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Design considerations for an Allowance for Corporate Equity (ACE) for Australia

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Abstract

Australia is facing a crisis in business investment. Even prior to the COVID-19 pandemic, Australia was experiencing capital shallowing—the ratio of capital to labour has fallen. Weak investment contributes to low productivity growth and the low wage growth that this engenders. Weak investment jeopardises Australia's future economic growth and prosperity. This is a serious concern for Australia. In this paper we discuss adoption of an Allowance for Corporate Equity (ACE) in Australia. We begin by briefly discussing problems with the current corporate tax system. We provide background about the ACE and why it might be a desirable direction for reform.

Keywords: corporate tax, economic, Allowance for Corporate Equity

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Executive summary

- Investment to GDP has been trending downward for decades. In recent years, Australia is experiencing a crisis in investment with a substantial drop since 2016.
- The COVID-19 pandemic has exacerbated the crisis and magnified the need for a recovery phase of accelerated economic growth.
- Fundamental reform of the tax system provides an opportunity to stimulate investment, spur post-pandemic economic growth, simplify the corporate tax system and remove key distortions from the current system.
- An Allowance for Corporate Equity (ACE) is a straightforward reform alternative that has been widely adopted in other countries. It improves several aspects of the current corporate tax system and can be implemented correctly, easily and effectively.
- We review the experience of the ACE elsewhere and lessons learned about design and implementation of its main features.
- We propose specific recommendations for eight key design elements of an ACE for Australia, considering Australia's unique characteristics, in the context of lessons learned elsewhere:
 1. The base for the equity allowance
 2. Selecting the ACE rate
 3. Dealing with the narrower base
 4. Setting the Corporate Income Tax Rate
 5. Timing of expensing
 6. Treatment of new versus old investment
 7. Special treatment afforded to SMEs
 8. Treatment of losses
- We discuss transition measures and other simplifications of corporate taxation that could be undertaken in combination with the adoption of an ACE.

Introduction

Australia is facing a crisis in business investment. Even prior to the COVID-19 pandemic, Australia was experiencing capital shallowing—the ratio of capital to labour has fallen (see Productivity Commission 2019). Weak investment contributes to low productivity growth and the low wage growth that this engenders. Weak investment jeopardises Australia’s future economic growth and prosperity. This is a serious concern for Australia.

A rapid and sustained recovery from the economic slowdown following the COVID-19 pandemic should be a major priority. Such a recovery will require a return to investment and capital deepening. Policies to encourage investment need to be considered and appropriate solutions adopted.

Can the corporate tax system in Australia be reformed to encourage more investment? Proposals include allowing immediate expensing, cuts to the corporate tax rate, and adoption of alternative tax systems such as a cash-flow tax.

In this paper we discuss adoption of an Allowance for Corporate Equity (ACE) in Australia. We begin by briefly discussing problems with the current corporate tax system. We provide background about the ACE and why it might be a desirable direction for reform. We canvass arguments for and against an ACE. We look at the history and performance of the ACE since countries began adopting it in the mid-1990s. This is timely given the European Commission’s current interest in implementing an ACE-variant (a Debt Equity Bias Reduction Allowance or ‘DEBRA’) in 2022. We focus particularly on the experiences of Belgium and Italy, which provide pertinent lessons for Australia. We look at the main design considerations and decisions that Australia would need to make if it were to adopt an ACE. We synthesise the experience of other countries and propose a series of recommendations for Australia if it were to adopt an ACE, taking into consideration unique aspects of Australia’s current tax system.

We firmly believe that Australia’s corporate tax system is in need of reform. It is not well suited to supporting Australia’s prosperity into the future. We also believe that an intelligently-designed ACE offers an acceptable effective pathway for reform of Australia’s corporate tax system. This paper prompts discussion of an ACE and paths to its effective implementation in Australia.

Background and current corporate tax system

Over a decade since the Henry Review, its observations in relation to Australia’s corporate income tax system remain apt:

“Relative to other similar size OECD countries, Australia’s company income tax rate is high ... 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.”

Traditional corporate tax systems typically generate more economic distortions than any other tax (outside of transaction taxes) (OECD 2010). Traditional corporate tax systems discourage investment, and distort choice of investment, financing and organisational structure. Consensus estimates from the literature find an increase of the corporate tax rate of one percentage point (for example from 30 per cent to 31 per cent) causes a decrease of 3.3 per cent in Foreign Direct Investment (FDI)—see Rose, Sinning and Breunig (2021) and references therein.

Corporate taxes impact investment through a variety of channels (Table 1). The effective marginal tax rate negatively impacts additional investment and expansion of operations. Effective average tax rates affect location decisions of firms (see Rose et al. 2021). Statutory tax rates affect decisions of firms of where to situate or declare profits.

While it is difficult to predict the full economic aftermath of the COVID-19 pandemic¹, corporate income tax revenues – which are responsive to economic cycles – are likely to be lower over the medium term than the relative decline in economic activity, in part reflecting the asymmetric treatment of losses.²

Given this circumstance, it may be politically opportune, economically efficient and socially acceptable to consider more fundamental changes to the corporate income tax system.

Problems with the current corporate tax system in Australia

Australia’s corporate income tax system engenders seven significant problems (distortions). Table 1 summarizes these and their consequences. We have drawn this primarily from a working paper by de Mooij and Ederveen (2014) and the paper by Auerbach, Devereux and Simpson (2010) prepared for the Mirrlees Review on tax system design in the UK.

Table 1: Summary of the problems associated with the current corporate income tax system

Problem	Summary	Margin
1. Discourages investment	Investment is driven by the cost of capital. Corporate taxes increase the required rate of return on an investment, and consequently some marginal projects become unviable. <i>Lower level of investment leading to lower productivity and wages.</i>	Effective marginal tax rate
2. Discourages foreign investment (location decisions)	Multinationals that earn firm-specific rent (i.e. associated with patents, brands, know-how, etc.) are mobile across borders. Taxes on these mobile rents discourage foreign investment.	Effective average tax rate

¹ It is unclear if the COVID-19 shock will have the same impact as an equally severe demand shock.

² OECD, Tax policy and administration responses to COVID-19 (2020), <<https://www.oecd-ilibrary.org/sites/a06bffa0-en/index.html?itemId=/content/component/a06bffa0-en>>.

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	<i>Lower level of investment leading to lower productivity and wages.</i>	
3. Distorts resource allocation	Difficulties in measuring true economic income (for example, economic depreciation and inflation adjustment) can distort tax across investment classes. <i>Misallocates resources, leading to lower productivity and wages.</i>	Effective marginal tax rate
4. Profit shifting	Most countries, including Australia, operate a source-based tax system. However, companies which operate across multiple jurisdictions may manipulate the allocation of their profits. <i>Erodes the corporate tax base, reduces potential revenue.</i>	Corporate tax rate
5. Distorts financing decisions	Interest from debt is deductible, while the return on equity is not. While differences can be compensated with taxes at the personal level, this is not so for international investors. As such, the tax system biases towards debt financing for firms with access to international capital. <i>Increases use of debt for financing results in an economy more susceptible to shocks.</i>	Effective marginal tax rate (between debt and equity finance)
6. Discourages innovation and entrepreneurship	High tax rates and asymmetric treatment of losses discourage risk taking. <i>Lower level of investment and risk taking leading to less innovation and growth.</i>	Effective marginal tax rate
7. Distorts choice around organisational form	The gap between the highest PIT rate and the CIT rate incentivises companies to incorporate whenever the CIT rate is lower. In Australia, this distortion is amplified as businesses may operate through trusts in Australia, enabling significant arbitrage opportunities whenever beneficiaries can access PIT rates lower than the CIT rate. <i>Compromises the efficiency and fairness of the tax system as well as the tax revenue base.</i>	Effective marginal tax rates (across organisational forms)

Sobeck, Breunig and Evans (2021) discuss several possible options to reform the current corporate tax system, including the Comprehensive Business Income Tax (CBIT), the ACE, the Allowance for Corporate Capital (ACC), and Cash-flow taxes (CFT).

No single reform option solves all the problems identified above. Nonetheless, Sobeck et al. (2021) identify the ACE as the best reform option available to Australia. It resolves several identified distortions (see below), is relatively easy to implement, and the transition from the current corporate tax system is straightforward. It has been experimented with in practice

by a wide range of countries and empirical evidence suggests that, if properly designed and implemented, it produces good results.

What is an Allowance for Corporate Equity (ACE) and how does it improve the current system?

What is an ACE?

The ACE builds on the existing corporate tax system with one small but important change. It introduces a notional deduction for the cost of equity finance. In doing so, a revenue neutral ACE can address two of the main economic distortions created by the current corporate tax system: on investment decisions (whether to invest and how much to invest); and financing decisions (whether to finance corporate activity with debt or with equity).³

As we will discuss, the ACE only taxes supra-marginal returns so the effective marginal tax rate on the marginal investment, or normal return, is zero. This is the key benefit of an ACE. As such an ACE can be expected to lead to increased investment on both the extensive and intensive margins. Under an ACE, investment decisions are no longer impacted by the tax arrangements for depreciation or inflation, reducing biases towards particular asset classes (particularly intangible assets, which are increasingly important in the new economy). The ACE also reduces the tax-induced bias towards debt financing and brings additional benefits of reduced leverage, in turn reducing systemic risk. This may be less of an issue in Australia than elsewhere as the imputation system also reduces this bias (but only for domestic equity). Evidence from Italy and Belgium suggests the ACE has been successful in reducing firm debt levels. The ACE can also reduce distortions to risk-taking, supporting innovation and entrepreneurial activity. Lastly, the ACE provides opportunities to simplify the administration and compliance burdens of the existing tax system.

The ACE originated in the 1970s with the Meade Committee's⁴ proposed alternatives to the UK tax system. Research by Boadway and Bruce⁵ subsequently established the theoretical foundations for a corporate tax system that is neutral to investment financing decisions. The 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. In its purest form the ACE system allows equity deductions for the part of company profits that corresponds to the normal return. The ACE system regained interest after a specific proposal for its

³ Devereux M P and Vella J, 'Reflections on the allowance for corporate equity after three decades' in de la Feria R and Loutzenhiser (eds) *The Dynamics of Taxation: Current Challenges* (Hart Publishing, 2019) 232.

⁴ Institute for Fiscal Studies, *The Structure and Reform of Direct Taxation* (Allen & Unwin, 1978) <<http://www.ifs.org.uk/docs/meade.pdf>> ('Meade Committee') 23.

⁵ Boadway R W and Bruce N D, 'A General Proposition on the Design of a Neutral Business Tax' (1984) 24(2) *Journal of Public Economics* 231.

implementation was put on the agenda by the IFS Capital Taxes Group in 1991⁶. At present, the European Commission is drafting a legislative proposal for the implementation of an ACE-variant (called a 'Debt Equity Bias Reduction Allowance' or 'DEBRA'). It is expected that a draft Directive will be released in early 2022.⁷

There are a variety of possible reforms that have been proposed which attempt to tax economic rents without taxing the normal return to investment, including cash flow taxes. An ACE has many of the benefits of a cash flow tax without similar implementation difficulties. It provides an uplift for those capital expenses not immediately refunded. This allows government to reap the benefits of economic growth and tax revenue from enhanced investment. In a sense, the firm is effectively 'lending' money to society and should be compensated at the government bond rate. If the loan to the country is risky, then one might want to set compensation higher. The risk will depend upon the treatment of losses and the probability that a firm will be able to use its ACE deductions in the future.

Table 2 presents a simple example of how an ACE works in practice, compared with scenarios of no corporate tax and the existing corporate tax system. We consider a firm making an initial equity investment of \$120 in Year 1. This investment depreciates at a rate of \$40 per year over 3 years. Under an ACE, the firm gets a deduction on the basis of the amount of equity in the firm each year, set at 10% for simplicity in this demonstration. A firm making profits below the ACE rate faces a zero effective marginal tax rate. Note that the ACE system considered here excludes nuance around the treatment of losses, such as a provision for loss uplift. Scenarios focussing on the treatment of losses are provided in Table 6.

Table 2: How the ACE works in practice, compared to scenarios of no corporate tax and the existing corporate tax regime

No corporate tax:

	Year 0	Year 1	Year 2	Year 3
Purchase price	120.0			
Book value		120.0	80.0	40.0
Revenue		52.0	48.0	44.0
Less: depreciation		40.0	40.0	40.0
Less: ACE (10%)		0.0	0.0	0.0
Taxable income		12.0	8.0	4.0
Tax (30%)		0.0	0.0	0.0
After tax income		52.0	48.0	44.0
Available loss carry forward		0.0	0.0	0.0
Closing book value	120.0	80.0	40.0	0.0
IRR (after tax)	10.0%			
EMTR	0.0%			

⁶ Institute for Fiscal Studies, *Equity for Companies: A Corporation Tax for the 1990s*, Fourth Report of the IFS Capital Taxes Group, Commentary No 26 (Chameleon Press, 1991) ('IFS') <<http://www.ifs.org.uk/comms/comm26.pdf>>.

⁷ European Commission, 'Debt-equity bias reduction allowance (DEBRA)' (2021), <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12995-Debt-equity-bias-reduction-allowance-DEBRA-public-consultation_en>.

Existing corporate tax system:

	Year 0	Year 1	Year 2	Year 3
Purchase price	120.0	120.0	80.0	40.0
Book value				
Revenue		52.0	48.0	44.0
Less: depreciation		40.0	40.0	40.0
Less: ACE (10%)		0.0	0.0	0.0
Taxable income		12.0	8.0	4.0
Tax (30%)		3.6	2.4	1.2
After tax income		48.4	45.6	42.8
Available loss carry forward	120.0	80.0	40.0	0.0
Closing book value		0.0	0.0	0.0
IRR (after tax)	7.0%			
EMTR	30.0%			

ACE:

	Year 0	Year 1	Year 2	Year 3
Purchase price	120.0			
Book value		120.0	80.0	40.0
Revenue		50.0	46.0	48.6
Less: depreciation		40.0	40.0	40.0
Less: ACE (10%)		12.0	8.0	4.0
Taxable income		0.0	0.0	0.6
Tax (30%)		0.0	0.0	0.2
After tax income		50.0	46.0	48.4
Available loss carry forward		-2.0	-4.0	0.0
Closing book value	120.0	80.0	40.0	0.0
IRR (after tax)	9.9%			
EMTR	0.7%			

In Year 1, the firm makes \$12 of profit on its equity base of \$120. Once the ACE allowance is subtracted from this \$12 of profit, the firm faces no tax. Were the firm to make more than \$12, the firm would pay tax on profits above \$12. Were the firm to make less than \$12, it would have a tax credit. Some countries allow firms to carry these credits forward and apply them to future years (see Table 6 for an example of how loss carry forward or ACE credit carry forward could work in practice).

How does an ACE improve the current system?

Sobeck et al. (2021) examine in detail how the ACE addresses six of the seven distortions identified in Table 1 above. In this paper, we include a seventh distortion, differentiating total investment (foreign and domestic) from foreign investment exclusively. In Table 3 we

consider the impact of an ACE combined with an unchanged corporate tax rate of 30per cent.⁸

Table 3: Does an ACE eliminate the corporate income tax system’s problems?

Problem	Does the ACE address the problem?
1. Discourages investment	Yes, the effective marginal tax rate under an ACE approaches zero, as such, the required rate of return on an investment remains the same as if there were no tax and marginal investments are undertaken.
2. Discourages foreign investment (location decisions)	Depends on the tax base. A source based ACE would still tax firm specific rents, but would also tax Australian rents earned by foreign investors.
3. Distorts resource allocation	Yes, the ACE is neutral to tax depreciation arrangements (see below) and the treatment of inflation. As such, the ACE provides a more neutral treatment across asset classes.
4. Profit shifting	Depends on the tax base. A source based ACE at the same company tax rate would not change incentives on where to allocate profits compared to the current system.
5. Distorts financing decisions	Yes, a notional return on equity is deductible, on par with interest expenses on debt financing.
6. Discourages innovation and entrepreneurship	Partial. The ACE could be designed to ensure unused losses are indexed and retain their real value until used in the future. This would reduce the asymmetric treatment of gains and losses.
7. Distorts choice around organisational form	No. Would depend on personal level taxation, including personal and company tax integration and the taxation of capital gains. (An area for future reform: Sobeck et al. 2021)

From Table 3, we can see the ACE solves four of the six major problems identified by Sobeck et al. (2021). The problem of arbitrage between personal and corporate rates remains, but could be solved by reform of the personal tax system. Base erosion and profit shifting (problem four) is a reality of the source-based taxation of profits. Outside a major rethink of the taxation of corporate profits (see Devereux 2019, for example), changes to the current corporate tax system will not eliminate this problem.

Arguments for and against an ACE

The ACE has desirable theoretical and practical properties. This section briefly explores advantages and disadvantages of the ACE.

The most noteworthy and widely accepted advantage of an ACE is that it stimulates investment by reducing the marginal effective tax rate for investment to zero, while continuing to tax existing capital and economic rents. By allowing a deduction for equity, the ACE puts a zero tax rate on marginal projects (and marginal firms). As a policy for driving investment in the post-pandemic economic environment, this is a strong point in its favour. The effective tax rate increases with economic rent when companies earn above the normal rate of return.

⁸ Table 6 of Sobeck, Breunig and Evans (2021) looks at the answers to these questions were the ACE to be introduced in a revenue neutral way, that is, in combination with a higher corporate tax rate.

If firms which are making economic rents have discretion over location of the business, cutting the corporate tax rate would provide a stronger incentive for firms to locate in a country than an ACE (see Rose et al. 2021).

The ACE is constructed to be neutral regarding marginal investment, with Sørensen and Johnson observing “*it only taxes economic rents (in excess of normal profits), without distorting marginal investment decisions*”.⁹ Even though the ACE is a tax on economic rents, it resembles an income tax.¹⁰ This should improve its prospects of being considered a feasible reform option.

The current tax system encourages firms to reduce their tax bill by borrowing and gearing investments. The ACE removes this incentive, thus reducing the need for thin capitalisation rules.

The ACE system is insensitive to the method of tax depreciation and inflation.¹¹ 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 accelerated depreciation. A similar effect is present for inflation, where an increase in profits because of inflation is offset by a higher notional return.¹² An ACE allows for radical simplification of the depreciation schedule.

The ACE is easy to introduce because it builds upon the current system by simply adding a form of deduction. It allows for the simplification of complex provisions currently in the tax law around depreciation and eliminates complexity from decision-making around financing options (debt vs. equity).

Introducing an ACE in the wake of the current COVID-19 pandemic would produce a significant short-term boost in investment. Investment should respond quickly to additional stimulus in the current environment. The ACE introduces a degree of progressivity into the corporate tax system. Normal returns pay zero tax, but companies making significant profits begin making payments on those profits at the statutory rate. The ACE targets the tax deduction to break-even investments, such as those made by new start-up firms.

⁹ European Commission, ‘Tax reforms in EU member states 2013: Tax policy challenges for economic growth and fiscal sustainability: 2013 Report’, European Economy 5 (European Commission, DG ECFIN and DG TAXUD, October 2013) 64; Sørensen P B and Johnson S, ‘Taxing Capital Income: Options for Reform in Australia’ in *Melbourne Institute, Australia’s Future Tax and Transfer Policy Conference: Proceedings of a Conference* (Melbourne Institute, 2010) 213.

¹⁰ McLure C E, Mintz J and Zodorow G R, ‘US Supreme Court Unanimously Chooses Substance over Form in Foreign Tax Credit Case: Implications of the PPL Decision for the Creditability of Cash-flow Taxes’ (Working Paper 14/11, Oxford University Centre for Business Taxation, August 2014), 10.

¹¹ In practice this will depend upon the treatment of losses and their carry forward. Auerbach A J, Devereux M P and Simpson H D, ‘Taxing Corporate Income’ in Mirrlees J et al. (eds) *Dimensions of Tax Design: The Mirrlees Review* (Oxford University Press, 2010) 837; see also, Keuschnigg C, ‘The Design of Capital Income Taxation: Reflections on the Mirrlees Review’ (2011) *Fiscal Studies* 32(3) 437–52; see further, Cooper G S, ‘Implementing an Allowance for Corporate Equity’ (2012) 27 *Australian Tax Forum* 241.

¹² De Mooij R A and Devereux M P, ‘An Applied Analysis of ACE and CBIT Reforms in the EU’ (2011) 18(1) *International Tax and Public Finance* 93, 96.

The debt bias of the current system encourages businesses to load up on debt, a potential sovereign risk for large debtor countries like Australia that could be reduced by the introduction of an ACE.

Finally, the ACE would bring the tax system significantly closer to attaining Capital Import and Export Neutrality (CIN and CEN) if accompanied by the elimination of withholding taxes.¹³ CIN and CEN require that the overall tax burden on investment is the same whether invested domestically or abroad (from the point of view of the overseas investor and the domestic investor). This inclines capital investment towards the place where it delivers the largest economic benefit. Complete neutrality will always be difficult to achieve while different international jurisdictions apply different tax rates.

The ACE is not without drawbacks. The equity deductions allowed under the ACE are applied across all corporate structures. However, since reform is limited to corporate structures, it risks creating distortions regarding organisational form. It may encourage individuals with businesses to incorporate rather than pay tax through the personal income tax system. This distortion is present in the current system and discussed in more detail in Sobeck et al. (2021). Empirical evidence is unavailable to clarify the likelihood of this distortion growing under an ACE. It does highlight the need to place personal income tax on the reform agenda.

The ACE does not solve problems associated with the arbitrary distinction in international taxation that equity-financed outbound investments are largely taxed abroad while debt-financed outbound investments are taxed at home.¹⁴ This “*question of where multinationals’ profits should be taxed and whether the international tax system should maintain the existing source-basis rules*”¹⁵ is beyond the scope of this paper. We assume that source-based taxation will remain the international norm for the foreseeable future. However, since 2015, the OECD has been working towards an international agreement to coordinate a response to such cross-border tax issues under its Pillar 1 and 2 proposals, of which consideration of assigning at least some taxation rights to destination countries is a key aspect.¹⁶

The ACE does not solve existing problems with base erosion and profit shifting and may enable other kinds of profit-shifting such as companies using the equity deduction for equity then provided to foreign branches. Introducing more equal treatment of debt and equity

¹³ “*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.

¹⁴ “*Interest payments (and other payments, such as fees and royalties) are typically taxed in the country in which they are received rather than the country in which the underlying return out of which they are paid is earned*”: M P Devereux, ‘Taxation of outbound direct investment: economic principles and tax policy considerations’ (2008) 24(4) *Oxford Review of Economic Policy* 698, 701.

¹⁵ Parillo K A, ‘The Allowance for Corporate Equity and the CCCTB: More Efficient Ways to Tax Corporate Income?’ (2012) 117-2 *Worldwide Tax Daily* 1, 2.

¹⁶ OECD, ‘BEPS Action 1: Tax challenges arising from digitalisation’ (2020), <<https://www.oecd.org/tax/beps/beps-actions/action1/>>.

could reduce concerns about thin capitalisation rules. The incentive for MNEs to engage in transfer pricing one way or another will continue as long as international taxation is less than fully integrated. High headline corporate tax rates will continue to make such behaviour attractive.

The ACE allows for simplification of rules around the timing of expenses and offers an opportunity to eliminate targeted concessions. This will enable tax authorities to dedicate resources otherwise spent on wrangling complexities and competing interpretations towards integrity issues like profit shifting. Despite acknowledging challenges associated with cross-border flows under an ACE, many tax experts such as Sørensen continue to advocate for the ACE on the strength of its desirable properties.¹⁷

Extensive consideration of taxing economic rents through an ACE is merited as it offers a potentially significant improvement to the existing corporate tax system. The next section examines the actual, practical experiences of countries that have applied an ACE.

International experience with the ACE

Since its theoretical conception, the ACE has garnered substantial support and increasing interest internationally.¹⁸ The ACE is one of the few large corporate tax reform proposals to have been adopted in practice, with several countries having tried the ACE or one of its variants,¹⁹ including Austria (2000–2004),²⁰ Croatia (1994–2000),²¹ Belgium (2006–today),

¹⁷ Sørensen PB, 'Swedish Tax Policy: Recent Trends and Future Challenges', Report to the Expert Group on Public Economics, Swedish Ministry of Finance, May 2010.

¹⁸ Keuschnigg, above n 11; Gammie, above n 13; Devereux M P and Sørensen P B, 'The corporate income tax: international trends and options for fundamental reform' (European Economy, Economic Paper No 264, European Commission, December 2006) 23.

¹⁹ Traversa E, 'Interest Deductibility and the BEPS Action Plan: Nihil Novi Sub Sole?' [2013] 5 *British Tax Review* 607.

²⁰ There is limited literature in relation to the Austrian ACE. 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 A D, 'Allowances for Corporate Equity in Practice' (2007) 53(2) *CESifo Economic Studies* 229; 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).

²¹ The Croatian ACE-variant came close to the theoretical ideal. Similar 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.

Brazil (1996–today),²² Italy (1997–2003²³ and 2011–today)²⁴, Latvia (2009–2014)²⁵, Liechtenstein (2011–today)²⁶, Portugal (2008–today)²⁷, Cyprus (2015–today)²⁸, Turkey (2015–today)²⁹, Malta (2018–today)³⁰ and Poland (2019–today)³¹.

Where ACEs or ACE-variants were repealed, none were due to any fundamental problem with the theoretical ACE,³² nor any technical flaws with the ACE system.³³ Rather, the abolition of these ACE-variants was in the context of ‘tax-rate cut cum base broadening’ in line with the trend of reducing headline corporate income tax rates.³⁴

Table 4 provides a brief overview of these ACE-variants, updating a version previously compiled by Klemm, with additional information from Hebous and Klemm, and Bunn and Asen.³⁵

Table 4: Overview of ACE-variants

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

²² 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. As Klemm observes “*For most of these firms, the Brazilian system is not an ACE system but rather one of dividend deductibility*”: Klemm, above n 20.

²³ The Italian DIT reform package was not fully completed and was repealed in favour of a single-rate corporate tax scheme after a change of government. 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).

²⁴ Staderini provides an empirical evaluation of the initial Italian ACE-variant: Staderini A, ‘Tax reforms to influence corporate financial policy: The case of the Italian business tax reform of 1997–98’ (Bank of Italy Working Paper No 423, November 2001).

²⁵ It has been observed that the Latvian ACE-variant was repealed “[i]n 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.

²⁶ Hebous S and Klemm, A D, ‘A destination-based allowance for corporate equity’ (2018), IMF Working Paper 18/239.

²⁷ Hebous and Klemm, above n 26.

²⁸ Hebous and Klemm, above n 26.

²⁹ Hebous and Klemm, above n 26.

³⁰ Hebous and Klemm, above n 26.

³¹ Bunn D and Asen E, ‘Reducing the bias against long-term investments’ (2020), <<https://taxfoundation.org/reducing-bias-against-long-term-investments/>>.

³² Klemm, above n 20 **Error! Bookmark not defined.**

³³ Keen and King, above n 21, 417.

³⁴ Keen and King, above n 21.

³⁵ Klemm, above n 20; Hebous and Klemm, above n 26, 22; Bunn D and Asen E, above n 31.

Design considerations for an Allowance for Corporate Equity (ACE) for Australia

Belgium (2006–present)	Risk capital deduction / Notional interest deduction	Until 2017: book value of equity. Since 2018: new equity, base equal to 1/5 of the increase over 5 years.	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	The notional return is deductible; since 2013, no carry forward of unused allowances, tax on distributed dividends of large firms introduced
Brazil (1996–present)	Remuneration of equity	Book value of equity; only for distributions (closed companies: also credits to owners)	Rate applicable to long-term loans	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.
Croatia (1994–2000)	Protective interest	Book value of equity	5% plus inflation rate of industrial goods if positive	The notional return is deductible
Cyprus (2015–present)	Notional interest deduction	Book value of new (post-reform) equity: issued share capital, fully-paid share premium	10-year Cypriot government bond yield, or, if higher, yield of country where equity is invested; plus 3%	
Italy (1997–2003)	Dual income tax	Book value of new (post-reform) equity. In 2000, 120% of new equity; in 2001, 140% of new equity; then back to 100% of new equity	7% (1997–2000); 6% (2001–2003)	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%.
Italy (2011–present)	Aid to economic growth	Book value of new (post-reform) equity plus profits made in 2010	3% (2011–13); 4% (2014); 4.5% (2015); 4.75% (2016). From 2017: average public debt rate plus risk factor set by Finance Minister.	The notional return is deductible. Extends to corporations, sole proprietors and partnerships. Excludes current year profits. May not exceed the company’s profits at end of given fiscal year.

			<i>Special SME rate is 0.5% higher.</i>	
Latvia (2009–2014)	<i>Notional interest deduction</i>	<i>Retained earnings accumulated since 2008</i>	<i>Weighted average interest rate on loans to nonfinancial enterprises. 5.05% in 2010, 4.37% in 2011.</i>	
Liechtenstein (2011–present)	<i>Notional interest deduction</i>	<i>Modified equity</i>	<i>Based on market developments (currently 4%)</i>	
Malta (2018–present)	<i>Notional interest deduction</i>	<i>Share capital, including: share premium, interest-free debt, retained earnings and contribution reserves</i>	<i>Yield on 20-year government bonds plus 5%</i>	<i>Limited to 90% of taxable income. Excess can be carried forward.</i>
Poland (2019–present)	<i>Notional interest deduction</i>	<i>Book value of equity</i>	<i>National Bank of Poland’s reference rate as on last day of preceding calendar year, plus 1%</i>	<i>Notional return is deductible up to around €60,000</i>
Portugal (2008–present)	<i>Notional allowance for share capital</i>	<i>Incremental equity of SMEs from 2014</i>	<i>2008-2013: 3%; 2014-2016: 5%; from 2017: 7%</i>	<i>Notional return is deductible up to €2,000,000</i>
Turkey (2015–present)	<i>Notional interest deduction</i>	<i>New cash capital</i>	<i>50% of weighted average bank loan interest rate</i>	<i>Not for: firms with high passive income / financial assets; subsidiaries or participations</i>

The tax design criteria most consistently adopted by these ACE-variants were economic efficiency (with a focus on funding neutrality), international competitiveness and growth. For the Belgian Notional Interest Deduction (‘Belgian NID’),³⁶ the literature identifies four key motivations: regional tax rate competition; improvements in corporations’ solvency by addressing the debt bias; replacement of the coordination centre regime; and tax

³⁶ 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.

neutrality.³⁷ A key motivation for Belgium was to address the push for more homogenous tax arrangements across European Union member countries, while continuing to support investment that previously benefited from the coordination centre regime.

The performance of the ACE in practice

The introduction of ACE-variants in a range of jurisdictions has provided an opportunity to investigate empirically whether the ACE can achieve its policy goals. Studies providing assessments of ACE-variants in practice tend to focus on the cost of capital,³⁸ the company tax rate with respect to the pre-existing and subsequent systems³⁹ and the effect of tax incentives on firms' capital structure.⁴⁰ Several simulation studies have been conducted by Keuschnigg and Dietz,⁴¹ Radulescu and Stimmelmayer,⁴² Fehr and Wiegard⁴³ and De Mooij and Devereux.⁴⁴

Of particular interest, given concerns around systemic risk made even more salient by the COVID-19 crisis, are the growing number of studies that examine the impact of an ACE on

³⁷ See further Kayis-Kumar A, *Taxing multinationals* (OUP, 2019).

³⁸ In the context of the Belgian NID: Colmant B, Minne P and Vanwelkenhuyzen T, *Les intérêts notionnels: Aspects juridiques, fiscaux et financiers de la déduction pour capital à risqué* (Larcier, 2006); Van Campenhout G and Van Caneghem T, 'How Did the Notional Interest Deduction Affect Belgian SMEs' Capital Structure?' (2013) 40(2) *Small Business Economics* 351, 352, and footnotes cited therein. See also, Burggraefe K et al., '2008 Macroeconomic and fiscal impact of the risk capital allowance' (2008) III *National Bank of Belgium Economic Review* 7, who investigate the marginal tax rate and macro-economic effects of the NID.

³⁹ In the context of the Italian DIT: Balzano S, Oropallo F and Parisi V, 'On the Italian ACE and its Impact on Enterprise Performance: A Microsimulation Study' (Working Paper No 624, Società Italiana di Economia Pubblica, July 2009); Balzano S, Oropallo F and Parisi V 'On the Italian ACE and its impact on Enterprise Performance: A PLS-path Modeling Analysis' (2011) 4(2) *International Journal of Microsimulation* 14.

⁴⁰ For example, 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 F, Pérez-González F and Villanueva P, 'Capital Structure and Taxes: What Happens When You (Also) Subsidize Equity?' (Working Paper, Stanford Graduate School of Business, Stanford University, June 2013).

⁴¹ Keuschnigg C and Dietz M, 'A Growth Oriented Dual Income Tax' (2007) 14(2) *International Tax and Public Finance* 191.

⁴² Radulescu D M and Stimmelmayer M, 'ACE versus CBIT: Which is Better for Investment and Welfare?' (2007) 53(2) *CESifo Economic Studies* 294.

⁴³ Fehr H and Wiegard W, 'The Incidence of an Extended ACE Corporation Tax' (CESifo Working Paper No 484, May 2001).

⁴⁴ De Mooij and Devereux, above n 12.

firm leverage, most finding the ACE reduces leverage.⁴⁵ Studies with larger datasets find the Belgian NID significantly reduces SME leverage.⁴⁶

The experience of Belgium and Italy

In this section, we summarise some lessons learned from Belgium and Italy. These two countries provide particularly appropriate case studies due to their systems' closeness to a theoretical ACE, the longevity of their reforms, and a relative abundance of documentation and policy evaluation in the literature. The Italian reforms restricted the ACE to new equity. From Table 4, Italy first implemented a Dual Income Tax (DIT), which was subsequently removed and later replaced by an "Aid to Economic Growth"/ACE. In Belgium, the ACE was applicable to all equity until 2017, leaving the system susceptible to criticism that companies did not need to generate new investments to benefit from the ACE. However, in Belgium the ACE was introduced to replace an existing concession that was available to all firms whether they injected new equity into their company or not. Restricting the equity base goes some way to addressing revenue neutrality concerns.

The headline lessons are: incremental reform appears preferable; introducing an ACE for new investment only can increase acceptability; providing some special treatment of a temporary nature to SMEs can ease the transition; simplicity is important, particularly for SMEs; support from government and business is crucial to success; businesses must have faith in the long-term survival of the reforms; the main value of the ACE is in long-term efficiency gains, requiring policy vision.

In the context of the Belgian and Italian ACE-variants, the advantages of the ACE system were considered to outweigh the disadvantages⁴⁷ and striving for neutrality between the tax

⁴⁵ Devereux and Vella, above n 3, 248. See also: Hebus S and Ruf M, 'Evaluating the effects of ACE systems on multinational debt financing and investment' (2017), 156 *Journal of Public Economics* 131; Petutschnig M and R nger S, 'The effects of a tax allowance for growth and investment: Empirical evidence from a firm-level analysis' (2017), WU International Tax Research Paper; Princen S, 'Taxes Do Affect Corporate Financing Decisions: The Case of Belgian ACE' (CESifo Working Paper No 3713, January 2012); Branzoli N and Caiumi A, 'How effective is an incremental ACE in addressing the debt bias? Evidence from corporate tax returns' (2020), 27 *International Tax and Public Finance* 1485-1519; Panteghini P M, Parisi M and Pighetti F, 'Italy's ACE tax and its effect on a firm's leverage' (2012), CESifo Working Paper 3869; Schepens G, 'Taxes and Bank Capital Structure' (Working Paper, Department of Financial Economics, University of Ghent, October 2013).

⁴⁶ Kestens K, Van Cauwenberge P and Christiaens J, 'The Effect of the Notional Interest Deduction on the Capital Structure of Belgian SMEs' (2011) 30(2) *Environment and Planning C: Government and Policy* 228.

⁴⁷ In the Belgian context: Van Glabbeek S, *Eigen vermogen, eigen behandeling?* (Masters Thesis, Tilburg University, 2010); De Callatay E and Thys-Cl ment F (eds), *The Return of the Deficit: Public Finance in Belgium over 2000–2010* (Leuven University Press, 2013); Chaudhry S M, Mullineux A W and Agarwal N, 'Balancing Bank Regulation and Taxation' (4 February 2014) <<http://dx.doi.org/10.2139/ssrn.1141090>>.

treatment of debt and equity finance⁴⁸ was thought to strengthen corporations' capital structure,⁴⁹ thereby improving overall corporate solvency.⁵⁰

In Belgium, the system resulted in a marked increase in shareholders' equity in 2006 and 2007, due to capital contributions from both Belgium and overseas.⁵¹ SMEs also benefited from the Belgian NID,⁵² with companies decreasing leverage by 2–7%, and banks by 12%. These results led researchers to conclude the Belgian NID achieved its intended effect.⁵³ Further, reforms following the judgment of the European Court of Justice ('ECJ') in *Argenta Spaarbank*⁵⁴ may result in more neutrality in treatment of foreign earnings in domicile states – although this has not yet been addressed in the empirical literature.

Political challenges around implementing the ACE in Belgium and Italy crystallised into two key areas: determining the impact on SMEs; and quantifying the long-term benefits.

Empirical evidence regarding the impact of the Italian DIT on SMEs is ambiguous, with contradictory evidence emerging from the literature.⁵⁵ On one hand, the first ex-post evaluation found SMEs did not enjoy tax reductions. This evaluation was unclear on whether this was because SMEs were slower to adjust to the changing tax environment or simply more reliant on debt. On the other hand, subsequent research found the Italian DIT mainly benefited new firms and less well-capitalised firms, over well-capitalised companies.⁵⁶ 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 and elimination of the equity deduction) harmed SMEs significantly.⁵⁷

This strongly suggests an ACE provides greater benefit to SMEs than a reduction in the headline corporate tax rate. While the literature is unclear on the implications for SMEs, the effects of the Italian ACE appear limited. This may be due to the lack of profits available for reinvestment, or because the Italian ACE's relatively low rate is insufficient to effectively engage businesses.⁵⁸ Political uncertainty around the ACE in Italy (evidenced by its repeal

⁴⁸ In the Italian context: 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).

⁴⁹ In the Belgian context: Princen, above n 45. In the Italian context: Panteghini, Parisi and Pighetti, above n 45. In the Italian context: Bernardi L 'Some issues on the Italian tax reforms and the European tax environment' (Working Paper No 457, Società Italiana di Economia Pubblica, September 2005).

⁵⁰ In the Belgian context: Van Campenhout and Van Caneghem, above n 38.

⁵¹ Princen, above n 45.

⁵² Princen, above n 45.

⁵³ Burggraeve et al., above n 38; Princen, above n 45; Schepens, above n 45.

⁵⁴ *Argenta Spaarbank NV v Belgische Staat*, C-350/11, 4 July 2013 (Belgium) ('*Argenta Spaarbank*').

⁵⁵ Santoro, above n 23.

⁵⁶ Bordignon M, Giannini A and Panteghini P, 'Reforming Business Taxation: Lessons from Italy?' (2001) 8(2)

International Tax and Public Finance 191; Oropallo and Parisi, above n 23; Balzano, Oropallo and Parisi, above n 39.

⁵⁷ Manzo M, 'Corporate Taxation and SMEs: The Italian Experience' (OECD Taxation Working Papers, No 6, 2011).

⁵⁸ Panetta F, 'A Financial System for Growth' (Speech delivered by the Deputy Governor of the Bank of Italy, Milan, 27 January 2014).

in 2019 and subsequent reinstatement in 2020) may mean firms were unwilling to base decisions on an uncertain legislative framework.

Though the largest responses to changing tax incentives are among large and new firms,⁵⁹ empirical evidence suggests SMEs benefited significantly from the Belgian NID. The Belgian NID encouraged SMEs to strengthen their capitalisation,⁶⁰ providing insulation from economic difficulties. In Belgium, SMEs were also granted a 0.5% higher NID rate. Despite these benefits, the literature suggests the Belgian NID is unpopular with SMEs. Rather than objecting to the idea of an allowance for equity, SMEs were unhappy because the ACE was introduced alongside a set of complex measures to reduce revenue loss—see Zangari (2014). The ACE also required a more sophisticated understanding of the tax rules than many SMEs would have had.⁶¹

Empirical evidence shows a connection between firm profitability, productivity and investment and the increased use of the Italian DIT,⁶² with very little evidence that the Italian DIT encouraged FDI inflows.⁶³ Bordignon et al. suggest other factors were more significant in deterring FDI inflows. They suggest FDI inflows were stunted by a lack of infrastructure, burdensome bureaucracy and an inflexible labour market, rather than tax policies such as the DIT.⁶⁴

The Belgian NID had an undeniably significant impact on financial flows.⁶⁵ Belgium explicitly marketed their ACE to international capital and that seems to have paid off. The NID's impact on the real economy seems fairly limited in the short term, but potentially more apparent in the medium term.⁶⁶ For employment, Burggraeve et al. conclude that the post-coordination centre regime decline in employment would have been larger without the Belgian NID. They indicate that new finance centres set up by MNEs had a positive (albeit marginal) impact on employment levels in the short term, raising the potential for larger long-term benefits as firms come to grips with changed conditions.⁶⁷

The predominantly short-term focus of politicians can inhibit the realisation of gains apparent only over longer time frames, potentially a substantial hurdle to implementing and maintaining an ACE in practice. Political pressure has resulted in the phasing-down and phasing-out of ACE-variants in many countries, and Italy and Belgium have not been immune.

⁵⁹ Panier, Villanueva and Pérez-González, above n 39.

⁶⁰ Empirical evidence suggests the NID has reduced debt-asset ratios of SMEs: see further, Kestens, Van Cauwenberge and Christiaens, above n 46.

⁶¹ Van Campenhout and Van Caneghem, above n 38.

⁶² Staderini, above n 24.

⁶³ Bordignon, Giannini and Panteghini, above n 56.

⁶⁴ Bordignon, Giannini and Panteghini, above n 56.

⁶⁵ Burggraeve et al., above n 38.

⁶⁶ Burggraeve et al., above n 38.

⁶⁷ Burggraeve et al., above n 38.

In Italy, the 2004 repeal of the DIT was attributable to the 2001 election. The repeal was criticised⁶⁸ as even in its early stages the DIT reduced both debt distortions⁶⁹ and the cost of capital.⁷⁰ The Italian ACE regime was abolished in 2019 but reintroduced retroactively in 2020, leaving no gap. The stated reasons for eliminating the ACE, despite it conclusively reducing firm leverage, were: it was not considered to have had the impact on investment that government had hoped; and other measures were enacted to generate this additional investment, including a policy to tax retained earnings at a reduced rate.⁷¹ The reintroduction of the ACE occurred because the new measures were more complex and seemed unlikely to generate the intended favourable consequences with respect to investment.⁷² Failure to generate FDI into Italy probably has more to do with aspects of the investment environment distinct from the tax system.

The Belgian NID has diminished in popularity⁷³, with increasing pressure from media and all sides of politics for its abolition. This was partially due to the opposition from SMEs to the increased complexity of the overall system, discussed above. The left in Belgium opposed the revenue cost of the ACE—see Peeters and Hermie (2011). The NID became a federal election ‘hot topic’ in 2014.⁷⁴ Tax policy uncertainty generated by implementing, modifying, phasing down and then considering the abolition of the NID, eroded business confidence in the measure. Political uncertainty would diminish Belgium’s attractiveness as a destination for investment.⁷⁵ The literature does not expressly analyse whether the watering-down of the Belgian NID provisions – thereby marking a departure from ACE principles – contributed to its diminished popularity.

Commentary from both the European Commission and the OECD assists in evaluating the relative success of the Italian ACE. Specifically, the European Commission 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*”.⁷⁶ Similarly, the OECD observed

⁶⁸ Panteghini, Parisi and Pighetti, above n 45.

⁶⁹ Bordignon, Giannini and Panteghini, above n 56, found that the cost of equity halved after the reform (attributable to the abolition of ILOR and the introduction of the DIT) and the cost of debt increased since interest payments were no longer deductible; so, while the debt bias persisted, it was largely reduced. See further, Bernasconi M, Marenzi A and Pagani L, ‘Corporate Financing Decisions and Non-Debt Tax Shields: Evidence from Italian Experiences in the 1990s’ (2005) 12(6) *International Tax and Public Finance* 741.

⁷⁰ 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; Staderini, above n 24.

⁷¹ OECD, ‘Tax policy reforms 2019: The latest tax policy reforms’ (2019), <<https://www.oecd-ilibrary.org/sites/ec0b6d39-en/index.html?itemId=/content/component/ec0b6d39-en>>.

⁷² Petrello V, Albano P and Russo G, ‘Italy: Highlights on the 2020 budget law and related tax legislation’ (2020), <<https://www.clearygotlieb.com/news-and-insights/publication-listing/italy-highlights-on-the-2020-budget-law-and-related-tax-legislation>>.

⁷³ Bernstein J, ‘International Tax Issues in Cross-Border Corporate Finance and Capital Markets’ (2013) 71(10) *Tax Notes International* 905.

⁷⁴ Themelin N, ‘The only consequence of the announcement effects of notional interest: the legal uncertainty’ (Afshrift, 19 September 2013).

⁷⁵ Themelin, above n 73.

⁷⁶ European Commission, ‘Italy: Review of progress on policy measures relevant for the correction of macroeconomic imbalances’ (Brussels, November 2014), 14.

the Italian 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. [...] 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.*”⁷⁷

Key design questions for an ACE

As an alternative to reducing the corporate tax rate or a radical shift to a cash flow tax (as proposed by Garnaut et al. 2020), allowing for an additional deduction or an ACE is a realistic and efficient company tax measure, with fewer transitional problems and greater conformity with current international tax law.

This section highlights the trade-offs and challenges to operationalising an ACE in practice with reference to countries that have implemented an ACE. First, we consider the prerequisite decisions:

1. The base for the equity allowance
2. Selecting the ACE rate
3. Dealing with the narrower base
4. Setting the Corporate Income Tax Rate
5. Timing of expensing
6. Treatment of new versus old investment
7. Special treatment afforded to SMEs
8. Treatment of losses.

We then discuss implementation and transition issues.

1. The base for the equity allowance

The equity allowance base for the ACE is based on tax book value or some measure of actual equity in the entity. Tax book value is a simple measure and provides less scope for manipulation. The starting base can include all equity (as initially used in Belgium) or only equity created following introduction of the scheme. The literature suggests an incremental equity base (i.e. only new equity) provides a stronger incentive for new investment and results in a more politically acceptable system.⁷⁸

⁷⁷ OECD, ‘OECD Economic Surveys: Italy’ (February 2015) 13 <http://www.oecd.org/eeco/surveys/Overview_Italy_2015_ENG.pdf>.

⁷⁸ Zangari E, ‘Addressing the Debt Bias: A Comparison between the Belgian and the Italian ACE Systems’ (European Commission Taxation Papers, Working Paper No 44, July 2014) 45.

2. Selecting the ACE rate

The full neutrality properties of the ACE system will depend on whether the imputed rate of return on equity is set at the 'right' level. Full tax neutrality under the ACE requires the imputed rate of return be set equal to the rate at which shareholders discount the tax savings from the company's future ACE allowances.

In principle the ACE rate will not require a risk premium provided the tax savings from the ACE allowance can be used with certainty – that is, that the ACE allowance is a 'safe' cash flow from the viewpoint of the firm (see Bond and Devereux 1995). To achieve this, firms require certainty that they can utilise any tax losses they generate, in full, at a later date.

However, in practice, corporate tax systems impose some limitations on the use of loss offsets. For example, while many countries allow unutilised losses to be carried forward, they are typically not indexed and therefore their value in real terms falls over time. In circumstances where a company goes bankrupt, refunds for prior year losses are not provided.

When shareholders are exposed to risk in being able to utilise ACE allowances, the ACE rate, or imputed return, should include a risk premium. Theoretically, given risk will differ across companies, the ACE rate should be firm specific. In practice the firm-specific information needed to set the 'right' risk premium is not readily available to tax authorities. Some distortion in the pattern of investment and risk taking are unavoidable without full loss offset – although lower than under a traditional corporate tax system. As discussed below, efficiency gains from an ACE do not depend upon a firm-specific ACE.

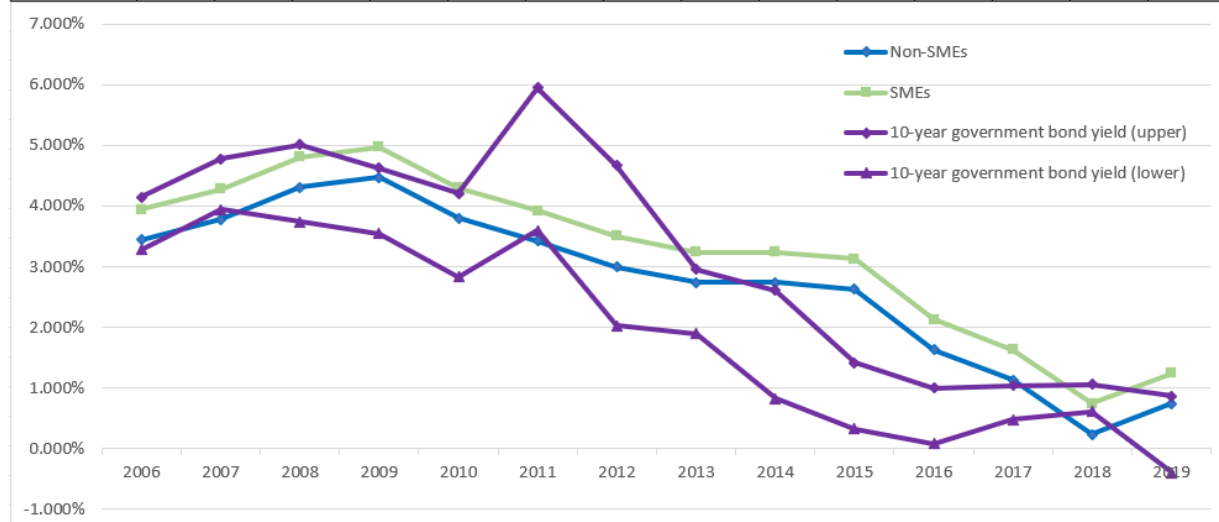
Given a substantial component of risk stems from the probability that a company goes bankrupt, a pragmatic approach is to base the ACE rate on average long-term corporate borrowing rates. The risk-free rate approximated by the rate on long term government bonds, plus the average spread to A class bonds (typically around 50-150 basis points) is one potential basis. For SMEs, who face higher failure rates, a small additional uplift could be provided (for example, approximated by BBB bonds).

The ACE rate should be set using a metric as close in time and place as possible to the equity being raised. Belgium set a rate based on the long-term government bond rate from 2 years prior, although this exposed it to large deviations when long-term government bond rates spiked. In 2011 the NID rate applied to non-SMEs at 3.425% was substantially below the long-term government bond rate at 5.949%—see Figure 1.⁷⁹

Figure 1 – Trend in the Belgian NID rate

⁷⁹ Authors' own addition; see further, Fusion Media Limited, *Belgium 10-Year Bond Yield*, Investing.com <<http://www.investing.com/rates-bonds/belguim-10-year-bond-yield-historical-data>>.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Non-SMEs	3.442%	3.781%	4.307%	4.473%	3.800%	3.425%	3.000%	2.741%	2.742%	2.630%	1.630%	1.131%	0.237%	0.746%
SMEs	3.942%	4.281%	4.807%	4.973%	4.300%	3.925%	3.500%	3.241%	3.242%	3.130%	2.130%	1.631%	0.737%	1.246%
10-year government bond yield (upper)	4.149%	4.776%	5.010%	4.631%	4.209%	5.949%	4.665%	2.951%	2.603%	1.418%	0.997%	1.035%	1.058%	0.861%
10-year government bond yield (lower)	3.278%	3.946%	3.737%	3.541%	2.832%	3.601%	2.025%	1.898%	0.824%	0.323%	0.082%	0.476%	0.609%	-0.396%



The Italian DIT operated as a dual-rate schedule in which overall profits were divided into two components. The lower, preferential statutory corporate tax rate of 19% 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%, cut to 36% by early 2001) applied for all above-normal profits.⁸⁰ A particularly noteworthy feature of the Italian DIT was that the imputed ACE 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 risk of not being able to utilise DIT allowances.⁸¹

For the first three years of application (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 considered included the average financial returns of public bonds, which may be increased by a further three percentage points to more closely align with the risk-free nominal return.⁸²

⁸⁰ Federici D and Parisi V ‘Corporate Taxation and Exports’ (MPRA Paper No 41012, Munich Personal RePEc Archive, 3 September 2012).

⁸¹ Bordignon, Giannini and Panteghini, above n 69.

⁸² Tuccillo A, Cortellazzo & Soatto, ‘Aiuto alla Crescita Economica (ACE): incentivo alla patrimonializzazione delle imprese’ (2012) 13(1) *C&S Tell* <<http://www.cortellazzo-soatto.it/Approfondimenti/TemieContributi/AiutoallaCrescitaEconomicaACEincentivoall.aspx>>.

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 market interest rates;⁸³ in 2012 the 10-year government bond rate was approximately 5.78–5.90%. By early 2014 the bond rate had reduced to 3.10–3.40%, and despite the decline a larger ACE allowance was introduced under the Stability Law for 2014–16. The Italian ACE literature has not considered whether interest rates on debt financing also halved. If not, this suggests ongoing, albeit significantly less pronounced, asymmetric tax treatment of debt and equity financing.

An *average* ACE rate, while pragmatic, will not reflect the different firm-specific risks in utilising ACE allowances. The US Treasury has used this rationale to critique the ACE system. The degree of non-neutrality will depend on the size of the difference between the actual and ‘right’ rates of notional interest.⁸⁴ Since substantial information, generally impossible to obtain, would be required to set the ACE rate separately by company,⁸⁵ different rates for different companies is clearly impractical.⁸⁶ It has been suggested that the ACE rate could be set equal to the firm-level interest rate paid on debt financing.⁸⁷ This is problematic if a firm has no external borrowings. Also, there is no reason to believe that the costs of debt and equity are equal for firms.

Given this necessary tolerance for inaccuracy in setting the rate, while theoretically the ACE *eliminates* corporate financing distortions between debt and equity, in practice, differences between the actual interest rate and the allowance defined and permitted by the notional return in the ACE only *mitigate* the corporate financing distortion. Given heterogeneity across time, sector and individual companies, some companies will receive an investment subsidy, others will have financing options equalized, and others will have part of their normal return on investment taxed, albeit at a lower rate than under a reduced corporate income tax rate. However, even if the ACE rate were set at the ‘wrong level’, it is preferable to a zero ACE rate, as effectively provided under the existing corporate tax system.

More recent literature (see Devereux and Vella, 2019), has stressed the ACE does not need to reflect the underlying risk of the company nor the specific investment project. Nor does it need to be related to the interest rate that a company pays on debt. The key function of the ACE rate is to reflect the possibility that the company finds itself in a position where it cannot utilise the ACE allowance. Even if the ACE rate is off by a substantial amount from the ‘right’ number, it would still serve to achieve its main purpose and deliver its primary benefits of reducing the effective marginal tax rate to zero on marginal projects and reducing the bias towards debt. The efficiency gains of the ACE do not depend on getting the rate “correct”.

⁸³ Panteghini, Parisi and Pighetti, above n 45.

⁸⁴ Keen and King, above n 21, 415.

⁸⁵ Boadway and Bruce, above n 5; Bond S R and Devereux M P, ‘On the Design of a Neutral Business Tax under Uncertainty’ (1995) 85(1) *Journal of Public Economics* 57.

⁸⁶ Sørensen, above n 17; see further, Sørensen and Johnson, above n 9, 212.

⁸⁷ Radulescu and Stimmelmayer, above n 42. This would effectively transform the ACE into an Allowance for Corporate Capital (ACC).

3. Tax revenue implications of a narrower “equity” base

By allowing an additional deduction, the ACE narrows the corporate tax base. In the absence of behaviour change by firms and any other changes to the tax system, this leads to a reduction in corporate tax revenues. However, the ACE encourages further investment, economic growth and welfare. These additional activities will increase tax revenue over the longer term. The precise magnitude of these offsetting changes is not readily quantifiable and estimates in the literature based upon simulations from models are highly sensitive to parameter choice. The tax revenue implications remain an empirical question. The cost of implementing an ACE in Australia is explored further in Sobeck et al. (2021).

Chen, Lee and Mintz,⁸⁸ Keen and King,⁸⁹ Klemm⁹⁰ and Massimi and Petroni⁹¹ have provided comprehensive evaluations of different ACE-variants in practice, concluding that they were successful in practice and without significant negative effects on corporate tax revenues.⁹² Importantly, regarding the ACE-variants no longer in operation, their abolition was attributable to governments’ desire to introduce lower overall corporate tax rates, rather than to any fundamental design flaws in the ACE-variant system. For example, the Latvian ACE-variant was repealed because of flaws in implementation, not because of any failure of the ACE. An appendix to a recent European Commission document confirms the Latvian ACE was abolished “*to compensate for a potential loss of tax revenues*”.⁹³

Adoption of an ACE generally results in minor revenue losses, but the International Monetary Fund (‘IMF’) suggests that transitional provisions can be designed to limit these losses.⁹⁴ Concurrent with revenue considerations, a well-reasoned evaluation of the ACE would assess the flow-on benefits, such as increased investment, economic growth and employment. We touch on this in the remainder of this subsection, but an in-depth review is beyond the scope of this paper.

In Italy, 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 advantages of debt and would likely benefit the financial soundness of firms and their

⁸⁸ Chen D, Lee F C and Mintz J M, ‘Taxation, SMEs and Entrepreneurship’ (OECD Science, Technology and Industry Working Papers 2002/09, August 2002).

⁸⁹ Keen and King, above n 21.

⁹⁰ Klemm, above n 20.

⁹¹ Massimi F and Petroni C, ‘Real-World ACE Reforms and the Italian Experience: Towards a General Trend?’ (2012) 40(11) *Intertax* 632.

⁹² Keen and King, above n 21.

⁹³ Eurostat, above n 25, 108. Contrast this with an appendix on ACE in practice which mentions all of the other ACE-variants that had been implemented at the time of publication 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.

⁹⁴ IMF, ‘A Fair and Substantial Contribution by the Financial Sector: Final Report for the G-20’ (June 2010) <<http://www.imf.org/external/np/g20/pdf/062710b.pdf>>.

ability to finance medium and long-term investments.⁹⁵ With an estimated cost of €4 billion (i.e. about 0.25% of GDP) this was within their financial means.⁹⁶

Analysis shows the Belgian NID had only limited if any negative effect on corporation tax revenues, in part because it replaced an existing concession.⁹⁷ This contrasts with earlier empirical estimates from Keen and King that corporate tax revenue losses would range from 15% to over 30%,⁹⁸ and the most recent approximations of Sørensen that about 10% of corporate tax revenues are foregone.⁹⁹ Assuming inflows of foreign capital expanded the corporation tax base in Belgium, the introduction of the Belgian NID may have plausibly had a positive impact on public finances.¹⁰⁰ Further empirical evidence shows 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, €1.2 billion higher than simulation estimates.¹⁰¹

Other reviews, including Australia's Henry Review, the Business Tax Working Group ('BTWG')¹⁰² and the United Kingdom's Mirrlees Review,¹⁰³ suggest a more holistic approach to genuine reform ought not be impeded by a requirement of revenue neutrality. The current environment of low interest rates and the imperative for economic growth in the wake of the COVID-19 pandemic give further weight to the argument that short-term revenue neutrality need not be required for corporate tax reform.

The budgetary cost of the ACE did not preclude Belgium and Italy from introducing ACE-variants to their company tax systems.¹⁰⁴ The overall economic benefits were seen to outweigh the costs. While an ACE necessarily narrows the tax revenue base,¹⁰⁵ potentially strengthening political pressure for its abolition in difficult economic times, it also lowers

⁹⁵ 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.

⁹⁶ Arachi G et al., 'Fiscal Reforms during Fiscal Consolidation: The Case of Italy' (Working Paper No 2, Department of Economics and Statistics, University of Torino, February 2012); Panteghini, Parisi and Pighetti, above n 45.

⁹⁷ Burggraeve et al., above n 38.

⁹⁸ Keen and King, above n 21.

⁹⁹ Sørensen, above n 17.

¹⁰⁰ Burggraeve et al., above n 38.

¹⁰¹ Burggraeve et al., above n 38. 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.

¹⁰² "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": Australian Government, Department of the Treasury, 'Australia's Future Tax System: A Report to the Treasurer', December 2009 ('Henry Review'), 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.

¹⁰³ "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.

¹⁰⁴ Zangari, above n 77.

¹⁰⁵ Klemm, above n 20, 230.

overall capital costs and increases the return on investment. This in turn attracts more foreign investment, as has been the experience of ACE-variants in practice.¹⁰⁶

4. Choosing the corporate income tax rate

By exempting normal returns from tax, the ACE requires higher statutory tax rates if revenue neutrality is to be maintained without other changes to the tax system, particularly in the short term. Higher corporate tax rates would deter inward investment by profitable MNEs and provoke profit-shifting through transfer pricing.¹⁰⁷ Further, making the ACE revenue neutral through a higher tax rate would adversely affect investment decisions of credit-constrained firms¹⁰⁸ and lead to negative economy-wide repercussions.¹⁰⁹ Where businesses have a discrete choice on where to invest, the statutory corporate rate will still impact upon location decisions even when combined with an ACE.

While it might seem a tax which offers such generous investment incentives would require a higher tax rate to raise revenue to the level of the current corporate tax system, the new tax base would imply the abolition of investment tax credits and grants.¹¹⁰ This comment was made in relation to cash flow taxes, but De Mooij notes the revenue impact of an ACE is equivalent to that of a cash flow tax.¹¹¹

Raising the corporate tax alongside the introduction of an ACE would reduce many of the benefits of the ACE, whereas reducing tax on foreign income can advance both domestic and global welfare.¹¹²

Many countries implementing an ACE have accepted slightly lower corporate tax revenues in exchange for greater economic dynamism and investment. Some have used the implementation of an ACE to shift their tax base away from direct taxation towards more indirect taxation, for example by increasing the rate of Value Added Tax (VAT). De Mooij et al. (2018) conclude that the positive effect on investment is greater if financed by an increase in VAT revenue, compared to an increase in the statutory corporate tax rate.

¹⁰⁶ Kayis-Kumar, above n 37.

¹⁰⁷ Auerbach, Devereux and Simpson, above n 11; Van Campenhout and Van Caneghem, above n 38.

¹⁰⁸ Van Campenhout and Van Caneghem, above n 38.

¹⁰⁹ Radulescu and Stimmelmayer, above n 42.

¹¹⁰ 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>.

¹¹¹ 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), 16.

¹¹² Desai M A and Hines J R, 'Evaluating International Tax Reform' (2003) 56(3) *National Tax Journal*, 497.

Italy did not increase its corporate tax rate. The Italian ACE was funded using a combination of: first, an increase in VAT/excise duties to set off its budgetary cost;¹¹³ and second, the Development Fund, which partially covered costs resulting from strengthening the ACE and allowed a temporary 40% bonus for SMEs.¹¹⁴ 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.¹¹⁵

5. Timing of expensing

An ACE is insensitive to the method of tax depreciation.¹¹⁶ Assuming that the imputed rate of return is approximately equal to the firm's discount rate, an increase in the depreciation allowance implies an equivalent reduction in the company's equity capital. This advantage of the ACE allow simplification in the tax treatment of depreciation. Under an ACE, firms are indifferent to accelerated depreciation deductions.

Another benefit of the ACE is removal of distortions due to divergence between tax depreciation and economic depreciation.¹¹⁷ Tax owed would be the same under either tax or economic depreciation, for example because if tax depreciation occurs at a constant rate and is slower than economic depreciation, this increases the ACE tax base initially, but commensurately reduces it later on.

Table 5: Economic depreciation and tax schedule depreciation under an ACE

	Cost of purchase	Year 1	Year 2	Year 3	Year 4
Tax-schedule depreciation	5000	1250	1250	1250	1250
Economic depreciation	5000	2000	1800	900	300

Under accounting depreciation (as above):

Year	Opening book value/ACE tax base	Revenue	Costs (labour, materials, debt, interest)	Depreciation	ACE allowance (5%)	Taxable profits	Tax owed	Net profits	NPV (net profits)

¹¹³ *Camera dei deputati, Temi dell'attività parlamentare: Politica economica e finanza pubblica*, 9 July 2015 (Italy).

¹¹⁴ *Camera dei deputati, Le risorse per le aree sottoutilizzate nella legge di stabilità 2015*, 8 June 2015, Dossier n° 174, FSC 2014-2020 (Italy).

¹¹⁵ Assonime, 'La disciplina dell'ACE (aiuto alla crescita economica)' (Direct Taxation, Circular No 17, 7 June 2012).

¹¹⁶ Originally outlined by Boadway and Bruce, above n 5. See also: Auerbach, Devereux and Simpson, above n 11; Keuschnigg n 11; Cooper n 11.

¹¹⁷ Sobeck K, Breunig, R and Evans, A, *Corporate Income Taxation in Australia: Theory, Current Practice, and Future Policy Directions (2021)*, Tax and Transfer Policy Institute (TTPI) Policy Report No. 01-2021, Canberra, Australia.

Design considerations for an Allowance for Corporate Equity (ACE) for Australia

1	5000	2500	100	1250	250	900	270	630	630
2	3750	2250	90	1250	187.50	722.50	216.75	505.75	481.67
3	2500	2000	80	1250	125	545	163.50	381.50	346.03
4	1250	1750	70	1250	62.50	367.50	110.25	257.25	222.22
Total						2535	760.50	1774.50	1679.92

Under economic depreciation (as above):

Year	Opening book value/ACE tax base	Revenue	Costs (labour, materials, debt, interest)	Depreciation	ACE allowance (5%)	Taxable profits	Tax owed	Net profits	NPV (net profits)
1	5000	2500	100	2000	250	150	45	105	105
2	3000	2250	90	1800	150	210	63	147	140
3	1200	2000	80	900	60	960	288	672	609.52
4	300	1750	70	300	15	1365	409.50	955.50	825.40
Total						2685	805.50	1879.50	1679.92

6. Treatment of new versus old investment

This relates closely to the choice of tax base for the ACE.

In its early stages, the Italian DIT was limited to new equity to limit short-term revenue losses¹¹⁸ and fulfil public finance obligations within the EU.¹¹⁹ It was later subject to changes mainly aimed at accelerating its application,¹²⁰ which aligned the Italian DIT more closely with the theoretical ACE. Specifically, a multiplier was utilised which enabled normal profits to be computed on the enterprise's entire capital stock rather than on capital increases.¹²¹ The multiplier was intended to achieve the goal of balancing the conflicting aims of complying with Italy's public finance obligations under the European Monetary Union process¹²² and accelerating the application of the Italian DIT.

However, as seen with the Belgian NID, extending the equity base of the ACE to both new and existing equity opens scope for criticism that companies do not need to generate new

¹¹⁸ Bordignon, Giannini and Panteghini, above n 56.

¹¹⁹ Oropallo and Parisi, above n 23.

¹²⁰ Balzano, Oropallo and Parisi, above n 39.

¹²¹ Oropallo and Parisi, above n 23; Balzano, Oropallo and Parisi, above n 39.

¹²² Federici and Parisi, above n 79.

investment to benefit.¹²³ An alternative to the formulation of the ‘adjusted’ equity balance¹²⁴ is to use retained earnings.¹²⁵ While this would encourage reinvestment and be effective in countries with high corporate tax rates,¹²⁶ the English-language literature is largely silent on the relevant legal issues, further explored by Kayis-Kumar.¹²⁷ The literature suggests that the practical application of an incremental equity base results in a more robust system.¹²⁸

7. Considerations for SMEs

Small businesses are often at a disadvantage relative to large businesses because they have limited or no access to debt markets and cannot leverage the debt deduction provisions of the tax system. The ACE provides an automatic advantage to SMEs because it would allow them a deduction on equity even in the absence of access to debt markets.

The vast majority of SMEs who pay corporate tax are generally paying very small amounts. The introduction of an ACE would allow them to earn a “normal” return without paying corporate tax and reduce their tax burden. The ACE would encourage investment for SMEs without the administrative burden of applying for special subsidies or programs.

The ACE is in many ways suited to SMEs and should be viewed as a small business promotion program. Political palatability can be increased with additional provisions for SMEs. The most effective are temporary in nature and simple to administer. In Italy the ACE rate is set at 0.5% higher for SMEs. This provision comes with a sunset clause.

8. Treatment of losses

The treatment of losses is central to setting the ACE rate, or the imputed return to equity. Where an ACE allowance can be used with certainty, the appropriate allowance rate will be close to a risk-free rate. Corporate tax systems, unlike value added taxes, typically have restrictions on the use of tax losses. Some countries allow losses to be carried back and offset against prior year income. Others allow losses to be carried forward and used against future profits typically subject to certain conditions (such as limitations on changes in ownership or undertaking the same or similar business activities). Restrictions on loss

¹²³ Princen, above n 45.

¹²⁴ 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.

¹²⁵ Poutziouris P, Chittenden F and Michaelas N, ‘Evidence on the Tax and Investment Affairs of Small Firms’ (1999) 6(1) *Journal of Small Business and Enterprise Development* 7.

¹²⁶ mac an Bhaird C and Lucey B, ‘Determinants of Capital Structure in Irish SMEs’ (2009) 35(3) *Small Business Economics* 357.

¹²⁷ Kayis-Kumar, above n 37.

¹²⁸ Zangari, above n 77.

utilisation distort risk taking and entrepreneurship. The ACE provides some opportunity to address issues of loss utilisation.

First, unutilised losses that are carried forward could be uplifted each year at the ACE rate to maintain their real value over time by including unutilised losses in the ACE base or simply indexing the pool of losses by the deemed ACE rate each year. Four examples of how loss utilisation works under an ACE are provided in Table 6. These examples follow on from Table 2, using the same hypothetical firm but allowing the ACE system to vary with regard to treatment of losses. In the first example, the firm makes a profit of less than 10 per cent in years one and two and receives ACE credits which it cannot use fully in those years. It makes profit over 10 per cent in year three, resulting in an internal rate of return of 10 per cent over the three years. The firm uses the ACE credits carried forward in year three, resulting in no tax liability. The subsequent examples refer to losses being included in the ACE allowance (with one scenario where the firm carries losses forward and another where it utilises them in year three), and full refundability of losses.

Second, to reduce the risk of losses being wasted by failing utilisation tests, losses incurred in a given year could be 'offset' against other tax liabilities, such as goods and services tax, pay-as-you-go income tax and fringe benefits tax. This would provide many of the benefits of full refundability particularly for businesses starting-up or incurring closing-down expenditure.

Table 6: Examples of loss utilisation

ACE, losses uplifted at ACE rate, utilised in year 3:

	Year 0	Year 1	Year 2	Year 3	Year 4
Purchase price	120.0				
Book value		120.0	80.0	40.0	
Revenue		50.0	46.0	48.6	
Less: depreciation and prior year losses		40.0	40.0	40.0	
Less: ACE (10%)		12.0	8.0	4.0	
Taxable income		0.0	0.0	0.0	
Tax (30%)		0.0	0.0	0.0	
After tax income		50.0	46.0	48.6	
Available loss carry forward		-2.0	-4.2	-4.6	0.0
Closing book value	120.0	80.0	40.0	0.4	
IRR (after tax)	10.0%				
EMTR	0.0%				

ACE, losses included in the ACE allowance, carried forward as an asset and available to offset future liability:

	Year 0	Year 1	Year 2	Year 3
Purchase price	120.0			
Book value		120.0	82.0	44.2
Revenue		50.0	46.0	48.6
Less: depreciation and prior year losses		40.0	40.0	40.0
Less: ACE (10%)		12.0	8.2	4.4
Taxable income		0.0	0.0	4.2
Tax (30%)		0.0	0.0	1.3
After tax income		50.0	46.0	47.4
Available loss carry forward	0.0	-2.0	-2.2	-2.2
Closing book value	120.0	80.0	42.0	4.2
IRR (after tax)	10.0%			
EMTR	0.0%			
Tax value of closing ACE balance	1.26			

Table 7 (continued): Examples of loss utilisation

ACE, losses included in the ACE allowance and utilised in year 3:

	Year 0	Year 1	Year 2	Year 3
Purchase price	120.0			
Book value		120.0	82.0	44.2
Revenue		50.0	46.0	48.6
Less: depreciation and prior year losses		40.0	40.0	40.0
Less: ACE (10%)		12.0	8.2	4.4
Taxable income		0.0	0.0	0.0
Tax (30%)		0.0	0.0	0.0
After tax income		50.0	46.0	48.6
Available loss carry forward		-2.0	-2.2	0.0
Closing book value	120.0	82.0	44.2	0.0
IRR (after tax)	0.0%			
EMTR	100.0%			
Tax value of closing ACE balance	0			

ACE, full refundability:

	Year 0	Year 1	Year 2	Year 3
Purchase price	120.0			
Book value		120.0	80.0	40.0
Revenue		50.0	46.0	48.6
Less: depreciation and prior year losses		40.0	40.0	40.0
Less: ACE (10%)		12.0	8.0	4.0
Taxable income		-2.0	-2.0	4.6
Tax (30%)		-0.6	-0.6	1.4
After tax income		50.6	46.6	47.2
Available loss carry forward	0.0	0.0	0.0	0.0
Closing book value	120.0	80.0	40.0	0.0
IRR (after tax)	10.0%			
EMTR	0.0%			

Implementing an ACE in Australia: Design recommendations

Taking lessons learned from the experience of other countries and having assessed the empirical literature on the effects of the ACE, we now apply these insights to Australia. If Australia were to implement an ACE, what elements and design features should it have? How can we account for the unique and idiosyncratic aspects of Australia? Do other elements of its existing taxation system need to be addressed?

We view our suggestions below as a starting point for a conversation about an ACE and what its implementation might look like.

The base for the equity allowance

We recommend the equity which qualifies for the ACE be calculated on the incremental book value of equity based on the tax system. In calculating the ACE base each year we suggest the approach outlined by the IFS (1991) and discussed for the Australian context in Sørensen and Johnson (2010) (Table 7).

Table 8: Calculating the base for the ACE allowance

Equity base in previous year (initial base is zero)
+ taxable profits in previous year (gross of the ACE allowance)
+ exempt dividend received
+ net new equity issues
– tax payable on taxable profits in previous year
– dividends paid
– net new acquisitions of shares in other companies
– net new equity provided to foreign branches
= Equity base for current year

The ACE rate

The ACE rate for Australia should be set with consideration to any changes in the treatment of losses. As a starting point we suggest using the 10-year government bond rate. Setting the ACE rate too low leads to an insufficient reduction in the debt bias of the corporate tax system. The 10-year government bond rate is comparable to the ACE rate set in other countries. The ACE rate should be adjusted annually and automatically to avoid misalignment with the long-term government bond rate.

Tax revenue implications of a narrower equity base

If Australia were to adopt an ACE and keep the current corporate rate constant (as we suggest below), the result is a decrease in corporate tax revenue. The experience of other countries has been a modest decrease in revenue. Over the longer term, this decrease in revenue is compensated for by increased investment and economic activity leading to supplementary tax revenue. Taxing only rents, and not the normal return to investment, also benefits workers. In a small open economy such as Australia's, some of the cost of the

corporate tax flows through to workers in terms of fewer jobs and lower wages. See Sobek et al. (2021) for a detailed review of the theoretical and empirical research on the incidence of corporate tax.

The current environment of low interest rates and the need to stimulate economic activity makes a transition to an ACE without a requirement of revenue neutrality an attractive option. Increased economic activity from the switch to an ACE takes some time to flow through to additional tax revenue and Australia's ability to borrow at very low cost in the medium-term can be used to finance this reform.

Lowering the effective corporate tax rate would also provide an opportunity to address the tax mix in Australia. Australia is an outlier internationally in its heavy reliance on corporate and personal income tax, both of which have a large deadweight loss because of the behavioural responses they incentivise. See Cao et al. (2015) for recent estimates of the excess burden of different Australian taxes. Australia also comes in for frequent criticism by the OECD for its heavy reliance on inefficient corporate and personal income taxes and poor usage of consumption and broad-based land taxes.¹²⁹

Choosing the corporate income tax rate

The current corporate tax rate of 30 per cent could be kept and combined with an ACE. While holding the corporate tax rate constant implies the switch to an ACE would create a modest short-term loss of government revenue, this will be offset in the medium-term by increased economic activity. Raising the corporate tax rate would disincentivise firms to locate in Australia and exacerbate problems created by the gap between Australia's corporate tax rate and those of its neighbours and competitors—see Rose et al. 2021.

Some countries introduced an ACE and simultaneously raised their corporate tax rates to maintain revenue neutrality. These countries have generally failed to reap the benefits of corporate tax reform because the high corporate tax rate has had a negative impact on firm location decisions, particularly in the presence of mobile economic rents. See the discussion in Rose et al. (2021). These countries often repealed their ACE systems and opted for a broad reduction in the corporate tax rate.

For simplicity, the corporate tax rate of 30 per cent would be applied to all businesses of any size. The ACE gives substantially better tax relief to SMEs than the 25 per cent rate and the benefit of one rule applying to all firms outweighs the benefit of a concessional tax rate for SMEs. We suggest giving SMEs a slightly higher ACE rate to compensate for the slightly higher risk of bankruptcy they face compared to larger firms. The loan they make to society is riskier and should be compensated at a higher rate.

¹²⁹ See the recent OECD report, "Going for Growth", for example: <https://www.oecd.org/economy/going-for-growth/>

Timing of expensing

The ACE removes issues around the timing of expensing. Because expenses reduce the base on which the ACE is calculated, the ACE has properties not unlike a cashflow tax with immediate expensing. Reform should be introduced with no upper limit to the increases in equity financing – and should apply to corporations, individual firms and limited partnerships.

We recommend introducing reforms to simplify the calculation of expenses such as those suggested by Sørensen and Johnson (2010). Alongside the ACE, they propose replacing the current Australian depreciation scheme based on effective periods of use with a pooling system, in which assets are pooled into broad groups according to durability (for example, short-, medium- and long-lived) with a fixed depreciation rate for each pool.

Treatment of new versus old investment

Australia should adopt an ACE that applies only to new equity, as did Italy. By so doing, new investment and foreign investment can be specifically encouraged. This advantage was identified by the Biasco Commission, established in 2006 to study the reform of the corporate income tax system in Italy.¹³⁰ The use of an incremental equity base results in a more robust system in practice.¹³¹

Consideration for SMEs

We suggest removing the current concessional tax treatment of SMEs (the reduced corporate tax rate currently paid by companies with less than \$50 million of annual turnover). Having different rates for different size businesses introduces distortions and complexities—see Sobeck et al. (2021).

We suggest instead giving SMEs access to an ACE rate 0.5 percentage points higher than the base ACE rate, recognising that SMEs are typically riskier and more likely to generate tax losses that may not be utilised in the future. SMEs are defined using the current definition of base rate entities (companies with annual turnover less than \$50 million). The benefits of a higher ACE rate for SMEs more than make up for the loss of a reduced corporate income tax rate. Simply by not taxing the normal return to investment, the ACE provides substantial tax relief to SMEs by construction.

The economic aftermath of the COVID-19 pandemic will potentially see many more SMEs in financial difficulty rather than operating profitably. Since a concessional tax rate is only available to firms that are already profitable, it would remain largely ineffective particularly for small businesses. On the other hand, an ACE would be a more effective strategy to support substantially more SMEs because it stimulates capitalisation and investment.

¹³⁰ *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>>.

¹³¹ Zangari, above n 77.

Incentivising larger capital buffers also ensures that those firms are better-positioned to withstand future economic shocks.

Giving SMEs an uplift on the ACE rate, allowing for loss carry forward and removing all the existing concessions and introducing a simple depreciation schedule will create a much simpler corporate tax environment. It will reduce costs and provide additional support for SMEs, from which the most significant economic growth typically originates.

Treatment of losses

We suggest as a starting point to make the temporary loss carry back arrangements permanent. Making these arrangements permanent will provide greater certainty for investors, particularly in the current economic environment. We also suggest improving arrangements to allow companies to utilise their losses, in particular by allowing losses to be refunded up to the value of other tax liabilities (such as PAYG, GST instalments).

Other transition issues

A recurring critique of the ACE reform is that it would require an extensive transition period, generally considered a major hurdle to implementation. However, as observed in the Belgian and Italian ACE-variant experiences, ACE-variants are relatively straightforward to implement and do not require a fundamental overhaul of the existing tax system. Rather, the presence of political will and industry support appear to be the key elements for ensuring the stability, steadfastness and success of these reforms.

The experiences of ACE-variants in practice suggests there is also a significant element of ‘loss aversion’ when implementing and maintaining fundamental reforms such as the ACE.¹³² One key lesson learned from the overseas experience of ACE in practice is to introduce a relatively modest ACE. Hence our suggestion of a “soft ACE” applying only to new investments.

Further, to assist with the introduction of an ACE in Australia, we suggest the reform be introduced with no upper limit to the increases in equity financing¹³³ and in a way that supports business structure neutrality.¹³⁴

This would be consistent with the approach adopted with the implementation of the Italian ACE. This ensured the Italian ACE was more closely aligned to the original ACE principles by: directly and immediately allowing deductions for equity financing; not providing an upper

¹³² 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.

¹³³ Tuccillo, above n 81.

¹³⁴ See further, Panteghini, Parisi and Pighetti, above n 45.

limit to the increases in equity financing; and applying the measure to corporations, individual firms and limited partnerships.

Finally, it is important that the ACE be introduced in a way that simplifies, or at least does not overcomplicate, the tax affairs of businesses, particularly SMEs. This could be done by introducing the ACE in combination with other tax simplification measures, or even by ensuring that the ACE is designed soundly enough that other more complex measures are not required to mop up consequent problems. A simpler tax system and political certainty about the process will reduce some of the problems that were seen in other countries.

Dividend imputation

The current dividend imputation system could be maintained under an ACE. Equally it could be removed. Removal would be better considered within a broader package of measures to redesign company and shareholder taxation arrangements.

An ACE would result in fewer franking credits being issued (since less company tax is paid). Accordingly, long-term consideration could be given to replacing dividend imputation with a dual income tax (DIT) in Australia—see Varela, Breunig and Sobeck (2020). Such a regime could preserve average returns to Australian shareholders while making company taxation more attractive for foreign investors. An important note on nomenclature is that this notion of a DIT is entirely different from the Italian Dual Income Tax ACE-variant that we referred to earlier in this paper (despite the identical name).

A DIT includes two sets of tax rates on income – a series of progressive tax rates that apply to labour income and one flat rate that applies to income from savings. Introducing a DIT and setting the effective tax rate on domestic dividends equal to the effective tax rate on all other forms of savings would ensure tax neutrality not provided by the imputation system, particularly with regard to personal investment decisions. Internationally, DIT systems are best known for their successful implementation in Scandinavian countries, although aspects of such a system have been introduced elsewhere as well, including in Italy. See Varela et al. (2020) for a discussion of key parameters and design questions. Note the observation of Sørensen and Johnson¹³⁵ and others that introducing an ACE along with removing dividend imputation, such as in the context of a DIT, could even be approximately revenue neutral were that deemed an important consideration.

The Italian ACE regime presents a useful case study for the contemporaneous introduction of an ACE and the removal of an imputation system. Prior to 1997, the Italian corporate income tax system, designed as a full imputation system,¹³⁶ had not been subject to major reforms for nearly three decades. By 2004, Italy had transitioned to a participation exemption

¹³⁵ Sørensen and Johnson, above n 9.

¹³⁶ Lammersen L and Schwager R, *The Effective Tax Burden of Companies in European Regions: An International Comparison*, Volume 28 of *ZEW Economic Studies* (Springer, 2006), 75.

regime.¹³⁷ Italy's move away from imputation was in common with many other EU member countries and conformed with the EU's non-discrimination principle. By the time the Italian ACE was implemented, the Italian tax system also had elements of a Comprehensive Business Income Tax (CBIT) with local business tax and interest deductibility limits in force since 2008.

Integrity

The introduction of an ACE will not eliminate problems of base erosion and profit shifting. While some types of profit shifting become less likely under an ACE, new opportunities for profit shifting can arise under a poorly designed ACE. Companies should not be allowed to claim the ACE deduction for equity that is invested in overseas parts of the company. There will still be a need for Australia to work with other countries in multilateral frameworks to reduce corporate tax avoidance.

The simplifications introduced by an ACE around timing of expenses, depreciation, and the distinction between debt and equity will reduce the burden on tax authorities in some areas of integrity. These resources can be redeployed to address real tax avoidance.

In Australia heavy use is made of trusts. While some are for legitimate purposes, the rapid rise in the number of trusts over the past two decades is related to their usefulness as vehicles for minimising personal income taxes. Measures to stop further erosion of the personal income tax base through the use of trusts are an important future tax reform agenda item.

Cooper (2012) suggests that only non-transparent entities be permitted to claim the ACE – including trusts that are currently taxed as companies, trusts elected to head a consolidated group and corporate limited partnerships – but excluding most trusts and partnerships, which are fiscally transparent.

The ACE will need to be accompanied by ongoing development of integrity provisions in the above areas and with respect to its interaction with the tax system in general.

Business assistance programs

The ACE imposes no tax on businesses that make less than the normal rate of return and it provides a carry forward deduction that businesses can apply when they eventually make a profit. The ACE is a broad-based business assistance program that rewards investment, risk and innovation. As such it offers an opportunity to eliminate existing, targeted business

¹³⁷ “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%.”; see further, Uricchio A, *Italian Individual Taxation*, available at: www.lex.uniba.it/ta/ITALIAN_INDIVIDUAL_TAXATION.ppt.

Design considerations for an Allowance for Corporate Equity (ACE) for Australia assistance programs. It creates an opportunity to review a plethora of government assistance and grants to business, particularly those administered through the tax system. The ACE delivers benefits to all firms without burdensome applications or qualification rules. The reduction in time, complexity and administrative costs to business would improve economic efficiency.

Conclusion

Australia is facing an investment crisis. It also faces an urgent need to stimulate growth in the wake of COVID-19. These needs provide added impetus to consider an overhaul of the corporate tax system that stimulates investment and directly addresses its fundamental weaknesses.

An ACE presents a promising vehicle for reform. Implementation is easy, a simple additional deduction in the context of the current system. It requires no complicated transition schemes and Australia can draw on extensive worldwide experience with the ACE to ensure good design and implementation practice.

Adoption of the ACE elsewhere has by and large been a positive and successful process. While some countries have repealed their ACEs, this has mostly been in coordination with large-scale reductions in the corporate tax rate and a switch away from reliance on corporate tax revenues, and not because of flaws in the ACE itself.

We have turned extensively to the experiences of Belgium and Italy and the rich body of research on their practical experiences with an ACE, to suggest design, implementation and operation principles for an Australian ACE that will contribute to our economic wellbeing and prosperity for generations to come.

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