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Company Taxation in the New EU Member States

Survey of the Tax Regimes and Effective Tax Burdens for Multinational Investors

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Economic Research

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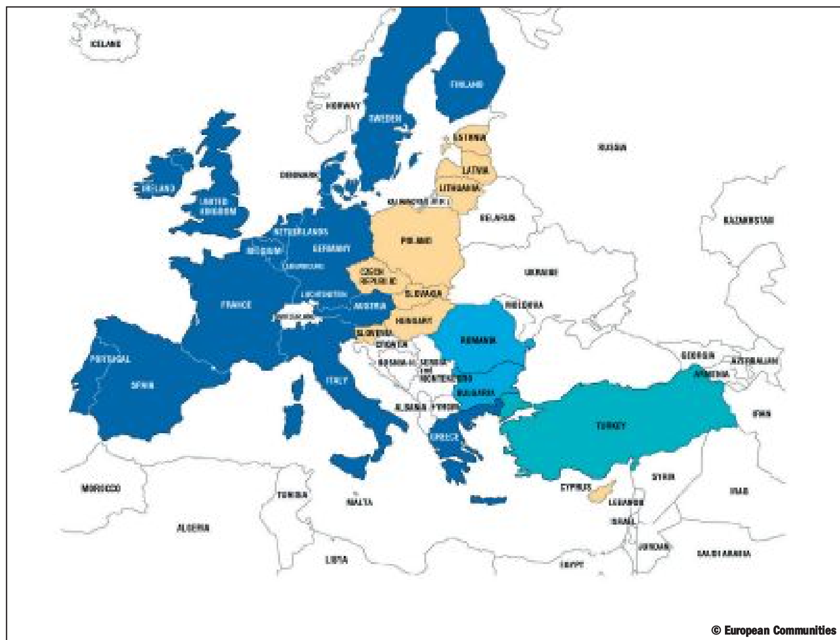

Study by Ernst & Young and Centre for European Economic Research (ZEW)

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Second Edition

July 2004
Frankfurt am Main/Mannheim

Riga, Latvia

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Executive Summary

As consequence of the great success and acceptance of the initial study which was issued in November 2003, it became necessary to react on the very recent tax law changes in the new EU member states. Therefore, we have updated our report which is now based on the relevant figures and information available as of 1 May 2004.

Objectives of the Study and the Model Applied

On 1 May 2004, ten new countries joined the European Union. Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic, and Slovenia became new member states increasing the Union from 15 to 25 members.

The main objective of this study is to provide an overview of the company tax systems in the new member states and to present estimates of the effective levels of company tax burdens on domestic investments and cross-border investments by multinationals. The secondary objective is to determine the impact of the various influencing factors on the effective tax burden (tax drivers), i.e. to analyse the impact of the different types of taxes, the tax bases and the tax rates, as well as the impact of tax incentives and the provisions for the taxation of cross-border income flows. A third objective is to develop a ranking of the new member states with respect to the effective tax burden of subsidiaries of multinational investors. In order to simplify the analysis, the multinational investor is assumed to be a German parent company. The results can be generalised for all multinationals resident in countries where the exemption method is applied on dividends. However, the results will differ for countries that apply the credit method for eliminating double taxation of cross-border dividends.

The calculation of effective tax burdens is based on the commonly accepted approach of King and Fullerton, which has been recently extended by Devereux and Griffith. The most important studies by the OECD and the European Commission apply this methodology. The model takes into account different types of investment (intangibles, buildings, machinery, financial assets and inventories) and different sources of finance (retained earnings, new equity capital and debt). In particular, the calculations provide estimates of effective average tax rates (EATR) for corporations taking into account the tax regimes as of 1 January 2004. Information about the existing tax regimes of the new member states was provided by Ernst & Young offices in the new member states.

Qualitative Assessment of the Tax Systems of the New Member States (Chapter 2)

In general, the taxation of corporations in the new member states follows international standards. The computation of the tax bases takes the Generally Accepted Accounting Principles (GAAP) as a starting point, and these are then modified by each new member state to a different extent. On average, compared to the current EU member states, the new member states offer lower tax rates. They range from 15% in Cyprus, Latvia, and Lithuania to 35% in Malta, with an average rate of 21.5%. With respect to the corporate income tax system, the majority of the new member states operate so-called shareholder relief systems. The application of this type of corporate income tax system follows the trend in the current member states. In addition to corporate income tax, only real estate tax is levied as an extra tax on investments in most new member states. The levying of local profit taxes and other non-profit taxes in the new member states is an exception.

Effective Tax Burden on Domestic and Cross-Border Investments (Chapter 3)

With respect to domestic investments, the quantitative analyses indicate considerable variations among the EATR in the new member states. The overall spread amounts to 19.99 percentage points; EATR is lowest in Lithuania (12.82%) – closely followed by Latvia (14.35%), and Cyprus (14.52%) – and highest in Malta (32.81%). On average, the EATR in the new member states is 19.61%. Of the elements of the tax systems that determine the effective tax burdens, the statutory (nominal) tax rate on corporate profits is by far the most important tax driver because our calculations exclude personal income taxes at the shareholder level. With respect to the taxation of the different sources of finance and the different types of assets, debt financing is treated more favourably than equity financing and EATR on machinery is lowest in most countries.

With respect to cross-border investments, there are no major changes in the ranking of the countries from the highest to the lowest EATR from the perspective of a German multinational investor. Since in Germany the exemption method applies,

the national level of taxation in the host country of the subsidiary has the greatest influence on the attractiveness of a location for a subsidiary in one of the new member states. Before entering the EU some countries still levied withholding taxes on dividend payments. These countries incorporated provisions into their national tax codes to ensure that their tax laws entirely comply with the Parent-Subsidiary Directive. These provisions abolish withholding taxes on dividend payments to qualified EU resident parent companies and came into effect on 1 May 2004. Since local taxes in each of the new member states are lower than German taxes, investments in subsidiaries located in the new member states are favoured over domestic investments in Germany from a tax point of view. Moreover, because dividends are 95% exempt from taxation in Germany, equity financing of a subsidiary is more tax efficient compared to debt financing. The most tax efficient financing strategy is to choose equity financing and to retain profits at the level of the subsidiary in the new member states.

Impact of Tax Incentives (Chapter 4)

Most new member states grant various tax incentives. In total, our survey revealed 23 major tax incentives. For specified industries, sectors, or regions, the incentives include reductions of the taxable income (i.e. the tax base), the tax rates (i.e. reduced rates and tax holidays) and the tax liability (i.e. a tax credit). The tax incentives have a considerable impact on the ranking of the new member states from the highest to the lowest EATR. Moreover, since profits from foreign investments (i.e. dividends) are 95% exempt from taxation in Germany, a multinational German parent company also benefits from the incentives if the profits are transferred to Germany.

Multinational investors have to bear in mind that most of the tax incentives are in conflict with European law. In particular, they are likely to contravene the state aid provisions of the EC Treaty. For the time being, the future of the tax incentives in the new member states remains difficult to predict. The European Commission is currently reviewing many of these incentives. As a first outcome of these review activities the European Commission has reached consent with some of the new member states regarding transitional periods to bring certain national state aid provisions in line with European law. An official communication on subject matter from the European Commission cannot be expected before the end of 2004/early 2005.

Impact of Prospective Tax Changes (Chapter 5)

To compensate for the abolition of incentives, there is a trend to reduce statutory (nominal) tax rates on profits. Seven of the ten new member states have reduced recently or will reduce corporate income tax rates in the near future. Continuous change on this front is anticipated; multinational investors should closely follow the development of the tax systems in the new member states.

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This study is a joint project of Ernst & Young and the Centre for European Economic Research (ZEW) in Mannheim.

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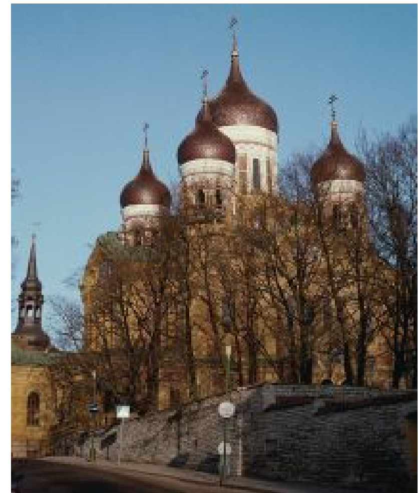
1 Motivation for and Structure of the Study

The EU has been engaged in an enlargement process that significantly increased the number of member states. On 1 May 2004 Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic, and Slovenia joined the European Union, expanding the total number of member states by two-thirds from 15 to 25.

The main objective of this study is to provide information on the company tax regimes in the new member states and to calculate and compare effective tax burdens on domestic and cross-border investments, mainly from the perspective of multinational investors. The calculation of the effective tax burdens is based on the commonly accepted approach of King and Fullerton (1984), which has recently been extended by Devereux and Griffith (1999). The most important studies by the OECD (1991) and the European Commission (the 1992 Ruding Report) in the last decade, as well as the comprehensive report by the European Commission "Company Taxation in the Internal Market" (2001) apply this methodology.

The secondary objective of this study is to determine the impact of the various tax drivers on the effective tax burdens. In particular, we want to elaborate how the effective tax burden is influenced by the different elements of the national tax regimes, e.g. number of taxes, tax rates and tax bases. The study also takes into account the prevailing tax incentives granted in addition to the standard tax regimes and the provisions for the taxation of cross-border income flows, i.e. withholding taxes in the new member states, where applicable, and provisions for avoiding international double taxation in the home country of the investor.

Finally, a third objective of the study is to develop a ranking of the new member states with respect to the effective tax burden of subsidiaries of multinational investors. This takes into account various tax planning options in the field of intercompany financing. In order to simplify the analysis, the multinational investor is assumed to be a German parent company. The results for a German parent company can be generalised for all multinationals resident in countries where the exemption method on dividends is applied. However, the results will differ for countries that apply the credit method for eliminating double taxation of cross-border dividends. Since the typical structure of a multinational group of companies with worldwide activities is – from a legal point of view – composed of corporations, the study is limited to the effective tax burden of corporations.



Church in Estonia

The study consists of four chapters. Chapter 2 provides an overview of the company tax systems in the new member states (qualitative analysis). Chapter 3 calculates and compares effective tax burdens on domestic investments and cross-border investments taking into account the standard tax regimes in the new member states as of 1 January 2004 (quantitative analysis). The methodological approach is also outlined here. Chapter 4 provides an overview of the various tax incentives granted by the new member states and analyses the impact of these tax incentives on the effective tax burdens on both domestic and cross-border investments. Finally, Chapter 5 highlights recent and prospective developments in the new member states. The impact of these tax changes on the effective tax burdens on both domestic and cross-border investments is analysed.

2 Company Taxation Regimes in the New Member States

2.1 Overview

In general, the taxation of corporations in the new member states follows international standards. Corporations that are resident in one of the new member states are subject to corporate income tax on their worldwide income. Corporate residence depends on the fiscal domicile or the place of management.

The corporate income tax liability is determined according to the tax base, the tax rate and the corporate income tax system. The calculation of the tax base takes the Generally Accepted Accounting Principles (GAAP) as a starting point, and these are then modified by each new member state to a different extent. On average, compared to the current EU member states, the new member states offer lower tax rates, ranging from 15% in Cyprus, Latvia, and Lithuania to 35% in Malta, with an average rate of 21.5%. With respect to the corporate income tax system, the majority of the new member states operate so-called shareholder relief systems. In a shareholder relief system, double taxation on dividends with corporate income tax and personal income tax is mitigated by a reduction of personal income tax on dividend income. The application of shareholder relief systems follows the trend in the current member states.

In addition to corporate income tax, only real estate tax is levied as an extra tax on an investment in most new member states. The levying of local profit taxes and other non-profit taxes in the new member states is an exception.

2.2 Corporate Income Tax Systems

There are various types of corporate income tax systems in Europe. A classification of the systems reveals that the tax systems of the new member states are similar to those of the previous EU-15. Regarding the extent of integration of the corporate income tax into the personal income tax of the individual shareholder, three main categories can be distinguished: the classical system, double taxation reducing systems and double taxation avoiding systems.

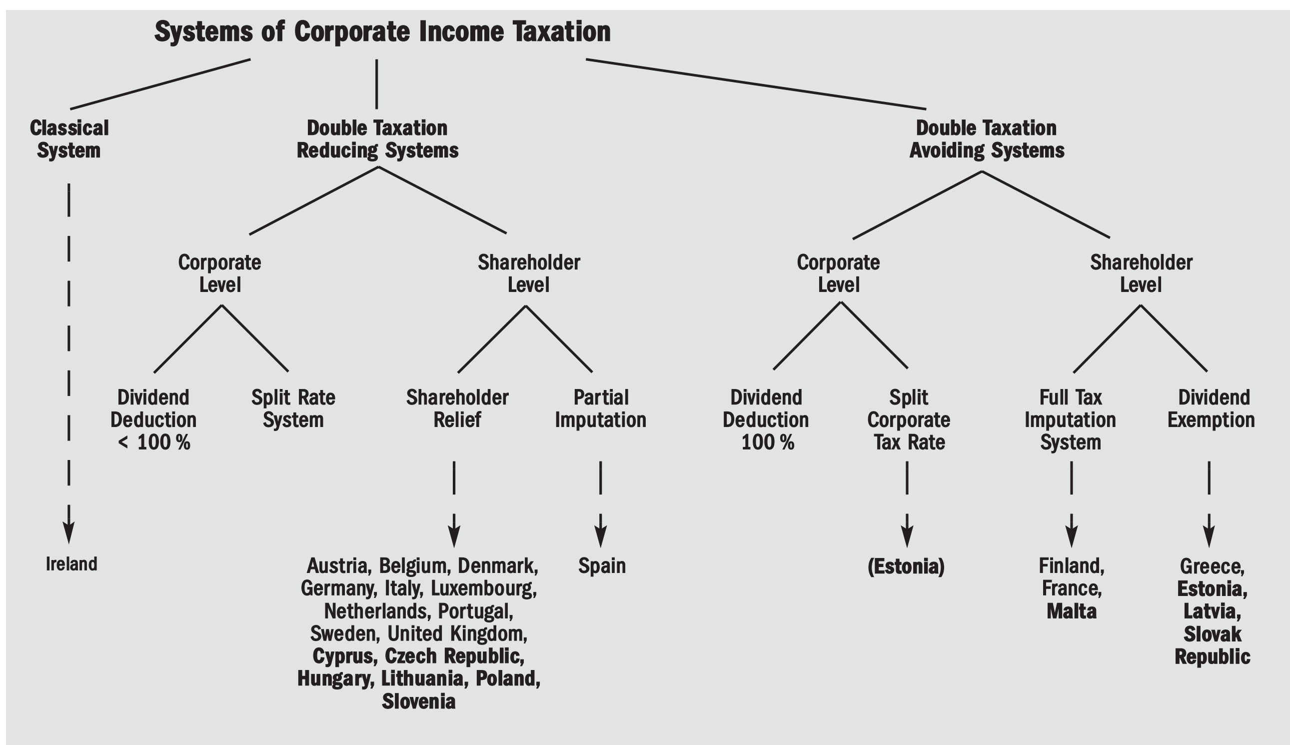


Figure 1: Corporate Income Tax Systems in the Enlarged EU

The classical system results in the double taxation of dividends by imposing both corporate and personal income tax. Within Europe, the classical system is currently applied only in Ireland and most of the Swiss cantons (e.g. Zurich). It is not in effect in any of the new member states.

By contrast, double taxation avoiding systems ensure that profits are taxed only once – either at the corporate level (exempting dividends at the shareholder level) or at the shareholder level (full imputation system). Malta is the only new member state that applies a full imputation system. Dividends received by individual shareholders are grossed-up by the underlying corporate income tax and taxed progressively. At the same time, the corporate income tax is credited against the personal income tax. As a result, there is full relief from corporate income tax on distributed profits, and dividends are subject only to personal income tax.

Latvia and the Slovak Republic[1] eliminate double taxation through a system of dividend exemption at the shareholder level. Profits are subject only to corporate income tax. Consequently, the corporate income tax rate determines the tax burden of both retained and distributed profits.

Estonia combines elements of a split-rate system with a system of dividend exemption. At the corporate level, retained earnings are tax-exempt, and distributed profits are taxed at a rate of 26%. This clearly places a burden on the distribution of profits as opposed to profit retention. At the shareholder level, dividends are exempt from personal income tax, as it is the case in Latvia and the Slovak Republic.

Most of the new member states grant only partial relief from double taxation on dividends. In Cyprus, the Czech Republic, Hungary, Lithuania, Poland, and Slovenia, shareholders receive – compared to other sources of personal income – preferential treatment for their dividend income (shareholder relief system). The application of a shareholder relief system is in line with the provisions prevailing in the old member states. Since shareholder relief systems do not discriminate foreign dividends against domestic dividends they do not violate against the fundamental freedoms of the EC Treaty (i.e. freedom of establishment and free movement of capital). By contrast, imputation systems result in a discrimination of foreign dividends since the tax credit is restricted to domestic dividends. Therefore, in the past years the UK, Germany and Italy gave up their imputation systems and introduced shareholder relief systems. It has already been announced that Finland and France will follow this trend in 2005.

In some of the new member states different relief provisions have been introduced to reduce personal income tax on dividends:

- In Cyprus, the Czech Republic, and Lithuania a final withholding tax of 15% is imposed on distributed profits. The final withholding tax of 15% represents a preferential treatment because it corresponds to the lowest personal income tax rate. Hence, the personal income tax rate for taxpayers in higher tax brackets always exceeds the withholding tax rate. In Poland dividends are subject to a final withholding tax of 19%. This is also a preferential treatment since the tax rate in the first tax bracket is set at 19%. The same applies to Hungary where the final withholding tax of 20% equals the tax rate of the first tax bracket.

- In Slovenia, 40% of dividends received are deductible from the personal income tax base. Consequently, only 60% of the dividend is subject to personal income tax.

[1] The exemption of dividends was part of a comprehensive tax reform in the Slovak Republic which came into effect on 1 January 2004. Until the end of the preceding year, the Slovak Republic imposed a final withholding tax on dividend payments.

From the perspective of a multinational investor, the type of the corporate tax system is generally not relevant when choosing the most tax efficient location for a subsidiary. Since relief for corporate tax is only granted to domestic shareholders, the type of corporate tax system is relevant only if a subsidiary also has resident shareholders. Therefore, the tax burden for a multinational investor borne at the level of a subsidiary depends primarily on the local tax bases and tax rates. In addition, withholding taxes on repatriated profits, as well as the methods for mitigating international double taxation in the parent company's home country, have to be taken into account. Chapter 3.3 deals in detail with the taxation of cross-border profit transfers outside the new member states using German investors as an example.

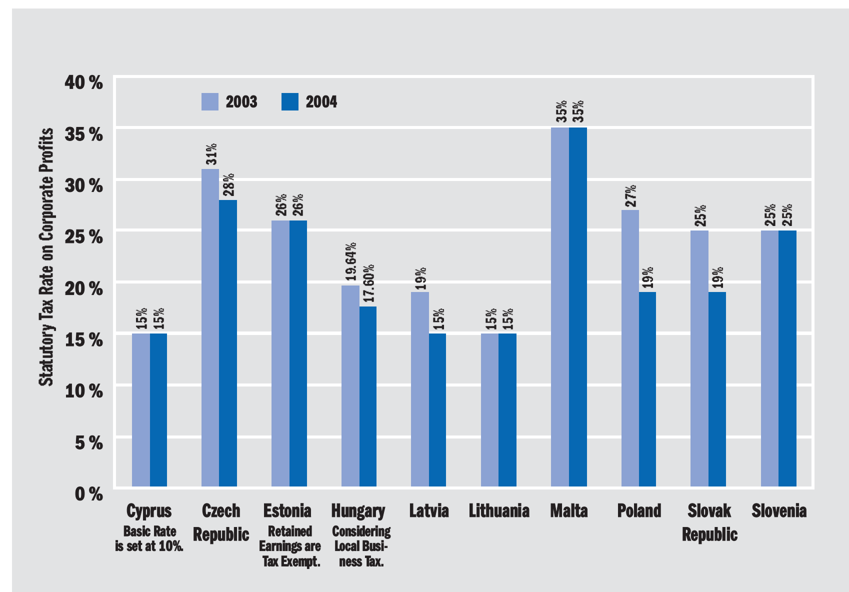


Figure 2: Statutory Tax Rates on Corporate Profits in the New Member States

2.3 Tax Rates

Figure 2 sets out statutory (nominal) tax rates as of 1 January 2004. The spread between the statutory corporate income tax rates in the new member states is 20 percentage points. Cyprus, Latvia, and Lithuania have the lowest (15%) and Malta the highest tax rate (35%). Corporate income tax rates in the new member states are linear, with the exception of Cyprus. The standard rate in Cyprus is 10%. For the fiscal years 2003 and 2004, an additional 5% tax is imposed on taxable income in excess of an amount corresponding to € 1.7 million. In Estonia, distributed profits are taxed at a rate of 26%, whereas retained earnings are exempt from taxation.

There is a trend of corporate income tax rate reduction in the new member states. Through recent tax reforms, five of the ten countries reduced their statutory corporate income tax rates. Thus, in the new member states tax rates on corporate profits declined from an average of 23.8% in 2003 to 21.5% in 2004. The 2004 average is more than 10 percentage points lower than in the previous EU-15 (31.7% in 2003 and 31.6% in 2004). Poland and the Slovak Republic cut their corporate income tax rates most significantly by 8 percentage points and 6 percentage points, respectively. Malta remains the only country imposing a tax rate above the average of the previous EU-15. Considering the tax exemption of retained earnings in Estonia, seven countries impose tax rates below 20%.

2.4 Tax Bases

Taxable income is determined according to the accrual principle. Generally, financial accounting profits that are assessed in line with the national Generally Accepted Accounting Principles (GAAP) form the starting point for the tax base. Cyprus and Estonia use International Financial Reporting Standards (IFRS) for financial accounting. All new member states adjust financial accounting profits for tax purposes to a different extent to obtain the corporate income tax base.

Several differences exist with respect to individual elements of taxable income. The most important rules – most of which are taken into account in the calculation of effective tax burdens in Chapter 3 – are summarised in Table 1 and explained in more detail below.

- **Buildings**
  Buildings may be depreciated for tax purposes in all new member states. The useful life ranges from 20 to 40 years. The declining balance method is in use in Latvia and Lithuania. In the Czech and the Slovak Republics companies may use a special accelerated depreciation method based on coefficients. The accelerated coefficient method may be classified as a declining balance method because the results of both methods are similar. In the remaining countries, the straight-line method is compulsory. In Malta, an initial allowance of 10% in addition to the annual rate of 2% is allowed.

- **Intangibles**
  In all new member states, expenses for intangibles (e.g. brands, patents, expertise) that have been acquired against payment must be capitalised and amortised over their useful economic life (Cyprus, Hungary, and Malta), or the amortisation method stated in the tax law must be applied. The useful life specified in the tax code is set at five years in Latvia, Poland, the Slovak Republic and Slovenia, and at six years in the Czech Republic. In Lithuania, intangibles are treated most favourably because they are amortised at a rate of 66.67% using the declining-balance method.

- **Tangible Fixed Assets**
  Tangible fixed assets such as plant, machinery and office equipment are depreciated in all new member states. In most countries, companies may use the declining balance method. In the Czech and the Slovak Republics, the amount of depreciation is determined by an accelerated depreciation method, which is based on coefficients. Companies located in the Czech Republic benefit from a first-year deduction of 10% in addition to the annual allowances for the acquisition of new machinery. Cyprus, Hungary, Malta, and Slovenia restrict depreciation to the straight-line method.

- **Inventories**
  Inventories are valued at production cost. The concrete amount at which inventories are included in the accounts depends on the extent to which overhead is allocated to the products. Changes in stock of finished goods and work in progress are valued on the basis of alternative simplifying assumptions. In Cyprus and Malta, the first-in, first-out (FIFO) method is compulsory. In the Czech Republic, Latvia and the Slovak Republic, the weighted-average cost method is an option. Hungary, Lithuania, Poland, and Slovenia permit the last-in, first-out (LIFO) method. As long as the price level increases and the stock of goods do not decrease, LIFO is the most advantageous method from a tax point of view. The items most recently purchased at the higher price are matched against taxable revenues. Consequently, the taxable income decreases in earlier periods and payment of corporate income tax is deferred.

Countries	Depreciation Buildings	Amortisation Intangibles	Depreciation Machinery	Valuation of Inventories	Reserves for: Bad Debts Contingent Liabilities	Losses carry-forward carry-back
Cyprus	straight-line 25 years	straight-line 12.5 years	straight-line 10 years	FIFO	– –	unlimited –
Czech Republic	declining balance 30 years	straight-line 6 years	declining balance 6 years	weighted average	allowed –	5 years –
Estonia	Financial accounting (IFRS)	Financial accounting (IFRS)	Financial accounting (IFRS)	Financial accounting (IFRS)	Financial accounting (IFRS)	Not necessary since retained earnings are tax exempt
Hungary	straight-line 25 years	straight-line 12.5 years	straight-line 14.5%	LIFO	– –	unlimited –
Latvia	declining balance 10%	straight-line 5 years	declining balance 40%	weighted average	– –	5 years –
Lithuania	declining balance 25%	declining balance 66.67%	declining balance 40%	LIFO	allowed –	5 years –
Malta	straight-line 45 years	straight-line 12.5 years	straight-line 5 years	FIFO	– –	unlimited –
Poland	straight-line 40 years	straight-line 5 years	declining balance 10%	LIFO	allowed –	5 years –
Slovak Republic	declining balance 20 years	straight-line 5 years	declining balance 6 years	weighted average	allowed –	5 years –
Slovenia	straight-line 20 years	straight-line 5 years	straight-line 4 years	LIFO	– –	5 years –

Table 1: Most Important Rules for the Determination of Taxable Income in the New Member States

- **Provisions**
  Due to the diversity of the tax treatment of provisions, it is not possible to provide a comprehensive overview. Rather, the focus is on provisions for bad debts or uncertain (contingent) liabilities. In all new member states, provisions for contingent liabilities are not deductible for tax purposes. Furthermore, in Cyprus, Hungary, Latvia, Malta, and Slovenia, provisions for bad debts are prohibited. Only companies in the Czech Republic, Lithuania, Poland and the Slovak Republic are entitled to deduct provisions for bad debts if certain prerequisites are fulfilled. In Latvia, only financial institutions are entitled to account for such a provision.

- **Losses**
  With regard to the tax treatment of losses, none of the new member states allows a carry-back of losses. However, all of the countries grant a loss carry-forward. In six countries (the Czech Republic, Latvia, Lithuania, Poland, the Slovak Republic and Slovenia), the loss carry-forward is limited to five consecutive years. Only Cyprus, Hungary, and Malta allow an unlimited loss carry-forward. In Poland, the amount of a loss carried forward to be set off from taxable profits in each year is limited to 50% of the loss.

Estonia has a unique tax system. The tax base is not linked to profits, and retained profits are tax-exempt. Taxable income therefore equals the amount of distributed profits to the shareholders and the amount considered as hidden profit distribution. Distributable profits are assessed according to the International Financial Reporting Standards (IFRS), but there are no special accounting rules for tax purposes. Since retained profits are not taxed, there is no need to implement special provisions for the treatment of losses.

2.5 Additional Company Taxes

Corporations may be subject to additional taxes on business profits or on business assets other than corporation income tax. In general, the most important additional taxes are real estate tax, property tax and local business tax.

	Local Business Tax on Income	Real Estate Tax
Cyprus	no	YES
Czech Republic	no	YES
Estonia	no	no
Hungary	YES	YES
Latvia	no	YES
Lithuania	no	YES
Malta	no	no
Poland	no	YES
Slovak Republic	no	YES
Slovenia	no	no

Table 2: Local Profit Taxes and Non-Profit Taxes at Corporate Level

A property or net wealth tax on business assets is not levied in any of the new member states. This reflects the situation in the old member states.

Real estate tax is levied in all new member states except for Estonia, Malta, and Slovenia. The tax base covers land and buildings. The taxable value is derived from either market prices, lower standard tax values or the area of land (square meters). Therefore, the taxable value may be completely different in different countries even though the tax base covers the same items. Although the amount of real estate tax varies from country to country, real estate tax has no significant impact on the effective tax burden of companies, since the tax rates are relatively low.

An additional local business tax for companies is levied in Hungary only. The tax base comprises the net sales revenues and half of the interest income (until the end of 2003 interest income was included entirely). The costs of goods sold, costs of services (subcontractor fees) and the costs of materials are deductible. However, neither depreciation nor interest expenses are allowed. The maximum rate for the local business tax may not exceed 2%. Since 125% of the local business tax is deductible from the base of the corporate income tax the effective burden of the Hungarian local business tax is significantly lower than its nominal burden.

2.6 Conclusion

A comparison of the company tax regimes in the new member states reveals that the most important tax is corporate income tax. As in the old member states additional profit taxes as well as non-profit taxes, except real estate tax, are of minor importance. With respect to the corporate income tax system, the majority of the new member states apply some type of shareholder relief system. This follows the trend in the old member states. Both the corporate income tax rates and the corporate income tax bases vary greatly. For example, the difference between the highest and the lowest corporate income tax rate amounts to 20 percentage points. Depreciation on assets including machinery varies from a straight-line depreciation over 10 years to declining balance depreciation at a rate of 40%.

The impact of the different taxes, tax rates and tax bases on the effective tax burdens of companies differs according to the individual circumstances, including the type of investment, the source of finance and the profitability of an investment. Thus, it is not possible to come to any universally valid conclusion about the effective company tax burdens in the new member states. Moreover, a qualitative comparison of the different elements of the tax regimes cannot identify their impacts on the effective tax burdens. It is, therefore, unclear as to whether favourable allowances in the tax base compensate for higher tax rates and vice versa.

In order to assess the weight of the different tax drivers on the subsidiary level and on the parent company level, as well as to assess the weight of the cross-country differences of effective company tax burdens within the new member states, a quantitative analysis is required. This is the main task of the following chapters.

3 The Effective Tax Burden on Domestic and Cross-Border Investments in the New Member States

3.1 Methodology and Assumptions

3.1.1 Model for the Calculation of Effective Tax Burdens

The main purpose of the following chapters is to provide reliable information about the impact of the tax systems in the new member states on the decisions multinational investors make about the location, investment strategies and financing options for subsidiaries. First, effective tax burdens on both domestic and cross-border investments in each of the new member states are calculated (Chapter 3). Next, the impact of the most important tax incentives currently granted by the new member states (Chapter 4) as well as of announced tax reforms (Chapter 5) on the effective tax burdens is analysed. In this study – to simplify – only German parent companies are considered as multinational investors.

Academic research has developed sophisticated models for calculating effective company tax burdens. The methodology in this study follows the commonly accepted approach of King and Fullerton[2], recently extended by Devereux and Griffith[3]. International studies by the OECD[4] and by the European Commission[5] – the so-called Ruding Report – applied this methodology. Moreover, the most comprehensive survey to date on the comparison of effective company tax burdens in the EU carried out by the European Commission in 2001 applies this methodology[6]. In the preparation of their report, the Commission Services were assisted by experts from the Centre for European Economic Research (ZEW) and the University of Mannheim in cooperation with the Institute for Fiscal Studies (IFS) in London. The model used here is basically the same as that applied by the European Commission in 2001. Since it is described in detail in the 2001 report of the European Commission, we do not explain it here in detail. Instead, we just highlight the most important features.

The main advantage of the King/Fullerton-Devereux/Griffith approach is that it presents an opportunity to model the most relevant provisions of tax regimes in a very systematic way. In order to analyse the effective tax burden, several measures are computed: the cost of capital, the effective marginal tax rate (EMTR), and the effective average tax rate (EATR).

The cost of capital and the EMTR are measures for marginal investments. These are investments in new additional projects, which yield a rate of return on the initially invested capital that is just sufficient to make the project worthwhile from the perspective of the investor. The minimum rate of return before taxes is called the cost of capital $\tilde{p}$. The EMTR is defined as the difference between the cost of capital $\tilde{p}$ and the market interest rate divided by the cost of capital $\tilde{p}$:

$$(1) \qquad EMTR = \frac{\tilde{p} - r}{\tilde{p}}$$

To illustrate both measures we use the example of a corporation's investment in a financial asset, e.g. a bond. We assume that the investment yields a return of 5% – which corresponds to the market interest rate – in order to be worthwhile from the perspective of the investor. Since in case of a financial investment, the return is subject only to corporate income tax, we do not consider the tax base. We now assume a corporate income tax rate of 33.33%. Consequently, the minimum rate of return before taxes – the cost of capital – increases to 7.5%

$$\left(7.5\% = \frac{5\%}{1 - 0.3334}\right)$$

and the EMTR amounts to 33.33%

$$\left(33.33\% = \frac{7.5\% - 5\%}{7.5\%}\right)$$

which corresponds to the corporation tax rate.

For investments other than financial assets, the calculation of the cost of capital and the EMTR is more complex. In order to understand the approach for depreciable assets such as machinery or buildings, it is sufficient to take the corporate income tax rate τ and the net present value of depreciation allowances A into account. For a given market interest rate r, the cost of capital is

$$(2) \qquad \tilde{p} = \frac{(1 - A) \cdot (r + \delta)}{(1 - \tau)}$$

where δ is the rate of true economic depreciation. From equation (2), it is easy to see that the cost of capital and the EMTR derived from this increase if

[2] See King/Fullerton (1984).

[3] See Devereux/Griffith (1999). See also Schreiber/Spengel/Lammersen (2002).

[4] See OECD (1991).

[5] See European Commission (1992).

[6] See European Commission (2001).

the net present value of depreciation allowances A decreases and/or if the tax rate on corporate profits τ increases ($\tilde{p}\,/\,EMTR \uparrow \Leftrightarrow A \downarrow and\ \tau \uparrow$).

From the above, it is evident that the EMTR on depreciable assets can fall below the tax rate on corporate profits τ if there are favourable depreciation allowances. The EMTR, however, can also be above the tax rate on corporate profits if considerable non-profit taxes are levied which – to simplify – are not considered in equation (2).

The EMTR takes into account marginal investments only. Such investments yield a rate of return equal to the cost of capital. Therefore, the EMTR is relevant in assessing the allocation efficiency of tax regimes. However, it has been proven empirically that location decisions for subsidiaries of multinational investors are made for highly profitable investments. A profitable investment yields a rate of return p above the cost of capital $\tilde{p}$. Therefore, the relevant tax burden on profitable investments is the EATR. In the following, it is sufficient to describe the relation between the EATR and the EMTR:

$$(3)\qquad EATR = \frac{\tilde{p}}{p} \cdot EMTR + \frac{p - \tilde{p}}{p} \cdot \tau$$

The EATR equals the weighted average of the EMTR and the corporate income tax rate τ. The weights are determined by the proportion of the return before taxes p that is covered by the cost of capital (for the EMTR) and the proportion that is above the cost of capital (for the corporate income tax rate).

To illustrate the properties of the EATR and to identify the impact of the different tax drivers on the effective tax burden, we assume a market interest rate r of 5% and a corporate income tax rate τ of 33.33%. Due to the impact of favourable depreciation allowances, the cost of capital $\tilde{p}$ for a marginal investment should be 6.67%. Consequently, the EMTR amounts to 25%

$$\left(25\% = \frac{6.67\% - 5\%}{6.67\%}\right).$$

From equation (3), it follows that the EATR equals the EMTR of 25% if the rate of return of an investment p equals the cost of capital $\tilde{p}$. With an increasing rate of return, however, the EATR approaches the corporate income tax rate of 33.33%. If, for example, the rate of return p is 20%, the EATR increases to 30.55%

$$\left(30.55\% = \frac{6.67\%}{20\%} \cdot 25\% + \frac{20\%\text{-}6.67\%}{20\%} \cdot 33.5\%\right).$$

This is because any additional expenses such as depreciation etc. do not reduce any additional return above the cost of capital, making the corporate income tax rate fully relevant.

In summary, as far as the impact of the different tax drivers is concerned, for a marginal investment the tax base (e.g. depreciation/amortisation allowances or the deduction of interest payments in the case of debt financing) and non-profit taxes play an important role in addition to the corporate income tax rate. By contrast, the importance of the features of the tax system just mentioned decrease for a profitable investment, and the corporate income tax rate becomes the dominant factor in determining the effective tax burden.

The following section presents EATR on domestic and cross-border investments only. This is because the EATR is the relevant measure from a tax point of view for the choice of location for subsidiaries of multinational investors. The EATR model covers the most important provisions of the tax regimes in the new member states as well as the provisions for the taxation of cross-border income flows, e.g. withholding taxes and methods for avoiding international double taxation in the investor's home country. The following section briefly describes the assumptions about investment and financing strategies and the tax provisions covered by the model. For technical details of the model, we refer to Annex A of the European Commission's report from 2001[7].

[7] See European Commission (2001), pp. 519-533. The full report can be downloaded from http://europa.eu.int/comm/taxation_customs/publications/official_doc/sec/sec.htm. Spengel (2003), pp. 68-79, 134-138, provides an explanation in German.

3.1.2 Assumptions about Investment and Financing Strategies and Tax Provisions

The calculation of the effective tax burdens on investments in the new member states is based on the following assumptions (see Figure 3).

- A parent company, resident in Germany, makes an investment through a subsidiary that is located in one of the 10 new member states.
- The parent company's shareholding in the subsidiary is 100%, thus only a direct cross-border investment is considered (and no transnational portfolio investment).
- The shareholders of the German parent company are private portfolio investors who reside in the same country as the parent, i.e. in Germany.
- Five different assets for the investment of the subsidiary are examined: intangibles acquired against payment from third parties, industrial buildings, machinery, financial assets and inventories.
- The financing policies of the subsidiary and the parent, respectively, consider three sources of financing: new equity capital, retained earnings, and debt.

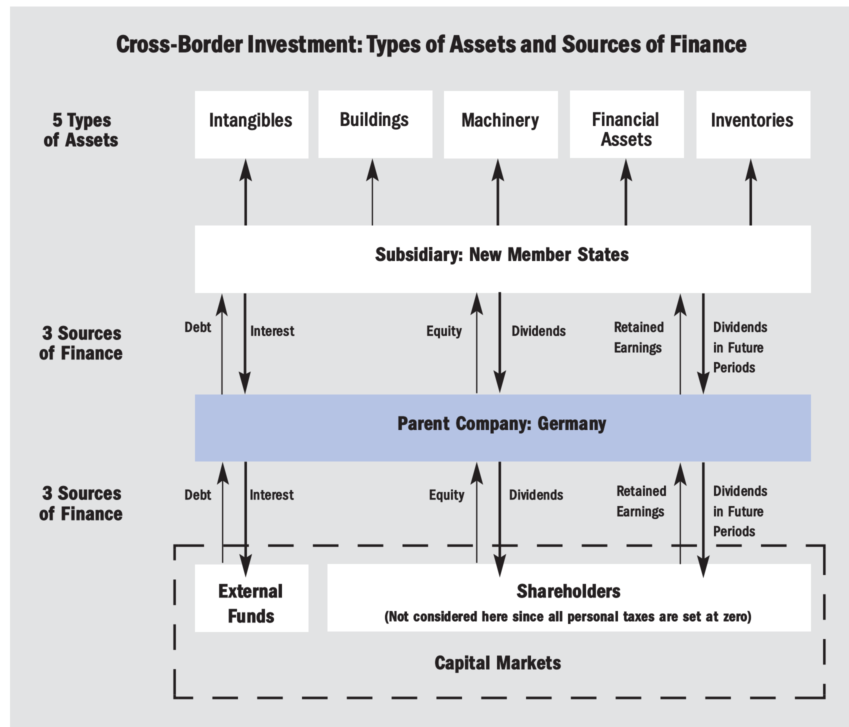


Figure 3: Outline of the Model: Types of Assets and Sources of Finance

- The subsidiary disregards the options of raising funds in its local, or even international, capital markets. Instead, the investment is financed only by the subsidiary's retained earnings, by the parent injecting new equity into the subsidiary, or by the parent lending money to the subsidiary.
- There is a complete repatriation of the subsidiary´s profits to the parent. In the case of new equity financing, we assume a full distribution of profits as dividends in the same period. In the case of financing with retained earnings, we assume that profits will be distributed in subsequent periods. In the case of debt financing, we assume that the subsidiary pays interest to the parent at a fixed rate and distributes the remaining profits as a dividend.
- In each case, the parent must raise funds itself by issuing new equity, using retaining earnings, or borrowing money from its own shareholders. At the subsidiary level, we assume a complete repatriation of the profits of the parent to its ultimate shareholders.

Under these assumptions, profits resulting from the investment may be taxed at three different levels:

- First, taxation takes place at the level of the subsidiary. In many situations, this is sufficient from the perspective of a multinational investor, since the tax burden borne at the level of the subsidiary is the relevant tax burden for location decisions of subsidiaries. By setting all other taxes, except local taxes, at zero, the tax burden at the level of the subsidiary is also an indicator of the company tax burdens on domestic investments in the new member states.
- Second, as far as tax planning options in the field of financing are concerned, the analysis must take into account the taxation at the level of the parent company when profits are repatriated from the subsidiary to the parent in the form of dividends and interest payments.
- Third, individual shareholders of the German parent company may pay personal taxes. In our analysis, however, the treatment of the different kinds of investment income, e.g. dividends, interest income and capital gains from the disposal of shares in the hands of the individual shareholders, is not taken into account because personal taxation is in most cases not relevant for investment and location decisions of multinationals.

The consideration of five types of assets at the level of the subsidiary and three sources of finance at both the level of the subsidiary and the parent company results in 45 possible combinations of assets and financing for each of the levels as described in Figure 3. In order to keep the comparison of EATR for all countries manageable, we calculate the mean (weighted average) EATR for each type of asset, the mean (weighted average) EATR for each source of finance and an overall mean EATR for all combinations of assets and financing. To simplify, the sources of finance and the types of assets are weighted equally, i.e. 33.33% for each source of finance and 20% for each type of asset. Additional economic data incorporated into the model are an inflation rate set at 2%, a pre-tax interest rate of 7.1%, and economic depreciation/amortisation of fixed assets on a declining basis at a rate of 3.1% for buildings, 15.35% for intangibles and 17.5% for machinery. The pre-tax financial return of the investment is set at 20%. The assumptions are summarised in Appendix B.

Tax provisions

The model covers the most relevant tax provisions of the tax systems in the new member states. We consider corporate income tax, real estate tax and local business taxes, as well as capital allowances, the valuation of inventories and interest deductibility in the case of debt financing. Tax elections are exercised in a consistent manner, i.e. the most tax-efficient option is chosen. For example, the declining balance method is used prior to the straight-line method, and inventory is valued at LIFO instead of FIFO or weighted average. When profits are repatriated from the subsidiary to the German parent in the form of dividends and interest payments, both the levying of withholding taxes in the new member states and the 95% elimination of double taxation in Germany are taken into account. Further, in Chapter 4, the most relevant tax incentives granted by the new member states are included in the model to quantify their impact on the effective tax burdens. The calculations are based on the tax regulations as at 1 January 2004. The relevant information about the tax systems was provided by the country representatives of Ernst & Young in the new member states. For details about the tax data used in the calculations, see Appendix A.

3.2 The Effective Tax Burden at the Level of the Subsidiary (Domestic Investment)

3.2.1 Overall Tax Burden

The primary purpose of this study is to quantify the effective tax burden on investments in the new member states, to identify tax drivers, and to analyse different financing policies with regard to the effective tax burden. Figure 4 illustrates the EATR at the level of the subsidiary and the ranking of the countries. The EATR is calculated as a combination of equally weighted assets and sources of finance as described in Section 3.1.2. Taxes borne by the parent company in the new member states (i.e. withholding taxes) and in the home country (i.e. taxes on repatriated profits) are set at zero for the moment. Therefore, the effective tax burden borne at the level of the subsidiary is the same as for a domestic investment without taking into account any shareholder taxation.

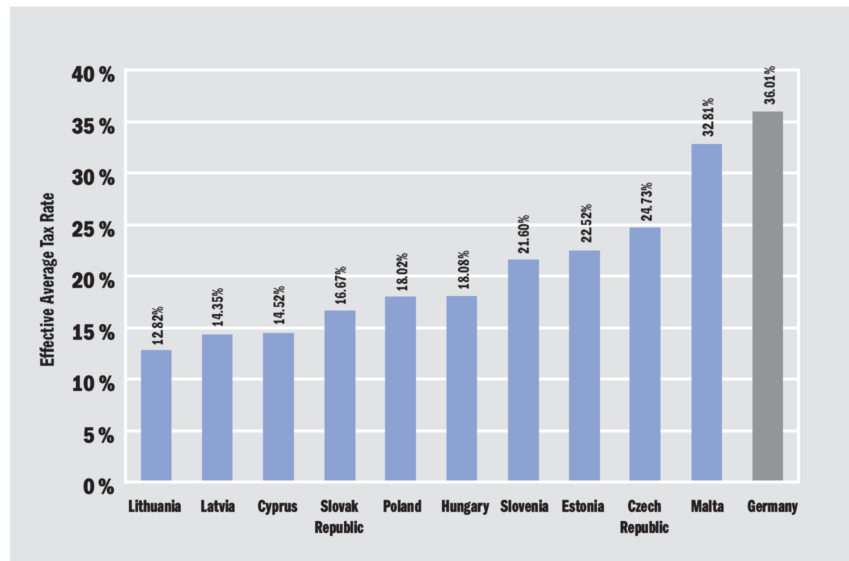


Figure 4: Effective Average Tax Rates in the New Member States (Subsidiary Level)

Figure 4 illustrates the EATR at the level of a company resident in the related country (domestic investments). There is a wide range of EATR within the new member states. The overall spread amounts to 19.99 percentage points. Lithuania (12.82%) is the most tax attractive country closely followed by Latvia (14.35%), and Cyprus (14.52%). Malta imposes the highest effective tax burden (32.81%). The average of the EATR amounts to 19.61%. German companies bear a tax burden which is at least 10 percentage points higher compared to the new member states when Malta remains out of consideration. The result is the same for multinational investors located in other countries, for example in France (34.91%), in the Netherlands (32.41%), and in the United Kingdom (29.13%) where domestic investments bear a higher effective tax burden compared to the new member states except for Malta. Overall, the new member states have a significant advantage.

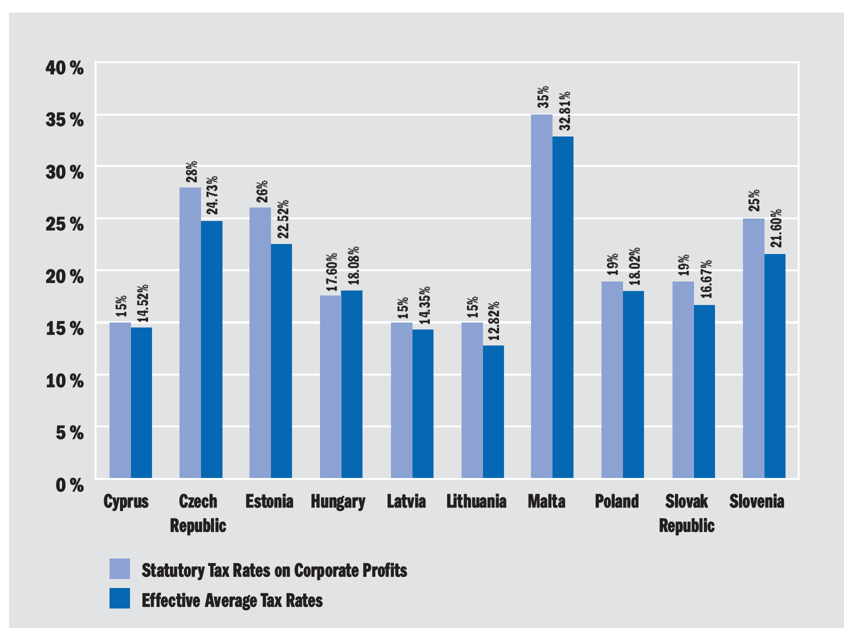


Figure 5: Statutory Tax Rates on Corporate Profits and Effective Average Tax Rates in the New Member States (Subsidiary Level)

The elements that determine the effective tax burdens in the new member states cannot be explained by one single feature of the tax regime. However, the statutory (nominal) tax rate on corporate profits plays an important role in determining the effective tax burden because the level of personal shareholders is not considered. When analysing the effective tax burden at shareholder level, the system of corporate taxation would be an additional significant tax driver in addition to the nominal corporate income tax rate. The ranking of the countries based on the nominal tax rates on corporate profits is a good indicator of the ranking with respect to the EATR (see Figure 5). Here, there would be few changes in the country ranking. This is because calculations of the effective tax burdens concentrate on profitable investments, and none of the new member states levies substantial non-profit taxes. In the case of profitable investments, it has already been shown theoretically that the corporate income tax rate is the dominant factor in determining the effective tax burden (Section 3.1). The spread between EATR and the nominal tax rate is not more than 3.5 percentage points. The lower EATR compared to the nominal tax rate on corporate profits is explained by the tax-reducing impact of the tax base (e.g. depreciation and inventory valuation) and the deduction of interest payments in the case of debt financing. Hungary is the only country where the EATR exceeds the combined statutory tax rate on corporate profits. This is caused by the local business tax, where neither interest expenses nor depreciation are allowed as a tax deduction. These two items can, however, be deducted for corporate income tax purposes. This restriction – in addition to real estate tax imposed on industrial buildings – drives the EATR above the statutory tax rate.

3.2.2 Impact of Different Sources of Finance

In the following section, the impact of different financing policies on the effective tax burden on domestic investments is analysed. Figure 6 outlines the EATR with respect to three different sources of finance of the subsidiaries: retained earnings, new equity and debt.

[9] See Appendix C, Table C.1 for details.

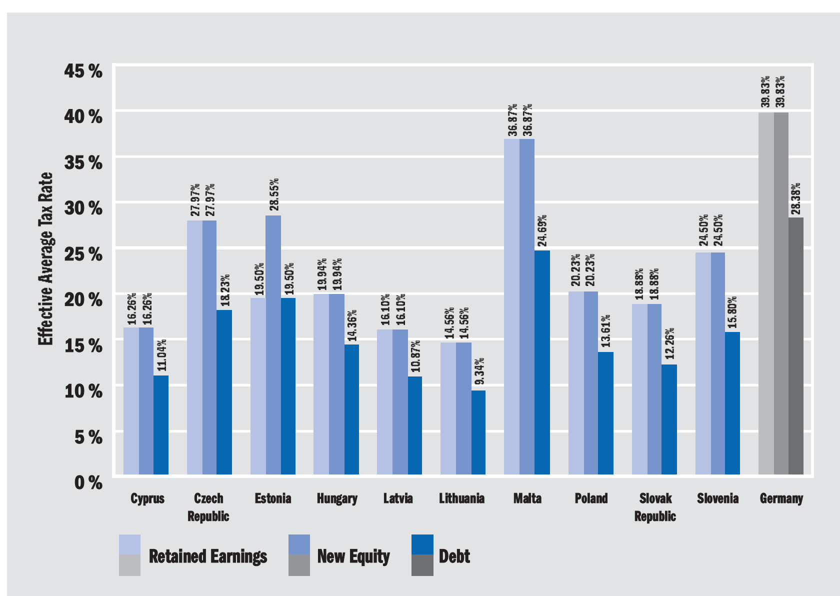


Figure 6: Effective Average Tax Rates and Sources of Finance in the New Member States (Subsidiary Level)

From the perspective of a corporation located in one of the new member states, i.e. the subsidiary, debt financing is always more tax-efficient compared to equity-financed investments because nominal interest payments are deductible from taxable income. Compared to Germany, where only half of interest payments are deductible from the local business tax (Gewerbesteuer), interest deductibility for tax purposes is not restricted in any of the new member states. The relative advantage of debt financing over equity financing or vice versa arises with the statutory tax rate. This is because the tax saving due to interest deduction at nominal rates increases with an increasing corporate income tax rate, e.g. Malta and the Czech Republic. Figure 6 illustrates that the impact of interest relief is relatively low for countries with modest statutory tax rates, e.g. Cyprus, Latvia, and Lithuania.

In contrast to debt financing, financing through retained earnings and new equity is disadvantageous, because no deduction from taxable income is allowed for the corresponding dividend payments. The effective tax rate for both financing options almost equals the statutory tax rates on profits. Deviations from the statutory tax rate are due to the accounting rules incorporated in the model, in addition to interest relief. These accounting rules have no decisive impact on the EATR because they do not result in a tax exemption, but only in timing differences, and consequently, tax deferrals. This again is evidence that the nominal corporate income tax rates on profits, in contrast to the accounting rules, explain most of the level of the EATR in each country and the cross-country differences.

The EATR on retained earnings and new equity is the same for all countries except for Estonia. Equity financing policies result in equal EATR if tax rules do not differentiate between retained earnings and distributed profits, i.e. the same tax rate is applied on profits regardless of whether they are distributed to the shareholders or retained at corporate level. In Estonia, taxation may be deferred by profit retention at the corporate level because retained earnings are tax exempt. Since taxable income is, therefore, determined by the amount of distributed profits, retained earnings and debt financing result in the same EATR. Consequently, it is advisable to finance investment projects in Estonia through retained earnings or debt to minimise the effective tax burden.

From the perspective of the multinational investor, i.e. the German parent company, the preferential treatment of debt financing at the level of the subsidiary does not mean, however, that debt financing is more tax-efficient than equity financing. Because interest received from a subsidiary is always taxable at the level of the parent company and double taxation of dividends in the case of equity financing is avoided as a rule, a multinational investor always has to compare the aggregate tax burden on interest payments and repatriated profits. This is examined in more detail in Section 3.3.

3.2.3 Impact of Different Types of Investment

Figure 7 provides information on the EATR for each type of asset. Different accounting rules for different kinds of assets result in a dispersion of the corresponding EATR.

In most countries allowances for **machinery** and **industrial buildings** far exceed true economic depreciation. The preferential depreciation for tax purposes leads to modest EATR. However, in Cyprus, the Czech Republic, Hungary, Latvia, Lithuania, Poland, and the Slovak Republic, real estate tax imposes an extra tax burden on industrial buildings and, thus, increases the EATR. Despite of advantageous depreciation rules, in Hungary and Latvia industrial buildings report the highest EATR relative to the other assets. In this respect, real estate tax can be identified as the main tax driver. The effective rate of real estate tax amounts to 1.3% in both countries, which is at least three times higher than in the remaining countries. However, from an overall tax perspective real estate tax is of rather minor importance given that the EATR is based on a corporation modelled by an investment mix of five equally weighted assets. Hence, there is only a rather small impact of real estate tax on the overall EATR of a company.

The tax systems offer similar generous allowances for **intangibles**. Therefore, the EATR for intangibles and machinery is approximately the same and among the lowest in most of the new member states. A different conclusion applies to Cyprus, Hungary, and Malta where intangibles have to be depreciated over their useful economic life on a straight-line basis. As a result the EATR is close to the statutory tax rate.

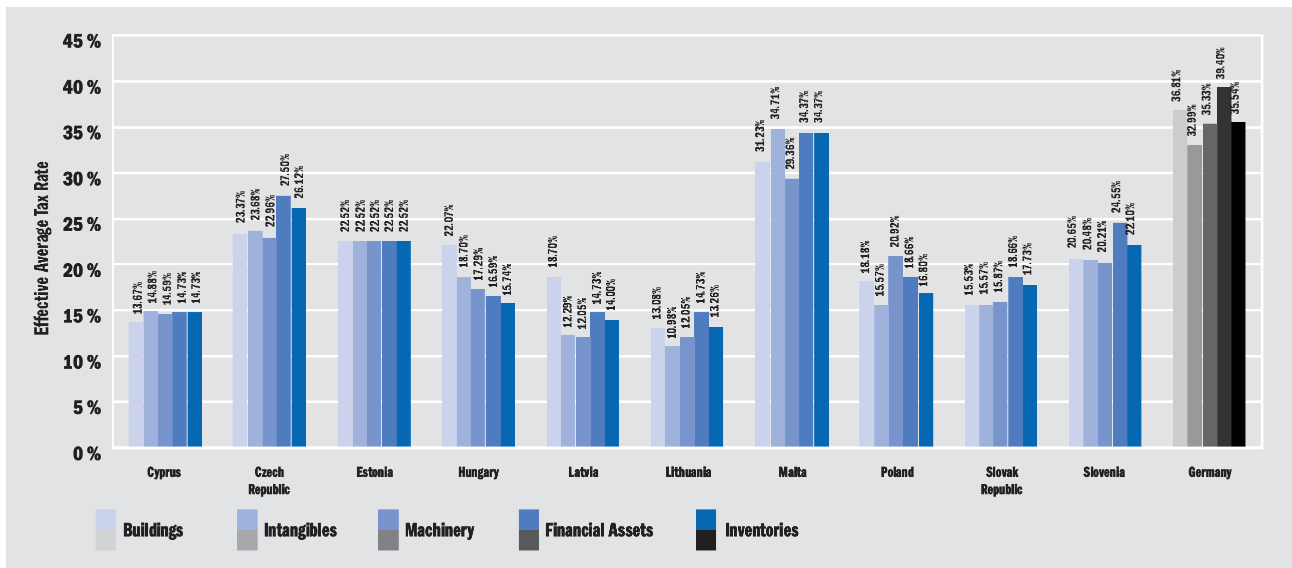


Figure 7: Effective Average Tax Rates and Types of Assets in the New Member States (Subsidiary Level)

Analysing the tax burden of **non-depreciable assets**, i.e. financial assets and inventories, the impact of inflation on the EATR becomes evident. Inflation increases the nominal sales price and nominal costs. Only LIFO avoids the taxation of inflationary gains. Under the FIFO and weighted-average-cost method, taxable income is measured by the difference between nominal sales price and nominal cost valued at a lower price level. Thus, taxable income rises with inflation. The same applies to financial assets. As a result, the EATR on investments in inventories does not exceed the EATR of investments in financial assets.

In Estonia, accounting rules do not have any influence on the taxable base which is determined by the amount of profits distributed to the shareholders. Thus, all assets are treated equally and EATR is the same for all types of assets.

3.3 The Effective Tax Burden on Cross-Border Investments

3.3.1 General Approaches to the Taxation of Cross-Border Investments

If we consider only the tax burden borne at the level of the subsidiaries located in the new member states, debt financing is always more tax-efficient than new equity financing and profit retention. However, to make an adequate comparison of all forms of finance, and hence, to decide whether the subsidiary should be financed by profit retention, new equity or debt, the analysis must include the taxation of profit repatriation at the level of the multinational investor. This means that the taxation of intercompany dividends and interest payments must also be taken into account.

Before examining the situation for a German-based multinational investor in more detail (see the following Section 3.3.2), we draw some general conclusions on the most tax-efficient financing strategies. The advantage of one way of financing over another and, hence, the advantage of one location over another, very much depends on the methods for avoiding international double-taxation on cross-border dividend and interest payments applied by the home country of the multinational investor. Here, one can differentiate between the exemption method and the credit method. Both methods can be found in Article 23 of the OECD Model Convention.

In the case of equity financing, the OECD Model Convention offers a choice between the exemption method and the tax credit method. This choice is exercised differently in the existing double taxation conventions of different countries.

- If the exemption method is used and the levying of withholding taxes on dividends in the source country of the subsidiary is overlooked for the moment, the tax burden borne at the level of the subsidiary does – in principle[8] – not change when dividends are distributed to the parent company. Thus, the exemption method follows the principle of capital import neutrality. Therefore, as a general rule, in the case of equity financing, the tax burden at the subsidiary level is relevant to the comparative advantage of one location over another from the perspective of a multinational investor. The majority of the old member states applies the exemption method to cross-border dividend payments (e.g. Austria, Belgium, Denmark, Finland, France, Germany, Italy, Luxembourg, the Netherlands, Portugal and Sweden).
- Compared to the exemption method, the effects of the application of the credit method on foreign dividends depend on the relation of the tax level in the home country of the multinational investor to the tax level in the country where the subsidiary is

[8] We will observe later in the case of a German-based multinational that this general conclusion must be modified with respect to special provisions in the domestic tax codes. See Section 3.3.2.

located. Because the foreign tax credit on dividends is limited to the domestic corporate income tax on the underlying profits, the tax burden at the level of the parent company is the minimum tax burden that the multinational investor faces. If the foreign tax level is below the domestic tax level, the tax burden on foreign dividends is grossed-up to the domestic level (capital export neutrality). As a result, a multinational investor cannot benefit from lower taxes abroad if profits are distributed. Compared to the exemption method, this results in a higher tax burden at the level of the parent company. By contrast, the exemption method and the credit method arrive at the same result, if the foreign tax level exceeds the domestic tax level (capital import neutrality). As a consequence of the limitation of the tax credit, the foreign taxes in excess of the domestic taxes become definite. The tax credit method is applied by Anglo-Saxon member states (Ireland and the United Kingdom), Greece and Spain, as well as by the United States.

The new member states implemented provisions to ensure that their domestic tax codes entirely comply with the Parent-Subsidiary Directive (90/435/EEC), which requires exempting cross-border dividend payments to qualifying EU resident parent companies from withholding taxes. These provisions came into effect on 1 May 2004 in the Czech Republic, Hungary, Latvia, Poland, and Slovenia. The remaining countries abandoned to levy withholding taxes on dividend payments before entering the EU. The Slovak Republic has abolished withholding taxes on dividend payments since the beginning of the year 2004 as part of a comprehensive tax reform. With respect to multinational investors located outside the EU, withholding taxes will remain relevant in any case. Whether withholding taxes on dividends will result in a definite tax burden depends on whether the exemption method or the credit method is applied. In the case of the exemption method, the levying of dividend withholding taxes always results in a definite tax burden. In the event of the credit method, dividend withholding taxes only become definite if they – together with the foreign corporate income tax – exceed the domestic tax level.

In the event of debt financing, the accepted approach in all countries for the taxation of cross-border interest payments follows the concept of capital export neutrality. This is true regardless of whether the exemption or the credit method is applied to dividends in the case of equity financing. Interest paid by a foreign subsidiary is, in general, deductible from the profits of the subsidiary and subject to corporate income tax at the level of the parent company. Consequently, foreign profits shifted via debt financing bear – regardless of the location of a subsidiary – the same tax burden as domestic investments of the parent company. Compared to equity financing, debt financing is therefore more tax-efficient if local taxes are lower than foreign taxes. A withholding tax levied on interest payments is credited against the domestic corporate income tax and therefore, in most cases, does not result in a definite burden.

By choosing equity or debt financing, a multinational investor located in a country that applies the exemption method on dividends has the opportunity to decide whether profits from international investments should be liable to domestic tax (debt financing, capital export neutrality) or foreign tax (equity financing, capital import neutrality). In the event the credit method is applied on dividends, and the level of foreign taxes is below the level of domestic taxes, foreign profits are subject to the same tax burden (i.e. the level of domestic taxes, capital export neutrality) regardless of whether equity or debt financing is used. An investor located in a credit country only has a comparable choice as offered by the exemption method if the level of foreign taxes exceeds the level of domestic taxes. In this event – due to the limitation of the foreign tax credit – it is the level of foreign taxes that determines the tax burden on foreign dividends whereas interest payments are still subject to the (lower) domestic taxes. It must be kept in mind, however, that profit shifting via debt financing is limited by the arm's length principle. This means that profits above the accepted interest rate cannot be shifted via debt financing to the parent company and, therefore, are still subject to taxation at the level of the subsidiary. In addition, specific thin capitalisation rules in the source countries limit the extensive use of

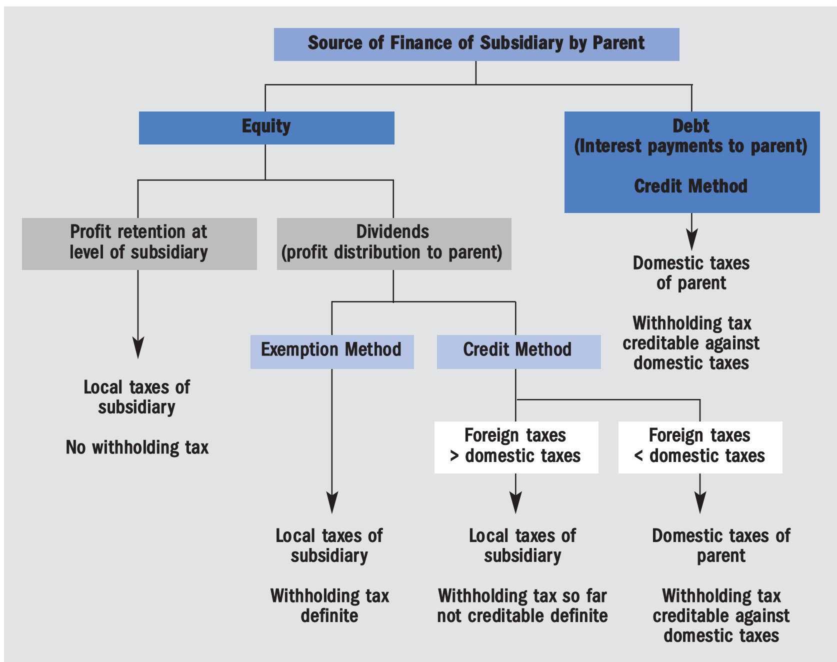


Figure 8: Taxation of Cross-Border Income Depending on the Source of Finance

debt financing. The area of transfer pricing, which is not considered here, offers additional opportunities for profit shifting.

The tax planning strategy of multinational investors in the field of intragroup financing depends on the decision as to where the profits of the subsidiary should be reinvested. Figure 8 outlines the relevant practises and the consequences for the tax burdens.

(1) If profits are to be reinvested at the level of the subsidiary, the most tax-efficient source of financing is profit retention at the level of the subsidiary. The effective tax burdens on retained earnings in the source countries become immediately relevant and determine the most advantageous location of a subsidiary. Of the new member states, Lithuania would be the best location and Malta the worst from a tax point of view. This is true regardless of the methods employed for avoiding international double taxation on cross-border dividends and interest payments applied by the home country of the multinational investor.

(2) If profits are to be reinvested at the level of the parent company in the most tax-efficient way, the optimal tax planning strategy depends on the relationship between the level of foreign taxes (i.e. taxes borne at the level of the subsidiary and – if relevant – withholding taxes on dividends) and the level of domestic taxes in the home country of the parent company.

a) If foreign taxes exceed the corporate income tax rate in the home country of the parent company, debt financing of the subsidiary is more tax-efficient than equity financing. This is true regardless of whether foreign dividends are exempt from taxation in the home country of the parent company or a foreign tax credit is granted (because there is no refund of an excess tax credit). In this event, a withholding tax levied on dividends results in a definite tax burden.

b) If foreign taxes are lower than the corporate income tax rate in the home country of the parent company and dividends are exempt from taxation, equity financing is more tax-efficient than debt financing. A withholding tax on dividends becomes definite. If however, dividends are not tax exempt, but a foreign tax credit is granted instead, the effective tax burdens on debt financing and equity financing are, in principle, the same. Due to the application of the (limited) tax credit method, the effective tax burden on foreign investments is usually not lower than the tax burden on domestic investments.

3.3.2 Situation of a German Parent Company

3.3.2.1 Taxation of Cross-Border Dividend Flows and Interest Payments

Countries	Effective Average Tax Rates When Dividend Payments Are Exposed to Withholding Taxes			Effective Average Tax Rates for Qualifying Participations Considering the Implementation of the Parent-Subsidiary Directive		
	Withholding Tax Rates (in %)	*EATR (in %)*	*Ranking*	*EATR (in %)*	*Ranking*	*Δ EATR (in percentage points)*
Cyprus	0	16.69	2	16.69	3	0.00
Czech Republic	5	29.79	8	26.70	9	-3.09
Estonia	0	24.53	7	24.53	8	0.00
Hungary	5	23.61	6	20.18	6	-3.43
Latvia	5	20.15	3	16.53	2	-3.62
Lithuania	0	15.03	1	15.03	1	0.00
Malta	0	34.62	10	34.62	10	0.00
Poland	5	23.56	5	20.13	5	-3.43
Slovak Republic	5	22.30	4	18.80	4	-3.50
Slovenia	15	33.38	9	23.63	7	-9.75

Table 3: Impact of the Parent-Subsidiary Directive on Effective Average Tax Rates of German Outbound Investments to the New Member States (Parent Company Level)

From the perspective of a German parent company, the relevant rules for the taxation of dividends and interest paid by subsidiaries located in the new member states may be summarised as follows.

Equity financing (new equity and profit retention) of the subsidiary: at the level of the German parent company, dividend payments from both domestic and foreign subsidiaries are exempt from corporate income tax and trade tax. Domestic law already grants the exemption. Five percent of dividends received from abroad, however, are considered a non-deductible business expense in connection with tax-exempt dividend income. Therefore, the exemption of foreign dividends at the level of the German parent company covers only 95% of the dividends received; the remaining 5% is subject to corporate income tax, solidarity levy and trade tax. Because foreign dividends are exempt in Germany, withholding taxes on dividends levied abroad may not be credited against the German corporate income tax and, therefore, result in a definite tax burden at the level of the German parent company.

Debt financing of the subsidiary: in the case of debt financing, Estonia, Latvia, and Lithuania levy a withholding tax of 10% on interest payments in accordance with the tax treaties concluded with Germany. This will increase the tax burden on debt financing at the subsidiary level in these countries. In all other new member states, interest payments are exempt from withholding tax. In addition, on the basis of the Council Directive 2003/49/EC of June 3, 2003 on a common system of taxation applicable to interest and royalty payments made between associated companies of different member states any respective payments shall be released from withholding tax.

However, interest payments from the subsidiaries to the German parent company are subject to German corporate income tax (25% in 2004), solidarity levy (5.5% of the corporate income tax), and trade tax. Assuming an average trade tax coefficient of 428%, the aggregate tax rate on corporate profits in Germany amounts to 39.35% for the year 2004. Currently, withholding taxes on interest levied abroad can be credited against the corporate income tax in Germany.

3.3.2.2 Overall Tax Burden

Figure 9 illustrates the aggregate EATR on German outbound investments to the new member states as of 1 May 2004, i.e. all jurisdictions of the new member states entirely comply with the Parent-Subsidiary Directive. In addition, the EATR on German domestic investments is in-

cluded as a benchmark for German investors. Compared to the EATR for domestic investments at subsidiary level, the average EATR rises from 19.61% to 21.68% because the subsidiary is partly debt financed which means that part of the tax base is shifted to the parent company through interest payments and therefore subject to the higher German tax rate of 39.35% on corporate profits. Cross-border investments to each of the new member states are exposed to a lower tax burden than domestic investments in Germany. This result reveals a comparative tax advantage of the new member states regarding the impact of taxation on the location decision.

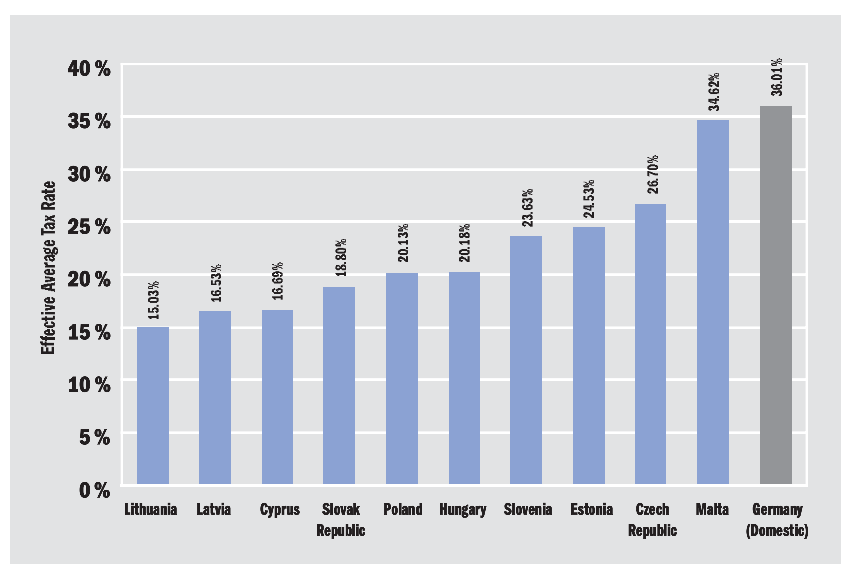


Figure 9: Effective Average Tax Rates of German Outbound Investments to the New Member States (Parent Company Level)

According to the Parent-Subsidiary Directive withholding taxes have been abolished for qualifying participations as of 1 May 2004. As a result, the additional tax burden stemming from withholding taxes on dividends has been eliminated. The countries' ranking is the same as the ranking for domestic investments at subsidiary level. The underlying reason is the dominant influence of the effective tax burden imposed at subsidiary level in the source country on German outbound investments because the exemption method (which is applied in Germany) prevents transferred profits from taxation in Germany if the profits are repatriated by dividend payments (except for the 5% taxation under German domestic tax law).

In the following the impact of the Parent-Subsidiary Directive on the effective tax burdens and the relative attractiveness of the locations is analised. The third column of Table 3 reports the EATR when dividend payments are exposed to withholding taxes. It is to note that the Slovak Republic has abolished withholding taxes on dividends as part of a comprehensive tax reform which came into effect on 1 January 2004. To illustrate the impact of this measure on the relative attractiveness of the Slovak Republic, we consider the withholding tax rate of 5% which was imposed on cross-border dividend payments for qualifying participations until the end of the preceding year according to the double taxation treaty concluded with Germany.

The amendments of national rules to the Parent-Subsidiary Directive reduce the average EATR from 24.37% to 21.68% by 2.69 percentage points. The EATR is between 3.09 and 3.62 percentage points lower for countries having imposed a 5% withholding tax on dividends. In particular Slovenia became more attractive for German multinational investors. Cross-border investments to Slovenia have been exposed to the most significant additional tax burden which raised the EATR by 9.75 percentage points. The application of the Parent-Subsidiary Directive eliminates this extra tax burden and causes the most obvious benefit in ranking: Slovenia gains a comparative tax advantage in reference to Estonia and the Czech Republic.

3.3.2.3
Impact of Different Sources of Finance

So far, the calculation of the EATR at the level of the German parent company takes into account all three possible options of refinancing, e.g. profit retention, dividend distribution, and debt financing. From the results presented in Figure 10, it is clear that the EATR at the German parent company level depends on the sources of finance of the subsidiary. The different financing options included in the model have a major impact on the level of the effective tax burden. The German parent company may provide funds to the subsidiary through equity or debt capital. In addition, the subsidiary may use retained earnings to finance its projects and distribute the resulting profits in subsequent periods.

In the case of equity financing, foreign source dividends distributed to the German parent company are exempt at an amount of 95% from both corporate income tax (and solidarity levy) and trade tax. Except for the corporate income tax, the solidarity levy and the trade tax on the 5% of the foreign dividends, the tax burden in the case of equity financing at the level of the foreign subsidiary and the German parent is the same as the tax burden at the level of the foreign subsidiary if no withholding tax is levied on dividends. If a withholding tax is levied, this increases the tax burden on equity financing. Interest payments from foreign subsidiaries for debt financing are subject to corporate income tax, solidarity levy and trade tax at the level of the German parent. The combined tax rate is 39.35%. Thus, the tax rate for debt financing of a foreign subsidiary is the same as the tax rate a German parent company pays on its own domestic profits.

Because the exemption method applies for foreign dividends, a German parent company can generalise this result for tax planning considerations in the field of intra-group financing. By choosing equity

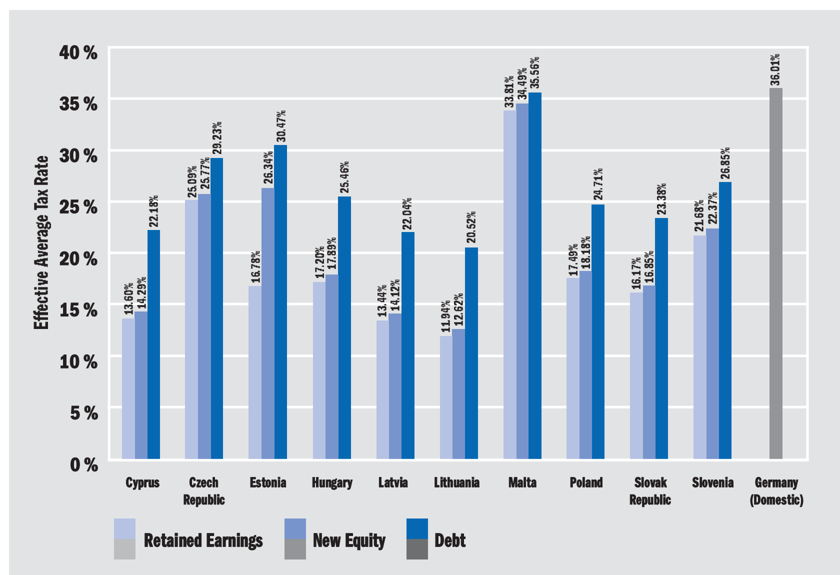


Figure 10: Effective Average Tax Rates on German Outbound Investments to the New Member States and Sources of Finance (Parent Company Level)

or debt financing, a German parent company can decide whether profits from international investments should be liable to domestic tax (debt financing, capital export neutrality) or foreign tax (equity financing, capital import neutrality).

- If the taxes paid abroad (i.e. taxes borne at the subsidiary level and a withholding tax on dividends) plus the German profit taxes (i.e. corporate income tax, solidarity levy and trade tax) on 5% of the foreign dividends are lower than the German profit taxes, equity financing of a foreign subsidiary is more tax-efficient than debt financing.

- If the taxes paid abroad (i.e. taxes borne at the subsidiary level and a withholding tax on dividends) plus the German profit taxes (i.e. corporate income tax, solidarity levy and trade tax) on 5% of the foreign dividends are higher than the German profit taxes, debt financing of a foreign subsidiary is more tax-efficient than equity financing. Local taxes in each of the new member states are lower than German taxes. Therefore equity financing of a subsidiary always results in a lower EATR compared to debt financing. Figure 10 outlines the advantage of providing funds through equity. The most tax-efficient financing strategy would be profit retention at the subsidiary level. The additional taxes on dividends are deferred into future periods until profits are distributed. These additional taxes stem, on the one hand, from withholding taxes, if any, at the level of the subsidiary and, on the other hand, from the taxation of 5% of the dividends at the level of the German parent company. Figure 10 provides evidence of the value of tax deferral in the case of retained earnings. The EATR is slightly lower for retained earnings compared to new equity as a source of finance. This is because the model assumes that earnings are distributed immediately if a subsidiary is financed through new equity. By using profit retention in each case, the average EATR for investments in the new member states can be reduced to 18.72% (compared to 21.68% if all three sources of finance were weighted equally).

A key result of the tax planning considerations for German multinationals is the significant preference for equity compared to debt financing concerning outbound investments to the new member states. However, German multinationals might consider various factors in the process of a location decision. First, there is the risk associated with the investment. Profits might be repatriated more easily by means of interest payments than dividends, or debt capital might be considered more flexible in terms of withdrawing from abroad. If a German parent company decides to finance its subsidiary through debt, generated earnings are taxable in Germany and, therefore, face the high German tax rate on profits.

In the case of debt financing, complex tax planning techniques can reduce the tax burden significantly[9]. One strategy is to locate an international finance company in a low-tax jurisdiction (e.g. in Belgium or the Netherlands). The German parent company shifts equity to the international finance company. Corresponding dividends, i.e. when profits are repatriated from the finance company to the German parent, are tax-exempt in Germany except for 5%. The international finance company provides the operating subsidiary located in the new member state with debt capital. Interest payments are subject to the tax level of the international finance company (Figure 11). With this strategy, earnings generated in the new member states may be repatriated to the German parent company and suffer only the tax burden of the international finance company, in addition to the 5% of the amount of dividends received by the parent, which are taxable in Germany. The operating unit is financed through debt and the effective tax burden will be significantly reduced.

Before implementing the outlined strategy, certain constraints must be considered. The advantage of the low-tax jurisdiction is eliminated when controlled foreign corporation (CFC) rules are triggered. However, German CFC rules do not apply if the foreign company is subject to tax at a rate not lower than 25%. Therefore, the international finance company must be located in a tax regime in which profits are subject to a tax rate of at least 25%. Within Europe, the Netherlands' group financing regime allows financing companies to form a tax-free risk reserve of up to 80% of "qualifying income". This means that tax deductible contributions to the risk reserve of approximately 27.5% of the profits reduce the tax rate to 25% (given a standard tax rate of 34.5%). The German CFC rules are not triggered and the return of the investment is not subject to the high German effective tax rate despite financing the operating subsidiary through debt.

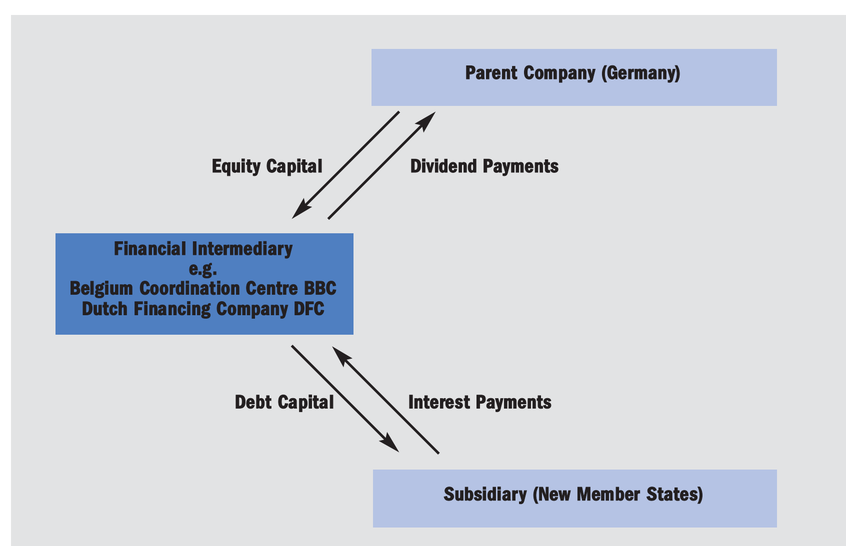


Figure 11: Implementation of a Financing Company

[9] See Jacobs (2002), pp. 1039-1048, for details.

4 Tax Incentives in the New Member States

4.1 Overview of Tax Incentives

Granting tax incentives is still a common policy in the new member states for attracting foreign direct investments. Many of these tax incentives are very generous and even include tax holidays. Tax incentives can be classified in a systematic manner depending on their impact on the tax burden: tax incentives can reduce taxable income (i.e. the tax base), reduce the tax rates or even the tax liability (i.e. a tax credit). Typical reductions in taxable income are accelerated depreciation and tax-free reserves. Accelerated depreciation merely results in a tax deferral. A tax-free investment reserve reduces the taxable base in addition to regular depreciation, which results in a higher tax relief overall. In some countries, reduced tax rates are available for investments in special economic zones (SEZ), or they are offered generally to foreign investors. Some countries grant tax holidays if certain conditions are fulfilled. A tax holiday means that a company is exempt from taxation for several years. In effect, the tax rate is set at zero for the period for which the tax holiday is granted. Therefore, a tax holiday can be classified as a tax rate reducing incentive over a certain number of years. Some of the new member states allow crediting part of the amount invested against the company's tax liability (tax credit) if certain conditions are fulfilled.

Overall, our survey revealed 23 major tax incentives. First, we provide a description of the tax incentives available in the new member states. Second, the impact of selected tax incentives on the effective tax burden is calculated. Table 4 summarises the tax incentives.

Prague and the River Vltava, Czech Republic

The information in italic and with a mark is used for the calculations in Sec. 4.2

Summary of Tax Incentives in the New Member States

Country	Reduction in Taxable Income		Reduction in the Tax Rate		Reduction in the Tax Liability
	Tax Deferral	Tax relief	Reduced Tax Rate	Tax Holiday	Tax Credit
Cyprus			*4.25% for international business companies.* ✓		
Czech Republic				*10 years for establishing a new entity.* ✓ 5 years for expansion.	
Estonia					
Hungary	Investment reserve of 25%. Certain assets are depreciated over 2 years.	200% of the R&D costs are tax deductible.			*Tax credit equal to 35% – 50% of the investment value. The tax credit cannot exceed 80% of the tax liability in any of the tax years. Credit carry-forward: 10 years.* ✓
Latvia					*80% tax rebate for corporate tax and withholding tax on dividends in special economic zones until the year 2017.* ✓ Tax rebate of 40% equal to the amount invested for an investment volume of € 17 million within 3 years. Credit carry-forward: 10 years.
Lithuania	Accelerated depreciation for specified assets.			Free Enterprise Zones: exemption from real estate tax and withholding tax on dividends. Free Enterprise Zones: 80% of the profits are tax-free for the first 5 years, 50% of the profits are tax-free in the following 5 years. *Free Enterprise Zones and investment of at least € 1 million: profits are exempt from taxation for the first 6 years and the tax rate will be reduced to 50% of the normal rate for the following 10 years.* ✓	
Malta		50% / 20% of the investment for specified assets. 150% of certain R&D costs are tax deductible.	*5% for qualifying companies.* ✓ 15.75% applied to reinvested profits.		The higher of 50% of the amount invested or 50% of the wage costs in the first two years resulting from the creation of new jobs. Credit carry-forward: 7 years.
Poland	*Accelerated depreciation of 30% in the first year.* ✓			Special Economic Zones: corporate income tax and real estate tax exemptions. Total public aid is limited to 50% of qualifying expenditures in most of the zones.	
Slovak Republic				*10 years tax holiday for the development of a new or the expansion of an existing establishment.* ✓	
Slovenia		*Investment reserve of 10% which must be used within 2 years for the acquisition of fixed assets.* ✓ Tax relief of 25% of the amount invested in fixed assets.			

Table 4: Summary of Tax Incentives in the New Member States

Cyprus
International Business Companies, which had income in 2001 have the option of being taxed at a reduced rate of 4.25% instead of 15% for the years 2003, 2004 and 2005 (certain restrictions will apply).

Czech Republic
The Investment Incentive Law grants several incentives. To qualify for tax incentives, several conditions must be met. The main prerequisites are:

- The total amount of investment must exceed CZK 200 million (€ 6.3 million[10]). The threshold is reduced to CZK 150 million (€ 4.7 million) if a new investment is made in an area with an unemployment rate of at least 25% higher than the Czech average, and is further reduced to CZK 100 million (€ 3.1 million) if the unemployment rate is at least 50% higher than the Czech average.
- At least half of the investment must be financed by equity capital of the investor.
- Only preferred industries are entitled to the tax incentives: information technology, telecommunication, pharmaceutical, space and aviation, means of transport and transport equipment. Tax incentives are also available to other manufacturing industries if at least half of the production line comprises machinery specified by the government decree.
- At least 40% of the total amount must be invested in certain types of machinery.

There are two income tax relief provisions:

- The investor is granted a ten-year corporate income tax holiday for a newly established entity. The income tax relief is restricted to the amount of tax that would have been paid in each year, decreased by the tax corresponding to interest income from securities and deposits.
- For the expansion of an existing plant, a five-year tax holiday is granted equal to the income tax related to the expanded production income.

However, there are further specific qualifying conditions for these types of income tax relief:

- The investor must be the first owner of the assets acquired except for immovable assets.
- The established entity may not be dissolved, merged with another entity or subject to bankruptcy proceedings during the period of the tax holiday.
- The taxpayer may not increase taxable income through transactions with related parties, which are not in accordance with the arm's length principle.
- The investor must apply all provisions in the Income Tax Act for reducing its taxable income, e.g. depreciation/ amortisation and bad debt provisions.

There are further tax incentives in areas with an unemployment rate not lower than the national average. In these areas, a financial aid is provided to investors creating new jobs, and training costs are subsidised at 25% to 35% of the costs incurred.

Estonia
There are no explicit tax incentives. However, since retained earnings are tax exempt, the investor can take advantage of a tax deferral. In the theoretical model, it is, therefore, assumed that earnings are retained until the end of 2008 in order to estimate the impact of the tax deferral. The period of the tax exemption is restricted to five years because the preferential treatment of retained earnings has to be abolished as of the beginning of the year 2009.

Hungary

- A tax-free development reserve of up to a maximum of 25% of profits is granted. This reserve must be used for investing in tangible assets. The basis for depreciation will be reduced by the amount of the reserve used. Hence, this provision is a kind of accelerated depreciation.
- Capitalised research and development (R&D) costs can be deducted twice: in addition to the regular amortisation, taxable income can be reduced by the amount of capitalized R&D costs resulting in a 200% deduction.
- Movable property (except for vehicles), intangibles acquired in 2003 and 2004, and capitalized research and development costs can be depreciated/ amortised over two years on a straight-line basis.
- Development Tax Allowance: A tax credit of 35% to 50% of the investment value is granted depending on the region of the investment (e.g. 35% in Budapest and 50% in most of the

[10] Average exchange rate in 2003: CZK 31.8 to € 1.

rest of the country). The tax credit can be carried forward ten years. However, the tax credit cannot exceed 80% of the tax liability in any of the tax years. The tax allowance may be claimed if the investment value reaches HUF 10 billion (€ 39 million[11]), or HUF 3 billion (€ 12 million) in certain favoured regions. The development tax allowance is to be granted by the Hungarian Government upon application.

Latvia

- Special Economic Zones (SEZ): companies established in special economic zones in accordance with the management of Liepaja or Rezekne or the Riga and Ventspils free ports benefit from an 80% rebate of corporate income tax on income derived from the relevant zone, and an 80% rebate of withholding tax on dividends, and on management and service fees paid to non-residents. Tax incentives in the SEZ and free-port areas will expire in 2017.
- A tax rebate is granted equal to 40% of the amount invested for a volume of € 17 million within 3 years if the government accepts the investment plan. The tax rebate is granted in the year the investment project is completed and may be carried forward for 10 years.

Lithuania

- The double-digit method (accelerated depreciation) may be applied to new buildings, software, acquired rights, machinery and equipment, computer equipment, hotel furniture and fixtures, and to new vehicles used for transport services and driving lessons.

Furthermore, there are free enterprise zones, which will be retained after EU accession. Entities established in free enterprise zones and performing qualifying activities are entitled to the following tax incentives:

- Exemption from real estate tax and exemption from withholding tax on dividends paid to foreign investors.
- 80% of the profits are tax-free for the first 5 years, 50% of the profits are tax-free in the following 5 years.
- If foreign capital of at least € 1 million is invested in a free enterprise zone, profits are exempt from taxation for the first 6 years if the threshold has been reached. Further, the tax rate will be reduced to 50% of the normal rate for the following 10 years.

Malta

- A deduction of 50% of the investment in the first year is granted in addition to the normal depreciation in the case of the acquisition of plant and machinery, and 20% additional allowances in the case of an industrial building.
- 150% of expenditure for certain R&D costs is tax deductible.
- Qualifying companies may benefit from a reduced income tax rate of 5% up to the year of assessment 2009 (basis year ending on 31 December 2008).
- Income tax on profits reinvested in projects, which are approved by the Malta Development Corporation, is reduced from 35% to 15.75%.
- The Business Promotion Act allows companies to benefit from reduced rates according to the increase in the added value of their activities.
- A tax credit is granted equal to 50% of the amount invested or 50% of the wage costs in the first two years resulting from the creation of new jobs. The higher of both thresholds is applied. For small and medium companies, the thresholds are set at 65%. Any unused tax credit may by carried forward seven years and increased by 7% each year.

Poland

- In the first year, a 30% additional allowance is granted on certain new fixed assets. In the subsequent years, the standard depreciation rate should be applied.
- Several SEZs offer corporate income tax and real estate tax exemptions. The public aid in total is limited to 50% of qualifying expenditures in the majority of the zones. Investors are required to invest a minimum amount, which varies by zone.

[11] Average exchange rate in 2003: HUF 253.6 to € 1.

Slovak Republic

- Profits are exempt from taxation for 10 consecutive years if the following conditions are met:
  - A new establishment must be developed or an existing development expanded or modernised for the following purposes:
    - » to start a new production or establish new services;
    - » to expand or modernise an existing production or services;
    - » to change the range of products;
    - » to change the production process substantially;
    - » to acquire a company with financial difficulties.
  - The investor must purchase tangible or intangible fixed assets worth at least SKK 400 million (€ 9.6 million[12]), of which at least SKK 200 million (€4.8 million) must be covered by the company's equity. These thresholds may be reduced by 50% in areas with an unemployment rate of 10% or more.
  - The fixed assets mentioned above must be acquired within three years. This period starts from the date the tax incentive was granted.
  - At least 80% of total revenue must be generated from activities listed in the application form.

Investors have to apply for approval. The tax incentive was incorporated into the current new tax law under transitory provisions and will only be granted until the end of the year 2006.

Slovenia

- Investment Reserve: a company may deduct up to 10% of taxable income transferred to an investment reserve. The investment reserve must be used within 2 years for the acquisition of fixed assets.
- Tax relief is granted equal to 25% of the amount invested in fixed assets. A corporation is only entitled for this provision if profits are not distributed within a period of three years.

Marsamxett Harbour, Valetta, Malta

[12] Average exchange rate in 2003: SKK 41.5 to €1

4.2 Impact on the Tax Burdens at the Levels of the Subsidiary and the German Parent Company

The tax incentives have a significant impact on the level of the effective tax burden and on the ranking of the new member states. For each country, the following calculations are based on the tax incentives marked in Table 4. These measures have been classified as a typical incentive in the respective new member states. Figure 12 displays the impact of the selected tax incentives on the EATR at the subsidiary level. To quantify the impact of tax incentives, our model outlined in Chapter 3 is based on a going-concern assumption. This means that only the net present value of a tax incentive is taken into account. For example, a tax holiday for a certain number of years does not reduce the effective tax rate to zero indefinitely because profits are subject to taxation after the tax relief has expired.

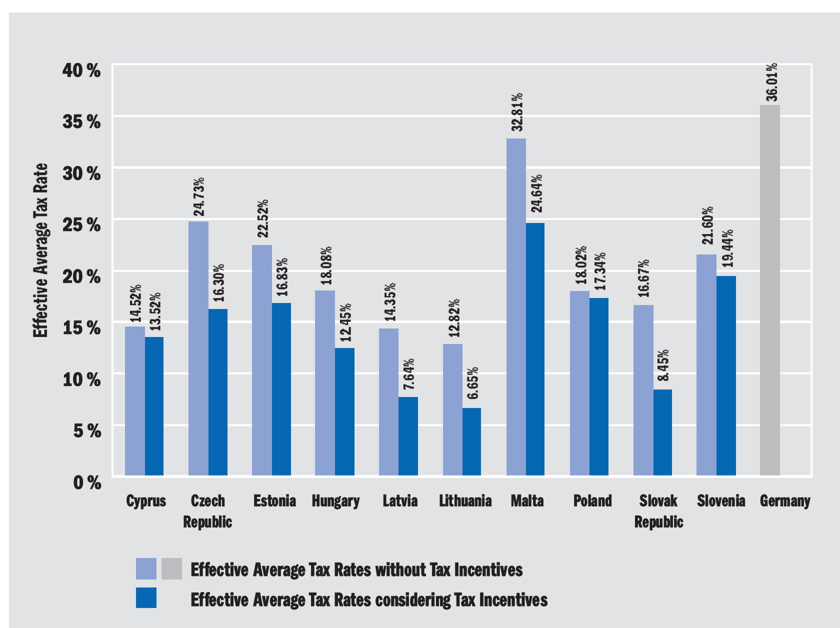


Figure 12: Impact of Tax Incentives on Effective Average Tax Rates in the New Member States (Subsidiary Level)

The strongest relief in the tax burden are tax incentives that exempt profits from taxation for a certain period of time (i.e. tax holidays granted by the Czech Republic, Lithuania, and the Slovak Republic). Latvia grants a tax rebate over an extended period (until 2017) which is comparable to an 80% tax exemption. The tax credit in Hungary also accounts for a substantial relief of the effective corporate tax burden. Furthermore, as far as Malta is concerned, a large reduction in the tax rate for certain activities (5% instead of 35% for qualifying companies) results in a significant tax relief since the general tax rate is relatively high (35%). The tremendous reduction in the EATR in Estonia is due to the assumption that earnings are retained at the corporate level over a period of five years. In Cyprus, Poland, and Slovenia, tax incentives are of minor importance. This is because either the general tax rate on profits is already low (e.g. Cyprus) or the incentives result only in a tax deferral of minor importance (e.g. Poland and Slovenia).

From the perspective of a multinational investor, i.e. the German parent company, the tax incentives have a considerable impact on the ranking of the new member states from the highest to the lowest EATR. Because profits from foreign investments (i.e. dividends) are 95% exempt

from taxation in Germany, a German parent company also benefits from the incentives if the profits are transferred to Germany. In summary, the EATR on outbound investments to the new member states is significantly lower than the EATR on German domestic investments when tax incentives are taken into account. The situation would be different for multinationals located in countries where the tax credit method is applied to avoid international double taxation on dividends (e.g. the United Kingdom or the United States). Figure 13 displays the impact of the selected tax incentives on the EATR at the level of the German parent company.

The ten years tax holiday granted by the Czech Republic has the largest influence on both, the relief in effective tax burden and the improvement in the ranking which accounts for a higher relative attractiveness (seeTable 5). The Czech Republic advances from the 9th to the 6th rank by three positions. Hungary increases by two places enhancing from the 6th to the 4th rank. Estonia and the Slovak Republic improve by one place, proceeding from the 8th to the 7th and from the 4th to the 3rd attractive location. In contrast, Cyprus and Slovenia fall back by two places from the 3rd to the 5th and from the 7th to the 9th rank. Poland even loses three positions going down from the 5th to the 8th rank. The decline in ranking reflects the relatively small impact of the tax incentives in the latter three countries.

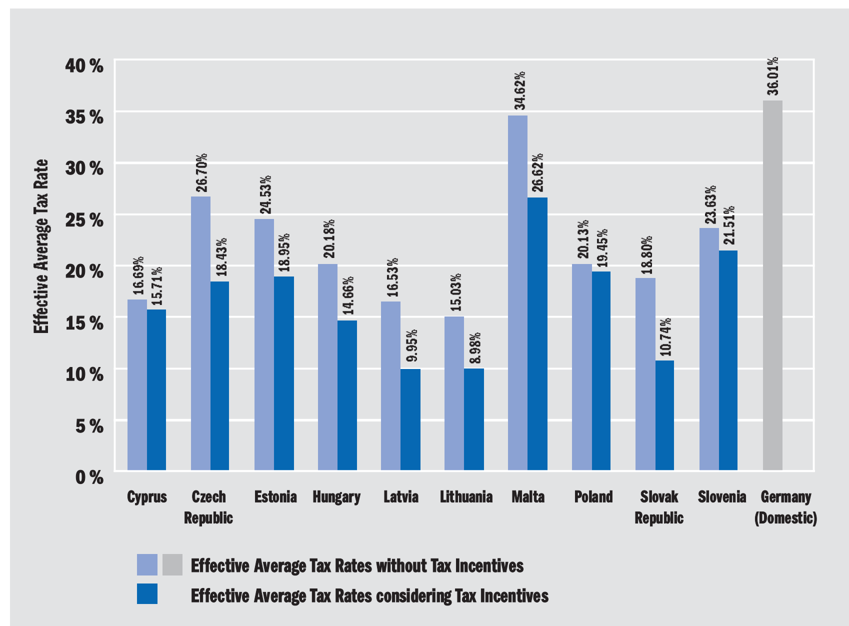


Figure 13: Impact of Tax Incentives on German Outbound Investments to the New Member States (Parent Company Level)

Country	Without Tax Incentives		Including Tax Incentives	
	EATR	Ranking	EATR	Ranking
Cyprus	16.69	3	15.71	5
Czech Republic	26.70	9	18.43	6
Estonia	24.53	8	18.95	7
Hungary	20.18	6	14.66	4
Latvia	16.53	2	9.95	2
Lithuania	15.03	1	8.98	1
Malta	34.62	10	26.62	10
Poland	20.13	5	19.45	8
Slovak Republic	18.80	4	10.74	3
Slovenia	23.63	7	21.51	9

Table 5: Impact of Tax Incentives on German Outbound Investments to the New Member States (Parent Company Level)

Multinational investors must bear in mind that the tax incentives presented above are not available for every activity. Rather, they are restricted to particular activities, sectors or regions. Therefore, the impact of the tax incentives on the EATR cannot be generalised.

For tax planning considerations and location decisions it is important to keep in mind that most of the tax incentives are in conflict with European Law. In particular, they are likely to contravene the state aid provisions of the EC Treaty since they distort competition in the Common Market. For the time being, the future of the tax incentives in the new member states is difficult to predict. The European Commission is reviewing many of these incentives. An official statement on these review activities can not be expected prior to the end of 2004/early 2005. Since the new member states are aware that their tax incentives contravene European Law, most of the countries incorporated provisions, which ensure that the incentives will only be granted for a certain period of time and abolished in the near future (e.g. the tax holiday in the Slovak Republic will only be granted until the end of 2006). To compensate for the reductions in incentives, either tax rates have been reduced recently or tax reforms have been announced.

Boats in Harbour at Kyrenia, Cyprus

5 Prospective Tax Changes in the New Member States

5.1 Tax Changes in the New Member States

The quantitative analysis of the preceding section revealed the attractiveness of tax incentives for location decisions. However, we emphasise that most tax incentives might be in conflict with European Law. Some countries already abolished tax incentives, others will let them expire. In order to compensate for the increase in the effective tax burden, there is a trend to reduce corporate income tax rates in the new member states. The reduction in the tax rates decreases effective tax burdens without any prerequisites. As a result, new member states that reduce their tax rates become more attractive for foreign investors who will face a lower tax burden regardless of the type of investment, sector or region where an investment is effectively carried out.

Recently, there started a first wave of tax rate cuts. Compared to the situation prevailing in 2003 half of the new member states **lowered** their **statutory corporate income tax rates with effect of 1 January 2004**:

- **Poland** reduced the corporate income tax rate from 27% to 19%,
- the **Slovak Republic** from 25% to 19%,
- **Latvia** from 19% to 15%,
- the **Czech Republic** from 31% to 28%,
- and **Hungary** from 18% to 16%.

A second wave of tax changes includes the **following amendments which have already been announced for the future years**:

Cyprus

The additional 5% tax on the amount in excess of € 1.7 million will be eliminated as of 2005, and the basic rate of 10% will be applied on the whole tax base.

Czech Republic

A gradually reduction of the corporate income tax rate from 28% (2004), to 26% (2005), and to 24% (2006) is intended.

Estonia

An incremental reduction of the corporate income tax rate has been announced: The tax rate on distributed profits will be reduced from 26% (2004), to 24% (2005), to 22% (2006), and finally to 20% (2007). Further amendments will be necessary. According to a judgement of the European Court of Justice in the Greek Athinaiki Case[13], the tax rate of 26% on distributed profits might be considered as a withholding tax, which is not in line with the Parent-Subsidiary Directive. During the accession negotiations the European Commission and Estonia arrived at an agreement[14] that a transitional Period is granted until 31 December 2008 to comply with the directive[15]. It is foreseeable that Estonia will continue to exempt retained earnings from taxation until the end of 2008. The government has not decided yet about concrete measures to align the Estonian tax system to the *acquis*[16].

Hungary, Budapest, Parliament Building

[13] ECJ, Athinaiki Zithopiia AE v. Elliniko Domisio, 4 October 2001, Case C-294/99 [2002] ECR I-3683.

[14] See European Commission (2003), Chapter 10, p. 7.

[15] See Uustalu (2003), p. 165.

[16] See Estonia, State Chancellery, European Union Secretariat (2003), Chapter 10, p. 8.

5.2 Impact on the Tax Burdens at the Levels of the Subsidiary and the German Parent Company

Figure 14 illustrates the impact of the announced future tax reforms by the new member states on the EATR at subsidiary level. The most significant influence of the prospective tax changes on the EATR as well as on the ranking relates to Estonia. The incremental reduction of corporate income tax rate on distributed profits from 26% to 20% by 6 percentage points reduces the effective average tax burden from 22.52% to 17.32% by 5.2 percentage points. The corresponding advance in ranking by three places reflects the improvement in relative attractiveness compared to the remaining countries. The withdrawal of the five percent additional tax rate in Cyprus will reduce the tax burden by 4.77 percentage points. Cyprus will offer an effective level of company taxation of 9.75% in 2005 and become the

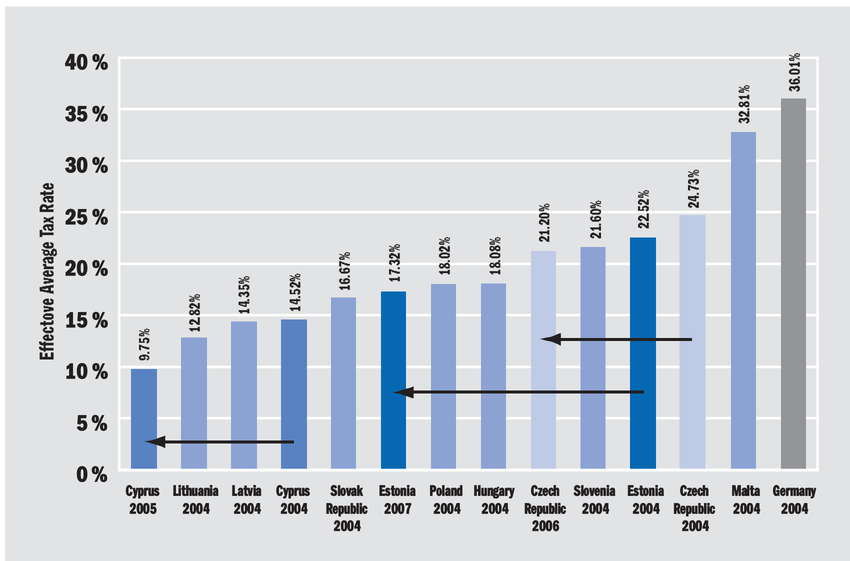


Figure 14: Impact of Prospective Tax Changes on Effective Average Tax Rates in the New Member States (Subsidiary Level)

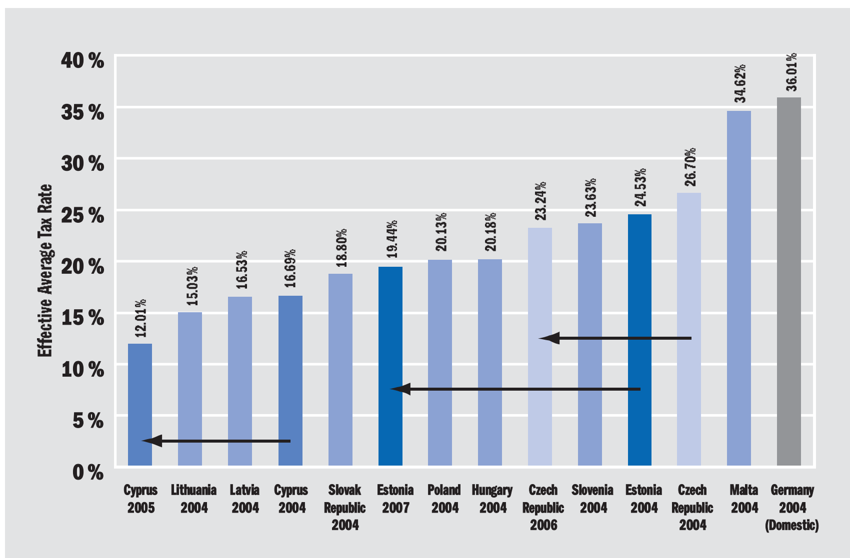


Figure 15: Impact of Prospective Tax Changes on Effective Average Tax Rates on German Outbound Investments to New Member States (Parent Company Level)

most tax attractive new member state, supposing there will be no further amendments beyond the changes specified in this study. The Czech Republic will decrease the effective tax burden by 3.53 percentage points to 21.20%. The gap to Hungary and Poland will become closer and the comparative tax advantage to German-based companies will spread.

The tax rate reductions will also decrease the tax burden on cross-border investments (see Figure 15). At the level of a German parent company the EATR will be reduced (i) to 12.01% if the subsidiary is located in Cyprus, (ii) to 19.44% if the subsidiary is located in Estonia (2007), and (iii) to 23.24% if the subsidiary is located in the Czech Republic (2006). For tax purposes, these countries will become even more attractive as a location for subsidiaries of German-based multinational companies.

Outdoor Market, Slovenia

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Appendix A: Tax Data Used in the Calculations as of 1 January 2004

Country	Nominal corporate income tax rate	Surcharge on corporate income tax rate	Local profit tax rate	Effective statutory tax rate on corporate profits
Cyprus	15.00	–	–	15.00
Czech Republic	28.00	–	–	28.00
Estonia [a]	26.00	–	–	26.00
Germany	25.00	5.50	17.63 [b]	39.35
Hungary	16.00	–	2.00 [c]	17.60
Latvia	15.00	–	–	15.00
Lithuania	15.00	–	–	15.00
Malta	35.00	–	–	35.00
Poland	19.00	–	–	19.00
Slovak Republic	19.00	–	–	19.00
Slovenia	25.00	–	–	25.00

[a] Only distributed profits are subject to taxation in Estonia.

[b] Local profit tax is deductible from the base of the corporate income tax; for Germany, we assume an average coefficient of the trade tax of 428%.

[c] In Hungary, 125% of the local profit tax is deductible from the base of the corporate income tax . However, it is to note that the tax base of the local profit tax differs significantly from the tax base of the corporate income tax.

Table A.1: Statutory Tax Rates on Corporate Profits (%)

	Real estate tax[a]	
Country	**Nominal**	**Effective**
Cyprus	0.4	0.17
Czech Republic	[b]	0.04
Estonia	–	–
Germany	0.39	0.23
Hungary	3.00	1.26
Latvia	1.50	1.28
Lithuania	1.00	0.43
Malta	–	–
Poland	[b]	0.23
Slovak Republic	[b]	0.11
Slovenia	–	–

[a] In all countries, real estate tax is deductible from the base of the corporate income tax.

[b] Tax base is calculated according to the area in square meters.

Table A.2: Real Estate Tax for Corporations (%)

Countries	Valuation of Inventories
Cyprus	FIFO
Czech Republic	Weighted average cost
Estonia	–
Germany	LIFO
Hungary	LIFO
Latvia	Weighted average cost
Lithuania	LIFO
Malta	FIFO
Poland	LIFO
Slovak Republic	Weighted average cost
Slovenia	LIFO

Table A.3: Valuation of Inventories for Tax Purposes

	Kind of allowance	Allowance rate	Length of period
Cyprus	SL	4.00	ufd
Czech Republic	DB	–	30
Estonia	–	–	–
Germany	SL	3.00	ufd
Hungary	SL	4.00	ufd
Latvia	DB	10.00	ufd
Lithuania	DB	25.00	ufd
Malta	SL	12.00	1
		2.00	ufd
Poland	SL	2.50	ufd
Slovak Republic	DB	–	20
Slovenia	SL	5.00	ufd
DB	Declining balance		
SL	Straight-line		
ufd	until fully depreciated		

Table A.4: Capital Allowances for Industrial Buildings (%)

	Kind of allowance	Allowance rate	Length of period
Cyprus	SL	8.00	ufd
Czech Republic	SL	16.67	ufd
Estonia	–	–	–
Germany	SL	20.00	ufd
Hungary	SL	8.00	ufd
Latvia	SL	20.00	ufd
Lithuania	DB	66.67	ufd
Malta	SL	8.00	ufd
Poland	SL	20.00	ufd
Slovak Republic	SL	20.00	ufd
Slovenia	SL	20.00	ufd
DB	Declining balance		
SL	Straight-line		
ufd	until fully depreciated		

Table A.5 Capital Allowances for Intangibles (%)

	Kind of allowance	Allowance rate	Length of period
Cyprus	SL	10.00	ufd
Czech Republic	DB	–	6
Estonia	–	–	–
Germany		20.00	2
		12.80	5
Hungary	SL	14.50	ufd
Latvia	DB	40.00	ufd
Lithuania	DB	40.00	ufd
Malta	SL	20.00	ufd
Poland	DB	10.00	ufd
Slovak Republic	DB	–	6
Slovenia	SL	25.00	ufd
DB	Declining balance		
SL	Straight- line		
ufd	until fully depreciated		

Table A.6 Capital Allowances for Machinery (%)

Appendix B: Economic Parameters of the Model

Economic depreciation rate used in the calculations	
Machinery	11 years = 17.5%
Buildings	53 years = 3.1%
Intangibles	12.5 years = 15.35%
Weights of assets and sources of finance used in the calculations	
Assets	equally weighted (20%)
Sources of Finance	equally weighted (33.33%)
Inflation rate	2.0%
Pre-tax interest rate	7.1%
Pre-tax return	20.0%

Table B.1: Economic Parameters of the Model

Appendix C: Summary of Results

Country	Overall Average	Average for each Source of Finance			Average for each Asset				
		Retained Earnings	New Equity	Debt	Buildings	Intangibles	Machinery	Financial Assets	Inventories
Cyprus	14.52	16.26	16.26	11.04	13.67	14.88	14.59	14.73	14.73
Czech Republic	24.73	27.97	27.97	18.23	23.37	23.68	22.96	27.50	26.12
Estonia	22.52	19.50	28.55	19.50	22.52	22.52	22.52	22.52	22.52
Hungary	18.08	19.94	19.94	14.36	22.07	18.70	17.29	16.59	15.74
Latvia	14.35	16.10	16.10	10.87	18.70	12.29	12.05	14.73	14.00
Lithuania	12.82	14.56	14.56	9.34	13.08	10.98	12.05	14.73	13.26
Malta	32.81	36.87	36.87	24.69	31.23	34.71	29.36	34.37	34.37
Poland	18.02	20.23	20.23	13.61	18.18	15.57	20.92	18.66	16.80
Slovak Republic	16.67	18.88	18.88	12.26	15.53	15.57	15.87	18.66	17.73
Slovenia	21.60	24.50	24.50	15.80	20.65	20.48	20.21	24.55	22.10
Germany	**36.01**	**39.83**	**39.83**	**28.38**	**36.81**	**32.99**	**35.33**	**39.40**	**35.54**

Table C. 1: Effective Average Tax Rates in the New Member States (Subsidiary Level) for the Year 2004

Country	Overall Average	Subsidiary Source of Finance		
		Retained Earnings	New Equity	Debt
Cyprus	16.69	13.60	14.29	22.18
Czech Republic	26.70	25.09	25.77	29.23
Estonia	24.53	16.78	26.34	30.47
Hungary	20.18	17.20	17.89	25.46
Latvia	16.53	13.44	14.12	22.04
Lithuania	15.03	11.94	12.62	20.52
Malta	34.62	33.81	34.49	35.56
Poland	20.13	17.49	18.18	24.71
Slovak Republic	18.80	16.17	16.85	23.38
Slovenia	23.63	21.68	22.37	26.85

Table C. 2: Effective Average Tax Rates on German Outbound Investments to the New Member States (Parent Company Level) for the Year 2004

Country	Overall Average	Average for Each Source of Finance			Average for Each Asset				
		Retained Earnings	New Equity	Debt	Buildings	Intangibles	Machinery	Financial Assets	Inventories
Cyprus	13.52	15.14	15.14	10.29	12.87	13.82	13.55	13.68	13.68
Czech Republic	16.30	18.40	18.40	12.08	13.19	13.28	12.87	27.50	14.65
Estonia	16.83	14.57	21.34	14.57	16.83	16.83	16.83	16.83	16.83
Hungary	12.45	13.54	13.54	10.27	17.14	12.64	11.93	10.37	10.16
Latvia	7.64	8.56	8.56	5.80	10.17	6.49	6.36	7.78	7.39
Lithuania	6.65	7.52	7.52	4.91	7.83	5.47	6.00	7.34	6.61
Malta	24.64	27.69	27.69	18.54	23.46	26.07	22.05	25.82	25.82
Poland	17.34	19.54	19.54	12.93	16.40	15.57	19.26	18.66	16.80
Slovak Republic	8.45	9.56	9.56	6.23	8.11	7.84	7.99	9.40	8.93
Slovenia	19.44	22.05	22.05	14.22	18.59	18.43	18.19	22.10	19.89

Table C. 3: Effective Average Tax Rates in the New Member States (Subsidiary Level) Considering Tax Incentives for the Year 2004

Country	Overall Average	Subsidiary Source of Finance		
		Retained Earnings	New Equity	Debt
Cyprus	15.71	12.50	13.18	21.45
Czech Republic	18.43	15.70	16.39	23.21
Estonia	18.95	11.95	19.27	25.65
Hungary	14.66	10.92	11.61	21.45
Latvia	9.95	6.05	6.73	17.06
Lithuania	8.98	5.03	5.71	16.19
Malta	26.62	24.81	25.50	29.54
Poland	19.45	16.82	17.50	24.03
Slovak Republic	10.74	7.04	7.72	17.47
Slovenia	21.51	19.28	19.96	25.30

Table C. 4: Effective Average Tax Rates on German Outbound Investments to the New Member States (Parent Company Level) Considering Tax Incentives for the Year 2004

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