a multiplier later added to align this base to the theoretical ACE while simultaneously protecting the tax revenue base; see further, Oropallo and Parisi, above n 430.

438 As originally drafted, the Italian ACE invoked the Italian DIT in some respects. A substantial improvement on the Italian ACE is that, while the Italian DIT incentivised capitalisation by applying a reduced rate to the portion of profit identified by the notional return on capital, the Italian ACE provides a tax deduction in respect of the notional return on new equity. The imputation rate was initially fixed at 3%, with increases to be set by reference to Treasury bonds, set at 4%, 4.5% and 4.75% for 2014, 2015 and 2016, respectively. Further, the Italian ACE was introduced with retroactive effect, or to also apply for the whole of 2011. This ensures the Italian ACE was more closely aligned to the original ACE principles, directly and immediately allowing deductions for equity financing and not providing an upper limit to the increases in equity financing. Importantly, the Italian ACE also applies to corporations, individual firms and limited partnerships, the inclusion of which promotes neutrality in organisational form. See further, IFS, above n 370.
funding neutrality, thereby enhancing the capital structure of Italian companies by stimulating company capitalisation.

These ACE-variants have received considerable attention in the economic literature, which currently has a corporate tax neutrality focus. Despite acknowledging the relevance and importance of also considering the legal, accounting and political issues, these aspects remain understudied. Overall, the literature can be broadly separated into two categories: one is commentary focussing on a given jurisdiction when conducting simulation studies; the other is relatively brief legal commentary of individual jurisdictions’ ACE frameworks at a point in time. Any comparative analysis of ACE-variants in practice is restricted to the economic paradigm and does not provide in-depth legal analysis.

The majority of the English-language literature focusses distinctly on economic modelling rather than engaging in any legal analysis. One of the exceptions is an OECD report that provides a descriptive exposition with detailed reference to particular amendments and developments; despite this, there remains a gap in relation to a critical analysis directed at suggesting design improvements for similar reforms in the future.

A recent contribution in this area is the comparative analysis of the Belgian and Italian ACE-variants by Zangari, who presents the case for why the design of the Italian ACE-variant allows for a more robust reform than the Belgian NID, arguing that this is due to its anti-avoidance framework. This may appear contrary to the description provided by De Mooij and Devereux, who consider that these two ACE-variants are the closest to the theoretical ACE. However, the implementation and maintenance of these two ACE-variants were approached

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439 Visco I, ‘Fact-finding with regard to the decree law containing urgent measures for growth, equity and the consolidation of the public finances’ (Address by the Governor of the Bank of Italy, Rome, 9 December 2011).
441 Auerbach, Devereux and Simpson, above n 382; see also, Keuschnigg, above n 382; see further, Cooper, above n 382.
442 OECD, above n 364, 130–3.
444 OECD, above n 14.
446 De Mooij and Devereux, above n 427.
from “opposite reference points”, which has likely accounted for the success of the Italian ACE compared to the waning popularity of the Belgian NID.

Despite providing a comprehensive comparison of the technical aspects of these ACE-variants in practice, legal analysis is beyond the scope of Zangari’s paper. Accordingly, there remains scope in the literature to provide a legal comparative analysis, with an emphasis on legislative drafting and the underlying policy intentions for amendments over time. This is addressed through an in-depth legal analysis of these two regimes in section 4.2, which then lays the foundations for a comparative assessment in section 4.3 of these regimes against the evaluation framework.

Another aspect of the ACE that has received little attention in the literature to date is that ACE-based reforms have potential to be applied as part of a broader anti-avoidance framework. It is plausible that this would be particularly useful when dealing with cross-border issues.

The studies providing assessments of ACE-variants in practice tend to be focussed on the cost of capital, the company tax rate with respect to the pre-existing and subsequent systems and the effect of tax incentives on firms’ capital structure. Several simulation studies have been conducted by Keuschnigg and Dietz, Radulescu and Stimmelmayr, Fehr and Wiegard and De Mooij and Devereux.

447 Zangari, above n 445, 6.
451 For example, commentators such as Panier, Villanueva and Pérez-González use the introduction of the Belgian NID as a quasi-experiment to investigate the effect of tax incentives on firms’ capital structure using a difference-in-differences approach where the treatment group is constituted by Belgian firms whilst the control group is composed by firms located in neighbouring countries: France, Germany, Luxembourg and the Netherlands. The authors use a mix of data spanning 2001 to 2009, concluding that the ACE significantly increased the capitalisation of firms, mainly by encouraging higher equity levels: Panier, Villanueva and Pérez-González, above n 376.
453 Radulescu and Stimmelmayr, above n 381.
455 De Mooij and Devereux, above n 369.
However, research on these ACE-variants is inconclusive. In relation to the Belgian NID, econometric evidence on the financial structures of small to medium enterprises (‘SMEs’) ranges from the reform having no significant effects in some studies, to the finding of other studies conducted by the same commentators but using larger datasets that the Belgian NID does significantly change SME leverage. In relation to the Italian DIT, microsimulation modelling conducted by Oropallo and Parisi is limited in scope because the empirical results only consider the first-round impact of the reform. Even though the post-transition period planned to more closely align the Italian reform to the theoretical ACE, it was abolished merely months into this stage due to a change of government in July 2001. Nonetheless, the literature contains a useful comparison between theoretical ACE and the Italian DIT in both its early and final stages, extracted in Table 6 below. Bordignon et al observe that the 1998 version of the Italian DIT contained provisions to assist in the regime’s transition to the ‘final regime’. They explain that this final regime differs from both the theoretical ACE and the reforms introduced in the Nordic countries at the beginning of the 1990s (‘Nordic DIT’) in that the final regime is an attempt to balance conflicting tax reform goals. They observe that this results in a reform halfway between the theoretical ACE and the Nordic DIT. As shown in Table 6 below, the final regime includes an ACE-inspired tax on above-normal income, but it also taxes the ordinary return. This attempts to balance the policy objective of attaining efficiency with the budgetary pressures that resulted from reducing the statutory tax rate in response to increased international tax competition.

456 Van Campenhout and Van Caneghem, above n 449.
457 Kestens, Van Cauwenberge and Christiaens, above n 376.
458 Oropallo and Parisi, above n 430.
459 Table 6 is a partial extract. The full table contains both corporate and non-corporate sector columns; see further, Bordignon M, Giannini A and Panteghini P, ‘Reforming Business Taxation: Lessons from Italy?’ (2001) 8(2) International Tax and Public Finance 191, 197–201.
460 The ACE deducted an allowance for the cost of equity computed by applying the market interest rate on government bonds ($r$) to a measure of the equity invested in the company ($E$), thereby resulting in a tax payable calculation of $\gamma(\Pi - rE)$.
461 It is noteworthy that, at the company level, the Nordic DIT does not exempt the opportunity cost of equity, whereas interest costs remain fully deductible: Bordignon, Giannini and Panteghini, above n 459, 198.
The following sections 2.5.1.2.1 to 2.5.1.2.5 highlight the five-fold challenges to operationalising the Belgian and Italian ACE-variants; cross-referencing the theoretical literature, and examining both the English-language and the accessible foreign-language materials on these ACE-variants. This contextualises, and highlights the significance of, the more detailed longitudinal legal analysis of these ACE-variants presented in the subsequent section 4.2.

2.5.1.2.1 Selecting the ACE rate

In general, the risk-free\(^{462}\) interest rate\(^{463}\) is the preferred rate for the notional return on equity (‘the ACE rate’). The long-term government bond rate is perceived to be the best proxy for this.\(^{464}\)

Reliance on a long-term government bond rate is particularly problematic when there is significant variation between it and the NID rate, as was experienced in 2011 with the Belgian NID. As shown in Figure 10 below – which depicts the Belgian NID rate since its implementation, with an additional row indicating the range of the 10-year government bond yield\(^{465}\) – in 2011 the long-term government bond rate reached 5.949%, yet the NID rate applied to non-SMEs remained at 3.425%.

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\(^{462}\) “calculated by reference to a normal commercial rate of interest, fixed by the government”; see further, Gammie, above n 378.

\(^{463}\) De Mooij and Devereux, above n 369, 96.


Under both the Italian DIT and the Italian ACE, empirical evidence shows that effective marginal tax rates have dramatically reduced. This is consistent with the ACE literature, which indicates that the tax advantage of debt financing can be eliminated quite simply by bringing the notional ACE rate in line with the long-term risk-free interest rate.\footnote{Panetta F, ‘A Financial System for Growth’ (Speech delivered by the Deputy Governor of the Bank of Italy, Milan, 27 January 2014); see further Boardway and Bruce, above n 368; De Mooij R A, ‘Tax Biases to Debt Finance: Assessing the Problem, Finding Solutions’ (IMF Staff Discussion Note SDN/11/11, Fiscal Affairs Department, 3 May 2011).}

The Italian DIT applied a two-tier statutory rate. The lower rate (initially 19%, 23.25% by early 2001) applied for the portion of normal profits representing the opportunity cost of new equity financing compared with other forms of capital investment, while a higher rate (initially 37%, 40.25% by early 2001) applied for all above-normal profits.\footnote{Federici and Parisi, above n 443.} A particularly noteworthy feature of the Italian DIT was that the imputed rate was set annually with reference to market interest rates on both public and private bonds, with scope to raise the imputed rate up to 3% over market interest rates to compensate for the higher risk of equity over debt finance.\footnote{Bordignon M, Giannini A and Panteghini P, ‘Corporate Taxation in Italy: An Analysis of the 1998 Reform’ (1999) 56 (3–4) FinanzArchiv: Public Finance Analysis 335.} This seems contrary to the suggestion in the ACE literature that the long-term government bond rate is the appropriate benchmark rate.

Some commentators argue that the tax advantage of the Italian ACE has reduced rather than eliminated the debt bias, because the ACE rate was only half the market interest rates; in 2012 the 10-year government bond rate was approximately 5.78–5.90%. Nonetheless, by early 2014 the bond rate was reduced to 3.10–3.40%, and despite this decline, a larger ACE allowance was introduced under the Stability Law for 2014–16, which was applauded as a step in the right direction. For completeness, the Italian ACE literature has not compared whether the interest rates on debt financing have also halved. If they have not, this would suggest the continued asymmetric tax treatment between debt and equity financing, albeit significantly less pronounced.

However, the use of the long-term government bond rate can result in issues at both the domestic and the international levels, which the theoretical literature has thus far remained silent on.

Domestically, the issues are two-fold. First, on a pragmatic level, if a country has a relatively fragmented or unstable financial market, there is no obvious choice for a risk-free rate. Second, it is arguable that the risk-free rate does not necessarily reflect the actual cost of equity for each firm. Sørensen and Johnson observe that “in practice, the ability of the ACE to eliminate the debt bias depends crucially on ... whether actual interest rates differ from the notional return chosen to relieve equity”. This was the rationale for the US Treasury’s critique of the ACE system, which commentators such as Rumble highlight when rejecting the viability of the ACE. However, Rumble’s observation that “the ACE proposal is a detailed exposition of a dividend deduction scheme” suggests that he has arguably conflated the ACE with dividend deductibility. The degree of non-neutrality would depend on the size of the difference between the actual and the appropriate rate of the notional interest. Since a substantial amount of information would be required to set the ACE rate, this may be overly burdensome administratively, requiring different rates for different companies. Nonetheless, a key counter-argument is that even if the ACE rate were set at the ‘wrong level’ this would still be preferable to a zero ACE rate, as effectively provided under the existing system. On the other hand, some commentators suggest that the ACE rate could simply equal the interest rate paid on

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469 Panteghini, Parisi and Pighetti, above n 440.
470 Panetta, above n 466.
471 Keen and King, above n 428.
472 European Commission, above n 119, 64; Sørensen and Johnson, above n 97, 213.
474 Keen and King, above n 428, 415.
475 Boadway and Bruce, above n 368; Bond and Devereux, above n 464.
476 Sørensen, above n 392; see further, Sørensen and Johnson, above n 97, 212.
debt financing.\footnote{Radulescu and Stimmelmayr, above n 381.} However, this would be a problematic approach if there were no external borrowings.

For consistency with the preferred rate in the ACE literature, the notional return on equity under the pure ACE is characterised as the ‘risk-free’ interest rate \( (t^E) \), as extracted in Table 7 below. Since under a pure ACE system as contemplated by the majority of the ACE literature there would be no restriction on debt deductibility \( (t^D) \), the cost of debt deductibility would be uncapped. So, a pure ACE would mitigate the debt bias.

However, if the ACE were used to supplement thin capitalisation rules (rather than replace them, as explored in section 2.5.1.1.2), the result would likely change. Even though the notional return on equity would remain at the risk-free interest rate \( (t^E) \), the extent of debt deductibility \( (t^D) \) would now be capped. This would provide partial tax deductibility for both debt and equity financing, thereby nearly equalising their tax treatment. This would in turn mitigate the impact of both the behavioural response and the underlying non-neutrality, as shown in Table 7 below. This presents a more robust approach in comparison to the ‘pure’ ACE, which currently neglects the MNEs behavioural response of debt shifting.

Table 7 – Summary of tax treatment under theoretical ACE and modified ACE

<table>
<thead>
<tr>
<th>Scope of the rule</th>
<th>Distortions to funding neutrality</th>
<th>Impact on behavioural responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest</td>
<td>Dividends</td>
<td>Royalties</td>
</tr>
<tr>
<td>( t^I = t^{uncapped} %)</td>
<td>( t^F = t^{risk-free} %)</td>
<td>( t^R = t^{risk-free} %)</td>
</tr>
</tbody>
</table>

Source: Author’s own

On the other hand, Høj challenges the suggestion in the traditional ACE literature that the best proxy for the risk-free rate is the long-term government bond rate, instead suggesting that the Belgian NID rate should reflect market conditions to enhance neutrality and growth.\footnote{Høj J, ‘How to Reform the Belgian Tax System to Enhance Economic Growth’ (Working Paper No 741, OECD Economics Department, 18 December 2009).} When the long-term government bond rate is used as the proxy for the NID rate, the latter will most likely be lower than the interest rate on debt financing. So, there will remain a tax preference in favour of debt financing.

Another key concern which has been underemphasised in the ACE literature to date is that, particularly when dealing with MNEs, it is questionable that a domestic risk-free rate is the best
indicator of an MNE’s notional return on equity. Rather, a worldwide rate would arguably be a more suitable proxy. A ‘worldwide debt-to-capital ratio interest limitation rule’ (otherwise known as the ‘worldwide gearing ratio’) currently exists in both the theory and practice of thin capitalisation rules, whereby interest deductions on debt financing are denied to the extent that the proportion of a company’s assets exceeds the proportion of the group’s worldwide third-party debt to asset ratio. This rule is inherently suited to international harmonisation, which would also be compatible with an ACE system.

2.5.1.2 The tax revenue base and the ‘equity’ base

One of the most substantial hurdles to implementing the ACE is the political aversion to non-revenue neutral reform. Budget constraints were at the forefront of both Belgian and Italian policymakers’ concerns when considering implementation of the ACE.

In the context of the Italian ACE, the government decided not to extend the calculation of ‘equity’ to the entire equity stock, mostly for revenue base protection reasons. This was despite their belief that extending the calculation of equity to the entire equity stock would eliminate the remaining tax advantage of debt, and would likely benefit the financial soundness of firms and their ability to finance medium and long-term investments. Further, with an estimated cost of €4 billion (i.e. about 0.25% of GDP) this would have been affordable.

The literature similarly reflects substantial criticism being directed at the Belgian NID, as it is thought to have placed a considerable cost on public finances, and that the revenue foregone failed to boost the economy and did not serve any employment objective. Given the unfortunate timing leading to implementation of the Belgian NID coinciding with the 2007–08 global financial crisis (‘GFC’), there is increasing political pressure to abolish the NID on the basis that MNEs significantly (and disproportionately) benefit from it. However, macroeconomic analysis shows that the Belgian NID had only a limited negative effect on corporation tax revenues, if any. This is in contrast to the earlier empirical estimates from

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479 This is most likely due to the traditionally domestic nature of ACE reform proposals.
480 Burnett, above n 95.
481 Burnett, above n 95.
482 De Mooij and Devereux, above n 369.
483 Visco I, ‘Overview of Italy’s economy and banking system’, Address by the Governor of the Bank of Italy, Italian Banking Association Annual Meeting, Rome, 10 July 2013.
485 Princen, above n 376.
486 Burggraeve et al, above n 449.
Keen and King that corporate tax revenue losses would exceed 30%,\textsuperscript{487} with the most recent approximations by Sørensen at 10% of corporate tax revenues.\textsuperscript{488} Assuming that inflows of foreign capital have expanded the corporation tax base in Belgium, it is plausible that the introduction of the Belgian NID may have even had a positive impact on public finances.\textsuperscript{489} Further, empirical evidence shows that the introduction of the Belgian NID generated substantial dynamic effects, bringing the gross tax advantage for companies to €3.035 billion by the end of 2006, which was €1.2 billion higher than simulation estimates.\textsuperscript{490}

Interestingly, in the context of both the Belgian and the Italian ACE-variants, implementation of the ACE appears to have been a last-resort solution. To provide a more holistic evaluation it is also necessary to consider the flow-on benefits of the ACE in practice, such as investment, economic growth and employment.

Regarding investment and economic growth, the Belgian NID had an undeniably considerable impact on financial flows.\textsuperscript{491} Regarding the Belgian NID’s impact on the real economy, it seems to have been fairly limited in the short term, but it may become more noticeable in the medium term.\textsuperscript{492} In terms of employment, Burggraeve et al also consider that the post-coordination centre regime decline in employment would have been larger without the introduction of the Belgian NID. They indicate that in the new finance centres being set up by MNEs, there has been a positive (albeit marginal) impact on employment.\textsuperscript{493} However, it is also important to note that it takes time for firms to increase their employment.

In its early stages, the Italian DIT was limited to new equity to limit short-term revenue losses\textsuperscript{494} and fulfil the public finance obligations within the EU.\textsuperscript{495} It was later subject to changes mainly aimed at accelerating its application,\textsuperscript{496} which aligned the Italian DIT more closely with the theoretical ACE. Specifically, a multiplier which enabled normal profits to be computed on the enterprise’s entire capital stock rather than on capital increases was utilised.\textsuperscript{497} The reason for the introduction and gradual increase of the multiplier was to achieve the goal of

\textsuperscript{487} Keen and King, above n 428.
\textsuperscript{488} Sørensen, above n 392.
\textsuperscript{489} Burggraeve et al, above n 449.
\textsuperscript{490} Burggraeve et al, above n 449. However, it is possible to argue that, with corporate tax revenues falling due to the GFC, some of the negative revenue effects of the introduction of the ACE may have been lessened.
\textsuperscript{491} Burggraeve et al, above n 449.
\textsuperscript{492} Burggraeve et al, above n 449.
\textsuperscript{493} Burggraeve et al, above n 449.
\textsuperscript{494} Bordignon, Giannini and Panteghini, above n 459.
\textsuperscript{495} Oropallo and Parisi, above n 430.
\textsuperscript{496} Balzano, Oropallo and Parisi, above n 450.
\textsuperscript{497} Oropallo and Parisi, above n 430; Balzano, Oropallo and Parisi, above n 450.
balancing the conflicting aims of complying with Italy’s public finance obligations under the European Monetary Union process while also accelerating the application of the Italian DIT.

However, as seen in the Belgian NID, when the equity base of the ACE is aligned to the theoretical ideal, there is scope for criticism on the basis that companies did not need to generate new investments to benefit from the ACE. A popular alternative to the formulation of the ‘adjusted’ equity balance is to use retained earnings. While this would encourage reinvestment and be effective in countries with high corporate tax rates, the English-language literature is silent on the legal issues relevant to this alternative, which are further explored in section 4.2. Despite the departure of the Italian ACE from the theoretical ideal, the literature suggests that the use of an incremental equity base results in a more robust system in practice.

2.5.1.2.3 Safeguarding the tax revenue base

Despite the theoretical desirability and practical effectiveness of the ACE, governments consistently conclude that it is not a suitable reform option predominantly due to revenue neutrality concerns. This is despite recent reviews, including Australia’s Henry Review and the review of the Business Tax Working Group (‘BTWG’) and the United Kingdom’s Mirrlees Review, suggesting that a more holistic approach to genuine reform ought not to be impeded by the requirement of revenue neutrality.

While the ACE system results in a narrower tax base and therefore lower tax revenues, which the theoretical literature anticipates is one of its primary drawbacks, it is efficient to tax normal returns at a lower rate than economic rents. So, if individual countries were to adopt an

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498 Federici and Parisi, above n 443.
499 Princen, above n 376.
500 Specifically, shareholders’ equity is reduced by: (i) the net tax value of the company’s own shares; (ii) financial fixed assets consisting of participating interests and other equity; (iii) shares issued by investment companies whose income, if any, is deductible as finally taxed income; (iv) net book value attributed to PEs or immovable property located abroad; (v) net book value of assets which are unreasonably in excess of business needs; (vi) the book value of asset items held as an investment but that are not destined to generate regular income; (vii) the book value of property used for private purposes; (viii) capital gains expressed but not realised; and (ix) capital subsidies.
503 Zangari, above n 445, 45.
504 “Australia, in the future, should consider moving the company income tax system towards a business level expenditure tax, such as an allowance for corporate equity, subject to further international development of tax models”: Henry Review, above n 195, Part 1, 42–3; and, “full implementation of an ACE would not be possible within the revenue neutral constraint imposed by the Working Group’s terms of reference with the base broadening options identified in this thesis”: Australian Government, Business Tax Working Group, Final Report (November 2012) (‘BTWG Final Report’) 12.
505 “Our recommendations are thus to introduce an ACE without increasing the corporate tax rate, to accept that less revenue will be collected from the corporate tax”: Mirrlees et al, ‘The Mirrlees Review: Conclusions and Recommendations for Reform’ (2011) 32(3) Fiscal Studies 331, 351.
ACE system in response to growing capital mobility, the resulting tax structure might be desirable from both a national and an international perspective. Since some rents earned by MNEs are internationally mobile, national governments acting in their own interests are likely to choose a lower tax rate on rents than would otherwise be optimal from a global perspective. Achieving the appropriate level of taxation is therefore likely to require substantial international policy coordination. While this is a key setback, it is important to note that this requirement already applies to many taxes to some degree.

Further, there is an assumption in the theoretical literature that by exempting normal returns from tax, the ACE tends to require higher statutory tax rates to secure the desired revenue (and maintain revenue neutrality). This assumption most likely stems from Devereux and Freeman, who estimated the increase in the corporate tax rate necessary to finance an ACE. This could be characterised as the Achilles’ heel of the ACE because it is highly unlikely for governments to legislate higher corporate tax rates for both budgetary reasons and because, ironically, this would deter inward investment by highly profitable MNEs and provoke outward profit-shifting through transfer pricing. Further, it is important to also recognise the down-sides of relying on the premise that the ACE reform would be revenue neutral through a higher profit tax rate, as this would adversely affect investment decisions of credit-constrained firms and lead to negative economy-wide repercussions generally.

However, this overlooks the observation made by King; specifically that even though it might seem that a tax which offers such generous investment incentives would require a higher tax rate to raise the same amounts of revenue as under the current corporate tax system, the new tax base would imply the abolition of investment tax credits and grants. Even though this comment was in relation to cash flow taxes more generally, De Mooij notes that, in present value terms, the revenue impact of an ACE is equivalent to that of a cash flow tax.

507 Devereux and Freeman, above n 374.
508 Auerbach, Devereux and Simpson, above n 382; Van Campenhout and Van Caneghem, above n 449.
509 Van Campenhout and Van Caneghem, above n 449.
510 Radulescu and Stimmelmayr, above n 381.
511 King M A, ‘The Cash Flow Corporate Income Tax’ in Feldstein M (ed) The Effects of Taxation on Capital Accumulation (University of Chicago Press, 1987) 377. King provides the following elaboration: “A full-scale calculation of the tax rate that would be required to raise the same amount of revenue would involve a general equilibrium analysis of the incentive effects of the new tax. This is beyond our scope here”, 394–5. This highlights the scope of further research. A useful starting point for this analysis would be the Tax Expenditures Statement; see for example, Australian Government, Department of the Treasury, Tax Expenditures Statement 2015 <http://www.treasury.gov.au/-/media/Treasury/Publications%20and%20Media/Publications/2016/Tax%20Expenditures%20Statement%202015/Downloads/PDF/2015_TES.ashx>.
512 De Mooij, above n 466, 16.
Further, according to the Meade Committee report, there is no reason to suppose that the corporate tax rate would have to rise if the base were switched to a corporate cash flow base.\textsuperscript{513} However, given that the period surveyed by the Meade Committee was 1964–74, it is most likely that the partial equilibrium calculations are no longer relevant, as “the most important developments affecting business taxation since the Meade Report in 1978 have been the growth of multinational businesses and cross border ownership of companies”.\textsuperscript{514} More recent estimates of the revenue loss of ACE systems places reductions in corporate income tax revenue between 15\%\textsuperscript{515} to over 30\%.\textsuperscript{516}

However, it is arguable that the benefits of the ACE from an economy-wide perspective may not be adequately considered in these assessments. For example, in relation to Keen and King’s estimate,\textsuperscript{517} some of the investment would never have taken place under a higher marginal effective tax rate. This suggests that the revenue loss may be overestimated. Further, reducing tax on foreign income can advance both domestic and global welfare.\textsuperscript{518} The ACE encourages further investment, economic growth and welfare. So, it is arguable that those additional activities will in turn result in tax revenues. Admittedly, the precise magnitude of this is not readily quantifiable and is beyond the scope of this thesis.

Understandably, at the current economic juncture where tax base erosion and revenue base protection are key areas of concern for policymakers, it is more pragmatic to finance the ACE reform with other tax reforms.\textsuperscript{519} For example, an increase in the VAT/GST to finance the ACE could increase employment and GDP, potentially recovering more than 75\% of the initial fiscal costs in the long run.\textsuperscript{520} Other simulation results indicate that introducing the ACE at both the corporate and non-corporate levels (accompanied by the half-income principle of dividend taxation on households) would provide significant positive effects for investment, capital accumulation and welfare.\textsuperscript{521} The budgetary cost can also be reduced by limiting the ACE deduction to new investment only, however this may not be entirely consistent with the theoretical conception of the ACE base.

\textsuperscript{513} King, above n 511, 395.
\textsuperscript{514} Auerbach, Devereux and Simpson, above n 382; see also, Keuschnigg, above n 382; see further, Cooper, above n 382.
\textsuperscript{515} De Mooij, above n 466.
\textsuperscript{516} Keen and King, above n 428.
\textsuperscript{517} Keen and King, above n 428.
\textsuperscript{518} Desai and Hines, above n 67, 497.
\textsuperscript{519} See, for example, Sørensen and Johnson, above n 97, 232.
\textsuperscript{520} De Mooij and Devereux, above n 369, 98.
\textsuperscript{521} Radulescu and Stimmelmayr, above n 381.
Accordingly, it is useful to examine the ACE-variants in practice. Chen, Lee and Mintz,\textsuperscript{522} Keen and King,\textsuperscript{523} Klemm\textsuperscript{524} and Massimi and Petroni\textsuperscript{525} have provided comprehensive evaluations of these ACE-variants in practice, concluding that ACE-variants were quite successful in practice and did not have significant negative effects on corporate tax revenues.\textsuperscript{526} Importantly, regarding the ACE-variants no longer in operation, their abolition was attributable to political aspirations and the willingness of governments to introduce lower overall corporate tax rates, rather than to any fundamental design flaws in the ACE-variant system. The exception is the recent abolition of the Latvian ACE-variant which, at the time of writing, the literature is silent on. Yet, an appendix to a recent European Commission document confirms the Latvian ACE was abolished “to compensate for a potential loss of tax revenues”.\textsuperscript{527}

Even though the adoption of an ACE generally results in − albeit minor − revenue losses, commentators agree that “ACE passed its first practical test”\textsuperscript{528} and the International Monetary Fund (‘IMF’) suggests that transitional provisions can be designed to limit these losses.\textsuperscript{529} To provide a more holistic evaluation it is also necessary to consider the flow-on benefits of the ACE in practice, such as investment, economic growth and employment.

2.5.1.2.4 Effectiveness in practice

Whereas the Italian DIT was a restricted version of an ACE system,\textsuperscript{530} it is arguable that both the Belgian NID and the Italian ACE share the main characteristics of the theoretical ACE.\textsuperscript{531}

In the context of both the Belgian and Italian ACE-variants, despite calls for a rate reduction and base broadening measures – contrary to the ACE’s base narrowing – the advantages of the ACE system were considered to outweigh the disadvantages\textsuperscript{532} and striving for neutrality

\textsuperscript{522} Chen, Lee and Mintz, above n 374.  
\textsuperscript{523} Keen and King, above n 428.  
\textsuperscript{524} Klemm, above n 371.  
\textsuperscript{525} Massimi and Petroni, above n 143.  
\textsuperscript{526} Keen and King, above n 428.  
\textsuperscript{527} Eurostat, above n 432, 108. Contrast this with the latest appendix on ACE in practice which mentions all of the other ACE-variants yet entirely omits the Latvian ACE: De Mooij R A and Saito I, ‘Japan’s Corporate Income Tax: Facts, Issues and Reform Options’ (IMF Working Paper WP/14/138, 4 August 2014), 42–3.  
\textsuperscript{528} Keen and King, above n 428, 417.  
\textsuperscript{530} Bordignon, Giannini and Panteghini, above n 459; Balzano, Oropallo and Parisi, above n 450.  
\textsuperscript{531} Zangari, above n 445, 45.  
between the tax treatment of debt and equity finance was thought to strengthen corporations’ capital structure, thereby improving corporations’ solvency.

In the context of the Belgian ACE-variant, the system resulted in a marked increase in shareholders’ equity in 2006 and 2007, due to capital contributions from both Belgium and overseas. SMEs were also found to have benefited from the Belgian NID, with companies decreasing leverage by 2–7%, and banks by 12%. These results have led commentators to conclude that the Belgian NID achieved its intended effect. Further, the reforms following the judgment of the European Court of Justice (‘ECJ’) in Argenta Spaarbank may result in more neutrality in the treatment of foreign earnings in domicile states – although this has not yet been specifically addressed by the literature.

On the other hand, it is arguable that the Belgian NID failed to achieve tax neutrality due to weaknesses in the reform. The Belgian NID failed to ensure tax neutrality with respect to both the source of funds and the size of investment. However, this evaluation was conducted during the ‘gestation’ phase of the Belgian NID. Also, the evaluation differentiated between retained earnings, capital gains and equity, yet equity consists of both retained earnings and capital gains.

In the context of the Italian ACE-variants, the majority of the English-language literature is focussed on initial comments on, for example, how the Italian ACE could favourably impact Italian investments carried out by foreign groups and descriptive commentary on the legislative provisions. By contrast, the Italian-language literature contains very detailed and thorough analysis of the legislative provisions and relevant explanatory memoranda and cross-references the treatment under the former Italian DIT. However, unlike the case with the former Italian DIT, there is little emphasis on the trade-offs to implementation of the Italian ACE. Another

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533 In the Italian context: Visco, above n 439.
535 In the Belgian context: Van Campenhout and Van Caneghem, above n 449.
536 Princen, above n 376.
537 Princen, above n 376.
538 Burggraeve et al, above n 449; Princen, above n 376; Schepens, above n 375.
539 Argenta Spaarbank NV v Belgische Staat, C-350/11, 4 July 2013 (Belgium) (‘Argenta Spaarbank’).
issue is that the commentators merely identify problematic tax treatments rather than presenting explanatory case studies or suggestions for improvement, which would assist in policy development. Yet, this is understandable given the intended audience of these practitioner briefing notes. Even though a very detailed and thorough analysis of legislative provisions is available, there is little emphasis on considering other jurisdictions’ ACE-variants, or engaging in a longitudinal analysis and evaluating economic and conceptual reasons for any amendments. These all signal gaps in the English-language literature.

Overall, in the context of both the Belgian and the Italian ACE-variants, there is a research gap in relation to the more specific funding neutrality aspects of these ACE-variants and their suitability in the cross-border anti-avoidance context, which at present is generally overlooked. Accordingly, a detailed legal comparative analysis of the Belgian and Italian ACE-variants forms the basis of Chapter 4 of this thesis.

2.5.1.2.5 Political controversy and legal uncertainty

Both the Belgian and the Italian ACE-variants have been subject to much political controversy following criticisms that the ACE reform disproportionately benefits MNEs and presents a substantial tax expenditure. This is the obverse of the observation by Ruf and Schindler in section 2.4.1; namely, that for the average MNE there is no need to implement thin capitalisation rules. It seems that, for the average MNE operating within an ACE-variant, there is a need to implement tax revenue base protection measures.

This has resulted in a plethora of legislative amendments, in turn exacerbating concerns surrounding legal certainty. This highlights one of the key issues in practice: it is difficult to create enough simplicity to give businesses a feeling of legal certainty about fundamental reform while instilling in the voting public confidence in the relevant reform.

Since its inception, the Belgian NID has been the subject of debate over whether it should be abolished, with political controversy regarding its economic benefits, effectiveness, costs and

546 Zangari, above n 445, 45.
547 Assonime, ‘La disciplina dell’ACE (aiuto alla crescita economica)’ (Direct Taxation, Circular No 17, 7 June 2012).

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legal validity. Belgium has the second highest headline corporate income tax rate in the EU, yet the socialist parties were opposed to directly reducing the CIT rate. The Belgian NID was originally introduced purely on politically grounds. This resulted in much criticism of the motivations for implementing the Belgian NID from academics such as Vanistendael, who described the Belgian NID as “a prime example of what happens when you hold [on to] political and social symbols”. Vanistendael attributes the continued existence of the Belgian NID to the socialist side of politics, who were reluctant to reduce the headline corporate tax rate so retained the NID. Vanistendael further notes that policymakers could have increased tobacco and alcohol taxes or increased the VAT in place of implementing an ACE-variant.

Similarly, in the Italian context, the implementation of two ACE-variants within the past decade, with one abolished following a change in government, exemplifies the highly controversial nature of the ACE reform.

While implementing and maintaining an ACE in practice gives rise to many political challenges, they can be crystallised into two key areas: first, determining the impact that an ACE-variant has on SMEs; and second, quantifying the long-term benefits of an ACE-variant. Both the Italian and the Belgian ACE-variants will be dealt with in turn.

Regarding the Italian DIT, the empirical evidence regarding its impact on SMEs is ambiguous, with contradictory evidence emerging from the literature. On one hand, the first ex-post evaluation of the Italian DIT found that tax reductions were not obtained by SMEs. This evaluation observed that the literature was unclear on whether this was because SMEs were slower to adjust to the changing tax environment or whether SMEs were simply more reliant on debt. On the other hand, subsequent research found that the Italian DIT mainly benefited new firms and less-well capitalised firms, rather than well capitalised companies. This proposition is consistent with empirical evidence that the partial abolition of the Italian DIT in 2001 (replaced by a decreased statutory corporate tax rate) harmed SMEs significantly.
strongly suggests that an ACE provides greater benefits for SMEs than a reduction in the headline corporate tax rate. Maffini highlights that some commentators have employed large datasets, including SMEs, to investigate the differential responses of firms’ capital structure to tax. However, the literature is unclear on the implications for SMEs. So far the effects of the Italian ACE have been limited. This result may be due to the lack of profits available to reinvest in particular firms, and also because of the relatively small size of the Italian ACE rate, which must be sufficiently large and permanent in the eyes of businesses if it is to be effective.

The Belgian literature presents similar ambiguities. Even though the largest responses to changing tax incentives are found among large and new firms, empirical evidence suggests that SMEs benefited significantly from the Belgian NID. This is because the Belgian NID encouraged SMEs to strengthen their capitalisation, thereby providing insulation from economic difficulties. There is a plethora of Belgian media suggesting that the NID is of little benefit to SMEs, and therefore raises fairness issues. This is despite the 0.5% higher NID rate available for SMEs to utilise. Further, the literature also suggests that the Belgian NID is unpopular with SMEs due to its complexity, while simultaneously suggesting that SMEs benefit significantly from the Belgian NID as it encourages them to strengthen their capitalisation.

Even though the full impact of the Belgian and Italian ACE-variants might only become visible in the medium- to long-term, the predominantly short-term focus of politicians and the political decision-making process in general require tenable results in the short term. This is a substantial hurdle to implementing and maintaining an ACE in practice because a lengthier sample period is required to derive meaningful results. This political pressure has resulted in the phasing-down and phasing-out of ACE-variants, and the Italian and Belgian ACE-variants have not been immune to this.

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558 Panetta, above n 466.
559 Panier, Villanueva and Pérez-González, above n 376.
560 Empirical evidence suggests the NID has reduced debt-asset ratios of SMEs: see further, Kestens, Van Cauwenberge and Christiaens, above n 376.
561 ‘Milquet veut ramener le taux de l’Impôt des sociétés à 23,7%’ Le soir, 3 February 2013 <http://www.lesoir.be/177360/article/actualite/fil-info/2013-02-03/milquet-veut-ramener-taux-nominal-l%E2%80%99imp%C3%B4t-des-soci%C3%A9t%C3%A9%C3%A9s-33-%C3%A0-237>.
562 Burggraeve et al, above n 449; Princen, above n 376.
563 Van Campenhout and Van Caneghem, above n 449.
564 Empirical evidence suggests the NID has reduced debt-asset ratios of SMEs: see further, Kestens, Van Cauwenberge and Christiaens, above n 376.
565 Van Campenhout and Van Caneghem, above n 449.
In Italy, the 2004 repeal of the Italian DIT was attributable to the 2001 election. This political decision was criticised given the significant empirical evidence that even in its early stages the Italian DIT resulted in a reduction in the debt distortion and a reduced cost of capital. Admittedly, these results were based on accounting data rather than tax data, which would derive only a proxy of the increase in net equity eligible for tax purposes. So, there may have been substantial differences between net equity changes depicted on balance sheets and actual net equity changes.

In Belgium, the Belgian NID has been diminishing in attractiveness, and therefore popularity. Over the past few years, there has been increased pressure from the media and all sides of politics to abolish the Belgian NID. This resulted in the Belgian NID becoming a 2014 federal election ‘hot topic’. It goes without saying that the tax policy uncertainty from first implementing, then modifying, phasing down and now considering the abolition of the Belgian NID, erodes business confidence. While it remains unclear whether the Belgian NID will be abolished, abolition would diminish the attractiveness of Belgium as a destination for inbound investment. Further, the literature does not expressly analyse whether the watering-down of the Belgian NID provisions – thereby marking a departure from ACE principles – was the cause of its diminished popularity. On the other hand, at the time of writing, the Italian ACE remains in operation with no indication of discontentment directed towards it. The development of both of these reforms is examined in the later section 4.2.

Relevantly, one of the key hurdles to maintaining an ACE in practice is in overcoming the limitations of macroeconomic modelling, and the consequent inability to objectively and immediately quantify the long-term benefits of such a reform. For example, Burggraeve et al recognise that to assess the Belgian NID’s ex-ante effect on corporate cash flows it is necessary to know its budgetary cost, or more precisely a transfer of resources from the government to the business sector. However, this cost is particularly difficult to assess, since the measure relates...
to both new investments and entire balance sheets, thereby requiring an integration of accounting and tax definitions – something which is beyond the scope of their model. Similarly, regarding the Italian DIT’s impact on FDI inflows, empirical evidence shows a connection between firm profitability, productivity and investment and the increased use of the Italian DIT;\textsuperscript{574} while, on the other hand, there is very little evidence that the Italian DIT encouraged FDI inflows.\textsuperscript{575} Commentators such as Bordignon et al suggest that FDI inflows are stunted by the lack of infrastructure, heavy bureaucracy and an inflexible labour market, rather than tax policies such as the Italian DIT.\textsuperscript{576}

2.5.2 Comprehensive business income tax (‘CBIT’)

This section details both the theoretical desirability and the practical feasibility of the CBIT, in sections 2.5.2.1 and 2.5.2.2, respectively. In relation to practical feasibility, the CBIT is considered in terms of its ability to broaden the tax base, the potential to attract more inbound FDI and the transitional difficulties that may arise.

By way of background, the CBIT denies the deductibility of interest. In doing so, this fundamental reform proposal aims to end the classical double taxation of source income.\textsuperscript{577} First proposed by the US Department of the Treasury and having more recently gained support from the IMF,\textsuperscript{578} the CBIT has its theoretical foundations in the fundamental equivalence between a corporate income tax levied at source and an equal-rate personal income tax on corporate earnings with full credit for the underlying corporate income tax.

However, as noted by de Mooij and Devereux, “There are no real-world experiments of actual CBIT regimes. Yet, countries do have imposed reforms that limit the deductibility of interest in some way, usually through thin-capitalisation rules”.\textsuperscript{579} For completeness, in its capacity as a quasi-CBIT, the Australian thin capitalisation regime explored in section 2.4.3.2.3 is assessed against the evaluation framework in the below section 4.2.4.

2.5.2.1 Theoretical desirability

In addition to attaining funding neutrality by denying all deductions at corporate level for dividends and interest paid to shareholders and debt-holders, a CBIT also exempts from tax

\textsuperscript{574} Staderini, above n 377.
\textsuperscript{575} Bordignon, Giannini and Panteghini, above n 459.
\textsuperscript{576} Bordignon, Giannini and Panteghini, above n 459.
\textsuperscript{578} For completeness, the IMF proposed a CBIT which denies interest deductibility for corporate income tax altogether while exempting interest received: IMF, above n 529.
\textsuperscript{579} De Mooij and Devereux, above n 427, 17.
items at the level of the recipient by applying to individuals, corporations, exempt entities and non-residents.\textsuperscript{580} This attains neutrality of organisational form. Sørensen and Johnson also note a key goal of the original CBIT proposal; that is, to secure a single uniform tax on all corporate source income at a rate roughly equal to the top marginal personal tax rate.\textsuperscript{581} The CBIT greatly reduces the distinction between retained and distributed earnings (depending on the treatment of capital gains). Further, unlike a cash flow tax, assets are depreciated over their lifetime under the CBIT, as they would be under a conventional income tax, thereby taxing the normal return on capital.\textsuperscript{582}

The CBIT eliminates the debt bias by denying existing debt deductibility. By affording no tax deductions for either debt or equity financing, the CBIT equalises the tax treatment of debt and equity financing (so, under this system \( t^D = t^E = 0\% \)). Further, the CBIT literature offers two key variations on the scope of the rule. First, it deals only with debt and equity financing.\textsuperscript{583} Second, commentators such as Fossen and Bach propose a more expansive interpretation of the CBIT, which taxes profits, all interest expenses, and all interest portions of rents, leasing rates and royalties (the ‘extended CBIT’).\textsuperscript{584}

The CBIT would mitigate both the underlying non-neutrality arising from the cross-border funding bias and mitigate the behavioural response of debt shifting. This is illustrated in the below Table 8:

Table 8 – Summary of tax treatment under theoretical CBIT and extended CBIT

<table>
<thead>
<tr>
<th>Scope of the rule</th>
<th>Distortions to funding neutrality</th>
<th>Impact on behavioural responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest</td>
<td>Dividends</td>
<td>Royalties</td>
</tr>
<tr>
<td>CBIT</td>
<td>( t^D = 0% )</td>
<td>( t^E = 0% )</td>
</tr>
<tr>
<td>Extended CBIT</td>
<td>( t^D = 0% )</td>
<td>( t^E = 0% )</td>
</tr>
</tbody>
</table>

Source: Author’s own

\textsuperscript{581} “The goal of the original CBIT proposal was to secure a single uniform tax on all corporate source income at a rate (roughly) equal to the top marginal personal tax rate on capital income. In this way, the CBIT would in principle make personal taxes on corporate source income redundant, given the US Treasury’s goal of ending the classical double taxation of such income.”: Sørensen and Johnson, above n 97, 212.
\textsuperscript{582} Cnossen, above n 580.
\textsuperscript{583} De Mooij and Devereux, above n 427, 16–17.
\textsuperscript{584} Fossen F and Bach S, ‘Reforming the German Local Business Tax: Lessons from an International Comparison and a Microsimulation Analysis’ (2008) 64(2) FinanzArchiv 245, 258; a similar reform (‘Kommunalmodell’) was proposed by the German local authority central organizations. However, the authors do not detail how these reforms would be operationalised. Rather, they conduct a microsimulation analysis of the extended CBIT, in addition to other reform options.
If the more expansive variation of the CBIT were to be applied, this reform would attain funding neutrality. However, it is important to take a balanced view with reference to both the advantages and disadvantages of the CBIT, which are subject to continuing debate in the literature. The key advantages, in addition to attaining funding neutrality, include the ability to implement a policy of tax-cut-cum-base-broadening, neutrality of organisational form, less vulnerability to international profit-shifting and potential improvement in investment. The key disadvantages include the introduction of a distinction between the real and financial activities of MNEs, the risks of an economy-wide capital de-accumulation, deterrence of foreign portfolio investors and inbound FDI, and potentially substantial welfare losses and transition difficulties, including the need for special depreciation allowances or provisions for immediate write-offs. These are each dealt with in turn below.

2.5.2.2 Practical feasibility

2.5.2.2.1 Broadening the tax revenue base

Sørensen and Johnson maintain that if the CBIT were accompanied by a lower statutory tax rate, domestic business tax revenue would become less vulnerable to international profit-shifting through transfer pricing and thin capitalisation. This proposition is widely supported in the literature, as the growth in opportunities for international income shifting strengthens the case for a policy of tax-cut-cum-base-broadening.

On the other hand, the IMF has observed that even though a standalone CBIT broadens the tax base it also increases capital costs. Since the CBIT increases the cost of capital, a lower number of profitable investments offering the minimum required rate of return will be available, resulting in fewer investments being made, implying that each firm will operate at a lower capital intensity. This would result in an economy-wide capital de-accumulation. Firms would reduce their labour demand, gross wages would decrease and, even though a lower tax rate would apply, this would not be enough to compensate for the negative effects of the reform.

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586 Sørensen and Johnson, above n 97, 213.
587 See further, Sørensen and Johnson, above n 97, 213.
588 This is due to the denial of deductibility of the cost of debt financing: see further, Cottarelli, above n 141. However, it may be argued that non-deductibility at the corporate level is counterbalanced by exemption at the investor level.
589 Radulescu and Stimmelmayr, above n 381.


2.5.2.2.2 **Attracting international investment**

In the context of a small, open economy such as Australia, Sørensen and Johnson suggest that the CBIT is an attractive option, despite the obvious disincentive of denying debt deductibility, as it would attract more inbound FDI with positive spill overs into the domestic economy.\(^{590}\)

However, there are four issues with Sørensen and Johnson’s position. First, there are no real-world examples of CBIT systems to substantiate this inference.\(^{591}\) Second, since the CBIT involves a source-based tax on the normal return to capital,\(^{592}\) it is likely to generate significant distortions by deterring foreign portfolio investors. Third, without first lowering corporate tax rates, it is unclear how denying debt deductions (thereby raising the cost of debt and, in turn, rendering fewer investments profitable at the margin) would attract more inbound FDI.\(^{593}\) This is supported by Radulescu and Stimmelmayr, who are sceptical of the claim that the CBIT would benefit a small, open economy, since most countries would likely want to attract investors while broadening their tax base.\(^{594}\) Fourth, the CBIT might lead to increased distortions of the marginal investment, with an increase in capital costs potentially resulting in fewer investments.

Contrary to the assumption that a CBIT would encourage international investment, Radulescu and Stimmelmayr’s simulation results suggest that the investment incentives produced by a CBIT would be outweighed by the decline in investment, wages, disposable income, consumption and ultimately welfare.

Accordingly, governments would need to be careful when determining how to finance the CBIT. Simulation results suggest that if the CBIT reforms were financed by a change in the GST/VAT rate rather than the corporate tax rate, introducing a CBIT would have negative consequences for investment. Also, if the implementation of a CBIT were not accompanied by special depreciation allowances or provisions for immediate write-offs, it could even lead to welfare losses.\(^{595}\) Even though these simulation results are very sensitive to the magnitude of the parameters, Radulescu and Stimmelmayr posit that it is clear that the pure CBIT would not produce favourable results.\(^{596}\)

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\(^{590}\) Sørensen and Johnson, above n 97, 213.

\(^{591}\) De Mooij, above n 466.

\(^{592}\) Sørensen and Johnson, above n 97, 213.

\(^{593}\) De Mooij and Devereux, above n 369, 98.

\(^{594}\) Radulescu and Stimmelmayr, above n 381.

\(^{595}\) Radulescu and Stimmelmayr, above n 381.

\(^{596}\) Radulescu and Stimmelmayr, above n 381, 313.
2.5.2.2.3 Transitional difficulties

In addition to the practical obstacles associated with implementing the CBIT – namely, that it can only be implemented gradually over a fairly long time horizon – it is unclear how to best mitigate the transitional difficulties of dealing with pre-existing debt issued in full expectation of deductibility\(^ {597}\) and the short-run risk of the CBIT amplifying financial distress.\(^ {598}\)

The CBIT also potentially presents significant issues with US-based MNEs potentially being unable to claim foreign tax credits in their home country,\(^ {599}\) which may exacerbate capital de-accumulation. However, a counterargument is that most OECD countries exempt foreign source non-portfolio dividends and many source countries do not levy withholding tax on interest or royalties. Further, financial institutions would be paying little or no corporate income tax under the CBIT, having no tax due on interest received and other deductible costs unrelated to interest.\(^ {600}\) Despite suggesting that in aggregate this might be more than offset by increased payments by other companies, it is not clear how this would be acceptable from both the political and the revenue base protection perspectives.

However, it is clear that the CBIT, a conceptual cousin of thin capitalisation rules, owes much of its popularity to the possibility of a lower statutory corporate tax rate.\(^ {601}\) Nonetheless, the disadvantages associated with a CBIT appear to outweigh the advantages, with a strong preference for both the ACE and the ACC over the CBIT in practice.\(^ {602}\) The literature pertaining to these reform alternatives is examined in the subsequent sections.

2.5.3 Allowance for corporate capital (‘ACC’)

There exists an extensive ACC literature, a thorough analysis of which is beyond the scope of this thesis. Under an ACC, a deduction is allowed for the imputed return on the book value of capital \((r^K)\), calculated by reference to a risk-free nominal rate.\(^ {603}\) As such, these reforms contemplate an overhaul of the corporate income tax system.

However the cross-border implications are largely overlooked, particularly the design aspects of international, transitional and anti-avoidance provisions.\(^ {604}\) Indeed, the ACC literature has not yet turned its attention to the possibility of replacing thin capitalisation rules with an ACC; nor has it analysed the operationalisation of an ACC in the cross-border context.

\(^{597}\) Chaudhry, Mullineux and Agarwal, above n 377.

\(^{598}\) De Mooij, above n 147; see further, De Mooij, above n 466; Cottarelli, above n 141, 13–14.

\(^{599}\) Cottarelli, above n 141, 13–14.

\(^{600}\) IMF, above n 529, 63.

\(^{601}\) European Commission, above n 119.

\(^{602}\) Sorensen and Johnson, above n 97, 215, 233.

\(^{603}\) De Mooij and Devereux, above n 427.

The theoretical foundation for the ACC was established by Boadway and Bruce, who proposed abolishing debt deductibility and replacing it with an allowance for notional risk-free return to capital.605 A key advantage of the ACC is that it entirely eliminates the debt bias, unlike the ACE which only partially achieves funding neutrality.606 This gives the ACC the funding neutrality benefits of a CBIT without being as adverse to investments as a CBIT. De Mooij and Devereux apply simulations with the CORTAX model607 to quantify the trade-offs in ACE and CBIT reform in the EU, the US and Japan.608 While many countries including Australia are excluded from the scope of this analysis, it may be possible to extrapolate the results to other jurisdictions.

Sørensen and Johnson observe that a weakness of the ACC is that, since it is a source-based tax system, it faces the same problems in an international context as its cash flow equivalents. Specifically,609

“... it hurts heavily indebted firms, more or less exempts the financial sector from tax, and provides incentives to convert taxable real flows to customers into tax exempt financial flows because interest income and expenses are left out of the business tax base”. 

However, even though interest income and expenses would not expressly be deductible, an ACC effectively allows a limited deduction for these amounts so they would likely still be included, albeit indirectly.

Sørensen and Johnson also note that both this system and the ACE may distort international location decisions and invite international profit-shifting through transfer-pricing.610 Nonetheless, since the ACC treats debt and equity equally for tax purposes it arguably has the same, if not better, economic efficiency implications as the ACE. Indeed, the choice between the ACC and the ACE ultimately involves a trade-off between the greater degree of funding neutrality achieved under the ACC and the greater real investment neutrality under the ACE.611

605 The normal return is applied to the book value of the entire firm’s capital according to the tax accounts, calculating net project receipts and expenses (that only include book value depreciation) and then deducting the ACC (the uplift rate) before applying the rent tax. It is thought that the ACC preserves value particularly for the spread of capital expenditure over a project’s effective life: De Mooij and Devereux, above n 369, 96.

606 De Mooij and Devereux, above n 369, 107.

607 See further, Bettendorf L et al, ‘The economic effects of EU-reforms in corporate income tax systems’ (Study for the European Commission, Contract No TAXUD/2007/DE/324, October 2009). However, CORTAX does not explicitly model tax planning through intra-company capital structures; also, there is a large variation in semi-elasticity estimates for transfer pricing: De Mooij and Devereux, above n 369, 104–6.

608 De Mooij and Devereux, above n 369.

609 Sørensen and Johnson, above n 97, 202.

610 Sørensen and Johnson, above n 97, 212.

611 Sørensen and Johnson, above n 97, 212.
By applying the ACC rate on the book value of assets, the difference between debt and equity becomes irrelevant for tax purposes, thereby reducing complexity in practice.\(^\text{612}\)

Some commentators observe that equity would then become a preferred source of finance due to the possibility of capital gains tax (‘CGT’) deferral from equity finance as opposed to interest payments and dividends that are taxable on accrual.\(^\text{613}\)

However, this would present an opportunity to abolish the quarantining of capital losses, as proposed by Taylor. The quarantining of capital losses would be unnecessary in a regime where capital gains are taxed at marginal rates, capital losses are spread backward over a period of years at their real values, and interest is payable on any overpayments of tax that thereby arise.\(^\text{614}\)

Alternatively, the OECD suggests that this non-neutrality could be addressed with a “minimum distribution rule”,\(^\text{615}\) which would induce corporations to distribute the cost of capital allowance (‘COCA’) rate, be it in the form of interest payments or dividends. This rule would likely be similar to an ‘undistributed profits tax’, which commentators such as Oats note “… presupposes profitability as an acceptable measure of ability to pay tax”.\(^\text{616}\) In any event, the ACC is broadly comparable to both the ACE and the combined ACE-CBIT, and to an extent replicates a combined ACE-CBIT.\(^\text{617}\)

However, there are three key differences between the ACC and the combined ACE-CBIT. First, the ACC literature contemplates the use of the risk-free nominal rate for the imputed return, applied to the book value of capital \((r^K = r^{\text{risk-free}}\%\)), irrespective of its source of finance.\(^\text{618}\) This would in effect provide tax deductions for the cost of both debt and equity financing, thereby eliminating the debt bias. On the other hand, the combined ACE-CBIT applies a reduced nominal rate, thereby applying a partial tax deduction \((t^{\text{D/E/L/F}}=t^{\text{partial}}\%\)). As such, a cross-border ACE-CBIT may have a smaller and more targeted impact on the tax revenue base by only allowing deductions for particular flows rather than the book value of capital.

\(^{612}\) OECD, above n 364, 134.

\(^{613}\) OECD, above n 364, 134. This is a particularly pertinent issue when there is no means of equating a realisation-basis capital gains tax with an accruals-basis capital gains tax.


\(^{615}\) OECD, above n 364, 134.


\(^{617}\) De Mooij and Devereux, above n 369, 99.

\(^{618}\) De Mooij and Devereux, above n 427.
Second, despite certain funding arrangements having historically been classified as ‘off-balance sheet’, these will likely not escape the ambit of the ACC regime given recent reporting rules on leasing. Given the use of an expansive definition of ‘capital’, as suggested by Kleinbard, this proposal is likely to further attain funding neutrality. On the other hand, a combined ACE-CBIT is typically confined to debt and equity financing, given its origins in the debt–equity focussed ACE and CBIT literatures. So, the ACC would likely eliminate the funding bias and, in turn, eliminate behavioural distortions. By equalising the tax treatment between all categories of funding, the ACC goes one step further than the ‘ACE plus thin capitalisation rules’ alternative explored in section 2.5.1.2.1. This is illustrated in the below Table 9:

<table>
<thead>
<tr>
<th>Scope of the rule</th>
<th>Distortions to funding neutrality</th>
<th>Impact on behavioural responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest</td>
<td>✓</td>
<td>Eliminates</td>
</tr>
<tr>
<td>Dividends</td>
<td>✓</td>
<td>Eliminates</td>
</tr>
<tr>
<td>Royalties</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Rents on leasing</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>ACC</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

Table 9 – Summary of tax treatment under theoretical ACC

Source: Author’s own

Third, it is also important to note that the ACC literature is largely US-focussed. For example, Kleinbard notes that under a business enterprises income tax (‘BEIT’):

“By virtue of true worldwide consolidation, all group income and assets would be treated as owned by the US parent for purposes of its US tax bill, and intercompany interest, rents, royalties or dividends would be ignored”

For completeness, the fundamental reform proposal of the BEIT is essentially the same as the ACC. This emphasis on worldwide consolidation may present problems from a small,
capital-importing economy’s perspective and potentially give rise to international double taxation issues.\(^{624}\)

### 2.5.4 Combined ACE-CBIT

A combined ACE-CBIT consisting of a partial ACE and a partial CBIT mitigates the discrimination between both debt and equity. First proposed in 2009 by De Mooij and Devereux, and cited with approval by the International Chamber of Commerce (‘ICC’),\(^{625}\) a revenue-neutral combination of ACE and CBIT reforms in the form of the combined ACE-CBIT would improve economic efficiency by eliminating the debt bias while also reducing possible negative effects of the pure ACE or CBIT systems.\(^{626}\) For completeness, the negative effects of a standalone ACE are that it narrows the tax base, increases the corporate tax rate (assuming higher corporate tax rates are introduced for revenue neutrality reasons) and lowers capital costs, whereas a standalone CBIT broadens the tax base, lowers the corporate tax rate (assuming lower corporate tax rates are introduced for revenue neutrality reasons) and increases capital costs.\(^{627}\)

This fundamental reform proposal has five key advantages. First, it was designed as a revenue neutral policy, and does not depend on whether the CORTAX\(^{628}\) model is extended to tax havens or discrete location choices.\(^{629}\) Second, economic analysis shows that moving to the combined ACE-CBIT could potentially bring substantial benefits in terms of reducing leverage, reducing systemic risk and reducing profit-shifting,\(^{630}\) by bringing the amount of interest close to its efficient level.\(^{631}\) Third, estimates suggest that the combined ACE-CBIT would raise welfare by 0.3% of GDP due to the more neutral tax treatment of debt and equity.\(^{632}\) Although relatively new to the literature, there exist studies suggesting that the combined ACE-CBIT would expand welfare due to its more efficient financial structure.\(^{633}\)

Fourth, unlike thin capitalisation rules, which set limits on the amount of debt (rather than the interest rate charged on debt), a partial ACE (such as a cross-border ACE-CBIT) would

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\(^{626}\) De Mooij and Devereux, above n 369, 93–120.

\(^{627}\) Cottarelli, above n 141, 13–14.

\(^{628}\) The CCH CorTAX product (‘CORTAX’) is a computable general equilibrium model widely utilised in the literature.

\(^{629}\) De Mooij and Devereux, above n 369; it is interesting that this observation was not included in the subsequent 2011 version of this paper.

\(^{630}\) Fatica, Hemmelgarn and Nicolò, above n 121.


\(^{632}\) De Mooij and Devereux, above n 427; De Mooij and Devereux, above n 369.

\(^{633}\) De Mooij and Devereux, above n 369, 93–120.
effectively cap the deductibility of interest, thereby extracting an economic rent while bypassing issues associated with transfer pricing.\textsuperscript{634}

Finally, economic analysis suggests that the combined ACE-CBIT has the advantage of not having to move to tax consolidation and, as such, preserving national tax sovereignty. This presents a particularly valuable alternative to the introduction of, for example, an ACC or a common consolidated corporate tax base (‘CCCTB’).\textsuperscript{635} The latter was proposed for re-launch by the EC in October 2016.\textsuperscript{636}

However, a key research gap is that the potential of widening the scope of the combined ACE-CBIT remains understudied, in particular by extending its scope to all cross-border intercompany funding activities instead of just debt and equity financing. This would eliminate the underlying funding bias and, in doing so, eliminate the distortive impact on behavioural responses. This would lead to a comparable result to the ACC, as shown in the below Table 10. However, a cross-border ACE-CBIT may be preferable over a ACC for one key reasons; it has a budgetary advantage. This is because, unlike a risk-free rate, the reduced nominal rate under a cross-border ACE-CBIT allows for a partial tax deduction, which may have a smaller impact on the tax revenue base.

### Table 10 – Summary of tax treatment under combined ACE-CBIT and cross-border ACE-CBIT

<table>
<thead>
<tr>
<th>Scope of the rule</th>
<th>Distortions to funding neutrality</th>
<th>Impact on behavioural responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Combined ACE-CBIT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest</td>
<td>Dividends</td>
<td>Royalties</td>
</tr>
<tr>
<td>$\ell^D = \ell^{\text{capped}}$</td>
<td>$\ell^E = \ell^{\text{risk-free}}$</td>
<td>$\times$</td>
</tr>
<tr>
<td><strong>Cross-border ACE-CBIT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\ell^D = \ell^{\text{partial}}$</td>
<td>$\ell^E = \ell^{\text{partial}}$</td>
<td>$\ell^C = \ell^{\text{partial}}$</td>
</tr>
</tbody>
</table>

Source: Author’s own

\textsuperscript{634} This is particularly timely given the Chevron decision; “The respondent submitted in this respect that Subdiv 815-B provided no comfort to the applicant, first, because this was an inappropriate approach to construction and, secondly, because on the very terms of Div 13, Subdiv 815-A and Art 9 there was no warrant for an approach which set in stone all aspects of the non-arm’s length agreement save as to interest rate ... I agree with this submission made by the respondent. It is necessary to start and finish with the words of Subdiv 815-A, both as to what they do provide and as to what they do not”: Chevron, above n 169, [596]–[598].

\textsuperscript{635} “Although not entirely eliminating the incentive to use a lucrative detour, the above analysis finds that a combined ACE-CBIT system may offer a valuable alternative to the introduction of a common consolidated tax base. Giving partial but equal tax relief to both interest and dividend payments, it is the studied tax environment which reduces profit-shifting strategies at best. This environment has the advantage of not having to move to tax consolidation and to preserve national tax sovereignty to a larger extent”: Gérard and Princen, above n 631, 21.

Further, by applying equally to both debt and equity financing, the cross-border ACE-CBIT likely makes the debt and equity rules surrounding the existing thin capitalisation regime redundant, thereby simplifying this area of tax law. However, the cross-border ACE-CBIT has not yet been analysed in detail by the literature. For example, in Australia, recommendations for reform have featured detailed analysis of the ACE, ACC, CBIT and DIT – entirely omitting the combined ACE-CBIT. Further, the concept of a cross-border ACE-CBIT remains understudied by the literature to date.

2.6 CONCLUSION

This chapter has reviewed the history and evolution of the principle of ‘tax neutrality’ and examined the extent to which this principle has been applied in the policy and design of tax laws. This presents the theoretical core of this thesis.

The chapter has outlined two of the most problematic non-neutralities in the cross-border intercompany context, namely that corporate income tax rates and bases differ across jurisdictions and that like income is not treated alike for tax purposes – even within the same jurisdiction (the ‘funding bias’). It has further highlighted that these non-neutralities incentivise behavioural responses by MNEs to take advantage of distortions in different cross-border tax treatments between various types of intercompany financing activities.

Governments have implemented rules to restrict these behavioural responses by MNEs. While the literature generally perceives these rules as addressing the distortion in the tax treatment between debt and equity financing in the cross-border setting, this chapter posits that this may not be the case. This is exemplified by the global rise of thin capitalisation rules, which are perceived as presenting an effective anti-avoidance measure.

Given the multi-disciplinary nature of the research this review is deliberately broad. It encompasses many aspects of the legal, taxation and economics literatures and explores theory, practice and issues in practice. In doing so, it identifies research gaps and questions within – and

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637 De Mooij and Devereux, above n 369; Marres O and Weber D, Tax Treatment of Interest for Corporations (IBFD, 2013). Some commentators have suggested applying the same notional return (which strong arguments suggest should approximate some risk-free return) to equity as well as debt without referring to it as an ACE-CBIT; see, for example, Chaudhry, Mullineux and Agarwal, above n 377. The ICC has observed that, in the context of cross-border limitations of deductions of interest payments, ideally there should be neutrality between equity and debt financing from a tax point of view. On the basis of their draft scoping paper, the ICC suggested a list of recommendations be prepared and circulated to governments, noting that the sections dealing with thin capitalisation and the combined ACE-CBIT should be elaborated on and further extended to deal with technical issues. No updates have been made since: ICC Commission on Taxation, above n 625.

638 Sørensen and Johnson, above n 97.
between – these literatures. This contextualises the overarching question guiding this thesis, namely (related to the null hypotheses):

“Given the opportunity to ‘start over’, would existing thin capitalisation rules be retained in their current form or would an alternative reform result in a more neutral tax treatment of cross-border intercompany funding activities?”

Specifically, emerging from this review are six key research gaps:

First, this chapter notes the gap in the literature on whether mitigating the debt bias has been conflated with eliminating the debt bias. Applying the principle of ‘tax neutrality’ would require equalising the tax treatment between intercompany financing activities, as illustrated in the below Table 11:

<table>
<thead>
<tr>
<th>Table 11 – Summary of tax treatment under ‘funding neutrality’ and thin capitalisation rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope of the rule</td>
</tr>
<tr>
<td>Interest</td>
</tr>
<tr>
<td>Theory: Tax neutrality</td>
</tr>
<tr>
<td>Thin capitalisation rules</td>
</tr>
</tbody>
</table>

Second, very little is known about the effectiveness of thin capitalisation rules beyond their ability to reduce debt-to-asset ratios of MNEs and, in particular, whether these rules induce behavioural responses related to MNEs’ intercompany funding decisions. Since their ostensible effectiveness could be explained by the fact that MNEs may utilise loopholes in regulations allowing them to bypass these rules, it is important to question whether, rather than eliminating the debt bias, thin capitalisation rules simply encourage the behavioural response of allocating certain categories of intercompany financing at the prescribed ratios. If this is the case, MNEs may be technically complying with these rules while utilising other means of tax planning such as hybrid finance to minimise their tax liabilities.

Third, based on the principle of ‘tax neutrality’, eliminating the tax-induced cross-border funding bias in earnest would require equalising the tax treatment of intercompany funding activities. However, this review highlights that both the literature and current policy responses aim to eliminate the debt bias – which, even if attained, would not eliminate the wider funding bias. Also, the operation of thin capitalisation rules to date has utilised a pragmatic approach by prioritising simplicity, administrative ease and taxpayer certainty at the expense of economic efficiency. Further, even in studies exploring economic efficiency aspects of these rules, the
focus has primarily been on the CEN/CIN/CON debate. The absence of funding neutrality in the
design and evaluation of interest limitation rules has been largely omitted, which presents a
significant research gap.

**Fourth**, given the literature’s mostly piecemeal analysis, this chapter includes an in-depth
legal analysis of Australia’s thin capitalisation regime, with an emphasis on whether these rules
adequately address the debt bias.

**Fifth**, this legal analysis is supplemented by an analysis of alternative reform proposals in
the context of cross-border intercompany deductions, including the OECD’s Action 4 Report.
However, faced with the same trade-offs and priorities as the existing thin capitalisation
regimes, this chapter demonstrates that the OECD’s recommendation still prioritises simplicity,
administrative ease and taxpayer certainty at the expense of eliminating the debt bias.

**Sixth**, alternative theoretical options do exist which specifically aim to attain tax neutrality.
Even though policymakers and commentators posit that ACE-inspired reforms may strengthen
or replace existing thin capitalisation rules, these two literatures have remained disconnected to
date. Accordingly, this study bridges these two research areas by highlighting the importance –
for efficiency and transparency – of starting from first principles as in the ACE literature to
address the shortcomings in the current tax design of MNEs’ cross-border intercompany
funding activities.

These research gaps and problems provide a catalyst for the development of the evaluation
framework in Chapter 3 used to test the research questions. This evaluation framework guides
both the practical-level and conceptual-level analyses in Chapters 4 and 5, and the subsequent
development of tax reform proposals restricting the deductibility of income derived from cross-
border intercompany funding flows in Chapter 6.
3 DESIGNING A PRINCIPLES-BASED EVALUATION FRAMEWORK

3.1 INTRODUCTION

Emerging from the literature are two particularly problematic non-neutralities in the cross-border intercompany context, namely, that corporate income tax rates and bases differ across jurisdictions and that like income is not treated alike for tax purposes – even within the same jurisdiction (the ‘tax-induced debt bias’). Since the former cannot be addressed without full international tax coordination, this thesis focusses on the latter.

This thesis posits that a more direct approach of targeting – rather than merely mitigating – this non-neutrality is needed to ensure a strong conceptual basis in the tax treatment of cross-border intercompany transactions.

Further, a key insight that also emerges from the literature is that, to date, policymakers have approached solutions to the taxation of cross-border transactions from a fairly limited paradigm involving a ‘debt/equity all-or-nothing’ approach. Looking beyond the current paradigm, this thesis introduces the concept of ‘cross-border funding neutrality’, which seeks to treat all fungible cross-border intercompany funding flows in a like manner for tax purposes. In doing so, the underlying non-neutrality is re-conceptualised not as the ‘tax-induced debt bias’ but as the broader ‘tax-induced funding bias’.

Accordingly, this Chapter 3 develops an evaluation framework for the study grounded in the concept of ‘cross-border funding neutrality’. Given the myriad of possible tax policy criteria against which the effectiveness of a law can be measured, the conceptual basis for the development of the evaluation framework is explained in section 3.2, which demonstrates that certain types of intercompany debt and equity financing, licensing and leasing activities are fungible in the cross-border intercompany setting.

Section 3.3 sets out the evaluation framework, which consists of assessing whether a particular reform attains cross-border funding neutrality (the ‘evaluation criterion’) and revenue neutrality (the ‘positive constraint’) while satisfying the reformers’ own policy objectives, in a stable manner (the ‘normative constraints’).

This presents the foundation for the analysis of past, current and proposed policies across Chapters 4, 5 and 6. By bridging the gap between the theoretical options available and the

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639 The corollary is that like expenses relating to income are not treated alike for tax purposes.
practical operation of reform alternatives, this framework also provides a useful reference point for policymakers’ future considerations in relation to the taxation of MNEs.

3.2 BEYOND THE DEBT BIAS: DELINEATING THE FUNGIBILITY OF INTERCOMPANY FUNDING ACTIVITIES

This study extends the scope of the funding neutrality concept beyond the debt bias to include different modes of finance – specifically, key types of highly mobile income such as interest, dividends, royalties and finance lease payments. These categories of income, despite their differences in type, share a similarity in mechanics and, at their simplest, all of these income streams can relatively easily be structured to result in outflows from source countries.\textsuperscript{640}

Accordingly, this section examines whether, in the cross-border intercompany setting, certain types of intercompany debt and equity financing, licensing and leasing activities are fungible. This provides the basis for developing the ‘cross-border funding neutrality’ concept, such that it can be applied as an evaluation criterion. The outcome of this analysis constitutes the policy and economic basis for the fundamental reform proposal developed in subsequent chapters of this thesis, which is that the tax treatment of cross-border intercompany activities (where economically equivalent) should be equalised, thereby attaining ‘cross-border funding neutrality’.

As highlighted in the above Chapter 2, the concept of ‘funding neutrality’ is currently debt/equity focussed. This is typified by the following observation by Bärsch:\textsuperscript{641}

“In the case of financial instruments, the most important neutrality consideration concerns the decision on different modes of finance (financial neutrality). Business may finance investments traditionally via retained earnings, new equity issues or debt capital. In the most general form, tax neutrality would require taxation of all finance investments in the same way, with neither preference nor prejudice”

Indeed, there is a growing body of academic literature examining the fungibility between debt and equity financing in the context of MNEs, led by Burnett,\textsuperscript{642} Mintz and Weichenreider,\textsuperscript{643} Graetz,\textsuperscript{644} and Benshalom,\textsuperscript{645} among others.\textsuperscript{646}

\textsuperscript{640} OECD, above n 81, 38.
\textsuperscript{641} Bärsch, above n 30, 45.
\textsuperscript{642} Burnett, above n 95, 44, 63 and 67.
\textsuperscript{643} “we focus on debt financial structuring by multinationals although some of the analysis we provide could be easily applied to leasing and insurance structuring”: Mintz J M and Weichenrieder A J, The Indirect Side of Direct Investment: Multinational Company Finance and Taxation (MIT Press, 2010) 13.
However, the literature has not adequately considered the fungibility of funding flows beyond debt and equity financing, including licensing and leasing activities in the context of cross-border intercompany transactions. This broadened conceptualisation is supported by tax practitioners’ publically available recommendations outlining various techniques for the tax-effective repatriation of funds from overseas operations. Specifically, some tax practitioners group under the one umbrella of “Alternatives for Getting Funds Out” the following options: “dividends; redemptions of shares; interest payments/royalties/payments for services”. 647

Further support for the proposition that intercompany licensing activities are fungible with debt and equity financing is evinced by two key reform proposals by Avi-Yonah. First, the proposal that the OECD should adopt a coordinated, uniform withholding tax on cross-border interest flows, which should also be extended “to royalties and other deductible payments on portfolio investment (for example, all payments on derivatives)”. 648 Second, the proposal by Avi-Yonah and Halabi, in the context of the OECD’s BEPS Action 4, that thin capitalisation rules be extended “to other deductible payments like royalties”. 649

Benshalom also provides academic analysis on the fungibility of these activities, observing that “almost every type of tax reduction plan that uses affiliated financial transactions could be

644 “the treatment of cross-border interest payments is now one of the most complex aspects of income tax law. Rules differ among countries and contexts ... because money is fungible, it is difficult in both theory and practice to know the ‘purpose’ of specific borrowing. Nevertheless, many countries attempt to ‘trace’ borrowed funds to their use, creating opportunities for creative tax planning and inducing inevitable disputes between taxpayers and tax collectors”: Graetz M J, ‘A Multilateral Solution for the Income Tax Treatment of Interest Expenses’ [November 2008] Bulletin for International Taxation 486, 487.

645 “The most startling example is withholding taxes on financial payments. While dividend payments are typically subject to withholding taxes, interest payments and income derived from financial derivatives are typically exempt by double taxation treaties from withholding source taxes. This discontinuity is ridiculous given taxpayers’ ability to replicate equity investments with the use of hybrid financial derivatives”: Benshalom, above n 154, 642; Benshalom, above n 402; Benshalom, above n 154.


647 Barreiro M et al, ‘Techniques for Repatriation of Funds’ (Paper presented at the Baker & McKenzie 11th Annual Latin American Tax Conference, The Baltimore Hotel, Florida, 10 March 2010) 7. However, payments for services are beyond the scope of this thesis given its focus on capital mobility, rather than both capital and labour mobility.


649 Avi-Yonah and Halabi, above n 356, 3.
executed via other types of affiliated transactions”. The fungibility and mobility of these intercompany financial flows mean that attempts to allocate ownership to any one entity within an MNE is an arbitrary exercise. Nonetheless, Benshalom’s research is limited to separately and distinctly analysing the taxation of intercompany financing and licensing activities.

While Benshalom briefly mentions leasing activities, these are distinguished from financing transactions. This is despite his acknowledgement that “it is impossible to draw a perfect line between financial transactions and non-financial transactions ... affiliated leasing transactions could replicate the consequences of related lending”. In contrast, Mintz and Weichenrieder observe the fungibility of leasing with debt and equity financing in the cross-border intercompany setting, and the profound influence of taxes on these flows.

Accordingly, the literature contains support – albeit piecemeal and often implicit – for the proposition that cross-border intercompany financing, licensing and finance leasing activities are fungible. Further, there is very little literature that directly studies the taxation implications of this observation. Taken as a whole, this justifies broadening the current classification of otherwise fungible intercompany financing activities beyond the current ‘debt/equity all-or-nothing’ approach, as examined in the above section 2.4.4.3.1.

Given that the focus of this thesis is cross-border restrictions on the tax deductibility of costs related to intercompany funding, the concept of ‘funding neutrality’ is the most relevant, testable and appropriate benchmark criteria.

The practical implication of this characterisation of cross-border intercompany funding activities as fungible is that it presents a more fit-for-purpose approach to the taxation of MNEs. Currently, tax authorities generally lack adequate resources to audit the increasing volumes of cross-border intercompany activities. Administrative complexity is further exacerbated by the arm’s length standard requirement of finding the proper market comparables of specifically tailored financial flows. In contrast, MNEs are largely indifferent to the structuring of their

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650 Benshalom, above n 402, 193–5; see also, Benshalom, above n 156.
651 Benshalom, above n 156, 660–1.
652 Benshalom, above n 402, 193–5; see also, Benshalom, above n 156, 647.
653 Benshalom, above n 156, 647.
654 Benshalom, above n 154, 642.
655 “Multinationals can effectively shift income across jurisdictions through leasing arrangements since all debt and imputed equity financing expenses are included in the lease costs”: Mintz and Weichenrieder, above n 643, 13
656 “taxes that are levied on investment income (dividends, capital gains, rents, royalties and interest) influence multinational cross-border activity most profoundly”: Mintz and Weichenrieder, above n 643, 18.
658 Brauner, above n 18, 24.
659 See further, Benshalom, above n 402; Benshalom, above n 154.
internal financial flows because these are fungible and mobile with no substantial economic cost.

Further, as highlighted by Shapiro and Balbirer, MNEs are uniquely advantaged by having a plethora of options available for the cross-border flow of funds, coupled with control over the mode and timing of these flows, as illustrated in the below Figure 11:

Figure 11 – Comparison of intercompany real and financial flows

At the regulatory level, evidence for the proposition that cross-border intercompany financing, licensing and leasing activities are fungible is contained in existing legislative provisions. For example, US Treasury Regulation §1.882-5 views interest as fungible, using a formula to determine the attributable interest expense, extracted as follows:

“The term financing transaction also includes any other advance of money or property pursuant to which the transferee is obligated to repay or return a substantial portion of

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For completeness, there are three key qualifications to this characterisation that intercompany debt, equity, licencing and leasing activities are fungible. First, this analysis is confined to ‘pure’ paper shifting, as opposed to applying in the context of real economic flows. For example, dealings with relatively immobile assets such as land are beyond the scope of this characterisation. Second, fungibility does not apply to all classes of intercompany debt, equity, licencing and leasing – only to those that are economically equivalent. In this context, is it instructive to contrast a financing lease payment with an operating lease payment, whereby the former would be reasonably characterised as economically equivalent to interest. Third, this characterisation (and the model developed from it in the below section 5.2.1) assumes that it will be possible for an MNE to switch between methods of financing upon changes to tax laws. However, this may not be possible in all cases, particularly where switching would give rise to potentially adverse tax implications and other costs.

The remainder of this section outlines three scenarios where a hypothetical, three-jurisdiction MNE establishes different structures using various types of funding to obtain the same tax outcomes, thereby suggesting intercompany fungibility. This demonstrates that certain types of debt and equity financing, licensing and leasing transactions are fungible in the cross-border intercompany setting – and that these transactions can be utilised to erode the tax base of source jurisdictions.
Utilising intercompany debt and equity financing

Figure 12 – Tax planning responses under the existing regime: Utilising intercompany debt and equity financing

Figure 12 above illustrates the impact of three scenarios in the cross-border intercompany setting. In the first scenario (shown in black text), there are no intercompany financing activities and the overall tax payable by the MNE is $69. However, in the second scenario (shown in pink text), once Co A provides $1000 in equity to Co B, which funnels those funds to Co C in the form of an intercompany loan, the overall tax payable is reduced to $56. The third scenario (shown in blue text) has Co B separately extend an intercompany loan to Co A, which reduces the taxable income in that jurisdiction such that the overall tax payable by the MNE is $25. This is almost a third of the original tax liability. Despite the possibility that foreign tax credits and withholding taxes may apply in this context to all the scenarios in this thesis, this additional layer is beyond the scope of this section, and will instead be the subject of a more sophisticated mathematical analysis in Chapter 5.

Separately, further tax minimisation may be possible if the parent (Co A) obtains a loan from a financial institution, or if a group member grants a loan to Co A through a conversion of equity to debt financing or the creation of intercompany debt. This is shown as the third scenario in Figure 12 with the inclusion of the loan between Co A and Co B, whereby new interest is deducted twice (in both the US and Australia) while interest income is taxed in

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663 Co A is the parent and is a tax resident of the US where the corporate income tax rate is 39%.
664 Co B is a subsidiary and is a tax resident of Singapore where the corporate income tax rate is 17%.
665 Co C is also a subsidiary and is a tax resident of Australia where the corporate income tax rate is 30%.
Singapore, a low-tax jurisdiction. For completeness, any jurisdiction with relatively low taxes is a contender for the interposed entity scenario illustrated in this section.666

**Utilising intercompany licensing**

Figure 13 – Tax planning responses under the existing regime: Utilising intercompany licensing

As with the above analysis, Figure 13 demonstrates the fungibility of financing and licensing by showing how exactly the same result is arrived at if Co C pays Co B royalties instead of interest.667 Separately, it is important to note the possibility of extending additional sub-licences to other subsidiaries to minimise tax. This example excludes tax deductions that may also be available for the acquisition or creation of IP, for example, research and development (‘R&D’) concessions, general deductions, uniform capital allowances and CGT.

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666 Butler and Wilkins, above n 21.

Utilising intercompany finance leasing

Figure 14 – Tax planning responses under the existing regime: Utilising intercompany finance leasing

A third type of cross-border intercompany activity, illustrated by Figure 14, shows the tax base eroding impact of ‘double-dipping’ depreciation expenses and claiming finance leasing payments. The first scenario of Co A purchasing an asset (shown in black text) results in overall tax payable of $39, as Co A will be taxed on its $100 EBIT, and Co C will have its taxable income reduced to $0 after deducting the $100 depreciation expense from its $100 EBIT. However, by arranging for the purchase through the parent and a sub-lease via Co B (the second scenario, shown in pink text), the result is to reduce overall tax payable to $0.

It is possible to ‘double-dip’ because varying tax laws regarding depreciation allowances exist across jurisdictions. (Some countries apply legal ownership tests, while others apply economic ownership tests. Irish rules have a reputation for being a ‘good fit’ with other jurisdictions’ rules, rendering the possibility of even a ‘triple-dip’.) Further, Mintz and Weichenrieder observe that MNEs can “effectively shift income across jurisdictions through leasing arrangements since all debt and imputed equity financing expenses are included in the lease costs”. Leases can also be used to avoid customs duties, to achieve a lower cost of borrowing with no minimum equity balance on investment and to achieve off-balance sheet financing. For completeness, the EU Interest and Royalty Directive which impacts equipment leasing has been excluded. If a double-dip is not available, it will be possible to lower the parent’s taxable income through an intercompany loan from its subsidiary, Co B.

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Key: t = Tax Rate, EBIT = Earnings Before Interest and Taxes
Source: Author’s own

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668 Mintz and Weichenrieder, above n 643, 13.
Accordingly, the following section 3.2.1.1 further extends the literature with an analysis of the cross-border ACE-CBIT. This presents the foundational basis for an examination in the subsequent Chapter 5 of whether a cross-border ACE-CBIT would be a viable alternative to thin capitalisation rules.

### 3.2.1.1 Operation of a cross-border ACE-CBIT

Utilising the three-jurisdiction scenario set out in the above section 3.2, this section explores the operation of a combined ACE-CBIT applied in the cross-border intercompany context (the ‘cross-border ACE-CBIT’). This is a novel fundamental reform proposal with its theoretical genesis in the economic rent literature outlined in the above section 2.5.1.1.1.

An unequal tax treatment between fungible intercompany activities creates distortions, which in turn incentivises tax planning behaviour. Restricting the deductibility of all expenses to a portion of a suitable proxy for the normal rate of return (such as the risk-free rate) is illustrated in Figure 15, Figure 16 and Figure 17 below. The selection of the appropriate rate is based on the ACE literature which suggests that the risk-free interest rate is the preferred rate for a notional return.

![Figure 15 – Tax planning responses under a cross-border ACE-CBIT: Utilising intercompany debt and equity financing](image)

**Key:** t = Tax Rate, EBIT = Earnings Before Interest and Taxes

**Source:** Author’s own

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669 This is “calculated by reference to a normal commercial rate of interest, fixed by the government”; see further, Gammie, above n 378.

670 De Mooij and Devereux, above n 369, 96.
Using the last permutation offered in Figure 12 (in section 3.2) as the base case for Figure 15, it is clear that a restriction on the deductibility of cross-border intercompany financing activities limits the extent of opportunities available for BEPS in this setting. While the overall tax payable was originally $25, under a cross-border ACE-CBIT this increases to $76.75. This exceeds the originating scenario illustrated in Figure 12, where overall tax payable was $69. For completeness, despite the neatness of this scenario, it is important to recognise that MNE behaviour would likely be responsive to this new regulatory framework.

The above Figure 16 reiterates the implications of the fungibility of cross-border financing and licensing activities, replicating the outcome of Figure 15. This scenario has assumed that amortisation is not applicable.
As with the above two scenarios, a restriction on the deductibility of cross-border intercompany leasing activities limits the extent of opportunities available for BEPS in this setting. While the overall tax payable was originally $0, under a cross-border ACE-CBIT this increases to $22.5. This does not exceed the originating scenario illustrated in Figure 14 (in section 3.2), where overall tax payable was $39, but this is by virtue of the full amount of the depreciation remaining available to Co A and Co B operating at a tax loss regardless of whether there is a restriction on its depreciation expense. Despite the neatness of this scenario, it is important to recognise that MNE behaviour would likely be responsive to this new regulatory framework by possibly shifting depreciation expenses to Co C rather than Co B, if possible.

In all of the above scenarios, applying a cross-border ACE-CBIT resulted in an increase in overall total tax payable by the MNE.

### 3.3 DESIGNING THE EVALUATION FRAMEWORK

Emerging from both the literature review and the above section 3.2 is the key problem that cross-border funding neutrality has not been utilised as an evaluation criterion upon which to assess the effectiveness of reforms dealing with cross-border funding activities.

Accordingly, this section 3.3 establishes the evaluation framework to be utilised in the remainder of this thesis. This evaluation framework presents a new perspective by incorporating cross-border funding neutrality and other criteria to assess current approaches and proposals (in
both the BEPS Project and those presented by this thesis) to taxing cross-border intercompany funding flows.

Specifically, the evaluation framework consists of:

1. cross-border funding neutrality (the evaluation criterion);
2. revenue neutrality (the positive constraint); and
3. consistency with legislative objectives and stability of the reform (the normative constraints).

### 3.3.1 Cross-border funding neutrality (Evaluation criterion)

The concept of ‘cross-border funding neutrality’, as introduced in the above section 3.2, has its origins in the concept of tax neutrality. Tax neutrality, as examined in the above section 2.2.1, requires that the tax system strives to be neutral so that decisions are made on their economic merits rather than for tax reasons. Tax neutrality is a subset of economic efficiency because it implies a lower degree of government intervention by aiming to only avoid tax-induced distortions and not correcting for private inefficiencies.

The relationship between the principles of economic efficiency and tax neutrality are explained by Shaheen, as follows:

> “The baseline of the classic tax neutrality analysis seeking to maximize global economic efficiency is a non-tax world in which investment and other business decisions are considered economically most efficient. Tax neutrality theories strive to keep such investment and business decisions tax neutral – that is, to keep investment and business decisions unaffected and undistorted, compared to a non-tax world, by the imposition of tax and tax consideration.”

In order to determine the extent of cross-border funding neutrality attained by an existing tax rule or reform option, section 5.2.1.1 operationalises this criterion.

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672 Eden observes that tax neutrality is a weaker condition than economic efficiency: Eden L, Taxing Multinationals: Transfer Pricing and Corporate Income Taxation in North America (University of Toronto Press, 1998) 74.


674 Shaheen, above n 68, 207.
3.3.2 Revenue neutrality

The literature review reveals that government decisions to implement or tighten interest limitation rules such as thin capitalisation rules are predominantly motivated by fiscal pressures. This punctuates the importance of fiscal sustainability concerns, regardless of the tax policy soundness in the long-term design of a particular reform option. However, a comprehensive study of fiscal sustainability would likely require a longer-term analysis of questions which remain unclear due to definitional and modelling issues.

So, this thesis takes a more practical and limited view of the fiscal sustainability concept, in light of the often underestimated impact of the political process on tax policy. Specifically, it focusses on only the short-to-medium-term consideration of revenue neutrality, as this is generally prioritised over long-term fiscal sustainability in the decision-making process. For example, in the context of tax reform debates, tax experts often finesse the question of revenue adequacy by making their recommendations revenue neutral. This is exemplified by the BTWG which, following recommendations by the Henry Review, considered whether

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675 The IMF has observed that the term ‘fiscal sustainability’ does not have an exact meaning.: Chalk N A and Hemming R, ‘Assessing Fiscal Sustainability in Theory and Practice’ (IMF Working Paper WP/00/81, April 2000) 3.

676 ‘Fiscal sustainability’ can broadly be defined as the ability of government to manage its finances such that it can meet its spending commitments, both now and in the future: Australian Government, Budget Paper No 1 – Statement 3: Fiscal Strategy and Outlook (May 2008), 3–21.

677 Hossain M, Sarker T and McIntosh M (eds), The Asian Century, Sustainable Growth and Climate Change (Edward Elgar, 2013) 92–3. See further, Richardson D, ‘Surplus Fetish: The Political Economy of the Surplus, Deficit and Debt’ (The Australia Institute Policy Brief No 26, May 2011) 16–17. Despite bipartisan support for a target of budget surpluses, the rhetoric that borrowing today imposes a ‘burden’ on future generations is questionable because that future cohort will likely be better off simply due to the fact that the current generation has not endured a prolonged period of unemployment and poverty.

678 “Most discussions of tax policy objectives in any country begin by stating that the fundamental objective of taxation is to secure the resources needed for public sector purposes in an equitable, efficient and sustainable fashion and then proceed to set out a series of criteria that may be used to evaluate the suitability of different tax instruments to achieve this basic aim. In reality, of course, in the end tax policy is often determined largely by political factors … essentially in isolation from other policies, and largely without sufficient regard to the international context”: Bird R M and Wilkie J S, ‘Designing Tax Policy: Constraints and Objectives in an Open Economy’ (2013) 11(3) eJournal of Tax Research 284, 287.


680 The prima facie notion of revenue adequacy is that a tax system should provide enough revenue to finance government spending. However, this notion is laden with value judgments regarding what an appropriate level of government spending ought to be: Hildreth W B and Richardson J A (eds), Handbook on Taxation Public Administration and Public Policy 72 (CRC Press, 1999) 287. Unlike introducing a reform that increases tax revenue, which would likely be politically challenging to implement due to lobbying activities of business interests, remaining revenue neutral somewhat overcomes this hurdle.

681 “Australia, in the future, should consider moving the company income tax system towards a business level expenditure tax, such as an allowance for corporate equity, subject to further international development of tax models”: Henry Review, above n 195, Part 1, 42–3.
Australia should implement an ACE reform. Even though the tax design principles providing the basis for their review specifically included ‘sustainability’, the BTWG developed a separate set of principles by which to evaluate reform options, instead prioritising the requirement of ‘revenue adequacy’. This constraint was ultimately the reason for the BTWG not recommending the ACE in the short-to-medium term.

Other tax reviews, such as the Mirrlees Review, have also been cognisant of revenue neutrality as a relevant constraint, observing that “[r]evenue neutrality avoids ‘false’ improvements in the tax schedule through unfunded government giveaways”. However, for completeness, this observation was made by the Mirrlees Review in the context of taxing labour earnings, rather than corporate income taxation. In the corporate income taxation context, the Mirrlees Review was in favour of reducing rather than increasing tax revenue, providing the following basis for their recommendation:

“Looking beyond the current fiscal crisis, we would advocate significant reform of the corporation tax base, with the key ingredient being the introduction of an allowance for the cost of using equity to finance corporate investment … The main implication of this in the short-term is that corporation tax reform does not look like a promising avenue for revenue-raising.”

This demonstrates that it is necessary to target revenue neutrality to ensure the political viability and administrative feasibility of a reform. Accordingly, it is practical and meaningful to factor budgetary pressures into the evaluation framework by utilising the proxy of ‘revenue neutrality’. This constraint will be operationalised in the below section 5.2.1.2.

### 3.3.3 Satisfying legislative objectives & Attaining stability

Although legislative changes are usually labelled as ‘reforms’, this term can be used in either a broad or a narrow sense. The former refers to improving the structure of the tax system to reduce the cost that raising revenue imposes on the economy, whereas the latter “has no

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682 “full implementation of an ACE would not be possible within the revenue neutral constraint imposed by the Working Group’s terms of reference with the base broadening options identified in this paper”: BTWG Final Report, above n 504, 12.
683 BTWG Final Report, above n 504, 50–2.
684 “For these reasons, the Working Group considers that an ACE should not be pursued in the short to medium term but may be worthy of further consideration and public debate in the longer term”: BTWG Final Report, above n 504, 12.
685 Mirrlees Review, above n 39, 60.
687 For completeness, political viability refers to the acceptability of the reform to various relevant stakeholders who hold political power, including but not limited to voters, lobby groups and legislators. Administrative feasibility refers to the relative ease of implementing a reform.
connotation of improvement by reference to a conceptual or objective benchmark”. Rather, it simply designates whether, in the subjective eyes of the promoters of change, a change has yielded a ‘better’ outcome. This thesis recognises that it is not appropriate to label all legislative changes as ‘reforms’ in the broad sense; sometimes these changes are better categorised within a narrower, deliberately limited view of the term ‘reform’. Further, in both design and assessment, if a ‘reform’ has been mischaracterised as such, this will invariably limit its effectiveness.

To accommodate this narrower, deliberately limited view of ‘reform’ a useful reference point is the three-point criteria propounded by Sandford, by which successfully implemented tax reform in this narrower sense of the term might be judged, specifically:

1. the extent to which the tax reforms met the objectives the reformers set themselves;
2. the sustainability of the reforms; and
3. the extent to which the tax reforms had desirable or undesirable by-products.

The last of these three criteria – the extent to which the tax reforms had desirable or undesirable by-products – requires pinpointing both the originally foreseen and the unforeseen effects of a reform, whether major or minor. However, by its very definition, economic neutrality aims to minimise by-products (or distortions) and the evaluation criterion already focusses on this principle to the extent that it is relevant to this thesis. So ‘desirable or undesirable by-products’ as an additional criteria need not be applied by the evaluation framework developed in this thesis.

Accordingly, the remaining two criteria propounded by Sandford are examined in sections 3.3.3.1 and 3.3.3.2 below, to assess their suitability in the context of evaluating the outcome of a particular reform, given the scope of this thesis.

3.3.3.1 Satisfying legislative objectives

This criterion assesses the reforms according to the policy and criteria set by the originators of the legislation. Dirkis observes that the pertinence of this criterion is in highlighting where the law does not reflect the underlying policy intention. Despite the advantages of utilising this criterion, it is necessary to also acknowledge its three key limitations, which are dealt with in turn below.

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690 Sandford, above n 689, 5.
The first limitation is that this is a short-term criterion because such an evaluation cannot attempt to assess the longer-term effects of the tax reform.

The second limitation is that it requires assuming that the publicly stated objectives are the real (and all the real) objectives.\textsuperscript{692} It is often difficult to identify the policy underlying a law for the following three reasons. First, older legislation is rarely accompanied by detailed secondary material, and even when it is accompanied by explanatory notes they rarely articulate the underlying policy. Second, recently developed laws also sometimes lack a clear articulation of underlying policy because the political process results in diluted or compromised policy, often influenced by the spheres of politics, philosophy, ideology, economics and sociology. These spheres influence tax policy debate regarding complexity, compliance costs, the tax mix and effective tax rates.\textsuperscript{693} Third, the underlying policy may be implicit or obscure because in archival materials there is generally an absence of explicit reasoning provided in explanatory materials and second reading speeches. Nonetheless, in the Australian context in more recent times it has been possible to readily source the policy in the explanatory memoranda to taxation bills and the various parliamentary debates.\textsuperscript{694} This is instructive because the majority of the amendments to the Australian thin capitalisation rules have occurred in the last few decades. However, it is necessary to be mindful that, even where explicit reasoning is provided, this might not necessarily correspond to the underlying internal rationale of the policymakers.\textsuperscript{695}

The third limitation is that, due to the political process inherent in developing taxation legislation, the stated policy may not reflect the range of related policies which underlie the final policy position. As elucidated by Stamp:\textsuperscript{696}

“There is no country in which the whole system of taxation is one, logically worked out from the first principles. Everywhere the accidents of political and commercial considerations in past history are perpetuated, and condition the present system.”

Nonetheless, this criterion is still a useful one to the extent that departures from the underlying policy may signal the reasons why a law may not be effective.

\begin{flushright}
\textsuperscript{692} Sandford, above n 689, 5; see also, Taylor C J, ‘Archival Research as an Aid to the Interpretation of Tax Legislation’ (Paper presented at the 23rd Annual Conference of the Tax Research Network, University of Roehampton, 6 September 2012).
\textsuperscript{693} Dirkis, above n 691, 67–71, and references cited therein.
\textsuperscript{694} Dirkis, above n 691, 67.
\textsuperscript{695} Taylor, above n 692.
\end{flushright}
3.3.3.2 Attaining stability

Stanford uses the term “sustainability” to connote the overall stability and therefore longevity of a reform. To avoid any ambiguity with ‘fiscal sustainability’ this criterion is referred to as ‘stability’.

The basis for this criterion of attaining stability is that, no matter how valuable they are in their own right, reforms are of little value if they lack stability. Specifically, if a reform is subjected to a plethora of amendments or is speedily reversed, the administrative and compliance costs associated with those changes risks outweighing any benefits arising from the reform. This is a pertinent factor given the increasing prevalence of implementing and tightening thin capitalisation rules, compared to the experience of the ACE-inspired reforms which has largely consisted of implementing and subsequently repealing these ACE-variants.

3.4 CONCLUSION

This chapter builds on the observation that a significant cause of tax base erosion is the incongruous tax treatment of MNEs’ cross-border intercompany deductions. It observes that, since in the cross-border intercompany context funding flows are fungible, funding neutrality cannot be attained by eliminating the debt bias alone.

This suggests that the literature’s focus on debt neutrality, as shown in the previous Chapter 2, is currently too narrow and an insufficient target to attaining funding neutrality. In order to attain funding neutrality, the tax treatment between fungible funding flows – regardless of whether these flows are labelled debt, equity, licensing or leasing – must be equalised.

This provides the foundation for the evaluation framework, which examines the extent to which various tax reform options:

1. attain cross-border funding neutrality (the ‘evaluation criterion’);
2. attain revenue neutrality (the ‘positive constraint’); and
3. satisfy the reformers’ own policy objectives, and are stable (the ‘normative constraints’).

This evaluation framework is then applied in a two-pronged evaluation: first, the legal analysis in Chapter 4; and second, the modelling in Chapter 5.

697 “2. The sustainability of the reforms. Reforms, however good in themselves, are of little value if they are speedily reversed. Then any benefits are likely to be exceeded by the administrative and compliance costs of the changes. Thus, a vital criterion in assessing success is how far the reforms have been, or are likely to be, sustained”: Sandford, above n 689, 5.
698 Sandford, above n 689, 5.
The qualitative analysis tests whether, and if so to what extent, the principle of cross-border funding neutrality has been applied by some jurisdictions, using both past and proposed policy responses that target the debt bias as case studies.

The quantitative analysis consists of simulating complex cross-border intercompany tax planning strategies whilst incorporating the key categories of otherwise fungible intercompany financing flows. This model makes it possible to observe how a hypothetical tax-minimising MNE would structure its intercompany financing in response to existing and proposed reforms, simulated at multiple increments of tax-aggression for each reform option. This facilitates a formal ‘what if’ analysis of one of the most significant challenges presented by the mobility and fungibility of capital, testing both the revenue impact and policy effectiveness of several reforms both alternatively and concurrently.

This evaluation process is illustrated in the below Figure 18:

<table>
<thead>
<tr>
<th>Qualitative</th>
<th>Conceptual</th>
<th>Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 3</td>
<td></td>
<td>Chapter 4</td>
</tr>
<tr>
<td>Establishing:</td>
<td>Chapter 3</td>
<td>Applying: Legal</td>
</tr>
<tr>
<td>Evaluation framework</td>
<td>Cross-border funding neutrality; revenue neutrality; legislative objectives; and stability</td>
<td>analysis</td>
</tr>
<tr>
<td>Chapter 5</td>
<td></td>
<td>Belgian NID; Italian DIT; and Italian ACE</td>
</tr>
<tr>
<td>Applying:</td>
<td>Chapter 5</td>
<td>N/A</td>
</tr>
<tr>
<td>Optimisation</td>
<td>Applying:</td>
<td>[Empirical analysis is beyond the scope of this thesis]</td>
</tr>
<tr>
<td>modelling</td>
<td>Evaluation</td>
<td></td>
</tr>
<tr>
<td>Analysis of past, present and proposed reforms relevant to cross-border funding neutrality</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s own

This has three-fold implications by: utilising an objective measure to justify; strengthening the conceptual foundations of; and bolstering the practical value of, the reform proposals developed and tested in Chapter 6.
4 EVALUATING CURRENT LEGAL PRACTICE ON CROSS-BORDER INTERCOMPANY DEDUCTIONS

4.1 INTRODUCTION

The central question guiding this chapter is whether, and if so to what extent, the principle of cross-border funding neutrality has been applied in practice by some jurisdictions.

This literature presents a principled solution to the domestic debt bias, but considers neither the wider funding bias nor the cross-border implications of these reforms. On the other hand, as observed in the above Chapter 2, the literature relevant to thin capitalisation rules focusses on the cross-border implications of funding decisions but is not based in the economic first-principle of tax neutrality.

Section 4.2 explores the origins and evolution of policymakers’ past approaches to addressing the perceived problem of the debt bias. Specifically, this section presents a longitudinal, legal analysis of both the Belgian and Italian ACE-variants, which has not yet been extensively carried out in the literature. This gap will be explored through a comparative analysis of these legislative frameworks. While this section highlights, where possible, the cross-border implications of these ACE-variants, most of the discussion of these reforms is focussed on their domestic effects. This is similar to the theoretical literature’s focus on the domestic debt bias. Section 4.2.4 contains an analysis of whether an inversely proportional relationship exists between implementing an ACE-variant and the need for thin capitalisation rules. While this relationship is assumed, it has not yet been expressly tested by the literature. Accordingly, a key contribution of this study is that it bridges two currently disconnected areas of the literature by asserting the importance of starting from first principles – as is done in the fundamental reform literature – to address the shortcomings in the current tax design of cross-border intercompany funding activities. This is important from a transparency perspective for policymaking and policy evaluation.

Section 4.3 applies the evaluation framework developed in the previous Chapter 3 to both past and proposed policy responses which appear to target the debt bias, thereby extending the existing literature. This takes the form of evaluating: first, the ACE-variants implemented in Belgium and Italy, with a focus on the cross-border implication of these rules; second, Australia’s thin capitalisation regime, in its capacity as a quasi-CBIT; and third, the OECD’s recommendation on Action 4 of the BEPS Project, in terms of both its process and outcome.
4.2 ADDRESSING THE DEBT BIAS IN PRACTICE

As noted in the above section 2.5, out of all the fundamental reform proposals focussed on eliminating the debt bias, only the ACE has been experimented with in practice. Further, the ACE has predominantly been conceptualised as a domestic-level solution. Accordingly, this section presents a longitudinal legal analysis examining the origins and evolution of ACE-variants in practice – in particular, the Belgian NID, the Italian DIT and Italian ACE.

While there is much practitioner commentary on and economic analysis of the Belgian and Italian ACE-variants, this occurs largely in isolation. Further, a longitudinal, legal analysis of ACE-variants in practice has not yet been conducted in the English-language literature.

Accordingly, this study broadens the scope of comparative analysis of ACE-variants both horizontally and vertically, conducting legal analysis of the domestic laws, tax treaties, domestic and international case law, academic articles and media literature. The emphasis is on reviewing legislative drafting, evaluating the underlying policy intentions for amendments over time, and expanding the analysis with a focus on the implications of these reforms for the tax treatment of cross-border intercompany funding activities. This facilitates an investigation of the reasons for the ongoing persistence of Australia’s thin capitalisation rules compared to Belgium’s and Italy’s ACE-variants.

Sections 4.2.1–4.2.3 examine how ACE-variants in Belgium and Italy have been adopted, and how (and why) these variants have been amended over time. Given the focus of this study on analysing the rationales for implementing and amending legislative provisions, both intrinsic and extrinsic materials are explored. This is relevant in both the civil law and the common law contexts. Civil law has typically been more focussed on the purposive approach. The common law approach has also – albeit recently – adopted extrinsic materials as part of the statutory interpretation process.

This presents the ‘scaffolding’ for assessing in section 4.2.4 the relationship between implementing an ACE-variant and the need (or lack thereof) for thin capitalisation rules. As noted in the above section 2.5.1.1.2, this is currently underexplored despite the literature suggesting that there would be no need for thin capitalisation rules under an ACE. Given the


700 “Not only can relevant extrinsic material now be considered at common law, but it can and should be considered as part of the first instance approach to interpretation, rather than being confined to use as a mere subsidiary tool for use only in case of primary interpretive ambiguity”: Stubbs M T, ‘From Foreign Circumstances to First Instance Considerations: Extrinsic Material and the Law of Statutory Interpretation’ (2006) 34(1) Federal Law Review 103, 116.
assumption in the economic literature that the ACE has an inversely proportional relationship to thin capitalisation rules, this presents a significant gap in the literature.

4.2.1 The Belgian NID

The Belgian corporate tax system is a partial exemption system. Tax practitioners have long considered Belgium an interesting jurisdiction for various tax-planning and structuring purposes. For completeness, the Belgian legislative process has two separate avenues for the creation of Bills.

4.2.1.1 Origins of the Belgian NID

Even prior to the introduction of the Notional Interest Deduction (‘Belgian NID’), dividends could be received nearly tax-free, interest paid on loans taken out to acquire shares was tax deductible and capital gains on shares were generally tax exempt. The NID (otherwise known as the “Intérêts notionnels et déduction fiscales pour capital à risque”, “Notionele Interestaftrek” or “Capital Risk Deduction”) was introduced in 2005 (effective from the 2007 tax year) to encourage equity financing following two key pressures: one, from the European Commission to abandon the Belgian coordination center regime; and another, competition following the expansion of the EU to countries with lower corporate tax rates, such as Cyprus, Latvia, Lithuania and Hungary, which emphasised the need for Belgium to strengthen its position on the international tax map.

This section explores the originating legislation. When initially introduced, Belgium’s NID reform was very close to the pure version of the ACE, with the parliamentary focus appearing

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701 The Belgian corporate tax system is described as a double taxation system modified by an exemption for dividends from qualifying participations held by corporate shareholders and a reduced rate for dividends from participations held by individual shareholders: see further, Offermanns R H M J and Michel B, Belgium: Corporate Taxation (IBFD Country Surveys, July 2016) 1.


703 “Bills originate either with the government (projects de loi) or with deputies (propositions de loi). The projects de loi (government bills) have absolute priority and, short of a government crisis, almost every one of them passes. The propositions de loi that come from members or groups, often opposition groups, have little chance of passing and must be considered as propagandistic or kite-flying efforts to get an issue aired”: Fitzmaurice J, The Politics of Belgium: A Unique Federalism (Hurst, 1996) 110.


705 Liebman, above n 702.


707 Gérard, above n 540; De Callatay and Thys-Clément, above n 532, 111–12.
to be the tax neutral characteristic of the NID with its potential to overcome the debt–equity distortion.\textsuperscript{708}

This is evinced by the originating explanatory notes,\textsuperscript{709} which detail the political, philosophical, economic and tax policy rationales for implementing the Belgium ACE-variant, and the anticipated impact of this reform. Each rationale is dealt with in turn below.

In terms of the political and philosophical issues, the NID was seen as a mechanism to lower the effective corporate tax rate, which was perceived as too high, being the second highest in the EU, after Italy.\textsuperscript{710} The Bill was unconditionally approved by the VLD\textsuperscript{711} (the liberal faction and also the largest group in Parliament following the 2003 election) who considered the NID as a pioneer in tackling tax discrimination between debt and equity finance.\textsuperscript{712} Also, high unemployment was seen as an economic problem which could be addressed by lowering effective corporate taxes, which was expected to give the economy a new impetus.\textsuperscript{713}

In terms of economic policy, the NID signalled an end to fiscal discrimination between debt and equity finance,\textsuperscript{714} a difference which was widely considered to have no logical foundation.\textsuperscript{715} This was not met without cynicism, with the National Bank of Belgium (the central bank of Belgium) observing:\textsuperscript{716}

\begin{quote}
"The memorandum put to the Parliament stresses the neutrality property of the reform because it enables corporate income tax to overcome the well-known debt equity bias. It ends by indicating that the reform also provides an alternative for financial companies using the coordination centre regime. Most would argue – rightly – that of the two motivations the second was the more important and the neutrality properties are more a consequence of the reform than its main policy motivation”.
\end{quote}

So, it is important to recognise the context of these statements. The parliamentary debates refer to the high unemployment rate as an economic problem with the NID presented as a strategy to lowering corporate tax and giving the Belgian economy a new impetus\textsuperscript{717}.

\textsuperscript{708} De Callatay and Thys-Clément, above n 532, 112.
\textsuperscript{709} Originating legislation for the Belgian ACE, above n 704, 30077.
\textsuperscript{710} Chambre des Représentants de Belgique, Compte Rendu Intégral avec compte rendu analytique traduit des interventions, 2 June 2005, CRIV 51 PLEN 143 (Belgium) (‘Belgian House of Representatives’) 61–2 [15.20]. The extrinsic materials also indicate that parliamentarians made reference to the Forbes suggestion that Belgium had the third highest marginal tax rate in the world; cited as further support for the proposition that Belgium’s tax rates were high and corporate investment and economic stimulus were in need of bolstering (taking into account considerations of economics and taxation).
\textsuperscript{711} Belgian House of Represenatives, above n 710, 53 [15.01].
\textsuperscript{712} Belgian House of Represenatives, above n 710, 58–9 [15.01].
\textsuperscript{713} Belgian House of Represenatives, above n 710, 60–1 [15.19]–[15.20].
\textsuperscript{714} Belgian House of Represenatives, above n 710, 65–6 [15.20].
\textsuperscript{715} Belgian House of Represenatives, above n 710, 54 [15.02].
\textsuperscript{716} De Callatay and Thys-Clément, above n 532, 112.
\textsuperscript{717} Belgian House of Represenatives, above n 710, 60–1 [15.19]–[15.20].
Further, from a tax policy perspective, tax competitiveness pressures were pivotal in the implementation of the NID. Even though the official tax rate had fallen over 7% in three years, the effective tax rate at the time was over 21% higher than the EU average, as noted in the explanatory memorandum.\footnote{Belgian House of Representatives, above n 710, 62 [15.02].} When the NID was introduced, Finance Minister Didier Reynders and Prime Minister Guy Verhofstadt organised roadshows in Asia, the US and India to promote the NID. They were accompanied by representatives of some banks and tax advisory firms who explained how the NID could be used for group finance companies and treasury centres, for acquisition structures and for post-acquisition restructuring.\footnote{Quaghebeur, above n 706.} Subsequently, many multinational corporations moved their corporate treasury centres to Belgium, including for example the Dutch Randstad Group.\footnote{Quaghebeur M, ‘Belgium Removes Obstacles to Risk Capital Deduction’ World Tax Daily (online), Document 2005-24008, 30 November 2005 <http://www.taxnotes.com/worldwide-tax-daily/corporate-taxation/belgium-removes-obstacle-risk-capital-deduction/2005/11/30/8020981?highlight=removes-obstacles-to-risk-capital>\footnote{Quaghebeur, above n 706.}} During their roadshows, Finance Minister Didier Reynders and Prime Minister Guy Verhofstadt explained that the NID deduction reduced the average corporate income tax rate from 33.99% to about 25%.\footnote{Quaghebeur, above n 706.}

However, the parliamentary debates also document criticisms of the design of the NID. These can be summarised as the following four key obstacles to implementation: the need for a political majority, the design of anti-abuse mechanisms, the scope of the NID and the budgetary pressures.

First, it is important to recognise that Belgium did not have wide political support for the NID reform; indeed, the green and socialist parties opposed the NID, which was criticised as being used as “a weapon in the election campaign of 2004”.\footnote{Belgian House of Representatives, above n 710, 59 [15.02].} Further, the rationale of highlighting the urgency of the NID in light of the dramatic decline in investment in Belgium was criticised in the parliamentary debates as a rushed and underhanded political strategy.\footnote{Belgian House of Representatives, above n 710, 59 [15.12].} Despite ongoing political debate for over one year, which resulted in limitations to the NID, it was discussed at only two parliamentary sittings, which was criticised as resulting in insufficient debate on the broader reform of corporate income tax.\footnote{Belgian House of Representatives, above n 710, 59–60 [15.12].} This was considered especially problematic by opposition parties, who made comparisons to the reform processes in neighbouring countries such as the Netherlands.\footnote{Belgian House of Representatives, above n 710, 61 [15.20].} Also, the NID design parameters had mixed reviews; some parliamentarians believed the design was too generous while others considered...
them inadequate. The Finance Minister interpreted this as indicating that the Bill was balanced,\textsuperscript{726} and noted that an evaluation period would identify areas for improvement.\textsuperscript{727}

Second, another major obstacle to the implementation of the NID was contained in Article 9, which barred companies from distributing the portion of their profits that corresponds to the NID deduction by way of a dividend unless they retained an amount equal to the amount of the NID deduction for a period of at least four years. In the extrinsic materials prepared in June 2005, one of the key anti-abuse mechanism contained in Article 9 was reduced to three years following concerns that four years would make equity less appealing than debt finance and could undermine the effectiveness of the NID. Even though the design was the subject of passionate political debate\textsuperscript{728} and was ultimately a compromise, the Parliament considered that Article 9 should be further relaxed in subsequent legislative amendments.\textsuperscript{729} Nonetheless, this provision was amended even before the commencement date of the NID, with the Belgian Prime Minister delivering a public announcement on 17 November 2005 that this obstacle to the NID would be lifted.\textsuperscript{730} While this revision arguably aligned the NID more closely to its theoretical underpinnings in the ACE, it is largely an administrative issue rather than one of tax policy design which encourages the use of equity financing at the risk of making the system more vulnerable to abuse from aggressive tax planning. The key criticism was that the NID was largely agreed to in principle, but the provisions and administrative aspects were unnecessary to the point that it was criticised as largely missing its objectives in practice.\textsuperscript{731} This highlights how translating ACE theory into practice through a robust tax reform design is one of its most challenging aspects, as anticipated by the wider ACE literature\textsuperscript{732} and as experienced by jurisdictions in the past.\textsuperscript{733}

Third, there was opposition to the limited scope of the NID, which some parliamentarians argued ought to be extended to personal income tax.\textsuperscript{734} This reflects the ACE literature, which anticipates that one key challenge in designing and implementing ACE reform is that it does not operate as a backstop to the personal income tax system.\textsuperscript{735} Even though tax neutrality arguably

\textsuperscript{726} Belgian House of Representatives, above n 710, 53–4 [15.01].
\textsuperscript{727} Belgian House of Representatives, above n 710, [5.0].
\textsuperscript{728} Parliamentary reports show dialogue such as “Mr Bogaert, I suggest that you take the sequel to the market stand, because you are very good at selling apples that look like pears.”: Belgian House of Representatives, above n 710, 57 [15.02].
\textsuperscript{729} Belgian House of Representatives, above n 710, 69 [15.52].
\textsuperscript{730} Quaghebeur, above n 720.
\textsuperscript{731} Belgian House of Representatives, above n 710, 64 [15.20].
\textsuperscript{733} The ACE-variant adopted in Brazil is more akin to a system of dividend deductibility; see further, Klemm, above n 371, 246.
\textsuperscript{734} Belgian House of Representatives, above n 710, 58 [15.11].
\textsuperscript{735} OECD, above n 387.
cannot be achieved unless there is a personal-level ACE, the domestic shareholder position is less relevant in a small, open economy where the marginal investor is assumed to be a foreign investor. While it is difficult to pinpoint the non-resident investor as the marginal investor, it is plausible for a small, open economy like Belgium.

Fourth, budgetary issues generally tend to pose one of the most significant political hurdles to implementing fundamental tax reform. Even though the budgetary cost of the NID was a significant issue, the government mentioned that it expected a €58 million return on the NID reform. This was despite the revenue cost of €566 million, which was largely accepted by Parliament, with budgetary compensation measures and savings provisions (including abolishing corporate tax credits and opting-in to the NID at the expense of opting-out of ‘investment reserve’ provisions) amounting to €400 million. The extrinsic materials make reference to the following 10 benefits of the NID, anticipating that it would:

- incentivise equity finance and thereby encourage investment;
- facilitate employment;
- stimulate financing;
- reduce bankruptcy risk thereby improving credit ratings;
- anchor investments in Belgium thereby reducing relocation risk;
- stimulate the establishment of new companies;
- ensure consistency with EU guidelines thereby providing the necessary legal certainty;
- facilitate an attractive investment climate;
- improve the competitiveness of Belgium; and
- facilitate private corporations’ investment in construction and property through equity finance.

4.2.1.2 Evolution of the Belgian NID

Since there is already substantial academic analysis and practitioner commentary on the development of the Belgian NID, this section focusses on synthesising thematic threads representing challenges to maintaining the reform, with a focus on learning from the key hurdles encountered by the policymakers.

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736 OECD, above n 364, 88 and 139.
738 Belgium has recently described as a small, open economy by economists; see, for example, Du Caju P, Ryx F and Tojerow I, ‘Wage Structure Effects of International Trade in a Small Open Economy: The Case of Belgium’ (2012) 148(2) Review of World Economics 297.
739 Belgian House of Representatives, above n 710, 53 [15.01].
740 Belgian House of Representatives, above n 710, 55 [15.02].
741 Belgian House of Representatives, above n 710, 59 [15.02].
4.2.1.2.1 Cross-referencing with the theoretical ACE

One fundamental critique of the Belgian NID reform was that the legislative intent in implementing the reform was not entirely clear.\textsuperscript{742} As observed in a Private Bill proposed in 2012, the Belgian NID was implemented with goals that appear to be at odds with each other, such as reducing the effective corporate tax rate yet remaining revenue neutral.\textsuperscript{743} This rendered the drafting of amendments problematic.

The Belgian NID has been continually amended by the Belgian Parliament since its introduction in 2005, culminating in the continued reduction in the NID rate and the abolition of carry-forwards,\textsuperscript{744} which further limit its scope. These legislative amendments have taken the Belgian NID further away from its original legislative purpose and underlying ACE principles.

This has resulted in two key problems. First, the NID rate was initially set to regularly increase.\textsuperscript{745} However, since 2012 the NID rate has been dramatically reduced. This has resulted in the criticism in both the 2013 and 2014 Budgets that “[the Belgian NID] is so gutted, so that there is no more legal certainty for investors”.\textsuperscript{746} As noted in the ACE literature, reducing the tax deduction provided for equity financing risks eliminating the neutrality properties of the Belgian NID and simply providing a sweetener for equity financing.\textsuperscript{747} Further, an unexpected obstacle to maintaining the Belgian NID was the fact that revenue base erosion was exacerbated during economic downturns (with reduced corporate earnings and no corresponding reduction in the NID deduction). This resulted in criticism that if the government bond rate increased significantly, the Belgian NID would be untenable from a budgetary perspective.\textsuperscript{748}

\textsuperscript{742} Chambre des Représentants de Belgique, Projet de loi-programme (art 64 à 66, 108 et 135 à 168) Proposition de loi modifiant le Code des impôts sur les revenus 1992 en ce qui concerne la disposition anti-abus, 16 March 2012, DOC 53 2081/016 (Belgium) (‘Government Bill’); see also, Chambre des Représentants de Belgique, Proposition de loi modifiant le Code des impôts sur les revenus 1992 en ce qui concerne la disposition anti-abus, 22 March 2012, DOC 53 1111/003 (‘Private Bill’).
\textsuperscript{743} Private Bill, above n 742, 6.
\textsuperscript{744} The abolition of carry-forwards exacerbates the asymmetric treatment of profits and losses; see further, Bond and Devereux, above n 464.
\textsuperscript{745} “The rate of the notional interest deduction has only increased in recent years. For the 2007 tax year, it stood at 3.442%, for the taxation year 2008, to 3.781% for the 2009 tax year, it stood at 4.307% and the 2010 tax year, the rate is 4.473%”: Chambre des Représentants de Belgique, Projet de loi portant dispositions diverses, 19 December 2011, DOC 53 1952/007 (Belgium) (‘Government Bill’).
\textsuperscript{746} Chambre des Représentants de Belgique, Projet de loi contenant le budget des Voies et Moyens de l’année budgétaire 2013, 1 February 2013, DOC 53 2521/007 (Belgium) (‘Annual Budget 2013’) 55; see also, Chambre des Représentants de Belgique, Projet de loi contenant le budget des Voies et Moyens de l’année budgétaire 2014, 11 December 2013, DOC 53 3070/006 (Belgium) (‘Annual Budget 2014’) 181.
\textsuperscript{747} The Mirrlees Review recommends that the normal rate of return be utilized; see further, Auerbach, Devereux and Simpson, above n 382; and Griffith, Hines and Sørensen, above n 388.
\textsuperscript{748} Chambre des Représentants de Belgique, Proposition de loi visant à empêcher l’utilisation abusive de la déduction pour capital à risqué (déposée par MM Jean-Marc Nollet et Stefaan Van Hecke), 26 March 2008, DOC 52 1024/001 (Belgium) (‘Private Bill’) 7.
Accordingly, budgetary pressures provided the impetus for the ongoing trend of continually reducing the maximum allowable NID rate.\footnote{For example, the Belgian NID rate was reduced to a maximum 3.8\% for 2011/2012: \textit{Moniteur belge, Publication conforme aux articles 472 à 478 de la loi-programme du 24 décembre 2002, modifiés par les articles 4 à 8 de la loi portant des dispositions diverses du 20 juillet 2005, 30 December 2009, N 433, 179e (Belgium) art 205 quarter, § 5 [82337]. This was reduced again to 3.425\% for 2012 by \textit{Moniteur belge, Publication conforme aux articles 472 à 478 de la loi-programme du 24 décembre 2002, modifiés par les articles 4 à 8 de la loi portant des dispositions diverses du 20 juillet 2005, 17 January 2011, N 17, 181e (Belgium) Article 205 quarter, § 5 [3061] (‘Belgian Official Gazette’).}

Second, as observed in the 2012 Budget, reductions to the NID rate were considered a measure that balanced attracting investment business with tax revenue protection. However, as also noted in the 2012 Budget, any further reductions to the NID rate risk encouraging MNEs to invest less in Belgium, which would likely result in lower tax revenues overall.\footnote{Chambre des Représentants de Belgique, \textit{Projet de loi contenant le budget des voies et moyens de l’année budgétaire 2012}, 27 January 2012, DOC 53 1943/008 (Belgium) (‘Annual Budget 2012’).} Nonetheless, as reiterated in the 2013 Budget, the NID was seen as a sound mechanism to encourage participation in capital increases of companies – and was considered a measure worth retaining on the assumption that the NID strengthens capital and therefore improves profitability.\footnote{Annual Budget 2013, above n 746, 230–1 and 239.} However, the logic of this inference is questionable. That ACE-variants boost profitability may not be relevant in all cases given the current business climate, particularly with the advent of international tax planning.

\subsection*{4.2.1.2.2 Unintended consequences from cross-border transactions}

There have been many legislative amendments due to discontentment over the perceived inequities between the treatment of MNEs and SMEs in the design and operation of the Belgian NID. This section explores the amendments impacting MNEs and SMEs in turn below.

A Private Bill proposed in 2008 to Parliament evinced the legislature’s knowledge that MNEs were able to take considerable advantage of the NID – and perhaps that the magnitude had been unexpectedly high.\footnote{Private Bill, above n 748.} As observed by the Belgian central bank in a December 2007 report, MNEs at that stage had already augmented their capital structure to optimise their NID
deductions, including by increasing their equity,\textsuperscript{753} establishing treasury centres\textsuperscript{754} and changing their group structures.\textsuperscript{755}

This highlights the challenges associated with unilateral implementation of the Belgian NID and raises the question of whether this reform is genuinely beneficial for the domestic economy – or whether it simply presents a tax break for the most profitable MNEs who are able to tax plan and bypass anti-avoidance rules to maintain very low effective tax rates. Accordingly, the primary concern was that this reform might not have encouraged real investment, value-adding or job creation.\textsuperscript{756}

Some amendments enacted to mitigate the unintended consequences of MNE tax planning include the following 10 features:

- introducing lock-in provisions on maintaining capital in a separate account for a fixed period;\textsuperscript{757}
- excluding credit institutions, and insurance and investment funds;\textsuperscript{758}
- introducing specific anti-avoidance provisions to align the NID with its real objective of encouraging real investment, not artificial tax planning restructures;\textsuperscript{759}
- limiting the rate of the NID deduction.\textsuperscript{760}

\textsuperscript{753} For example, MNEs issued a record-breaking $114 billion in shares, up 250%; also, by increasing their equity by $52 billion, MNEs were able to reduce their tax liabilities by $660 million: Private Bill, above n 748, 6.

\textsuperscript{754} The following example demonstrates how MNEs were able to dramatically lower their tax bases; an MNE will establish an internal bank in Belgium and will then provide inter-company loans. If the NID deduction is, for example, 3% and the interest rate charged by the MNE on its inter-company loan is 3.5%, then corporate tax on the finance company’s net interest income is reduced to 0.5%. This highlights that the use of intercompany financing poses key technical issues for ACE-based reforms in this area.

\textsuperscript{755} Chambre des Réprésentants de Belgique, Projet de loi-programme, 24 February 2012, DOC 53 2081/001 (Belgium) (‘Government Bill’) 95.

\textsuperscript{756} Private Bill, above n 748, 8.

\textsuperscript{757} This was introduced to address two key criticisms: first, encouraging new foreign investment on the condition that the capital is maintained in a separate account for at least four years; second, removing the intangibility condition: Chambre des Réprésentants de Belgique, Projet de loi relatif au Pacte de solidarité entre les générations, 2 December 2005, DOC 51 2128/003 (Belgium) 20. In a subsequent version, the lock-in timeframe was reduced from four to three years: Chambre des Réprésentants de Belgique, Projet de loi relatif au Pacte de solidarité entre les générations (art 85 tot 101), 12 December 2005, DOC 51 2128/012 (Belgium).

\textsuperscript{758} Chambre des Réprésentants de Belgique, Projet de loi-programme, 15 December 2009, DOC 52 2278/021 (Belgium) (‘Government Bill’). This Government Bill introduced new art 132/1, which excludes credit establishments, insurance companies and investment firms from the scope of the NID deduction. This was further amended by entirely excluding these institutions under Government Bill, above n 745, 5, since the financial sector had gained significant tax benefits from the NID, for example €600 million in 2007 alone.

\textsuperscript{759} Government Bill, above n 758. For the purpose of an allowable NID deduction, if an act or transaction has the purpose or effect of increasing equity, this is not binding on the tax authorities, unless it can be shown that the act or transaction was a response to legitimate economic or financial needs, and not the sole purpose/aim of reducing taxable income. Despite the existence of a general anti-abuse provision, contained in section 344 of the Belgian Income Tax Code 1992, a specific provision is necessary because the general provision does not necessarily apply to all arrangements made in relation to the NID.
• limiting deferral;\textsuperscript{761}
• making the NID benefit conditional on maintaining employment\textsuperscript{762} (although this appears not to have been a very effective amendment; the 2013 Budget and a 2015 Government Bill cited the lack of connection with job creation as a problematic aspect of the Belgian NID);\textsuperscript{763}
• changing the NID equity base calculation by implementing a dividend received deduction on incoming dividends;\textsuperscript{764}
• removing the seven-year carry forward tax losses, to prevent MNEs from accumulating deductions;\textsuperscript{765}
• excluding untaxed reserves and capital subsidies;\textsuperscript{766}
• introducing the Fairness Tax.\textsuperscript{767}

The Fairness Tax amendment, which was expected to generate revenue savings of €165 million in 2014,\textsuperscript{768} has also proven problematic. The unintended consequences were highlighted

\textsuperscript{760} Chambre des Représentants de Belgique, Projet de loi portant des dispositions diverses, 17 December 2010, DOC 53 0771/020 (Belgium) (‘Government Bill’) 21.
\textsuperscript{761} Government Bill, above n 760, 21.
\textsuperscript{762} Government Bill, above n 760, 21. The origin of this law appears to be a Private Bill proposed earlier that year. That Private Bill was to propose linking the granting of NID benefits to the condition that employment be maintained: Chambre des Représentants de Belgique: Session extraordinaire 2010, Proposition de loi relative aux intérêts notionnels, 9 August 2010, DOC 53 0059/001 (Belgium) (‘Private Bill’). This criteria was further tightened such that the NID will only be granted if MNEs continue to employ the same (if not larger) numbers of employees during the tax period and for the next three tax periods; see Government Bill, above n 745 and Chambre des Représentants de Belgique, Projet de loi portant des dispositions fiscales et financières et des dispositions relatives au développement durable, 30 April 2013, DOC 53 2756/003 (Belgium) (‘Government Bill’).
\textsuperscript{763} Annual Budget 2013, above n 746, 241; see also, Chambre des Représentants de Belgique, Projet de loi-programme (Art 38 à 85) Proposition de loi modifiant le Code des impôts sur les revenus 1992, visant à lutter contre la fraude fiscale internationale et les paradis fiscaux par l’instauration de règles dites “CFC”, 30 June 2015, DOC 54 1125/009 (Belgium), and the subsequent version in Chambre des Représentants de Belgique, Projet de loi-programme (Art 38 à 85) Proposition de loi modifiant le Code des impôts sur les revenus 1992, visant à lutter contre la fraude fiscale internationale et les paradis fiscaux par l’instauration de règles dites “CFC”, 13 July 2015, DOC 54 1125/013 (Belgium) 6. These highlight the importance of SMEs in job creation and economic growth.
\textsuperscript{764} Originally designed to allow a ‘double-dip’ by awarding the MNE twice: once for the parent that counts the shares as investments; and once in the subsidiary whose shares were purchased, with only the latter constituting genuine economic activity. The relevant calculation was changed by Chambre des Représentants de Belgique, Projet de loi portant des dispositions, 16 March 2011, DOC 53 1208/014 (Belgium). Practitioners observed that this change in the calculation order would result in a lower taxable profit available for the application of the NID: Damiere N, ‘Year end closing: beware of excess notional interest deduction’ (Tiberghien, 30 November 2012).
\textsuperscript{765} Government Bill, above n 762, 7.
\textsuperscript{766} Government Bill, above n 762; this amendment inserted the words “excluding untaxed reserves and capital subsidies” at §1, paragraph 1, between the words “subject to the provisions of §§ 2–7” and the words “the amount of equity of the company at the end of the previous tax period, determined in accordance [with] legislation on accounting and financial statements as they appear on the balance sheet”.
\textsuperscript{767} Chambre des Représentants de Belgique, Projet de loi portant des dispositions, 8 July 2013, DOC 53 2891/004 (Belgium) (‘Government Bill’) 13.
by the Court of Auditors in the 2014 Budget, and the European Commission has recently submitted before the Court of Justice of the European Union (‘CJEU’) that the Fairness Tax violates EU law.

However, the Belgian NID also delivers benefits by incentivising business capitalisation and thereby protecting businesses during the GFC. Further, it is arguable that this is an obvious feature of the Belgian NID which is why it was such an attractive investment reform to begin with. Some legal practitioners have observed that “the purpose of introducing the notional interest deduction was just to make Belgium fiscally attractive to foreign investors and to offer a credible and competitive alternative for the coordination centres whose system was condemned by the European authorities”. Indeed, it is arguable that since the Belgian NID resulted in substantial investment by both local and overseas MNEs, it thereby encouraged a larger capital base, which ensured that those companies were well-positioned to withstand the GFC because of their capital buffers.

Nonetheless, the pressure from lobby groups and media sentiment that MNEs were unfairly advantaged by the NID remains substantial. By way of background, despite a reduced tax rate applied being to SMEs at 24.98% (compared to the headline rate of 33.99%), MNEs were still perceived as being at an advantage with the average effective tax rate at around 5%. This has resulted in industry lobby groups such as Le Syndicat des Indépendants & des PME calling for reform to the Belgian NID to “reconcile the existing blatant discrimination between hundreds of small SMEs that pay 3–4 times more taxes than multinational companies”.

Further, there is a general perception that SMEs are the main drivers of employment and have added significant value to the Belgian economy over the last decade, whereas MNEs have downsized. However, SMEs appear not to be maximising the benefits available to them under

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769 It is very difficult to accurately estimate the budgetary benefit of the Fairness Tax. This is in part due to the fact that companies can optimise the timing of the distribution of dividends by distributing during a period in which the Belgian NID and the deduction for tax losses are limited: see further, Chambre des Représentants de Belgique, Commentaires et observations sur les projets de budget de l’état pour l’année budgétaire 2014, 19 November 2013, DOC 53 3070/004 (Belgium) (‘Annual Budget 2014 Comments and Observations’) 28.
771 Thémelin, above n 571.
773 “réconcilier la discrimination flagrante existant entre les centaines de petites PME qui payent 3 à 4 fois plus d’impôts des sociétés que les multinationales”: Fil info Belgique, above n 772.
774 Private Bill, above n 748, 7.
the Belgian NID. For example, even though 42% of Flemish SMEs had used the measure, less than 10% changed their capital structure to take advantage of a larger deduction. This behavioural response – or lack thereof – appears contrary to the object of the originating legislation, which sought to encourage economic growth and job creation by stimulating capitalisation and investment.

Discontentment concerning the perceived inequities of the NID was again raised in 2010, when it was noted that in 2007–08, the budgetary cost of the NID was split 94% to larger MNEs and 6% to SMEs. This split had not changed substantially by 2012. It was observed in the 2012 Budget that SMEs only gain 5% of the NID benefit and since they contribute the majority of the employment and innovation most of the NID should be directed at them rather than MNEs who take the NID benefit abroad through complex tax structures.

This inequity is being addressed in a manner external to the ambit of the Belgian NID. Despite a proposal to increase the NID rate applied to SMEs by an additional 0.5%, to 1% above the MNEs’ allowable NID rate, an alternative strategy was introduced in 2013. Under this alternative to the Belgian NID, SMEs are able to access a new 4% deduction, introduced as Article 49.

4.2.1.2.3 Resulting budgetary pressures

Arguably the most substantial hurdle to implementing and sustaining ACE-based reform is that it is politically very difficult to quantify (and therefore justify) the benefit of the Belgian NID but very easy to point to the loss of revenue.

This has been acknowledged in parliamentary materials. For example, in Belgium’s 2012 Budget it was noted that the precise economic impact of the Belgian NID could not be calculated, and that the true revenue impact of the Belgian NID was being underestimated. Yet the executive government retained a strong belief that the competitiveness of the Belgian

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775 Government Bill, above n 760, 23.
776 Annual Budget 2012, above n 750, 206. There was no further clarity in the 2013 Budget, which observed simply that at the time there were no specific statistics on the use of the NID by SMEs: Annual Budget 2013, above n 746, 113.
777 Chambre des Représentants de Belgique, Proposition de loi modifiant le Code des impôts sur les revenus 1992, concernant les intérêts notionnels (déposée par M Olivier Maingain et consorts), 21 February 2013, DOC 53 2662/001 (Belgium) (‘Private Bill’). 5.
778 Chambre des Représentants de Belgique, Projet de loi-programme, 13 December 2013, DOC 53 3147/007 (Belgium), 5–10.
779 Annual Budget 2012, above n 750.
780 Annual Budget 2012, above n 750, 47.
economy was being protected by maintaining the Belgian NID.\footnote{Annual Budget 2012, above n 750, 88.} It is also important to acknowledge the difficulty in measuring the impact of anti-abuse rules in general.\footnote{Rather, the purpose of general and specific anti-avoidance is that they are necessary precautions and aim more for compliance and/or prevention, which will have an indirect impact on the budget in the form of increased tax revenue; “tax revenues remain on track and we can say that there is no reason to revise downward the expected results for 2013 with regard to the measures taken results including those taken in the context of the fight against fraud and the proper application of the law”: Annual Budget 2014, above n 746, 95.}

Further, in an increasingly globalising economy with capital mobility there is no certainty that regulatory tightening will prevent a loss of revenue. Belgium’s thin capitalisation rules are relatively lenient. Even so, many MNEs are now moving out of Belgium as a result of the overall regulatory tightening including, inter alia, tightening of thin capitalisation rules, increase in the interest withholding tax rates, tightening of anti-abuse rules and levying of CGT on shares.

So, even though MNEs were subject to relatively low effective tax rates under the NID reform, it is conceivable that this at least incentivised businesses to operate from, and develop in, Belgium – this influx in inbound investment may have, in turn, had a multiplier effect. If so, the Belgian NID would have remained broadly consistent with its originating purpose. As observed in a Government Bill in 2010, it is important to note that the NID was one of two key measures which were introduced in response to the GFC to help MNEs maintain employment and avoid bankruptcy.\footnote{Government Bill, above n 760, 22.} So, even though NID has not resulted in an increase in employment or higher tax revenues, it may have curtailed the extent of the economic downturn in Belgium.\footnote{Government Bill, above n 760, 25.}

4.2.1.2.4 Dealing with domestic and international pressures

The Belgian NID has resulted in pressures both internationally and domestically being applied to the Belgian government.

In the international context, pressure from the European Commission has been pivotal in the inception, waxing and waning of the Belgian NID. Specifically, the Belgian NID was implemented in 2005, to replace the coordination centre regime, which had been determined to be contrary to EU law in 2003.\footnote{Green P, ‘Coordination Centres: The End of an Era? Not Quite …’ [Summer 2003] 2 Competition Policy Newsletter 23.} However, this ACE-variant proved to be overly generous to the more tax-aggressive MNEs, an outcome which was exacerbated by the ECJ’s decision that the refusal to apply the Belgian NID to a foreign PE’s net assets violated the freedom of establishment.\footnote{Argenta Spaarbank, above n 539.} These events in turn resulted in the implementation of the Fairness Tax in

\footnotesize{\begin{itemize}
\item 782 Annual Budget 2012, above n 750, 88.
\item 783 Rather, the purpose of general and specific anti-avoidance is that they are necessary precautions and aim more for compliance and/or prevention, which will have an indirect impact on the budget in the form of increased tax revenue; “tax revenues remain on track and we can say that there is no reason to revise downward the expected results for 2013 with regard to the measures taken results including those taken in the context of the fight against fraud and the proper application of the law”: Annual Budget 2014, above n 746, 95.
\item 784 Government Bill, above n 760, 22.
\item 785 Government Bill, above n 760, 25.
\item 787 Argenta Spaarbank, above n 539.
\end{itemize}}
2013 to mitigate budgetary pressures caused by the Belgian NID. Recently, the Court of Justice of the European Union was asked to determine whether the Belgian NID violated EU law. Both the European Commission and Advocate General Juliane Kokott concluded that it was partly incompatible with the EU Parent-Subsidiary Directive.\textsuperscript{788}

In the domestic setting, the most significant political pressure point and media criticism of Belgium’s NID is in relation to its cross-border impact, specifically the tax planning opportunities that it presents for MNEs. It is important to consider legislative amendments to the NID reform in the context of the political landscape. Belgium has been confronted by an ongoing political crisis at federal level since 2007.\textsuperscript{789} During that time, the outgoing conservative–socialist government continued to handle current affairs, and in October 2007, following much political pressure, decided to conduct an investigation into alleged abuses by Belgian companies and banks of the Belgian NID.\textsuperscript{790}

Parliament acknowledged the unintended consequences in the extent of benefits extracted by MNEs from the NID observing that only two of the companies in the BEL20 paid taxes. This resulted in criticism that “it is clear that Belgium is a tax haven for larger companies”.\textsuperscript{791} This position was more recently reiterated by the Ministry of Finance’s Office for Advance Decisions in Tax Matters, which observed in its report to Parliament that “it was no secret that the previous Minister of Finance was ready to grant tax breaks to make Belgium a financial centre”.\textsuperscript{792} This sentiment has bolstered the argument in favour of repealing the NID, which has been characterised as a product of “favouritism from lobbying”.\textsuperscript{793}

This is exemplified by the numerous Private Bills calling for stronger anti-abuse mechanisms associated with, or proposing the repeal of, the NID. The earliest Private Bill seeking to prevent abuse of the NID was proposed within just over a year of it being operational.\textsuperscript{794} This Bill observed that the stated objective of reducing tax discrimination was not the real objective. Rather, the agenda was to replace the coordination centre regime, as highlighted above.

\textsuperscript{788} Request for a preliminary ruling from the Grondwettelijk Hof (Belgium) (Case C-68/15), Opinion of Advocate General Kokott delivered on 17 November 2016 (ECLI:EU:C:2016:886); available at: \texttt{http://curia.europa.eu/juris/document/document.jsf?text=&docid=185446&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=113296}.


\textsuperscript{790} Quaghebeur, above n 706.

\textsuperscript{791} Government Bill, above n 760, 23.

\textsuperscript{792} Chambre des Représentants de Belgique, Audition de Mme Véronique TAI, présidente du Collège du SDA, Service des décisions anticipées en matières fiscales, 16 September 2013, DOC 53 3008/001 (Belgium) 17.

\textsuperscript{793} Chambre des Représentants de Belgique, Compte Rendu Analytique, 3 April 2014, CRABV 53 PLEN 195 (Belgium) 24; see also, Chambre des Représentants de Belgique, Compte Rendu Intégral avec compte rendu analytique traduit des interventions, 3 April 2014, CRIV 53 PLEN 195 (Belgium) 39.

\textsuperscript{794} Private Bill, above n 748.
Also, as early as 2008 Parliament was made aware that the Belgian NID in practice was no silver bullet; rather the following four issues were experienced: (a) the improper application of the regime; (b) large-scale engineering and tax optimisation by MNEs; (c) lagging tax revenues on corporate profits yet increased budgetary cost; and (d) substantial decline in implicit corporate tax rate to 16%. 795

Most recently, in 2015, two further Private Bills were again proposed to repeal the NID. The first proposal made the four-fold critique of the NID that: (a) the political landscape has shifted since the implementation of the Belgian NID, and Belgium is currently faced with heightened tax competition and budgetary pressures; (b) it is arguably better to simply reduce the headline corporate tax rate; (c) Belgium is a relatively strong recipient of international financial flows but job creation remains a pressing issue, particularly given job cuts by MNEs taking advantage of the Belgian NID; and (d) there is a perceived inequity in the design of the Belgian NID, with MNEs disproportionately advantaged over SMEs, the latter group being the ‘job creators’ and meriting more support. 796 The second proposal reiterated the objective of promoting investment in the real economy by suggesting the NID be replaced with the pre-2006 regime which provided a 4% investment deduction. 797

Further, there has been increased media pressure and pressure from all sides of politics to abolish the NID. In May 2014 this resulted in the NID becoming a federal election ‘hot topic’. 798 Media reports indicate that political parties such as the Christian Democratic Party (“Centre démocrate humaniste”) promised to abolish the NID as part of their election campaigns. 799

The Belgian NID currently remains phased down, and it is unclear whether it will be abolished, with industry groups and practitioners awaiting further developments, particularly given the ECJ’s consideration of the Fairness Tax.

4.2.2 The Italian DIT

Italy provides an important case study because it has implemented two ACE-variants under two different corporate-shareholder tax systems. The ACE-variant operating in Italy from 1998

795 Private Bill, above n 748, 12.
797 Chambre des Représentants de Belgique, Proposition de loi modifiant le Code des impôts sur les revenus 1992, en vue de promouvoir l’investissement dans l’économie réelle, 20 April 2015, DOC 54 0819/004 (Belgium).
798 Themelin, above n 571.
to 2001 was termed the Dual Income Tax (‘Italian DIT’). As explored in the above section 2.5.1, Italy’s DIT was very different to the Nordic DIT as it only affected capital income and as such had a “most confusing name”.

However, it did involve a dual rate, with a lower rate applied to normal profits (that is, a nominal return on capital calculated by reference to the interest rate on bonds) and a higher rate applied to economic rents (that is, the statutory corporate income tax rate).

Prior to 1997, the Italian corporate income tax system, which was designed as a full imputation system, had not been subject to major reforms for nearly three decades. However, by 2004, Italy had transitioned from an imputation system to a partial exemption system. Italy’s move away from an imputation system was in line with many other EU member countries.

An understanding of Italy’s political dynamics is imperative in assessing tax policy reforms. Originating from a context of taxpayer discontent and widespread tax planning and tax evasion, the then centre-left government introduced the Italian DIT as part of its Visco reforms (pursuant to Decree Law 466/1997 of 18 December 1997). It is important to note that this system of ‘decree laws’ (or legislative decrees) allows for the implementation of legislation without the ordinary parliamentary approval process in “extraordinary cases of necessity and urgency”.

Specifically, the relevant extrinsic materials note that the Italian DIT was introduced to encourage greater neutrality in corporate financing decisions and to facilitate competitiveness by making Italian an attractive investment destination.

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800 Klemm, above n 371, 234.
802 “Effective for tax periods starting on or after 1 January 2004, Italy applies a classical system of taxation of corporate profits. The former imputation system is abolished and replaced by a 95% participation exemption for corporate shareholders and a 60% exemption for individual shareholders who hold the participation in a business capacity. Individual shareholders not holding the participation in a business capacity are also entitled to the 60% exemption if they own more than 2% of the voting power or 5% of the capital in listed companies, or more than 20% of the voting power or 25% of the capital in other companies (substantial participation). Otherwise, dividends derived by individuals are subject to a final withholding tax at a rate of 12.5%”: Uricchio A, ‘Italian Individual Taxation’ (Università di Bari) <www.lex.uniba.it/ta/ITALIAN_INDIVIDUAL_TAXATION.ppt>.
803 “In the decree law procedure (art 77, comma 2 CI), the Executive can promulgate a decree in ‘extraordinary cases of necessity and urgency’: The Executive decree becomes a law immediately and remains in effect 60 days without any parliamentary approval. If, after this period, the parliament has not actively ‘converted’ the decree into a regular law, then previous status quo is reinstated. The procedure to convert a decree law ... is detailed by the standing orders of the chamber”: Zucchini F, ‘Italy: Government Alternation and Legislative Agenda Setting’ in Rasch B E and Tsebelis G, The Role of Governments in Legislative Agenda Setting – Routledge/ECPR Studies in European Political Science (Routledge, 2013) 53, 56.
804 Bernardi, above n 534.
Revenue neutrality concerns resulted in two key restrictions being placed on the original Italian DIT, which reduced its initial effectiveness. First, the opportunity cost of equity finance was not deductible from taxable income; rather, it was taxed at a reduced rate.

Second, only post-reform equity was considered in the Italian DIT deduction calculations under an incremental approach (as with the Belgian NID). Over time, this restriction would not have been problematic but the short-term political repercussions were significant. The Italian DIT was criticised as largely benefiting large and profitable firms, who were more likely to issue new equity, while companies in the south of Italy and SMEs were less likely to issue equity, despite their higher cost of debt. This is in contrast to ACE theory, which anticipates that the ACE will increase the tax burden on the most profitable firms and encourage innovation by SMEs by lowering the tax burden on marginal projects.

One of the key legislative amendments that aligned the Italian DIT more closely to the original ACE was the recognition by Parliament that both personal and corporate income tax may need to be reformed in tandem to promote neutrality in organisational form. This was achieved by equalising the minimum tax rate applied to the ‘normal return’ on equity capital with the basic personal tax rate on labour income (that is, 19%).

In any event, it is arguable that the technical and social teething process suggests that the transition to the Italian DIT was never completed, with a Senate stenographic report indicating:

“We have also further strengthened the tools to support new investments, through the extension and improvement of the Visco reforms, and the extension and acceleration of the Dual Income Tax ... its complexity both from a technical point of view and from a social impact, required a long preparation ... 2000, therefore, should reap the benefits of this long preparatory phase.”

The Italian DIT was a restricted version of the standard ACE, subject to “an excess of changes” and complicated interactions with other taxes, thus rendering both theoretical and empirical analysis difficult.

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805 Staderini, above n 377.
806 Santoro, above n 430.
807 Giannini, above n 443, 21.
It is noteworthy that this reform package was not fully completed due to the change of the government’s coalition following elections in 2001, which resulted in the repeal of the DIT in favour of a single-rate corporate tax scheme. For completeness, this formed part of a broader trend of European countries moving away from imputation systems following ECJ decisions relating to cross-border imputation credits. Interestingly, the abolition of the DIT resulted in a higher tax burden for most companies. Further, administrative issues surrounding the continued ‘reform of the reform’ resulted in a detrimental level of uncertainty which stunted growth, with the “need for stability and completion of reforms for greater coherence and rationality of the system”.

4.2.3 The Italian ACE

The new ACE-variant implemented in 2012 was termed the Aiuto alla Crescita Economica, which arguably shares the main characteristics of the theoretical ACE. This was implemented in conjunction with the local business tax the IRAP (imposta regionale sulle attività produttive [regional tax on productive activity]), which is conceptually similar to the CBIT. This is in addition to a limit on the deductibility of interest, in force since 2008.

Accordingly, the Italian corporate income tax system can be characterised as a combination of a partial ACE and a partial CBIT; mitigating the debt–equity distortion from both directions.
4.2.3.1 Origins of the Italian ACE

Introduced by Article 1 of Decree Law 201/2011 of 6 December 2011 and entitled the *Aiuto alla crescita economica* [Aid to economic growth], the Italian ACE was one of a plethora of reforms implemented under the emergency *Salva Italia* [Save Italy] decree.

Parliamentary materials provide detailed insights into the political spectrum and background rationales for why the Italian ACE was implemented in the midst of a recession. Specifically, parliamentarians from centrist parties observed in the explanatory materials that “today’s speakers’ clearly witness the change in the political phase, which led to the opening of scenarios that seemed unthinkable just a few months ago”. There is specific reference to the act that the new reforms such as the Italian ACE are “owing to the heterogeneity of the coalition forces supporting it … the Decree-Law is only justified in light of this particular political and institutional framework.”

This political solidarity culminating in the legislative reform under the pressure of a “very dangerous” economic situation appears to have resulted in a renewed confidence in the Italian financial markets; “the political stability provided by the new government has had a positive impact on the financial markets with a reduction in the order of 200 points on the yield spread between Italian government bonds and German ones”.

The originating legislation highlights that the Italian ACE was introduced to:

- stimulate the capitalisation of companies by reducing tax on income from capital funding risk;
- reduce the imbalance in the tax treatment between companies that are financed with debt and companies that are financed with equity, thereby strengthening the capital structure of Italian companies; and
- to encourage, more generally, the growth of the Italian economy.

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816 *Gazzetta Ufficiale, Disposizioni di attuazione dell'articolo 1 del decreto-legge 6 dicembre 2011, n 201 concernente l'Aiuto alla crescita economica (Ace)*, 14 March 2012, 12A03200 (Italy) (‘Italian Official Gazette’).


819 Parliamentary Committee Referral, above n 818, 5.

820 Parliamentary Committee Referral, above n 818, 75.

However, the Italian ACE was not implemented without political opposition. Parliamentarians from opposition parties such as Il Popolo della Libertà (Christian democrat party, launched by Silvio Berlusconi) commented that the national and international press were talking about the Italian situation in alarmist terms and observed that “real growth in Italy is likely to be negative for a long time”. The Italian ACE was also strongly opposed by regionalist minority parties such as Lega Nord Piemont, who believed that this reform would further depress growth, especially in their electoral areas in the north of Italy.

The originating legislation for the Italian ACE has not been immune to design flaws. Specifically, commentators have noted at least two key issues in practice. First, definitional uncertainties arising from accounting standards have impacted the calculation of the Italian ACE base. For example, the lack of unanimity in the accounting treatment of some instruments (on whether certain instruments should be classified as liabilities or equity) resulted in their exclusion from the ACE base. However, streamlining the tax law with accounting principles would likely give rise to tax sovereignty issues.

Second, the evolution of the accounting framework has also resulted in definitional complexities which had not been problematic under the Italian DIT. For example, the Italian ACE treatment of ‘reserves’ is most likely attributable to the more complex accounting standards.

As originally drafted, the Italian ACE evokes the Italian DIT in two key respects. First, the scope of the Italian ACE was not limited to companies. Rather PEs, partnerships and sole traders were also included. However, given the focus of this thesis is limited to intercompany dealings, the only relevant observation is that the inclusion of these various entity types promotes neutrality in organisational form, which is also in line with the theoretical ACE.

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823 Parliamentary Committee Referral, above n 818, 63.
824 Parliamentary Committee Referral, above n 818, 75.
825 Assonime, above n 547, 30.
826 “Neutrality of taxation may be a desideratum but Governments will not wish to give up the ability to use tax as an economic tool”: Freedman J, ‘Aligning Taxable Profits and Accounting Profits: Accounting Standards, Legislators and Judges’ (2004) 2(1) eJournal of Tax Research 71, 98.
827 Assonime, above n 547, 38.
828 Chiarenza F and Staffieri F, ‘Recent Developments in International Taxation: Italy’ (Presented at the Annual International Bar Association Conference 2015, Vienna, Austria, 9 October 2015) 4.
829 See further, Panteghini, Parisi and Pighetti, above n 440.
Second, Article 10 provides specific anti-avoidance rules which are similar to the Italian DIT. Most notable is the broad definition of “control” in relation to related parties and the reconstruction rules, allowing for a broad application of the anti-avoidance rules. These rules anticipate intercompany and related party double-dipping.

However, the Italian ACE also contains three significant deviations from the Italian DIT. First, while the Italian DIT incentivised capitalisation by applying a reduced rate (19% in most cases) to the portion of profit identified by the notional return on capital, the Italian ACE provides a tax deduction in respect of the notional return on new equity.

Second, the Italian ACE was introduced with retroactive effect, to apply for the whole of 2011. This ensured the Italian ACE was more closely aligned to the original ACE principles, directly and immediately allowing deductions for equity financing, rather than providing an upper limit to the increases in equity financing.

Third, the Italian DIT contained a limit on the ACE benefit, whereas the Italian ACE does not. Under the Italian DIT, the calculation was capped at an increase of equity not exceeding net assets from the financial statements. This anti-avoidance provision compressed the ACE base. The Italian ACE therefore appears more favourable to the taxpayer.

4.2.3.2 Evolution of the Italian ACE

Although the Italian ACE is in the relatively early stages of its development, this section highlights thematic threads in amendments, with a focus on examining reasons for the perceived success of this reform to date.

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830 For the five key types of transactions that will reduce the ACE base see Bundgaard J, ‘Allowance for Corporate Equity: Overview of Existing Equity and Dividend Deduction Regimes and the International Tax Law treatment hereof’ (Discussion Paper No 14, Corit Academic, 2014) 5.


832 Therefore, the Italian DIT could be seen as a partial ACE: Santoro A, ‘The impact of the Italian DIT: A preliminary empirical evaluation’ in Bosco B and Pisauro D (eds), Politiche pubbliche, sviluppo e crescita Economia e finanza pubblica 38 (FrancoAngeli, 2005) 261, 264; Keen and King, above n 428.

833 See further, IFS, above n 370.

834 Tuccillo, above n 822.

835 “The equity increases that are relevant for ACE purposes (qualifying increases) derive from cash equity contributions, waivers of financial receivables that the shareholders had towards the company or undistributed profits set aside to reserves other than non-disposable reserves”: Chiarenza and Staffieri, above n 828, 4.

836 Assonime, above n 547, 65.
4.2.3.2.1 Cross-referencing with the theoretical ACE

Unlike the theoretical ACE, which is calculated on the equity base, the base of the Italian ACE displays a compromise. Operationally, the Italian ACE allows for the deduction of an amount corresponding to the notional return on new equity only. Compared to the former Italian DIT, the Italian ACE is also thought to encourage new investment and attract foreign investment, and is possibly more beneficial than the Italian DIT due to the different rates applied between the two systems. This advantage was identified by the Biasco Commission, established in 2006 to study the reform of the corporate income tax system. In particular, the Commission had shown that a mechanism similar to the Italian ACE was preferable over the incremental approach of the Italian DIT. This was thought to be one of the main limitations of the Italian DIT.837

In terms of the rate, for the first three years of application of the rule (2011–13) the Italian ACE rate was fixed at 3%. It was contemplated at its inception that from the fourth tax year (2014), this rate would be determined by decree of the Minister of Economy and Finance – to be issued by 31 January of each year. Factors to be taken into account included the average financial returns of public bonds, which may be increased by a further percentage point to more closely align with the risk-free nominal return (10-year Italian government bonds are currently returning approximately 4%, down from 6.5% in 2012).838

This rate was modified by the Stability Law amendment enacted in 2014, which increased the rate to 4%, 4.5% and 4.75% in 2014, 2015 and 2016, respectively. Specifically, this amendment (the Decree Law 91/2014 of 24 June 2014) entered into force on 25 June 2014 and was an emergency temporary measure which implemented Article 19. This legislative decree was converted into law by Law 116/2014 of 11 August 2014.840 While it signals a further compromise by specifically benefiting SMEs, Article 19 targets companies intending to go public, with “the same [approach] used in the current ACE, which enhances a company’s cost-effectiveness and ‘transparency’ after listing”.841

837 Camera dei deputati, Delega al Governo per la riforma fiscale e assistenziale, 15 September 2011, AC 4566 n 533 (Italy) (‘Government Bill’) <http://documenti.camera.it/leg16/dossier/testi/FI0520.htm>.
838 Tuccillo, above n 822.
840 See further, Camera dei deputati, Resoconto stenografico dell’Assemblea n 278 di 4 Agosto 2014, Legislatura 17ª, 4 August 2014 (Italy) (‘Stenographic Report’).
While the Italian ACE is still in a relatively early stage, practitioners have praised the reform as a comprehensive package consistent with preventing MNEs from undercapitalising their Italian operations.842

4.2.3.2.2 Unintended consequences from cross-border transactions

While it is difficult to assess the effectiveness of the anti-avoidance rules contained in Article 10, as mentioned in the above section 4.2.3.1, they appear to have mitigated MNEs’ overt abuse of the Italian ACE. This is inferred partly from the lack of political and media criticism – in contrast to the views expressed in relation to the Belgian NID. In addition, the data suggests that the potential revenue loss attributable to the Italian ACE was relatively small, as shown in the below Table 12.843

<table>
<thead>
<tr>
<th></th>
<th>CIT base (millions)</th>
<th>ACE amount (millions)</th>
<th>Potential tax revenue loss (millions)</th>
<th>Potential rate reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporations</td>
<td>148,604</td>
<td>157,951</td>
<td>1,829</td>
<td>4,197</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>2012</td>
<td>2011</td>
<td>2012</td>
</tr>
<tr>
<td></td>
<td>503</td>
<td>1,154</td>
<td>0.34%</td>
<td>0.73%</td>
</tr>
</tbody>
</table>

Source: Ceriani (2015)

The uncertain economic and political environment of 2014, which carried on from 2013,844 presented another year of interesting developments for the Italian ACE.

The ‘Super ACE’ in Article 19 was one of many measures intended to make Italy more attractive for foreign investors and to strengthen business conditions.845 As noted by the Decree Law,846 the operation of Article 19 is two-fold; first, it provides a temporary 40% bonus ACE if the relevant SME lists within three years;847 and second, in the event the company has

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842 Assonime, above n 547.
845 Italian Government, above n 841, 18.
846 Senato della Repubblica, Disposizioni urgenti per il settore agricolo, la tutela ambientale e l’efficientamento energetico dell’edilizia scolastica e universitaria (DL Competitività), 24 June 2014 (DL 91/2014) AC 2568 Dossier n° 209/1 (Italy), 14.
847 “The Decreto Competitività further enhanced the tax relief for companies whose shares will be listed on Italian, EU or EEA regulated markets or MTFs after 25 June 2014 (so-called ‘super-ACE’)”: Chiarenza and Staffieri, above n 828, 4.
insufficient earnings to use its ACE in full, it can take advantage of a tax credit, which would be usable within five years. The Stenographic Transcript of the amending law notes that the legislative intention in implementing Article 19 was to stimulate equity financing through a tax subsidy, with the overarching intention of stimulating growth in light of the economic environment.\textsuperscript{848} The Italian central bank also supported these measures, noting it was “the urgency of economic growth and employment” driving this reform.\textsuperscript{849}

While the overarching intention of the amendment is broadly consistent with the original ACE principles, this amendment does not more closely align the Italian ACE to its theoretical genesis. Rather, it adopts a pragmatic approach to encouraging equity capitalisation by SMEs.

Accordingly, if the dose makes the poison\textsuperscript{850} the Italian ACE appears to have found the balance by supporting both MNEs and SMEs, starting relatively modestly then gradually strengthening the reform by increasing its ambit. This is in contrast to the approach taken by the Belgian NID, which was effectively the reverse.

\subsection*{4.2.3.2.3 Resulting budgetary pressures}

The Italian ACE was largely able to overcome budgetary pressures because it was mostly perceived as an effective measure.

This is shown in the parliamentary materials reflecting the questions presented to the Standing Committee VI on Finance on 27 November 2013. Specifically, there was a request for data relating to measuring the effectiveness of the ACE reform. This was deferred to 15 January 2014 on the basis that only very limited data was available at the time.\textsuperscript{851}

According to the statistics published by the Ministry of Economics and Finance in January 2014, in 2011 around 205,000 entities utilised the Italian ACE, with a total cost of €1.8 billion. Even though the financial sector was the industry that benefited most from the ACE, its cost

\textsuperscript{848} Stenographic Report, above n 840, 8.
\textsuperscript{849} Stenographic Report, above n 840, 20–1; see also, “The government has launched a multiplicity of interventions to support the growth and economic development of SMEs … As for the credit situation of companies, in particular the lack of liquidity and to complain of difficulties accessing credit, various measures have been implemented to address these issues, with the aim of reducing the degree of underfunding and the high dependence of the Italian production system from the banking world … also note expansion of the application of ACE (Aid to Economic Growth) and the introduction of ‘SuperACE’”: Camera dei deputati, Interrogazione n 5-06016 Ricciatti: Iniziative a favore delle PMI marchigiane, con particolare riguardo alle prospettive di internazionalizzazione, 9 July 2015 (Italy) 161.
\textsuperscript{850} The adage “sola dosis facit venenum” (loosely translated as ‘the dose makes the poison’) was first recognized by Theophrast von Hohenheim (aka Paracelsus).
\textsuperscript{851} Camera dei deputati, Interrogazioni a risposta immediata n 5-01564 Causi: Dati relativi alla frazione della misura per l’aiuto alla crescita economica, 27 November 2013 (Italy) (‘Standing Committee’) 79 and 91; see also, Confindustria, ‘Un’agenda per il credito per la crescita del paese’, June 2014 <http://www.confindustria.it/wps/wcm/connect/www.confindustria.it5266/0055675e-babd-487f-9816-023982ec6e9b/Agenda+per+il+Credito.pdf?MOD=AJPERES>. 156
represented only 2% of the total. Indeed, around half of the cost of the Italian ACE was due to its use by partnerships, sole traders and trusts, amounting to €890 million.\textsuperscript{852}

The following year, in the statistics published by the Ministry of Economics and Finance in January 2015,\textsuperscript{853} around 239,000 entities utilised the Italian ACE, with a total cost of €4.2 billion (more than double compared to 2011). The ACE benefit increased for higher classes of income: it was utilised by only 13% of those in the €0–50,000 income bracket, but by 65% of those with income above €50 million. However, it is noteworthy that the highest income bracket utilised 51% of the total budget of the Italian ACE. This is in contrast to Belgium, where political discontent in relation to the budgetary strain imposed by the Belgian NID has been fuelled by its perceived inequity.

4.2.3.2.4 Dealing with domestic and international pressures

The Italian ACE has successfully dealt with pressures both nationally and regionally. On a nation-wide level, one aspect that remains largely unexplored in the commentary is that there are parliamentary materials documenting political opposition to, and both departmental and industry criticism of, the provision strengthening the Italian ACE. The former opposed the reforms whereas the latter groups wanted the reforms to go further.

Political opposition was expressed on the basis that this reform would be funded by increasing the VAT and excise rates.\textsuperscript{854} However, a counterargument to this is that such a tax policy is fundamentally consistent with the good tax policy principle of economic efficiency.

In terms of departmental criticism the financial markets regulatory authority, CONSOB,\textsuperscript{855} observed that the next steps had not been adequately thought out. It noted that the super-ACE acts on the supply side, providing an incentive for companies to go public, but that in order to maximise its utility it would need to encourage the demand side too. An example is providing a tax exemption of capital gains related to the investments stimulated by the super-ACE. The corollary was that measures would also need to be put in place for the sustainable development of long-term investors, with CONSOB suggesting that the Italian Investment Fund (owned by the Ministry of Economics) provide the necessary capital here.\textsuperscript{856} Similarly, the Italian central

\textsuperscript{852} Standing Committee, above n 851, 36–7.
\textsuperscript{853} Ministero dell’Economia e delle Finanze, Comunicato Stampa N° 13 del 15 Gennaio 2015, 15 January 2015 (Italy).
\textsuperscript{854} Stenographic Report, above n 840, 56.
\textsuperscript{855} Commissione Nazionale per le Società e la Borsa (‘CONSOB’).
\textsuperscript{856} Senato della Repubblica, Audizione del Presidente della CONSOB: Giuseppe Vegas, Presented to Commissioni Riunite 10a (Industria, Commercio, Turismo) e 13a (Territorio, Ambiente, Beni Ambientali), 2 July 2014 (Italy) 8.
bank noted that the effectiveness of this reform would likely be weakened by the three-year limitation period (noting a similar experience with the super-DIT).857

In terms of industry critique, despite acknowledging that the strengthened ACE promotes capitalisation and the growth of firms, Confindustria observed that the reform package “lacks decisive action on investment”.858

Nonetheless, on a regional level, this reform has been welcomed by both the European Commission and the OECD. The European Commission highlighted that:859

“Italy has implemented a broad set of measures to ease and diversify firms’ access to finance. Over the past year, Italy has made significant progress in enabling and incentivizing firms to diversify their external funding sources ... Recent signals on the take-up of some of the above-mentioned measures are encouraging.”

More specifically, the European Commission has observed with approval that the Italian ACE was implemented “to help overcome firms’ debt bias in external funding and as such strengthen corporate balance sheets”860 and that in order to take effect, the super-ACE requires prior authorisation on the basis of Article 108 of the Treaty on the Functioning of the European Union, “to ensure the compatibility of state aid and the functioning of the internal market”.861 This pragmatic approach to implementing the super-ACE effectively bypassed the problems faced by the Belgian NID.

Similarly, the OECD observed that the ACE reforms were one of three key:

“measures to make it easier or cheaper for finance to flow to small companies or infrastructure projects and investment in general, as well as encouraging wider stock market listing to improve access to equity finance ... Encouraging the supply of equity finance ... early results are encouraging. Within the first few months additional lending SMEs from the “Sabatini law” fund was EUR 2 billion, and 26 new companies raised EUR 1 billion in bond issues.”862

857 Senato della Repubblica, Audizione nell’ ambito dell’esame del disegno di legge n 1541, concernente la conversione in legge del decreto-legge 24 giugno 2014, n 91, Presented to Commissioni Riunite 10a (Industria, Commercio, Turismo) e 13a (Territorio, Ambiente, Beni Ambientali), 9 July 2014 (Italy) 5.
860 European Commission, above n 859, 14.
4.2.4 Does the ACE make thin capitalisation rules redundant?

The literature predicts an inversely proportional relationship between implementing an ACE-variant and the need for thin capitalisation rules. However, this interaction remains largely unexplored by the literature.

An examination of the relationship between reducing the scope of the Belgian and Italian ACE-variants and the increased implementation of interest limitation rules in those jurisdictions suggests an inversely proportional relationship between these reforms, thereby confirming the theoretical literature on this point. Each jurisdiction in detailed in turn below.

In the Belgian context, political concerns regarding aggressive tax planning led to the broadening of Belgium’s thin capitalisation rule, which specifically targets intercompany loans with a 5:1 debt-to-equity ratio limitation. Further, subsequent explanatory notes reveal a link between the reduced scope of the NID and the increased incidence of thin capitalisation rules in Belgium.

Specifically, out of the six originating legislative materials, only one made reference to thin capitalisation rules. However, out of the 47 subsequent parliamentary materials dealing with the Belgian NID, 17 made reference to thin capitalisation rules (see further Annexure B1, ‘Relationship between Belgian NID and thin capitalisation rules’). A more detailed analysis shows that of these parliamentary materials, only four documents made direct reference to the interaction between the two tax rules.

Of the four parliamentary documents to make a connection between the NID and thin capitalisation rules, two made direct reference to the interaction. Specifically, as observed by the Senate on 23 March 2012:

“the strengthening of the rule of undercapitalization is a positive example of a measure to curb tax abuses ... This is a good measure because it reduces the benefits of a double dip in the notional interest without infringing the advantages of notional interest”

This rationale was similarly reiterated by the Belgian Official Gazette published 16 September 2013, noting that “thin cap rules (Article 139, 2o) simply limit the NID relief”. The remaining two documents made only passing references to this interaction by observing that as

863 Chambre des Représentants de Belgique, Project de Loi-Programme du 24 février 2012 (n° 53-2081/001) (Belgium), art 139, 94–8.
864 Sénat de Belgique, Projet de loi-programme procédure d’évocation, 23 March 2012, 5-1545/4 (Belgium) 20.
865 “Belgium encouraged capital flows through the NID. However, this has been limited over time ... MNEs were incentivised to capitalise their Belgian subsidiary to maximise the NID, which then made loans thereby reducing the tax base ... thin cap rules (Article 139, 2o) simply limit the NID relief”; Moniteur Belge, Extrait de l’arrêt n° 104/2013 du 9 juillet 2013, 16 September 2013, [2013/204271], N5496 (Belgium) 65577-65578.
the NID rules were tightened, MNEs were responding by setting up thinly capitalised structures instead.\textsuperscript{866} However, none of these documents expressly analyse whether an inverse relationship between the NID and thin capitalisation rules exists; nor are the implications of this relationship explored.

In the context of Italian ACE-variants, the relationship between the Italian ACE and interest limitation rules has not yet been directly addressed in the literature. Currently, interest barrier rules are in place instead of thin capitalisation rules, under which the limitation of interest deductibility is generally based on an operating income test rather than debt-to-equity ratios.\textsuperscript{867} Since the introduction of the Italian ACE, there has been no modification of the Italian rules on the deductibility of interest, suggesting that the reform is effective in practice.\textsuperscript{868}

In terms of restrictions on relief for interest deductibility, Italy replaced its thin capitalisation regime in 2008 with an interest cap rule (or fixed ratio rule,\textsuperscript{869} similar to that proposed by the OECD in its Action 4 Report). Accordingly, this section explores this gap by cross-referencing parliamentary materials relating to the thin capitalisation rules and both the Italian DIT and the Italian ACE.

From the six parliamentary materials that made reference to both the Italian ACE and thin capitalisation rules (see further Annexure B, ‘Relationship between Italian ACE and thin capitalisation rules’), only three documents made direct reference to the interaction between the two tax rules, albeit limited to the context of summarising the ‘rise and fall’ of the Italian DIT and how thin capitalisation rules were strengthened in response to the repeal of the Italian DIT.

Accordingly, it is instructive to further explore the inverse relationship between implementing the Italian DIT and the thin capitalisation regime. Even though 11 out of the 16 parliamentary materials made reference to both the Italian ACE and the thin capitalisation regime, only two parliamentary documents made direct reference to the inverse relationship between the two tax rules (see further Annexure B, ‘Relationship between Italian DIT and thin capitalisation rules’).

\textsuperscript{866} Government Bill, above n 755; 96; see also subsequent version, Government Bill, above n 742.\textsuperscript{867} Interest barrier rules are also referred to as interest limitation rules, ‘interest-to-profit ratios’ or earnings stripping rules across various jurisdictions.\textsuperscript{868} Assonime, above n 547.\textsuperscript{869} “Generally, interest expense is fully tax deductible up to the amount of interest income. Thereafter, excess interest expense is deductible at up to 30\% of the gross operating margin (interest deduction capacity) as reported in the financial statements”: Meulepas M, ‘Italy: Corporate – Deductions’ (PwC Worldwide Tax Summaries, 1 December 2015) <http://taxsummaries.pwc.com/uk/taxsummaries/wwts.nsf/ID/Italy-Corporate-Deductions>.
Specifically, the first parliamentary document making direct reference to the inverse relationship between the Italian DIT and the thin capitalisation rules consisted of a senator, Sergio Gambini observing that:

“we had, in previous years, a strong push, especially related to the dual income tax, for a market capitalization of companies; I think that this policy has been somewhat abandoned ... The thin capitalization, as any tax rule, goes in the same direction”

Even more on point is the following – albeit not adopted – reform suggestion by Giorgio Benvenuto in the Standing Committee VI on Finance:

“The DIT has in fact its intrinsic merits, as a corrective to the excessive tax advantage to debt and as a means of gradual reduction of the tax burden in the hands of companies according to their growth and their capital base. It has been applied to a large number of companies, increasingly since its introduction, and it was much appreciated, as evidenced by the views expressed by the organizations, even during the hearings on the measure in question ... If you encourage the capitalization and the use of the equity with the DIT, it is not necessary to ‘punish’ debt: the thin capitalization rules could therefore be deleted, thus eliminating the complications associated administrative burdens of the tax burden for many small business and medium in size and the peculiar changes related to the conveniences of borrowing and use of capital.”

Accordingly, this analysis presents further confirmation from policymakers that there exists a correlation between implementing (or reducing the scope of) an ACE-variant and limiting (or tightening the ratios of) thin capitalisation rules.

4.3 EVALUATING CURRENT AND PROPOSED LEGAL MEASURES THAT TARGET MNEs

This section assesses both past and present policy responses to the perceived problem of the debt bias. Specifically, these policy responses are the Belgian and Italian ACE-variants, the Australian thin capitalisation regime, and the OECD’s Recommendation on BEPS Action 4. These measures are summarised in the below Table 13:

---

870 Camera dei deputati, Audizione di rappresentanti dell'Associazione bancaria italiana, 18 September 2003 (Italy), 11–7.
871 Camera dei deputati, Schema di decreto legislativo recante riforma dell’imposizione sul reddito delle società, 13 November 2003 (Italy) 90.
Table 13 – Summary of tax treatment under ACE-variants, thin capitalisation rules and the OECD’s Fixed Ratio Rule

<table>
<thead>
<tr>
<th>Scope of the rule</th>
<th>Distortions to funding neutrality</th>
<th>Impact on behavioural responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interest</strong></td>
<td>✅</td>
<td></td>
</tr>
<tr>
<td><strong>Dividends</strong></td>
<td>✅</td>
<td></td>
</tr>
<tr>
<td><strong>Royalties</strong></td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td><strong>Rents on leasing</strong></td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td><strong>ACE-variants</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$t^D = \text{capped} %$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$t^E = \text{sub-risk-free} %$</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Thin cap rules</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$t^D = \text{capped} %$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$t^E = 0%$</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>OECD’s Fixed Ratio Rule</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$t^D = \text{capped} %$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$t^E = \text{capped} %$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s own

These reform options are assessed against the evaluation framework developed in Chapter 3, the benchmark measures of which are: attaining cross-border funding neutrality, protecting revenue neutrality, satisfying legislative objectives and stability.

4.3.1 The Belgian NID and the Italian ACE regimes

4.3.1.1 Cross-border funding neutrality

In its purest form, the ACE allows a deduction for the part of a company’s profits that correspond to a risk-free return in the capital market. By allowing a deduction for the notional cost of equity financing, the ACE would reduce the debt bias in both the domestic and cross-border settings, as explored in the above literature review. However, reducing the debt bias is distinct from eliminating the cross-border funding bias. As such, these ACE-variants do not attain funding neutrality.

Turning to the issue of the ACE rates selected, at the conceptual level the commentary assumes that the return on equity financing must be the risk-free rate. However, it does not apply the same logic to the rate of return on debt financing.

This may be problematic because it is arguable that under this system debt and equity are still not being treated equally (whether ‘equally’ is considered to mean symmetrically or proportionately). Indeed, corporate finance theory dictates that equity is typically more expensive than debt and that interest rates will always consist of two components: the risk-free
base plus the risk premium.\textsuperscript{872} This suggests that limiting returns on equity to a risk-free rate may not result in the equal tax treatment of debt and equity, provided that returns on debt financing are not similarly limited to the same risk-free rate. In any event, this area of corporate finance theory often assumes that debt is externally financed, rather than separately considering related party debt.

However, what remains beyond the scope of the existing literature is a higher-level conceptual analysis of whether an ACE in practice, implemented rigorously and consistently with its conceptual roots, presents an effective approach to achieving cross-border funding neutrality.\textsuperscript{873} This is particularly important because the implementation of the Belgian NID and the Italian ACE regimes have at times favoured pragmatism over conceptual purity, rendering them partial-ACE systems.

Nonetheless, even a partial-ACE system is likely to mitigate the debt bias. The Belgian and Italian ACE-variants only partially implemented the ACE system, yet emerging from the literature review was the general observation that these ACE-inspired reforms greatly mitigated the debt bias.

At a theoretical level, eliminating the debt bias is preferable to reducing the corporate income tax rate because the latter approach does not improve economic efficiency. Rather, in theory, the ACE reform encourages investment by reducing the EMTR.\textsuperscript{874} Accordingly, it is instructive to cross-reference whether the Belgian and Italian ACE-variants resulted in a reduced EMTR.

Regarding the Belgian NID, in the annual corporate tax rate rankings prepared by the Cato Institute, the following effective marginal tax rates have been calculated:

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{872} Brealey R A, Myers S C and Marcus A J, \textit{Fundamentals of Corporate Finance} (McGraw-Hill, 3\textsuperscript{rd} ed, 2001) 316.
\item \textsuperscript{873} This analysis provides the focus of section 5.5.1, which explores the effectiveness of the Belgian NID and the Italian ACE regimes by reference to the optimisation model.
\item \textsuperscript{874} The EMTR and the METR are used interchangeably in this context, defined as follows: “The \textit{METR} is the wedge between the before tax and post tax rates of return on capital, expressed as a percentage. Given equal non-tax considerations, a rational investor will invest in the sector where \textit{METR} is lowest. To the extent taxes play in an investment decision, the only tax rate that matters for capital allocation is the \textit{METR}”: Gillen D and Gados A, ‘How the Border Behaves as a Tax Application of the Marginal Effective Tax Rates (METR) Methodology to Issues of Increased Border Security’ (Working Paper 2007-1, University of British Columbia, Centre for Transportation Studies, 13 December 2012) 3; see further, Chen D, ‘The Marginal Effective Tax Rate: The Only Rate that Matters in Capital Allocation’ (Backgrounder, CD Howe Institute, 22 August 2000) <https://www.cdhowe.org/sites/default/files/attachments/research_papers/mixed/chen.pdf>. For completeness, it is arguable that headline rates also matter – even if EMTRs matter \textit{more} than headline rates: OECD, ‘Tax Effects on Foreign Direct Investment’ (OECD Observer: Policy Brief, February 2008), 2.
\end{itemize}
\end{footnotesize}
Table 14 – Comparison of headline and effective tax rates across Australia, Belgium and Italy

<table>
<thead>
<tr>
<th></th>
<th>Australia</th>
<th></th>
<th>Belgium</th>
<th></th>
<th>Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Headline</td>
<td>Effective</td>
<td>Headline</td>
<td>Effective</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CIT Rate</td>
<td>Tax Rate on</td>
<td>CIT Rate</td>
<td>Tax Rate on</td>
<td></td>
</tr>
<tr>
<td></td>
<td>on Capital</td>
<td>Capital</td>
<td>on Capital</td>
<td>Capital</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>30%</td>
<td>23.4%</td>
<td>33.99%</td>
<td>23.5%</td>
<td>39.4%</td>
</tr>
<tr>
<td>2006</td>
<td>30%</td>
<td>23.6%</td>
<td>33.99%</td>
<td>-4.4%</td>
<td>37.25%</td>
</tr>
<tr>
<td>2007</td>
<td>30%</td>
<td>26.7%</td>
<td>33.99%</td>
<td>-4.5%</td>
<td>37.25%</td>
</tr>
<tr>
<td>2008</td>
<td>30%</td>
<td>29.3%</td>
<td>33.99%</td>
<td>-3.4%</td>
<td>31.4%</td>
</tr>
</tbody>
</table>

Source: Author’s own, partially adapted from Chen and Mintz (2012)

Even though there is inadequate data from the Cato Institute after 2008, the above Table 14 indicates the trend of a negative effective marginal tax rate following the introduction of the Belgian NID. Belgium’s EMTR decreased from 23.5% in 2005 to a range of -3.4% to -4.5% in 2006–08. The literature has directly attributed this reduction to the implementation of the Belgian NID.

Similarly, Italy also experienced a negative EMTR upon the introduction of the Italian ACE. Specifically, Bilicka and Devereux calculated Italy’s EMTR to be -10% in 2012. As observed by Ceriani, “[t]he negative value of the EMTR is mainly the effect of the ACE”.

Accordingly, these jurisdictions experienced a dramatic reduction in their effective tax rate on capital. The implications of a negative EMTR for both the Belgian and Italian ACE-variants is that, consistent with the ACE theory, the incidence of an ACE results in a net tax subsidy for marginal investments.

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876 For completeness, the effective tax rate on capital is the amount of corporate income and other capital-related taxes paid by a business as a percentage of pre-tax profits for marginal investment projects: see further, Mintz J M, ‘Cutting the Effective Corporate Tax Rate’ (Tax & Budget Bulletin No 50, CATO Institute, October 2008) <http://object.cato.org/sites/cato.org/files/pubs/pdf/tbb_1008-50.pdf>.

877 “it has also been established that the NID has reduced the effective tax rate on capital in Belgium from 23.5% (2005) to minus 4.4%”: Vanhaut P A A, Belgium in International Tax Planning (IBFD Publications, 2nd ed, 2008) 159.

878 Bilicka and Devereux, above n 875.

879 Ceriani, above n 843, 12.

880 “This is because the ACE base depends on retained earnings as measured by accounting rules rather than tax rules. This overcompensates [for] the fact that the rate of return used in calculating the ACE is slightly lower than the risk-free interest rate”: Ceriani, above n 843, 12.
Commentary in support of this proposition is found in the comparative analysis of reforms to both the Italian and UK corporate tax systems conducted by Bilicka, Devereux and Maffini, observing that:  

“The recent UK reforms reduce the tax burden on highly profitable investments and ease the vulnerability of the UK to profit shifting. But they do not address the existing distortions towards debt financing. By contrast, by introducing an ACE, Italy has eliminated the bias in favour of debt finance. It has also reduced the rate of tax on less profitable investments.”

Further empirical support for the proposition that the Italian ACE substantially eliminated the debt bias is contained in the quantitative analysis conducted by Caiumi, Di Biagio and Rinaldi, as extracted in the below Figure 19. As shown, the previously significant margin in the cost of capital between debt and equity was eliminated in the same year that the Italian ACE was introduced. This is despite the Italian ACE being characterised as a ‘partial ACE’.

Figure 19 – Impact of the Italian ACE on the cost of capital

4.3.1.2 Revenue neutrality

Budgetary pressures play a significant role as a key hurdle to implementing and sustaining fundamental reforms. As identified throughout the above sections 4.2.1.2 and 4.2.3.2, the Belgian and Italian ACE-variants are no exception.

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From the point of view of protecting the tax revenue base, since the cost of the ACE is relatively high, most policymakers contemplate increasing the corporate income tax rate to offset the reduced tax revenue collectable as a result of the ACE reform.

However, this approach to offsetting the budgetary cost of the ACE is very difficult to combine with most governments’ desire for a reduced corporate income tax rate.\(^{883}\)

This did not preclude Belgium and Italy from introducing ACE-variants to their company tax systems.\(^{884}\) An ACE lowers overall capital costs, thereby increasing the return on investment, which in turn attracts more investment from MNEs. Nonetheless, an ACE also necessarily narrows the tax revenue base,\(^ {885}\) which could strengthen political pressure for its abolition. Indeed, tax expenditure concerns were the basis for the abolition of the Italian DIT in 2004 and have also resulted in the gradual phasing-out of the Belgian NID.

In the Belgian context, by as early as 2010 the Belgian NID had excessive budgetary cost\(^{886}\) despite being heralded as revenue-neutral at its inception.\(^{887}\) While there is disagreement and uncertainty around budget estimates, the net budgetary cost in 2008 was €2 billion and Parliament noted that it was doubtful that these funds were being invested in Belgium.\(^{888}\) By 2010, this figure had increased to €5.2 billion.\(^{889}\)

Further, by 2011 the Belgian NID’s budgetary cost was €6.15 billion, yet only 10% of the Belgian NID funds were provided to SMEs with no evidence that MNEs were value-adding to the Belgian economy and with no increase in employment or growth. This resulted in substantial criticism that the Belgian NID was not achieving its intended objectives.\(^{890}\)

As noted in the 2013 Budget, the gradual phasing-down of the Belgian NID is attributable to budgetary pressures, reflecting the government’s aims of balancing maintaining the collection of tax revenue for the budget with maintaining a tool which makes Belgium highly attractive for investment. This provides the rationale for why the Belgian NID has not yet been phased out entirely; repealing the NID would be inconsistent with attracting investment and remaining competitive.\(^{891}\)

\(^{884}\) Zangari, above n 445.
\(^{885}\) Klemm, above n 371, 230.
\(^{886}\) Government Bill, above n 760, 21 and 25.
\(^{887}\) Government Bill, above n 760, 23.
\(^{888}\) Government Bill, above n 760, 23.
\(^{889}\) Annual Budget 2012, above n 750, 78–9.
\(^{890}\) Annual Budget 2014, above n 746, 175. Further, it was noted that even though SMEs benefit only €556 million, less than 10% of the ACE funds, they generate 67.7% of employment and 61.6% of ‘value-adding’ in the Belgian economy.
\(^{891}\) Annual Budget 2013, above n 746, 46.
Turning to the Italian context, even though the Italian DIT was subject to substantial criticism due to budgetary pressures, the Italian ACE has not encountered such an obstacle to maintaining this reform. Rather, the perceived success of the Italian ACE has resulted in it being funded using a combination of, first, an increase in VAT/excise duties to set off the budgetary cost of the Italian ACE,\textsuperscript{892} and second, the Development Fund.

Regarding the latter, to partially cover the costs resulting from strengthening the ACE and allowing a temporary 40% bonus for SMEs, the introduction of Article 19 of Decree Law 91/2014 was accompanied by provisions for ACE funds to be drawn from the Development Fund in the amounts of €27.3 million in 2015, €55.0 million in 2016, €85.3 million in 2017 and €112.3 million in 2018.\textsuperscript{893}

4.3.1.3 Satisfying legislative objectives

Given the prevalence of thin capitalisation rules which aim to limit debt deductions rather than encourage equity deductions to eliminate the debt bias, an ACE is unlikely to attain popularity internationally unless it can be shown to satisfy the overarching legislative objective of encouraging investments and, in turn, economic growth.

This is exemplified by the contrasting attitudes to the Belgian NID and Italian DIT on the one hand, and the Italian ACE on the other. These are cross-referenced in turn below.

The Belgian NID and the Italian DIT have been phased down and phased out, respectively. The three key issues in practice for the Belgian NID were: the perceived inequity of not facilitating the growth of SMEs; the encouragement of abuses by MNEs through mechanisms such as intercompany loans; and strain on the government’s budget. Similarly, the Italian DIT was criticised as largely benefiting large and profitable firms, who were more likely to issue new equity, while SMEs were less likely to utilise the Italian DIT. These issues all point to a perceived failure to satisfy the legislative objective of implementing an ACE-variant in order to encourage investment, and in turn, encourage employment and economic growth as the underlying goal.

However, the following two considerations are also noteworthy, particularly in the context of the Belgian NID. First, this reform was designed to replace the coordination centre regime by ensuing Belgium remained an attractive destination for MNEs, and it did so effectively. Second, the data calculating EMTR suggests that the Belgian NID was highly effective at reducing the cost of marginal investments, which is a key attribute of the ACE.

\textsuperscript{892} Camera dei deputati, Temi dell'attività parlamentare: Politica economica e finanza pubblica, 9 July 2015 (Italy).

\textsuperscript{893} Camera dei deputati, Le risorse per le aree sottoutilizzate nella legge di stabilità 2015, 8 June 2015, Dossier n° 174, FSC 2014-2020 (Italy).
Accordingly, it could be said that these ACE-variants achieved their legislative objective (of encouraging investments) but that an unintended consequence (of MNEs disproportionately benefiting from the reform) was at odds with the underlying goal (of increasing economic growth and/or remaining revenue neutral).

In any event, the Belgian NID and the Italian DIT experiences are in contrast to the perceived success of the Italian ACE. As expressed in the parliamentary materials, the explanatory memorandum clearly states that the introduction of an ACE: 894

“aims to restore balance within the taxation of business income; equalising the tax burden on the different sources of financing through a reduction in the tax on equity financing, taking into account the need to strengthen the capital structure of companies and of the Italian economy in general.”

While the Italian ACE is still in a relatively early stage, it appears to have the support of practitioners, 895 industry, 896 government bodies 897 and regional institutions, 898 who have praised the reform as a comprehensive package consistent with preventing MNEs from undercapitalising their Italian operations.

Further, since the introduction of the Italian ACE there has been no modification of the currently interest barrier rules – in place instead of thin capitalisation rules – suggesting that the combination of the Italian ACE and the current interest relief restriction strikes an effective balance in practice. 899

4.3.1.4 Stability

A recurring critique of the ACE reform is that it would require an extensive transition period, which is generally considered one of the major hurdles to implementation. However, as

894 Government Bill, above n 837.
895 Assonime, above n 547.
896 As noted by the Italian central bank, the ACE has the support of institutional banks, including Banca Monte dei Paschi di Siena, which noted the widespread benefit of the ACE and that the recent strengthening of the ACE had mitigated the debt bias: Senato della Repubblica, Banca Monte dei Paschi di Siena: Indagine conoscitiva del sistema bancario italiano, February 2015 (Italy) 40. See also, Senato della Repubblica, Audizione del Vice Direttore Generale della Banca d’Italia, Fabio Panetta: Indagine conoscitiva sul sistema bancario italiano nella prospettiva della vigilanza europea, 9 July 2015 (Italy).
897 “As for business income taxation, measures have been taken to support investments and employment during the crisis, both in Italy and in other advanced countries. In particular, the introduction of the Economic Growth Aid (the so-called ‘Ace’) was an important step towards a more neutral taxation system with reference to business financing, thereby reducing the cost of the investments financed with equity and eliminating the associated tax wedge”: Golini A, ‘Annual Report 2014: The State of the Nation’ (Report produced by Istat and the National Statistical System, Rome, 28 May 2014) 11 <http://www.istat.it/en/files/2014/06/Sintesi-rapp-ann-2014-en1.pdf>.
898 OECD, above n 862, 13; European Commission, above n 859, 14; see also, Assonime, above n 861; Chiarenza and Staffieri, above n 828, 4.
899 Assonime, above n 547.
observed in the Belgian and Italian ACE-variants experience described throughout this Chapter 4, ACE-variants are relatively straightforward to implement and do not require a fundamental overhaul of the existing tax system. Rather, the combination of political will and support of both industry and, where relevant, regional organisations, appear to be the key pillars for ensuring stability of these reforms.

In the Belgian context, as indicated in the below Table 15, in the 11 years since its inception, the Belgian NID was referred to in 52 parliamentary documents. This includes mentions in 13 Government Bills and five Private Bills. This measure provides a proxy for the instability and waning political support for the NID. It is also noteworthy that the Belgian federal election was on 25 May 2014, which may have been one of the factors motivating the spike in discussion in 2013.

Table 15 – Parliamentary references to the Belgian NID

<table>
<thead>
<tr>
<th>Year</th>
<th>Government Bills</th>
<th>Private Bills</th>
<th>Other Parliamentary Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>2</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>2006</td>
<td>3</td>
<td>3</td>
<td>11</td>
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<tr>
<td>2007</td>
<td>4</td>
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<td>2008</td>
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<td>2009</td>
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</tr>
<tr>
<td>2015</td>
<td>12</td>
<td>12</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: Author’s own

It goes without saying that the instability and tax policy uncertainty arising from first implementing, then modifying, phasing down and now considering the abolition of the Belgian NID erodes business confidence. Abolishing the Belgian NID will likely diminish the attractiveness of Belgium as a destination for inbound investment, as highlighted by legal practitioners:

"It is therefore true that the notional interest deduction has allowed many companies to reduce their taxable result, but that is precisely the goal that is pursued, with full knowledge of the facts, by the political parties that were at the origin of the construction and of which some criticize the construction heavily today ... This constant legal

900 For completeness, this figure does not include earlier versions of Bills presented to Parliament, which would further increase these totals.
901 Themelin, above n 571.
uncertainty incites some companies to seek calmer climes, sometimes by establishing themselves at just a few miles from our borders, this to the detriment of competitiveness, the economy and the image of Belgium on the international stage. This is of course regrettable.”

Even though it is still a relatively new reform, the Italian ACE experience provides a significant contrast. This is exemplified in the response of the European Commission, which observed that the Italian ACE was implemented “to help overcome firms’ debt bias in external funding and as such strengthen corporate balance sheets”, and noted with approval the super-ACE mechanism requiring prior authorisation on the basis of Article 108 of the Treaty on the Functioning of the European Union, “to ensure the compatibility of state aid and the functioning of the internal market”. This pragmatic approach to implementing the super-ACE effectively bypassed the problems faced in the Belgian context, which has come full circle, as highlighted in the above section 4.2.1.2.4.

Ultimately, in the context of designing an ACE reform that will satisfying the legislative objectives, both the Belgian and Italian ACE-variant experiences suggest that there is a significant element of ‘loss aversion’ when implementing and maintaining fundamental reforms such as the ACE. The key lesson learnt is to introduce a relatively modest ACE and gradually strengthen the ambit of this reform with a targeted approach.

4.3.2 The Australian thin capitalisation regime

As observed in the above section 2.5.1, since there are “no real-world experiments of actual CBIT regimes”, the next-best practical example of a quasi-CBIT can be found in interest limitation rules such as the Australian thin capitalisation regime explored in section 2.4.3.2.3. Accordingly, this section assesses against the evaluation framework the Australian thin capitalisation regime in its capacity as a quasi-CBIT.

4.3.2.1 Cross-border funding neutrality

The question central to this thesis is whether a thin capitalisation system promotes the equal tax treatment of cross-border intercompany financing activities.

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902 European Commission, above n 859, 14.
903 European Commission, above n 859, 14; see also, Assonime, above n 861; Chiarenza and Staffieri, above n 828, 4.
904 The influence of ‘loss aversion’ as a political hurdle to implementing and maintaining fundamental tax reform remains an area for further research; “The potential beneficiaries of tax reform are often silent in contrast to the losers. This is typical of many structural reforms: for a variety of reasons, including loss aversion and endowment effects, agents are, ceteris paribus, more likely to mobilise against a proposal that threatens them than in support of one that offers them benefits”: Brys B, ‘Making Fundamental Tax Reform Happen’ (OECD Taxation Working Papers No 3, 2011) 12.
905 De Mooij and Devereux, above n 427, 17.
Implicit in this is the view that thin capitalisation rules need not equally apply to resident companies investing domestically. This is because the domestic entity position is arguably less relevant in a small, open economy where the marginal investor is assumed to be a foreign investor.\textsuperscript{906} Although there is international global trend away from imputation systems,\textsuperscript{907} this thesis assumes that the ‘home’ jurisdiction has an imputation system. This is a result of Australia being the home jurisdiction of the author. In jurisdictions where full imputation systems are in place, significant distortions between debt and equity financing arguably only arise in the cross-border context.\textsuperscript{908} The dividend imputation system was originally implemented to remove the double taxation of dividends. While this system arguably mitigates the corporate funding bias towards debt, it invariably introduces its own distortions; specifically, there are biases against direct investment offshore by resident companies, and investment by resident shareholders in resident companies with direct offshore investments.\textsuperscript{909} In this sense, it is arguable that the dividend imputation system is a barrier to expansion for resident companies. On the other hand, since imputation credits are only paid on resident companies’ taxed profits, this provides an incentive for MNEs to recognise more profits, and therefore pay more tax, domestically.

While tightening thin capitalisation rules has been thought to reduce opportunities for tax planning, it is also arguable that tightening thin capitalisation rules in an attempt to reduce tax planning may result in reduced investment.\textsuperscript{910} Reduced investment is the opposite outcome to that desired by the conceptual origins for the Australian thin capitalisation regime, the Ralph Review.\textsuperscript{911}

\textsuperscript{906} Australian Government, above n 737, 21.
\textsuperscript{908} See further, Henry Review, above n 195, Part 2, Chapter B1-4.
\textsuperscript{909} Taylor, above n 907, 200.
\textsuperscript{910} The link between tightening debt deductions through thin capitalisation rules and reduced investment was established by Buettner et al, who conclude that: “Thus, our results conclude that tax policy is facing a trade-off between limiting multinationals’ tax planning and the real consequences of corporate taxation. This suggests that tax policy should take account of the adverse investment effects of restrictions on tax planning by means of debt finance. Imposing restrictions alone does not enable tax policy to escape the fundamental questions concerning the corporation tax realised by the emergence of multinationals”: Buettner T et al, ‘The Impact of Thin-Capitalization Rules on the Capital Structure of Multinational Firms’ (Ifo Institute for Economic Research Working Paper, November 2007) 32; see also, Buettner et al, above n 107.
\textsuperscript{911} “Australia must ensure that its international tax arrangements attract desirable inbound investment, do not detract from the incentives Australian entities have to remain domiciled here, recover an appropriate return from both inbound and outbound investment, and further the competitiveness of the economy generally”: Australian Government, Department of the Treasury, ‘Review of Business Taxation: A Strong Foundation’, November 1998, 107–8 (‘International Taxation’) <www.rbt.treasury.gov.au/publications/paper2/download/Ch5.rtf>, 77.
An emerging design complexity, as observed in the above section 2.4.3.2.3, is the shift from safe harbour limits to the arm’s length rules. This is exacerbated by using an arm’s length price in the cross-border intercompany context, with practitioners noting “the difficulty in using inherently indefinite concepts like an ‘arm’s length price’”. 912

This policy dilemma between increasing efficiency at the expense of complexity or uncertainty is not unique to the Australian thin capitalisation regime. Even though Australia’s thin capitalisation regime is arguably further behind, 913 Asimakopoulos conceptualises this as an OECD-wide issue. 914

Accordingly, instead of addressing the behavioural responses to the distortions created by existing tax laws, it is instead preferable to address the underlying ‘non-neutrality’ by instead equalising the tax treatment of economically equivalent activities. This will likely come closer to capturing the economic reality of an MNE, which is the inherent difficulty with the arm’s length principle. 915

As outlined in the literature review above, despite the prevalence of commentators such as Shaheen 916 detailing international tax neutrality considerations, the literature remains largely silent on the absence of funding neutrality in the design of thin capitalisation rules. Some commentators posit that “neutrality with regard to firms’ funding decisions makes theoretically redundant the adoption of thin capitalisation rules”. 917 Indeed, it is counterintuitive for thin capitalisation rules, particularly since they are purportedly anti-avoidance rules dealing with firms’ funding decisions, to not prioritise funding neutrality in their design.

At least at face value, thin capitalisation rules appear to mitigate the debt bias by restricting the debt-to-equity ratios permissible for the purposes of claiming debt deductions. To this extent, it is arguable that they partially address the debt bias. This is reflected in the literature review in section 2.4.1. However, mitigating the debt bias ought not to be conflated with eliminating the debt bias – let alone eliminating the cross-border funding bias. As observed by

913 “Australia’s laws fall short of OECD standards in a number of ways. To start with, Australia’s current arm’s length debt test is obsolete, as it applies out-dated OECD arm’s length principles”: Dimac, above n 242, 348.
914 “In its effort to fight abusive structures, the OECD has long linked the assessment of intercompany transactions with the arm’s length standard. On the other hand, time- and cost-effectiveness are to be found in fixed ratios. States are left to consider the pros and cons of suggested methods in view of eliminating abusive structures as well as double taxation”: Asimakopoulos K, ‘Fixed Ratio Thin Capitalization Rules in Conflict with the Arm’s Length Principle and Relative Issues of Deductibility’ (2012) 19(6) International Transfer Pricing Journal 405, 411.
915 “The difficulty with the arm’s length principle has always been to capture the economic reality of an MNE”: Koomen, above n 325, 152.
916 Shaheen, above n 68.
917 Massimi and Petroni, above n 143.
both practitioners and academics, most finance leases are currently not subject to Australia’s thin capitalisation regime due to the definition of ‘financing arrangement’ in section 974-130 of the ITAA97.918

It is arguable that, even if thin capitalisation rules were re-designed, attaining full neutrality919 would be nearly impossible without full international tax coordination.20 Nonetheless, MNEs’ financing and investment decisions will always be responsive to the tax environment to the extent that they will engage in alternative means of minimising their tax liabilities.921 Accordingly, a principled alternative to the existing thin capitalisation rules would provide a ‘second-best solution’.

4.3.2.2 Revenue neutrality

At its inception, Australia’s thin capitalisation regime aimed to balance the policy aims of simplicity, efficiency and revenue adequacy. However, in practice, thin capitalisation rules have prioritised revenue adequacy. Admittedly, the raison d’être of the thin capitalisation regime is to protect the corporate tax base by limiting ‘excessive’ debt deductions in the cross-border setting, as outlined in the originating legislation examined in the above section 2.4.3.2.3.

However, this policy intention of limiting base erosion has been criticised by commentators as being prioritised over other policy aims, resulting in these other tax policy principles not being adequately addressed by the legislators.922

So, changes that are perceived to result in revenue base protection have come at the expense of the other design principles, including economic efficiency. This is supported by commentators such as de Mooij, who posits that there is no compelling reason for a systematic

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918 “Hence many finance leases are treated in the same way as other leases, and only a small subset of leases, recharacterised as a sale and loan, are subjected to thin capitalisation rules.”: Frost T et al, Submission to the Treasury on Proposed Diverted Profits Tax Consultation Paper, Implementing a Diverted Profits Tax, 24 June 2016, 11 <http://www.greenwoods.com.au/media/1794/dpt-submission.pdf>.

919 The tax neutrality principle states that tax systems should strive to be neutral such that decisions are made on their business or economic merits, rather than for tax reasons.

920 Butler K C, Multinational Finance (Thomson, 3rd ed, 2004) 440. In a real world situation in which there were cross-border flows of portfolio and direct investment, and also international trade, all traditional forms of taxation would be distorting to some extent unless they were completely harmonised: see further, Diamond and Mirrlees, above n 54; further, full neutrality between debt and equity would also require dividends, capital gains and interest payments being taxed at the same rate at the individual shareholder level: see further, Gammie, above n 378.


922 Ting, above n 255, 131.
tax preference for debt\textsuperscript{923} and that there is no economic basis for distinguishing between debt and equity financing.\textsuperscript{924} This is particularly relevant in the MNE context when comparing internal debt and equity financing.\textsuperscript{925} Indeed, there is a growing body of economic literature suggesting that the debt bias creates welfare costs that are \textit{\textquotedblright probably larger, perhaps much larger, than has been previously thought\textquotedblright}.\textsuperscript{926}

In any event, it also remains unclear whether thin capitalisation rules attain fiscal sustainability in practice – particularly, in the long-term. If these rules are ineffective at protecting the tax revenue base, as suggested by some commentators such as Ruf and Schindler,\textsuperscript{927} they are an unnecessary part of the international tax system.

\textbf{4.3.2.3 Satisfying legislative objectives}

This thesis acknowledges that determining whether Australia’s thin capitalisation regime has satisfied its legislative objectives (as extracted in the above section 2.4.4.2) involves assessing the effectiveness of this anti-avoidance legislation. This is an inherently difficult task, primarily because the effectiveness of these rules may depend as much on their deterrent effect as their actual implementation,\textsuperscript{928} rendering the assessment imprecise at best and unquantifiable at worst.

Ting observes that the originating legislation, while more comprehensive than the 1987 Regime, contained conceptual problems and definitional mismatches. One key issue was the definition of the gearing ratio (that is, the ‘debt-to-assets’ instead of the debt-to-equity, which could have the unintended consequence of allowing a greater amount of safe harbour debt) Another was the fact that the ratio allowed for the ‘worldwide gearing’ test (that is, a 120% uplift, which would allow investors to have a higher gearing ratio in Australia than overseas). These issues would produce outcomes that would go \textit{\textquotedblright against the basic policy intention of [the thin capitalisation] regime\textquotedblright}.\textsuperscript{929}

\begin{itemize}
\item \textsuperscript{923} De Mooij, above n 466, 12.
\item \textsuperscript{924} \textit{\textquotedblright The original rationale to allow a deduction for only debt – namely, that interest is a cost of doing business and equity returns reflect business income – makes no sense economically\textquotedblright}: De Mooij, above n 466, 10.
\item \textsuperscript{925} Burnett, above n 95.
\item \textsuperscript{926} De Mooij, above n 466, 19.
\item \textsuperscript{927} Ruf and Schindler posit that the empirical evidence merely supports the proposition that, for the average MNE, there is no need to implement thin capitalisation rules because of their nominal impact: Ruf and Schindler, above n 112, 24–5. This is on the basis that they are not effective at protecting the revenue base from the most aggressive tax planning strategies and instead contribute to administrative complexity for the majority of MNEs that do not engage in aggressive tax planning.
\item \textsuperscript{929} Ting, above n 255, 131.
\end{itemize}
It is also important to note the haste with which Australia’s thin capitalisation regime was introduced.930 This provides the context for the observation by Dirkis that the legislative design process lacked adequate and timely consultation, and that it failed to adopt user-based design recommendations.931

This complexity and disconnection from underlying policy have resulted in Australia’s thin capitalisation regime being criticised as “arguably some of the most complex and incoherent tax legislation in Australia’s history”.932

4.3.2.4 Stability

It is noteworthy that have been 19 amendments in the 15 years since the introduction of the current Australian thin capitalisation regime (see Annexure B, ‘Amendment history of Australia’s thin capitalisation rules’).

While the number of amendments over a certain period of time is objective and relatively easy to measure, it does not necessarily provide an indication of the relative significance of the changes. Accordingly, it is noteworthy that, in the first five years of the 2001 Regime from 2002 to 2006, all nine amendments merely corrected errors with, rather than enhanced, the existing regime. During the next five years, from 2007 to 2011, there were four minor amendments, two relatively major amendments (namely, IFRS and TOFA related) and one ATO tax determination (preceded by two draft determinations). In contrast, in the last four years there have been four amendments, three of which are major.

The frequency of these changes supports the academic and practitioner commentary noted in the above section 2.4.4.2 indicating that the 2001 Regime was haphazardly implemented and likely is not working as intended in practice. Admittedly, some amendments were not possible to anticipate at inception of Australia’s thin capitalisation regime, such as the amendments relating to the wide-scale implementation of the consolidation regime, IFRS and TOFA.

However, the 2012 amendment introducing Subdivision 815-A was drafted with application back to 2004, so is arguably retrospective rather than a mere clarification. In principle, enacting retrospective legislation is arguably inconsistent with upholding the rule of law.933 Indeed, the

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930 Wachtel and Andersen, above n 251, 90.
931 Dirkis M, ‘Observations on the Development of Australia’s Income Tax Policy and Income Tax Law’ (2002) 56(10) Bulletin for International Taxation 522, 528–9; see further “It is clear that over the last decade the development of tax policy and law design in Australia has moved gradually to incorporate external input. Although there has been a generational shift in the last 12 years, the current tax policy and implementation processes are still flawed, being ad hoc and often seeking input into the process too late to influence real change” at 533.
932 Clark and Varasso, above n 243, 406.
933 Hayek provides an oft-cited formulation of the rule of law, “Stripped of all technicalities this means that government in all its actions is bound by rules fixed and announced beforehand – rules which make it
2012 amendment received substantial criticism from the tax community.\textsuperscript{934} There remains substantial uncertainty about the correct interpretation of the interaction between Australia’s transfer pricing and thin capitalisation regimes. This is exemplified by the very enactment of Subdivision 815-B, which seeks to confirm the operation of TR 2010/7 and codify a broader test for financing transactions by requiring that ‘arm’s length conditions’ be applied, as explored in the above section 2.4.4.3.

4.3.3 The OECD’s Recommendation

The best practice approach recommended in the OECD’s Action 4 Report was a fixed net interest-to-EBITDA ratio (‘Fixed Ratio Rule’) and the group ratio rule, possibly supplemented by additional rules such as a \textit{de minimus} threshold and option of allowing for the carry-forward or carry-back of disallowed interest deductions (the ‘OECD’s Recommendation’).\textsuperscript{935} The OECD’s Recommendation would be in place of existing thin capitalisation rules limiting the deductibility of interest with reference to ‘safe-harbour’ debt-to-equity or debt-to-asset ratios. As such, it is instructive to assess the OECD’s Recommendation against the evaluation framework, making reference to both the policymaking process and outcome.

4.3.3.1 Cross-border funding neutrality

The OECD’s Recommendation aims to present a more robust approach to combatting BEPS than existing thin capitalisation regimes. Unlike existing thin capitalisation rules, it restricts deductibility in relation to excessive interest payments and other ‘economically equivalent’ amounts. The reference to ‘economically equivalent’ amounts presents an expanded definition of interest,\textsuperscript{936} thereby emphasising a substance over form approach while potentially addressing some of the vulnerabilities in the scope of existing thin capitalisation regimes.

The meaning of ‘economically equivalent’ amounts was subjected to some clarifications and express carve-outs between the initial Public Discussion Draft (released 18 December 2014) and the Final Report (released 5 October 2015), as shown in bold in the below Table 16:

\begin{verbatim}
possible to foresee with fair certainty how the authority will use its coercive powers in given circumstances, and to plan one’s individual affairs on the basis of this knowledge”: Hayek F A, The Road to Serfdom (University of Chicago Press, 1944) 72.
\textsuperscript{936} There may be some influence of the definition of ‘interest’ in the OECD Model. As stated in the OECD Commentary on Article 11: “The term designates, in general, income from debt-claims of every kind, whether or not secured by mortgage and whether or not carrying a right to participate in profits.”; OECD, Model Tax Convention on Income and on Capital 2015 (updated 2014) (2015) C(11)-11. While similarly expansive, the OECD Model does not make reference to the term ‘economically equivalent’, which is most likely broader.
\end{verbatim}
A best practice rule to address base erosion and profit shifting using interest expense should therefore apply to: (i) interest on all forms of debt; (ii) payments economically equivalent to interest; and (iii) expenses incurred in connection with the raising of finance. These payments should include, but not be restricted to:

- payments under profit participating loans;
- imputed interest on instruments such as convertible bonds and zero coupon bonds;
- amounts under alternative financing arrangements, such as Islamic finance;
- the finance cost element of finance lease payments;
- amounts re-characterised as interest under transfer pricing rules, where applicable;
- amounts equivalent to interest paid under derivative instruments or hedging arrangements related to an entity’s borrowings;
- foreign exchange gains and losses on borrowings and instruments connected with the raising of finance;
- guarantee fees with respect to financing arrangements; and,
- arrangement fees and similar costs related to the borrowing of funds.

The best practice approach does not apply to payments which are not interest, economically equivalent to interest or incurred in connection with the raising of finance. Therefore in general, the rules set out in this report should not limit deductions.

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**Table 16 – Scope of the OECD BEPS Action 4 ‘best practice rule’ pre- and post-consultation**

<table>
<thead>
<tr>
<th><strong>Action 4: Public Discussion Draft</strong></th>
<th><strong>Action 4: Final Report</strong></th>
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</thead>
<tbody>
<tr>
<td>A best practice rule to address base erosion and profit shifting using interest expense should therefore apply to: (i) interest on all forms of debt; (ii) payments economically equivalent to interest; and (iii) expenses incurred in connection with the raising of finance. These payments should include, but not be restricted to:</td>
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<tr>
<td>• payments under profit participating loans;</td>
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<td>• the finance cost element of finance lease payments;</td>
<td>• the finance cost element of finance lease payments;</td>
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<tr>
<td>• amounts re-characterised as interest under transfer pricing rules, where applicable;</td>
<td>• capitalised interest included in the balance sheet value of a related asset, or the amortisation of capitalised interest;</td>
</tr>
<tr>
<td>• amounts equivalent to interest paid under derivative instruments or hedging arrangements related to an entity’s borrowings;</td>
<td>• amounts measured by reference to a funding return under transfer pricing rules, where applicable;</td>
</tr>
<tr>
<td>• foreign exchange gains and losses on borrowings and instruments connected with the raising of finance;</td>
<td>• <strong>notional interest amounts</strong> under derivative instruments or hedging arrangements related to an entity’s borrowings;</td>
</tr>
<tr>
<td>• guarantee fees with respect to financing arrangements; and,</td>
<td>• <strong>certain</strong> foreign exchange gains and losses on borrowings and instruments connected with the raising of finance;</td>
</tr>
<tr>
<td>• arrangement fees and similar costs related to the borrowing of funds.</td>
<td>• guarantee fees with respect to financing arrangements; and,</td>
</tr>
<tr>
<td></td>
<td>• arrangement fees and similar costs related to the borrowing of funds.</td>
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for items such as:

- foreign exchange gains and losses on monetary items which are not connected with the raising of finance;
- amounts under derivative instruments or hedging arrangements which are not related to borrowings, for example commodity derivatives;
- discounts on provisions not related to borrowings;
- operating lease payments;
- royalties; and,
- accrued interest with respect to a defined benefit pension plan.

Sources: OECD (2014) and OECD (2015)

It is important to note that, while it presents a promising step towards a more expansive conceptualisation of intercompany funding activities than typically contemplated under thin capitalisation rules, this delineation still sits within the current paradigm adopting a ‘debt/equity all-or-nothing’ approach. For example, the OECD’s Recommendation carves out dividends from the scope of other ‘economically equivalent’ amounts with statements such as “payments which are not economically equivalent to interest. This could include (i) dividend income”. In doing so, the OECD’s Recommendation bypasses a substantial economic literature suggesting that intercompany debt and equity funding are fungible. The tax treatment of different types of funding under the OECD’s Recommendation is summarised in the below Table 17:

<table>
<thead>
<tr>
<th>Scope of the rule</th>
<th>Distortions to funding neutrality</th>
<th>Impact on behavioural responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest</td>
<td>Dividends</td>
<td>Royalties</td>
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<tr>
<td>OECD’s Fixed Ratio Rule</td>
<td>✓</td>
<td>✓</td>
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<td>tD = tCapped%</td>
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Table 17 – Summary of tax treatment under OECD’s Recommendation

Source: Author’s own

So, as with existing thin capitalisation rules, the OECD’s Recommendation is limited to targeting the perceived problem of base erosion focussing on mitigating the debt bias. As highlighted in the literature review in the above Chapter 2, mitigating the debt bias ought not be

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937 Brauner, above n 18, 24.
938 OECD, above n 15, 61.
conflated with eliminating it. As observed by Avi-Yonah and Xu, the OECD’s Recommendation appears to reflect a philosophy of convergence on national rules in the area of interest deductibility\(^{939}\) – rather than a ‘clean slate’, first-principles approach to taxing cross-border funding activities.

Indeed, commentators such as Haufler, Mardan and Schindler observe that interest limitation rules such as net interest-to-EBITDA ratios are one of the two key categories of thin capitalisation rules.\(^{940}\)

Given the concept of cross-border funding neutrality introduced in this study in the above section 3.2, the proposal for replacing fixed debt-to-equity ratios with net interest-to-EBITDA ratios – coupled with relatively narrow interpretation of other ‘economically equivalent’ amounts – appears to be an instance of \textit{plus ça change}.\(^{941}\) As noted by Brauner, this approach risks precluding other more innovative solutions from being considered.\(^{942}\)

\subsection*{4.3.3.2 Revenue neutrality}

Unlike thin capitalisation rules which reference fixed debt-to-equity ratios, the OECD’s Recommendation for a Fixed Ratio Rule (based on net interest-to-EBITDA ratios) is perceived by policymakers as a more robust approach to tax revenue base protection.

While the suggested benchmark fixed ratio is between a 10\% to 30\% ‘corridor’, it is noteworthy that a higher ratio implies a more lenient rule.\(^{943}\) Avi-Yonah and Xu criticise this corridor as exceedingly generous when coupled with the group ratio rule suggested by the OECD’s Recommendation.\(^{944}\) This design weakness has also been highlighted by practitioners such as Hülshorst et al, who note that some aspects of the OECD’s Recommendation, such as the group ratio rule, provide incentives to MNEs that extend beyond the initial goal of curtailing BEPS.\(^{945}\)

\begin{flushleft}
\begin{footnotesize}
\textsuperscript{939} Avi-Yonah and Xu, above n 168, 33–4.
\textsuperscript{940} “\textit{thin-capitalization rules are characterized either by a ‘safe-harbor’ debt-to-equity ratio for which interest payments are always tax-deductible, or directly by a share of interest payments in relation to EBIT(DA)’}”: Haufler A, Mardan M and Schindler D, ‘Optimal Policies against Profit Shifting: The Role of Controlled-Foreign-Company Rules’ (CESifo Working Paper No 5850, April 2016) 3.
\textsuperscript{941} The full phrase is ‘\textit{plus ça change, plus c’est la même chose}’, directly translated as ‘the more it changes, the more it’s the same thing’, and used to mean: although the outward appearance may change, the fundamentals remain constant.
\textsuperscript{942} Brauner, above n 18, 24.
\textsuperscript{943} Haufler, Mardan and Schindler, above n 940, 3.
\textsuperscript{944} “More problematic is the substance of Action 4, which prioritized an interest deduction cap within a suggested band of 10\%–30\%, with the option of using apportioned consolidated interest costs if they are higher. Such a recommendation is not as powerful and strong as the audience anticipated ... In fact, even the lowest limit still falls in the range of unrelated loans.”: Avi-Yonah and Xu, above n 168, 34.
\textsuperscript{945} See further, Hülshorst et al, above n 935, 131.
\end{footnotesize}
\end{flushleft}
Yet, as observed by the OECD, the majority of countries which currently adopt fixed ratio rules to restrict interest relief utilise the 30% benchmark ratio.\textsuperscript{946} This may give rise to a significant unintended consequence by potentially allowing for more opportunities for tax planning compared to the current interest limitation rules. Accordingly, it is instructive to consider Germany’s variant, known as the \textit{Zinsschranke} [interest barrier] rule.\textsuperscript{947} This presents an interesting dichotomy to the critiques in the literature. As observed by commentators such as Kessler and Eicke, German’s \textit{Zinsschranke} was introduced to act as “\textit{a new source of revenue to counterfinance a tax reform}”.\textsuperscript{948}

However, the tax revenue impact was not as favourable as anticipated by policymakers, who had originally projected an increase of €1–1.5 billion,\textsuperscript{949} yet only saw an estimated €750 million\textsuperscript{950} increase. This was likely a result of, inter alia, companies splitting up into smaller subsidiaries in order to fall beneath the exemption limit of the interest barrier rule.\textsuperscript{951} Further, as observed by Ruf and Schindler, empirical studies demonstrate that even though Germany’s \textit{Zinsschranke} was effective in reducing internal debt-to-asset ratios, the particular design of these rules saw an increase in external debt-to-asset ratios and MNEs also made use of loopholes, for example by utilising preferred holding structures.\textsuperscript{952}

### 4.3.3.3 Satisfying legislative objectives

Since the evaluation framework’s criterion of ‘satisfying legislative objectives’ is a normative constraint, this section cannot present a practical-level evaluation; instead it aims to highlight issues associated with the process and outcome of the OECD’s Recommendation.

The OECD’s Recommendation was prepared in response to the following six-fold policy aims:\textsuperscript{953}

\textit{“The design and scope of the rules to limit interest deductibility described in this

\textsuperscript{946} OECD, above n 100, 49.
\textsuperscript{947} The \textit{Zinsschranke} places a cap on the deductibility of interest payments, and applies regardless of whether the payee is a related or unrelated party. The interest deduction is capped at 30\% of EBITDA, with the excess treated as either deductible under one of three exceptions or carried forward indefinitely; see further, Eicke R, \textit{Tax Planning with Holding Companies – Repatriation of US Profits from Europe: Concepts, Strategies, Structures}, Euco tax series on European taxation 22 (Kluwer, 2009) 251–9.
\textsuperscript{949} However, it is noteworthy that this estimate was based on the original tax threshold of €1 million in 2008, which was increased to €3 million in 2009. While this increase would have likely resulted in a significant reduction in the expected tax revenue, tax authorities did not present a revised revenue estimate: Ruf and Schindler, above n 112, 23.
\textsuperscript{951} Drehl ̈er and Scheuering, above n 950, 3.
\textsuperscript{952} Ruf and Schindler, above n 112, 31.
\textsuperscript{953} OECD, above n 100, 10.
consultation document reflect government concerns in relation to a variety of policy issues including addressing base erosion and profit shifting, minimising distortions to competition and investment, avoiding double taxation, reducing administrative and compliance costs, promoting economic stability and providing certainty of outcome.”

While it may appear that the OECD’s Recommendation may be able to satisfy the primary legislative objective of protecting the tax revenue base, it is unclear that this would be the case.

It is also unclear that the OECD’s Recommendation would attain – let alone exceed existing thin capitalisation rules in better addressing – its five other policy aims. Three of these aims are examined here. First, as observed in the previous section 4.3.3.1, the OECD’s Recommendation falls within the scope of one of two key categories of thin capitalisation rules, rather than presenting a first-principles approach grounded in eliminating the debt bias (thereby not minimising distortions).

Second, the design of the OECD’s Recommendation may result in a lack of predictability of interest deductibility if there are fluctuations in an MNE’s earnings (so, not necessarily providing more certainty). As noted by Hülshorst et al, “the fixed ratio and group ratio will be subject to substantial fluctuation as long as a reduction in interest rate levels is not completely outweighed by a respective increase in the amount of debt”.954

Third, a net interest-to-EBITDA ratio does not necessarily reduce administrative or compliance costs. This is exemplified by German’s Zinsschranke. Following implementation, certain features of this reform proved remarkably complex and resulted in high administrative costs.955 This prompted lawmakers to increase the tax threshold from €1 million to €3 million. Commentators note that this would have likely resulted in a significant reduction in the expected tax revenue from the reform – which was its ultimate policy aim at inception.956

4.3.3.4 Stability

As with the above section 4.3.3.3, since this criterion of ‘stability’ is a normative constraint, this section aims to outline issues relevant to the process and outcome of the OECD’s Recommendation.

Given the exponential increase in the implementation and maintenance of thin capitalisation reforms, these rules are an exemplar of 20th century tax policy convergence. Yet, just as the rise of thin capitalisation rules can be attributed to convergence – mostly of tax systems in Western democracies – so too can the possibly impending decline of thin capitalisation rules.

954 Hülshorst et al, above n 935, 131.
955 Dreßler and Scheuering, above n 950, 5, and empirical studies cited therein.
956 Ruf and Schindler, above n 112, 23.
As observed in the Action 4 Report, there is currently a trend away from thin capitalisation rules’ fixed debt-to-equity ratios and to, instead, applying fixed net interest-to-EBITDA ratios. This trend towards the latter is extracted in Figure 6 (this was presented earlier in section 2.3.2.1).

Nonetheless, this does not necessarily equate to encouraging stability in, or a simplification of, tax laws. For example, one feature of the OECD’s Recommendation is that an arm’s length test should be applied as a preparatory step before applying the fixed ratio and group ratio rules. Commentators and practitioners have criticised this feature on the grounds that it itself disregards the current use of the arm’s length approach and risks rendering the best practice approach suggested by the OECD’s Recommendation ultimately inconsistent with many other areas of tax and company law.957

Further, Germany’s Zinsschranke was recently the subject of a constitutional challenge which went to the Bundesfinanzhof [German Federal Court of Finance]. The Bundesfinanzhof took the view that the Zinsschranke is in breach of the German Constitution because it violates the principle of equality. As such, this matter has been referred to the Bundesverfassungsgericht [German Federal Constitutional Court] to decide whether it is. This is a particularly problematic development because the OECD’s Recommendation is effectively based on this regime.

4.4 CONCLUSION

This thesis bridges the ACE and thin capitalisation literatures by asserting the importance of starting from economic first-principles, as is the hallmark of the ACE literature, to address the shortcomings of thin capitalisation rules.

This presents the foundations for a legal analysis throughout sections 4.2–4.3 of both past and proposed policy responses to the perceived problem of the debt bias giving rise to opportunities for tax revenue base erosion. In relation to the past policy responses, those examined here are the Belgian and Italian ACE-variants and the Australian thin capitalisation rules (in their capacity as a quasi-CBIT). Regarding proposed policy responses, this study explores the OECD’s Recommendation, in terms of both its process and outcome.

Section 4.2 examines the origins and evolution of the Belgian and Italian ACE-variants by reference to the evaluation framework established in Chapter 3. This legal analysis extends the literature by applying a combination of doctrinal, reform-oriented and theoretical analysis to these ACE-variants with a cross-border focus. The Belgian and the Italian ACE-variants provide useful case studies because they are long-standing ACE-variants still in operation, they share a

957 Hülshorst et al, above n 935, 130, and footnotes cited therein.
closeness to the theoretical ideal, and they are relatively well-documented. However, there is a gap in the literature regarding the more specific funding neutrality aspects of these ACE-variants and their suitability in the cross-border anti-avoidance context. This provides the scaffolding to also address in this section the question posed in section 2.5 – namely, whether the ACE makes thin capitalisation rules redundant. However, the story is incomplete with a legal analysis alone. Emerging from this analysis is a clear confirmation from policymakers that there exists a correlation between implementing (or reducing the scope of) an ACE-variant and limiting (or tightening) thin capitalisation rules. Since correlation does not prove causation, it is instructive to explore this relationship through the quantitative analysis in Chapter 5.

Section 4.3 assesses these past and proposed policy responses against the evaluation framework, primarily asking whether these policy responses satisfy the criterion of funding neutrality. The section concludes that while each may attain the latter three criteria in the evaluation framework to a varying degree, none of these policy responses target the primary criterion of attaining cross-border funding neutrality.

Further, the key lessons learnt from this Chapter are that, while thin capitalisation rules and the ACE are the only two reform options to have been implemented in practice, they are not the most effective solution from the perspective of eliminating – or even reducing – distortions in the cross-border intercompany setting. Rather, if the primary criterion outlined in the evaluation framework – attaining cross-border funding neutrality – becomes the starting point for an assessment of reform options, the extended CBIT, ACC and cross-border ACE-CBIT become the preferred reforms.

This analysis is summarised in the below Table 18:
Table 18 – Summary of tax treatment under thin capitalisation rules and the fundamental reforms

<table>
<thead>
<tr>
<th>Scope of the rule</th>
<th>Distortions to funding neutrality</th>
<th>Impact on behavioural responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interest</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dividends</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Royalties</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rents on leasing</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Theory:**
- **Tax neutrality**
  - \( t^D = t\% \)
  - \( t^E = t\% \)
  - \( t^C = t\% \)
  - \( t^S = t\% \)
  - Eliminates
  - Eliminates

**Thin cap rules**
- \( P = t^{appended}_E \)
- \( i^E = 0\% \)
- \( i^C = t\% \)
- Unclear
- Neglects
- Mitigates

**ACE**
- \( P = t^{uncapped}_E \)
- \( i^E = t^{risk-free}_E \)
- \( i^C = t^{risk-free}_E \)
- Unclear
- Mitigates
- Neglects

**ACE plus thin cap rules**
- \( P = t^{appended}_E \)
- \( i^E = t^{risk-free}_E \)
- \( i^C = t^{risk-free}_E \)
- Unclear
- Mitigates
- Mitigates

**CBIT**
- \( P = 0\% \)
- \( i^E = 0\% \)
- \( i^C = t\% \)
- \( i^S = t\% \)
- Mitigates
- Mitigates

**Extended CBIT**
- \( P = 0\% \)
- \( i^E = 0\% \)
- \( i^C = 0\% \)
- \( i^S = 0\% \)
- Eliminates
- Eliminates

**ACC**
- \( i^K = t^{risk-free}_E \)
- \( i^K = t^{risk-free}_E \)
- \( i^K = t^{risk-free}_E \)
- \( i^K = t^{risk-free}_E \)
- Eliminates
- Eliminates

**Combine d ACE-CBIT**
- \( P = t^{appended}_E \)
- \( i^E = t^{risk-free}_E \)
- \( i^C = t^{risk-free}_E \)
- \( i^K = t^{risk-free}_E \)
- Unclear
- Mitigates
- Mitigates

**Cross-border ACE-CBIT**
- \( i^D = t^{partial}_E \)
- \( i^D = t^{partial}_E \)
- \( i^C = t^{partial}_E \)
- \( i^K = t^{partial}_E \)
- \( i^K = t^{partial}_E \)
- Eliminates
- Eliminates

**OECD’s Fixed Ratio Rule**
- \( P = t^{appended}_E \)
- \( i^D = t^{appended}_E \)
- \( i^C = t^{appended}_E \)
- \( i^K = t^{appended}_E \)
- Mitigates
- Mitigates

Source: Author’s own

However, an extended CBIT would be problematic from an international investment and competitiveness perspective. Once policy issues such as revenue neutrality and international competitiveness are considered, the reform option that this thesis considers best suited to dealing with the taxation of cross-border intercompany transactions is narrowed down to either
the ACC or the combined ACE-CBIT. However, the ACC may present other challenges in implementation in the intercompany context given the consolidation of intercompany transactions for accounting purposes.

This provides a useful reference point for policymakers’ future considerations regarding reforming the taxation of MNEs and, more specifically, bridges the gap between the theoretical options available and the practical operation of reform alternatives applied in this context.

In doing so, it facilitates the analysis in Chapter 5 of how a source jurisdiction could better tax cross-border intercompany debt and equity financing, licensing and leasing activities, with the ultimate aim of developing, testing and cross-referencing reform options to prevent base erosion via these intercompany activities. This enables the development of a legislative framework to improve or replace the existing thin capitalisation regime, which is the focus of Chapter 6.
5 SIMULATING TAX-MINIMISING BEHAVIOURAL RESPONSES TO CURRENT AND PROPOSED TAX RULES

5.1 INTRODUCTION

The previous Chapter 4 highlighted that while thin capitalisation rules are one of only two reform options to have been implemented in practice, they are not the most effective solution. In particular, these rules do not attain funding neutrality in the cross-border intercompany setting.

Accordingly, this Chapter 5 expands the literature by simulating cross-border intercompany tax planning strategies in responses to both current and proposed tax laws, and analyses whether these laws meet the evaluation framework set out in Chapter 3 and operationalised in section 5.2.

This makes it possible to design tax laws based on MNEs’ tax-minimising behavioural responses that prevent tax base erosion. Specifically, this chapter explores how that MNE would behave in both the absence and presence of ‘cross-border funding neutrality’ across various tax systems and reform options. These tax systems and reform options are grouped into the following four categories.

First, section 5.3 explores current practice: specifically, implementing thin capitalisation rules and changing corporate income tax rates.

Second, fundamental reforms designed to address the debt bias – in particular, the ACE and the CBIT – are covered in section 5.4.

Third, section 5.5 considers the effectiveness of existing policy responses to date, spanning from the Belgian and Italian ACE-variants to the OECD/G20’s BEPS Project recommendation on Action 4.

Finally, alternative reform proposals designed to address the cross-border funding bias are developed in section 5.6. These principles-based proposals are the extended thin capitalisation rule and the cross-border ACE-CBIT. Within each of these tax systems and reform options several variations are modelled, with the combinations summarised in Table 19 below.
### Table 19 – Overview of various tax systems and reform options modelled

<table>
<thead>
<tr>
<th>Theme</th>
<th>Description</th>
<th>Model</th>
<th>Thin cap rules</th>
<th>CIT rate change</th>
<th>ACE</th>
<th>CBIT</th>
<th>ACE-variants</th>
<th>Fixed ratio rule</th>
<th>Extended thin cap rules</th>
<th>Cross-border ACE-CBIT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Thin capitalisation rules (&quot;TC&quot;)</strong></td>
<td>Current regime</td>
<td>1</td>
<td>TCU ((1.5:1)), TC(^A) ((1.5:1))</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Loosened thin cap rules</td>
<td>2</td>
<td>TCU ((1.5:1)), TC(^A) ((3:1))</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tightened thin cap rules</td>
<td>3</td>
<td>TCU ((1.5:1)), TC(^A) ((1:1))</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inbound-only thin cap rules</td>
<td>4</td>
<td>In-only TC(^A) ((1.5:1))</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Outbound-only thin cap rules</td>
<td>5</td>
<td>Out-only TC(^A) ((3:1))</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Current thin cap rules with finance leasing</td>
<td>6</td>
<td>TCU ((1.5:1)), TC(^A) ((1.5:1))</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Loosened thin cap rules with finance leasing</td>
<td>7</td>
<td>TCU ((1.5:1)), TC(^A) ((3:1))</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tightened thin cap rules with finance leasing</td>
<td>8</td>
<td>TCU ((1.5:1)), TC(^A) ((1:1))</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No Australian thin cap rules</td>
<td>9</td>
<td>No TC(^A)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No thin cap rules</td>
<td>10</td>
<td>No TC(^A) ((3:1))</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Corporate income tax rate (&quot;CIT&quot;)</strong></td>
<td>Unilateral CIT rate cut</td>
<td>11</td>
<td>TCU ((1.5:1)), TC(^A) ((1.5:1))</td>
<td>CIT(^A) reduced</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multilateral CIT rate cut</td>
<td>12</td>
<td>TCU ((1.5:1)), TC(^A) ((1.5:1))</td>
<td>CIT(^A) reduced</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tightened thin cap rules and unilateral CIT rate cut</td>
<td>13</td>
<td>TCU ((1.5:1)), TC(^A) ((1:1))</td>
<td>CIT(^A) reduced</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Allowance for Corporate Equity (&quot;ACE&quot;)</strong></td>
<td>Unilateral ACE with thin cap rules</td>
<td>14</td>
<td>TCU ((1.5:1)), TC(^A) ((1.5:1))</td>
<td></td>
<td>ACE(^A)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unilateral ACE without thin cap rules</td>
<td>15</td>
<td>No TC(^A)</td>
<td></td>
<td>ACE(^A)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multilateral ACE with thin cap rules</td>
<td>16</td>
<td>TCU ((1.5:1)), TC(^A) ((1.5:1))</td>
<td></td>
<td>ACE(^A) (^{UK})</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multilateral ACE without thin cap rules</td>
<td>17</td>
<td>No TC(^A) ((3:1))</td>
<td></td>
<td>ACE(^A) (^{UK})</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Comprehensive Business Income Tax (&quot;CBIT&quot;)</strong></td>
<td>CBIT implemented by Australia with thin cap rules</td>
<td>18</td>
<td>TCU ((1.5:1)), TC(^A) ((1.5:1))</td>
<td></td>
<td>CBIT(^A)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CBIT implemented by Australia without thin cap rules</td>
<td>19</td>
<td>TCU ((1.5:1)), No TC(^A)</td>
<td></td>
<td>CBIT(^A)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cross-border ACE-CBIT</strong></td>
<td>Cross-border ACE-CBIT with thin cap rules</td>
<td>20</td>
<td>In/out TC(^{UK,A}) ((1.5:1))</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ACE-CBIT(^A)</td>
</tr>
<tr>
<td></td>
<td>Cross-border ACE-CBIT with no thin cap rules</td>
<td>21</td>
<td>No TC(^{UK,A})</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ACE-CBIT(^A)</td>
</tr>
</tbody>
</table>
When expressing the results, both the numeric value of the MNE’s total tax payable and the percentage value of the total tax payable relative to the global net profit before tax (‘NPBT’) (as the group-wide AETR) are presented. The latter is particularly meaningful because, at a practical level, it is difficult to measure or estimate the budgetary impact of a reform. Accordingly, it is necessary to utilise a proxy instead. Given the usefulness of the AETR in the

| Cross-border ACE-CBIT with inbound-only thin cap rules | 22 | In-only TC\(^A\) | ACE-CBIT\(^A\) |
| Cross-border ACE-CBIT with outbound-only thin cap rules | 23 | Out-only TC\(^A\) | ACE-CBIT\(^A\) |
| Extended thin cap rule implemented by Australia | 24 | TC\(^{relF}\) (1:5:1) | |
| Extended and tightened thin cap rule implemented by Australia | 25 | TC\(^{relF}\) (1:1) | |
| Extended thin cap rule implemented by Australia and US | 26 | TC\(^{relF}\) (1:5:1) | |
| Cross-border ACE-CBIT with extended thin cap implemented by Australia | 27 | TC\(^{relF}\) (1:5:1) | ACE-CBIT\(^A\) |
| Cross-border ACE-CBIT with extended thin cap implemented by Australia and US | 28 | TC\(^{relF}\) (1:5:1) | ACE-CBIT\(^A\) |
| Flat withholding tax | 29 | No TC\(^A\) (but WHT\(^A\)) | ACE-CBIT\(^A\) |
| Flat extended withholding tax | 30 | No TC\(^A\) (but WHT\(^A\)) | ACE-CBIT\(^A\) |
| Belgium’s ACE-variant at 2006 | 31 | TC\(^2\) (1:5:1), No TC\(^A\) | ACE\(^B\) |
| Belgium’s current ACE-variant | 32 | TC\(^2\) (1:5:1), TC\(^6\) (1:5:1) | ACE\(^B\) |
| Italy’s ACE-variant at 2011 | 33 | TC\(^2\) (1:5:1), TC\(^3\) (30% cap) | ACE\(^I\) |
| Italy’s current ACE-variant | 34 | TC\(^2\) (1:5:1), TC\(^3\) (30% cap) | ACE\(^I\) |
| Italy’s current regime ex-ACE-variant | 35 | TC\(^2\) (1:5:1), TC\(^3\) (30% cap), without WHT cut | |
| OECD BEPS Action 4 Recommendation | 36 | No TC\(^A\) | FRR\(^A\) |
| OECD BEPS Action 4 Recommendation | 37 | No TC\(^{relA}\) | FRR\(^{relA}\) |

Key: \(U = \text{US}, A = \text{Australia}, B = \text{Belgium}, I = \text{Italy}, \text{DEL} = \text{Debt, equity, licensing and finance leasing.}

Source: Author’s own
context of measuring revenues of government\textsuperscript{958} and discrete location decisions,\textsuperscript{959} it is also
appropriate to utilise this measure here.

For completeness, it is necessary to acknowledge that modelling generally involves a trade-off between realism in scope and simplicity to facilitate meaningful analysis. So, the results extracted below may not necessarily reflect the only behavioural responses suited to each variation. Rather, these figures simply reflect optimised results which are based on simplified assumptions to present an abstraction of reality. This does not make the observations any less meaningful, since the purpose of model building is to learn about relations between variables.

5.2 OPERATIONALISING THE EVALUATION FRAMEWORK

This section 5.2 outlines the objective tests necessary to operationalise the evaluation framework to enable its use for both qualitative and quantitative analysis and testing in the subsequent chapters of this thesis. Specifically, section 5.2.1 presents the considerations for the practical-level analysis which, given the legal focus of this study, constitute case studies of various jurisdictions’ rules dealing with the taxation of cross-border intercompany funding activities. Section 5.2.2 provides the blueprint for the development of the optimisation model which forms the basis for the conceptual-level quantitative analysis.

5.2.1 Qualitative analysis

Given the legal focus of this study, the qualitative analysis considers whether, and if so to what extent, the principle of cross-border funding neutrality has been applied by both past and proposed policy responses which appear to target the debt bias. This is supplemented by an assessment of the other elements of the evaluation framework, also operationalised in this section.

5.2.1.1 Cross-border funding neutrality (Evaluation criterion)

The cost of capital ($r_i^*$) is expressed as a rate which also factors in the tax treatment afforded to each intercompany funding option, where ‘*’ is either $D$, $E$, $L$ or $F$, representing debt financing, equity financing, licensing or finance leasing, respectively.

\textsuperscript{959} “discrete investment choices do depend on an average tax rate”. Further, Devereux and Griffith observe that: “Conditional on the choice of location, the size of investment depends on the EMTR. But the choice of location depends on the level of post-tax net present value (‘NPV’); for a given pre-tax NPV in each location, the impact of taxation on the location choice is through its effect on the post-tax NPV. This can be measured by an effective average tax rate (‘EATR’)”: Devereux and Griffith, above n 960, 107–8.
In this context, $r_i^*$ comprises two portions: the normal return and the above-normal return (or ‘economic rent’).

The cost of capital itself need not always be identical across all intercompany funding types, because various funding options may plausibly have varying underlying pre-tax costs of capital. Rather, this criteria aims for tax neutrality among fungible intercompany funding types, such that business decisions are not distorted by the tax treatment of intercompany funding options that may otherwise be substitutable but for varying levels of tax deductibility across the different intercompany funding options which may distort the MNE’s internal funding structure decisions. Accordingly, evaluating the extent of funding neutrality involves cross-referencing the extent or proportion of tax deductibility ($t$) afforded to each individual category of intercompany funding within a particular jurisdiction.

It follows that the objective test for whether funding neutrality has been attained is if the tax deductions afforded to otherwise fungible cross-border intercompany debt and equity financing, licensing and leasing activities are all equal (the ‘cross-border funding neutrality test’).

So, cross-border funding neutrality can be expressed as follows:

$$t_i^D = t_i^E = t_i^L = t_i^F$$

At a practical level, it is possible to measure the tax deductibility (if any) for a particular category of intercompany funding. Approximating the exact quantum of both the underlying pre-tax cost of capital and the portion of economic rents for an individual MNE is a considerably more difficult task, and is beyond the scope of this study. Accordingly, only the tax deductions granted for each category of intercompany funding need be considered. This does not compromise the integrity of the criterion because it is assumed that, given the fungibility of cross-border intercompany funding activities, the underlying pre-tax cost of capital will be the same across all categories of intercompany funding considered.

5.2.1.2 Revenue neutrality

At a practical level, it is difficult to measure or estimate the budgetary impact of a reform. Accordingly, it is necessary to utilise a proxy, with the theoretical and empirical literature most often referring to either the effective marginal tax rate (‘EMTR’)\textsuperscript{960} or the average effective tax rates (‘AETR’).\textsuperscript{961}

\textsuperscript{960} “As a consequence of the focus on marginal choices, the impact of public policy on investment has typically been modelled by evaluating the impact of taxation on the cost of capital ... one direction of empirical research has developed increasingly sophisticated measures of this relationship, summarised by the effective marginal tax rate (‘EMTR’)”: Devereux M P and Griffith R ‘Evaluating Tax Policy for Location Decisions’ (2003) 10(2) International Tax and Public Finance 107, 107. For completeness,
Even though the EMTR considers both the impact on the rate and the base,\textsuperscript{962} the AETR is able to measure revenues of government\textsuperscript{963} and discrete location decisions.\textsuperscript{964} As such, it presents a more useful proxy in the context of this study. In particular, an ex-ante AETR is a suitable measure of revenue neutrality because any variation of the AETR inputs could reasonably be inferred to impact the total tax payable. So, if the ex-ante AETR is the same regardless of funding choices under a reform alternative, it can be reasonably inferred that the proposed reform attains revenue neutrality.

For completeness, it is instructive to highlight other studies that have calculated and utilised the AETR; specifically, Devereux and Griffith’s study and ZEW’s ‘European Tax Analyzer’\textsuperscript{965} are the most notable. Each is examined in turn.

Devereux and Griffith explore the behavioural implications on the location decisions of MNEs.\textsuperscript{966} They develop a measure of the effective average tax rate (‘EATR’),\textsuperscript{967} defined as the ratio of the present discounted value of taxes over the present discounted value of the profit of a project in the absence of taxation.\textsuperscript{968} In contrast, the model developed by this thesis operates at a

Devereux and Griffith observe in the same paper that “a ‘neutral’ business tax ... is levied only on economic rent, and hence has EMTR = 0”: Devereux and Griffith, above n 960, 113.

\textsuperscript{961} The difference between the AETR and the EATR are summarised as follows: the former is a weighted average of the EMTR and the statutory rate, and the latter is the ratio of the present discounted value of taxes over the present discounted value of the profit of a project in the absence of taxation; see: Ruiz F M and Gérard M, ‘Summary, Description, and Extensions of the Capital Income Effective Tax Rate Literature’ in Read C and Gregoriou G N (eds) International Taxation Handbook: Policy, Practice, Standards and Regulations (Elsevier, 2007) 24.

\textsuperscript{962} “Over the past several decades, most developed countries have steadily reduced their CIT rates ... A comparison of METRs shows a similar trend, dampened somewhat by the base broadening that has often accompanied CIT rate reduction in many other countries”: Diamond J, Zodrow G and Carroll R, ‘Macroeconomic Effects of Lower Corporate Income Tax Rates Recently Enacted Abroad’ (Prepared for the Reforming America’s Taxes Equitably (RATE) Coalition, March 2013) 18.

\textsuperscript{963} Fullerton observes that AETRs are “relatively easy to calculate, and they are useful for measuring incomes of capital owners, revenues of government, and the size of the public sector”. It is however important to acknowledge that the “measurement of average effective tax rates is not unambiguous”: Fullerton, above n 958, 3–4.

\textsuperscript{964} “Conditional on the choice of location, the size of investment depends on the EMTR. But the choice of location depends on the level of post-tax net present value (‘NPV’); for a given pre-tax NPV in each location, the impact of taxation on the location choice is through its effect on the post-tax NPV. This can be measured by an effective average tax rate (‘EATR’)”: Devereux and Griffith, above n 960, 107–8.

\textsuperscript{965} Zentrum für Europäische Wirtschaftsforschung GmbH (‘ZEW’), which is the Centre for European Economic Research.

\textsuperscript{966} Devereux and Griffith, above n 960, 107.

\textsuperscript{967} “In contrast to the King-Fullerton-approach for the computation of EMTR there is no generally accepted approach for the computation of the EATR. So far, only very few models seem to exist”: Jacobs O H and Spengel C, ‘The Effective Average Tax Burden in the European Union and the USA: A Computer-based Calculation and Comparison with the Model of the European Tax Analyzer’ (ZEW Discussion Paper No 99-54, Centre for European Economic Research (ZEW) and University of Mannheim, September 1999) 8. For completeness, Ruiz and Gérard identify three key methodologies for calculating AETR: Ruiz and Gérard, above n 961, 11, 22–4.

\textsuperscript{968} Devereux and Griffith, above n 960, 108.
single point in time and instead focusses on evaluating a range of both parallel and complementary measures to restrict tax revenue base erosion by MNEs.

ZEW’s European Tax Analyzer presents another notable method of calculating an ex-ante AETR. Its purpose is to facilitate international tax burden comparisons and to simulate the development of a firm over a 10-year period. The current version covers the tax systems of EU member states, facilitating the calculation of the AETR at the levels of both the corporation and the shareholder. It simulates corporate planning by reference to capital stock and estimates for its future development.

However, there are three key levers not factored into the simulation conducted by the European Tax Analyzer.

First, the simulation focusses on real economic activity, rather than paper shifting cross-border intercompany transactions. In contrast, the focus of this thesis is tax planning through cross-border intercompany paper shifting.

Second, the European Tax Analyzer presents a vertical analysis over an extended period under one system of corporate income taxation, occasionally utilised to compare with one other reform proposal. However, it is more suitable for this study to instead apply a single-period model that can readily be adjusted for horizontal differences across various reform options.

Third, the abolition of withholding taxes on interest and royalty payments following the EU Interest and Royalty Directive renders withholding taxes considerably less relevant in the European context and therefore beyond the scope of the European Tax Analyzer. On the other hand, withholding taxes form a key part of the international tax framework beyond the EU.

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969 Ruiz and Gérard, above n 961, 24.
970 See further, Jacobs and Spengel, above n 967, 8–13.
The various levers and goals, and their interrelationships are summarised in the below Table 20, with the aspects dealt with in this study in **bold**:

Table 20 – Key parameters utilised across various simulation models

<table>
<thead>
<tr>
<th>Micro-level vs Macro-level</th>
<th>Micro-level vs Macro-level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group-wide vs Intercompany</td>
<td>Group-wide vs Intercompany</td>
</tr>
<tr>
<td>Labour vs Capital (or both)</td>
<td>Labour vs Capital (or both)</td>
</tr>
<tr>
<td>External funding vs Internal funding</td>
<td>External funding vs Internal funding</td>
</tr>
<tr>
<td>Real activity vs Paper shifting</td>
<td>Real activity vs Paper shifting</td>
</tr>
<tr>
<td>Single-period vs Multi-period</td>
<td>Single-period vs Multi-period</td>
</tr>
<tr>
<td>Static rules vs Reform alternatives</td>
<td>Static rules vs Reform alternatives</td>
</tr>
<tr>
<td>Policymaker decisions vs MNEs’ behavioural responses</td>
<td>Policymaker decisions vs MNEs’ behavioural responses</td>
</tr>
<tr>
<td>National-level vs Multi-jurisdictional</td>
<td>National-level vs Multi-jurisdictional</td>
</tr>
<tr>
<td>Linear modelling vs Non-linear modelling</td>
<td>Linear modelling vs Non-linear modelling</td>
</tr>
<tr>
<td>EU-wide vs International</td>
<td>EU-wide vs International</td>
</tr>
</tbody>
</table>

Source: Author’s own

5.2.1.3 Satisfying legislative objectives & Attaining stability

Each of the two normative constraints are dealt with in turn. First, in order to assess whether the reforms are consistent with the policy and criteria set by the originators of the legislation, this thesis will examine the objectives set by the originators of the legislation, as described in the legislative materials, and then evaluate whether these objectives were met by reference to subsequent legislative amendments, government reviews and academic and practitioner commentary. The issues associated with translating the policy and criteria set by the originators of the legislation into successful reform will likely be particularly useful in the later chapters of this thesis, which will propose suggestions for legislative redesign.

Second, as with the first normative constraint, stability can be objectively tested by reference to the legislative history of the reform. Very frequent changes may indicate that an area of the tax law is not working well in practice, although it is important to acknowledge that this is not always the case. The number of amendments over a given period is objective and relatively easy to measure, but does not necessarily provide an indication of the relative significance of the changes. Accordingly, this will be supplemented by reference to government reviews and both academic and practitioner commentary. This will be particularly pertinent in triangulating whether there was any fundamental problem or technical flaw with the particular tax, or whether the amendments were simply in line with political pressures such as a dominant regional or global trend.
5.2.2 Quantitative analysis

The quantitative analysis consists of evaluating the tax implications for a hypothetical MNE at varying degrees of tax aggressiveness given both the existing system and multiple combinations of alternative reform options. As such, it predominantly deals with the theoretical systems and reform alternatives.

Accordingly, a hypothetical, tax-minimising MNE is modelled in this study in order to examine its cross-border intercompany structuring decisions and behavioural responses to changes in tax laws. This presents a significant contribution because analysis in this area of the literature is largely stunted given the accessibility issues associated with collecting various revenue authorities’ corporate tax return data and the limitations of using publically available accounting data. Even if accounting data were gathered through annual reports this approach would be problematic given the difference between accounting profit and taxable income. Specifically, MNEs start with accounting profit and then make adjustments to accounting profit\(^{972}\) to reach their taxable profit.

However, there are four key issues associated with relying on financial statements alone to glean intercompany tax-related information. First, consolidated accounts undergo intercompany eliminations.\(^{973}\) While some MNEs provide certain details regarding their intercompany transactions in their segment reports, this is not a requirement across the board. This lack of disclosure is particularly problematic because, as observed by Balakrishnan et al, “tax aggressive firms are characterized by lower transparency.”\(^{974}\)

Second, amendments to the *Corporations Act 2001*, enacted on 28 June 2010, removed the requirement for companies to include full unconsolidated parent entity financial statements in their group annual financial reports under Chapter 2M of the Act where consolidated financial statements are required.\(^{975}\)

Third, there is currently no requirement to produce ‘general purpose’ financial reports in subsidiary locations where the MNE determines that that subsidiary is not a ‘reporting entity’. So, if a subsidiary is a private company it does not necessarily need to disclose even

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\(^{972}\) Net profit before tax pursuant to the relevant accounting standards.

\(^{973}\) In preparing consolidated financial statements, all intercompany transactions, balances and unrealised gains and losses resulting from intercompany transactions and dividends are eliminated in full on consolidation.


\(^{975}\) APRA requests that “APRA reporting” MNEs continue producing their general purpose financial reports to them, though this is on a voluntary basis: see Australian Government, Australian Prudential Regulation Authority, ‘Letter from APRA to Chief Executive Officers (or equivalents) of all APRA regulated groups’ (1 September 2010) <http://www.apra.gov.au/GI/Documents/Letter-for-Website_Parent-Entity-Financial-Statements-September-2010.pdf>.
comprehensive financial statements in the source jurisdiction. In the Australian context, this has been countered somewhat by the Tax Laws Amendment (Combating Multinational Tax Avoidance) Act 2015 (Cth). This transparency measure introduces a wider reporting requirement on the lodgement of general purpose financial statements with the ATO. However, this reform potentially conflates tax and accounting concepts by hinging on accounting consolidation concepts rather than tax consolidation.

Fourth, given the gaps in reporting requirements and the fact that some items are off-balance sheet to begin with, it is highly difficult to undertake a meaningful analysis of data from financial statements in this context. This difficulty is exacerbated by the absence of official data about specific MNEs’ non-portfolio investment activities, despite their significance to the Australian economy.

Accordingly, in the absence of a requirement that MNEs fully disclose their intercompany transactions in financial statements, cross-referencing the information reported to taxing authorities against that reported in financial statements is a highly challenging task. Commentators such as De Simone and Stomberg observe that “[financial reporting for income taxes is so complex that even sophisticated financial statement users often ignore detailed tax disclosures” and “taxation is often viewed by the market as beyond meaningful analysis”.

However, these issues can be bypassed by developing a model of a hypothetical MNE from which to conduct scenario analysis, rather than relying on financial statements to glean intercompany tax-related information. Such a model makes it possible to observe how a tax-minimising MNE may structure its internal affairs, thereby enabling a formal analysis of one of the most significant regulatory challenges presented by the mobility and fungibility of capital in the cross-border intercompany setting.

For example, in the financial year ending 2014, Google Australia Pty Ltd’s disclosure omitted itemising over $35 million in expenses from its financial statement and the corresponding notes, not even categorising these expenses as ‘COGS’ and/or ‘other expenses’.

“A corporate tax entity to which this section applies for an income year must, on or before the day by which the entity is required to lodge its income tax return for the income year with the Commissioner, give to the Commissioner a general purpose financial statement for the financial year most closely corresponding to the income year”, pursuant to section 3CA(2) of the Taxation Administration Act 1953 (Cth).


Accordingly, the remainder of this section 5.2.2 targets this real-world issue by formulating it as a linear programming problem. This model facilitates an analysis of the extent of cross-border funding neutrality in both the existing system, variations of the existing system and proposed reform options to demonstrate the tax effects of utilising various cross-border intercompany instruments under different tax regimes.

5.2.2.1 Suitability of optimisation modelling

As observed in Chapter 2, there is a growing theoretical literature on the relationship between tax planning and investment locations, and the implications of this relationship for tax policies. There is also a rich literature which utilises empirical data in this context, extensively considering the relationship between MNE leverage and taxation using US, Canadian and EU (particularly German) data. Generally, quantitative evaluations are conducted utilising regression based evaluation methods and general equilibrium modelling.

Substantially less developed is the literature on the effect of taxation on leverage in a multilateral context. Huizinga, Laeven and Nicodème present the primary exploration of whether MNEs make multilateral capital structure decisions based on the tax rates faced by various subsidiaries. Under their model, the MNE’s objective is to maximise its overall firm value. However, the model has five key limitations. First, it is limited to intercompany debt and equity financing, excluding the possible use of royalty financing. Second, since it utilises the Amadeus database for its regression analysis, it is limited in scope to European company data. Third, it suggests that withholding taxes can be excluded from the effective tax burden borne by MNEs by triangular arbitrage involving a conduit company in a tax haven – however, this is deduced rather than explicitly modelled. Fourth, Huizinga, Laeven and Nicodème apply a


983 Huizinga, Laeven and Nicodème, above n 982, 8.

984 Huizinga, Laeven and Nicodème, above n 982, 8.


static model which may overly simplify the complexity of the tax system.987 Fifth, it assumes that cross-border effective tax rates are a function of the statutory corporate income tax rates and withholding taxes.988

Even less attention has been directed to economic modelling frameworks beyond general equilibrium modelling. However, many types of mathematical models can be utilised in practice to solve ‘real-world’ problems.989 A prominent approach in the business context is ‘optimisation modelling’ (that is, modelling that seeks to minimise costs or maximise profits).990 Optimisation modelling using linear programming has its origins in economics991 and is primarily concerned with the optimal allocation of scarce resources.992 Linear programming is a prominent technique993 currently used in operations research by executive management,994 and in financial planning by financial managers.995

Solving a linear programming problem requires converting it into a mathematical model, formulated by reference to two key components. First, it is necessary to describe the ‘objective function’ (denoted as ‘\( Z \)’ below), which represents how the ‘decision variables’ (denoted as ‘\( x_1 \)’, etc below) affect the cost or value to be optimised (whether through minimisation or maximisation), where \( c_1, c_2, \ldots, c_n \) are constants.

988 Miniaci, Panteghini and Parisi, above n 987, 22.
993 Linear programming is considered a powerful analytic tools that offers a simple resolution to complex economic formulations. This is made possible by conceptualising economic processes as interrelated and decided at one point in time. Another prominent mathematical optimisation technique is dynamic programming, which considers these decisions to be made in multiple, functionally related stages; see: Dreyfus S E, A Comparison of Linear Programming and Dynamic Programming (RAND Corporation, 1956). Dynamic programming is beyond the scope of this thesis and will be the subject of further research.
This can be expressed as follows:  

\[
\text{Minimise (or Maximise): } Z = c_1x_1 + c_2x_2 + \cdots + c_nx_n
\]

Second, the ‘constraints’ – which set out the limitations – need to be determined. Importantly, the term ‘constraints’ when used in this context is distinct and separate from the ‘positive constraint’ of revenue neutrality and the ‘normative constraints’ of satisfying legislative objectives and attaining stability, outlined in the above section 5.2.1.

For completeness, the objective function and the constraints have a linear relationship, such that the effect of changing a ‘decision variable’ is proportional to its magnitude.

Applied in the context of observing how an MNE may structure its internal affairs in a tax-minimising manner, the linear programming problem expresses the ‘objective function’ as minimising the total tax payable for the MNE (defined in section 5.2.2.3). The ‘decision variables’ represents the profit in each jurisdiction in which the MNE has a subsidiary and the ‘constants’ are those respective jurisdictions’ corporate income tax rates.

Further, given the focus of this thesis is on ‘pure’ profit shifting by a tax-minimising MNE through intercompany financing, the ‘constraints’ consist of, first, the flows from intercompany transactions that can increase or decrease the profit figures for each jurisdiction (the ‘primary constraints’), and second, the tax laws applicable to the MNE, which can be fine-tuned to particular jurisdictions’ specific tax rules (the ‘secondary constraints’).

Optimisation modelling using linear programming remains largely unexplored in the context of anticipating MNE behaviour. This is a particularly significant gap because some literature does exist suggesting that international tax planning decisions can be approximated as linear programming problems. Specifically, only two papers have been authored in this area: those of Brada and Buus, and Vasarhelyi and Moon. For completeness, the features of each paper are briefly outlined below.

Brada and Buus focus on cross-border intercompany transfer pricing issues, specifically on whether it is possible to identify subsidiaries within an MNE which engage in profit shifting. They note that empirical studies are rare in this area since transfer pricing is considered to be a confidential issue for most MNEs. Further, they note that the extensive literature modelling
optimal tax systems does not deal with MNEs utilising transfer pricing to profit shift. To date, the optimal tax literature modelling income shifting has conceptualised it as a decision along either the intensive or the extensive margin. Even where it has considered capital income, this has been at a macro-level only. On the other hand, Brada and Buus provide a mathematical proof that the basic tax optimisation task of MNEs can be conceptualised as a linear programming problem. For completeness, in a subsequent paper, Brada and Buus proposed that VAT be used as a solution to reach a Pareto-optimal state that would prevent harmful tax competition and tax-evasive transfer pricing. However, this proposal was yet to be tested and Buus and Brada’s work on this topic has since ceased.

More recently Vasarhelyi and Moon, as part of the latter’s doctoral dissertation, presented the suitability of linear programming for solving international tax planning problems on the basis that these problems are concerned with the optimal allocation of tax subject to relevant tax laws and other limitations:

“International tax planning optimisation problems can be formulated as linear functions to maximize or minimize a particular objective function”

However, Vasarhelyi and Moon’s work on this topic has also since ceased. They did not develop a model beyond a single-period, six-jurisdiction MNE subject to thin capitalisation rules with two constraint functions. Withholding taxes were assumed zero, foreign tax relief was not considered, none of the parameters were adjusted and the model focussed on optimal firm policy only, not considering the government perspective.

The four forms of fungible intercompany financing referred to in the above section 3.2 are built into the tax optimisation model developed in this thesis. This model contributes to the literature by simulating complex cross-border intercompany tax planning strategies. This facilitates a formal analysis of one of the most significant challenges presented by the mobility and fungibility of capital.

999 Brada and Buus, above n 998, 45.
1001 Selin and Simula, above n 1000, 5.
1002 Brada and Buus, above n 998, 75; Brada and Buus note that further mathematical proofs and more detailed specification conditions of validity have not been conducted: Brada and Buus, above n 998, 73–4.
5.2.2.2 Developing an optimisation model

Complex real-life structures and systems can be represented in a mathematical way. Specifically, mathematical optimisation is one of the most powerful and widely-used quantitative techniques for making optimal decisions.

In the context of this thesis, the process of ‘making optimal decisions’ is expressed as MNEs’ decisions to minimise taxation for the overall group by utilising various conduit financing structures. It is possible to formulate this decision to engage in tax-minimising behaviour through an algorithmic expression. This is conceptualised as the ‘objective function’ to the optimisation model developed using the IBM® ILOG® CPLEX® for Microsoft® Excel (‘CPLEX’) software. CPLEX is sophisticated software appropriate for both building and solving optimisation problems, and for interfacing with Microsoft Excel. “IBM® ILOG® CPLEX® for Microsoft® Excel is an extension to IBM ILOG CPLEX that allows you to use Microsoft Excel format to define your optimization problems and solve them. Thus a business user or educator who is already familiar with Excel can enter their optimization problems in that format and solve them, without having to learn a new interface or command language. CPLEX is a tool for solving linear optimization problems, commonly referred to as Linear Programming (LP) problems”: IBM, IBM ILOG CPLEX V12.1: IBM ILOG CPLEX for Microsoft Excel User’s Manual, 12 <ftp://public.dhe.ibm.com/software/websphere/ilog/docs/optimization/cplex/cplex_excel_user.pdf>.

Microsoft Excel is utilised to generate the data, delineate the parameters and output the solution in a multidimensional format, while the CPLEX software is used to express and solve the optimisation problem.

The baseline iteration of the optimisation problem consists of the current global tax framework and its treatment of fungible funding options, as expressed in the hypothetical scenario outlined in section 3.2. The hypothetical MNE has entities in four jurisdictions: two high-tax jurisdictions (one capital-exporter and one capital-importer; a US parent and Australian subsidiary); and two lower-tax jurisdictions (one non-treaty country and one treaty country, Hong Kong and Singapore, respectively).

Given its focus on intercompany funding options, this optimisation model focusses on funding constraints and regulatory limitations directly relevant to intercompany funding decisions. This ensures the model is flexible in relation to representing both funding structure decisions and regulations influencing those decisions. The various intercompany funding decisions, in terms of funding type and location, are illustrated in the below Figure 20.

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1004 In Australia, Singapore is a relatively more popular jurisdiction than other well-known low-tax jurisdictions such as Ireland in terms of the volume of intercompany payments made by Australian companies: Butler and Wilkins, above n 21.
This is a necessary development because the literature to date undertaking modelling in this area has not focussed on the fungibility of intercompany funding options for a single MNE.
Rather, modelling to date predominantly utilises an economy-wide scale, for example, delineating between domestic firms and MNEs and then assigning each a single unit of immobile and mobile capital, respectively.

Even when the analysis is constrained to a single MNE, the models developed have focussed on: the calculation of EATRs under the model-firm approach; determining the MNE’s optimal after-tax income by reference to labour, capital and production; or have only considered debt financing without exploring its economic equivalents.

By conceptualising the issue of tax-minimising behavioural responses by MNEs as a linear programming problem, this thesis considers tax implications of different rules at a given point in time.

It is important to acknowledge a key disadvantage of a single-MNE one-period model approach: namely, the results are heavily dependent on the particular characteristics of the hypothetical MNE. To that end, a consideration of various types of MNEs is beyond the scope of this study.

However, this model can take into account different funding situations or tax planning options so it has the ability to engage in detailed scenario or ‘what-if’ analysis. This enables validation testing to be conducted to anticipate MNE behaviour and quantify the impact on the total tax payable by the MNE of different reform options. As observed by Jacobs and Spengel, the technique of sensitivity analysis is used in all important studies on international tax burden comparisons regardless of the methodical approach and the underlying model.

This model also extends the analysis of behavioural implications beyond the limited perspective of a single MNE by considering optimal government policy. This has not yet been contemplated by the literature in this area, as explored in section 5.2.2.1. More generally, the literature on transfer pricing contains very few papers considering both optimisation problems jointly, with Raimondos-Møller and Scharf presenting a notable exception.

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1006 See, for example, Jacobs and Spengel, above n 967.
1008 Jacobs and Spengel, above n 967, 9.
1011 This limitation has been echoed in the literature; see, for example, Brada and Buus, above n 998, 69.
1012 Jacobs and Spengel, above n 967, 9, and references cited therein at footnote 43.
So, instead of a multi-stage model it is more useful to apply multiple scenarios and sub-scenarios within a simple one-period model for a hypothetical MNE. This framework will be adjusted by changing the values of various parameters to test the relative impact of a change in specific tax laws. This facilitates a comparison between the baseline iteration and alternative reform options proposed in later chapters of this thesis. Validation testing will consist of representing algorithmically the alternative reform options by incorporating their different funding constraints and regulatory limitations. This approach aims to provide an objective assessment of each reform’s impact on MNE intercompany tax minimisation behaviour.

For ease of reference, the abbreviations utilised in the remainder of this study are summarised in Table 21 below:

<table>
<thead>
<tr>
<th>Optimisation model abbreviations</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$NPB_{i,0}$</td>
<td>Net profit before tax for company ‘i’ at the start of the period</td>
</tr>
<tr>
<td>$NPB_{i,1}$</td>
<td>Net profit before tax for company ‘i’ at the end of the period</td>
</tr>
<tr>
<td>$t_i$</td>
<td>Corporate income tax rate in country ‘i’</td>
</tr>
<tr>
<td>$T$</td>
<td>Total tax payable</td>
</tr>
<tr>
<td>$r_{ij}^D$</td>
<td>The rate of return on debt financing from company ‘i’ to company ‘j’</td>
</tr>
<tr>
<td>$D_{ij}$</td>
<td>The balance of debt financing provided from company ‘i’ to company ‘j’</td>
</tr>
<tr>
<td>$I_i$</td>
<td>The interest received by company ‘i’ (or, if negative, interest paid)</td>
</tr>
<tr>
<td>$r_{ij}^E$</td>
<td>The rate of return on equity financing from company ‘i’ to company ‘j’</td>
</tr>
<tr>
<td>$E_{ij}$</td>
<td>The balance of equity financing provided from company ‘i’ to company ‘j’</td>
</tr>
<tr>
<td>$V_i$</td>
<td>The dividends received by company ‘i’ (or, if negative, dividends paid)</td>
</tr>
<tr>
<td>$r_{ij}^L$</td>
<td>The rate of return on licensing from company ‘i’ to company ‘j’</td>
</tr>
<tr>
<td>$L_{ij}$</td>
<td>The balance of licenses provided from company ‘i’ to company ‘j’</td>
</tr>
<tr>
<td>$R_i$</td>
<td>The royalties received by company ‘i’ (or, if negative, royalties paid)</td>
</tr>
<tr>
<td>$r_{ij}^F$</td>
<td>The rate of return on finance leasing from company ‘i’ to company ‘j’</td>
</tr>
<tr>
<td>$F_{ij}$</td>
<td>The balance of finance leases provided from company ‘i’ to company ‘j’</td>
</tr>
<tr>
<td>$P_i$</td>
<td>The finance leasing payments received by company ‘i’ (or, if negative, finance leasing payments)</td>
</tr>
</tbody>
</table>
5.2.2.3 Determining the objective function

It is possible to represent the optimisation problem formulaically. This entails a two-step approach; first, defining and applying the objective function; and second, defining and applying the constraints. This will be presented in this section 5.2.2.3 and the subsequent section 5.2.2.4, respectively.

The general optimisation problem is the minimisation of the objective function by adjusting the design variables and at the same time satisfying the constraints. Since this model is only concerned with the intercompany activities conducted to minimise tax, the only relevant constraints relate to these intercompany transactions, rather than extending to ‘real’ economic activities.

In the present analysis, the objective function is the minimisation of total tax payable (‘T’) for the corporate group.

\[
\text{Minimise: } T = \sum_{i=1}^{n} \text{NPBT}_{i,n+1} \times t_i
\]

5.2.2.4 Delineating the ‘primary constraints’

Since this model is only concerned with the intercompany activities conducted to minimise tax, the only relevant constraints relate to these intercompany transactions, rather than extending to ‘real’ economic activities.

Accordingly, this optimisation problem is subject to four ‘primary constraints’. Each constraint relates to one of the four categories of fungible intercompany funding that constitute the focus of this thesis: namely, debt financing, equity financing, licensing and finance leasing (‘\(D_{ij}\)’, ‘\(E_{ij}\)’, ‘\(L_{ij}\)’ and ‘\(F_{ij}\)’, respectively). These can be characterised as the underlying capital amounts (‘\(C_{ij}\)’). The ‘flow’ (‘\(W_i\)’) or remuneration derived therefrom constitutes interest, dividends, royalties and finance lease payments (‘\(I_i\)’, ‘\(V_i\)’, ‘\(R_i\)’ and ‘\(P_i\)’, respectively).

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1014 Importantly, the term ‘constraints’ when used in this context is distinct and separate from the ‘positive constraint’ of revenue neutrality and the ‘normative constraints’ of satisfying legislative objectives and attaining stability, as described in the above section 3.3.
1015 While this is a reasonable objective for a US-based MNE, if the MNE were Australian owned then the objective function may have instead been the minimisation of foreign taxes; see further, Ikin C and Tran A, ‘Corporate Tax Strategy in the Australian Dividend Imputation System’ (2013) 28(3) Australian Tax Forum 523.
1016 For completeness, in the context of leases, this model focusses on finance leases only and this iteration does not contemplate the impact of depreciation.
This is formulated as follows for each constraint:

\[ W_i = \sum_{i=1, i \neq j}^{n} C_{ij} \times r_{ij}^{C} \] (2)

In other words, the ‘flow’ or remuneration (‘\( W_i \)’) is received by company \( i \), where \( C_{ij} \) is the underlying capital provided by company \( i \) to company \( j \), at a cost of capital of \( r_{ij}^{C} \). Given the fungibility between these intercompany funding activities, the rate of return is uniform. For ease of reference, this cost of capital (‘\( r \)’) is set at 10% in the baseline iteration.

As a consequence, this model assumes that an increase in the profitability of the MNE does not generate shareholder pressure to increase the rate of return on equity (in the form of increased dividends on intercompany equity financing). However, this shareholder pressure is more likely to arise in a widely-held company rather than a wholly-owned subsidiary that prioritises global tax-minimisation. On the other hand, the latter situation applies to the model developed by this study. Nonetheless, the model is designed so that ‘\( r \)’ can later be adjusted to simulate the impact of tax rules which directly influence the particular cost of capital, enabling a more complex analysis of MNE behaviour in future iterations.

For completeness, there are three key qualifications to this characterisation that certain types of debt, equity, licencing and leasing are ‘fungible’. First, this analysis is confined to ‘pure’ profit shifting, as opposed to applying in the context of real economic flows. For example, dealings with relatively immobile assets such as land are beyond the scope of this characterisation. Second, fungibility does not apply to all classes of intercompany debt, equity, licencing and leasing – only those that are economically equivalent. In this context, it is instructive to contrast a financing lease payment with an operating lease payment, whereby the former would be reasonably characterised as economically equivalent to interest. Third, this model assumes that it will be possible for the MNE to switch between methods of financing upon changes to tax laws. However, this may not be possible in all cases, particularly where doing so would give rise to potentially adverse tax implications and other costs.

Further, this optimisation problem can be remodelled by layering secondary constraints (which can also be conceptualised as limitations or parameters) that reflect the tax laws applicable to each reform variation, as further detailed in the below 5.2.2.5.

5.2.2.5 Overlaying the ‘secondary constraints’

This section delineates concurrent and/or alternative tax rules which constitute the ‘secondary constraints’, to simulate the impact of various rules on MNEs’ tax planning behaviour.
These parameters make it possible to address the question of what the most likely behavioural responses would be to alternative types and rates of tax being levied on otherwise fungible intercompany activities. This facilitates an examination of whether alternative reform proposals developed in this thesis could ameliorate the distortions leading to said behavioural responses.

This enables a more complex analysis to be conducted which also highlights the breadth of the problem, which is that the literature has thus far been too focussed on modification of one parameter at a time.

These parameters are as follows:\(^\text{1017}\):

- thin capitalisation rules;
- withholding taxes;
- foreign tax credits;
- additional subsidiary located in Hong Kong;
- depreciation; and
- OECD’s BEPS Fixed Ratio Rule.

This analysis is then rolled over to the Belgian and Italian contexts. This is achieved by removing the Australian subsidiary (‘Co A’) from the model and replacing it with a new company in two versions: first, Belgium (‘Co B’); and second, Italy (‘Co I’).

For completeness, parameters such as the PE rules and the CFC regime are beyond the scope of this iteration of the model. Recently examined in the OECD’s BEPS Final Report on Action 3,\(^\text{1018}\) CFC rules play a unique role in the international tax system, particularly given their focus on passive income in low-tax jurisdictions. However, given that the primary concern of this thesis is with thin capitalisation rules and the OECD’s Action 4 Report, the CFC rules which would otherwise be applicable are excluded from this iteration of the model. Instead, subsequent research by the author will build in additional complexities, including but not limited to CFC rules.

Further, two additional assumptions are made by this study. First, this model assumes that MNEs can relocate almost instantly and free of transaction cost. This assumption is used for simplicity and is in line with the approach adopted in the OECD’s BEPS project.\(^\text{1019}\) Second, as

---

\(^\text{1017}\) For completeness, parameters such as the PE rules and the CFC regime are beyond scope.

\(^\text{1018}\) OECD, ‘Designing Effective Controlled Foreign Company Rules’ (Final Report, 5 October 2015).

\(^\text{1019}\) See further, Hülshorst et al, above n 935, 131.
with the OECD’s BEPS project,\textsuperscript{1020} industry- or sector-specific features are beyond the scope of this iteration of the model.

\textit{Thin capitalisation rules}

In the context of the hypothetical MNE, thin capitalisation rules apply to both the subsidiaries in the US and Australia. This is factored into the model by considering that MNEs will operate at the legal limits of rules, as suggested by anecdotal evidence cited in the above section 2.4. Accordingly, the ratio of debt to equity for each company should be kept at less than 1.5, assuming the debt-to-equity ratio is 1.5:1 for both the US parent and Australian subsidiary.\textsuperscript{1021}

This can be expressed algorithmically as follows:

\[ D_{ij} - 1.5 \times E_{ij} \leq 0 \]

With the above algorithm, it is possible to target both or either inbound and outbound investment.

\textit{Withholding taxes}

Unlike most of the other parameters built into the model, withholding tax rates are beyond the unilateral control of governments. Each tax treaty – and, by extension, each withholding tax rate within each treaty – is the result of a distinct and separate bilateral negotiation process. Since withholding tax rates cannot be unilaterally increased (although they can be unilaterally decreased) without renegotiation of the bilateral arrangements, this parameter can be conceptualised as a ‘supernational parameter’.

Specific withholding tax rates apply for each of the types of intercompany flows examined in this model. Table 22 below indicates the withholding tax rates for each type of intercompany funding applicable for each jurisdiction (with notation in the second column representing a flow from country ‘\(j\)’ to country ‘\(i\)’, given the notation of the underlying transfer would be ‘\(ij\)’).

\textsuperscript{1020}“Moreover, the formula of fixed cap does not match best with every sector and firm. That is why the Action 4 report recognizes the need to develop suitable and specific rules that address BEPS risks in banking and insurance industries. Although it does make sense to respect the specific features of banking and insurance industries, other industries might also claim the special treatments from the BEPS project. It is not realistic to design the specific rules for every firm, industry or sector”: Avi-Yonah and Xu, above n 168, 34.

\textsuperscript{1021} It is noteworthy that Australia’s thin capitalisation regime had its safe harbour rules tightened from 3:1 to 1.5:1 through the TSLA Bill, above n 264, which received Royal Assent on 16 October 2014.
Table 22 – Overview of withholding tax rates across USA, Singapore and Australia

<table>
<thead>
<tr>
<th>Withholding tax rates</th>
<th>Interest</th>
<th>Dividends</th>
<th>Royalties</th>
<th>Lease payments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$U, S$</td>
<td>30%♦</td>
<td>30%</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>$U, A$(^{1022})</td>
<td>0/10%◊</td>
<td>0/5/15%● ♦</td>
<td>5%(^{1023})</td>
<td></td>
</tr>
<tr>
<td><strong>Singapore</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$S, U$</td>
<td>15%</td>
<td>0%</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>$S, A$(^{1024})</td>
<td>10%</td>
<td>0%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Australia</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$A, U$</td>
<td>0/10%◊(^{1025})</td>
<td>0/5/15%(^{1026})● ♦</td>
<td>5%</td>
<td>0/10%◊</td>
</tr>
<tr>
<td>$A, S$</td>
<td>10%</td>
<td>0/15%● ♦</td>
<td>10%</td>
<td>10%(^{1027})</td>
</tr>
</tbody>
</table>

Key: ♦ represents absence of a comprehensive tax treaty; ◊ government authorities/financial institutions are afforded a withholding tax exemption; □ interest on certain ‘portfolio debt’ obligations are exempt from withholding tax; ● withholding tax exemption applies to interest paid in relation to either a sale on credit of goods, merchandise or services, or a sale on credit of industrial, commercial or scientific equipment; ● higher withholding rates apply if there is a lower level of participation; ♦ withholding tax exemption applies to interest paid in relation to either a sale on credit of goods, merchandise or services, or a sale on credit of industrial, commercial or scientific equipment; ● higher withholding rates apply if there is a lower level of participation; ♦ withholding tax exemption applies to interest paid in relation to either a sale on credit of goods, merchandise or services, or a sale on credit of industrial, commercial or scientific equipment; ● higher withholding rates apply if there is a lower level of participation; ♦ withholding tax exemption applies to interest paid in relation to either a sale on credit of goods, merchandise or services, or a sale on credit of industrial, commercial or scientific equipment; ● higher withholding rates apply if there is a lower level of participation; ♦ withholding tax exemption applies to interest paid in relation to either a sale on credit of goods, merchandise or services, or a sale on credit of industrial, commercial or scientific equipment; ● higher withholding rates apply if there is a lower level of participation.

For completeness, in the above Table 22 where one form of intercompany funding may be subject to varying rates of withholding tax, the rate used by the model is highlighted in bold. For

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1025 Beyond the scope of this iteration is further elaboration on the different categories available for the public offer exemption to apply. Briefly, this includes but is not limited to the ‘public offer test’, syndicated loan facilities and payments under guarantee. Further research will consider the impact of the public offer exemption applying in the context of the Australian subsidiary.

1026 “While the top withholding rates are similar across jurisdictions, substantial concessions are available to investors from the US and the UK, including a zero withholding tax rate on unfranked dividends which may be available where the investor beneficially holds an 80% or greater stake in an Australian company”: Tang R and Wan J, ‘Tax Treaties for Asian Century’, The Australian Financial Review (Sydney), 7 November 2012.

1027 “Section 128AC was introduced by the Taxation Laws Amendment Act (No 2) 1986 ... The mischief to be remedied was the loss of revenue by the use of non-traditional methods of finance where a resident enters into a hire-purchase agreement or finance lease arrangement with a non-resident ... The EM recognises the dual purpose served by the agreements in question, namely, purchase and financing the purchase. Consistent with this objective, the section deemed that part of the hire payments that were equivalent to interest in the financing arrangement to be interest for withholding tax purposes”: Australian Government, Australian Taxation Office, Income tax: withholding tax implications of cross border leasing arrangements (2 December 1998) ATO Taxation Ruling TR98/12, 12 <https://www.ato.gov.au/law/view/document?docid=TXR/TR9821/NAT/ATO/00001&PIT=20100630000001>.

1028 However, the differences between direct and portfolio investment are beyond the scope of this iteration.
example, assuming a high level of participation, the withholding tax rate of dividends from Co A and Co U would be 0%. It is important to note the difference in tax treatment between franked and unfranked dividends in the context of Australia’s imputation system, \(^\text{1029}\) which in the first instance, this model assumes are unfranked. \(^\text{1030}\)

Further, this iteration of the model does not make a distinction between portfolio and non-portfolio dividends. \(^\text{1031}\) These rules are nuanced and jurisdiction specific, whereas this iteration of the model aims to provide a general expression of the current tax rules influencing cross-border tax planning decisions. Similarly, this study acknowledges that various other rules may apply; for example, non-portfolio dividends received by a resident company from a foreign-resident country may be exempt or non-assessable non-exempt income. However, this level of detail is beyond the scope of this iteration of the model. The ultimate issue of repatriation is also not considered, given the short-term nature of this single-period iteration of the model. For the purposes of the optimisation model, the existence of withholding tax gives rise to a potentially increased \(T\). This necessitates a modification to the objective function, as follows:

\[
\text{Minimise: } T = \ldots + (D_{ij} \times r_{ji}^{WHTI} + E_{ij} \times r_{ji}^{WHTV} + L_{ij} \times r_{ji}^{WHTR} + F_{ij} \times r_{ji}^{WHTP})
\]

where \(r_{ji}^{WHT}\) represents the potential marginal increase in \(TTP\), which is a function of the rates of return \(r\), assumed to be 10% in the baseline iteration for all types of funding) multiplied by the respective ‘relative value’ for each decision variable (denoted as \(WHT\), with each ‘relative value’ shown in the above Table 22).

\(^{1029}\) The treatment of franked and unfranked dividends differs when paid to a foreign resident. Specifically, a franked dividend is exempt from Australian income and withholding taxes, whereas an unfranked dividend is subject to withholding tax; see further, Harris, above n 36.

\(^{1030}\) For completeness, modelling issues relating to untaxed foreign source income are beyond the scope of this thesis and will be the subject for future research by the author.

\(^{1031}\) An area for further research is to consider the ultimate flow through to the final shareholder in the model, which would require distinguishing portfolio and non-portfolio dividends – whereas this model assumes that an MNE engages in tax planning in relation to its non-portfolio dividends. “An important principle of tax design is that taxes should have a minimal impact on business decisions and with this in mind, tax treaties commonly distinguish between small passive investments in local companies (known as ‘portfolio’ investments, as they are assumed to be part of the foreign shareholder’s investment portfolio) and more substantial (non-portfolio) direct investments in a local operating company ... treaties may set two caps on dividend income with a higher rate allowed on dividends paid to portfolio shareholders and a lower rate allowed on dividends paid to non-portfolio shareholders. The provisions setting out the dual caps for portfolio and non-portfolio investors provide the only instance in which the UN model treaty is more favourable to the capital exporting nation than the OECD model treaty. Under the OECD model, the capital importing country will be required to use the lower withholding tax rate when the investor has a 25% or greater interest in the company paying dividends. Under the UN model, the capital importing country must apply the lower rate when dividends are paid to investors with only 10% or greater interests in a company”: Daurer V and Krever R, ‘Choosing between the UN and OECD Tax Policy Models: An African Case Study’ (European University Institute, EUI Working Paper RSCAS 2012/60, November 2012) 12.
A run-time test indicates that the MNE will funnel all funds through a combination of the decision variable with the lowest withholding tax rate and the jurisdiction with the lowest corporate income tax rate. This can be further validated by a two-fold analysis: first, anecdotal evidence from leading tax practitioners suggests that this reflects MNEs’ behaviour; second, from the perspective of the MNE as a group, withholding taxes increase the cost of capital of the funding type by the amount of the tax rate withheld.\(^{1032}\)

This relationship can be expressed as follows:

\[
r^{WHT} = r (1 + \tau)
\]

where \(r^{WHT}\) is the cost of capital following the imposition of withholding taxes, \(r\) is the rate of return prior to the imposition of withholding taxes and \(\tau\) is the withholding tax rate.

**Foreign tax credits**

To avoid double taxation, foreign income may be exempt from tax under the relevant jurisdiction’s foreign tax credit (‘FTC’) regime. Each jurisdiction unilaterally controls its FTC system, rendering this a parameter.

It is noteworthy that FTC systems and rates differ markedly between jurisdictions. For example, even though passive income is included within the FTC calculations for the US,\(^{1033}\) Singapore and Australia,\(^{1034}\) Australia’s FTC regime was replaced in 2008 with the foreign income tax offset (‘FITO’) pursuant to Division 770 of the *ITAA97*.\(^{1035}\) Also, even though Singapore has not entered into a comprehensive double tax treaty with the US, as indicated in the above Table 22, Singapore’s unilateral tax credit system provides similar relief to an FTC.\(^{1036}\)

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\(^{1033}\) “The separate income baskets help discourage US corporations from moving offshore highly mobile investments (such as international shipping, financial services, and portfolio loans) that can easily be located in low-tax countries”: Rousslang D J, ‘Foreign Tax Credit’ in Cordes J J, Ebel R D and Gravelle J (eds) The Encyclopedia of Taxation & Tax Policy (Urban Institute, 2nd ed, 2005) 163.


\(^{1035}\) “The FITO differs from the FTC in that it applies to both Australian and foreign residents and is not subject to quarantining rules”: Barkoczy S, Foundations of Taxation Law (CCH, 6th ed, 2014) 930.

\(^{1036}\) “Effective Year of Assessment (YA) 2009, a UTC will be granted on all foreign-sourced income received in Singapore by Singapore tax residents from jurisdictions that do not have DTAs with Singapore”: Singaporean Government, Inland Revenue Authority of Singapore, Foreign Tax Credit (21 March 2016) <https://www.iras.gov.sg/irashome/Businesses/Companies/Working-out-Corporate-Income-Taxes/Claiming-Reliefs/Foreign-Tax-Credit/>. 

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However, the purpose of this model is not to replicate the nuances of each jurisdiction’s unique system. Rather, this model aims to algorithmically express the top-level design of FTCs. While some jurisdictions (including Singapore) calculate their FTCs on a ‘country-by-country’ basis, this is not built into the model in the first instance. Further, since this model offers a single-period analysis, carry-backs or carry-forwards are not relevant. For simplicity, controlled foreign companies, pooling, other types of tax credits, etc are beyond the scope of this section.

In order to convert the FTC regime into an algorithmic expression, it is instructive to first articulate the operation of this system. The FTC is limited to the domestic tax liability that would be due on the foreign source income. Specifically, a jurisdiction’s FTC is the lower of: (A) the amount of tax attributable to the foreign source income; or (B) the actual amount of foreign tax paid.

In other words, if the amount of tax attributable to the foreign source income (A) exceeds the actual amount of foreign tax paid (B), then $T$ will increase by the difference: namely, $A - B$. If, however, the actual amount of foreign tax paid (B) exceeds the amount of tax attributable to the foreign source income (A), then $T$ will remain unchanged, because there will be no increase to domestic tax liability.

For the purposes of the optimisation model, FTC can be built into the objective function with the addition of the following notation:

$$Minimise: T = \cdots + \sum_{i \neq j} \sum_k \left(D_{ijk} + E_{ijk} + L_{ijk} + F_{ijk}\right) \left(r_{ijk} \times r_{FTC}^{FTC} - r_{ijk} \times r_{WHT}^{WHT}\right)$$

where $ijk$ represents the inclusion of all three jurisdictions, $r_{ijk}$ is the initial rate of return (assuming the ‘tax attributable’ is calculated on the gross-up, this is the same as the initial rate of return of 10%), $r_{FTC}^{FTC}$ represents the amount of tax attributable to the foreign source income and $r_{WHT}^{WHT}$ represents the actual amount of foreign tax paid.

**Additional subsidiary located in Hong Kong**

It is instructive to observe MNE behaviour when interacting with a non-treaty, low tax jurisdiction. Accordingly, this model includes a Hong Kong subsidiary (‘Co H’), which has a headline corporate income tax rate of 16.5%.

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1037 For example, credits for underlying tax are beyond the scope of this iteration.

1038 “Essentially, the foreign tax credit is limited to the US tax liability that would be due on the foreign source income”: Australian Government, above n 911.
It is also necessary to build all of the previous parameters into this variation of the model. Regarding the withholding tax parameter, as indicated in Table 23 below, Hong Kong has not entered into comprehensive double tax treaties with any of the jurisdictions in the baseline model. Rather, Hong Kong allows substantially the same withholding tax rates (at or near 0%) for both treaty and non-treaty countries. However, the FTC regime does not apply to any of the baseline jurisdictions.

Table 23 – Overview of withholding tax rates in Hong Kong

<table>
<thead>
<tr>
<th>Hong Kong</th>
<th>Interest</th>
<th>Dividends</th>
<th>Royalties</th>
<th>Lease payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>$U, H\circ$</td>
<td>$30%\square$</td>
<td>$30%$</td>
<td>$30%$</td>
<td>$30%$</td>
</tr>
<tr>
<td>$H, U\circ$</td>
<td>$0%$</td>
<td>$0%$</td>
<td>$4.95/16.5%\square$</td>
<td>$0%$</td>
</tr>
<tr>
<td>$S, H\circ$</td>
<td>$15%$</td>
<td>$0%$</td>
<td>$10%$</td>
<td>$15%$</td>
</tr>
<tr>
<td>$H, S\circ$</td>
<td>$0%$</td>
<td>$0%$</td>
<td>$4.95/16.5%\square$</td>
<td>$0%$</td>
</tr>
<tr>
<td>$A, H\circ$</td>
<td>$10%$</td>
<td>$0/30%\square$</td>
<td>$30%$</td>
<td>$10%$</td>
</tr>
<tr>
<td>$H, A\circ$</td>
<td>$0%$</td>
<td>$0%$</td>
<td>$4.95/16.5%\square$</td>
<td>$0%$</td>
</tr>
</tbody>
</table>

Key: $\circ$ represents absence of a comprehensive tax treaty; $\square$ government authorities/financial institutions are afforded a withholding tax exemption; $\cdot$ interest on certain ‘portfolio debt’ obligations are exempt from withholding tax; $\circ$ withholding tax exemption applies to interest paid in relation to either a sale on credit of goods, merchandise or services, or a sale on credit of industrial, commercial or scientific equipment; $\circ$ higher withholding rates apply if there is a lower level of participation; $\square$ relates to different rates arising from imputation system; the higher rate applies to unfranked dividends; $\square$ the higher rate applies if the royalties are received by or accrued to a non-resident from an associate.

**Depreciation**

The tax deductibility of depreciation (or ‘capital allowance deductions’ in the Australian tax context) in relation to lease financing was excluded from the initial baseline model. Since depreciation policy is something that governments can unilaterally control, this is a parameter.

Mackenzie and Hart posit that “as long as there is symmetry between the assessability of the rental payments to the lessor and deductibility of those to the lessee there should be no disadvantage to the revenue”. \textsuperscript{1040}

However, finance leasing is more problematic in the cross-border context. As observed by Shapiro:1041

“Cross-border or international leasing can be used both to defer and to avoid taxes ... The principal tax advantage from international leasing is gained when it is possible to structure a ‘double-dip’ lease ... Double-dipping is most often achieved with lessees in countries that look to the economic reality of the arrangement (e.g., the United States, Japan, Germany, and the Netherlands) and lessors in countries that characterize leases solely on the basis of legal ownership (e.g., Switzerland, France, and Great Britain).”

For the purposes of the optimisation model, the deductibility of depreciation gives rise to a decreased $TTP$. Assuming single-dipping only, the tax implications of allowing deductions for depreciation of lease financing is represented by the following addition to the objective function:

$$Minimise: \quad T = \cdots + \frac{F_{ij} \times r_{ij}^{DEP}}{2}$$

where $r_{ij}^{DEP}$ represents the rate of depreciation (set at 2.5% in this model) and is divided by ‘2’ to simulate many jurisdictions’ limits on the minimum residual value.1042 One limitation of this model is that it is a single-period model so cannot calculate the present value of future cash flows. A multi-period analysis may result in a different decision, particularly given residual value limitations across jurisdictions.

**OECD BEPS Fixed Ratio Rule**

The purpose of this section is not to provide an extensive analysis of the OECD’s Action 4 Report.1043 Rather, it is only necessary to provide an algorithmic expression of the fixed ratio rule which can act as proxy for the OECD’s proposed reform.

The OECD’s Recommendation suggests replacing existing interest limitation rules such as thin capitalisation rules with a fixed net interest-to-EBITDA ratio (‘Fixed Ratio Rule’). This is thought to be a better approach to combatting BEPS than existing thin capitalisation regimes.


1043 For completeness, the recommendation was drafted with three key features, but only the second is relevant for the purposes of this section, on the assumption that the other two are satisfied.
The suggested corridor for the benchmark fixed ratio (‘BFR’) is between 10% and 30%. Accordingly, the OECD’s Recommendation can be expressed algorithmically as follows:

$$|I_i + P_i| \leq (BFR\% \times NPBT_{t,t+1})$$

Despite the complexities arising in the calculation of the EBITDA, this study makes the simplifying assumption that NPBT is effectively equivalent to EBITDA.

**Belgian and Italian ACE-variants**

This section applies the model developed thus far to the Belgian and Italian contexts. This is achieved by removing the Australian subsidiary (‘Co A’) from the model and replacing it with a new company in two concurrent iterations: first, Belgium (‘Co B’) and second, Italy (‘Co I’). The headline corporate income tax rates are 33% and 27.5%, respectively.

It is necessary to modify the constraint relating to thin capitalisation rules since the Australian subsidiary has been replaced by either the Belgian or Italian subsidiary. Belgium’s regime adopts a 5:1 debt-to-equity ratio under their general thin capitalisation rules applicable to intercompany loans. On the other hand, Italy utilises the fixed ratio approach with a benchmark ratio currently set at 30%. The withholding tax rates applicable to the Belgian and Italian subsidiaries are listed in the below Table 24 and Table 25, respectively.
Table 24 – Overview of withholding tax rates in Belgium

<table>
<thead>
<tr>
<th>Withholding tax rates</th>
<th>Interest</th>
<th>Dividends</th>
<th>Royalties</th>
<th>Lease payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$U, B_{1044}$</td>
<td>0/15%◊</td>
<td>0/5/15%●</td>
<td>0%</td>
<td>0/15%</td>
</tr>
<tr>
<td>$B, U$</td>
<td>0/15%</td>
<td>0/5/15%●</td>
<td>0%</td>
<td>0/15%</td>
</tr>
<tr>
<td>$S, B_{1045}$</td>
<td>5%◊</td>
<td>0%</td>
<td>3/5%●</td>
<td>5%</td>
</tr>
<tr>
<td>$B, S$</td>
<td>5%</td>
<td>5/15%●</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Key: ◊ government authorities/financial institutions are afforded a withholding tax exemption; □ interest on certain ‘portfolio debt’ obligations are exempt from withholding tax; ● withholding tax exemption applies to interest paid in relation to either a sale on credit of goods, merchandise or services, or a sale on credit of industrial, commercial or scientific equipment; ● higher withholding rates apply if there is a lower level of participation.

Table 25 – Overview of withholding tax rates in Italy

<table>
<thead>
<tr>
<th>Withholding tax rates</th>
<th>Interest</th>
<th>Dividends</th>
<th>Royalties</th>
<th>Lease payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$U, I_{1046}$</td>
<td>0/10%●</td>
<td>5/15%●</td>
<td>0/5/8%₁₀₄⁷</td>
<td>0/10%●</td>
</tr>
<tr>
<td>$I, U$</td>
<td>0/10%●</td>
<td>5/15%●</td>
<td>0/5/8%₁₀₄⁸</td>
<td>0/10%●</td>
</tr>
<tr>
<td>$S, I_{1049}$</td>
<td>12.5%◊</td>
<td>0%</td>
<td>15/20%₁₀₅⁰</td>
<td>12.5%</td>
</tr>
<tr>
<td>$I, S$</td>
<td>0/12.5%◊</td>
<td>10%</td>
<td>15/20%</td>
<td>0/12.5%◊</td>
</tr>
</tbody>
</table>

Key: ◊ government authorities/financial institutions are afforded a withholding tax exemption; □ interest on certain ‘portfolio debt’ obligations are exempt from withholding tax; ● withholding tax exemption applies to interest paid in relation to either a sale on credit of goods, merchandise or services, or a sale on credit of industrial, commercial or scientific equipment; ● higher withholding rates apply if there is a lower level of participation.

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¹⁰⁴⁸ For completeness, the 0% rate applies to royalties for copyrights of literary, artistic or scientific works (excluding royalties for computer software, motion pictures, films, tapes or other means of reproduction used for radio or television broadcasting). The 5% rate applies to royalties for the use of, or the right to use, computer software or industrial, commercial or scientific equipment. In all other cases, the 8% rate is imposed on the gross amount of the royalties; see further, Avella, above n 1047.


¹⁰⁵⁰ The lower 15% applies to copyright royalties: see Avella, above n 1047.
Regarding the FTC parameter, both jurisdictions provide some level of relief from double taxation of foreign source income. For completeness, Belgium’s FTC\textsuperscript{1051} is limited to a lump-sum amount equal to 15/85 of the amount of the net foreign source income, with a separate calculation applying to interest withholding tax, with it too capped at 15%. On the other hand, Italy’s FTC is calculated on a country-by-country basis.\textsuperscript{1052} However, for simplicity, none of these nuances are included in the initial iterations of the optimisation model.

5.3 CURRENT PRACTICE

5.3.1 Thin capitalisation rules

There is a growing literature challenging the traditional belief that thin capitalisation rules protect the tax revenue base, including Ruf and Schindler\textsuperscript{1053} and Vann.\textsuperscript{1054}

However, as observed in the literature review at section 2.4.3.2, there is currently no empirical evidence that new FDI is simply financed at or around the debt-to-equity ratio limits set by thin capitalisation rules. Accordingly, this model contributes to the literature by exploring this research gap utilising optimisation modelling.

The most important finding in relation to thin capitalisation rules is that the hypothetical MNE is indifferent to the existence of and variation in these rules. This is because whereas changes to thin capitalisation rules may result in changes to the funding mix of entities within an MNE, the total tax payable remains unchanged.

Specifically, where this variation is modelled with NPBT\textsuperscript{A} increments between 0–100, the total tax payable remains the same for each increment of tax aggressiveness, such that the AETR is 26.50–30.75% regardless of whether thin capitalisation rules are relaxed or tightened (Models 1–3), as shown in the below Table 26.

This is contrary to policymakers’ perceptions that thin capitalisation rules can be made more effective at restricting base erosion by simply tightening their debt-to-equity ratio. The model shows no change in total tax payable from tightening thin capitalisation rules from a debt-to-equity ratio of 3:1 to 1.5:1 (Model 2 and Model 1, respectively), as implemented by the Tax and Superannuation Laws Amendment (2014 Measures No 4) Act 2014 (Cth). Further tightening of Australia’s thin capitalisation rules – to a debt-to-equity ratio of 1:1 as proposed in May 2016 –

\textsuperscript{1051} Called the QFIE system (“quotité forfaitaire d’impôt étrangers”): Vanhaut, above n 877, 91–2.
\textsuperscript{1052} See further, Avella, above n 1047.
\textsuperscript{1053} Ruf and Schindler, above n 112, 17–18.
\textsuperscript{1054} Vann, above n 186, 71.
gives rise to the same total tax payable result (Model 3).\textsuperscript{1055} In contrast, in the absence of tax planning, the AETR is 34.50\%, since both the NPBT\textsuperscript{U} and NPBT\textsuperscript{A} is 100 before tax planning is engaged in (so, $T^{100}=69$). This demonstrates that ‘tightening’ thin capitalisation rules is a largely ineffective tax revenue base protection measure, since tax-minimising MNEs are already utilising other forms of intercompany funding beyond traditional debt and equity financing.

Table 26 – Results of modelling thin capitalisation rules with various safe harbour rules

<table>
<thead>
<tr>
<th>NPBT\textsuperscript{A}</th>
<th>Model 1 Current thin cap rules</th>
<th>Model 2 Loosened thin cap rules</th>
<th>Model 3 Tightened thin cap rules</th>
<th>AETR ($=T/200$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>53.00</td>
<td>53.00</td>
<td>53.00</td>
<td>26.50%</td>
</tr>
<tr>
<td>10</td>
<td>53.85</td>
<td>53.85</td>
<td>53.85</td>
<td>26.93%</td>
</tr>
<tr>
<td>20</td>
<td>54.70</td>
<td>54.70</td>
<td>54.70</td>
<td>27.35%</td>
</tr>
<tr>
<td>30</td>
<td>55.55</td>
<td>55.55</td>
<td>55.55</td>
<td>27.78%</td>
</tr>
<tr>
<td>40</td>
<td>56.40</td>
<td>56.40</td>
<td>56.40</td>
<td>28.20%</td>
</tr>
<tr>
<td>50</td>
<td>57.25</td>
<td>57.25</td>
<td>57.25</td>
<td>28.63%</td>
</tr>
<tr>
<td>60</td>
<td>58.10</td>
<td>58.10</td>
<td>58.10</td>
<td>29.05%</td>
</tr>
<tr>
<td>70</td>
<td>58.95</td>
<td>58.95</td>
<td>58.95</td>
<td>29.48%</td>
</tr>
<tr>
<td>80</td>
<td>59.80</td>
<td>59.80</td>
<td>59.80</td>
<td>29.90%</td>
</tr>
<tr>
<td>90</td>
<td>60.65</td>
<td>60.65</td>
<td>60.65</td>
<td>30.33%</td>
</tr>
<tr>
<td>100</td>
<td>61.50</td>
<td>61.50</td>
<td>61.50</td>
<td>30.75%</td>
</tr>
</tbody>
</table>

Contrary to the majority of the literature, this model also finds that there is no difference in total tax payable regardless of the existence of thin capitalisation rules, whether inbound-only, outbound-only or both inbound and outbound (Model 4, Model 5 and Model 1, respectively). This finding challenges the assumption in the literature that these rules protect the tax revenue base, rendering irrelevant the perception in the literature that thin capitalisation rules mitigate the cross-border debt bias.

Rather, the outcome of the modelling shows that when the MNE is making ‘pure profit’ shifting decisions in relation to intercompany activities, it simply ensures it is not in breach of

thin capitalisation rules whilst still attaining the minimum total tax payable. This finding is consistent with the literature on optimal tax policies.\textsuperscript{1056}

Also, capital structure and both the quantum and direction of funds flow remain the same under tightened (or relaxed) debt-to-equity ratios. In particular, the Australian subsidiary experiences no change in its funding mix between inbound-only, outbound-only or both inbound/outbound rules.

This result seem to be at odds with the literature that tightening thin capitalisation rules would impact MNEs’ funding decisions. The reason is that the funding mix selected by the MNE is already beyond the scope of the thin capitalisation rules. For example, at a moderate level of tax-aggressiveness (where \text{NPBT}^A=50), the MNE utilises finance leasing payments (P^C) from Australia to Hong Kong and royalty payments (R^A) from the US to Hong Kong. This result confirms the anecdotal evidence present in the literature, as noted in the above section 4.3.2.

Similarly for the US parent, there is also no change in funding mix between inbound-only, outbound-only or both inbound/outbound rules. These result in the same quantum and direction of intercompany payments (specifically, to Hong Kong). However, if inbound-only rules apply then the MNE switches the US parent’s intercompany financing from royalties to finance lease payments – simply ‘mixing and matching’ to obtain the same total tax payable as any of the above alternative reform configurations.

While at first blush these results may appear unusual, the anecdotal research presented by Ruf and Schindler\textsuperscript{1057} anticipates this result. This further reinforces the proposition that thin capitalisation rules are too narrow given the fungibility of funding alternatives in an MNE.

This finding is significant because even though there is a growing literature challenging the traditional belief that thin capitalisation rules protect the tax revenue base, including Ruf and Schindler\textsuperscript{1058} and Vann,\textsuperscript{1059} there is currently no empirical evidence that new FDI is simply financed at or around the debt-to-equity ratio limits set by thin capitalisation rules. This finding could have significant policy implications globally, especially given the worldwide popularity of implementing and tightening thin capitalisation rules.

If, on the other hand, the definition of “interest” was broadened to include the returns from both debt financing and finance leases, then the quantum of outflow from Australia would

\textsuperscript{1056} “Economically, this means that pure profits are relatively large and the corporation tax thus incorporates a substantial share of pure profit taxation. This condition is likely to be fulfilled for MNCs, which exhibit a high degree of profitability in empirical studies”: Haufler, Mardan and Schindler, above n 940, 13.

\textsuperscript{1057} Ruf and Schindler, above n 112, 17–18; see also Kayis-Kumar, above n 657; Kayis-Kumar, above n 144.

\textsuperscript{1058} Ruf and Schindler, above n 112, 17–18.

\textsuperscript{1059} Vann, above n 186, 71.
remain the same, with only a marginal increase in total tax payable. As with the above analysis, the outflows would remain the same regardless of whether debt-to-equity ratios were tightened under this regime. However, capital structure would switch from the use of finance leases to licencing arrangements out of Australia, with no change in the capital structure of the US parent. In short, royalty payments would flow to both the Singaporean and Hong Kong subsidiaries in order to minimise the total tax payable. This is reflected in the below Table 27.

Table 27 – Results of modelling thin capitalisation rules with broadened scope on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBT</th>
<th>Model 6 Current thin cap rules with finance leasing</th>
<th>Model 7 Loosened thin cap rules with finance leasing</th>
<th>Model 8 Tightened thin cap rules with finance leasing</th>
<th>AETR (=T/200)</th>
<th>ΔAETR (compared to Models 1–3, in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>53.77</td>
<td>53.77</td>
<td>53.77</td>
<td>26.89%</td>
<td>1.47%</td>
</tr>
<tr>
<td>10</td>
<td>54.54</td>
<td>54.54</td>
<td>54.54</td>
<td>27.27%</td>
<td>1.26%</td>
</tr>
<tr>
<td>20</td>
<td>55.32</td>
<td>55.32</td>
<td>55.32</td>
<td>27.66%</td>
<td>1.13%</td>
</tr>
<tr>
<td>30</td>
<td>56.09</td>
<td>56.09</td>
<td>56.09</td>
<td>28.05%</td>
<td>0.97%</td>
</tr>
<tr>
<td>40</td>
<td>56.86</td>
<td>56.86</td>
<td>56.86</td>
<td>28.43%</td>
<td>0.82%</td>
</tr>
<tr>
<td>50</td>
<td>57.63</td>
<td>57.63</td>
<td>57.63</td>
<td>28.82%</td>
<td>0.66%</td>
</tr>
<tr>
<td>60</td>
<td>58.41</td>
<td>58.41</td>
<td>58.41</td>
<td>29.21%</td>
<td>0.55%</td>
</tr>
<tr>
<td>70</td>
<td>59.18</td>
<td>59.18</td>
<td>59.18</td>
<td>29.59%</td>
<td>0.37%</td>
</tr>
<tr>
<td>80</td>
<td>59.95</td>
<td>59.95</td>
<td>59.95</td>
<td>29.98%</td>
<td>0.27%</td>
</tr>
<tr>
<td>90</td>
<td>60.73</td>
<td>60.73</td>
<td>60.73</td>
<td>30.37%</td>
<td>0.13%</td>
</tr>
<tr>
<td>100</td>
<td>61.50</td>
<td>61.50</td>
<td>61.50</td>
<td>30.75%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

Accordingly, the quantitative analysis conducted in this study supports (that is, ‘fails to reject’) the primary null hypothesis, that:

\[ H_0 \] – Thin capitalisation rules do not adequately protect the tax revenue base if designed to only mitigate the cross-border debt bias.

So, the two secondary null hypotheses will need to be explored:

\[ H_1 \] – Thin capitalisation rules do not adequately protect the tax revenue base if designed

1060 Industry- and size-specific issues are beyond scope given the simplifying assumptions made by this single-MNE model. This will be the subject of future research.
to mitigate the broader cross-border intercompany funding bias.

\( H_2 \) – Thin capitalisation rules are not required if there is neutral tax treatment of MNEs’ intercompany funding activities.

\( H_1 \) and \( H_2 \) are examined in the below sections 5.6.1 and 5.6.2, respectively.

5.3.2 Changes to the corporate income tax (‘CIT’) rate

Mansori and Weichenrieder challenge the assumption in the public choice literature that increasing tax rates in one region will result in increased tax revenues in another region; “[t]he (implicit) assumption of the public choice literature is that fiscal externalities between regions are positive”.\(^{1061}\) Instead, Mansori and Weichenrieder find that fiscal externalities are negative. Similarly, the model developed in this thesis shows that fiscal externalities are negative but also that they are capped. That is, an MNE is indifferent to higher tax in Australia in relation to pure profits. Even though this model does not consider economic rents, the concern of fiscal externalities ought not to apply since, given their immobility, they do not impact tax revenues of other jurisdictions.

In an increasingly globalising and internationally competitive business environment, governments are under considerable pressure to lower their headline CIT rates. Australia is no exception and there has been much political pressure to lower the Australian CIT headline rate.\(^{1062}\)

The argument is that a CIT rate cut will make Australia more internationally competitive, which is expected to result in higher living standards for residents and a permanent increase in the size of the domestic economy. It is of course conceded in that argument that the economic rent portion of funds will escape tax. This model’s ability to isolate and observe the behaviour of pure profits facilitates an objective assessment of whether, ceteris paribus, a reduced Australian CIT headline rate (‘CIT\(^A\)’) can benefit Australia, using the change in total tax payable as proxy for this measure.


\(^{1062}\) “To encourage new investment and be successful as a nation, Australia needs a competitive business environment ... An uncompetitive business environment can be the difference between firms investing in Australia or choosing to invest elsewhere ... Over the following 10 years, the corporate tax rate will be reduced incrementally so that, by the 2026-27 income year, the corporate tax rate for all companies will be 25 per cent. This will encourage investment and higher paid jobs. It will also make Australian companies more internationally competitive in a tough global market place”: Explanatory Memorandum, Treasury Laws Amendment (Enterprise Tax Plan) Bill 2016 (Cth), 9-10. However, it is noteworthy that even though the Henry Review recommended that “Australia should respond to these developments by reducing the company income tax rate to 25 per cent over the short to medium term, as fiscal and economic circumstances permit”, this was suggested in the context of also implementing a uniform resource rent tax in Recommendation 45: Henry Review, above n 195, 40 and 231.
For the most tax-aggressive MNEs (namely, those who book \(\text{NPBT}^A=0\text{–}20\)), total tax payable remains at 53 until a fall in the Australian CIT rate to 21.5%. This means that global total tax payable is effectively capped at 53, as shown in the below Figure 21. In other words, a reduction in the CIT rate to 25% will simply forfeit tax revenue from economic rents.

Specifically, where this variation is modelled with \(\text{NPBT}^A\) increments between 0–100, the AETR ranges between 26.50%–8.25% thereby simply enabling relatively less tax-aggressive MNEs to further reduce their total tax payable.

This is shown in Table 28 as follows:

Table 28 – Results of modelling a headline CIT rate cut on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBT&lt;sup&gt;A&lt;/sup&gt;</th>
<th>Model 1 Current regime</th>
<th>Model 11 CIT rate cut to 25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>53.00</td>
<td>53.00</td>
</tr>
<tr>
<td>10</td>
<td>53.85</td>
<td>53.35</td>
</tr>
<tr>
<td>20</td>
<td>54.70</td>
<td>53.70</td>
</tr>
<tr>
<td>30</td>
<td>55.55</td>
<td>54.05</td>
</tr>
<tr>
<td>40</td>
<td>56.40</td>
<td>54.40</td>
</tr>
<tr>
<td>50</td>
<td>57.25</td>
<td>54.75</td>
</tr>
<tr>
<td>60</td>
<td>58.10</td>
<td>55.10</td>
</tr>
<tr>
<td>70</td>
<td>58.95</td>
<td>55.45</td>
</tr>
<tr>
<td>80</td>
<td>59.80</td>
<td>55.80</td>
</tr>
<tr>
<td>90</td>
<td>60.65</td>
<td>56.15</td>
</tr>
<tr>
<td>100</td>
<td>61.50</td>
<td>56.50</td>
</tr>
</tbody>
</table>

Further, assuming that immobile economic rents will also be taxed at a reduced rate, the findings of this study suggest that a reduction in the CIT rate to the proposed 25% will result in: at best, no difference in the tax benefit; and at worst, a reduced tax benefit to Australia. It should be noted that this study does not attempt to model investment behaviour over time in response to global tax changes. Rather, it only observes that pure profits do not shift and economic rents are forfeited from a CIT rate reduction from 30% to 25%, as currently being contemplated in the Australian context.
As shown in the above Figure 21, there is no behavioural change for the most tax-aggressive MNE (where NPBT^A=0) from a reduction in CIT^A from 30% to 25%. Rather, it would take a CIT^A rate cut of below 21.5% for the initial NPBT (of 100) to remain in Australia. Interestingly, for the less tax-aggressive MNEs (for example, where NPBT^A=20 or where NPBT^A=50), this study shows that any reduction in CIT^A will result in less tax revenue being collected and that if there is a CIT^A rate cut to below 21.5%, all MNEs behave like the most tax-aggressive variation.

Interestingly, from a capital structure perspective, finance lease payments are made from Australia at every tax rate above 21%; then, between 16.5–21.5% there is no funds in-flow or out-flow; but once the CIT^A rate has dropped below 16.5% this switches entirely to royalty inflows, since Australia at that point would take the position currently occupied by Hong Kong. For completeness, this pattern would change if additional jurisdictions were included in the model. However, this rendition of the model intends to anticipate behavioural shifts only, rather than calculate a precise quantum. The latter would require more extensive economic modelling beyond the scope of this thesis.

Tax competition issues cannot be eliminated in practice. However, the findings of this model question whether Australia would benefit from a reduction in its CIT rate in response to other jurisdictions’ changes to their CIT rates. Assuming that CIT reductions would only occur between higher-tax jurisdictions, this variation would only apply to the US and Australian subsidiaries. The findings are that, while total tax payable behaves in a similar way as in the above Figure 21, the most tax-aggressive MNE never nominates to place any NPBT into the Australian subsidiary. This indicates that Australia would not be a ‘winner’ from a reduction in the headline CIT rate to 25%.
5.3.2.1 The (in)effectiveness of lowering the CIT rate and tightening thin capitalisation rules

Consistent with the earlier finding in relation to the ineffectiveness of thin capitalisation rules, a combination of a tightened thin capitalisation rule with lower CIT rates is not an effective tax base protection measure. Specifically, the reduction in the tax base is directly proportional to the marginal increase in NPBT\(^{A}\), simply eroding the tax base by up to 8.13%, as shown in the below Table 29.

Table 29 – Results of modelling a headline CIT rate cut and tightening safe harbour rules on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBT(^{A})</th>
<th>Model 1 Current regime</th>
<th>Model 13 Tightened thin cap rules and CIT rate cut to 25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>53.00</td>
<td>53.00</td>
</tr>
<tr>
<td>10</td>
<td>53.85</td>
<td>53.35</td>
</tr>
<tr>
<td>20</td>
<td>54.70</td>
<td>53.70</td>
</tr>
<tr>
<td>30</td>
<td>55.55</td>
<td>54.05</td>
</tr>
<tr>
<td>40</td>
<td>56.40</td>
<td>54.40</td>
</tr>
<tr>
<td>50</td>
<td>57.25</td>
<td>54.75</td>
</tr>
<tr>
<td>60</td>
<td>58.10</td>
<td>55.10</td>
</tr>
<tr>
<td>70</td>
<td>58.95</td>
<td>55.45</td>
</tr>
<tr>
<td>80</td>
<td>59.80</td>
<td>55.80</td>
</tr>
<tr>
<td>90</td>
<td>60.65</td>
<td>56.15</td>
</tr>
<tr>
<td>100</td>
<td>61.50</td>
<td>56.50</td>
</tr>
</tbody>
</table>

As with the above section 5.3.1, this finding has significant policy implications globally, given the worldwide popularity of simultaneously tightening thin capitalisation rules whilst lowering CIT rates in an attempt to balance the competing policy interests of encouraging international investment while also protecting the tax revenue base – or, at least, intending to.

While this model does not profess to anticipate FDI behaviours, since it can observe the utility of optimising MNE’s behavioural responses in relation to pure profit shifting, it is instructive to gauge any unintended tax revenue impacts of reform proposals.

This section tests and confirms the observation by Vann that “paying for a cut in the corporate tax rate by changing the thin capitalisation ratio is unlikely to achieve the desired
However, it is important to note that Model 4 yields the same tax revenue outcome as Model 1. A more robust measure that protects tax revenue is still needed. Accordingly, the remainder of this Chapter 5 explores alternative options for reform.

5.4 FUNDAMENTAL REFORMS

5.4.1 Allowance for corporate equity (‘ACE’)

Despite its theoretical benefits, the findings of this model are mixed, pointing neither to – nor away from – implementing an ACE.

As observed in the above section 2.5.1.1.1, there is support in the literature for the proposition that thin capitalisation rules would no longer be required (or, at least, could be simplified) under an ACE. This inference can be extrapolated beyond thin capitalisation rules to also include other interest deduction limitation rules.

However, this position has been challenged in the literature by both Cooper and Hebous and Ruf, who find that a unilateral implementation of an ACE generates a tax planning opportunity.

On the other hand, the model finds that an ACE – regardless of whether or not it is accompanied by thin capitalisation rules – results in the same total tax payable at each increment of relative MNE tax aggressiveness. This is simply because the behavioural response by the MNE is that, ceteris paribus, the introduction of thin capitalisation rules from a system with an ACE simply results in the MNE ‘mixing and matching’ its capital structure from royalties and interest to dividends and finance lease payments, with no change in the direction or magnitude of the amounts, or any change in total tax payable overall.

This is an unexpected outcome of the model. As illustrated in the below Table 30, regardless of whether the current system is in place or whether a unilateral or multilateral ACE is implemented (with or without thin capitalisation rules), the hypothetical MNE will minimise total tax payable to the same level across all of these reform options – with identical results at each level of tax aggressiveness.

1063 Vann, above n 156; see also, Vann, above n 186, 72.
1064 Fischer and Lohbeck, above n 417.
1065 The ACE is also considered a viable alternative to the interest deduction ceiling rule: Fischer and Lohbeck above n 417, 307–27; see further, Rumpf, above n 421.
1066 Cooper, above n 382, 266.
1067 Hebous S and Ruf M, above n 443.
Table 30 – Results of modelling both a unilateral and a multilateral ACE on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBT^A</th>
<th>Model 1 Current regime</th>
<th>Model 14 Unilateral ACE with thin cap rules</th>
<th>Model 15 Unilateral ACE without thin cap rules</th>
<th>Model 16 Multilateral ACE with thin cap rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>53.00</td>
<td>53.00</td>
<td>53.00</td>
<td>53.00</td>
</tr>
<tr>
<td>10</td>
<td>53.85</td>
<td>53.85</td>
<td>53.85</td>
<td>53.85</td>
</tr>
<tr>
<td>20</td>
<td>54.70</td>
<td>54.70</td>
<td>54.70</td>
<td>54.70</td>
</tr>
<tr>
<td>30</td>
<td>55.55</td>
<td>55.55</td>
<td>55.55</td>
<td>55.55</td>
</tr>
<tr>
<td>40</td>
<td>56.40</td>
<td>56.40</td>
<td>56.40</td>
<td>56.40</td>
</tr>
<tr>
<td>50</td>
<td>57.25</td>
<td>57.25</td>
<td>57.25</td>
<td>57.25</td>
</tr>
<tr>
<td>60</td>
<td>58.10</td>
<td>58.10</td>
<td>58.10</td>
<td>58.10</td>
</tr>
<tr>
<td>70</td>
<td>58.95</td>
<td>58.95</td>
<td>58.95</td>
<td>58.95</td>
</tr>
<tr>
<td>80</td>
<td>59.80</td>
<td>59.80</td>
<td>59.80</td>
<td>59.80</td>
</tr>
<tr>
<td>90</td>
<td>60.65</td>
<td>60.65</td>
<td>60.65</td>
<td>60.65</td>
</tr>
<tr>
<td>100</td>
<td>61.50</td>
<td>61.50</td>
<td>61.50</td>
<td>61.50</td>
</tr>
</tbody>
</table>

This is because the capital structure will be ‘mixed and matched’ for each reform option, as highlighted below:

- Current versus Unilateral ACE (Models 1 and 15)
  - NPBT^A=0–50 – Unilateral ACE (no TC) prefers split between I^A/P^A instead of all I^A
- Unilateral ACE (with/without TC) (Models 14 and 15)
  - NPBT^A=0–50 – addition of with TC simply changes split from I^A/P^A to R^A/P^A
  - NPBT^A=60–90 – addition of with TC simply switches from I^A to R^A
- Unilateral ACE versus Multilateral ACE (Models 14 and 16) (both with TC)
  - NPBT^A=0–40 – Unilateral ACE prefers split between R^A/P^A instead of all P^A
  - NPBT^A=50–200 – Identical capital structure across the whole MNE.

Further, despite its theoretical benefits, an ACE is the only reform option considered in this Chapter 5 that incentivises ‘round-tripping’ at every increment of MNE tax aggressiveness.

^1068 In the international finance context, the term ‘round-tripping’ was first popularised by the Wall Street Journal; “Until recently, round-tripping was often used to describe practices in the energy and telecom business where a company would sell an unused asset to another company while at the same time...
This finding is in line with anecdotal evidence in the literature, as noted in section 4.2. This could either have significant negative unintended consequences from a simplicity perspective, or it could be viewed as a positive measure of robustness, because it requires the MNE to ‘work’ harder in order to minimise total tax payable. In any event, even the perception that an ACE may incentivise capital round-tripping or effectively provide a favourable tax treatment for non-productive investment is undesirable.\textsuperscript{1069}

The pattern of round-tripping behaviour across the reform alternatives also presents a relevant consideration. Round-tripping occurs in the following instances: with a unilateral ACE with or without thin capitalisation rules; and with a multilateral ACE with thin capitalisation rules. A multilateral ACE without thin capitalisation rules does not result in round-tripping. This indicates that under the regime without thin capitalisation rules, the MNE is not forced into making artificial capital structure decisions, yet even with thin capitalisation rules it still gets the same total tax payable result – thereby challenging the utility of thin capitalisation rules.

5.4.2 Comprehensive business income tax (‘CBIT’)

Consistent with the literature on the CBIT reform proposal, the findings of this model confirm the ability of the CBIT to protect the tax revenue base. Regardless of whether or not thin capitalisation rules are in place, this model finds that a unilateral CBIT entirely eliminates the incentive for the MNE to engage in profit shifting behaviour out of the Australian subsidiary. Instead, the total tax payable remains constant at 61.50, with a constant $NPBTA=100$. In other words, the AETR remains fixed at 30.75%, and unlike all other reforms considered thus far does not create an opportunity to reduce the AETR to the range of 26.50–30.75% (or otherwise). This minimises opportunities for tax base erosion.

However, it is important not to conflate minimising opportunities for tax base erosion with eliminating opportunities for tax base erosion. The MNE still engages in some tax planning by making royalty payments from the US to Hong Kong. This shows that tax planning cannot be entirely eliminated for the hypothetical MNE, and the AETR of 34.50% is likely unattainable in practice.

This reaffirms the literature highlighted in the above section 2.5.2, indicating that a CBIT eliminates the tax-induced debt bias and is the most effective reform for protecting the tax

agreement to buy back the same or similar assets at about the same price. The result of this potentially illegal accounting practice is to artificially inflate revenue of both the buyer and the seller. At technology firms, however, round trips can involve cash rather than hard assets\textsuperscript{1069}; Cohen L P and Angwin J, ‘Investigators Focus AOL Probe on Alleged ‘Round-Trip’ Deals’, The Wall Street Journal (online), 19 August 2002 <http://www.wsj.com/articles/SB1029704211820792555>.

\textsuperscript{1069} Nölke A, Multinational Corporations from Emerging Markets (Palgrave Macmillan, 2014) 97.
Once extended to denying all deductions in line with the cross-border funding neutrality concept, a CBIT equalises the tax treatment of all fungible forms of intercompany financing.

5.5 EXISTING POLICY RESPONSES – PAST AND PROPOSED

5.5.1 ACE-variants in practice: Belgian NID and Italian ACE

As noted in section 4.3.1, this section explores the effectiveness of the Belgian NID and the Italian ACE regimes by reference to the optimisation model. This presents a higher-level conceptual analysis of whether an ACE in practice, implemented rigorously and consistently with its conceptual roots, presents an effective approach to achieving cross-border funding neutrality.

As such, the Australian subsidiary built into the model is replaced with, first, a Belgian subsidiary and second, an Italian subsidiary, in order to model the hypothetical tax-minimising MNE’s behavioural responses to the implementation of both the Belgian and Italian ACE-variants.

The expectation in the literature and the observations of practitioners are that the Belgian ACE-variant results in a reduction in total tax payable compared to a regime without it, such as the current tax system modelled with the Australian subsidiary (Co A). The model confirms this observation in the case of the more tax-aggressive MNEs (from NPBT^A=0–40). However, the Belgian ACE-variant is equivalent in terms of total tax payable when NPBT^A=50, and it is able to collect more tax revenue from the relatively less tax-aggressive MNEs (where NPBT^A=60–100) compared to the current system.

In other words, even though the lower bound of the AETR falls from 26.50% to 25.22%, the upper bound increases from 30.75% to 32.25%.
This result is shown in the below Table 31 and Figure 22:

Table 31 – Results of modelling the Belgian ACE-variant on the Belgian subsidiary (Co B)

<table>
<thead>
<tr>
<th>NPBT B</th>
<th>Model 1 Current regime</th>
<th>Model 32 Belgium’s current ACE-variant</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>53.00</td>
<td>50.43</td>
</tr>
<tr>
<td>10</td>
<td>53.85</td>
<td>51.79</td>
</tr>
<tr>
<td>20</td>
<td>54.70</td>
<td>53.15</td>
</tr>
<tr>
<td>30</td>
<td>55.55</td>
<td>54.51</td>
</tr>
<tr>
<td>40</td>
<td>56.40</td>
<td>55.87</td>
</tr>
<tr>
<td>50</td>
<td>57.25</td>
<td>57.23</td>
</tr>
<tr>
<td>60</td>
<td>58.10</td>
<td>58.59</td>
</tr>
<tr>
<td>70</td>
<td>58.95</td>
<td>59.95</td>
</tr>
<tr>
<td>80</td>
<td>59.80</td>
<td>61.31</td>
</tr>
<tr>
<td>90</td>
<td>60.65</td>
<td>62.85</td>
</tr>
<tr>
<td>100</td>
<td>61.50</td>
<td>64.50</td>
</tr>
</tbody>
</table>

Figure 22 – Results of modelling the Belgian ACE-variant

The MNE utilises a funding mix with dividend payments from Belgium to Hong Kong, whereas finance lease payments are preferred by the Australian subsidiary. However, despite the ACE model examined in the above section 5.4 anticipating round-tripping, this does not occur under the Belgian ACE-variant. Rather, the US parent profit shifts to the Belgian subsidiary from NPBT A=90 onwards to minimise the overall total tax payable.
Once amendments are incorporated into the Belgian ACE-variant model to reflect the past decade of reform, a slight reduction in the total tax payable is observed, as shown in the below Table 32.

Table 32 – Results of modelling the Belgian ACE-variant over time on the Belgian subsidiary (Co B)

<table>
<thead>
<tr>
<th>NPBT^A</th>
<th>Model 31 Belgium’s ACE-variant at 2006</th>
<th>Model 32 Belgium’s current ACE-variant</th>
<th>Withholding tax collected at 2006</th>
<th>Withholding tax currently collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>50.50</td>
<td>50.43</td>
<td>2.50</td>
<td>2.43</td>
</tr>
<tr>
<td>10</td>
<td>51.90</td>
<td>51.79</td>
<td>2.25</td>
<td>2.14</td>
</tr>
<tr>
<td>20</td>
<td>53.30</td>
<td>53.15</td>
<td>2.00</td>
<td>1.85</td>
</tr>
<tr>
<td>30</td>
<td>54.70</td>
<td>54.51</td>
<td>1.75</td>
<td>1.56</td>
</tr>
<tr>
<td>40</td>
<td>56.10</td>
<td>55.87</td>
<td>1.50</td>
<td>1.27</td>
</tr>
<tr>
<td>50</td>
<td>57.50</td>
<td>57.23</td>
<td>1.25</td>
<td>0.98</td>
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<tr>
<td>60</td>
<td>58.90</td>
<td>58.59</td>
<td>1.00</td>
<td>0.69</td>
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<td>59.95</td>
<td>0.75</td>
<td>0.40</td>
</tr>
<tr>
<td>80</td>
<td>61.70</td>
<td>61.31</td>
<td>0.50</td>
<td>0.11</td>
</tr>
<tr>
<td>90</td>
<td>63.10</td>
<td>62.85</td>
<td>0.25</td>
<td>0.00</td>
</tr>
<tr>
<td>100</td>
<td>64.50</td>
<td>64.50</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

However, this reduction in total tax payable is exactly commensurate with the reduction in withholding tax rates, rather than being a result of the lower ACE rate. This behaviour can be expressed algorithmically as follows:

\[
\]

The remainder of this section 5.5.1 explores behavioural responses if the subsidiary were located in Italy (Co I) instead of Australia (Co A). Italy’s system is preferable to Australia’s current system in relation to protecting the tax revenue base from the most tax-aggressive MNEs (where NPBT^A=0–20).

Under the Italian tax system, the lower bound of the AETR increases from 26.50% to a flat 27.78% for the majority of increments of MNE tax aggressiveness. However, in what appears to be a reverse of the tax implications of the Belgian NID, the upper bound under the Italian ACE decreases from 30.75% to 29.50%.
This result is illustrated in the below Table 33, whereby Model 35 simulates the Italian regime upon extracting the Italian ACE-variant.

Table 33 – Results of modelling the Italian ACE-variant over time on the Italian subsidiary (Co I)

<table>
<thead>
<tr>
<th>NPBT</th>
<th>Model 33 Italy’s ACE-variant at 2011</th>
<th>Model 34 Italy’s current ACE-variant</th>
<th>Model 35 Italy’s current regime ex-ACE-variant</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>55.51</td>
<td>55.51</td>
<td>55.51</td>
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<tr>
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<tr>
<td>20</td>
<td>55.51</td>
<td>55.51</td>
<td>55.51</td>
</tr>
<tr>
<td>30</td>
<td>55.51</td>
<td>55.51</td>
<td>55.51</td>
</tr>
<tr>
<td>40</td>
<td>55.51</td>
<td>55.51</td>
<td>55.51</td>
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<tr>
<td>50</td>
<td>55.51</td>
<td>55.51</td>
<td>55.51</td>
</tr>
<tr>
<td>60</td>
<td>55.51</td>
<td>55.51</td>
<td>55.51</td>
</tr>
<tr>
<td>70</td>
<td>56.05</td>
<td>56.05</td>
<td>56.05</td>
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<tr>
<td>80</td>
<td>57.03</td>
<td>57.03</td>
<td>57.03</td>
</tr>
<tr>
<td>90</td>
<td>58.02</td>
<td>58.02</td>
<td>58.02</td>
</tr>
<tr>
<td>100</td>
<td>59.00</td>
<td>59.00</td>
<td>59.00</td>
</tr>
</tbody>
</table>

While Singapore is not used as a round-tripping point as anticipated by the pure ACE model in the above section 5.4, it is still utilised by the MNE to minimise total tax payable. For completeness, as indicated in the above Table 33, the MNE has no behavioural response to the changes in the ACE rate. This suggests that any increase in the ACE rate would benefit the ability of the Italian reform to increase tax on economic rents without distorting MNE behaviour.

Further, rather than this result being entirely attributable to the impact of the Italian ACE-variant, this result is due to Italy’s use of an ‘interest cap rule’ instead of fixed debt-to-equity ratios. It is noteworthy that Italy’s ‘interest cap rule’ is a fixed net interest-to-EBITDA ratio, similar in operation to the OECD’s Recommendation.

5.5.2 OECD BEPS Action 4 Recommendation: Fixed Ratio Rule

This section is designed to test the OECD’s Recommendation on BEPS Action 4 – the recommendation for a fixed ratio rule (the ‘OECD’s Recommendation’). Assuming that the OECD’s Recommendation was adopted by Australia in place of the existing thin capitalisation
rules’ use of fixed debt-to-asset ratios, the AETR would be between 26.89–30.75% (where NPBT\textsuperscript{A}=0–100). So, this reform would result in only a nominal increase in total tax payable for the most tax-aggressive MNEs. Specifically, there would be a maximum 1.45% increase in total tax payable for the most tax-aggressive MNE (where NPBT\textsuperscript{A}=0). This is outlined in the below Table 34 and Figure 23.

Table 34 – Results of modelling the OECD’s Recommendation on the Australian subsidiary (CoA)

<table>
<thead>
<tr>
<th>NPBT\textsuperscript{A}</th>
<th>Model 1 Current regime</th>
<th>Model 36 Fixed Ratio Rule implemented by Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>53.00</td>
<td>53.77</td>
</tr>
<tr>
<td>10</td>
<td>53.85</td>
<td>54.50</td>
</tr>
<tr>
<td>20</td>
<td>54.70</td>
<td>55.22</td>
</tr>
<tr>
<td>30</td>
<td>55.55</td>
<td>55.95</td>
</tr>
<tr>
<td>40</td>
<td>56.40</td>
<td>56.68</td>
</tr>
<tr>
<td>50</td>
<td>57.25</td>
<td>57.40</td>
</tr>
<tr>
<td>60</td>
<td>58.10</td>
<td>58.13</td>
</tr>
<tr>
<td>70</td>
<td>58.95</td>
<td>58.95</td>
</tr>
<tr>
<td>80</td>
<td>59.80</td>
<td>59.80</td>
</tr>
<tr>
<td>90</td>
<td>60.65</td>
<td>60.65</td>
</tr>
<tr>
<td>100</td>
<td>61.50</td>
<td>61.50</td>
</tr>
</tbody>
</table>
In terms of capital structure and funding mix, the US entity would not be impacted by Australia’s unilateral adoption of the OECD’s Recommendation. Relevantly, the US Treasury’s recently finalised regulations under Section 385 of the Internal Revenue Code, were originally proposed giving authority to the IRS to classify certain intercompany debt instruments as quasi-equity. Academics such as Shaviro noted that this strict reform would bring the US rules closer to the German earnings-stripping rules. However, there was much opposition to this ‘bifurcation’ rule. Commentators opposed to these regulations posited that they would likely exceed the interest deductibility limits contemplated as part of the OECD’s BEPS Recommendation. Originally intended to be finalised by early-September 2016, the finalised regulations were released in mid-October 2016. In what was described as a “significant

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1070 These final and temporary regulations establish “... threshold documentation requirements that ordinarily must be satisfied in order for certain related-party interests in a corporation to be treated as indebtedness for federal tax purposes, and treat as stock certain related-party interests that otherwise would be treated as indebtedness for federal tax purposes”: US Government, Department of the Treasury, Internal Revenue Service, ‘Treatment of Certain Interests in Corporations as Stock or Indebtedness’ (26 CFR Part 1 [TD 9790], 21 October 2016); available at: <https://www.gpo.gov/fdsys/pkg/FR-2016-10-21/pdf/2016-25105.pdf>.


1073 However, Treasury had exceeded this expected deadline. At time of writing, October was considered a more likely time for the release of the final regulations: see, for example, Becker B, ‘What Congress Can’t Do (Help Apple)’, (Politico: Morning Tax, 6 September 2016); available at: <http://www.politico.com/tipsheets/morning-tax/2016/09/what-congress-cant-do-help-apple-216172#ixzz4JWjijUKS>.
change” by practitioners, the final regulations did not contain this rule. Rather, the preamble to the final regulations indicated that the US Treasury’s decision on this issue is reserved “pending additional study”.

In any event, the modelling shows that a fixed ratio based on the level of interest expense and earnings appears to be a more robust base protection technique than rules which limit the deductibility of expenses by reference to leverage ratios.

Australia would also see no substantial change upon unilateral adoption of the OECD Recommendation. The MNE would simply switch the funding type utilised in Australia from finance lease payments to a combination of royalty and interest payments to attain the same tax payable result in Australia. Despite the fact that the Fixed Ratio Rule allows greater interest relief at higher levels of MNE profitability, since the tax-minimising MNE aims to minimise global tax payable, it simply maximises its use of the Fixed Ratio Rule in Australia and obtains an additional deduction by introducing the requirement to make royalty payments from Australia to Singapore. As such, Singapore emerges as a substantial beneficiary because it would obtain the majority of NPBT from the most tax-aggressive MNEs through royalty payments (from NPBT =0–60) in a behavioural response similar to a corporate inversion. This is in contrast to the baseline model, where the Singaporean entity received no funding. For completeness, unlike some ACE-variants, the OECD’s Recommendation does not incentivise round-tripping.

Next, it is instructive to examine a situation of relatively ‘multilateral’ adoption of the OECD’s Recommendation – specifically, implementation by both the US and Australia in place of their respective existing thin capitalisation rules. Implementation of the OECD’s Recommendation by both the US and Australia in place of their respective existing thin capitalisation rules produces the same results as the above section 5.5.2, as also shown in the below Table 35 and Figure 24, irrespective of the benchmark fixed ratio selected by the US.

This result is attributable to the fact that under the minimisation problem solved in the above section 5.5.2, the hypothetical MNE had ensured that NPBT remained zero throughout when applying a unilateral fixed ratio rule. Accordingly, since the NPBT was already nil there was no need to change its capital structure or its funding mix upon implementation of the OECD’s Recommendation in the US. Similarly, under a multilateral fixed ratio rule the tax minimising MNE would make the same capital structure and funding mix decisions. These results are reflected in the below Table 35 and Figure 24.

Table 35 – Results of modelling the OECD’s Recommendation adopted both unilaterally and multilaterally on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBT A</th>
<th>Model 1 Current</th>
<th>Model 36 Fixed Ratio Rule implemented by Australia</th>
<th>Model 37 Fixed Ratio Rule implemented by Australia and US</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>53.00</td>
<td>53.77</td>
<td>53.77</td>
</tr>
<tr>
<td>10</td>
<td>53.85</td>
<td>54.50</td>
<td>54.50</td>
</tr>
<tr>
<td>20</td>
<td>54.70</td>
<td>55.22</td>
<td>55.22</td>
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<tr>
<td>30</td>
<td>55.55</td>
<td>55.95</td>
<td>55.95</td>
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<tr>
<td>40</td>
<td>56.40</td>
<td>56.68</td>
<td>56.68</td>
</tr>
<tr>
<td>50</td>
<td>57.25</td>
<td>57.40</td>
<td>57.40</td>
</tr>
<tr>
<td>60</td>
<td>58.10</td>
<td>58.13</td>
<td>58.13</td>
</tr>
<tr>
<td>70</td>
<td>58.95</td>
<td>58.95</td>
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</tr>
<tr>
<td>80</td>
<td>59.80</td>
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</tr>
<tr>
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<td>60.65</td>
</tr>
<tr>
<td>100</td>
<td>61.50</td>
<td>61.50</td>
<td>61.50</td>
</tr>
</tbody>
</table>

Figure 24 – Results of modelling the OECD’s Recommendation adopted both unilaterally and multilaterally on the Australian subsidiary (Co A)
As shown in the above Table 35 and Figure 24, for the less tax aggressive MNEs (specifically, where NPBT^A\geq 70 or higher) implementing the OECD’s Recommendation does not result in any improvement to tax revenue base protection compared to the current tax regime. In relation to the relatively more tax aggressive MNEs, the model developed in this study shows that both a unilateral and multilateral implementation of the OECD’s Recommendation will result in a slight increase in total tax payable by the MNE compared to the current regime. This result is most marked for the most tax-aggressive MNEs.

However, an even more interesting finding is that a thin capitalisation rule utilising debt-to-equity ratios with the definition of “interest” broadened to include the returns from both debt financing and finance leases is either equivalent to, or more effective, than utilising fixed net interest-to-EBITDA ratios at the 30% corridor. This result is shown in the below Table 36.

Table 36 – Results of modelling thin capitalisation rules with broadened scope and the OECD’s Recommendation on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBT^A</th>
<th>Model 6 Current thin cap rules with finance leasing</th>
<th>Model 36 Fixed Ratio Rule implemented by Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>53.77</td>
<td>53.77</td>
</tr>
<tr>
<td>10</td>
<td>54.54</td>
<td>54.50</td>
</tr>
<tr>
<td>20</td>
<td>55.32</td>
<td>55.22</td>
</tr>
<tr>
<td>30</td>
<td>56.09</td>
<td>55.95</td>
</tr>
<tr>
<td>40</td>
<td>56.86</td>
<td>56.68</td>
</tr>
<tr>
<td>50</td>
<td>57.63</td>
<td>57.40</td>
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<tr>
<td>60</td>
<td>58.41</td>
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</tr>
<tr>
<td>70</td>
<td>59.18</td>
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</tr>
<tr>
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<td>59.95</td>
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</tr>
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<td>90</td>
<td>60.73</td>
<td>60.65</td>
</tr>
<tr>
<td>100</td>
<td>61.50</td>
<td>61.50</td>
</tr>
</tbody>
</table>

Broadening the scope of the thin capitalisation rules to include “economically equivalent to interest” was a key feature of the BEPS Recommendation. This highlights the importance of policymakers prioritising this feature, which is reflected in secondary null hypothesis H1:

\[ H_1 – Thin \text{ capitalisation rules do not adequately protect the tax revenue base if designed to mitigate the broader cross-border intercompany funding bias.} \]

However, since the BEPS Recommendation only mitigates the cross-border intercompany funding bias, it is necessary to conduct further testing on reforms focussed on eliminating this
distortion. In addition, the logical extension is the absolute importance of prioritising the elimination of the funding bias, reflected in secondary null hypothesis H₂:

\[ H_2 \rightarrow \text{Thin capitalisation rules are not required if there is neutral tax treatment of MNEs’ intercompany funding activities.} \]

These hypotheses are tested in the following section 5.6.

5.6 DEVELOPING ALTERNATIVE REFORMS

Given the lack of cross-border funding neutrality grounding existing practice and proposed reforms, this section presents a novel approach to designing legislation. Specifically, by outlining reform proposals originating from an analysis of how a tax-minimising MNE behaves, this section develops an extended thin capitalisation rule and a cross-border ACE-CBIT.

These principles-based reforms are designed to attain funding neutrality, thereby reducing the possibility of utilising differences in the tax treatment of cross-border intercompany funding activities to engage in tax base erosion.

5.6.1 Extended thin capitalisation rule

This section explores the implications of implementing an extended thin capitalisation rule – with a consistent outcome of an increased total tax payable as a result of broadening the scope of thin capitalisation rules. Currently, the thin capitalisation rules set limits based on the amount of debt, rather than the interest rate charged. As detailed in the below section 5.6.2, since a cross-border ACE-CBIT would effectively operate as a limit on the deductibility of the interest rate charged on debt, this section instead focusses on the setting of capital ratios.

A principles-based approach necessitates extending thin capitalisation rules beyond the debt bias (in \( H_0 \)) to address the cross-border funding bias (‘extended thin capitalisation rules’). This can be achieved by broadening their scope to also include royalties and finance lease payments within the scope of financing because these flows are ‘economically equivalent’ to, or fungible with, interest.

Accordingly, this study first explores whether a unilaterally-applied extended thin capitalisation rule (Model 24) improves tax base protection outcomes. Specifically, where this variation is modelled with NPBT\(^A\) increments between 0–100, the AETR ranges between 29.03–30.75%. These findings suggest that, even though implementing an extended thin capitalisation rule cannot eliminate all tax planning (such that AETR is 34.50%), this proposal is more effective at tax revenue base protection than most other reforms considered –
particularly when dealing with the most tax-aggressive MNEs. The only exception is the CBIT, which attains a flat AETR of 30.75%.

When applied multilaterally, the extended thin capitalisation rule (Model 26) has an 18.9% improved total tax payable outcome for the most tax aggressive MNE (where NPBTₐ=0). This indicates that a multilaterally-applied extended thin capitalisation rule has the most significant ability to prevent tax base erosion at a magnitude very close to the pre-planning level of total tax payable, where Tₜ₀=69.

This marked improvement in base protection afforded by an extended thin capitalisation rule in comparison to both the existing regime and the OECD’s Recommendation is presented in the below Table 37 and Figure 25.

Table 37 – Results of modelling the OECD’s Recommendation and an extended thin capitalisation rule on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBTₐ</th>
<th>Model 1 Current regime</th>
<th>Model 36 Fixed Ratio Rule implemented by Australia</th>
<th>Model 24 Extended thin cap rule implemented by Australia</th>
<th>Model 26 Extended thin cap rule implemented by Australia and US</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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<td>53.77</td>
<td>58.05</td>
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<td>68.40</td>
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<tr>
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<td>61.50</td>
<td>61.50</td>
<td>61.50</td>
<td>69.00</td>
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</tbody>
</table>
This has significant international tax policy implications, indicating that a coordinated effort to broaden the scope of existing thin capitalisation rules may be a highly effective reform alternative to the OECD’s BEPS Recommendation. This results in two tax policy advantages from a simplicity perspective: one being the relative ease of implementation, since it can be built on the already-existing domestic rules and tax treaty network; the other being the absence of transition issues, as would be associated with implementing a more ‘fundamental’, ACE-inspired reform. Accordingly, this thesis rejects the secondary null hypothesis $H_1$, expressed as follows:

$H_1$ – Thin capitalisation rules do not adequately protect the tax revenue base if designed to mitigate the broader cross-border intercompany funding bias.

It is noteworthy that introducing an extended thin capitalisation rule unilaterally results in the MNE channelling funds into Singapore (Co S). Yet, unlike the ACE explored in the above section 5.4, Singapore is not used as a round-tripping point. Further, a strong preference remains for royalty payments being made from US (Co U) to Hong Kong (Co H) across all three variations. This is also reflected in the current literature.\textsuperscript{1076}

While tightening the current thin capitalisation regime has no impact on total tax payable, tightening the proposed unilaterally-applied extended thin capitalisation rules does result in an increased total tax payable (Model 25). This is shown in the below Table 38 and Figure 26. For


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completeness, the total tax payable benefit is not as significant as that under a multilaterally-applied extended thin capitalisation rule.

Table 38 – Results of modelling the extended thin capitalisation rule on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBT&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Model 1 Current regime</th>
<th>Model 24 Extended thin cap rule implemented by Australia</th>
<th>Model 25 Extended and tightened thin cap rule implemented by Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>53.00</td>
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</tr>
<tr>
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<td>61.50</td>
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</tr>
</tbody>
</table>

Figure 26 – Results of modelling the extended thin capitalisation rule on the Australian subsidiary (Co A)
While an extended thin capitalisation rule unilaterally applied in Australia results in up to 9.5% improvement in total tax payable (Model 24), tightening the ratio from 1.5:1 to 1:1 (Model 25) results in a 14.3% improvement to total tax payable at the most tax aggressive level (that is, where $NPBT^A=0$). In other words, even if multilateral implementation is not a possibility, the AETR for the most tax-aggressive MNEs is increased from 26.50% to either 29.05% or 30.29% (in relation to Models 24 and 25, respectively) under an extended thin capitalisation rule.

Accordingly, this variation presents a second-best option if implementation of a multilaterally-applied extended thin capitalisation rule is not possible.

5.6.2 Cross-border ACE-CBIT

There is a strong perception in the literature that thin capitalisation rules would no longer be required (or, at least, could be simplified) under an ACE. However, a research gap that remains in the literature is an applied exploration of the expanded inverted proposition – namely, whether it is possible to address the cross-border funding bias by adapting fundamental reforms into the cross-border context to improve or replace existing thin capitalisation rules.

As noted in the above section 2.5.4, the thin capitalisation rules currently set limits based on the amount of debt, rather than the interest rate charged on debt. A cross-border ACE-CBIT would effectively cap the deductibility of interest, thereby bypassing issues associated with arm’s length valuations. This is particularly timely given the *Chevron* decision. Further, this approach also effectively addresses the sustainability concerns raised in the ACE literature, while retaining its principles-based origins.

Accordingly, this section tests the secondary null hypothesis $H_2$:

$H_2$ – Thin capitalisation rules are not required if there is neutral tax treatment of MNEs’ intercompany funding activities.

In doing so, this section first explores four key variations of a unilaterally-applied cross-border ACE-CBIT, namely, a cross-border ACE-CBIT with: inbound-only thin capitalisation rules; outbound-only thin capitalisation rules; both inbound and outbound thin capitalisation rules; and no thin capitalisation rules. The results are shown in the below Table 39 and Figure 27.

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1077 *Chevron*, above n 169.
Table 39 – Results of modelling the cross-border ACE-CBIT on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBT^A</th>
<th>Model 20 Cross-border ACE-CBIT with thin cap rules</th>
<th>Model 21 Cross-border ACE-CBIT with no thin cap rules</th>
<th>Model 22 Cross-border ACE-CBIT with inbound thin cap rules</th>
<th>Model 23 Cross-border ACE-CBIT with outbound thin cap rules</th>
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</thead>
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</table>

Figure 27 – Results of modelling the ACE-CBIT on the Australian subsidiary (Co A)

A cross-border ACE-CBIT without thin capitalisation rules (Model 21) is less effective at targeting the most tax aggressive MNEs than a cross-border ACE-CBIT with either in- and outbound, or outbound thin capitalisation rules (Model 20 and Model 23, respectively).
In terms of capital structure changes, when comparing an ACE-CBIT with or without thin capitalisation rules, the direction of funds does change. Specifically, the existence of thin capitalisation rules prompts the MNE to channel funds into Singapore and utilise finance lease payments only out of Australia, instead of a combination of finance lease payments and interest. In relation to the US parent, the existence of thin capitalisation rules encourages the use of a split between royalties and finance lease payments, whereas without thin capitalisation rules only finance lease payments are utilised.

Accordingly, the key finding is that, while any variation of a cross-border ACE-CBIT is preferable to the current tax design, the inclusion of either outbound-only or both inbound and outbound thin capitalisation rules makes this reform even more robust when dealing with the most tax aggressive MNEs (specifically, where NPBT^A=0–10). These variations are 0.5% more effective than a cross-border ACE-CBIT with either inbound-only or no thin capitalisation rules, and with 9.9% more total tax payable than the current tax system.

This is a significant and unexpected result for two key reasons. First, the literature appears unanimous in its perception that thin capitalisation rules would not be required under an ACE, so an ACE-CBIT presumably ought to be no different. Second, this finding is particularly important given the model’s earlier result in the above section 5.3 that thin capitalisation rules have no impact under the current system (Model 1) to the extent that the MNE is indifferent to the presence or absence of thin capitalisation rules.

Even though this finding fails to reject the secondary null hypothesis H2, it presents an outcome which has not yet been contemplated by the literature. Namely, that even though thin capitalisation rules are not required under an ACE-CBIT, the existence of extended thin capitalisation rules within such a regime results in its overall strengthening. In other words, thin capitalisation rules are not required but they are a useful integrity measure even if there is neutral tax treatment of MNEs’ intercompany funding activities.

Based on this analysis, it appears that any variant of an ACE-CBIT will strengthen the tax revenue base, although with diminishing marginal benefit as NPBT^A increases. This suggests there are increased welfare gains for government from a cross-border ACE-CBIT reform, as it is even more effective at targeting the more tax aggressive MNEs.

Accordingly, it is instructive to consider variations with an extended thin capitalisation rule.

This study shows that, remarkably, the best reform option from a tax revenue base protection perspective would be to implement an extended thin capitalisation rule with a multilaterally-applied cross-border ACE-CBIT (Model 28). Superior to even the CBIT in section 5.4.2, this
variation entirely eliminates opportunities for tax base erosion by guaranteeing a flat AETR of 34.50%.

The variation with extended thin capitalisation rules with a unilaterally-applied cross-border ACE-CBIT (Model 27) renders a second-best outcome comparable to the CBIT (Model 19). The AETR for such a variation ranges between 30.13–30.75%, compared to the CBIT’s flat AETR of 30.75%. These results are also shown in the below Table 40 and Figure 28 – Results of modelling the cross-border ACE-CBIT with an extended thin capitalisation rule on the Australian subsidiary (Co A).

<table>
<thead>
<tr>
<th>NPBT A</th>
<th>Model 1 Current regime</th>
<th>Model 19 CBIT implemented by Australia</th>
<th>Model 27 Cross-border ACE-CBIT with extended thin cap implemented by Australia</th>
<th>Model 28 Cross-border ACE-CBIT with extended thin cap implemented by Australia and US</th>
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</thead>
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<tr>
<td>0</td>
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5.6.3 Proxy for the cross-border ACE-CBIT

As observed in section 2.5, there are substantial hurdles, complexities and transition issues associated with fundamental reforms such as the ACE. Accordingly, this section explores how currently implemented tax rules could be adjusted to operate in a similar way to the standalone cross-border ACE-CBIT (Model 21) proposed in the previous section 5.6.2.

One relatively pragmatic solution, given the relative ineffectiveness of thin capitalisation rules at protecting the tax revenue base, is to replace these rules with a flat withholding tax rate, extended across all current types of withholding taxes. The results of the modelling are reflected in the below Table 41 and Figure 29, with an extended thin capitalisation rule included for completeness.
Table 41 – Results of modelling a proxy for the cross-border ACE-CBIT on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBT&lt;sup&gt;A&lt;/sup&gt;</th>
<th>Model 1 Current regime</th>
<th>Model 21 Cross-border ACE-CBIT with no thin cap rules</th>
<th>Model 24 Extended thin cap rule implemented by Australia</th>
<th>Model 30 Flat withholding tax at 20%</th>
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<tbody>
<tr>
<td>0</td>
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</table>

The outcome of this modelling is that a flat withholding tax of 20% (Model 30) would effectively replicate a cross-border ACE-CBIT (Model 21), thereby protecting the tax revenue.
base in a considerably more effective manner than the current tax system as modelled in the above section 5.3.1 (Model 1).\footnote{1078} This emphasis on increasing the use of withholding taxes as a method of tax revenue base protection is largely consistent with the approach recently proposed by Avi-Yonah – that is, to have a coordinated reinstatement of withholding taxes on interest, dividends and royalties in order to preserve the integrity of the international tax system.\footnote{1079}

There are six key advantages to adopting this approach. First, since current tax treaties are already grouped into the relevant categories of dividends, royalties and interest, this solution does not require a conceptual shift in the design of the tax system. Further, as noted by both academics\footnote{1080} and practitioners,\footnote{1081} the increased use of withholding taxes as an approach to tax revenue base protection has the additional advantages of pragmatism, simplicity and relatively low cost of both compliance and collection. Finally, an increased withholding tax rate would likely limit windfall gains to foreign treasuries and/or increase the incidence of withholding taxes on MNEs. The rationale for this is expressed by the OECD, albeit exploring the inverse situation of a reduced withholding tax rate:\footnote{1082}

“Where a foreign tax credit is available, reductions in withholding tax rates would tend to provide windfall gains to foreign treasuries. Where withholding tax cannot be fully credited (e.g. where the host country corporate tax rate is relatively high and the parent is in an excess foreign tax credit position), the burden of withholding tax (and thus withholding relief) would generally be shared by the corporate group. With the incidence of withholding tax not falling directly and fully on host country affiliates, relief from withholding tax on inter-affiliate royalty and interest may not influence inter-affiliate charges, as in the unrelated party case.”

As such, this presents a seemingly effective – albeit blunt approach – in contrast to the more sophisticated approaches to achieving neutrality offered by the earlier two reform proposals in section 5.6.1 (the extended thin capitalisation rules) and section 5.6.2 (the cross-border ACE-CBIT). Further, unlike the secondary null hypothesis H\textsubscript{2}, which was rejected in section 5.6.1, this and the preceding section 5.6.2 fail to reject the secondary null hypothesis H\textsubscript{2}, that:

\begin{flushright}
\footnote{1078} Albeit not as effectively as, for example, an extended thin capitalisation rule with a cross-border ACE-CBIT, as modelled in the above section 5.6.2 (Model 27).
\footnote{1082} OECD, Tax Effects on Foreign Direct Investment, OECD Tax Policy Studies 17 (2007) 76.}
**H_2** – *Thin capitalisation rules are not required if there is neutral tax treatment of MNEs' intercompany funding activities.*

Nonetheless, given the global trend of declining withholding tax rates and the increase in the exemptions available from said withholding taxes, the use of a 20% withholding tax (Model 30) as a proxy for the cross-border ACE-CBIT may not presently be a viable alternative. Accordingly, this approach will not be explored further for the following four reasons. First, since withholding taxes are effectively presumptive taxes (particularly where foreign tax credits are not available), they may suffer from a lack of fairness. This is because taxpayers with substantially differing amounts of actual income must pay the same amount of tax if their presumptive tax base is the same. Second, withholding tax relief may factor positively into investment location decisions favouring the host country, by impacting the net profitability of investments. Third, reducing the rates of interest and royalty withholding tax may encourage the repatriation of earnings through intercompany interest and royalty payments. Finally, increasing withholding tax rates would involve substantial renegotiation of existing tax treaties.

### 5.7 CONCLUSION

The primary null hypothesis H_0 and the secondary null hypotheses H_1 and H_2 were directed by the overarching question guiding this thesis:

> “Given the opportunity to ‘start over’, would existing thin capitalisation rules be retained in their current form or would an alternative reform result in a more neutral tax treatment of cross-border intercompany funding activities?”

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1083 This is a particularly pressing issue to address given the “effective end of withholding tax in developed countries”, as described by Avi-Yonah, above n 410, 60. Relevantly, the Henry Review criticised Australia’s current treatment of foreign debt as complex and distortionary, recommending a reduction in the interest withholding tax rate to zero among tax treaty partners. With an effective interest withholding tax rate of 3.5%, liability for withholding tax would likely not outweigh the advantages of interest deductibility given comparative levels of corporate tax. While the literature has recognised the debt bias as prevalent in the foreign debt context, policy makers have called for the reduction of interest withholding tax to 0% provided appropriate safeguards exist to limit tax avoidance: “Recommendation 34: Consideration should be given to negotiating, in future tax treaties or amendments to treaties, a reduction in interest withholding tax to zero so long as there are appropriate safeguards to limit tax avoidance”; Henry Review, above n 195, Part 1, 87.


1085 OECD, above n 1082, 76.

1086 This is because these items are deductible against the corporate tax base, whereas dividends are not. This likely provided the impetus for the ‘corporate dividends-paid deduction’, as recently proposed by the US Senate Finance Committee; see further, Graetz M J and Warren A C, ‘Integration of Corporate and Shareholder Taxes’ *National Tax Journal* (forthcoming); Kleinbard E D, ‘The Trojan Horse of Corporate Integration’ *Tax Notes* (forthcoming).
The findings of these hypotheses are outlined in turn. The primary null hypothesis $H_0$ failed to be rejected and the secondary null hypothesis $H_1$ was rejected. This analysis shows that addressing the debt bias alone does not neutralise the tax treatment of cross-border intercompany funding activities. From both a theoretical and an empirical perspective, thin capitalisation rules are therefore not even a ‘second-best’ solution to the tax-induced cross-border funding bias. Rather, equalising the tax deductibility of fungible intercompany funding activities minimises opportunities for cross-border tax planning by MNEs. This highlights the importance of utilising funding neutrality as one of the guiding tax policy criteria in the design of these rules. Such a principled approach is particularly important since thin capitalisation rules are generally conceptualised as forming part of the anti-avoidance framework.

The secondary null hypothesis $H_2$, which failed to be rejected, suggests that even if funding neutrality were to be attained, the resulting neutrality would not make thin capitalisation rules redundant. This presents an unexpected and significant result; specifically, that the implementation of a cross-border ACE-CBIT in conjunction with an extended thin capitalisation rule would constitute the most effective reform compared to any other unilaterally-applied regime.

The results of the various tax systems and reform options are extracted in Table 42 and Figure 30 below.
Table 42 – Overview of results of modelling various tax systems and reform options on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBT</th>
<th>Model 1 Current regime</th>
<th>Model 6 Current thin cap rules with finance leasing</th>
<th>Model 15 Unilateral ACE without thin cap rules</th>
<th>Model 19 CBIT implemented by Australia</th>
<th>Model 20 Cross-border ACE-CBIT with thin cap rules</th>
<th>Model 21 Cross-border ACE-CBIT with no thin cap rules</th>
<th>Model 24 Extended thin cap rule implemented by Australia</th>
<th>Model 26 Extended thin cap rule implemented by Australia and US</th>
<th>Model 27 Cross-border ACE-CBIT with extended thin cap implemented by Australia</th>
<th>Model 28 Cross-border ACE-CBIT with extended thin cap implemented by Australia and US</th>
<th>Model 30 Flat withholding tax at 20%</th>
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<td>59.80</td>
<td>60.80</td>
<td>60.80</td>
<td>60.81</td>
<td>67.80</td>
<td>61.25</td>
<td>69.00</td>
<td>60.80</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>60.65</td>
<td>60.73</td>
<td>60.65</td>
<td>61.15</td>
<td>61.15</td>
<td>61.16</td>
<td>68.40</td>
<td>61.38</td>
<td>69.00</td>
<td>61.15</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>61.50</td>
<td>61.50</td>
<td>61.50</td>
<td>61.50</td>
<td>61.50</td>
<td>61.50</td>
<td>69.00</td>
<td>61.50</td>
<td>69.00</td>
<td>61.50</td>
<td></td>
</tr>
</tbody>
</table>

\(^4\)NPBT: Net Present Book Tax
Accordingly, the top two reform options developed in this study are: first, a multilaterally-applied cross-border ACE-CBIT with extended thin capitalisation rules; and second, a multilaterally-applied extended thin capitalisation rule. This results in the failure to reject the secondary null hypothesis $H_2$.

If multilateral implementation is not possible due to a lack of international coordination, a unilaterally-applied cross-border ACE-CBIT and/or extended thin capitalisation rules provide ‘second-best’ alternatives. Specifically, the order of preference would be: first, a unilaterally-applied cross-border ACE-CBIT with extended thin capitalisation rules; second, a unilaterally-applied cross-border ACE-CBIT in addition to existing thin capitalisation rules; third, extended thin capitalisation rules; and fourth, unilaterally-applied cross-border ACE-CBIT in place of existing thin capitalisation rules.

The orders of preference and characteristics of each of these reforms are shown in Table 43 below:
Table 43 – Summary of preferences and characteristics of ‘second-best’ reform alternatives

<table>
<thead>
<tr>
<th>Rank</th>
<th>Variation</th>
<th>Description</th>
<th>Model</th>
<th>min(T) when NPBT&lt;sup&gt;a&lt;/sup&gt;=0</th>
<th>AETR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Multilateral</td>
<td>Cross-border ACE-CBIT with extended thin cap implemented by Australia and US</td>
<td>Model 28</td>
<td>69.00</td>
<td>34.50%</td>
</tr>
<tr>
<td>2</td>
<td>Multilateral</td>
<td>Extended thin cap rule implemented by Australia and US</td>
<td>Model 26</td>
<td>63.00</td>
<td>31.50%</td>
</tr>
<tr>
<td>3</td>
<td>Unilateral</td>
<td>Cross-border ACE-CBIT with extended thin cap implemented by Australia</td>
<td>Model 27</td>
<td>60.26</td>
<td>30.13%</td>
</tr>
<tr>
<td>4</td>
<td>Unilateral</td>
<td>Cross-border ACE-CBIT with thin cap rules</td>
<td>Model 20</td>
<td>58.26</td>
<td>29.13%</td>
</tr>
<tr>
<td>5</td>
<td>Unilateral</td>
<td>Extended thin cap rule implemented by Australia</td>
<td>Model 24</td>
<td>58.05</td>
<td>29.03%</td>
</tr>
<tr>
<td>6</td>
<td>Unilateral</td>
<td>Cross-border ACE-CBIT with no thin cap rules</td>
<td>Model 21</td>
<td>58.00</td>
<td>29.00%</td>
</tr>
</tbody>
</table>

Despite the ability of the CBIT to protect the tax revenue base, it is excluded from this shortlist given the negative reception it has historically received, as highlighted in the above section 2.5.2. Further, given the reasons outlined in the previous section 5.6.3, the use of a 20% withholding tax (Model 30) as a proxy for the cross-border ACE-CBIT is also excluded from this shortlist. For completeness, the maximum attainable AETR under this model, assuming tax planning were not possible, is 34.50%.
The primary null hypothesis $H_0$ fails to be rejected and the secondary null hypothesis $H_1$ is rejected. This corroborates the importance of utilising economic efficiency as one of the guiding tax policy criteria in the design of these rules. Such a principled approach is particularly importance since thin capitalisation rules are generally conceptualised as forming part of the anti-avoidance framework.

The secondary null hypothesis $H_2$, which failed to be rejected, suggests that even if funding neutrality were to be attained, the resulting neutrality would not make thin capitalisation rules redundant. This presents an unexpected and significant result; specifically, that the implementation of a cross-border ACE-CBIT in conjunction with an extended thin capitalisation rule would constitute the most effective reform compared to any other unilaterally-applied regime.
6 DEVELOPING PRINCIPLES-BASED PROPOSALS FOR TAX REFORM

6.1 INTRODUCTION

The analysis in Chapter 3 and findings in Chapter 5 highlight that distortions in the tax treatment of otherwise fungible intercompany activities affect MNEs’ cross-border structuring decisions.

However, as detailed in Chapter 4, currently implemented and/or proposed policy responses do not have their origins in the principle of tax neutrality, which would require that all fungible forms of intercompany funding flows be taxed as economic equivalents. At best, these policy responses aim to eliminate the debt bias – which, even if attained, does not eliminate the wider funding bias. Further, the literature has not yet contemplated taxing these activities under an expansive concept such as the ‘cross-border funding bias’.

As explored in Chapter 5, if the economic efficiency principle – as applied in the ACE literature – is adapted to the cross-border setting, this can substantially limit MNEs’ tax planning opportunities by eliminating distortions in the taxation of intercompany funding flows.

Accordingly, this Chapter 6 offers a new approach to designing and evaluating legislation based on the previous chapter’s observations on how a tax-minimising MNE behaves. This expands the existing literature by proposing policy responses grounded in the concept of cross-border funding neutrality, thereby proposing reforms that may be more effective at eliminating cross-border tax planning – even when applied unilaterally.

Specifically, section 6.2 presents two proposals for principles-based reform: the unilateral implementation of either an extended thin capitalisation rule (‘Proposal 1’) or a cross-border ACE-CBIT in conjunction with an extended thin capitalisation rule (‘Proposal 2’).

Proposal 1 consists of designing improvements that expand the scope of the existing thin capitalisation regime. These design improvements include extending the restriction on tax deductibility beyond debt financing to also include equity financing, licensing and leasing activities thereby forming an ‘extended thin capitalisation rule’. This proposal offers the advantage of ease of administration given the existing prevalence of thin capitalisation regimes worldwide.

The ‘cross-border ACE-CBIT’ proposed by this thesis presents a principled reform, which is grounded in the economic rent literature. This reform could be implemented either in place of, or in addition to, the existing (or extended) thin capitalisation regime. However, from a tax
revenue base protection perspective, the ideal combination is to implement the cross-border ACE-CBIT in conjunction with an extended thin capitalisation rule, as shown in Chapter 5. Accordingly, this constitutes Proposal 2 since it is one of the most effective unilaterally-applied reforms considered in this study.

These two key proposals also undergo validation testing in section 6.2.3. This is supplemented by section 6.2.4, which highlights the importance of adopting a broader institutional approach.

### 6.2 DEVELOPING PROPOSALS FOR PRINCIPLES-BASED REFORM

Emerging from the legal analysis in the above section 2.4.3, from both a design efficacy and a practicality perspective, it is important to ensure that proposals for reform are both simple and administrable. As noted by the Review of Business Taxation, while clarity and consistency are two key features of tax law, “detail has a tendency to bury principle ... [and] clarity is often more likely to be achieved by the statement of a principle rather than the elaboration of detail” ¹⁰⁸⁷

Even though the Review of Business Taxation was likely the impetus for Australia’s current thin capitalisation regime, these rules suffer from a high degree of complexity – and arguably ineffectiveness. This is evinced by the latest inquiry by the Australian Senate Standing Committee on Economics, which observed that thin capitalisation is among the top five base erosion and profit shifting risks in relation to MNEs. ¹⁰⁸⁸ This is largely attributable to the ‘invisibility’ of intercompany flows.

Accordingly, this Chapter 6 proposes administrable and effective reforms grounded in the principle of ‘cross-border funding neutrality’ which target intercompany activities. This is on the basis that reform proposals having administrative practicability likely stand a stronger chance of gaining widespread acceptance. ¹⁰⁸⁹ This may bolster the political motivation to reform the existing thin capitalisation regime.

It is important to note that since this thesis focusses on only a particular aspect of MNE taxation within one jurisdiction, rather than reform of an entire tax system or the overall global

¹⁰⁸⁷ Australian Government, above n 911, 85.
¹⁰⁸⁸ Australian Government, above n 6, 20.
¹⁰⁸⁹ In the international tax policy context, the merits of a pragmatic approach grounded in administrative practicability have seen widespread acceptance for nearly a century. For an in-depth history of the development of the international taxation framework dating back to the International Chamber of Commerce’s Double Taxation Committee and, in particular, the approach adopted by T S Adams (credited with much of the taxation policy of the World War I and post-war period), see Graetz M J and O’Hear M M, ‘The “Original Intent” of US International Taxation’ (1997) 46(5) Duke Law Journal 1021, 1100–2.
system, its focus is limited. However, by proposing the restriction of tax deductibility for intercompany transactions, this thesis suggests a reform that better addresses the distortions in the tax treatment of cross-border intercompany activities. Unlike other reform proposals such as global formulary apportionment, this approach does not risk limiting the tax sovereignty of jurisdictions and would likely result in simplification from a tax administration perspective. Further, unlike the OECD’s Recommendation on BEPS Action 4 for a fixed ratio rule, this proposal contemplates both the issues of intercompany transactions (which account for more than 60% of global trade in terms of value) and of taxing economic rents (which will likely encourage marginal investment while minimising tax-induced distortions).

Operationalising both proposals involves policymaker decisions on rate- and base-setting. The below Table 44 summarises the tax rate and tax base underlying each proposal modelled in the preceding Chapter 5. Here, the ‘base’ is in relation to the scope of the thin capitalisation rules and the ‘rate’ represents the allowable deductions for the various types of intercompany funding activities. This rate could either be the actual rate of return or a ‘reasonable’ return, which would be determined by reference to a proxy such as the government bond rate, as contemplated in the ACE literature.

Table 44 – Summary of the tax rate and tax base underlying Proposals 1 and 2 (P1 highlighted)

<table>
<thead>
<tr>
<th>Baseline</th>
<th>Proposal 1</th>
<th>Proposal 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 24</td>
</tr>
<tr>
<td>Current regime</td>
<td>Extended thin cap rule implemented by Australia</td>
<td>Cross-border ACE-CBIT with thin cap rules</td>
</tr>
<tr>
<td>Rate</td>
<td>$\bar{P}/\bar{L}/\bar{F} = 100%$</td>
<td>$\bar{P}/\bar{L}/\bar{F} = 100%$</td>
</tr>
<tr>
<td></td>
<td>$\bar{I}^E = 0%$</td>
<td>$\bar{I}^E = 0%$</td>
</tr>
<tr>
<td>Base</td>
<td>$D : E$</td>
<td>$D : E$</td>
</tr>
<tr>
<td></td>
<td>$1 : 1.5$</td>
<td>$1 : 1.5$</td>
</tr>
</tbody>
</table>

Modelling and operationalising these proposals necessitates applying an element of pragmatism and simplicity. However, this would not be at the expense of economic efficiency, as is currently the case. Rather, implementing either Proposal 1 or Proposal 2 to attain cross-border funding neutrality would result in substantial benefits to efficiency, certainty and simplicity.
6.2.1 Proposal 1: Extended thin capitalisation rules

As observed in the literature review, there is a global trend towards implementing thin capitalisation rules, whether with fixed debt-to-equity ratios\(^{1090}\) or fixed net interest-to-EBITDA ratios. So, even though the model assumes that the ‘denominator’ of the tax base is equity, it could be operationalised by reference to an EBITDA ratio.

What is most significant about this proposal arises from the tax treatment of the ‘numerator’, which broadens the scope of what is considered fungible with interest to also include licensing and finance leasing.\(^{1091}\)

Since Proposal 1 does not even go as far as to change the existing rates of deductibility, this study shows that even a relatively minor change to broaden thin capitalisation rules can lead to improved tax revenue base protection outcomes.

Currently, Australia’s thin capitalisation regime primarily utilises two of the three broad categories of regulatory method,\(^{1092}\) namely ‘bright line’ rules and ‘complex or detailed rules’. However, as noted by the Australian Law Reform Commission, both of these categories are susceptible to manipulation or creative compliance.\(^{1093}\)

Accordingly, this section instead recommends the adoption of a principles-based approach to amending the thin capitalisation regime by extending and strengthening key aspects of its design. Given the complexity of this regime, spanning over 150 pages of the \textit{ITAA97}, a full redrafting is beyond the scope of this study but is rather the subject of further research.

One of the key limitations of the existing thin capitalisation regime is that it operates within the confines of the current paradigm of income taxation with a ‘debt/equity all-or-nothing’ approach, which has precluded innovative solutions from being considered.\(^{1094}\) At best, policy responses in this arena will eliminate the debt bias – which, even if attained, does not eliminate the wider ‘cross-border funding bias’, thereby still giving rise to distortions in the tax treatment of otherwise fungible intercompany activities.

\(^{1090}\) Even though Australia’s thin capitalisation rules utilise a debt-to-assets ratio, this has been converted to the equivalent debt-to-equity ratio for two reasons: first, international consistency, so that Australia’s rules are readily comparable with other jurisdictions; second, the model developed by this thesis does not consider ‘assets’ and since it is limited to examining intercompany flows this approach gives rise to a neater proof.

\(^{1091}\) Since the cost of equity financing is not deductible under this proposal, it is not necessary to include this in the numerator.


\(^{1094}\) Brauner, above n 18, 24.
Under Australia’s thin capitalisation regime, the meaning of “debt deduction” is set out in section 820-40 of the ITAA97, as follows:

**Meaning of debt deduction**

(1) *Debt deduction*, of an entity and for an income year, is a cost incurred by the entity in relation to a * debt interest* issued by the entity, to the extent to which:

(a) the cost is:

(i) interest, an amount in the nature of interest, or any other amount that is calculated by reference to the time value of money; or

(ii) the difference between the * financial benefits received, or to be received, by the entity under the * scheme giving rise to the debt interest and the financial benefits provided, or to be provided, under that scheme; or

(iii) any amount directly incurred in obtaining or maintaining the financial benefits received, or to be received, by the entity under the scheme giving rise to the debt interest; or

(iv) any other expense incurred by the entity that is specified in the regulations made for the purposes of this subparagraph; and

(b) the entity can, apart from this Division, deduct the cost from its assessable income for that year;

(2) A cost covered by paragraph (1)(a) includes, but is not limited to, any of the following:

(a) an amount in substitution for interest;

(b) a discount in respect of a security;

(c) a fee or charge in respect of a debt, including application fees, line fees, service fees, brokerage and stamp duty in respect of document registration or security for the debt interest;

(d) an amount that is taken under an * income tax law to be an amount of interest in respect of a lease, a hire purchase arrangement or any other * arrangement specified in that law;

(e) any loss in respect of:

(i) a reciprocal purchase agreement (otherwise known as a repurchase agreement);

(ii) a sell-buyback arrangement;

(iii) a securities loan arrangement;

(f) any amount covered by paragraph (1)(a) that has been assigned or is dealt with in any way on behalf of the party who would otherwise be entitled to that amount.

(3) To avoid doubt, the following amounts that are incurred by an entity in relation to a * debt interest* issued by the entity are not covered by paragraph (1)(a):

(a) losses and outgoings directly associated with hedging or managing the financial risk in respect of the debt interest;

(b) losses incurred by the entity in relation to which the following apply:

(i) the losses would otherwise be a cost covered by subparagraph (1)(a)(ii); but

(ii) the benefits mentioned in that subparagraph are measured in a foreign currency or a unit of account other than Australian currency (for example, ounces of gold) and the losses have arisen only because of changes in the rate of converting that foreign currency or that unit of account into Australian currency;

(c) salary or wages;

(d) rental expenses for a lease if the lease is not a debt interest;

(e) an expense specified in the regulations made for the purposes of this paragraph.

However, the meaning of “debt interest” as referred to in the above section 820-40 is defined by reference to the debt and equity regime contained in Division 974 of the ITAA97.
(specifically, section 974-15). For completeness, a test for, and exemptions to, a debt interest are also contained in sections 974-20 and 974-25, respectively. Further, many finance leases are not subject to Australia’s current thin capitalisation regime due to the limited definition of “financing arrangement”.

On the other hand, a principles-based approach consistent with the concept of intercompany funding neutrality would conceptualise the ‘mischief’ as any excessive deductions – not only debt deductions – arising from fungible intercompany activities.

This is broadly consistent with the approach taken in the OECD’s Recommendation, as explored in the above section 5.5.2. However, this study considers this approach within the limited context of intercompany financing, while expanding the scope of the activities falling within the term “economically equivalent to interest”, given the principle of ‘cross-border funding neutrality’ developed in this thesis.

Accordingly, the extended thin capitalisation rule would apply to: interest on all forms of debt financing, payments economically equivalent to interest arising from fungible intercompany activities, and expenses incurred in connection with the raising of finance.

It is also noteworthy that thin capitalisation rules already have scope for regulatory updates; that is, regulations can currently be made to further specify what falls within the scope of a “debt deduction” and a “financial benefit”.

This includes, but is not limited to, cash flows or accruals attributable as the interest component (whether real, notional or imputed) relating to:

- guarantee fees;
- derivative instruments or hedging arrangements;
- financial instruments, including zero coupon or PIK bonds;
- alternative financing arrangements;
- capitalised interest, or the amortisation of capitalised interest;

---

1095 “At the moment most leasing activities are not subject to the thin capitalisation rules because of the definition of financing arrangement in ITAA s 974–130. Hence many finance leases are treated in the same way as other leases, and only a small subset of leases, recharacterised as a sale and loan, are subject to thin capitalisation rules”: Frost T et al, above n 995, 11.

1096 “Financial instruments can also be used to make payments which are economically equivalent to interest but have a different legal form, therefore escaping restrictions on the deductibility of interest”: OECD, above n 15, 11.


1098 OECD, above n 15, 29–30. Regarding the characterisation of payments economically equivalent to interest, the focus is on economic substance rather than legal form. Further, payments that are economically equivalent to interest include those which are linked to the financing of an entity and are determined by applying a fixed or variable percentage to an actual or notional principal over time.

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• arrangement fees and similar costs;
• finance lease payments;
• funding returns under transfer pricing rules;
• foreign exchange gains and losses;
• hybrid financing arrangements;
• discounts on provisions related to borrowings; or
• transfers of income streams, including intercompany royalty payments.

For the avoidance of doubt, the above is an indicative, rather than definitive, list. Any arrangements which, taken as a whole, give rise to amounts which are economically equivalent to interest may be subject to limitation under this approach.

The underlying purpose of this is to attain cross-border funding neutrality, such that MNEs are subject to the same tax treatment for otherwise fungible intercompany financing arrangements.

6.2.2 Proposal 2: Cross-border ACE-CBIT with extended thin capitalisation rules

Although a cross-border ACE-CBIT (Model 20) is more effective than the current regime (Model 1), a cross-border ACE-CBIT is substantially more effective when implemented in conjunction with an extended thin capitalisation regime (Model 27). This double limit restricts opportunities for tax revenue base erosion. As such, Proposal 2 outlined in this section contemplates implementing the cross-border ACE-CBIT in addition to – rather than alternatively to – the above Proposal 1. So, the above discussion applies equally to this section, and need not be repeated here.

In addition to broadening the scope of thin capitalisation rules, as proposed in the above section 6.2.1, Proposal 2 suggests an additional mechanism to limit the rate of deductions relating to intercompany funding activities. Specifically, the cross-border ACE-CBIT developed in this study proposes that a partial deduction be allowed for all forms of intercompany funding, including debt, equity, licensing and finance leasing. This is illustrated in the below Table 45 (where the magnitude of the deduction is 50% across all fungible forms of intercompany funding activities). This provision would operate in place of existing deductibility provisions otherwise concerning these transactions.
Table 45 – Summary of the tax rate and tax base underlying Proposals 1 and 2 (P2 highlighted)

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Proposal 1</th>
<th>Proposal 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baseline</strong></td>
<td>Model 1</td>
<td>Model 24</td>
<td>Model 20</td>
</tr>
<tr>
<td><strong>Current regime</strong></td>
<td>Model 24</td>
<td>Extended thin cap rule implemented by Australia</td>
<td>Cross-border ACE-CBIT with thin cap rules</td>
</tr>
<tr>
<td><strong>Model 27</strong></td>
<td>Model 27</td>
<td>Cross-border ACE-CBIT with extended thin cap implemented by Australia</td>
<td></td>
</tr>
<tr>
<td><strong>Rate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\rho^{D}/\rho^{E} = 100%$</td>
<td>$\rho^{D}/\rho^{E} = 100%$</td>
<td>$\rho^{D}/\rho^{E} = 50%$</td>
<td>$\rho^{D}/\rho^{E} = 50%$</td>
</tr>
<tr>
<td>$t^{E} = 0%$</td>
<td>$t^{E} = 0%$</td>
<td>$t^{E} = 50%$</td>
<td>$t^{E} = 50%$</td>
</tr>
<tr>
<td><strong>Base</strong></td>
<td>$D : E$</td>
<td>$D + L + F : E$</td>
<td>$D : E$</td>
</tr>
</tbody>
</table>
| $1 : 1.5$        | $1 : 1.5$ | $1 : 1.5$ | $1 : 1.5$

It is important to note that under the variations modelled in the preceding Chapter 5, it was assumed that the withholding tax rates would remain unchanged. A criticism of this assumption could be that this invariably does not eliminate all non-neutrals.

However, this does not preclude Proposal 2, which is the cross-border ACE-CBIT implemented in conjunction with an extended thin capitalisation rule, from attaining cross-border funding neutrality. Rather, this proposal presents a pragmatic approach grounded in administrative practicability, which would be harder to achieve unilaterally given the requirement to renegotiate tax treaties if withholding taxes were a central part of this proposal.

As highlighted in the above section 2.5.4, a combined ACE-CBIT addresses the design criticisms directed towards both the ACE and CBIT proposals. The cross-border ACE-CBIT deduction is a partial deduction calculated by reference to either the risk-free rate, using the long-term government bond rate as a proxy,\textsuperscript{1099} or a rate that reflects market conditions. Either rate will likely enhance neutrality and growth\textsuperscript{1100} because this mechanism likely avoids distortions relating to the type of financing arrangement. So, even if returns are industry- or sector-specific, this presents a better outcome from an economic efficiency perspective than the current system.

This limitation to applying the cross-border ACE-CBIT to intercompany transactions also bypasses the critique by Høj raised in the above literature review. Specifically, Høj observed that if the long-term government bond rate were used for equity financing, there would still remain a tax preference in favour of debt financing, which applied a rate reflecting market

\textsuperscript{1099} This long-term government bond rate may be the residence or source jurisdiction’s rate, or the average (or weighted average) of all jurisdictions’ rates where the MNE has a presence.

\textsuperscript{1100} Høj, above n 478.
conditions. Since the cross-border ACE-CBIT would apply one rate to both forms of intercompany financing, this would bypass the issue explored by Høj because the neutrality property would still hold. Despite the concern in the literature regarding the different costs of debt and equity, this assumption is unlikely to be applicable because the risk profile between these two forms of funding is likely not differentiated at the intercompany level.

6.2.3 Validation testing

6.2.3.1 Proposal 1: Extended thin capitalisation rules

This section critically evaluates the design of Proposal 1 through scenario analysis of various hypothetical firm-specific illustrative examples in the Australian context with the function of both comparative and integrity testing. Specifically, this section explores whether differences in an MNE’s internal cost of capital may impact the effectiveness of Proposal 1. This process is carried out using two variations: one in which when the cost of capital for all types of intercompany activities is increased to 10% and the other in which the cost of capital for all types of intercompany activities is decreased to 5%.

The following steps delineate the process by which this scenario analysis is performed.

**Step one:** Extract the baseline data. This data consists of the results from the modelling of the original Models 1 and 24. All sub-variations contemplated in the above Chapter 5 (namely, from 0–200 in increments of 10) necessarily form part of this analysis.

The outcome of this step is presented in the below Table 46.
Table 46 – Establishing the validation testing ‘baseline’ data on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBT&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Baseline</th>
<th>Model 1 Current regime</th>
<th>Model 24 Extended thin cap rule implemented by Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>53.00</td>
<td>58.05</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>53.85</td>
<td>58.40</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>54.70</td>
<td>58.74</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>55.55</td>
<td>59.09</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>56.40</td>
<td>59.43</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>57.25</td>
<td>59.78</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>58.10</td>
<td>60.12</td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>58.95</td>
<td>60.47</td>
<td></td>
</tr>
<tr>
<td>80</td>
<td>59.80</td>
<td>60.81</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>60.65</td>
<td>61.16</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>61.50</td>
<td>61.50</td>
<td></td>
</tr>
</tbody>
</table>

**Steps two and three:** Initialise the scenario analysis data set for ‘variations’ in the form of increases and decreases in the internal cost of capital to, for example, 10% and 5%. These steps involve specifying each sub-variation (also in increments of 10, as above). For ease of reference, only one sub-variation where NPBT<sup>a</sup>=50 is extracted in graphical form in Annexure C. Completing this step involves transcribing and compiling the given data values for each sub-variation.

The outcome of these steps is presented in the below Table 47.
Table 47 – Results of validation testing of the extended thin capitalisation rule on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBT^a</th>
<th>Variation 1 (r=10%)</th>
<th>Variation 2 (r=5%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 24 Extended thin cap rule implemented by Australia</td>
<td>Model 1 Current regime</td>
</tr>
<tr>
<td>0</td>
<td>58.05</td>
<td>53.00</td>
</tr>
<tr>
<td>10</td>
<td>58.40</td>
<td>53.85</td>
</tr>
<tr>
<td>20</td>
<td>58.74</td>
<td>54.70</td>
</tr>
<tr>
<td>30</td>
<td>59.09</td>
<td>55.55</td>
</tr>
<tr>
<td>40</td>
<td>59.43</td>
<td>56.40</td>
</tr>
<tr>
<td>50</td>
<td>59.78</td>
<td>57.25</td>
</tr>
<tr>
<td>60</td>
<td>60.12</td>
<td>58.10</td>
</tr>
<tr>
<td>70</td>
<td>60.47</td>
<td>58.95</td>
</tr>
<tr>
<td>80</td>
<td>60.81</td>
<td>59.80</td>
</tr>
<tr>
<td>90</td>
<td>61.16</td>
<td>60.65</td>
</tr>
<tr>
<td>100</td>
<td>61.50</td>
<td>61.50</td>
</tr>
</tbody>
</table>

**Step four:** Cross-reference each of the values generated with their counterparts in the original Models 1 and 24, which represent the current regime and the proposed extended thin capitalisation rules (Proposal 1), respectively. This step also involves examining and determining the rationales for these outcomes.

This consideration of scenario analysis demonstrates a method through which Proposal 1 can be assessed and evaluated. Although this section only considers two variations with sub-variations in increments of 10, many more scenario instances could have been included within the scenario analysis. The results of this scenario analysis demonstrate that differences in an MNE’s internal cost of capital do not impact the effectiveness of Proposal 1.

An examination of each sub-variation, as extracted in Annexure C, shows that the hypothetical MNE simply restructures its underlying transactions by changing their magnitude depending on the desired resultant intercompany deduction amount. This ensures the amount and type of intercompany deduction remains constant across the variations, thereby attaining the optimised total tax payable at each sub-variation (which is a proxy for the level of tax aggressiveness).
As demonstrated in Annexure C1, where the internal cost of capital increases to 10% (from the original 7.5%), the intercompany loan from Hong Kong to Australia (denoted as ‘D_{HA}’) is simply assigned a principal amount of $250 (rather than the original $333.33). Similarly, the equity financing from Singapore to Australia (denoted as ‘E_{SA}’) is assigned a principal amount of $166.67 (rather than the original $222.22). Also, the underlying financing leases from Singapore and Hong Kong, respectively, to the US (denoted as ‘L_{SU}’ and ‘L_{HU}’, respectively) are assigned principal amounts of $25.64 and $474.36 (rather than the original $34.18 and $632.48), respectively.

To ensure the scenario analysis is appropriately tested, it is also instructive to cross-reference the integrity of the Model 1 variations. Under the baseline Model 1, the MNE utilises both intercompany licenses and financing leases, resulting in royalty payments from the US to Hong Kong and finance lease payments from the US to Australia. The Model 1 sub-variation which represents the current regime where the MNE has an internal cost of capital of 10%, as illustrated in Annexure C2, results in the same capital structure. The optimised solution is also adhered to such that, regardless of an increase or decrease in the internal cost of capital, the MNE will restructure to attain the same minimised total tax payable.

As demonstrated in Annexure C2, where the internal cost of capital increases to 10% (from the original 7.5%), the underlying intercompany license (denoted as ‘L_{HU}’) is simply assigned a principal amount of $500 (rather than the original $666.67). Similarly, the underlying financing lease (denoted as ‘F_{HA}’) is assigned a principal amount of $250 (rather than the original $333.33).

The same outcome arises from a reduction in the MNE’s internal cost of capital. Accordingly, if the MNE is subject to a higher internal cost of capital, it is simply required to decrease the magnitude of the underlying transactions to achieve the same outcome, and vice versa. This result is consistent with the theory in the area that MNEs shift their profits to lower-taxing jurisdictions and their deductions to higher-taxing jurisdictions.

One criticism of the above analysis may be that the assumption that the internal cost of capital is the same across all types of intercompany transactions is misguided. Accordingly, the remainder of this section explores the implications of having a higher cost of equity on the results.

This involves preparing a further variation, one in which the cost of equity is 10% with all other types of intercompany funding remaining at 7.5%. The result is a slightly increased optimised total tax payable, as shown in the below Table 48. This increase is attributable to the

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1101 This is based on the analysis by Høj; see further, Høj, above n 478.
inability of the MNE to fully offset the increased tax payable from dividend withholding taxes, since the amount of equity financing from Singapore (Co S) to Australia (Co A) remains unchanged. For completeness, this is accompanied by the alternation of the funding mix by increasing the use of intercompany licences from Singapore (Co S) to the US (Co U) and decreasing the use of intercompany licences from Hong Kong (Co H) to the US (Co U).

Table 48 – Results of validation testing of the extended thin capitalisation rule where cost of equity financing is higher on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBT (%)</th>
<th>Baseline</th>
<th>Variation 3 ((r_E=10%))</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 24</td>
</tr>
<tr>
<td></td>
<td>Current</td>
<td>Extended thin cap rule</td>
</tr>
<tr>
<td></td>
<td>regime</td>
<td>implemented by Australia</td>
</tr>
<tr>
<td>0</td>
<td>53.00</td>
<td>58.05</td>
</tr>
<tr>
<td>10</td>
<td>53.85</td>
<td>58.40</td>
</tr>
<tr>
<td>20</td>
<td>54.70</td>
<td>58.74</td>
</tr>
<tr>
<td>30</td>
<td>55.55</td>
<td>59.09</td>
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<tr>
<td>40</td>
<td>56.40</td>
<td>59.43</td>
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<td>50</td>
<td>57.25</td>
<td>59.78</td>
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<tr>
<td>60</td>
<td>58.10</td>
<td>60.12</td>
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<tr>
<td>70</td>
<td>58.95</td>
<td>60.47</td>
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<tr>
<td>80</td>
<td>59.80</td>
<td>60.81</td>
</tr>
<tr>
<td>90</td>
<td>60.65</td>
<td>61.16</td>
</tr>
<tr>
<td>100</td>
<td>61.50</td>
<td>61.50</td>
</tr>
</tbody>
</table>

6.2.3.2 Proposal 2: Cross-border ACE-CBIT with extended thin capitalisation rules

Similarly to the above section 6.2.3.1, this section critically evaluates the design of Proposal 2 through scenario analysis of various hypothetical firm-specific illustrative examples in the Australian context with the function of both comparative and integrity testing. It is necessary to explore the relationship between an MNE’s internal cost of capital and the effectiveness of Proposal 2 if either the risk-free or a market rate is used to determine the cross-border ACE-CBIT rate. This process is carried out using three variations: one in which the cost of capital for all types of intercompany activities is increased to 10% (with a proportionate increase in the rate, to proxy a market rate); another in which the cost of capital for all types of intercompany activities is increased to 10% (with the same absolute rate as under the baseline model, to proxy...
a risk-free rate); and a third, in which the cost of capital for all types of intercompany activities is decreased to 5%.

Although this section only considers three variations with sub-variations in increments of 10, many more scenario instances could be included within the scenario analysis. However, given the results, it is not instructive to do so.

The results of this scenario analysis demonstrate that differences in an MNE’s internal cost of capital have no impact on the effectiveness of Proposal 2. An examination of each sub-variation, as extracted in the below Table 49, shows that the hypothetical MNE simply restructures its underlying transactions by changing their magnitude according to the desired resultant intercompany deduction amount.

Variations 1, 2 and 3 are further illustrated in Annexures C3, C4 and C5, respectively. In them, the intercompany deductions, and therefore total tax payable, remain the same with the only change being to the magnitude of the underlying principal for these flows. Specifically, the intercompany equity financing between Singapore and Australia (denoted as ‘D_SA’) is simply assigned a principal amount of $200 or $400 (rather than the original $266.67) when the internal cost of capital is increased to 10% or decreased to 5%, respectively. This rationale is replicated for all other intercompany flows, namely the intercompany licensing from Singapore to the US and from Hong Kong to the US (denoted as ‘L_SU’ and ‘L_HU’, respectively) and the intercompany financing financing from Hong Kong to Australia (denoted as ‘D_HA’). This ensures that the amount and type of intercompany deduction remain constant across the variations, thereby attaining the optimised total tax payable at each sub-variation (which is a proxy for the level of tax aggressiveness). This is the same strategy deployed by the hypothetical MNE in relation to the scenario analysis conducted for Proposal 1.
Table 49 – Results of validation testing of the cross-border ACE-CBIT with an extended thin capitalisation rule on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBT(^A)</th>
<th>Baseline</th>
<th>Variation 1  ((r=10% \text{ proportionate}))</th>
<th>Variation 2  ((r=10% \text{ absolute}))</th>
<th>Variation 3  ((r=5% \text{ proportionate}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>53.00</td>
<td>60.26</td>
<td>61.50</td>
<td>60.26</td>
</tr>
<tr>
<td>10</td>
<td>53.85</td>
<td>60.39</td>
<td>61.50</td>
<td>60.39</td>
</tr>
<tr>
<td>20</td>
<td>54.70</td>
<td>60.51</td>
<td>61.50</td>
<td>60.51</td>
</tr>
<tr>
<td>30</td>
<td>55.55</td>
<td>60.63</td>
<td>61.50</td>
<td>60.63</td>
</tr>
<tr>
<td>40</td>
<td>56.40</td>
<td>60.76</td>
<td>61.50</td>
<td>60.76</td>
</tr>
<tr>
<td>50</td>
<td>57.25</td>
<td>60.88</td>
<td>61.50</td>
<td>60.88</td>
</tr>
<tr>
<td>60</td>
<td>58.10</td>
<td>61.00</td>
<td>61.50</td>
<td>61.00</td>
</tr>
<tr>
<td>70</td>
<td>58.95</td>
<td>61.13</td>
<td>61.50</td>
<td>61.13</td>
</tr>
<tr>
<td>80</td>
<td>59.80</td>
<td>61.25</td>
<td>61.50</td>
<td>61.25</td>
</tr>
<tr>
<td>90</td>
<td>60.65</td>
<td>61.38</td>
<td>61.50</td>
<td>61.38</td>
</tr>
<tr>
<td>100</td>
<td>61.50</td>
<td>61.50</td>
<td>61.50</td>
<td>61.50</td>
</tr>
</tbody>
</table>

Further, this scenario analysis also shows that where the cross-border ACE-CBIT rate is set at the risk-free rate (instead of by reference to the MNE’s market rate), this proposal prevents the MNE from being able to engage in base erosion. This is because the model output shows the MNE has a total tax payable of $61.50 for all sub-variations from 0–100, as demonstrated in the below Figure 31. This finding is consistent with – and provides further support for – the perception in the literature that utilising the risk-free rate is preferable in ACE-based design.
Additional integrity testing also confirms that, where the MNE’s internal cost of capital is lower and the risk-free rate is applied, then even though the MNE is able to reduce its total tax payable more so than under a market-based rate, the outcome is still preferable to the current
regime. So, Proposal 2 presents an improvement to the existing regime regardless of whether a market rate or risk-free rate is utilised as the cross-border ACE-CBIT deduction. This is shown in Annexure C6.

This result holds even in the variation presenting the worst-case scenario, namely when the MNE has an internal cost of capital identical to the rate of the allowable deduction under the cross-border ACE-CBIT. This is shown in Annexure C7. As expected, this variation results in a lower total tax payable than the baseline variation of Proposal 2 (which, for this sub-variation where NPBT^A=50 was T=60.88). However, the total tax payable under this worst-case variation remains higher than the total tax payable under the current regime (where NPBT^A=50 results in T=57.25).

Due to their similarity, and to avoid repetition with the above section 6.2.3.1, this section does not replicate any integrity testing of the variations of Model 1.

The remainder of this section explores whether there would be a detrimental impact on the effectiveness of Proposal 2 (the cross-border ACE-CBIT with extended thin capitalisation rules) if the assumption that the internal cost of capital is the same across all types of intercompany transactions were flawed.

Even though this section could explore a plethora of variations, it is sufficient to explore only one option – namely, where the cost of equity is greater. This is to test the model against the assumption in the literature that the cost of equity financing is higher than the cost of debt financing.

Accordingly, in this variation the cost of capital for equity financing is increased to 10% while all other types of intercompany activities remain at 7.5% (with the same absolute value of the cross-border ACE-CBIT deduction applied across all types of intercompany activities). As shown in the below Table 50, the modelling confirms that applying the same absolute value of the cross-border ACE-CBIT deduction across all types of intercompany activities prevents the MNE from being able to engage in base erosion. This further confirms the above finding (in relation to Figure 31) that utilising the risk-free rate is preferable in ACE-based design.
Table 50 – Results of validation testing of the cross-border ACE-CBIT with extended thin capitalisation rule where cost of equity financing is higher on the Australian subsidiary (Co A)

<table>
<thead>
<tr>
<th>NPBT^A</th>
<th>Baseline</th>
<th>Variation 6 (r^2=10%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 27 Cross-border ACE-CBIT with extended thin cap implemented by Australia</td>
</tr>
<tr>
<td>0</td>
<td>53.00</td>
<td>60.26</td>
</tr>
<tr>
<td>10</td>
<td>53.85</td>
<td>60.39</td>
</tr>
<tr>
<td>20</td>
<td>54.70</td>
<td>60.51</td>
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<td>40</td>
<td>56.40</td>
<td>60.76</td>
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<tr>
<td>50</td>
<td>57.25</td>
<td>60.88</td>
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<tr>
<td>60</td>
<td>58.10</td>
<td>61.00</td>
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<tr>
<td>70</td>
<td>58.95</td>
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<td>59.80</td>
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<tr>
<td>90</td>
<td>60.65</td>
<td>61.38</td>
</tr>
<tr>
<td>100</td>
<td>61.50</td>
<td>61.50</td>
</tr>
</tbody>
</table>

However, it is also important to acknowledge the limitations of these proposed regimes. One key limitation of the model developed in this study is that it has an Australian-centric approach, focussing on sub-variations based on the Australian subsidiary’s operations. Of course, the operation of MNEs is much more complex in practice. However, this is beyond the scope of this thesis and the subject of further research.

More broadly, the most substantial practical hurdle to reform is that, as demonstrated in both the Belgian and Italian contexts in the above Chapter 4, there would need to be a radical change in the economic and political landscape for such fundamental reform to be implemented.
6.2.4 The importance of a broader institutional approach

With the advent of globalisation, the economic realities of the current structure of international trade and commerce have shifted. The rise of MNEs and their ability to engage in sophisticated cross-border tax planning techniques have governments and policymakers struggling to deal with the implications.

There is a widespread perception that these problems can be countered by, inter alia, tightening existing anti-avoidance rules or fine-tuning these rules by implementing piecemeal amendments as issues arise. However, this study finds that these strategies are not an effective mechanism when it comes to attaining cross-border funding neutrality – and the wider problems that arise from the distortive tax treatment between otherwise fungible intercompany funding activities. Indeed, since legislation is limited by the words used, legislative rules are inevitably susceptible to uncertainty as the global economic landscape shifts.

The plethora of amendments to Australia’s current thin capitalisation regime have not alleviated this uncertainty. As observed in section 2.4.4.3, nearly half of all amendments to Australia’s current thin capitalisation regime merely corrected omissions (denoted as ‘Omission’ in the below Table 51), while a quarter of amendments clarified or aligned the operation of the rules with the intention of the originating legislation (denoted as ‘Aligning’). On the other hand, only a quarter of amendments extended or developed the thin capitalisation regime (denoted as ‘Extended’, and in bold).

This is itemised in Table 51 below.
Accordingly, the following two-pronged approach may overcome the challenges faced by policymakers reforming cross-border tax rules; first, evolving the function of administrative agencies and law reform bodies; and second, heightening the capacity of courts and tribunals. Each will be dealt with in turn.

First, evolving the function of administrative agencies and law reform bodies by entrusting them with preparing and updating regulations would likely result in reduced complexity and uncertainty. This is also compatible with the existing framework for thin capitalisation rules, which currently has scope for regulatory updates. Increasing the responsibilities of a central policy agency – particularly one equipped with technical experts – would likely lead to a more responsive approach. The legislature could thereby reduce the impact of issues arising from the

\[\text{Table 51 – Overview of amendments to Australia’s current thin capitalisation regime}\]

<table>
<thead>
<tr>
<th>Number</th>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>162</td>
<td>2001</td>
<td>Originating</td>
</tr>
<tr>
<td>53</td>
<td>2002</td>
<td>Aligning</td>
</tr>
<tr>
<td>117</td>
<td>2002</td>
<td>Aligning</td>
</tr>
<tr>
<td>16</td>
<td>2003</td>
<td>Omission</td>
</tr>
<tr>
<td>142</td>
<td>2003</td>
<td>Aligning</td>
</tr>
<tr>
<td>21</td>
<td>2005</td>
<td>Omission</td>
</tr>
<tr>
<td>41</td>
<td>2005</td>
<td>Omission</td>
</tr>
<tr>
<td>64</td>
<td>2005</td>
<td>Extended</td>
</tr>
<tr>
<td>58</td>
<td>2006</td>
<td>Omission</td>
</tr>
<tr>
<td>101</td>
<td>2006</td>
<td>Omission</td>
</tr>
<tr>
<td>143</td>
<td>2007</td>
<td>Omission</td>
</tr>
<tr>
<td>164</td>
<td>2007</td>
<td>Omission</td>
</tr>
<tr>
<td>97</td>
<td>2008</td>
<td>Omission</td>
</tr>
<tr>
<td>145</td>
<td>2008</td>
<td>Extended</td>
</tr>
<tr>
<td>15</td>
<td>2009</td>
<td>Extended</td>
</tr>
<tr>
<td>90</td>
<td>2010</td>
<td>Extended</td>
</tr>
<tr>
<td>115</td>
<td>2012</td>
<td>Aligning</td>
</tr>
<tr>
<td>88</td>
<td>2013</td>
<td>Omission</td>
</tr>
<tr>
<td>101</td>
<td>2013</td>
<td>Aligning</td>
</tr>
<tr>
<td>110</td>
<td>2014</td>
<td>Extended</td>
</tr>
</tbody>
</table>

\[^{1102}\text{For example, regulations can currently be made to further specify what falls within the scope of a “debt deduction” and a “financial benefit”: Australian Government, above n 1097.}\]
rapidly evolving international tax landscape by enacting ‘intransitive’ laws setting out relatively high-level goals and avoiding micro-management. This approach is neither radical nor unheard of, and is consistent with the principles-based reform proposals contained earlier in this section 6.2.

The second aspect of this broader institutional approach is to heighten the capacity of courts and tribunals. This could be achieved by embedding the underlying concepts upon which a tax law is based, to facilitate a more purposive approach to interpretation being adopted by the judiciary. This would have the additional benefit of crystallising the underlying concepts and principles in order to facilitate the court’s application of the rules to new circumstances – which may currently be unanticipated and ‘unanticipatable’. This further strengthens the justification for adopting a principles-based reform proposal, as outlined earlier in this section 6.2.

6.3 CONCLUSION

The findings in Chapter 5 and the proposals developed in this chapter could provide the catalyst for changing the tax treatment of cross-border intercompany transactions. Even though there is no single unilateral measure which would entirely eliminate the problems identified in this thesis, the unilateral measures proposed and explored in section 6.2 provide ‘second-best’ alternatives which more effectively attain the objectives underlying existing thin capitalisation regimes.

These proposals have their genesis in the principle of tax neutrality, which suggests that ceteris paribus all like income should be treated alike for tax purposes, thereby providing a neutral basis for the taxation of cross-border intercompany flows. So, even though a key feature of operationalising these proposals involves a policy decision on ratio- or rate-setting, which necessitates applying an element of pragmatism and simplicity, this would not be at the expense

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1103 “For very difficult and complex problems ... [intransitive laws] grant agency officials limited discretion to decide about initial measures to take, and to introduce new measures as they gain experience.”: Seidman A, Seidman R B and Abeyasekere N, Legislative Drafting for Democratic Social Change (Kluwer, 2001) 157; see further, Surrey S S, ‘Complexity and the Internal Revenue Code: The Problem of the Management of Tax Detail’ (1969) 34(4) Law and Contemporary Problems 673.
1105 “The real choice, I believe, is not between detailed rules that we have today and less detailed legislation, when detailed legislation wins on the ground of certainty; but between detailed rules and less detailed legislation interpreted in accordance with principles, where less detailed legislation wins on the ground of certainty because the use of principles provides predictability”: Avery Jones, above n 1104, 79.
of economic efficiency as is currently the case. Rather, attaining cross-border funding neutrality would result in substantial gains in efficiency, certainty and simplicity.

These principles-based reform proposals are detailed in section 6.2; they are, specifically, the unilateral implementation of either an extended thin capitalisation rule (‘Proposal 1’) or a cross-border ACE-CBIT in conjunction with an extended thin capitalisation rule (‘Proposal 2’).

Proposal 1 consists of designing improvements that expand the scope of the existing thin capitalisation regime. These design improvements include extending the restriction on tax deductibility beyond debt financing to also include equity financing, licensing and leasing activities thereby forming an ‘extended thin capitalisation rule’. This proposal offers the advantage of ease of administration, given the prevalence of thin capitalisation regimes worldwide.

Proposal 2 consists of implementing a cross-border ACE-CBIT in conjunction with an extended thin capitalisation rule. As further confirmed by validation testing carried out in section 6.2.3, this proposal constitutes the most effective unilaterally-applied reform.

As highlighted in section 6.2.4, rather than focusing on ever-tightening potentially anti-avoidance legislation that fails to address the wider distortion of the cross-border funding bias, it is crucial that policymakers consider how the increasing mobility and fungibility of capital – particularly in the cross-border intercompany setting – produce challenges in a broader institutional context. In the absence of international tax coordination and absolute information sharing, the enormous diversity, complexity and invisibility of cross-border intercompany financing activities renders the need for principles-based reform – and a broader institutional approach to designing, implementing and maintaining such reform – increasingly urgent.
7 RESULTS AND CONCLUSION

7.1 SUMMARY

The importance of the tax neutrality principle in the design of cross-border taxation law and policy is the central thread of this thesis, which posits that reducing distortions in the current tax treatment of cross-border intercompany funding activities is more effective at minimising incentives for tax planning than introducing further complex anti-avoidance rules.

While the fields of international taxation law and policy are expansive, their intersection remains largely underexplored, especially in the context of eliminating distortions in the tax treatment of cross-border intercompany funding flows.

Currently, thin capitalisation rules are commonly utilised by governments to constrain debt deductibility in the cross-border intercompany setting. These rules are widely perceived as an anti-avoidance mechanism that limits tax base erosion. Despite this perception, the legal basis for these rules does not reconcile with the economic basis, because these complex and ad hoc rules present only imperfect solutions to the problem of the ‘debt bias’.

Accordingly, the focus of this research was on the tax treatment of cross-border intercompany activities, and in particular, whether equalising the tax deductibility of fungible intercompany funding activities minimises opportunities for cross-border tax planning by MNEs.

The key outcomes and findings of this research include:

1. Bridging the pure economic theory, practical optimisation modelling and applied legal research literatures by exploring theory, practice and issues in practice.
2. Analysing the effectiveness and shortcomings of the current tax treatment of cross-border intercompany transactions through legal comparative analysis of past and proposed policy responses to the perceived problem of the debt bias.
3. Simulating cross-border intercompany tax planning responses to applied past, present and proposed tax regimes, with the effectiveness of each analysed at varying degrees of tax aggressiveness.
4. Developing practical recommendations for reform by proposing the unilateral implementation of either an extended thin capitalisation rule or a cross-border ACE-CBIT applied in conjunction with an extended thin capitalisation rule.

This thesis presents a number of important contributions in terms of both the research approach undertaken and the results achieved.
Specifically, this study:

1 Introduced the concept of ‘cross-border funding neutrality’ to identify the shortcomings of the current tax treatment of cross-border intercompany activities. On the basis that income is a ‘flow’ from capital assets, this concept expands on the ‘debt bias’ literature to encompass fungible cross-border funding flows, including licensing and leasing activities in addition to debt and equity financing. This facilitated the development of a new evaluation framework utilising ‘cross-border funding neutrality’ and other tax policy criteria as a rubric for the subsequent practical- and conceptual-level analysis of current and proposed policy responses, and the tax reform proposals developed by this study.

2 Applied economic first-principles originating from the ACE literature to the thin capitalisation rules setting, thereby bridging these two areas of the literature to address the shortcomings of the current tax treatment of cross-border intercompany activities.

3 Developed a novel linear programming model representing a hypothetical tax-minimising MNE’s behavioural responses to various existing and proposed tax regimes. To date, this is the most sophisticated optimisation model developed to illustrate the fungibility, and overcome the invisibility, of intercompany transactions in the cross-border setting.

7.2 FINDINGS AND CONCLUDING REMARKS

Thin capitalisation rules are widely perceived as an anti-avoidance mechanism that limit tax base erosion from cross-border intercompany activities. Despite this perception, the legal basis for these rules does not reconcile with the economic basis.

In their current form, thin capitalisation rules are inadequate, internationally inconsistent, arbitrary and complex, with a marked absence of specific guidance at an international level, thereby presenting only imperfect solutions to the problem of the ‘debt bias’. This has resulted in policymakers continually tightening these rules in an attempt to increase their effectiveness, as exemplified by Australia’s thin capitalisation experience examined in Chapter

1107 Rules are inadequate, internationally inconsistent, arbitrary and complex: “The present system raises little revenue, is complicated, creates incentives for aggressive income shifting, and interferes with companies’ efficient use of capital as they try to avoid the dividend repatriation tax”: Grubert and Altshuler, above n 2, 672.

1108 Further, the inadequacy of these regimes has been criticised by the OECD, observing that the “[current] rules provide opportunities to associate more profits with legal constructs and intangible rights and obligations, and to legally shift risk intra-group, with the result of reducing the share of profits associated with substantive operations”: OECD, above n 14, 5.
2. The design and operation of these rules has gained increased attention from governments and policymakers worldwide.

Currently, policymakers and governments are attempting to strengthen their thin capitalisation rules by utilising one of two methods. The first involves replacing their reliance on fixed debt-to-equity ratios with fixed net interest-to-EBITDA ratios. This was most recently suggested by the OECD’s best practice recommendation on BEPS Action 4 in October 2015. The second method involves further tightening existing thin capitalisation rules’ fixed debt-to-equity ratios, which is also thought to protect the tax revenue base. This was recently noted by the Australian government in April 2016.

However, the central problem emerging from the introduction and literature review is that the existing framework of the international tax system operates inconsistently with economic reality, thereby giving rise to tax-induced distortions in the treatment of intercompany activities. This is particularly problematic in the cross-border setting, with policymakers currently utilising piecemeal rules that do not adequately address the underlying tax-induced distortions.

This thesis demonstrated that, from the perspective of a corporate group, cross-border intercompany funding flows are fungible. Accordingly, funding neutrality cannot be attained by eliminating the debt bias alone. Rather, it is necessary to neutralise the tax treatment between all fungible funding flows, regardless of whether these flows are labelled debt, equity, licensing or leasing.

In doing so, the concept of ‘cross-border funding neutrality’ was introduced and utilised as a criterion in the evaluation framework developed in Chapter 3.

This evaluation framework was then operationalised in a two-pronged evaluation: first, the legal analysis in Chapter 4; and second, the modelling in Chapter 5. This has three-fold implications by: utilising an objective measure to justify; strengthening the conceptual foundations of; and bolstering the practical value of, the reform proposals developed and tested in Chapter 6.

Specifically, the legal analysis explored existing theoretical and practical approaches used to address the debt bias. This included a longitudinal analysis of both the Belgian and Italian ACE-variants, with a focus on exploring the research gap on the relationship between implementing an ACE and eliminating the need for thin capitalisation rules. An assessment of past and proposed policy responses against the evaluation framework was carried out, concluding that while each may present a varying degree of attaining the latter three criteria in the evaluation framework, none of these policy responses target the primary criterion of attaining ‘cross-border funding neutrality’.
Two findings of Chapter 4 were particularly noteworthy. First, even a partial-ACE system was found likely to mitigate the debt bias. This presents a counterargument to the ACE literature which posits that a partial ACE risks providing a mere sweetener for equity financing without addressing the debt bias. The Belgian and Italian ACE-variants only partially implemented the ACE system, yet these jurisdictions experienced a dramatic reduction in their effective tax rate on capital, with a negative EMTR indicating that even a partial ACE has a significant impact on the tax treatment of marginal investments.

Second, the interaction between thin capitalisation rules and ACE-variants suggests an inversely proportional relationship. Specifically, as the Belgian and Italian ACE-variants were phased out this was generally accompanied by a tightening of thin capitalisation rules.

As such, Chapter 4 provides a useful reference point for policymakers’ future considerations regarding reforming the taxation of MNEs and, more specifically, bridges the gap between the theoretical options available and the practical operation of reform alternatives applied in this context. This presented the context and basis for the proposals developed in Chapter 5.

The findings of the modelling described in Chapter 5 provided support for the proposition identified in the literature review that eliminating tax-induced distortions would protect governments’ tax revenue base.

Further, this analysis showed that addressing the debt bias alone would not neutralise the tax treatment of cross-border intercompany funding activities. As such, from both a theoretical and empirical perspective, thin capitalisation rules are probably not even a ‘second-best’ solution to the problem of the tax-induced cross-border funding bias. Rather, only by equalising the tax deductibility of all fungible intercompany funding activities could cross-border tax planning opportunities be minimised. Also, it was shown that unilaterally attaining cross-border funding neutrality cannot eliminate the opportunities for a tax-minimising MNE to engage in tax planning. However, attaining multilateral cross-border funding neutrality was found to successfully eliminate these opportunities.

Based on both the ACE literature and the legal analysis of the ACE-variants, it was expected that thin capitalisation rules would not be required where there is neutral tax treatment of MNEs’ intercompany funding activities. However, a significant and unexpected result – which has not yet been contemplated by the literature – was that the implementation of a cross-border ACE-CBIT in conjunction with an extended thin capitalisation rule would constitute the most effective reform compared to any other unilaterally-applied regime.

Chapter 6 expanded the existing literature by proposing policy responses grounded in the concept of cross-border funding neutrality, thereby proposing reforms that may be more effective at eliminating tax planning. This would remain the case even when applied
unilaterally; specifically, in the form of the unilateral implementation of either an extended thin capitalisation rule (‘Proposal 1’) or a cross-border ACE-CBIT in conjunction with an extended thin capitalisation rule (‘Proposal 2’).

Proposal 1 expands the scope of the existing thin capitalisation regime. This is achieved by extending the restriction on tax deductibility beyond debt financing to also include equity financing, licensing and finance leasing activities thereby forming an ‘extended thin capitalisation rule’. This proposal offers the advantage of ease of administration given the existing prevalence of thin capitalisation regimes worldwide.

Proposal 2 is the cross-border ACE-CBIT implemented in conjunction with an extended thin capitalisation rule. As further confirmed by validation testing, this proposal is the most effective unilaterally-applied reform.

Both proposals are designed to be both administrable and grounded in the principle of cross-border funding neutrality. This may bolster the political motivation to reform the existing thin capitalisation regime, because reform proposals grounded in administrative practicability likely stand a stronger chance of gaining widespread acceptance.

Chapter 6 observed that, rather than tweaking or tightening thin capitalisation rules which fail to address the wider distortion of the cross-border funding bias, policymakers ought to consider how the increasing mobility and fungibility of capital – particularly in the cross-border intercompany setting – gives rise to challenges in a broader institutional context. In the absence of international tax coordination and absolute information sharing, the enormous diversity, complexity and invisibility of cross-border intercompany financing activities render the need for principles-base reform – and a broader institutional approach to designing, implementing and maintaining such reform – increasingly urgent.

7.3 LIMITATIONS AND FUTURE DIRECTIONS FOR FURTHER RESEARCH

Although the results presented in this thesis have demonstrated the effectiveness of applying cross-border funding neutrality in the tax treatment of intercompany deductions, this cannot solve all of the problems associated with base erosion and profit shifting by MNEs. Rather, this thesis highlights the importance of the tax neutrality principle in the design of cross-border taxation law and policy.

In the course of this study, potential areas for future research were identified – many of which are a direct consequence of questions raised in this thesis.
These future directions for further research include:

1. This study was only concerned with tax-minimising MNEs that were responsive to cross-border tax-induced distortions given the deductibility of passive payments. Further research may study the effects on both passive and active investment.

2. The linear programming model developed by this thesis is constrained to a single MNE over a one-period timeframe and lacks the sophistication and complexity of replicating MNE behaviours on a global scale over time given the plethora of tax rules internationally. This includes but is not limited to parameters such as PE rules and CFC regimes, and industry- or sector-specific features, which are beyond the scope of this model. Further research will expand the model to include these additional parameters and also explore the use of multi-stage decision processes through dynamic programming – rather than linear programming – in the cross-border intercompany context.

3. The conceptual model developed in this study adopts an Australian-centric approach, conceptualising the hypothetical MNE’s propensity to minimise tax in Australia as a proxy for overall tax aggressiveness. Of course, the operation of MNEs is much more complex in practice.

4. This research assumed that removing distortions in the tax treatment of fungible intercompany transactions will result in efficiency benefits. However, the magnitude of the indirect benefits in the form of further investment, economic growth and improvements to welfare are beyond the scope of this thesis.

5. Other alternative reform proposals such as the ACC, which addresses issues in corporate-shareholder taxation, were not the focus of this study but may offer further research opportunities.

6. This study focussed on the tax treatment of intercompany financing transactions rather than those of financial institutions, a detailed critique of which is beyond the scope of this research. This necessitated excluding significant portions of the Australian thin capitalisation rules relating only to financial institutions.

7. In the absence of international tax coordination and absolute information sharing, the enormous diversity, complexity and invisibility of cross-border intercompany financing activities renders the need for principles-based reform – and a broader institutional approach – increasingly urgent. This would assist governments, policymakers and researchers in designing, implementing and maintaining reforms.
7.4 CONCLUSION

This research extends the literature by exploring whether a fundamental reform grounded in cross-border funding neutrality would result in a more effective tax treatment of cross-border intercompany funding activities.

Practical measures were developed to restrict relief for cross-border intercompany deductions relating to passive income by designing an evaluation framework grounded in the principle of tax neutrality. This presented the conceptual foundations for tax reform proposals to expand or replace the existing thin capitalisation rules.

Based on both the ACE literature and the legal analysis of the ACE-variants, it was expected that thin capitalisation rules would not be required where there is neutral tax treatment of MNEs’ intercompany funding activities. However, a significant and unexpected result – which has not yet been contemplated by the literature – was that the implementation of a cross-border ACE-CBIT in conjunction with an extended thin capitalisation rule would constitute the most effective reform compared to any other unilaterally-applied regime. This finding has not yet been contemplated by the literature.

Ultimately, the findings and the proposals developed in this research may provide the catalyst for changing the tax treatment of cross-border intercompany transactions. Even though there is no single unilateral measure which would entirely eliminate the problems identified, the unilateral measures proposed and explored provide ‘second-best’ alternatives which would more effectively attain the objectives underlying existing thin capitalisation regimes.
ANNEXURES

ANNEXURE A

A1 – Defining the objective function

Since this model is only concerned with the intercompany activities conducted to minimise tax, the only relevant constraints relate to these intercompany transactions. $NPBT_{i,0}$ is the amount of Net Profit Before Tax (‘$NPBT$’) of company $i$ at the beginning of the period; $NPBT_{i,1}$ is the amount of NPBT of company $i$ at the end of the period; $r_i^*$ is the tax rate defined by the government of country $i$. For simplicity, the ‘real’ NPBT is a constant for each entity in each jurisdiction and is given ($NPBT_{i,0}$). The impact of the sum of intercompany transactions in each affiliate on NPBT is denoted as follows:

$$NPBT_{i,1} = NPBT_{i,0} + I_i + V_i + R_i + P_i$$

(provided $NPBT_{i,t+1} > 0$, $TTP > 0$. However, if $NPBT_{i,t+1} \leq 0$, then $TTP = 0$. For completeness, if $NPBT_{i,t+1} > 0$, then $TTP = NPBT_{i,t+1} \times r_i^*$. Further, this model assumes that there are no tax losses, so $TTP \geq 0$.

The general optimisation problem is the minimisation of the objective function by adjusting the design variables and at the same time satisfying the constraints. In the present analysis, the objective function is total tax payable (‘$T$’) for the corporate group.

$$\text{Minimise: } T = \sum_{i=1}^{n} NPBT_{i,t+1} \times r_i^*$$

This model is initially set with NPBT at $100 for both affiliates in the high-tax jurisdictions and with NPBT as $0 for the affiliate in the lower-tax jurisdiction.

\footnote{While the ‘effective tax rate’ would arguably be preferable, for simplicity the headline corporate income tax rate is used in this iteration of the model.}
A2 – Applying the objective function

First, the objective function is the minimisation of $T$, which is denoted as:

$$Minimise: \, T = 0.39 \times NPBT_{U,1} + 0.17 \times NPBT_{S,1} + 0.30 \times NPBT_{A,1}$$

For completeness, as other jurisdictions are added to the model, this will need to be reflected in the objective function. For example, the addition of a conduit subsidiary in Hong Kong will result in the following revised objective function:

$$Minimise: \, T = 0.39 \times NPBT_{U,1} + 0.17 \times NPBT_{S,1} + 0.30 \times NPBT_{A,1} + 0.165 \times NPBT_{H,1}$$

A3 – Defining the constraints and other limitations

Accordingly, this optimisation problem is subject to four constraints. Each constraint relates to one of the four categories of fungible intercompany funding that constitute the focus of this thesis: namely, debt financing, equity financing, licensing and finance leasing (‘$D_{ij}$’, ‘$E_{ij}$’, ‘$L_{ij}$’ and ‘$F_{ij}$’, respectively).\textsuperscript{1110} These can be characterised as the underlying capital amounts (‘$C_{ij}$’). The ‘flow’ (‘$W_i$’) or remuneration derived therefrom constitutes interest, dividends, royalties and finance lease payments (‘$I_i$’, ‘$V_i$’, ‘$R_i$’ and ‘$P_i$’, respectively).

This is formulated as follows for each constraint:

$$W_i = \sum_{i=1,i\neq j}^{n} C_{ij} \times r_{ij}$$  \hspace{1cm} (3)

In other words, the ‘flow’ or remuneration (‘$W_i$’) is received by company $i$, where $C_{ij}$ is the underlying capital provided by company $i$ to company $j$, at a cost of capital of $r_{ij}$.

Specifically, this optimisation problem is subject to the following four constraints:

$$I_i = \sum_{i=1,i\neq j}^{n} D_{ij} \times r_{ij}$$  \hspace{1cm} (4)

\textsuperscript{1110} For completeness, in the context of leases, this model focusses on finance leases only and this iteration does not contemplate the impact of depreciation.
Interest (‘\(I_i\)’) is received by company \(i\), where \(D_{ij}\) is the debt provided by company \(i\) to company \(j\); \(r_{ij}^D\) is the rate of return on debt financing.

\[
V_i = \sum_{i=1, i \neq j}^{n} E_{ij} \times r_{ij}^E
\]  \hspace{1cm} (5)

Dividends (‘\(V_i\)’) are received by company \(i\), where \(E_{ij}\) is the equity provided by company \(i\) to company \(j\); \(r_{ij}^E\) is the rate of return on equity financing.

\[
R_i = \sum_{i=1, i \neq j}^{n} L_{ij} \times r_{ij}^L
\]  \hspace{1cm} (6)

Royalties (‘\(R_i\)’) are received by company \(i\), where \(L_{ij}\) is the licence provided by company \(i\) to company \(j\); \(r_{ij}^L\) is the rate of return on licencing.

\[
P_i = \sum_{i=1, i \neq j}^{n} F_{ij} \times r_{ij}^F
\]  \hspace{1cm} (7)

Lease payments (‘\(P_i\)’) are received by company \(i\), where \(F_{ij}\) is the lease provided by company \(i\) to company \(j\); \(r_{ij}^F\) is the rate of return on leasing.

For simplicity, this iteration also assumes that the amount of intercompany transfers between each company ranges from a minimum of $0 to a maximum of $1000. This is expressed as follows:

\[
0 \leq D_{ij} \leq 1000
\]

\[
0 \leq E_{ij} \leq 1000
\]

\[
0 \leq L_{ij} \leq 1000
\]

\[
0 \leq F_{ij} \leq 1000
\]

This thesis acknowledges that there may be an element of uncertainty in classification of various financing types in practice. This is exemplified by different jurisdictions’ varying tax treatment of hybrids. Accordingly, future iterations of this model will
explore treating this constraint as ‘soft’.\footnote{Meseguer P, Rossi F and Schiex T, ‘Chapter 9: Soft Constraints’ in Rossi F, van Beek P and Walsh P (eds), Handbook of Constraint Programming (Elsevier, 2006) 281-328.} However, since this feature goes beyond standard linear programming, it is beyond the scope of this study.

A4 – Applying the primary and secondary constraints

The ‘primary constraints’ are represented formulaically below, separated by category of funding, namely debt financing, equity financing, licensing and leasing, assuming for simplicity all rates of return \((r)\) are 10% for each entity within the MNE. The model is designed so that \(r\) can later be adjusted to simulate the impact of tax rules on the cost of capital, enabling a more complex analysis of MNE behaviour.

The baseline model constraints are expressed algorithmically as follows:

Intercompany debt financing \((D)\) resulting in interest payments \((I)\):

\[
I_U = 0.10 \times D_{US} + 0.10 \times D_{UA} + 0.10 \times D_{SU} + 0.10 \times D_{AU}
\]

\[
I_S = 0.10 \times D_{SU} + 0.10 \times D_{SA} + 0.10 \times D_{US} + 0.10 \times D_{AS}
\]

\[
I_A = 0.10 \times D_{AU} + 0.10 \times D_{AS} + 0.10 \times D_{UA} + 0.10 \times D_{SA}
\]

Intercompany equity financing \((E)\) resulting in dividend payments \((V)\):

\[
V_U = 0.10 \times E_{US} + 0.10 \times E_{UA} + 0.10 \times E_{SU} + 0.10 \times E_{AU}
\]

\[
V_S = 0.10 \times E_{SU} + 0.10 \times E_{SA} + 0.10 \times E_{US} + 0.10 \times E_{AS}
\]

\[
V_A = 0.10 \times E_{AU} + 0.10 \times E_{AS} + 0.10 \times E_{UA} + 0.10 \times E_{SA}
\]

Intercompany licensing \((L)\) resulting in royalty payments \((R)\):
\[ R_U = 0.10 \times L_{US} + 0.10 \times L_{UA} + 0.10 \times L_{SU} + 0.10 \times L_{AU} \]
\[ R_S = 0.10 \times L_{SU} + 0.10 \times L_{SA} + 0.10 \times L_{US} + 0.10 \times L_{AS} \]
\[ R_A = 0.10 \times L_{AU} + 0.10 \times L_{AS} + 0.10 \times L_{UA} + 0.10 \times L_{SA} \]

Intercompany leasing \( (F) \) resulting in lease payments \( (P) \):
\[ P_U = 0.10 \times F_{US} + 0.10 \times F_{UA} + 0.10 \times F_{SU} + 0.10 \times F_{AU} \]
\[ P_S = 0.10 \times F_{SU} + 0.10 \times F_{SA} + 0.10 \times F_{US} + 0.10 \times F_{AS} \]
\[ P_A = 0.10 \times F_{AU} + 0.10 \times F_{AS} + 0.10 \times F_{UA} + 0.10 \times F_{SA} \]

**A5 – OECD BEPS Fixed Ratio Rule**

The OECD’s Recommendation can be expressed algorithmically as follows:
\[ |I_i + P_i| \leq (30\% \times NPBT_{t,t+1}) \]

An absolute value inequality is used because this rule is concerned with interest outflows, which are denoted with negative values. Translating this absolute value inequality to render it suitable for the modelling software requires expressing it in the form of the following two constraints:
\[ I_i + P_i - 30\% \times NPBT_{t,t+1} \leq 0 \]
\[ -I_i - P_i - 30\% \times NPBT_{t,t+1} \leq 0 \]
ANNEXURE B

B1 – Relationship between Belgian NID and thin capitalisation rules

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## B2 – Relationship between Italian ACE and thin capitalisation rules

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ANNEXURE C

C1 – Extended thin capitalisation rules
C2 – Current tax system
C3 – Cross-border ACE-CBIT with extended thin capitalisation rules (where $r=10\%$ proportionate)
C4 – Cross-border ACE-CBIT with extended thin capitalisation rules (where \( r=10\% \) absolute)
C5 – Cross-border ACE-CBIT with extended thin capitalisation rules (where $r=5\%$ proportionate)
C6 – Cross-border ACE-CBIT with extended thin capitalisation rules (where \( r = \text{risk-free rate} \) and MNE’s internal cost of capital is lower)
C7 – Cross-border ACE-CBIT with extended thin capitalisation rules (where \( r = \text{MNE’s internal cost of capital} \))
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