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March 3, 2017

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European Department

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GROWTH-ENHANCING CORPORATE TAX REFORM IN BELGIUM¹

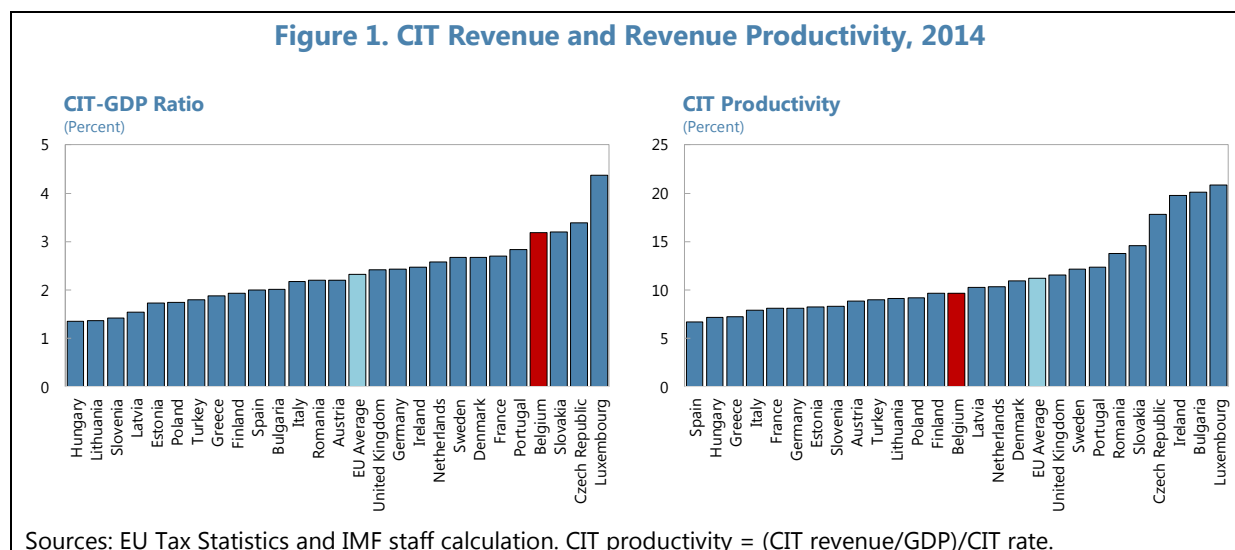
1. **Corporate tax reform has been under consideration by the Belgian coalition government.** This topic has become increasingly relevant in the context of international initiatives, such as the new anti-tax avoidance Directive in the EU, and concerns about intensive tax competition. Belgium has already changed some of its corporate tax provisions, such as innovation incentives and specific tax rulings. The focus is now on reducing the comparatively high headline corporate income tax (CIT) rate.
2. **This paper explores key features of Belgium's CIT regime as background for potential reform options that would be growth enhancing, while safeguarding revenues and limiting distortions.** A central question is to what extent the current tax system harms investment, entrepreneurship, job creation and productivity, and whether a redesign can do better. This requires a thorough analysis of the specific aspects of the CIT regime, but also a broader look across all tax rules affecting income from business and investment activities, given the potential for inefficiencies and tax arbitrage. Moreover, given Belgium's tight fiscal constraints, the scope for reducing overall revenue from business and investment income is limited; and also shifting the tax burden to other activities is difficult, especially since the labor tax wedge is still high. The paper complements earlier analyses by IMF staff, which have explored options for growth-enhancing fiscal consolidation (IMF 2015) and fiscal options on the expenditure side (2016a).

A. Business Taxation in Belgium

3. **Belgium's CIT is a relatively important revenue source.** In 2014, the CIT raised 3.2 percent of GDP. This is above the EU average of 2.3 percent of GDP (left panel of Figure 1). A significant share of CIT payments comes from small firms, partly reflecting a relatively high share of SMEs that are organized as legal corporate entities in Belgium—we discuss potential reasons below. Of course, this also means that the high revenue from the CIT is at least partly offset by a lower revenue from the personal income tax (PIT). It is also instructive to look at CIT revenue productivity—defined as the CIT revenue-to-GDP ratio divided by the statutory CIT rate (right panel of Figure 1). This indicator reflects CIT revenue in percent of GDP generated per each point of the CIT rate. With revenue productivity close to 0.1 percent of GDP (approximately €400 million per point of CIT), Belgium is slightly below the European average of 0.11. This may partly reflect relatively generous incentives that narrow the CIT base in Belgium; it can also reflect profit shifting to low-tax jurisdictions, induced by the relatively high Belgian CIT rate.

¹ This paper has been prepared as part of FAD's initiative to support IMF surveillance with analyses of international taxation issues. It has benefited from discussions with the Belgian authorities, businesses representatives, tax experts and academics. We are grateful to the Belgium authorities, Jean-Jacques Hallaert, Piyabha Kongsamut and Christian Mumssen for useful comments.

Figure 1. CIT Revenue and Revenue Productivity, 2014



Corporate tax rates

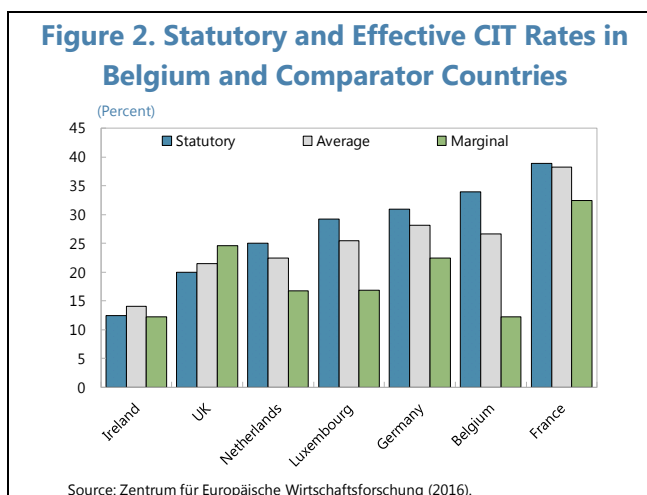
4. The statutory CIT rate is high by international comparison (Figure 2). The standard rate is 33 percent, but a 3 percent austerity surcharge (imposed since 1991) makes the overall applicable CIT rate 33.99 percent. In comparison, the average CIT rate in the EU is 22.5 percent; in the Euro area 24.3 percent; and in the OECD 24.7 percent. The only four other OECD countries with CIT rates exceeding 30 percent are France, Germany, Japan and the US. While most countries adopt a single CIT rate for all corporate income, Belgium employs a special progressive rate structure for corporate profits below €322,500, with the lowest rate of 24.98 percent applied to incomes up to €25,000, a rate of 31.93 percent for income between €25,000 and €90,000 and a rate of 35.54 percent between €90,000 and €322,500.

5. The impact of taxation on investment and revenue is determined by effective tax rates. These depend not only on the statutory CIT rate, but also on elements of the tax base, such as depreciation allowances, inventory valuation, interest deductibility and tax incentives. Two effective tax rate measures are generally used to infer the impact of the CIT system on investment:² (i) the marginal effective tax rate (METR), which is derived from the user cost of capital; it measures the tax burden imposed on an investment that just meets the required rate of return to be viable to undertake; and (ii) the average effective tax rate (AETR), which matters for investment choices that

² These are forward looking effective tax rates (ETRs), based on simulations of the prevailing tax code. They provide insight into the incentive effects of taxation. Alternatively, backward looking ETRs are based on realized tax payments and are generally used to picture the distribution of taxation across firms. Those measures capture also issues of non-compliance and tax avoidance. Backward looking tax rates reported by the European Commission until 2012 (labeled implicit tax rates) suggest that the corporate tax burden in Belgium is in the mid-range of the EU (lower than e.g., Austria, France, and Italy; similar to the United Kingdom and Portugal; and higher than Ireland and the Netherlands). See https://ec.europa.eu/taxation_customs/business/economic-analysis-taxation/taxation-trends-eu-union_en.

are inframarginal, e.g., the location choice of multinational corporations (MNCs) or investment by firms facing credit constraints. It is also indicative of the amount of fiscal revenue collected.

6. Compared to other European countries, the CIT entails relatively significant disincentives to discrete foreign direct investment (FDI) decisions, but relatively small marginal investment distortions. Based on data for 2015, Figure 2



shows that the AETR in Belgium of 26.7 percent is lower than the statutory CIT rate. The AETR is higher than the EU average of 21 percent and exceeds the rates in Ireland, the Netherlands and the United Kingdom; yet, it is lower than the 28.2 percent in Germany and the 38.3 percent in France. The METR in Belgium is relatively low compared to other European countries, reflecting the impact of specific design features of the CIT base (see below). Indeed, the rate of 12.5 percent is among the lowest in the EU and similar to the level in Ireland.³ Thus, while fewer multinationals will choose Belgium as the location for their activities, marginal investment distortions are relatively small, implying that additional investment by firms already residing in Belgium is taxed less than elsewhere.

Corporate tax base

7. The corporate tax base in Belgium is consistent with common international practices. Legitimate business expenses are deductible. Tax depreciation allowances are relatively generous for some types of machinery (with accelerated straight line depreciation available at 33 percent per year) and buildings (where straight line depreciation for industrial buildings is allowed at 5 percent per year). For intangible assets, depreciation is in line with other countries.

8. Several tax regime features encourage innovation, including by reducing the cost of R&D and through a preferential treatment of income from intellectual property. First, there is a specific tax credit for research and development (R&D), meaning that firms receive a discount on their tax liability that is proportional to their R&D expenses. This effectively subsidizes R&D costs by between 5 and 8 percent. Second, there is an exemption from the payroll withholding tax for qualified researchers. This reduces the cost of the labor component of R&D by between 15 and 20 percent. Finally, Belgium has a so-called innovation box.⁴ It implies that income from qualified intellectual property (IP) is separated from other income and liable for an 85 percent exemption

³ The METR is sensitive to assumptions about the interest rate. The calculations presented here assume a fixed interest rate of 5 percent for all years and countries. If the interest rate in the calculation would be based on the actual rate in Belgium (and thus equal to the notional interest deduction), the METR would be equal to zero—as theory suggests.

⁴ These are also sometimes referred to as IP box or patent box regimes.

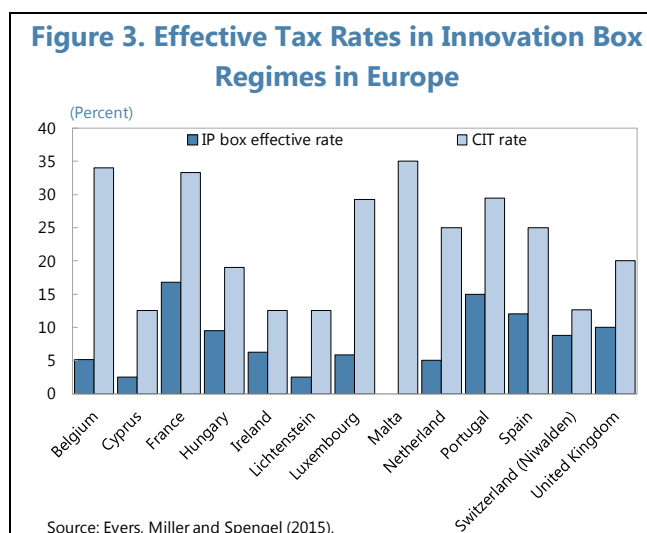
from the CIT. Hence, only the remaining 15 percent of that income is taxable at the statutory CIT rate of 34 percent; the effective rate on this income is therefore only 5.1 percent. This effective rate is low compared to other countries that have an innovation box (Figure 3). Virtually all benefits under this scheme are enjoyed by large enterprises in the manufacturing sector.

9. Losses offset provisions are comparatively restrictive. Losses can be carried forward indefinitely, but without interest. There is no loss carry backward—a provision that is available in only few European countries. Somewhat exceptional is that Belgium

does not allow for group taxation—i.e., the tax results of companies in a group cannot be consolidated. Such consolidation would allow for the immediate offset of losses in one subsidiary against profits elsewhere in the group. It is especially attractive for large businesses. Group taxation is available in most Western European countries (see Box 1).

10. The overall revenue forgone from base narrowing measures in the CIT is moderate, but non-negligible. This can be drawn from the annual tax expenditure review. The latest available analysis for 2012 (Federal Public Service Finance 2016) suggests that overall corporate tax expenditures in Belgium are 12.8 percent of CIT revenue. Approximately one quarter of this is due to R&D tax incentives; another 14 percent is due to the innovation box. The remainder is associated with special investment tax incentives and exemptions for certain entities, such as inter-municipal associations and firms in the audio-visual arts sector.

11. Since 2006, Belgium allows for a notional interest deduction (NID). It aims to neutralize the CIT treatment of debt and equity by supplementing the deductibility of interest with a deduction that is the product of the total book value of equity (with some corrections) and a notional interest rate. The latter is derived from the average monthly Belgian government bond rate of the preceding fiscal year. The NID rate for 2017 is 0.237 percent; it is 0.5 percentage points higher for small companies. Since 2013, unused NID can no longer be carried forward. The implications of the NID, including for revenue, financial stability, and economic growth are further discussed below.



Box 1. Group Taxation Regimes in Europe

Many European countries apply some form of group taxation, based on the assumption that each corporate group forms a single economic unit and should be taxed accordingly. Group taxation allows for the consolidation of losses and profits. The participation threshold defining the members of the consolidated group usually ranges between 50 and 95 percent. Under consolidation, intra-group transactions are eliminated as well as the need to price them at arm's length. The tax base of the consolidated group can be calculated on the entire basis, disregarding shares held by minority shareholders, or as a proportional aggregation (e. g. international tax consolidation in France). A few countries extend group taxation beyond their borders (Netherlands, Denmark, Italy, Luxembourg and Ireland), usually under strict conditions, e.g. that all the qualifying foreign companies must be included in the consolidation.

Austria, Cyprus, Iceland, Finland, Sweden, Ireland, Latvia, Lithuania, Malta, and United Kingdom do not allow full consolidation of revenues and expenses. However, members of the same group can share their profits or losses within a tax period. The German model requires subordinated members of the group to transfer their profit or loss by means of a formal commercial agreement to the parent company, which presumes all tax liabilities of these members.

Belgium, together with Bulgaria, Croatia, the Czech Republic, Estonia, Greece, Hungary, Romania, Slovakia, Slovenia and Switzerland, do not have a group tax treatment. These countries treat all members of the group as independent taxpayers. They neither allow any transfer of losses to other group companies nor eliminate transfer-pricing issues on intra-group transactions. In these countries, economic inefficiencies can be overcome using branches (not having legal personality) instead of subsidiaries.

Tax neutrality across business and investment income

12. Conceptually, the CIT operates as a backstop for the PIT. About 98 percent of firms in Belgium are purely domestic; and they employ more than 70 percent of all Belgian employees. For them, the CIT serves to limit tax avoidance opportunities vis-a-vis the PIT. For instance, with a very low CIT, entrepreneurs could change the legal form of their business and reduce their tax liability.⁵ This is because Belgian business income from unincorporated small and medium-sized enterprises (SMEs), such as sole proprietorships, is taxed under the progressive PIT, with rates ranging from 25 to 50 percent.⁶ In contrast, the income earned by a closely-held corporation is taxed differently. The owner-director of such a corporate business is obliged to pay a minimum director's remuneration of €36,000. This income is deductible for the CIT but taxed as labor income under the progressive PIT. The remaining income is first subject to the progressive CIT. Then, if this corporate income is distributed to the owner-director in the form of dividends, it is subject to an additional dividend tax of 30 percent. However, when corporate income is retained within the firm and at some stage

⁵ Evidence for Europe points to significant shifts in businesses legal form due to tax differences between corporate and non-corporate businesses, see De Mooij and Nicodeme (2008).

⁶ The analysis here abstracts from social security contributions. These differ between employees, corporate businesses and non-corporate businesses and might also affect the incorporation decision.

realized as a capital gain, the entrepreneur can escape this distribution tax since there is no personal tax on capital gains.^{7 8}

13. The Belgian tax system creates de facto incentives for individuals to register as a corporation and to accumulate retained earnings, rather than distributing dividends. To illustrate the properties of current system in Belgium, Figure 4 compares the average (left panel) and marginal (right panel) tax burden on income derived from three forms of businesses along the income distribution between €10,000 and €500,000:

- A non-corporate business that is subject to the progressive PIT;
- A corporate business that pays the minimum director's remuneration of €36,000 and then distributes all remaining profit as dividends;
- A corporate business that pays the minimum director's remuneration of €36,000 and then retains the profit in the firm and realizes it at a later stage as a capital gain.

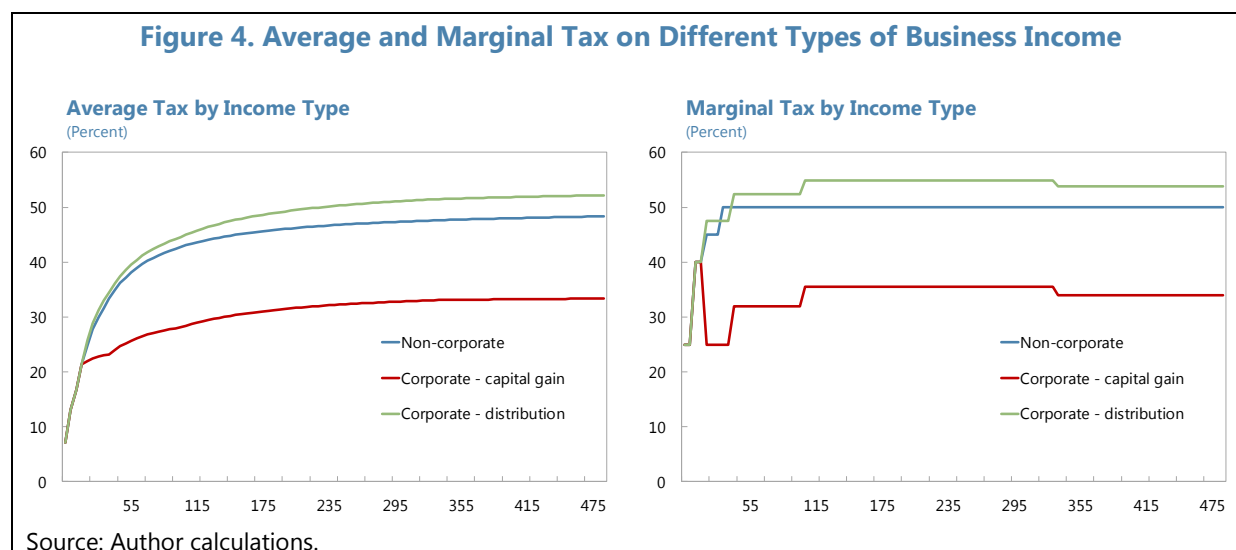


Figure 4 shows that the average and marginal tax burden is quite similar for a non-corporate business and a corporate business that pays dividends. Hence, there is little reason for entrepreneurs to run their business in either the corporate or the non-corporate legal form; nor is there reason to pay dividends instead of wages. However, Figure 4 also shows that a corporate business that retains profit and realizes income as a capital gain is taxed much lighter than others.

⁷ Liquidation proceeds (i.e., returns of accumulated profits over and above paid up capital upon liquidation of a company) are subject to personal tax. SMEs are subjected to a lower withholding rate. A short-term (speculative) capital gains tax was in place in 2016.

⁸ Note that capital gains taxation under the PIT does not apply to normal (non speculative) management of the private wealth. Capital gains derived in the course of a business activity are taxable as professional income. A capital gains tax is due on capital gains derived from the sale of shares of a Belgian company to a company outside the EEA by a substantial shareholder (25 percent).

This reflects the absence of a personal capital gains tax in Belgium. This leads to a lock-in effect (capital gets locked in existing companies), which distorts the allocation of capital, thus inducing efficiency loss. Although Belgium is not unique in this regard, only four other European countries leave personal capital gains entirely untaxed (Malta, Cyprus, Czech Republic, and Luxembourg).

14. This tax incentive may be responsible for the gradual but significant increase in the share of Belgian businesses run in the corporate form over the last few decades. A report by the High Council of Finance in 2014, for instance, shows that in 1983, less than 20 percent of all businesses were incorporated while more than 80 percent were run in the non-corporate form. In 2012, the share of businesses in the corporate form had risen to over 50 percent and was still increasing. Today, many professionals and self-employed people, such as lawyers, doctors, architects, engineers, contractors, journalists, interpreters, etc. are organized as closely-held corporations. The economic implications of this tax-induced development in business form may go beyond the pure fiscal aspects (e.g., lower PIT collection) and can also create organizational inefficiencies and misallocation of capital.

Treatment of multinational corporations

15. Belgium's CIT system features common international tax rules. Companies that receive dividends or qualified capital gains from abroad benefit from a 95 percent participation exemption to avoid double taxation (with the remaining 5 percent taxable in Belgium). Foreign subsidiaries and branches in Belgium are taxed on their source income through the CIT and possibly withholding taxes on dividends, interest and royalties. These latter taxes are often agreed upon in 93 bilateral tax treaties that Belgium has signed with other countries. The terms of Belgium's treaties (such as withholding tax rates) are consistent with international conventions and in line with those in many other tax treaties.

16. In the past, Belgium has used various targeted tax incentives to attract foreign direct investment from MNCs, such as the regime for coordination centers before 2006, the NID after 2006 (see below), the innovation box, and specific rulings such as an excess profit tax ruling. This strategy has been relatively successful in the past. For instance, the inbound stock of FDI is approximately 100 percent of GDP in 2015 (per the IMF Coordinated Direct Investment Survey). This is much higher than in most other European countries. However, the outbound stock of FDI from Belgium is of equal size, and around 35 percent of the outstanding inbound FDI is in special purpose vehicles (referred to as "captive financial institutions and money lenders" in the national accounts) (Duprez and Van Nieuwenhuyze, 2016). This suggests that a large share of FDI comprises purely financial flows running through Belgium—rather than greenfield investments that contribute to the Belgian economy. These financial flows may be part of tax planning strategies by MNCs and create negative spillovers on the tax base of other countries. The tax incentives have therefore recently come under increased international scrutiny (see next section). In response to this, Belgium has already revised some of its incentives, such as the excess profit ruling.

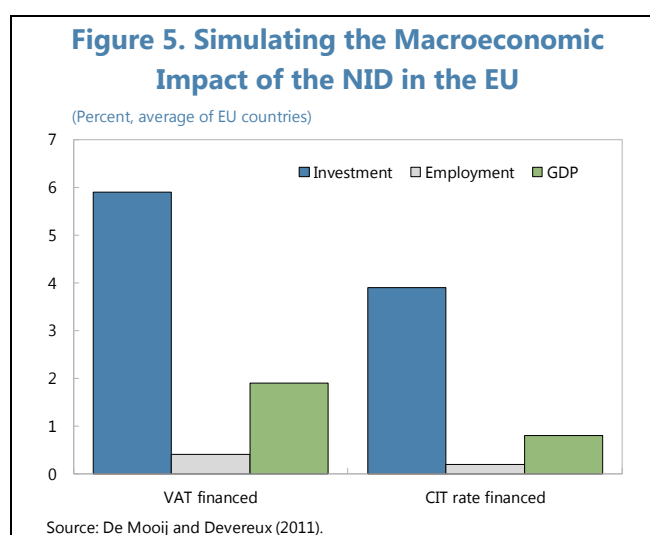
17. The Belgian tax code contains modest anti-avoidance provisions to protect its CIT base against base erosion and profit shifting by MNCs. For instance, its transfer pricing regulations are

consistent with OECD guidelines, and there is a general anti avoidance rule that can be used to challenge aggressive forms of tax planning. However, compared to other countries, the current anti-avoidance provisions are relatively modest. For instance, Belgium adopts relatively weak interest-deductibility limitations⁹ and applies very limited controlled foreign corporation rules (CFC rules, which would bring into tax the passive income earned in low-tax foreign affiliates of Belgian MNCs). In 2015, Belgium introduced the so-called “Cayman tax”—a limited form of CFC rule whereby legal constructions (fiduciary agreements or foreign entities that are not subject to a CIT) are deemed to be tax transparent and income of such legal constructions is taxable in Belgium.

The Notional Interest Deduction

18. The Belgian NID resembles what the public finance literature generally refers to as the Allowance for Corporate Equity (ACE). Inspired by Boadway and Bruce (1984), who proposed to replace interest deductibility with a notional deduction for all capital, ACE supplements the current deductibility of interest with a similar deduction for the normal return on equity. It has been quite widely advocated by economists including, for instance, in the Mirrlees review for the UK (2013) and more generally by IMF staff (IMF 2016c). This advocacy originates in the following neutrality aspects:

- **The ACE eliminates debt bias**, i.e. the bias that occurs if only interest is deductible for the CIT, but not the normal return on equity. Empirical evaluations show that the Belgium NID has been effective in lowering corporate leverage ratios, both in financial and non-financial firms. Thus, it has contributed to the resilience of the Belgian economy by mitigating instability risks (Burggrave et al. 2008; Kestens et al. 2012; Princen 2012; Panier et al. 2015). Box 2 illustrates this, based on an empirical assessment using the synthetic control method. The evolution of the ratio following the reform in Belgium compared to the counterfactual suggests that the average bank debt ratio in Belgium would have been 13.7 percentage points higher in the absence of the NID.¹⁰
- **The ACE boosts investment.** As the NID charges no tax on projects whose return equals the cost of capital, the effective marginal tax rate is reduced to zero. This offers a powerful stimulus for investment compared to a system without such a provision. For illustration, Figure 5 shows the predicted impact of the NID on investment, employment and GDP in the EU, based on simulations with a computational general equilibrium model (see De Mooij and Devereux 2011). In this



⁹ Interest deduction can be disallowed if the ratio of intragroup loans to equity exceeds 5:1.

¹⁰ Similar findings are reported by Schepens (2016). Moreover, even bigger effects are reported for non-financial firms by Hebous and Ruf (forthcoming).

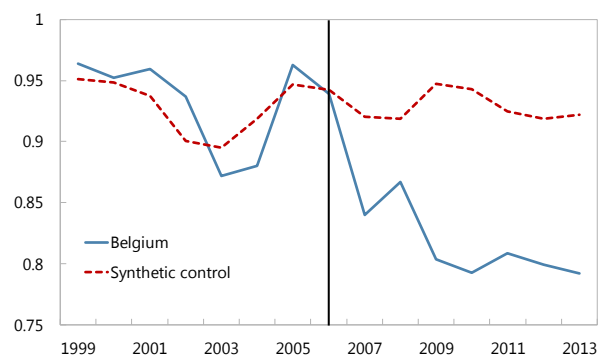
exercise, the NID is financed in a revenue-neutral fashion under two alternative offsets: (i) an increase in the VAT; or (ii) a higher statutory CIT rate. The simulations suggest that investment in EU countries rises by 6 percent if the VAT is used to finance the NID; it rises by 4 percent if the statutory CIT rate is increased. Employment would also rise under both scenarios, while GDP expands by, respectively, 2 and 1 percent. These results suggest that the NID is much more important for growth than the CIT rate. The NID has therefore recently received increased attention from countries and, for instance, was the main motivation for its introduction in Italy and its inclusion in the Common Consolidated Corporate Tax Base in the EU.

Box 2. Bank Leverage and the NID in Belgium: An Assessment Using the Synthetic Control Method

The challenge of assessing the impact of the NID on bank leverage is that the counterfactual is not observable — i.e., what would have happened to bank debt had Belgium not introduced the NID in 2006? This challenge can be addressed using a recent empirical technique — the synthetic control method — whereby the pre-NID consolidated debt-asset ratio in the banking sector in Belgium is replicated using a weighted average of the same debt ratio in non-NID countries (called ‘control units’). Abadie et al. (2010) provide a detailed explanation of the synthetic control method. In the exercise presented here, the source of the data on banks is Bankscope, and the sample includes 49 non-NID countries as well as Belgium. The weights are determined optimally by minimizing the distance between the average Belgian bank debt ratio and a synthetic debt ratio predicted using predicting variables that are typically used in the literature. These predictors are at the country-year-level and include, e.g., the statutory corporate tax rate, the interest rate, and profitability. Having constructed a variable mimicking the Belgian debt ratio before the reform (i.e., the synthetic control), the predicted evolution of the synthetic control after the reform gives a measure of the counterfactual debt ratio in a Belgium without the NID. The Box figure shows that the actual Belgian average debt in the banking sector considerably diverged from the synthetic debt after 2006, suggesting that the NID is highly successful in reducing bank leverage with a magnitude reaching 13.7 percentage points.

The NID and Bank Leverage

(Debt ratio)



Source: Author calculations.

19. A concern with the Belgian NID is that it is widely used for international tax planning.

To see how the mechanism may work, consider a MNC that resides in country 1 and that wants to invest in a subsidiary in country 2. Instead of directly funding this investment, the MNC can finance a Belgian special purpose vehicle (SPV) with equity; subsequently, the SPV transfers these funds to the subsidiary in country 2 in the form of a loan. By charging an interest rate on the loan that is equivalent to the NID rate prevailing in Belgium, no tax is due by the SPV in Belgium. At the same time, any dividend repatriation to the parent will be typically exempt in country 1, while the interest paid by the subsidiary is generally deductible in country 2. Thus, the MNC escapes tax in all three countries by using the SPV in Belgium. While the Belgian government neither suffers nor benefits from this SPV, other countries lose from its use. The importance of this spillover from the NID is visible in FDI data: Duprez and Van Nieuwenhuyzen (2016) note that: “*FDI in Belgium comprises a large proportion of “capital in transit,” i.e., capital that enters the country and in most cases leaves*

again immediately. When that capital enters Belgium, it often takes the form of equity, for tax reasons: when it leaves Belgium, it does so in the form of an (intra-group) loan.”¹¹

20. Overall, around 40 percent of all NID deductions in Belgium can be attributed to these SPVs (High Council of Finance 2016). Given the negative spillovers to the tax base of other countries, the question is whether this generates any benefit for the Belgian economy. Unfortunately, no study is available that estimates the contribution of these SPVs to Belgian GDP.¹² However, what is clear from data by the National Bank of Belgium is that the operations of these SPVs are almost entirely disconnected from the Belgian banking system. This feeds suspicion that these “transit flows” might indeed bring little gain to the country.

21. The true fiscal costs of the NID are complex to estimate, especially to take into account likely behavioral responses. In 2014, the sum of all NIDs multiplied by the CIT rate was around €4.5 billion, equivalent to 35 percent of actual CIT revenue. However, this figure cannot be interpreted as the overall fiscal cost of the NID for at least two reasons. First, as noted before, approximately 40 percent of the NID in Belgium is used by SPVs. They are present in Belgium only because of the NID and would likely disappear if the regime were repealed. Moreover, these NID provisions are exactly offset by an equivalent addition to the tax base due to taxable foreign interest income. The net revenue impact of the NID used by the SPVs is therefore zero. This implies that 40 percent of the gross fiscal cost of the NID should be subtracted from the number above. Second, for ordinary firms (other than SPVs), empirical evidence suggests that the introduction of the NID has raised the equity/asset ratio from 40 to 60 percent (Hebous and Ruf, forthcoming). Conversely, the stock of debt (and associated interest deductions) is noticeably smaller. Thus, using the current equity stock in computing the revenue impact of the NID significantly overestimates the true revenue loss, since the fiscal benefits from lower interest deductions should also be accounted for. IMF (2016c) estimates that this element leads to an overstatement of the revenue loss by 50 percent.¹³ With these modifications, the net revenue effect would likely be less than one third of the gross figure mentioned above, i.e. close to 10 percent of CIT revenue. This is close to estimates of the revenue cost of an ACE in an average OECD country, computed in IMF (2016c): using accounting data for 2012 and 2013, they arrive at an average cost of between 10 and 12 percent of CIT revenue.¹⁴

¹¹ The currently prevailing low NID rate of 0.237 percent reduces the attractiveness of this scheme.

¹² For instance, for the Netherlands Kerste and others (2013) assessed the economic impact of Dutch SPVs, which to a large extent are related to tax planning). They find that 12,000 SPVs create a total of between 8,800 and 13,000 jobs and contributed between €3 billion and 3.4 billion to the Dutch economy (between 0.4 and 0.5 percent of GDP). The sum of the inflow and outflow of capital through these SPVs was €8,000 billion (1240 percent of GDP).

¹³ This number might be even larger if the NID rate (at which equity is deducted) is lower than the corporate interest rate (at which debt is deducted).

¹⁴ For the coming years, the revenue cost of the NID is likely much smaller than 10 percent. Driven by the very low interest rate on government bonds, the NID rate for 2017 is set at 1.131 percent; and the rate for 2018 will be even lower, at 0.237 percent. These rates are much lower than the 2.63 percent in 2014—to which the numbers above refer. Hence, the NID in 2018 would effectively have negligible revenue implications for that year.

B. Forces Shaping Corporate Tax Reform in Belgium

International developments

22. Recent international initiatives have significant implications for Belgian CIT design.

Here, we discuss, respectively, the OECD/G20 initiative on base erosion and profit shifting (BEPS), decisions by the European Court of Justice (ECJ), and the EU Anti-Tax Avoidance Directive (ATAD). Box 3 elaborates briefly on the common consolidated corporate tax base (CCCTB) proposal in the EU—an ongoing debate, but with no immediate policy implications for Belgium.

- Under the BEPS initiative, concluded in November 2015, countries have agreed on a non-binding set of common guidelines and minimum standards to limit opportunities for international tax avoidance by MNCs. Belgium is committed to adopt at least the four minimum standards. The initiative has led to amendments in the design of the Belgian innovation box in February, 2017. Another important element of BEPS is the multilateral instrument, which intends to modify bilateral tax treaties along the lines of a common framework. This is foreseen to be signed in June 2017 and could affect several of Belgium's tax treaties. While the extent of the changes cannot be estimated until the convention is signed, at least a general anti-treaty abuse rule will be added to every treaty covered by the multilateral instrument.
- EU state aid rules have targeted various special regimes across Europe, including prominent cases in Ireland, Luxembourg and the Netherlands. In Belgium, it has required the government to abolish the so-called excess profit tax ruling regime. That scheme reduced the CIT base of companies who received a discount for "excess profits" resulting from being part of a MNC. The European Commission (EC) classified it as inconsistent with EU state aid rules, as it puts smaller competitors who are not a MNC on an unequal footing. 35 MNCs had enjoyed the relief and its repeal has been imposed with retroactive effect.¹⁵
- EU Directives provide concrete, binding rules that Belgium should implement. The most recent one is the Anti-Tax Avoidance Directive¹⁶ (ATAD) adopted in June 2016.¹⁷ Mimicking the BEPS guidelines, it comprises five measures: (i) an interest deduction limitation; (ii) a limitation to the exemptions of foreign source income (so-called CFC rule); (iii) exit taxation; (iv) a general anti-abuse rule; and (v) solutions for hybrid mismatches. Especially the first three will imply a considerable change in Belgium's anti avoidance provisions which, as noted before, are relatively lenient.¹⁸ For example, the limitation to interest deductibility can significantly affect several large

¹⁵ The Belgian government and some affected companies challenged the decision at the ECJ. The EC has faced criticism to impose the decision with retrospective effect, going back to its introduction in 2005. However, once deemed unlawful, the Commission must recover incompatible State aid including interest (for up to 10 years).

¹⁶ Council Directive (EU) 2016/1164 of 12 July 2016 laying down rules against tax avoidance practices that directly affect the functioning of the internal market.

¹⁷ ATAD will need to be implemented by 1 January 2019, except for the interest limitation rule, which may be postponed until 2024.

¹⁸ There has also been a recent amendment of the Parent Subsidiary Directive, which disallows the participation exemption on tax-deductible profit distributions.

multinational businesses and thus expand the Belgian CIT base. Also the CFC rule (which would require the non-distributed income of a controlled foreign subsidiary or permanent establishment to be included in the tax base of the parent company in Belgium) and the exit tax (which would impose Belgian tax on unrealized capital gains when an asset is transferred abroad) provide potential for further base broadening in Belgium.

Box 3. The Common Consolidated Corporate Tax Base in the EU

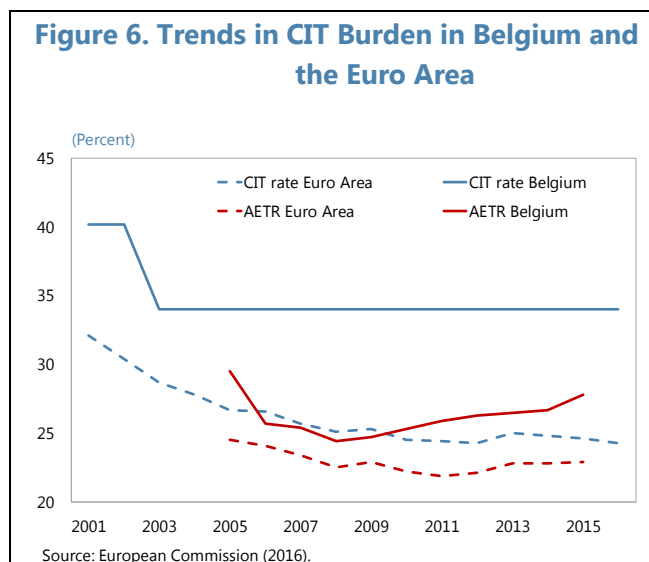
In October 2016, the EC re-launched a proposal for the adoption of a Common Consolidated Corporate Tax Base (CCCTB) in the EU—to replace the 28 different CIT regimes. First tabled in 2011 as an optional scheme for EU businesses, the new CCCTB contains two elements which are proposed to be implemented sequentially: (i) a common corporate tax base (CCTB), i.e., a set of common rules regarding depreciation, deductible costs and incentives; and (ii) consolidation of the accounts of a multinational corporation across countries. The consolidated base would then be divided between the Member states based on an apportionment formula, comprising three factors: 1/3 for the value of tangible assets, 1/3 labor (measured for one half by payroll and one half by the number of employees) and 1/3 for the value of sales by destination. Each country could then apply its own CIT rate to the apportioned base. The CCCTB would be mandatory for multinational groups with a consolidated revenue exceeding €750 million per year; other firms might opt to be taxed either according to the CCCTB or the national CIT. The CCCTB can significantly simplify the CIT in Europe, thus reducing compliance costs and eliminating mismatches between national systems. It would also curb aggressive tax planning and remove the need for transfer pricing within the EU. Yet, the CCCTB would also involve new challenges, not least due to a significant re-allocation of tax bases across countries. Moreover, as tax will effectively be levied based on the formula factors, new distortions will arise in the location of these factors—and tax competition for attracting those factors with a low tax rate will remain.

Most elements of the proposed common base follow general design principles of existing CIT systems in the EU, e.g., with respect to depreciation, loss carry forward, deductible expenses and anti-avoidance provisions vis-à-vis external EU trading partners. Yet, two specific elements in the CCTB are worth mentioning. First, it allows for a super-deduction for R&D costs: 150 percent of the R&D expenditures are deductible for up to €20 million. The deduction is smaller for R&D spending beyond that level and more generous for start-up firms without any associates. Second, the CCTB contains a so-called allowance for growth and investment (AGI), reminiscent to the Belgian NID. However, the AGI is applied to incremental equity relative to a base year and granted only for a 10-year period. The AGI rate is, like the Belgian NID rate, linked to the government bond rate, but topped up with a risk premium of 2 percent.

Adoption of the CCCTB would have major implications for EU member states, including for Belgium. First, the common base will require scrapping some tax incentives while introducing others. Second, consolidation will automatically imply cross-border loss offset. This benefits multinational businesses, but narrows the European-wide corporate tax base, including for Belgium. Third, formula allocation will lead to re-allocation of the tax bases across countries, with a small gain expected for Belgium according to the EC's impact assessment (EC 2016). Finally, the CCCTB can put further pressure on Belgium to lower its statutory CIT rate, which will be the only remaining instrument to attract business investment.

23. European countries compete for mobile capital by providing attractive fiscal terms for FDI. For one part, countries have introduced targeted preferential regimes, including through innovation boxes, which primarily serve to attract mobile tax bases from MNCs. For another part, they engage in tax competition using their headline CIT rates. For instance, the empirical tax competition literature provides firm ground for strategic complementarity in CIT rates, implying that

countries respond to reductions in the CIT rate cuts elsewhere by lowering their own (IMF 2014). During the past three decades, this has induced a gradual decline in CIT rates in Europe. Figure 6 illustrates this trend since 2001 in the Euro area and Belgium: in the Euro area, the mean CIT rate dropped from 32.1 to 22.5 percent; in Belgium, it fell by less from 40.2 to 34 percent. Also the AETR declined over the past decade, namely from 24.5 percent to 22.9 percent in the Euro Area and from 29.5 to 27.8 percent in Belgium. Although the pace of tax cuts in Europe has somewhat stalled during the last few years, several countries have recently announced further reductions.



24. In light of this international tax competition, the relatively high CIT rate in Belgium imposes two important risks:¹⁹

- BEPS risk. The high rate makes the Belgian tax base of multinational companies increasingly vulnerable to BEPS behaviors. Indeed, the incentive for MNCs to shift profits out of Belgium to low-tax jurisdictions is governed by the difference in statutory tax rates with other countries. Empirical studies, for instance, suggest a robust relationship between tax rate differentials and measures of reported profitability (Dharmapala 2013; Heckemeyer and Overesch, 2013).
- Relocation risk. The high CIT rate is an important component of the relatively high AETR in Belgium compared to other countries. This makes Belgium less attractive for foreign investors who seek a location for their new businesses through greenfield FDI.²⁰ Tax competition thus puts increasing pressure on Belgium to also lower its CIT rate. Of course, as long as reductions in the CIT rate are financed by base broadening, the mean value of the AETR across Belgian firms will not decline: reductions for some companies will then be merely offset by increases for others.

¹⁹ Also the overall tax burden on capital income in Belgium is high relative to other countries. This tax burden includes taxes on wealth (such as property), wealth transfers (such as property transactions or inheritances), corporate income and withholding taxes on interest and dividends. In 2014, the total burden of these taxes was 10.6 percent of GDP in Belgium, compared to 8.2 percent on average in the Eurozone. The distortions induced by this tax burden depends on its design. For instance, recurrent property taxes are generally found to be efficient, as they induce little behavioral responses. The CIT, in contrast, tends to induce several responses by businesses and thus comes along with greater distortions, including with respect to multinational corporations. The focus here is only on the CIT and personal taxes on corporate profits.

²⁰ Keen (2001) shows that limitations for countries to compete for mobile capital by means of preferential tax regimes will intensify tax competition based on the general tax rate. The latter form of tax competition might induce larger welfare losses than the former, since also the tax burden on immobile economic rents will be reduced.

The net effect on firm location will therefore be uncertain and dependent on the responsiveness of various types of capital to tax. Yet, lowering the statutory CIT rate might have the additional advantage of providing more certainty to international business compared to targeted incentives in the tax base that have come under increased international scrutiny. This tax certainty can be an important consideration as well for FDI locations by MNCs.

Balancing Growth and Fiscal Considerations

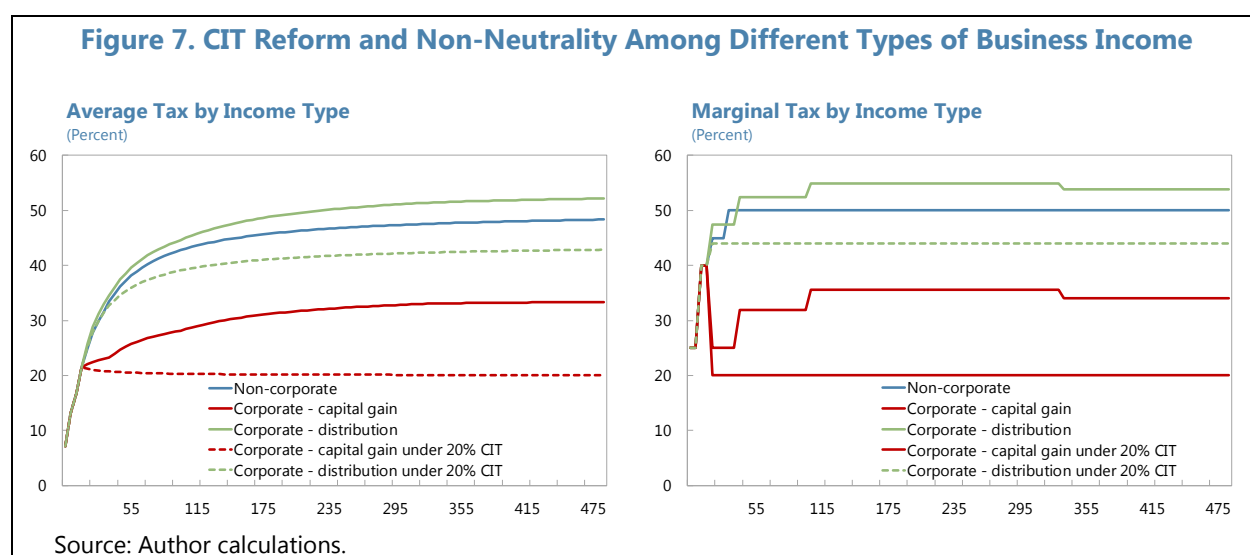
25. A central goal of corporate tax reform in Belgium would be to promote growth and job creation while safeguarding revenues and limiting distortions.²¹ The analysis above shows that the current design of business and investment income taxation in Belgium imposes several economic distortions. First, the combination of a high CIT rate and lenient anti-avoidance provisions impose a significant risk of profit shifting by MNCs; and the high CIT rate may also reduce inward FDI. Second, a range of special exemptions and deductions are poorly targeted to promoting growth; they rather favor narrow sectoral objectives. For instance, the progressive CIT rate structure may hurt rather than promote growth by disincentivizing firms to grow larger. Relatedly, the economic literature suggests that the innovation box appears to be inefficient relative to direct tax incentives for R&D in promoting innovation. Third, Belgium has comparatively restrictive loss offset provisions, which could discourage entrepreneurial risk taking. Fourth, the combination of high PIT rates and no capital gains taxes creates a tendency of tax arbitrage through incorporation of small businesses, which can lead to organizational inefficiencies and misallocation of capital. Finally, a side effect of Belgium's NID regime has been the proliferation of SPVs of multinational companies for tax planning purposes, with limited benefits for the Belgian economy. Overall, the wide range of relevant issues leaves significant scope to making the tax system more growth oriented and efficient. This is particularly important because of Belgium's tight fiscal constraints and the limited scope for shifting the tax burden away from corporations, given the already high taxes on labor and consumption.

26. A large reduction in the CIT rate without offsetting measures would result in significant revenue losses. The High Council of Finance (2016) has considered the opportunities for a CIT rate cut in Belgium to either 25 or 20 percent. With a CIT revenue productivity of 0.1 percent of GDP and without compensating measures, this would imply a static revenue loss of, respectively, 0.9 and 1.4 percent of GDP. The revenue loss might be smaller, however, if dynamic scoring effects are considered in the analysis, i.e., the broadening of the tax base due to endogenous responses to the lower rate. Such effects—which may occur primarily in the medium to longer term—are captured by the elasticity of corporate taxable income, i.e. the percentage change in the tax base due to a one percentage point change in the CIT rate. Based on a survey of the available international evidence, De Mooij and Saito (2014) arrive that a consensus value for this elasticity of -0.2. Hence, every € tax relief granted through a lower CIT rate will ultimately cost the government 80 cents. This would mean that rate cuts to 25 and 20 percent would, in the long run, cost approximately 0.7 and 1.1 percent of GDP, respectively. Clearly, these are still sizable revenue losses.

²¹ Another consideration, not discussed further here, is the complex impact on revenue sharing with subnational entities.

Moreover, if base broadening measures are adopted to compensate for this revenue loss, these themselves might induce opposing dynamic effects by exacerbating the distortionary impact of the CIT. Caution is therefore required in allowing dynamic scoring effects to analyze the revenue implications of reform.

27. Any CIT reform would also need to consider effects on tax neutrality, with a view to limiting distortions and tax arbitrage. Figure 7 shows what would happen with the average and marginal tax rates on different types of business income (as in Figure 3) if the CIT rate structure were reduced from the current progressive structure to a uniform 20 percent rate (dotted lines). Thereby, it is assumed that withholding taxes on dividends and PIT rates on non-corporate business income remain unchanged. We see that the marginal and average tax burden for distributed corporate profits are moved well below those for non-corporate business income, thus inducing a stronger incentive for businesses to incorporate. This could broaden the CIT base, but would come at the expense of a narrower base of the PIT (and reduce the level of social security contributions). For retained profits, the current tax preference will be reinforced further by the CIT rate cut and will thus induce an even stronger incentive to realize income as a capital gain.



C. Options for Reform

28. Policies of CIT base broadening and rate reduction (BB&RR) have been prevalent across the globe during the past few decades. Kawano and Slemrod (2016), for example, have collected information about CIT rate and base changes in 30 OECD countries between 1980–2004. They record a total of 134 CIT rate cuts and 302 base broadening measures (at the same time, there were also 37 CIT rate increases and 229 base narrowing measures).

29. Despite its popularity, however, not all forms of BB&RR are growth enhancing. On the one hand, a reduction in the headline CIT rate cut can by itself promote investment, employment and productivity. However, base broadening measures to finance such a rate cut can have an opposite effect. The importance of the latter depends on the type of base broadening. Some

incentives, for instance, might be efficient ways to encourage investment or innovation; others, in contrast, can distort the level the playing field across firms or magnify existing distortions. A case-by-case approach is therefore required to assess the economic merits of various base-broadening measures, necessary to finance a cut in the CIT rate. Below, we provide a brief assessment of the main options, inspired by reviews of the High Council of Finance (2016).

30. Belgium has a range of options for base broadening that would help balance growth and revenue objectives.

- New measures against tax avoidance are part of Belgium's obligation to comply with European ATAD. Interest deduction limitations, CFC rules and exit taxes could expand the Belgian CIT base and boost revenue. This expansion would come entirely from large MNCs.
- Repeal of the special CIT rates for SMEs could be good for growth. A proportional CIT is more efficient than progressive CIT rates, which disincentivize firms from growing larger (IMF 2016b). Progressive CIT rates could also induce firms to split their business in multiple parts to optimize the preferential treatment, with negative implications for organizational efficiency. Distributional considerations also provide little rationale for progressivity in the CIT, as the connection between the income of a legal entity and the personal income of the owners is often weak or absent.
- Some CIT exemptions and deductions could be curtailed with only marginal growth effects. For instance, it would be useful to review the efficiency of several special deductions for e.g. internships, cars, gifts and restaurants. The HCF (2016) finds that the combined effect of those measures could broaden the CIT base such that the CIT rate could be reduced by several percentage points.
- The innovation box regime could be reformed. A study by Dumont (2015) finds that the Belgian innovation box has had no significant effect on R&D. While the Belgian innovation box has been made less generous in 2017 to comply with new international standards, the Belgian government simultaneously increased the exempt amount from 80 to 85 percent and widened the range of qualifying IP assets to include copyrighted software and qualified orphan drugs. To support innovation, however, it would have been more effective to expand instruments that directly reduce the cost of R&D.

31. Some options for base broadening are less promising, and there are some areas where the current regime is already quite restrictive.

- Making depreciation allowances less generous could boost the CIT base during the first few years after the reform; yet, they will have no structural revenue implications. In fact, since less generous tax depreciation allowances will raise the book value of assets in the tax accounts, they will increase the cost of the NID in later years. Indeed, the present value of the sum of depreciation allowances and the NID allowance is independent of the rate at which firms write down their assets.

- R&D tax incentives are important instruments for promoting innovation. For instance, the April 2016 Fiscal Monitor concludes that, when designed and implemented properly, R&D tax incentives have the potential to yield a sizable impact on productivity growth. A recent evaluation by Dumont (2015), using Belgian micro data, finds that especially the tax relief for wages of researchers exerts a significant positive impact on R&D investment in Belgium.
- Loss offset provisions, which are critical for investment and growth, are already restrictive. For instance, less generous loss offset would discourage entrepreneurs to experiment and undertake risk, which is vital for innovation (IMF 2016b). Empirical evidence also finds that limitations to loss offset significantly reduce the level of investment (Dressler and Overesch, 2013). In Belgium, the absence of: (i) a consolidation regime; (ii) loss carry backward provisions; and (iii) interest on deferred losses, already impose important limitations to loss offset. Further restrictions will likely hurt economic growth. In fact, to enhance growth, Belgium could consider expanding loss offset provisions, e.g., by adopting a consolidation regime.

32. There are several options for restoring balance between different forms of business income and limiting tax arbitrage. As discussed above, a reduction in the CIT rate would aggravate the tendency for tax arbitrage and excessive incorporation of small businesses.

- A higher dividend withholding tax would be one option that could restore tax neutrality between salary payments and dividend payments, if the CIT rate is reduced (the current dividend tax rate is 30 percent).
- Moreover, introducing a capital gains tax could help address the increased imbalance between distributions and retained earnings.²² However, this suggests the need for a wider review and analysis of business and investment income taxation in Belgium (including, for instance, capital transaction taxes) to infer the precise implications, which is beyond the scope of this paper.
- Allocation rules for domestic businesses could also be strengthened. For instance, Nordic countries impute a “normal” rate of return to some measure of business capital (gross or net assets), with the residual income allocated to labor income. Thus, businesses with little investment, whose value-added derives largely from labor, are subject to the progressive PIT on most of their income. The challenge with such allocation rules, however, is with the enforcement, which can be complex.
- If small corporations are pass-through entities, the owners could be taxed on all their assigned income at the progressive PIT.

²² The imbalance between retained and distributed profits could also be addressed by imposing tax on a so-called deemed distribution, i.e. a fictitious amount that is deemed to be distributed irrespective of the actual distribution. The United States, for example, assume such a deemed distribution on personal holding companies that could otherwise shelter retained earnings as passive income.

33. The NID could be reformed to both enhance its growth-promoting properties and mitigate its undesirable spillover effects to other countries. The Belgian NID deviates in several ways from a model ACE design, which is discussed in more detail in the Annex. This reduces its effectiveness in encouraging investment and financial stability. Several aspects of the NID therefore may warrant reconsideration:

- As discussed above, the Belgian NID rate is linked to the government bond rate. However, the appropriate rate necessary to exploit the neutrality features of the NID should be higher to account for corporate risk. The Annex, for example, argues that a risk premium of 2 or 3 percentage points could be added to the long-term government bond rate. While this would support investment and growth, it also increases the revenue cost of the NID. To mitigate these fiscal implications, Belgium could implement this additional risk premium on an incremental basis, i.e. only for equity increases relative to the year of introduction. While this would preserve the incentive effects of the NID for new investments, it would avoid providing a windfall gain for the existing stock of equity.²³
- Restoring the carry forward of unused NID is an option that would strengthen the incentives to invest. It would imply more certainty that the NID can indeed be used, even if a firm incurs current losses. Moreover, it would also help absorb macroeconomic shocks by mitigating financing constraints that tend to be cyclical.
- The use of the NID by SPVs as a form of international tax planning could be curtailed by imposing an anti-avoidance rule that declines the NID provision in specific circumstances (Zangari, 2014). The price paid will likely be the departure of most SPVs from Belgium, as the tax planning route that justifies their existence is cut off. Yet, the impact on the real economy in Belgium might be small—an issue that would be worth exploring more.
- As discussed in the Annex, if the value of participations on a firm's balance sheet exceeds the value of its equity (e.g., in a holding company that finances share participations with debt), the NID base is negative. While this should in principle give rise to an addition to the tax base for that holding company, the NID base in Belgium is capped at zero. This creates opportunities for domestic tax planning, as the zero lower bound can imply duplication of NID relief (IMF 2016c). Eliminating the zero lower bound on the NID base is the most direct way to address this form of domestic tax avoidance and restore the neutrality of the NID. Alternatively, anti-avoidance provisions may also prevent this form of tax planning, e.g. interest deductions could be disallowed for debt that is used solely to finance equity participations.

²³ Switching from the current system to a fully incremental NID is not advisable for Belgium. It would imply a denial of NID for prior investments, which have been made under the assumption that the NID would be maintained. This is a classic case of time inconsistent behavior of government, which undermines its credibility. The lack of credibility will likely render the incremental NID ineffective as investors will fear for a future repeal of the NID. Applying the increment only to the risk premium does not impair credibility, since past investments have not assumed such higher NID rate.

D. Conclusions

34. Comprehensive reform of the taxation of business and investment income in Belgium is both promising and challenging. The challenge arises from the need for fiscal consolidation and the limited scope for shifting the tax burden away from the CIT to other taxes. The opportunity of a broader reform is that it could neutralize distortions in the current system and promote economic growth while safeguarding overall revenues. For example, certain exemptions and deductions in the CIT create an unlevel playing field among different sectors and firms. Moreover, the absence of capital gains taxation undermines tax neutrality between different forms of businesses, leading to organizational inefficiencies and a misallocation of capital. Finally, some tax incentives create negative international spillovers. Overall, there appears to be scope for a broader reform that could raise Belgium's growth potential without undermining fiscal revenues, based on a reduction in the CIT rate, a strengthening of the NID, and reforms to remove a range of distortions and broaden the tax base.

Annex. Design of a Notional Interest Deduction

This Annex describes the design of the text-book allowance for corporate equity (or equivalently, notional interest deduction), that aims to fully neutralize distortions of the CIT to financial structure choices and marginal investment decisions.

The NID base is either the entire equity stock, or the increment of equity relative to some base year. For instance, if last year's equity is used as the base year, the system is incremental relative to that stock. In that case, the NID base is formed by new equity issues plus retention of after-tax profits, relative to last year. To avoid duplication of NID, equity participations in other firms should be subtracted from the equity base: these participations will already be included in the equity base of the company that issued the shares. If this leads firms to have a negative balance of equity minus the value of participations in other firms—e.g., a holding company that finances participations primarily with debt—the NID will involve an addition to the CIT base, rather than a deduction. In this way the NID system guarantees tax neutrality between debt and equity also for holding companies, since the negative NID offsets the amount of interest that the holding company is allowed to deduct from taxable profits. It ensures that holding companies have no tax incentive to finance acquisitions by debt rather than equity. Participations in foreign companies should also be excluded from the NID base, since foreign equity returns are not subject to domestic tax.

The NID rate must be equal to the rate at which shareholders discount the tax savings from the company's future NID to obtain full tax neutrality under the NID. This discount rate will depend on the degree of riskiness attached to these tax savings. If the tax law allows full loss offset (including carry forward of unused NID) and the CIT rate is fixed over time, shareholders will receive the tax benefit from the NID with full certainty. Hence, they will discount the tax savings from the NID system at the risk-free rate of interest (Bond and Devereux 1995). To ensure tax neutrality, it is then sufficient to set the notional rate of return equal to the risk-free rate, e.g., proxied by the interest rate on government bonds. In Belgium, however, losses cannot be carried with interest and unutilized losses when a firm goes out of business cannot be offset against other taxable income. Moreover, unused NID cannot be carried forward since 2013. Hence, there will be some risk attached to the NID deductions. The risk will differ across companies, depending on how much they are affected by the restrictions on loss offsets. A substantial part of the risk is likely to stem from the probability that the company goes bankrupt. This risk will be reflected in the rate of interest at which the firm can borrow, so setting the NID rate equal to the interest on the company's long term debt would presumably ensure rough neutrality. However, for administrative reasons it is common to use a single NID rate for all companies rather than applying firm-specific rates. The average interest rate on corporate bonds would be a natural benchmark for choosing the NID rate. Alternatively, the NID might be based on the government bond rate and supplemented with a risk premium to reflect corporate risk.

References

- Abadie, A., A. Diamond, and J. Hainmueller, 2010, Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California's Tobacco Control Program, *Journal of the American Statistical Association* 105 (490), 493–505.
- Boadway R. and N. Bruce, 1984, A General Proposition on the Design of a Neutral Business Tax, *Journal of Public Economics* 24, 231–39.
- Bond, S.R. and M.P. Devereux, 1995, On the Design of a Neutral Business Tax Under Uncertainty, *Journal of Public Economics* 58, 57–71.
- Burggraeve, K., Ph. Jeanfils, K. van Cauter, and L. van Meensel, 2008, Macroeconomic and Fiscal Impact of the Risk Capital Allowance, National Bank of Belgium, Economic Review.
- De Mooij, R., and M.P. Devereux, 2011, An Applied Analysis of ACE and CBIT. Reforms in the EU, *International Tax and Public Finance* 18, 93–120.
- De Mooij, R. A., and Gaetan Nicodeme, 2008, Corporate Tax Policy and Incorporation in the EU, *International Tax and Public Finance* 15, 478–98.
- De Mooij, R.A., and I. Saito, 2014, Japan's Corporate Income Tax: Facts, Issues and Reform Options, IMF Working Paper 14/138.
- Dharmapala, D., 2014, What do we Know About Base Erosion and Profit Shifting? A Review of the Empirical Literature, Illinois Public Law and Legal Theory Working Paper 14–23.
- Dreßler, D. and M. Overesch, 2013, Investment Impact of Tax Loss Treatment – Empirical Insights from a Panel of Multinationals, *International Tax and Public Finance* 20, 513–543.
- Dumont, M., 2015, Evaluation of federal tax incentives for private R&D in Belgium: An update, Federal Planning Bureau Working Paper 5–15.
- Duprez, C., and Van Nieuwenhuyze, C., 2016, Belgium Inward and Outward Foreign Direct Investment, National Bank of Belgium Economic Review, Brussels.
- European Commission, 2016, Taxation Trends in the European Union.
- Federal Public Service Finance, 2016, Federal Tax Expenditures Report.
- High Council of Finance, 2014, Een Tax Shifting Ten Voordele van Arbeid en Bredere Belastinggrondslagen, August.
- High Council of Finance, 2016, Advies: De vennootschapsbelasting in een "Post-BEPS" omgeving, July.

- Heckemeyer, J. and M. Overesch, 2013, Multinational Profit Response to Tax Differentials: Effect Size and Shifting Channels, ZEW Discussion Paper 13–045.
- Hebous, S., and Ruf, M., forthcoming, Evaluating the Effects of ACE Systems on Multinational Debt Financing and Investment, *Journal of Public Economics*.
- International Monetary Fund, 2014, Spillovers in International Corporate Taxation, IMF Policy Paper, May 2014.
- International Monetary Fund, 2015, Toward a Growth-Friendly Fiscal Consolidation in Belgium, Selected Issues, February.
- International Monetary Fund, 2016a, Belgium—Making Public Expenditure More Efficient, Selected Issues, February.
- International Monetary Fund, 2016b, Fiscal Policies for Innovation and Growth, Fiscal Monitor, April.
- International Monetary Fund, 2016c, Tax Policy, Leverage and Macroeconomic Stability, IMF Policy Paper, October.
- Kawano, L. and J. Slemrod, 2016, How do Corporate Tax Bases Change when Corporate Tax Rates Change? With Implications for the Tax Rate Elasticity of Corporate Tax Revenues, *International Tax and Public Finance* 23, 401–433.
- Keen, M., 2001, Preferential Regimes can Make Tax Competition Less Harmful, *National Tax Journal* 54, 757–62.
- Kerste, M., B. Baarsma, J. Weda, N. Rosenboom, W. Rougoor, 2013, Uit de schaduw van het bankwezen (in Dutch), Stichting voor Economisch Onderzoek (SEO), University of Amsterdam.
- Kestens, K., P. Van Cauwenberge and J. Christiaens, 2012, The Effect of the Notional Interest Deduction on the Capital Structure of Belgian SMEs, *Environment and Planning C-Government and Policy* 30, 228–247
- Mirrlees, J., Adam, S., Besley, T., Blundell, R., Bond, S., Chote, R., Gammie, M., Johnson, P., Myles, G., and Poterba, J., 2011, Tax by Design: The Mirrlees Review, Oxford University Press, Oxford, UK.
- Panier, F., F. Perz-Gonzalez and P. Villanueva, 2015, Capital Structure and Taxes: What Happens when you (also) Subsidize Equity?, Paper presented at the Bank of International Settlements.
- Princen, S., 2012, Taxes Do Affect Corporate Financing Decisions: The Case of Belgian ACE, CESifo Working Paper No. 3713. Munich.
- Schepens, G., 2016, Taxes and Bank Capital Structure, *Journal of Financial Economics* 120, 585–600.

BELGIUM

Zangari, E., 2014, Addressing the Debt Bias: A Comparison between the Belgian and the Italian ACE Systems, European Commission Working Paper N.44 – 2014, Brussels.

Zentrum für Europäische Wirtschaftsforschung (ZEW), 2016, Effective Tax Rates in an Enlarged European Union, Study for the European Commission.