

# Fiscal innovation to make European banks more stable and competitive

**Michael Tröger**  
ESCP Europe

[special issue of *Réalités Industrielles*, August 2018]

## **Abstract:**

Following a series of tax and accounting reforms since the 1980s, the corporate tax system now favours debt financing. This pro-debt bias forces banks, in particular, to take on very high levels of debt to remain competitive. Recent empirical research has shown that this mechanism is one of the primary causes of the financial system's weakness. However, there are simple tax or accounting reforms that could either correct this pro-debt bias, or reverse it by creating a bias in favour of equity financing. These reforms would align tax incentives with the objectives of financial regulation, but especially, they would lend a substantial competitive advantage to banks competing internationally.

Since the financial crisis began, the debate about financial system regulation has been stuck in paradigms largely defined in Basel I 30 years ago. Regulators and banks are currently engaged in a kind of "trench warfare", using considerable resources but only achieving minor progress on a very small number of topics. Nobody is satisfied with the results. Banks complain of increasingly stringent and costly regulations, while international institutions and academia observe that the financial system is still fragile.<sup>1</sup>

It is time to take a different tack: innovative, effective regulatory mechanisms do exist, and the countries that adopt these mechanisms can create a substantial, lasting advantage for their financial sectors.

---

<sup>1</sup> N. Sarin and L.H. Summers, "Have Big Banks Gotten Safer?" [www.brookings.edu/wp-content/uploads/2016/09/2\\_sarinsummers.pdf](http://www.brookings.edu/wp-content/uploads/2016/09/2_sarinsummers.pdf); H. Scott (2016), *Connectedness and Contagion: Protecting the Financial System from Panics*, pp. 169-82; A. Admati and M. Hellwig (2013), *The Bankers' New Clothes: What's Wrong with Banking and What to Do About It*, pp. 179-91.

The most glaring omission from the current debate is the role of taxation.<sup>2</sup> This should be the primary mechanism for governments to guide corporate behaviour. However, as we will see in this article, corporate income tax currently encourages companies and banks to be excessively leveraged, thus undermining the financial system's stability rather than contributing to it.<sup>3</sup>

This link between taxation and financial stability has not received the attention it warrants because there was no immediate change to the corporate tax system prior to the 2008-09 financial crisis. Policymakers and academics therefore focused on the immediate causes: a real estate bubble and undercapitalised financial institutions. Yet detailed studies have shown that pre-existing debt levels were too high due to a tax bias towards debt. Since the 1980s, a series of tax reforms in most developed countries had created or involuntarily strengthened this bias.<sup>4</sup>

In this paper, we present the pro-debt bias of corporate income tax in its current form and trace back the tax and accounting changes that led it. Then, we put forward some simple reforms that would not only correct this bias, but would also make European banks more competitive.

## **In its current form, corporate income tax favours debt**

The pro-debt bias of corporate income tax is easily explained by the fact that interest (i.e. the cost of debt) is tax deductible, whereas the cost of equity does not enjoy any equivalent advantage. Since the landmark research by Nobel Prize-winning economists Franco Modigliani and Merton Miller in the 1960s,<sup>5</sup> it has been recognised that this asymmetric treatment gives a substantial advantage to debt. This implicit tax subsidy is an incentive not just for industrial firms, but also for banks, to increase their leverage – with obvious consequences. A firm or a bank with excessive leverage is less resilient to exogenous shocks. More insidiously, this additional debt also creates incentives for greater internal risk-taking. A highly-leveraged firm or bank will intentionally undertake very risky operations that will make it even more fragile.<sup>6</sup>

---

<sup>2</sup> M.J. Roe and M. Tröge (2014), "How to Use a Bank Tax to Make the Financial System Safer", *Financial Times*, Mar. 25; M.J. Roe and M. Tröge (2015), "A smarter way to tax big banks", *Wall Street Journal*, Feb. 1.

<sup>3</sup> Int'l Monetary Fund, Debt Bias and Other Distortions: Crisis-Related Issues in Tax Policy (Fiscal Affairs Dep't, June 12, 2009), [www.imf.org/external/np/pp/eng/2009/061209.pdf](http://www.imf.org/external/np/pp/eng/2009/061209.pdf); IMF, A Fair and Substantial Contribution by the Financial Sector, Final Report for the G-20 (June 2010), [www.imf.org/external/np/g20/pdf/062710b.pdf](http://www.imf.org/external/np/g20/pdf/062710b.pdf); Hilary J. Allen, *Let's Talk About Tax: Fixing Bank Incentives to Sabotage Stability*, 18 FORDHAM J. CORP. & FIN. L. 821 (2013); Ruud A. De Mooij, *Tax Biases to Debt Finance: Assessing the Problem, Finding Solutions*, 33 FISCAL STUD. 489 (2012).

<sup>4</sup> M. Tröge and M.J. Roe (2018) "Containing Systemic Risk by Taxing Banks Properly", *Yale Journal on Regulation*, Vol. 35, pp. 181-231.

<sup>5</sup> F. Modigliani and M.H. Miller, *Corporate Income Taxes and the Cost of Capital: A Correction*, 53, *Am. Econ. Rev.*, 433 (1963), "Ending the Debt Addition: A Senseless Subsidy", *Economist*, May 16, 2015, pp. 19-22.

<sup>6</sup> This risk-shifting phenomenon was identified in M.C. Jensen and W.H. Meckling (1976), "Theory of the firm: Managerial behavior, agency costs and ownership structure", *Journal of Financial Economics*, 3.4, pp. 305-60.

## A bias previously limited by income tax and tax credits

Until the mid-1980s, this pro-debt tax bias was limited by several factors in the US and Europe. In the US, the tax benefit of debt at the corporate level was reduced by the high tax cost of debt in terms of the investor's personal taxation. To simplify: a debt investment generates interest, whereas an equity investment mainly generates capital gains. In the US, these two categories of income are not taxed in the same way for an investor. Interest income is liable to income tax, whereas capital gains are taxed at a very low rate or are tax exempt.<sup>7</sup> Despite interest being deductible from corporate income tax, total taxation of debt can therefore be higher than taxation of equity when income tax rates are high. In such cases, the tax system provides an incentive for using more equity.

In France (beginning in 1965) and Germany, dividend tax credit systems (known as *avoir fiscal sur les dividendes* in France and *Anrechnungsverfahren* in Germany) produced a similar effect. Through these systems, the corporate income tax paid by a firm was refunded when dividends were paid out, thus significantly reducing the tax disadvantage for equity.

Unfortunately, a series of reforms upended this balance, first in the US, then in Europe. In the US, the tax advantage for debt emerged with successive reductions in income tax rates. For the highest tax bands, the income tax rate stood at 90% in the 1950s. It was gradually lowered to less than 30% in the 1990s. This reduction in the tax rate for interest income had the effect of making debt more appealing.

In Europe, the dividend tax credit was repealed (in Germany in 2000 and in France in 2004), thereby introducing – probably involuntarily – a substantial advantage for debt. In addition, at global level, the situation was aggravated by the development of offshore finance, which reduces tax pressure on investment income and therefore increases the bias towards debt.

Beginning in the 2000s, firms reacted to these tax changes and increased their debt levels, thus reducing their taxable income. In fact, the tax authorities clearly realised this, and governments implemented several limitations – largely arbitrary in nature – for the tax deductibility of interest payments. Just three of the many such measures are the *Zinsschranke* in Germany, the *abat fiscal*<sup>8</sup> in France and the interest deductibility cap included in the Trump administration's recent tax reform. While these measures limit tax optimisation, they do not really deal with the problem of the pro-debt tax bias. For example, these reforms have no effect on banks, in particular because the caps on interest deductibility apply to “net interest”, i.e. banks' net interest margin, which is by definition positive.

---

<sup>7</sup> <http://www.taxpolicycenter.org/briefing-book/how-are-capital-gains-taxed>

<sup>8</sup> The overall cap on interest was included in the 2013 Budget Act, Articles 212 *bis* and 223 B *bis* of the General Tax Code.

## Reserves for loan losses: another tax advantage repealed

In parallel to these pro-debt tax reforms, another tax incentive for equity was repealed in the US and France: the deductibility of banks' reserves for loan losses.

Until the 1980s, banks in France and the US could set aside reserves for loan losses (known in France as statutory reserves) that were not specifically earmarked to cover clearly identified future losses or expenses. Reserves for loan losses could be several times higher than maximum historical losses charged off.<sup>9</sup>

This type of reserve offers a strong tax advantage because it is deducted from taxable income. Unsurprisingly, banks used this tax advantage to hold the highest amount of reserves allowed. This had the indirect positive effect of increasing banks' reserves (not discharged of tax).

Before the Basel I reforms in 1988, this type of reserve was officially counted in the regulatory capital of US banks, alongside other components of primary capital. With the entry into force of Basel I rules, this status changed. Under the Basel I Cooke ratio, reserves (statutory or otherwise) are only included in the calculation of the well-known Tier 2 capital, just like subordinated debt, for instance. This rule is still in effect. Yet from an economic standpoint, these reserves are real capital, i.e. a financial resource that does not need to be paid back and can therefore fully absorb any losses the bank endures following a financial shock.

The elimination of statutory reserves was probably related to accounting and tax authorities' very negative opinion of this instrument. Authorities did not understand the prudential dimension of statutory reserves, which they viewed as an arbitrary instrument enabling banks to smooth their accounting result and optimise tax. Thus, a series of accounting and tax reforms progressively did away with this kind of reserve. At present, very few observers remember these reserves, and even fewer understand how this instrument provided banks with a powerful incentive to build robust financing structures.

Ironically, the IFRS 9 reform now seeks to reintroduce *ex ante* provisions. However, contrary to statutory reserves in the past, these provisions will have to be backed by calculations of expected credit loss and can only be counted as supplementary capital. The Basel Committee may change its stance, but it is clear that if these provisions are classified as Tier 2 (supplementary capital), rather than as Tier 1 (core capital), then IFRS 9 will not have a positive effect on retained earnings and increased equity.

---

<sup>9</sup> J.R. Walter (1991), "Loan Loss Reserves", 77 Fed. Res. Bank of Richmond, *Economic Review*, 20, 24.

## **Banks are especially sensitive to the pro-debt tax bias**

While the impact of taxation on the financing structures of non-financial corporations is well known, the connection between taxation and debt in the banking sector is not as well understood. The increase in bank debt levels beginning in the 2000s is generally ascribed to a loosening of regulatory constraints following the successive Basel Committee reforms. However, a series of empirical studies has proven that taxation had a sizeable impact. Banks always have capital levels that are higher than regulatory requirements. It has been clearly documented that the size of this security buffer reacts sharply to changes in taxation. We can observe that a tax change in favour of debt results in a significant decline in the level of equity. Conversely, a tax reform in favour of capital leads to an increase in equity levels.<sup>10</sup>

The explanation for this very strong connection between bank debt and taxation can be found in the cost structure of a bank. Taxation affects the cost of financing. For a non-financial corporation, the cost of financing is basically a fixed cost. After investments have been financed, this cost is virtually unaffected by increases in the level of output. By contrast, for a financial institution such as a bank, financing is a commodity and the cost of financing is therefore a variable cost. We learn from industrial economics that an increase in fixed costs affects profitability but not necessarily prices, whereas an increase in variable costs has a direct effect on prices and therefore on competitiveness.

In tangible terms, each loan granted by a bank must be refinanced with a certain proportion of debt and equity. Higher taxation of equity forces a bank to apply higher prices, thus denting its competitiveness. It can partly offset this higher cost by increasing the proportion of debt financing, but this strategy could threaten its stability. Currently, research has confirmed the importance of this mechanism, e.g. by showing that banks win or lose substantial international market share following relatively minor tax changes in their home countries.<sup>11</sup>

Ultimately, there is a second reason that forces banks to take on as much debt as possible to remain competitive. Banks are currently in direct competition with a large number of financial intermediaries often referred to as *shadow banks*. These institutions are usually set up as investment funds and are therefore fully tax exempt. Only by minimising the tax pressure through maximum leverage can banks remain competitive with these new intermediaries.

The tax system therefore creates a distorted situation in which banks seeking stable financing sources immediately lose in competitiveness. It is unsurprising that they express very strong opposition to any increase in their regulatory capital requirements.

---

<sup>10</sup> For a detailed review of this research, see: "Containing Systemic Risk by Taxing Banks Properly" (with ROE) (2018), *Yale Journal on Regulation*, vol. 35, pp. 181-231.

<sup>11</sup> C. C  l  rier, K.K. Thomas and S. Ongena (2018), "Taxing Bank Leverage: The Effects on Bank Capital Structure, Credit Supply and Risk-Taking".

## **CBIT and ACE: tax reforms to encourage equity financing**

The observation is straightforward. Interest is tax deductible, whereas the cost of equity is not. This asymmetric treatment of debt and equity creates a bias towards debt. To restore tax neutrality, a symmetry must be created between equity and debt. This reasoning leads to two theoretical possibilities. Either taxation of debt can be aligned with that of equity, i.e. by repealing the tax deductibility of interest, or equity can be treated in the same way as debt, i.e. by making the cost of equity tax deductible.

Researchers and certain tax authorities have analysed both approaches in great detail. The first system (non-deductible interest) is usually referred to by the acronym CBIT (Comprehensive Business Income Tax<sup>12</sup>), whereas the second (tax-deductible cost of equity) is called ACE (Allowance for Corporate Equity<sup>13</sup>).

A CBIT – i.e. eliminating the deductibility of interest – is an intuitively appealing system but has serious practical and theoretical drawbacks. The main problem is that this measure would not apply well to banks. Taxing their interest income without allowing them to deduct interest payments would immediately make their business non-viable given the level of the net interest margin. Most CBIT systems therefore plan to reason in terms of “net interest”, which would have no effect in terms of reducing the pro-debt tax bias for banks. Another practical problem is the fact that a CBIT-type reform cannot be limited to corporate taxation. It must also affect the taxation of investors by reducing the tax burden on interest income in order to avoid taxing debt excessively. For the time being, no country has attempted to implement a tax reform on this scale.

In addition to these practical problems, a CBIT system has theoretical properties that make it unappealing. Notably, many low value-creating investments would no longer be profitable. Therefore, following the introduction of a CBIT, a decline in investments is to be expected, which could dent company competitiveness and economic growth.

---

<sup>12</sup> Very detailed plans for a CBIT were developed by the US Treasury under George H.W. Bush: Department of the Treasury (1992), *Integration of the Individual and Corporate Tax Systems. Taxing Business Income Once*, <https://www.treasury.gov/resource-center/tax-policy/Documents/Report-Integration-1992.pdf>. For more information, Alvin C. Warren (2008), *The Business Enterprise Income Tax: A First Appraisal*, 118 *Tax Notes* 921, 921-26.

<sup>13</sup> The ACE concept was developed simultaneously by E. Wenger (1983) in “Gleichmäßigkeit der Besteuerung von Arbeits- und Vermögenseinkünften”, *FinanzArchiv [Public Fin. Analysis]* 207, and by R. Boadway and N. Bruce (1984), “A General Proposition on the Design of a Neutral Business Tax”, 24 *J. Pub. Econ.* 231. It was then popularised by “Equity for Companies: A Corporation Tax for the 1990s”, IFS Cap. Taxes Grp. (1991), <http://www.ifs.org.uk/comms/comm26.pdf> [<http://perma.cc/D77R-M8U3>] and again suggested for the UK in *Mirrlees Review*, see *Dimensions of Tax Design* (Stuart Adam et al., eds., 2010).

The ACE avoids all these pitfalls. It corrects the incentives for both banks and non-financial corporations. It can be added to the existing tax structure without requiring additional reforms, and has been successfully tested in several countries, notably Italy and Belgium.<sup>14</sup> Lastly, the ACE system has very appealing theoretical properties. Unlike the CBIT and the current tax system, an ACE eliminates taxation of low-return investments, thereby encouraging investment. This is precisely the main reason this system was developed.

An ACE-type reform works in a very straightforward way. The government determines a “notional interest rate” for equity capital. To achieve tax neutrality, this rate must be close to the average interest rate paid by companies on their debt. Using this rate, “notional interest” on the company’s equity capital is calculated. This notional interest is tax deductible, just like the interest that the company pays on its debt.

After establishing an ACE, if a company replaces equity with debt, its interest payments will increase, but its notional interest will decline in parallel. With a notional interest rate identical to the real interest rate, its taxable income will be unchanged. Thus, the tax treatment is neutral regardless of the capital structure. If the real interest rate is higher than the notional rate, there is a (slight) pro-debt bias. However, if the notional interest rate is higher than the real rate, companies with low debt have a tax advantage for preferring equity financing.

## The Allowance for Growth and Investment

Obviously, an ACE reduces taxable income and therefore lowers the government’s tax revenue. There are several ways to correct this lost revenue. The easiest is simply to increase the corporate tax rate. By calibrating this reform so that it is tax neutral, companies are unlikely to oppose this increase in the corporate tax rate. As taxation of low-return investments is lower with an ACE, this increase in the nominal tax rate is unlikely to weigh on investment and growth.

However, there are other ways to avoid reducing tax revenue. In Italy, the notional interest rate is not applied to all equity capital, but only to the increased equity capital compared to a benchmark year. This makes it easier for companies to build up additional equity and encourages investment without making existing equity tax deductible.

---

<sup>14</sup> S. Hebous and M. Ruf, Evaluating the Effects of ACE Systems on Multinational Debt Financing and Investment (Univ. of Frankfurt WorkingPaper, 2015), [https://ideas.repec.org/p/ces/ceswps/\\_5360.html](https://ideas.repec.org/p/ces/ceswps/_5360.html); E. Zangari, Addressing the Debt Bias: A Comparison between the Belgian and the Italian ACE Systems (Eur. Comm’n Taxation Papers Working Paper N.44-2014, 2014), [www.ec.europa.eu/taxation\\_customs/resources/documents/taxation/gen\\_info/economic\\_analysis/tax\\_papers/taxation\\_paper\\_44.pdf](http://www.ec.europa.eu/taxation_customs/resources/documents/taxation/gen_info/economic_analysis/tax_papers/taxation_paper_44.pdf)

The new EU Directive on the Common Consolidated Corporate Tax Base (CCCTB) puts forth a similar rule. Known as the Allowance for Growth and Investment (AGI), this rule will apply a notional rate to certain kinds of capital increases. As in an ordinary ACE, this notional interest will be deductible from taxable profit, but unlike an ACE, this deduction can only be carried forward for ten years. While the details for this regulation are still changing, it is a step in the right direction. The effect for banks is currently highly uncertain. In particular, in its current form, this reform would treat capital reductions in the opposite way, therefore creating additional tax to be paid.

### A special ACE for banks' non-regulatory capital

Furthermore, it would be completely possible to create an ACE for only certain specific sectors. For example, an ACE could be created for the banking sector, where the pro-debt tax bias creates especially dangerous distortions. Note that banks are already taxed differently from non-financial corporations; they are not liable to VAT, for instance. An ACE for banks alone could be designed to be even less intrusive. Notional interest could be calculated based not on total capital, but only on the “non-regulatory” portion of capital, i.e. the amount over and above the minimum regulatory capital requirements.<sup>15</sup> With such a system, the shortfall in tax revenue would be minimised.

Note also that the ACE systems in Italy and Belgium were not introduced to stabilise the banking system, but instead to encourage investment in Italy and to give multinationals an incentive to set up their headquarters in Belgium. As a result, these reforms are not properly designed for banks, a fact that limits their incentives to increase capital. In Belgium, for instance, the deductibility of notional interest cannot be combined with other tax advantages that certain banks benefit from. Moreover, in both countries, the notional interest rates have been set at very low levels, well below the interest rates paid by banks on their long-term debt. Nevertheless, it has been empirically documented that these reforms have had a substantial positive effect on the capital level of banks.<sup>16</sup> A reform more closely tailored to banks, notably with higher notional interest rates, would have stronger effects.

---

<sup>15</sup> A more detailed analysis of this system can be found in “Containing Systemic Risk by Taxing Banks Properly” (with M. Roe), (2018), *Yale Journal on Regulation*, vol. 35, pp. 181-231.

<sup>16</sup> J. Martin-Florès and C. Moussu (2017), “Is bank capital sensitive to a tax allowance on marginal equity?” *European Financial Management*. Forthcoming.



## **Conclusion**

The current situation is absurd: tax rules encourage banks to be highly leveraged, whereas regulators are attempting to implement higher capital requirements. These contradictory incentives heighten tensions between regulators and financial system stakeholders and dampen the competitiveness of banks.<sup>17</sup> Yet there are solutions that could be easily implemented and neutral in terms of the government's tax revenue. The recent initiative to include an Allowance for Growth and Investment in the CCCTB Directive is a step in the right direction. Aside from the official objective of driving investment and growth, this reform is likely to help stabilise the banking sector and to bolster banks' competitiveness in the international financial landscape.

---

<sup>17</sup> See Christophe Moussu's article in this issue.