

# Macroeconomic and fiscal impact of the risk capital allowance

K. Burggraeve  
Ph. Jeanfils  
K. Van Cauter  
L. Van Meensel\*

## Executive summary

This study was produced in response to the federal government's request for an assessment of the macroeconomic and fiscal impact of the risk capital allowance. More particularly, it aimed to assess the degree to which the objectives of the law of 22 June 2005 introducing a tax allowance for risk capital have been achieved. This study could not have been finalised without the assistance of a tax authority of the FPS Finance, as it was essential to obtain a number of detailed, unpublished data on corporation tax for the 2007 tax year. These data were made available to the Bank on 9 July 2008.

It should be noted that the tax allowance for risk capital is relatively recent and that an economic assessment of its impact is not always easy in these circumstances, particularly as regards the measure's dynamic effects or its impact at the most disaggregated level. It was therefore necessary to make a number of assumptions. Although this exercise aimed at maximum accuracy, there are still some areas where the estimates are only approximate. It was therefore decided to assess a range within which the net fiscal impact of the measure for the 2007 tax year is likely to fall. It was also necessary to confine the sectoral approach to an estimation of the gross fiscal impact of the risk capital allowance, as the data are still too fragmentary to attempt any disaggregated quantification of its secondary effects on employment, investment or the public finances.

The introduction of the risk capital allowance led to a structural change in the financial behaviour of companies, as it was very much in their interests to adapt their financial structure to take full advantage of the tax concession. It could therefore be to their advantage to establish a subsidiary or to operate via finance companies.

One aim of the tax reform was to strengthen the solvency of companies established in Belgium. In that regard, a very marked increase in shareholders' equity and authorised capital was recorded in 2006 and 2007. This increase was due to capital contributions of both Belgian and foreign origin.

Nonetheless, the real impact on corporate solvency must be qualified, as the very strong rise in equity capital is due largely to investments by Belgian companies in the shares of other companies, in most cases for tax reasons. However, such transactions did not bring any improvement in the solvency of Belgian companies, if viewed on a consolidated basis.

On the other hand, the inflow of foreign capital, notably via the replacement of current borrowings with shares in company capital and the formation of finance companies, did in fact strengthen the solvency of companies established in Belgium. That is also true of capital increases financed by households. In 2006 and 2007 there was a

\* The data used in this study have been provided by the General Statistics Department, the Microeconomic Information Department and the Research Department of the Bank, as well as by the FPS Finance. The authors would like to express their gratitude to all persons having made a contribution.

sharp rise in both the expansion of shareholders' equity resulting from inflows of foreign capital and that financed by households. This shows that the solvency of companies in Belgium increased following the introduction of the risk capital allowance. The relatively slower growth of debt financing, primarily in SMEs, during the 2006-2007 economic boom seems to indicate that firms are making less use of this source of funding and more use of equity capital, so that the solvency of that type of firms has improved.

The risk capital allowance was also designed to make Belgium more attractive from the tax angle, and to offer an alternative to the coordination centres, which are destined to lose their special tax status shortly. The way in which the risk capital allowance is applied makes Belgium an attractive location for multinational groups to set up their financial centres there. The introduction of the risk capital allowance seems to have procured a trend reversal, limiting the outflow of capital from the coordination centres which have lost their approval. However, it should be pointed out that this is still a very provisional finding, since some of the largest coordination centres only lost their approval very recently and others still have an approval. On the basis of the tax returns for the 2006 and 2007 tax years, it seems that a number of the coordination centres whose approval had not yet expired nevertheless opted to apply the risk capital allowance. At the same time, there has been a marked rise in the number of other finance companies of Belgian or foreign origin, particularly the finance centres of international groups.

The introduction of the risk capital allowance has undeniably had a considerable impact in terms of financial flows. Conversely, the impact on the real economy, measured via a simulation based on the Bank's econometric model, seems to be fairly limited in the short term, but it may become a little more noticeable in the medium term. On the assumption that the tax reform will be neutral for the government budget, companies' gross investments in fixed assets can be expected to increase by around 400 million euro over a five-year period, while the positive effect on employment will be around 3,000 jobs. In the case of the coordination centres, there are signs that employment has contracted, but there has been a partial shift towards other companies within the group. Nonetheless, the fall in employment would in any case have been larger without the introduction of the risk capital allowance. Moreover, some jobs are being created, albeit on a limited scale, in the new finance centres being set up by multinational groups.

Finally, the study assessed the impact on the budget of the risk capital allowance and the other measures laid down by the law of 22 June 2005. In order to conduct this assessment, it is necessary to distinguish between the gross tax advantage represented by the risk capital allowance for Belgian companies and the net impact of that measure on public revenues.

The gross tax advantage for companies increased considerably owing to the marked rise in equity capital. The gross cost of the reform was already around 2.4 billion euro in 2006, on the basis of the tax returns. However, the net impact on the budget is much smaller. It is limited by the proceeds of the compensatory measures, the main one being the amendment of the definition of tax-exempt capital gains. Furthermore, the inflow of foreign capital does in principle not mean any reduction in corporation tax revenues for the Belgian government, but quite the contrary. Nor is that the case in regard to the application of the risk capital allowance by the companies which have taken over the activities of the coordination centres. On the basis of data which are still provisional and taking into account wide uncertainty margins, the net cost to public finances in 2006 of the measures introduced by the law of 22 June 2005 is estimated at between 140 and 430 million euro.

Macroeconomic analysis also shows that the measures introduced by the law of 22 June 2005 have so far had at most only a limited negative effect on corporation tax revenues. Both the movement in these tax revenues and the absence of any decline in the implicit rates indicate that there has so far been no significant negative effect on public revenues.

However, the conclusions of the analysis of the risk capital allowance's impact on public finances must be considered provisional, since the measure's dynamic effects are not yet fully apparent.

In that regard, it is reasonable to expect future years to bring a further increase in the gross tax advantage which Belgian companies enjoy. Some of the factors behind that increase are unlikely to depress public finances, and could even prove positive if they lead to an expansion of the corporation tax base in Belgium, particularly as a result of the process of allocating profits between the various companies in the same international group. The positive influence of the macroeconomic payback effects on public revenues could also increase slightly.

Conversely, various other factors could depress corporation tax revenues. These include the increase in the rate used to calculate the risk capital allowance, the use of

the previously unused part of the risk capital allowance, and the changes made to the structure of companies or groups of companies in the context of tax optimisation techniques. Some of these factors could have a considerable impact. It is therefore possible that the public revenues generated by corporation tax could suffer a substantial adverse effect in the future.

It is not yet possible to estimate accurately the effect that the risk capital allowance will have on public finances in the future. It will depend, in particular, on what happens regarding the various factors mentioned above, the economic context and the latter's influence on the operating surplus of companies, and the movement in interest rates. In this regard it should be noted that the cost to the budget may increase, particularly in a situation where the operating surplus of companies declines significantly and interest rates rise. Finally, the impact of the tax reform will depend on the degree to which companies resort to tax optimisation techniques and the application of the relevant rules.

## Introduction

This study examines the macroeconomic and fiscal impact of the risk capital allowance. It thus responds to the request made by the federal government to the National Bank of Belgium in March 2008.

This study could not have been finalised without the assistance of the FPS Finance, as it was essential to obtain a number of detailed, unpublished data on the corporation tax for the 2007 tax year. These data were made available to the Bank on 9 July 2008.

It should be noted that the risk capital measure is relatively recent and that an economic assessment of its impact is not always easy in these circumstances, particularly as regards the measure's dynamic effects or its impact at the most disaggregated level. It was therefore necessary to make a number of assumptions. Although this exercise aimed at maximum accuracy, there are still some areas where the estimates are only approximate. It was therefore decided to assess a range within which the net fiscal impact of the measure for the 2007 tax year is likely to fall. It was also necessary to confine the approach by

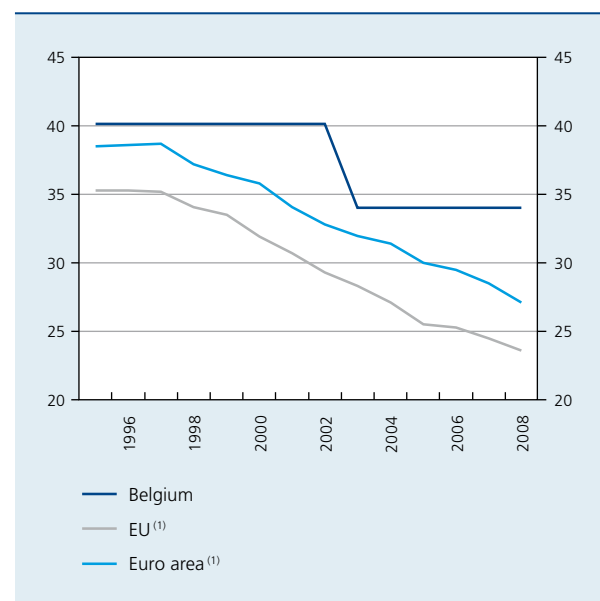
branch of activity to the estimation of the gross fiscal impact of the risk capital allowance, as the data are still too fragmentary to attempt any disaggregated quantification of its secondary effects on employment, investment or public finances.

Introduced by the law of 22 June 2005<sup>(1)</sup>, the risk capital allowance – more commonly known as the “notional interest deduction” – took effect from the 2007 tax year. It enables companies liable for corporation tax to deduct from their tax base a notional amount of interest calculated on the basis of their adjusted equity capital. This arrangement is unique in the sense that no other European Union Member State applies a general system of this type<sup>(2)</sup>.

By this innovative measure, the federal government of the day aimed to achieve various objectives, as revealed by the explanatory memorandum to the draft law.

First, the measure is intended to make Belgium more attractive from the tax angle for both Belgian and foreign investors. It should therefore be assessed in the light of the international trend towards lower nominal corporate tax rates. The same motive lay behind the marked reduction in nominal tax rates on corporate profits, which took effect in Belgium in 2003.

**CHART 1** STANDARD NOMINAL RATE OF CORPORATION TAX  
(percentages)



Source : EC.  
(1) Unweighted average.

(1) Law of 22 June 2005 introducing a tax allowance for risk capital (published in the Moniteur belge on 30 June 2005).

(2) In Croatia, a universal system of tax allowance for equity capital was applied between 1994 and 2001. Brazil and New Zealand have also used a similar arrangement in the past. The same applies to Austria and Italy, although the tax allowance there only applied to increases in capital. In Ireland, Luxembourg and Switzerland, certain categories of companies are eligible for a tax regime which includes the deduction of notional interest.

The measure also aims to boost the equity capital of companies – and hence to improve their solvency – by attenuating the discrimination under the tax rules between debt financing and equity financing. The whole of the interest payable on borrowings can normally be deducted as an operating expense, whereas the profits constituting the remuneration of the equity are taxed in full.

Finally, the measure endeavours to offer a credible alternative to the special tax regime applicable to coordination centres in Belgium, as that system has now entered its final phase and will soon be abolished.

As well as introducing the risk capital allowance, the law of 22 June 2005 abolished the 0.5 p.c. registration fee on contributions to companies. At the same time, compensatory measures were introduced to ensure that the reform was neutral overall in its effect on the government budget.

This study tries to assess the degree to which the objectives announced have been attained. Chapter 1 gives a brief presentation of the measures introduced by the law of 22 June 2005. Chapter 2 analyses the impact of these measures on the financial structure of corporations. Chapter 3 discusses the coordination centres. Chapter 4 examines the macroeconomic impact of the risk capital allowance, particularly its effect on investment and employment. Chapter 5 explains the budgetary implications on the basis of both macroeconomic and microeconomic data, and the transition between the gross tax advantage which Belgian companies obtain from the risk capital allowance – according to data broken down by branch of activity – and the net impact of the measure on the government budget. The main findings are summarised in the executive summary.

It should be stressed that this study of the macroeconomic and fiscal impact of the risk capital allowance is based partly on data which are still provisional. There are also many dynamic effects of which the future pattern is uncertain. At present it is therefore only possible to offer a provisional assessment of this corporation tax reform. A final overall view will only be obtainable in several years' time, once the coordination centre tax regime has been phased out and the full effect of the reform has made itself felt.

## 1. Content of the law of 22 June 2005

The risk capital allowance was introduced by the law of 22 June 2005, which also abolished the 0.5 p.c. registration fee on contributions to companies. The law simultaneously introduced a number of other measures designed to neutralise the impact on the budget. This section presents briefly the provisions of this law.

### 1.1 Risk capital allowance

The risk capital allowance enables companies liable for corporation tax to deduct from their tax base an amount of notional interest calculated on the basis of their "adjusted" shareholders' equity.

The rate of the risk capital allowance is equal to the average interest rate on ten-year linear bonds issued by the Belgian State for the penultimate year before the tax year. This means that it is the average interest rate for 2005 (3.442 p.c.) that applies to the 2007 tax year. Since interest rates have been rising, the rate is 3.781 p.c. for the 2008 tax year and 4.307 p.c. for the 2009 tax year. The rate of the risk capital allowance cannot deviate in any year by more than one percentage point from the rate applied in the preceding tax year, nor may it ever exceed 6.5 p.c. For SMEs, the allowance rate is increased by 0.5 percentage point. Moreover, SMEs can opt not to apply the risk capital allowance and to continue using the tax-exempt investment reserve regime<sup>(1)</sup>.

The risk capital allowance applies to all resident companies and to permanent establishments of foreign companies located in Belgium and subject to corporation tax in Belgium<sup>(2)</sup>. Only companies covered by a tax regime that is different from that under ordinary law, such as the approved coordination centres, conversion companies, investment companies, cooperative holding companies and shipping companies are excluded from this tax allowance regime.

The risk capital to be taken into account corresponds to the equity capital as recorded in the annual accounts of companies minus certain amounts. It is equal to items I to VI on the liabilities side of the balance sheet: capital, share premiums, revaluation gains, reserves, profit carried forward and capital subsidies. The adjustments made to

(1) It should be pointed out that the definition of an SME differs according to whether it is the 0.5 percentage point increase in the risk capital allowance that is being considered, or the option of choosing between the risk capital allowance and the tax-exempt reserve regime.

(2) The risk capital allowance also applies to foreign companies which have immovable property in Belgium, and to non-profit organisations and foundations which are subject to Belgian corporation tax.

the basis for calculating the risk capital allowance are intended to prevent cumulative tax allowances, to exclude assets which are tax-exempt in Belgium under double taxation agreements, and to prevent potential abuse.

In order to prevent cumulative tax allowances, the equity capital is reduced by the net fiscal value of the company's own shares, financial fixed assets consisting of participating interests and other equity, and the shares issued by investment companies whose income, if any, is deductible as finally taxed income. It is also reduced by the net accounting value attributed to permanent establishments or immovable property located abroad, the net accounting value of assets which are unreasonably in excess of business needs, the accounting value of asset items held as portfolio investments which are not destined to produce regular income (works of art, gold, etc.) and the accounting value of property used for private purposes. Finally, capital gains expressed but not realised and capital subsidies are also excluded. Any change in the equity occurring during the tax period is considered *pro rata temporis*<sup>(1)</sup>. If the tax base is not sufficient for the risk capital allowance to be applied, the allowance can be carried forward for seven years.

The risk capital allowance took effect from the 2007 tax year and therefore applies to corporate profits realised from 2006 onwards. Presumably, most companies will

therefore have taken this measure into account in their advance payments of corporation tax in 2006.

For companies established in Belgium, the risk capital allowance means a reduction in the effective corporate tax rate. Its exact impact depends on the return on equity of the company. Thus, for the 2007 tax year, in the case of a company subject to a nominal tax rate of 33.99 p.c., without other tax deductions and having a return on equity of 15 p.c. before tax (if the equity is not subject to any adjustment), this measure reduces the effective rate of tax to 26.2 p.c. For a company with a return on equity before tax of only 5 p.c., the effective tax rate is reduced to 10.6 p.c. The measure is therefore highly advantageous for finance companies which have substantial equity capital and which make a return on their loans which is only slightly higher than the rate on government bonds.

## 1.2 Abolition of the registration fee on contributions to companies

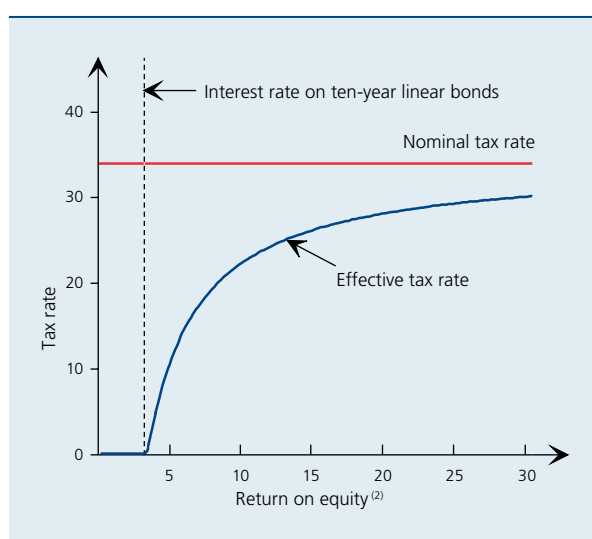
The law of 22 June 2005 also abolished *de facto* the registration fee on contributions to companies, as the rate of 0.5 p.c. was cut to zero whether the contribution concerns movable property, certain immovable property or increases in the authorised capital. This part of the law came into effect on 1 January 2006.

## 1.3 Fiscal compensatory measures

The law of 22 June 2005 also introduced a series of measures designed to neutralise the impact on the government budget of the introduction of the risk capital allowance and the abolition of registration fees on contributions to companies.

The main fiscal compensatory measure concerns the amendment to the definition of realised capital gains which are tax-exempt, either finally or temporarily. Henceforth, the charges relating to the realisation of capital gains have to be deducted from the amount of the capital gains before the tax exemption applies. This concerns in particular the costs of advertising, notary's fees, agents' fees, bank charges and the taxes on transactions associated with the realisation of capital gains. Since such costs are already tax deductible as business expenses, this is a way of avoiding a duplication of the tax relief.

**CHART 2** RETURN ON EQUITY AND EFFECTIVE TAX RATE<sup>(1)</sup>  
(percentages)



Source : NBB.

(1) The chart is based on the rate of the risk capital allowance initially applicable (2007 tax year), namely 3.442 p.c.

(2) The return on equity before tax.

(1) Any change is taken into account on the first day of the month following the change.

Moreover, the percentage of the investment allowance for small firms was reduced to zero<sup>(1)</sup>. This measure applies to both the one-off investment relief and the staggered allowance, though in the latter case there is provision for a transitional arrangement. The increased investment allowance, such as that for patents and R&D, nonetheless continues to apply.

At the same time, the tax credit system for SMEs was abolished. Previously, SMEs could claim a tax credit equivalent to 7.5 p.c. of the increase in the capital paid up in cash (including share premiums), subject to a maximum of 19,850 euro.

The budgetary cost of the risk capital allowance should also be limited by the anti-abuse provisions laid down by the law, and by the fact that some companies cannot use this new tax allowance. Thus, SMEs which continue to apply the investment reserve regime are excluded from claiming the risk capital allowance during the ensuing three years.

During the debate in the Chamber of Representatives concerning the law of 22 June 2005, the Minister of Finance gave an estimate of the expected impact on the government budget<sup>(2)</sup>. The decline in public revenues attributable to the risk capital allowance was thus estimated at 506 million euro, and that attributable to the abolition of the registration fee on contributions to companies was put at 60 million euro. The amount raised by the compensatory measures and the expected payback effects should come to exactly the same amount, namely 566 million euro. This tax reform was therefore assumed to be neutral in its effect on the government budget.

(1) However, investments in the production and recycling of reusable packaging may still qualify for the investment allowance.  
 (2) Belgian chamber of representatives, 31 May 2005, Draft law introducing the risk capital allowance – report on behalf of the Commission for Finance and the Budget, presented by Mr Bart Tommelein.

## 2. Influence on the financial structure of companies

This section examines how the introduction of the risk capital allowance has affected the financing decisions of companies established in Belgium. It is in fact very much in their interests to review their equity and balance sheet position in order to optimise the potential impact of the risk capital allowance on their effective tax burden. This section first outlines some of the financial options available to companies. Next, it analyses the movement in equity capital. Finally, it investigates whether the stated aim of strengthening corporate solvency will be achieved.

### 2.1 Possible influence of corporate financial options

For companies, the choice between debt financing and equity financing depends not only on parameters specific to the business – its internal organisation, management method, size, profitability, growth prospects, etc. – but also on tax considerations. The introduction of the risk capital allowance has therefore brought a structural change in the financial behaviour of companies, as it is in their interests to modify their financing structure in order to make maximum use of the tax advantage which this measure offers them. Consequently, companies may be tempted to expand the basis for calculating the risk capital allowance, namely their adjusted equity capital, by increasing the amount of their capital or reducing the elements deducted from it.

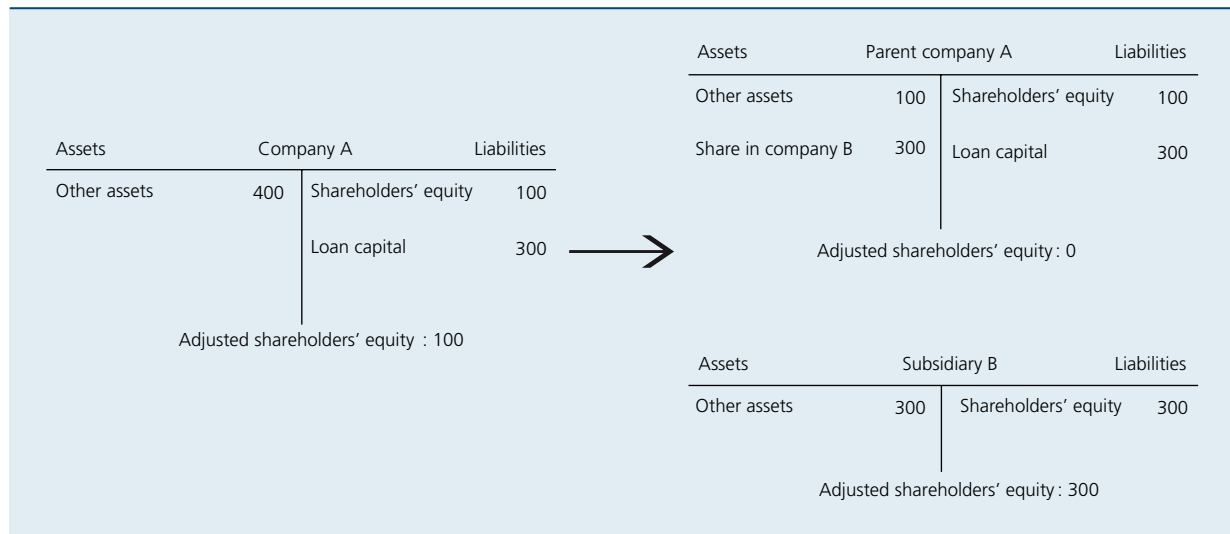
The various techniques for optimising the financing structure are not all the same in their impact on Belgian public finances, as illustrated by the examples below.

The risk capital allowance attenuates the discrimination against equity as opposed to borrowings and reduces the relative cost of equity capital. As a result, a company may choose to substitute equity for borrowings or to finance new investments with more of its own capital rather

**DIAGRAM 1** REPLACEMENT OF BORROWINGS WITH EQUITY

Assets	Company A		Liabilities		Assets	Company A		Liabilities
Other assets	400	Shareholders' equity	100	→	Other assets	400	Shareholders' equity	200
		Loan capital	300					Loan capital
Adjusted shareholders' equity: 100					Adjusted shareholders' equity: 200			

DIAGRAM 2 CREATION OF A SUBSIDIARY TO TAKE OVER THE MAIN ACTIVITIES



than with loans. An example of a substitution movement between borrowings and equity financing is shown in diagram 1. This is not normally accompanied by any loss of corporation tax revenues since the interest deductible against tax is replaced by a tax-deductible percentage of the new equity capital. Since companies generally pay a higher rate on their borrowings than the interest rate on linear bonds, this movement could even, in principle, generate higher corporation tax revenues.

Apart from the phenomenon of substitution between debt and equity financing, tax considerations may sometimes make it more advantageous for companies to operate via subsidiaries as in the example in diagram 2<sup>(1)</sup>. In that case, the parent company retains all its financial resources comprising equity and borrowings and uses those funds to capitalise its subsidiary. In view of its shareholding in the subsidiary, the parent company is not eligible for the risk capital allowance, but it may continue to deduct from its tax base the amount of the interest paid on the capital which it has borrowed. Conversely, the subsidiary can use the risk capital allowance for the whole of its equity capital.

It should be pointed out that in this specific example, the total amount on the basis of which the allowance can be used is higher than the amount of the parent company's equity capital. In such arrangements, the risk capital allowance is therefore partly converted to an additional deduction based on the group's loan capital. Such optimisation techniques only appear to strengthen the solvency

of the group of companies and could entail substantial additional costs for the government budget.

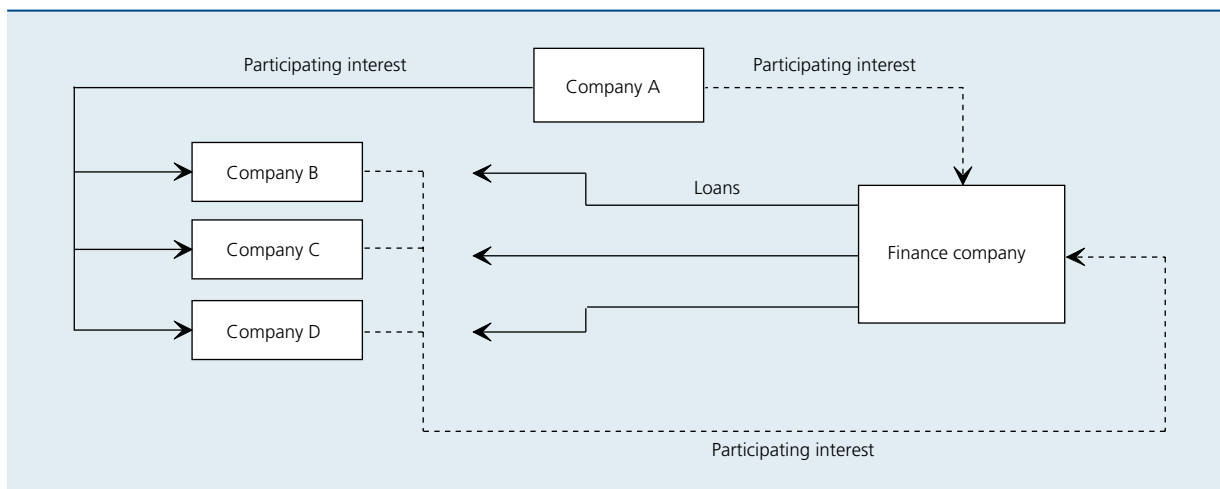
The formation of a finance company within a group of companies may also be attractive in tax terms. Such finance companies are capitalised mainly by the parent company or by several companies belonging to a group. These companies provide finance for affiliated companies based in Belgium or abroad, and thus take on the role of the group's "internal banker". Finance companies are therefore fairly similar to coordination centres in terms of their activity and financial structure. Thus, on expiry of their approval the coordination centres can adopt the form of a finance company. One characteristic of these companies is that they have very substantial equity and essentially obtain their income by charging interest on the loans which they grant to other group companies. Consequently, their return on equity is on average fairly low and they succeed in reducing their effective tax rate to a very low level by means of the risk capital allowance.

On the basis of techniques designed to optimise the balance sheet structure for tax purposes, a few examples of which have been described, a considerable increase in shareholders' equity following the introduction of the risk capital allowance could *a priori* be expected. Also investments in associated companies could be expected to show a marked rise, primarily as a result of the formation of finance companies.

In reducing the effective rate of corporation tax, the tax reform could also cause more operators to pursue their activities in the form of a company. Their number could therefore increase, along with the equity capital. Such

(1) Such restructuring cannot take place purely for tax reasons; economic considerations must also apply.

**DIAGRAM 3** CREATION OF A FINANCE COMPANY



a development could cause a shift away from taxes on earned incomes and towards corporation tax, resulting in lower revenues for the government.

## 2.2 Changes in the authorised capital

Since the risk capital allowance was introduced, there has been a noticeable rise in the authorised capital and hence in the shareholders' capital of companies established in Belgium<sup>(1)</sup>.

In 2006, the net additional capital, namely the difference between the increase in capital due to the formation of companies or equity increases and the decline in capital due to equity reductions, came to 102 billion euro. Capital increases were more than double the figure recorded during the economic boom at the turn of the millennium. Capital added via company formations also increased in 2006. Conversely, there was hardly a change in equity reductions.

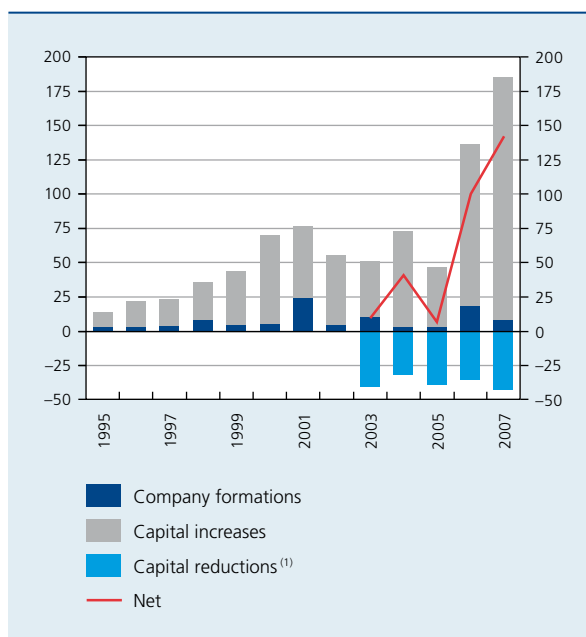
In 2007, the net additional capital increased again to 141 billion euro. A very sharp rise in the equity capital was again recorded in the first quarter of 2008, indicating that the dynamic effects generated by the introduction of the risk capital allowance are still perceptible.

The breakdown of net movements in the authorised capital shows that capital contributions of both domestic and foreign origin increased substantially to around

50 billion euro each in 2006. In contrast, foreign capital contributions exceeded those of domestic origin in 2007.

Capital contributions of Belgian origin were financed mainly by non-financial corporations and financial institutions. That indicates that those companies are investing more in other companies established in Belgium. However, on a consolidated level in Belgium this does not

**CHART 3** CHANGES IN THE AUTHORISED CAPITAL OF COMPANIES  
(billions of euros)



(1) Since any amendments to the articles of association of a Belgian company have to be published in the Moniteur belge annexes, almost all changes in the authorised capital of companies may be found there, except for the variable capital of cooperative societies.

Source : NBB.

(1) The statistics on capital reductions have only been compiled since 2003.



**TABLE 1** NET CHANGES IN THE AUTHORISED CAPITAL <sup>(1)</sup>  
(billions of euros)

	2004	2005	2006	2007
Net additional capital .....	40	13	102	141
<i>of which: influence of the coordination centres</i> .....	22	1	1	13
Domestic origin .....	3	2	48	56
<i>of which: influence of the coordination centres</i> .....	0	-2	4	3
Non-financial corporations .....	4	0	24	14
Financial institutions .....	0	1	19	34
Households .....	1	1	4	7
Other .....	-2	0	1	1
Foreign origin .....	36	10	51	75
<i>of which: influence of the coordination centres</i> .....	22	3	-3	10
Indeterminate origin .....	1	0	3	10

Source: NBB.

(1) The data on capital increases and reductions were adjusted for transactions which have no impact on the basis for calculating the risk capital allowance, such as the incorporation of reserves in the authorised capital.

lead to an increase in shareholders' capital. Conversely, the capital contribution resulting from capital invested by households resulted in an increase in the equity capital of Belgian companies at consolidated level <sup>(1)</sup>.

The considerable contribution of capital from other countries led to a rise in the authorised capital of Belgian companies while strengthening their financial autonomy, at least at Belgian level. These capital inflows partly reflect a move to substitute capital injections for current loans granted by foreign companies. In addition, the risk capital allowance has done much to encourage the formation of finance companies, allowing a large proportion of the authorised capital to flow back out to other countries in the form of loans.

The record capital contributions from abroad recorded in 2006, and particularly in 2007, seem to indicate that the risk capital allowance has succeeded in making Belgium attractive from the tax angle. It is unclear exactly how these inflows will affect the Belgian economy, but in principle they do not entail any budgetary costs for the government. Since they may lead to changes in the allocation of the profits of international groups and cause the tax base or other components of taxation to shift towards Belgium, it is even possible that they may have a positive effect on corporation tax revenues in Belgium. On the other hand, the capital flows and the associated shifts in the various components of taxation could depress government revenues in other countries.

### 2.3 Change in shareholders' equity

The change in the shareholders' equity is influenced not only by fluctuations in the authorised capital but also by movements concerning the reserves or the profit or loss carried forward. In 2006 there was very sustained growth – in the order of 105 billion euro – in the equity capital of Belgian companies other than the coordination centres <sup>(2)</sup>.

The increase in the equity capital concerned both SMEs and large corporations, credit institutions and insurance companies. However, the most sustained increase – namely 67 billion euro between 2005 and 2006 – was recorded in the equity capital of finance companies which file their annual accounts with the Central Balance Sheet Office: these are mainly financial holding companies, finance companies, investment companies and the financial centres of large business groups. This category comprises a number of new companies and the companies which perform the role of finance centres for multinational groups.

(1) The increase in capital originating from households may also be due in part to the fact that self-employed persons are now pursuing their activities in the form of a company.

(2) Changes in the situation concerning the shareholders' equity of companies can be monitored on the basis of the non-consolidated annual accounts filed with the Central Balance Sheet Office, the scheme A accounts of credit institutions and the balance sheet data forwarded to the CBFA by insurance companies. The figures may differ from those relating to changes in the authorised capital, notably on account of the change in the allocation of the profits and losses, but also because of time lags between the date of establishment and capital increases and the first occasion on which annual accounts are filed.

**TABLE 2** EQUITY POSITION OF BELGIAN COMPANIES<sup>(1)</sup>

(billions of euros)

	Equity position			Change	
	2004	2005	2006	2004-2005	2005-2006
Non-financial corporations .....	230	255	286	25	31
Large corporations .....	173	193	215	20	22
SMEs .....	58	63	72	5	9
Finance companies filing their annual accounts with the Central Balance Sheet Office .....	207	225	292	18	67
Credit institutions and insurance companies .....	44	43	49	-1	7
<b>Total</b> .....	<b>481</b>	<b>523</b>	<b>628</b>	<b>42</b>	<b>105</b>

Sources: CBFA, NBB.

(1) Excluding the equity capital of the coordination centres.

Not only did companies other than SMEs record sustained growth of their equity in 2006, their investments in associated companies also grew strongly, by 53 billion euro<sup>(1)</sup>.

The data on the increase in the authorised capital show that these investments were largely acquired in Belgian companies.

(1) The figures on investments in associated companies are not available for SMEs.

(2) Foreign direct investment was assessed mainly on the basis of the results of the annual direct investment survey conducted by the Bank since 1997. That survey considers the outstanding amount of the inward and outward foreign direct investment of a population of resident firms which, though not totally exhaustive, is comparable over time. The firms taken into account in the survey are selected on the basis of accounting criteria, and it is possible to take account of both direct and indirect shareholdings between companies in the same group. It is also possible to consider the foreign capital contributions of each company in relation to their use in terms of foreign direct investment and thus to measure the importance of the financial interchange role performed by certain multinational group companies.

## 2.4 Movement in foreign direct investment

The movement in foreign direct investment, for which the latest figures relate to the year 2006, seems to confirm the findings based on the changes in the authorised capital<sup>(2)</sup>.

**TABLE 3** MOVEMENT IN OUTSTANDING FOREIGN DIRECT INVESTMENT

(capital held solely via direct shareholdings; billions of euros)

	2001	2002	2003	2004	2005	2006
<b>Belgian foreign investment</b> .....	<b>223</b>	<b>234</b>	<b>258</b>	<b>282</b>	<b>326</b>	<b>322</b>
Equity capital .....	112	114	135	158	165	140
Investments in the authorised capital <sup>(1)</sup> .....	91	96	104	115	125	111
Revaluation gains, reserves and profits/losses carried forward .....	21	18	31	43	39	29
Interfirm loans .....	111	120	123	124	161	182
<b>Foreign investment in Belgium</b> .....	<b>242</b>	<b>251</b>	<b>269</b>	<b>292</b>	<b>320</b>	<b>361</b>
Equity capital .....	192	193	205	220	247	287
Investments in the authorised capital <sup>(1)</sup> .....	152	169	173	184	192	214
Revaluation gains, reserves and profits/losses carried forward .....	40	24	32	37	55	73
Interfirm loans .....	51	57	64	72	73	75

Source: NBB.

(1) Including share premiums.

According to the annual survey results, the outstanding amount of Belgium's foreign direct investment contracted by 4 billion euro in 2006, to 322 billion. This decline was attributable largely to a relatively small number of firms. The total net authorised capital held by Belgian companies in the rest of the world was down by 25 billion euro, while foreign loans granted by Belgian companies increased by 20 billion euro.

Foreign direct investment in Belgium was up from 320 billion euro in 2005 to 361 billion in 2006, an increase of 41 billion. Virtually all these contributions of funds to resident companies took the form of authorised capital; this concerned almost exclusively the strengthening of existing foreign direct investment links.

In 2006, Belgian companies largely preserved their traditional role of intermediary in the financial transactions of multinational companies, although the pattern of inward foreign direct investment deviated somewhat from the

usual profile. A particular feature seen this year was the greater involvement of companies other than the coordination centres in foreign direct investment flows.

In 2006, some of these finance companies other than coordination centres obtained new foreign capital contributions, totalling 113 billion euro. They used these financial resources primarily to grant loans to foreign firms amounting to 65 billion euro. Thus, whereas they used to reinvest these funds most frequently in the form of equity capital, their transactions are now similar to those of the coordination centres. At the same time, they have retained in Belgium a larger percentage of the incoming investment than in the past, namely 45 billion euro.

Other Belgian firms recorded in 2006 a decline in the amount of their capital owned by foreign shareholders, or they repaid loans which they had been granted. This caused a reduction of 53 billion euro in foreign assets invested in these firms, half of which was offset by

**TABLE 4** CAPITAL MOVEMENTS IN BELGIAN AFFILIATES OF FOREIGN COMPANIES, EXCLUDING COORDINATION CENTRES  
(capital invested via direct shareholdings<sup>(1)</sup>; billions of euros)

	2001	2002	2003	2004	2005	2006
<b>1. Foreign capital contributions to resident firms</b>	<b>52</b>	<b>35</b>	<b>38</b>	<b>42</b>	<b>41</b>	<b>113</b>
1.1 Funds reinvested abroad by the firms concerned	19	17	19	22	10	68
In the form of equity capital	17	12	16	17	3	3
In the form of interfirm loans	2	5	3	4	6	65
1.2 Foreign capital contributions remaining in Belgium	32	18	19	20	32	45
<b>2. Foreign capital withdrawals from resident firms</b>	<b>23</b>	<b>40</b>	<b>29</b>	<b>21</b>	<b>25</b>	<b>53</b>
2.1 Disinvestment of foreign funds by the firms concerned	-1	12	2	3	-1	26
In the form of equity capital	-1	9	-3	2	-2	20
In the form of interfirm loans	0	3	4	1	1	6
2.2 Foreign capital withdrawals not offset by foreign disinvestments	23	28	27	18	26	27
<b>Change in inward foreign direct investment (1 - 2)</b>	<b>29</b>	<b>-6</b>	<b>9</b>	<b>21</b>	<b>16</b>	<b>60</b>
Net foreign investment by the firms concerned (1.1 - 2.1)	20	5	17	18	11	42
Actual capital increase (+) or reduction (-) in the firms concerned (1.2 - 2.2)	9	-11	-8	2	5	18

Source: NBB.

(1) Direct shareholdings are defined by the holding of at least 10 p.c. of the shares or voting rights.

the recovery of assets which they themselves had held abroad.

In net terms, the increase in inward foreign direct investment in firms other than coordination centres came to 60 billion euro in 2006. Taking account of the foreign direct investment effected by these firms themselves, their financial resources thus increased by 18 billion euro in 2006, compared to 5 billion in 2005. As is often the case, this overall picture is dominated by a few firms effecting very large transactions.

The coordination centres also received a large net inflow of capital, amounting to 44 billion euro in 2006, compared to a reduction of 19 billion in 2005 (cf. the table in Annex 3). This is attributable mainly to the repayment of interfirm loans to one of these centres, while there was a substantial fall in the foreign investment which they received.

The evident concentration of funds invested in the form of equity capital in Belgium and the increase in loans to foreign firms are both in line with the pattern expected following entry into force of the system of the risk capital allowance. The financial arrangements previously set up via coordination centres now seem to have been transferred to other finance companies.

## 2.5 Newly formed finance companies

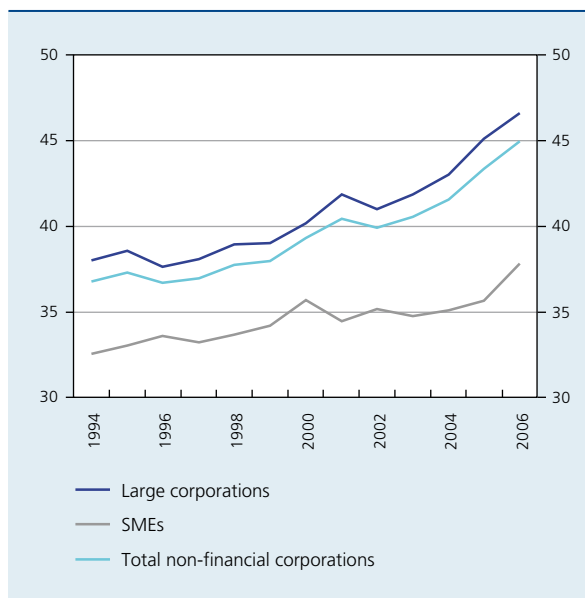
Around 5,350 new finance companies filing their annual accounts with the Central Balance Sheet Office were registered in 2005 and 2006. Altogether, the equity capital issued by these new companies grew by around 42 billion euro, compared to an expansion of 85 billion for finance companies as a whole. These new finance companies are very diverse. The 14 largest ones on their own account for an increase in equity capital in the order of 32 billion euro. The authorised capital of these companies mainly comes from abroad: the finance centres of a few large multinational groups have been set up in Belgium, and groups of Belgian firms have repatriated funds from abroad. On the basis of the annual accounts for 2006, the profits and taxes reported by these companies, the implicit tax rate for these companies can be estimated at around 4 p.c.

## 2.6 Solvency

The non-consolidated data of the Central Balance Sheet Office indicate that non-financial corporations established in Belgium have already for some time been recording an increase in the share of the equity capital in the total

**CHART 4** DEGREE OF FINANCIAL AUTONOMY <sup>(1)</sup>

(percentages, end-of-year data)



Source : NBB.

(1) The degree of financial autonomy is defined as the percentage of the equity capital in the total liabilities of non-financial corporations. The data are non-consolidated.

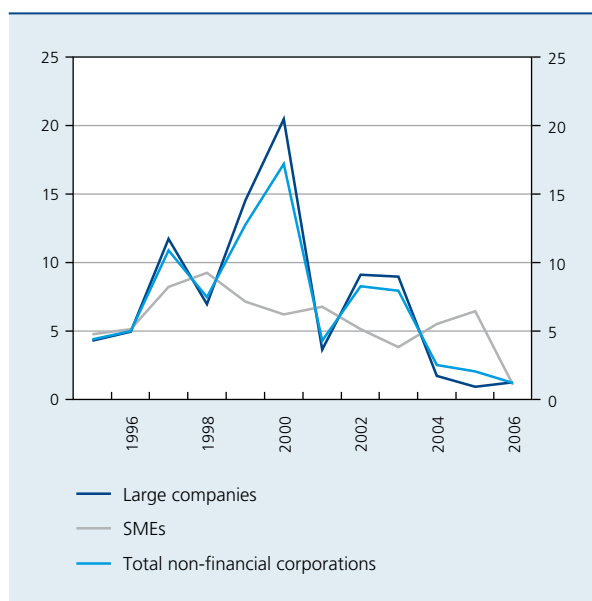
liabilities. This trend towards greater financial autonomy clearly intensified in 2005 and 2006, possibly indicating an improvement in the solvency of Belgian companies.

However, this finding calls for certain reservations. As already mentioned, a large proportion of the increase in equity capital is due to shareholdings acquired by other associated firms. This traditional measure of the solvency of companies in general could therefore present a biased picture of the actual improvement in the solvency of Belgian firms<sup>(1)</sup>.

However, it seems that in 2006 the rise in the loan capital of non-financial corporations filing their annual accounts with the Central Balance Sheet Office did slow down in both absolute and relative terms, falling to its lowest level for ten years, whereas during other boom periods there had been a sustained expansion in loans. This appears to indicate that firms have made relatively less use of debt financing. One possible explanation lies in the replacement of current foreign loans with investments in the authorised capital. However, the slower expansion of loan capital was evident mainly in the case of SMEs, where it is reasonable to suppose that foreign investments are

(1) It would be preferable to determine the solvency of Belgian companies on the basis of consolidated balance sheet data, but such information is not available.

**CHART 5** LOAN CAPITAL OF NON-FINANCIAL  
CORPORATIONS  
(percentage changes)



Source : NBB.

relatively less significant. These factors suggest that the risk capital allowance has led to a strengthening of the solvency of non-financial corporations.

### 3. An alternative to the coordination centres?

This section looks at the Belgian fiscal regime applicable to coordination centres, as the introduction of the risk capital allowance was also intended to offer an alternative to these centres. Thus, it briefly explains the coordination centre regime before describing the developments concerning the number of these centres and their capital transactions. Finally, it reviews employment in the coordination centres and in the new finance centres.

#### 3.1 The coordination centre tax regime

The Belgian rules on coordination centres apply to companies which take on the management of the financial flows of other companies belonging to a multinational group<sup>(1)</sup>. The advantageous tax rules for coordination centres were introduced in 1982. During the debates which began in the late 1990s concerning tax regimes which could distort competition, the Ecofin Council finally decided that this regime was a harmful tax measure implying a form of

unfair competition, so that it had to be abolished. The abolition of this regime also resulted from the European Commission's decision, in 2003, that it was incompatible with the current rules on State aid. The regime is to be phased out altogether by the end of 2010.

The tax concession enjoyed by coordination centres was estimated at just under 1.9 billion euro for the 2004 tax year<sup>(2)</sup>. The economic impact of these centres on the Belgian economy and the real influence of the tax concession on Belgian public finances are very difficult to assess, and are beyond the scope of this study. The activities pursued by the coordination centres are in fact highly mobile, and most of them probably would not have been located in Belgium in the absence of these advantageous tax rules.

One of the aims of introducing the risk capital allowance was to enable Belgium to offer an alternative to the coordination centres at a time when they were losing or relinquishing their approval. This alternative obviously had to be acceptable in a European context. On expiry or relinquishment of their approval, coordination centres come within the scope of the ordinary rules on corporate taxation, and can therefore use the risk capital allowance. Coordination centres are notable for the substantial equity capital at their disposal – in the order of 170 billion euro in 2006, taking all coordination centres together – and for the relatively low return which they generally obtain on that equity. Coordination centres obtain their main revenue from charging interest on loans to other group companies. These various factors mean that the risk capital allowance may offer a good alternative to the coordination centres.

#### 3.2 Change in the number of coordination centres

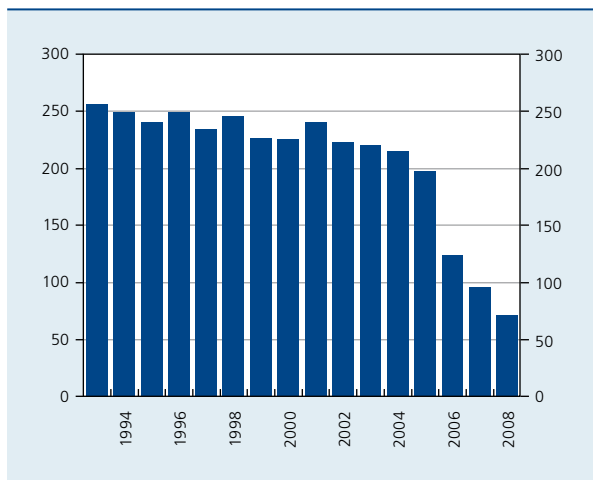
The FPS Finance has a list of coordination centres which have been granted official approval, for some specific points in time. It is not possible to state with certainty that a coordination centre approved by the tax authority is actually active and does not complete an ordinary corporation tax return<sup>(3)</sup>. That is why it is interesting to analyse

(1) To qualify for coordination centre approval, the company must belong to a multinational group with consolidated capital of at least 24 million euro and a consolidated annual turnover of at least 240 million euro. The foreign equity must total at least 12 million euro or 20 p.c. of the group's consolidated foreign equity capital. After two years, the coordination centre must employ at least ten full-time workers.

(2) Belgian Chamber of Representatives, State revenue and resources budget for the 2006 fiscal year – Annex: 2005 list of exemptions, abatements and reductions influencing the State revenues.

(3) On the basis of a comparison of the tax returns relating to the 2006 and 2007 tax years, it seems that a number of coordination centres which had applied for exemption of their profits under the coordination centre system in 2006 opted to replace this preferential tax regime by applying the risk capital allowance for the 2007 tax year. This may indicate the attractions of the risk capital allowance system for some of them.

**CHART 6** CHANGE IN THE NUMBER OF COORDINATION CENTRES <sup>(1)</sup>



Sources : FPS Finance, NBB.

(1) Estimate based on the special tax that coordination centres have to pay on their employees. For 2008, this concerns the number of coordination centres holding FPS Finance approval in March of that year.

the annual change in the number of active coordination centres on the basis of the special tax which these centres have to pay on their first ten employees.

The number of coordination centres approved and active had already declined somewhat during the 1990s and at the start of this decade. The figure had in fact dropped from just over 250 in 1993 to around 200 in 2005. However, this downward trend has become much more marked since 2005. It is attributable mainly to the restrictions imposed by the European Commission on the renewal of coordination centre approvals.

It is also evident from the detailed FPS Finance data that the number of approved coordination centres has slumped in the past few years, dropping from 226 in 2004 to 146 in November 2007. Since the European Commission decision of 13 November 2007 restricted the transitional measures, a number of coordination centres lost their approval at the end of 2007. According to the latest figures, around 74 coordination centres were still active in March 2008.

For the purposes of the analysis below, the coordination centres are divided into different groups according to whether they still possess approval or, if that is no longer

(1) If, at the time of a capital transaction effected by a coordination centre, an identical capital transaction in the opposite direction is effected simultaneously by a Belgian partner of the multinational group, the counterparty which was previously a foreign partner becomes a Belgian partner.

the case, according to the date on which they lost it. A further distinction is made between the centres which have been wound up and those which are still active in a different form.

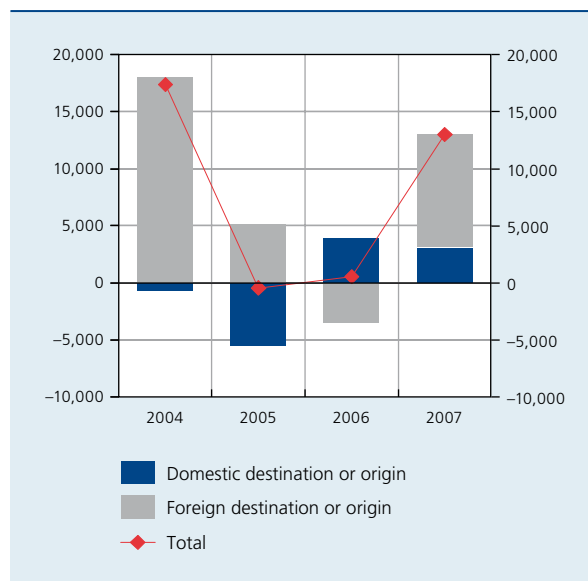
### 3.3 Capital transactions by coordination centres

On the basis of the list of coordination centres approved in 2004 by FPS Finance, the capital transactions effected by these centres were examined; for that purpose, a distinction was made according to whether the counterparty was based in Belgium or abroad<sup>(1)</sup>. The detailed figures are set out in Annex 4. Identification of the counterparty is important not only to determine the percentage of the capital remaining in Belgium, but also to assess the budgetary cost of the risk capital allowance. If, on liquidation of a coordination centre or a substantial reduction in its capital, the capital is transferred to another Belgian company in the group, that increases the basis for calculation of the risk capital allowance, in contrast to a situation in which the capital is injected into foreign companies.

It is important to note that the marked fall in the number of approved coordination centres has not so far led to any substantial net outflows of capital from coordination centres approved in 2004. Indeed, a net capital increase

**CHART 7** NET CHANGES IN THE AUTHORISED CAPITAL OF COORDINATION CENTRES STILL APPROVED IN 2004 <sup>(1)</sup>

(millions of euros)



Source : NBB.

(1) Difference between increases and reductions in the authorised capital, making a distinction between capital transactions according to whether their destination or origin is domestic or foreign.

of 30 billion euro was recorded in the period 2004-2007. Only in 2005 was there a small, net reduction in the authorised capital. Moreover, leaving aside 2006, the increase in the authorised capital is attributable mainly to inflows of foreign capital.

It is possible to divide the capital transactions between coordination centres which were still approved in March 2008 and those which had already lost their approval.

In 2004 and 2005, coordination centres which had been approved by the tax authorities and had lost or relinquished that approval between 2004 and November 2007 recorded substantial outflows of capital amounting to 24 billion euro, mainly as a result of liquidation. While the recorded counterparty was a foreign partner for half of the capital outflows in 2004, the bulk of those outflows went to Belgian companies in 2005. Since 2006, however, capital outflows from coordination centres which are still active have ceased, and there has actually been a net increase in the authorised capital.

The coordination centres whose approval expired recently – between November 2007 and March 2008 – did not record any marked change in their authorised capital during the period 2004-2007. Three centres have increased their capital since losing their approval, and five others have reduced their capital. These transactions

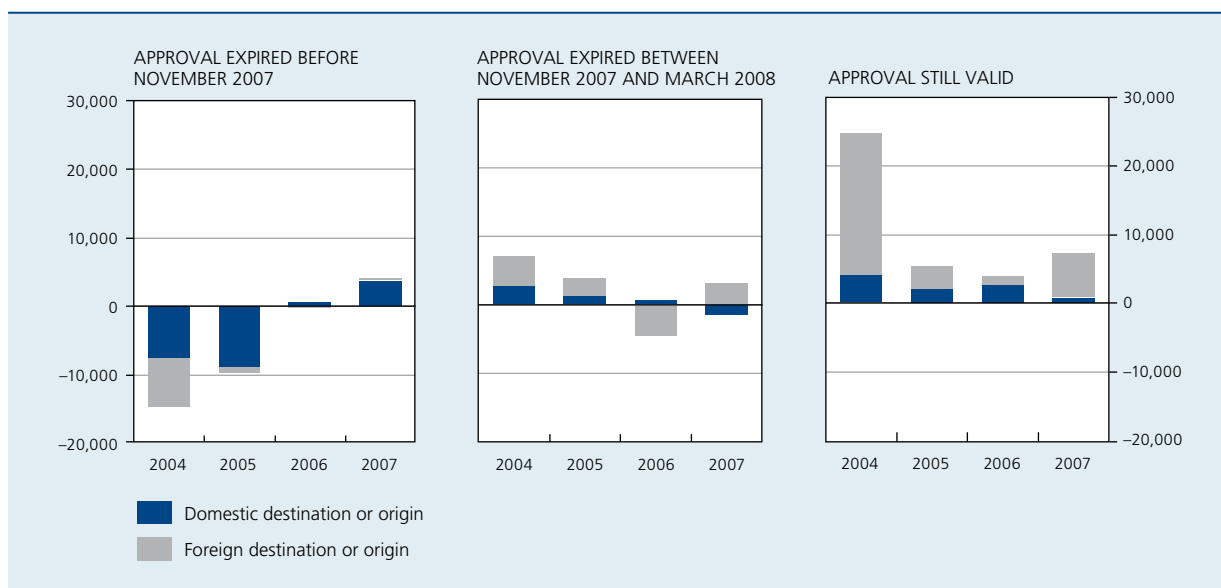
generated substantial net inflows of foreign capital during this brief period, and more particularly in the first three months of 2008.

The coordination centres which had not yet lost their approval in March 2008 recorded a considerable increase in their capital between 2004 and 2007.

Approved coordination centres do not form a homogenous group; the bulk of the capital is concentrated in just a few dozen centres. The data on the equity position show that the coordination centres which recently lost their approval and those which are still approved are the main ones that still have relatively substantial equity capital. In 2006, these two groups each had equity totalling around 70 billion euro. Any analysis of the impact of the risk capital allowance on capital transactions effected by coordination centres is therefore very provisional.

Between 2004 and 2008, a number of coordination centres terminated their activities in Belgium and their capital was transferred abroad, even after the introduction of the risk capital allowance. However, whereas in 2004 the coordination centres which had lost their approval were often in liquidation and had distributed their authorised capital among their various – largely foreign – shareholders, the trend now seems to have been reversed, since no further substantial capital outflows have been recorded.

**CHART 8** NET CHANGES IN THE AUTHORISED CAPITAL OF COORDINATION CENTRES STILL APPROVED IN 2004 ACCORDING TO THEIR RECENT STATUS<sup>(1)</sup>  
(millions of euros)



Source : NBB.

(1) Difference between increases and reductions in the authorised capital, making a distinction between capital transactions according to whether their destination or origin is domestic or foreign.

The absence of significant capital outflows from the coordination centres during the second half of 2007 and the beginning of 2008 seems to be a sign that many coordination centres regarded the risk capital allowance as an acceptable alternative.

### 3.4 Employment in the coordination centres

The data obtained from the social balance sheets show that, in the coordination centres approved in 2004, employment dropped from 9,510 persons at the end of 2003 to 8,616 persons at the end of 2006, a decline of around 900 persons.

This decline is due mainly to the coordination centres whose approval expired and which were liquidated or ceased operating during this period. At the end of 2004, employment in these coordination centres still amounted to around 1,200 persons. Those jobs were not necessarily lost to the Belgian economy since the workers were transferred to other group companies in a number of important cases.

Employment in the coordination centres whose approval had expired in March 2008 but which were still active in 2006 declined by around 200 persons between the end of 2003 and 2006. Conversely, in the coordination centres whose approval had not yet expired in March 2008, employment expanded by around 500 persons.

If Belgium can attract new finance centres belonging to multinational groups, that could stimulate employment and offset the job losses in coordination centres whose capital and activities have been transferred abroad. At first sight, these new finance centres employ few people at the moment.

## 4. Impact on investment and employment, and macroeconomic payback effects

The potential impact of the risk capital allowance on the Belgian economy is assessed by means of the Bank's quarterly "Noname" model. As in most models, this assessment is conducted by considering that the effects of corporate taxation on company decisions will be felt via the change in the user cost of capital. However, macroeconomic models – which largely ignore the effects of distortionary taxes, particularly in regard to the location of economic activities – cannot readily be used to simulate measures modifying the tax system. For example, it is not possible to quantify how such a measure in favour of the results of decision centres and coordination centres will affect the maintenance or expansion of their activities in Belgium.

In the long term, corporate investment demand depends on output and the ratio between the capital cost and the production price. In the short term, these investments are

**TABLE 5** EMPLOYMENT IN THE COORDINATION CENTRES STILL APPROVED IN 2004  
(number of persons, situation at end of year)

	<i>p.m.</i> Number of coordination centres	2003	2004	2005	2006
<b>Total</b> .....	<b>226</b>	<b>9,510</b>	<b>9,419</b>	<b>9,411</b>	<b>8,616</b>
Approval expired between 2004 and September 2006 .....	44	986	796	551	536
Liquidated or not active in 2006 .....	30	595	386	151	0
Active in 2006 .....	14	391	410	400	536
Approval expired between September 2006 and November 2007 .....	36	1,171	1,192	1,201	559
Liquidated or not active in 2006 .....	14	593	580	574	0
Active in 2006 .....	22	578	612	627	559
Approval expired between November 2007 and March 2008 .....	72	4,066	3,886	4,002	3,711
Approval still valid in March 2008 .....	74	3,287	3,545	3,657	3,810

Sources: FPS Finance, NBB.



**TABLE 6** EFFECTS OF THE REDUCTION IN THE COST OF CAPITAL<sup>(1)</sup> IN A SCENARIO OF *EX ANTE* BUDGET NEUTRALITY  
(differences in relation to the baseline simulation; millions of euros, unless otherwise stated)

	Year 1	Year 2	Year 3	Year 4	Year 5
Investments .....	80	330	420	420	420
Employment (units, end of period) .....	200	1,400	2,400	2,900	3,200
Primary budget balance .....	10	60	110	110	100

Source: NBB.

(1) Excluding effects of any compensatory measures on the cost of capital.

also influenced by an additional accelerator effect generated by cash flows. The risk capital allowance was introduced in the model simulation in two stages. First, via a reduction in the user cost of capital, on the basic assumption that this tax measure would be neutral *ex ante* for the general government budget. In a second phase, an increase in corporate cash flows was also introduced. To assess the measure's *ex ante* effect on corporate cash flows, it is necessary to know its budgetary cost, or more precisely a transfer of resources from the government to the business sector. This cost is particularly difficult to assess, since the measure does not relate only to new investments by firms, but concerns their entire balance sheet. That assessment therefore entails accounting and tax definitions which are beyond the scope of the model. In addition, the risk capital allowance is accompanied by a set of compensatory measures concerning corporate taxation, the impact of which is difficult to assess by means of a macroeconomic model. This second simulation is based on the assumption that, as a result of this tax measure, firms will pay, *ex ante*, one billion euro less each year by way of corporation tax; that corresponds to a reduction in government revenues totalling 0.3 p.c. of GDP. The effects of any measures designed to offset the impact on

the government budget of this reduction in revenues are disregarded.

The results of the simulation of the reduction in the cost of capital with no *ex ante* budgetary cost are presented first. Long-term investment demand reacts to both output and the user cost of capital. The reduction in the cost of capital stimulates investment demand which in turn boosts domestic demand and demand for imports. The strengthening of domestic demand is reflected in higher employment and lower unemployment. If the *ex ante* budgetary cost of the measure is zero, corporate investments increase by a maximum of 420 million euro, and employment expands by around 3,200 units. Such a measure modifying the tax system that is related to investment funding has practically no effect on prices. More detailed results are presented in Annex 5.

The second simulation incorporates the effects of a reduction in corporation tax totalling one billion euro per annum. If the measure reduces total corporate taxes, that boosts the cash flows available to firms. These additional cash flows generate higher investment, on top of that resulting from the substitution of capital for labour in

**TABLE 7** EFFECTS OF THE REDUCTION IN THE COST OF CAPITAL<sup>(1)</sup> ACCOMPANIED BY AN *EX ANTE* BUDGETARY COST OF ONE BILLION EURO PER ANNUM  
(differences in relation to the baseline simulation; millions of euros, unless otherwise stated)

	Year 1	Year 2	Year 3	Year 4	Year 5
Investments .....	130	600	850	900	900
Employment (units, end of period) .....	300	2,400	4,700	6,000	6,700
Primary budget balance .....	-990	-900	-790	-760	-770

Source: NBB.

(1) Excluding effects of any compensatory measures on the cost of capital.

response to the reduction in the cost of capital. This cash-flow effect is greater the higher the *ex ante* budgetary cost, and hence the impact on cash flows. For an *ex ante* budgetary cost of one billion euro, the effect on corporate investment would be 900 million euro maximum, and the impact on employment would come to 6,700 units. Apart from a very small increase in personal income tax and social contributions resulting from job creation, the payback effects on public finances are relatively minor.

On the basis of individual data obtained from the social balance sheets, a multivariate analysis was also conducted on the employment growth rate between 2005 and 2006, taking account of the risk capital allowance, the industry and the company's size and age. The risk capital allowance seems to have a positive but marginal impact on employment<sup>(1)</sup>. There is no point at present in conducting a specific analysis on the effects of the introduction of the risk capital allowance on employment by industry, in view of the very limited macroeconomic effect on employment in the first year following the introduction of such a measure.

Since the measure took effect in 2006, what is being assessed is the measure's spin-off effect on employment. However, it takes time for firms to adjust their employment, so that it is not surprising that the effect measured is marginal. These results are in line with those obtained at macroeconomic level by the model, which indicated that the measure would have weak effects on employment in the first year.

## 5. Implications for the government budget

The budgetary implications of the risk capital allowance and the other measures provided for by the law of 22 June 2005 are not easy to assess. In fact, it is essential to distinguish between the gross tax advantage which the tax allowance represents for companies, which can be calculated on the basis of the adjusted equity capital as reported on the corporation tax return forms, and the real impact of this measure on Belgian government revenues.

This section begins by examining the budgetary implications of this corporate income tax reform from a macroeconomic perspective. That approach provides an indication of the reform's impact on public finances. There follows a detailed analysis based on microeconomic data which, on the basis of the gross tax advantage enjoyed by companies since the introduction of the risk capital allowance, proceeds to examine the reform's net impact on the government budget. Finally, this section discusses

the potential future influence of various dynamic effects of the reform on public finances.

### 5.1 Macroeconomic analysis of the tax on corporations

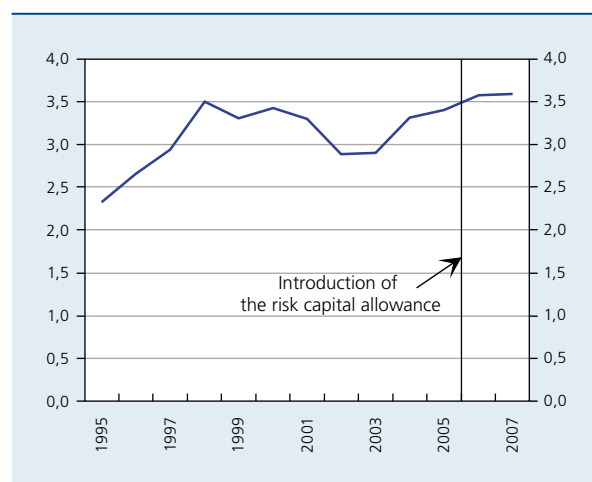
The taxes levied on corporate profits totalled 3.7 p.c. of GDP in 2007, corresponding to around 7.5 p.c. of total public revenues. Corporation tax therefore exceeded by 0.3 p.c. of GDP the level which it had reached in 2005, the year preceding the introduction of the risk capital allowance. In comparison with 2003, revenues increased by no less than 0.8 p.c. of GDP, or almost a quarter. Consequently, both the corporation tax revenues and their share in total revenues are at a historically high level.

The movement in corporation tax as a percentage of GDP can be divided into two components, namely the movement in the tax base for the corporation tax and the movement in the implicit tax rate.

The gross or net operating results of the companies plus the net rents, the net property incomes imputed to insurance policy holders and the net interest received, constitute a macroeconomic indicator which, overall, moves in line with the tax base<sup>(2)</sup>. This macroeconomic approximation of the tax base has grown steadily since 2001 in relation to GDP, except for a minor dip in 2007.

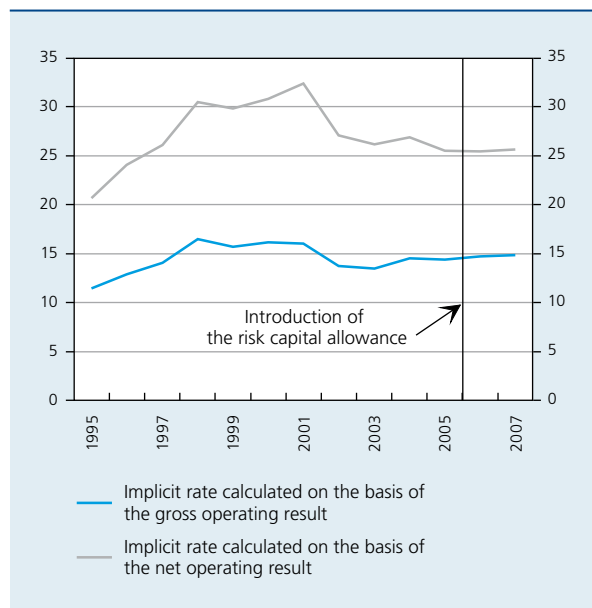
- (1) In this microeconomic analysis, the risk capital allowance could also partially capture the effect on employment of the firm's profitability or improved solvency.  
 (2) The tax definition of depreciation differs significantly from that used in the national accounts. That is why the implicit rates calculated on the basis of both the net and the gross operating results are mentioned here.

**CHART 9** CORPORATION TAX REVENUES  
(percentages of GDP)



Sources : NAI, NBB.

**CHART 10** MACROECONOMIC IMPLICIT RATES OF CORPORATION TAX <sup>(1)</sup>  
(percentages)



Sources: NAI, NBB.

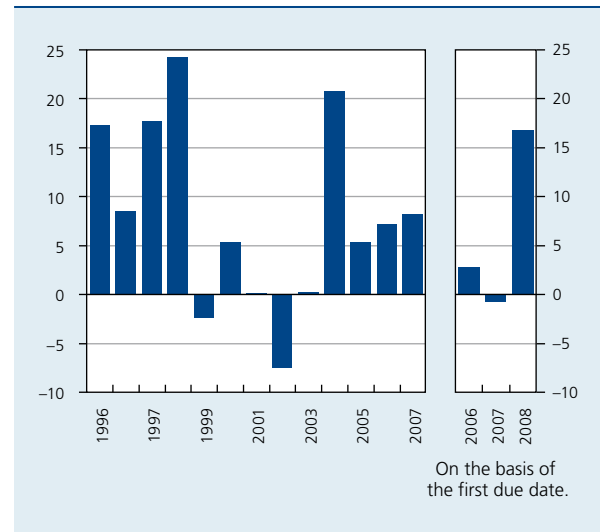
(1) The tax assessments were brought backward by one year so that they roughly coincide with the advance payments relating to the same tax year. In addition, the revenue figures were adjusted for one-off factors which had inflated revenues in 2006 and 2007. In 2006, the speedier collection of the assessments had boosted these revenues by around 900 million euro. In 2007, the one-off receipts generated by the measure permitting tax-exempt reserves to be paid out or invested at a reduced rate of tax were estimated at 245 million euro.

The introduction of the risk capital allowance may have affected both the implicit tax rate and the tax base. Although it is impossible to isolate the effect of the introduction of this measure on corporate operating results, simulations based on the Bank's econometric model show that the impact of the reform is probably relatively small. The increase in the authorised capital and the development of finance company activities – a phenomenon which the econometric model cannot simulate – could drive up net interest income. Such an increase was recorded in 2006, and at that time it exerted upward pressure on the estimated tax base as a percentage of GDP.

Calculated on the basis of the corporate gross operating results, the macroeconomic implicit rate of corporation tax increased from 14.4 p.c. in 2005 to 14.7 p.c. in 2006, rising to 14.8 p.c. in 2007. The implicit tax rate calculated on the basis of the net operating results remained steady in 2006, at 25.5 p.c., before rising to 25.7 p.c. in 2007 <sup>(1)</sup>.

These implicit tax rates are sensitive to the economic cycle and generally increase when the economic context is favourable, as was the case in 2006 and 2007 <sup>(2)</sup>. In other

**CHART 11** ADVANCE PAYMENTS OF CORPORATION TAX  
(percentage changes compared to the previous year)



Sources: FPS Finance, NAI, NBB.

respects, it is very likely that the introduction of the risk capital allowance will exert a downward influence on the implicit tax rate owing to the expansion of the finance companies' activities, and hence their tax bases, as these companies gain a relatively greater advantage from the tax allowance and therefore pay less tax.

Overall, the movement in the macroeconomic implicit rates of corporation tax suggests that the introduction of the risk capital allowance had no significant negative effect on government revenues in 2006 and 2007.

The data on the movement in corporation tax during the initial months of 2008 also imply that the introduction of the risk capital allowance has not so far influenced public revenues. In fact, advance payments made by corporations on the first due date in April 2008 were 16.8 p.c. higher than those of the previous year.

(1) The average implicit tax rate for non-financial corporations, calculated on the basis of their annual accounts, is less sensitive to the business cycle than the macroeconomic implicit tax rate since it is possible to identify the companies which are making a profit. That rate of tax had also risen slightly in 2006.

(2) The macroeconomic corporate operating result corresponds to the sum of the positive and negative operating results of the companies. In an economic boom, the proportion of the positive operating result which is subject to tax tends to increase, while the proportion of the negative operating result on which no tax is payable tends to decline, driving up the implicit tax rate.

## 5.2 Gross tax advantage for corporations calculated on the basis of the annual accounts

An approximation of the gross tax advantage offered by the risk capital allowance can be derived on the basis of the Central Balance Sheet Office data relating to non-financial corporations, the "scheme A" accounts of credit institutions and the information on insurance companies obtained from the CBFA. However, it is not possible to arrive at an exact figure on the basis of this information. Such an approach tends to overestimate the gross tax advantage for companies, as the annual accounts contain no information on the accounting value of foreign branches, "villa" companies or SMEs applying the investment reserve rules, so that no adjustment can be made for these factors. Moreover, a number of adjustments are made on the basis of the only data available, namely the accounting data, whereas the real adjustments are effected via the tax value. The figures are also calculated on the basis of the company's financial position at the end of the tax year, whereas changes in the adjusted equity capital are only taken into account *pro rata temporis* in the tax return form. This factor could have a significant impact in years when strong capital increases are recorded.

In addition, the tax returns indicate that companies which applied for exemption of their profits under the rules on coordination centres for the 2006 tax year were granted a risk capital allowance of 1.3 billion euro for the following year. This would correspond to a gross tax advantage of 442 million euro for those companies. As all the

coordination centres were excluded from the calculation of the gross tax advantage on the basis of the annual accounts, this figure needs to be added.

The gross tax advantage for companies comprises two elements. The first is static, and expresses the advantage which would have applied on the basis of the corporate financing structure before introduction of the measure, while the second is dynamic and reflects the influence of financial flows on the gross tax advantage.

The static component is calculated via a simulation based on the adjusted equity capital before the introduction of the reform. In order to avoid any anticipation effects, the 2004 balance sheet data were used. On the basis of that information, the theoretical gross tax advantage for companies would come to 1,365 million euro, or twice the government's initial estimate of 506 million euro.

The introduction of the risk capital allowance generated substantial dynamic effects, bringing the gross tax advantage for companies to 3,035 million euro at the end of 2006. This was 1.2 billion euro higher than the figure indicated by the simulation exercise based on the 2004 data, excluding the impact of the coordination centres which applied the risk capital allowance.

In the case of non-financial corporations, the gross tax advantage calculated on the basis of the balance sheet structure at the end of the 2006 tax year increased by 61 p.c. compared to that at the end of 2004. The gross

**TABLE 8** ESTIMATE OF THE GROSS TAX ADVANTAGE REPRESENTED BY THE RISK CAPITAL ALLOWANCE FOR COMPANIES<sup>(1)</sup>  
(millions of euros)

	2004 <sup>(2)</sup>	2005 <sup>(2)</sup>	2006	Change 2004-2006
Non-financial corporations <sup>(3)</sup> .....	1,012	1,290	1,633	+620
Large corporations .....	528	749	988	+460
SMEs .....	485	541	644	+159
Finance companies filing their annual accounts with the Central Balance Sheet Office .....	215	374	792	+577
Credit institutions and insurance companies .....	151	163	197	+46
Coordination centres applying the risk capital allowance <sup>(4)</sup> .....	–	–	442	+442
<b>Total</b> .....	<b>1,365</b>	<b>1,805</b>	<b>3,035</b>	<b>+1,670</b>

Sources: CBFA, FPS Finance, NBB.

(1) The data were based on the financial position of the companies at the end of the financial year.

(2) For 2004 and 2005, this is the theoretical gross tax advantage for companies, since the risk capital allowance had not yet entered into effect at that time.

(3) Excluding finance companies filing their annual accounts with the Central Balance Sheet Office.

(4) On the basis of the available data it is not possible to ascertain the theoretical advantage which these coordination centres would have enjoyed in 2004 and 2005.

tax advantage for large corporations increased by 87 p.c., while for SMEs it was 32 p.c. higher. The gross tax advantage for credit institutions and insurance companies increased by 30 p.c.

In the case of finance companies filing their annual accounts with the Central Balance Sheet Office, the gross tax advantage increased very sharply between 2004 and 2006. At the end of the latter year, the advantage enjoyed by those companies was three times higher than the theoretical advantage based on their balance sheet position at the end of 2004. These companies include financial holding companies, credit institutions and investment

companies. This category also comprises a range of new establishments linked to finance companies – credit institutions and insurance companies – or constituting the finance centres of multinational groups.

In all the branches of activity of non-financial corporations, the estimated gross tax advantage of the risk capital allowance increased between 2004 and 2006. Most of that increase can be attributed to the chemical sector and the wholesale trade. The marked increase recorded in the chemical sector may be due in part to the transfer of one coordination centre's activities to another group company which does make use of the risk capital allowance.

**TABLE 9** ESTIMATE OF THE GROSS TAX ADVANTAGE REPRESENTED BY THE RISK CAPITAL ALLOWANCE FOR NON-FINANCIAL CORPORATIONS, BY INDUSTRY, CALCULATED ON THE BASIS OF THE ANNUAL ACCOUNTS<sup>(1)</sup>  
(millions of euros)

	2004 <sup>(2)</sup>	2005 <sup>(2)</sup>	2006
Agriculture, hunting and fishing .....	9	10	11
Mining and quarrying .....	5	5	9
Agricultural and food industries .....	37	41	50
Textiles, clothing and footwear .....	14	14	15
Wood .....	5	6	7
Paper, publishing and printing .....	18	24	36
Coking, refining, nuclear industries .....	1	2	5
Chemicals and rubber .....	67	163	243
Metallurgy and metalworking .....	35	44	43
Metal manufactures .....	46	54	96
Other manufacturing industries .....	26	31	36
Energy and water .....	34	34	36
Construction .....	55	66	76
Retail trade .....	91	102	121
Wholesale trade .....	166	185	237
Hotels and restaurants .....	10	13	17
Transport .....	46	80	83
Post and telecommunication .....	32	48	56
Financial activities .....	15	16	31
Real estate activities .....	152	192	201
Self-operated hire .....	12	13	24
Services to businesses .....	114	123	166
Services to households .....	22	24	31
<b>Total non-financial corporations .....</b>	<b>1,012</b>	<b>1,290</b>	<b>1,633</b>

Source: NBB.

(1) The data were based on the financial position of the companies at the end of the financial year.

(2) For 2004 and 2005, this concerns the theoretical gross tax advantage for companies, since the risk capital allowance had not yet entered into effect at that time.

Companies whose profits were insufficient to apply the risk capital allowance in 2006 can carry the allowance forward for seven years and thus create a tax reserve. In the case of companies filing their annual accounts with the Central Balance Sheet Office, the budgetary cost of the formation of this tax reserve can be estimated at around 500 million euro in 2006, assuming that this reserve is used in full at the highest tax rate applicable to companies.

### 5.3 Net impact on public finances

According to an approximation based on annual accounts data and including the coordination centres which apply the risk capital allowance, the gross tax advantage which the risk capital allowance represents for companies is estimated at 3,035 million euro for 2006. Nevertheless, this approximation needs to be adjusted for a number of points.

First, the effect of the authorised capital increases which took place in 2006 is fully incorporated in the simulation based on the annual accounts, whereas these transactions can only be entered in the tax return form *pro rata temporis*. The overestimation of the impact of these increases can be assessed at 374 million euro on the basis of the monthly data relating to them for 2006. An adjustment also has to be made for SMEs which, instead of using the risk capital allowance, continue to apply the tax-exempt investment reserve rules. In addition, the simulation based on the annual accounts has to be adjusted to take account of the part of the corporate equity capital which relates to the activities of permanent establishments located abroad. Finally, an adjustment has to be made to eliminate "villa" companies and other factors, such as valuation differences. This last adjustment is obtained via the difference between the sum of the components mentioned above and the gross tax advantage of the risk capital allowance indicated by the corporation tax assessments. The FPS Finance supplied data on the amount of the risk capital allowance for the 2007 tax year<sup>(1)</sup>. On the basis of that information, the gross tax advantage for companies can be estimated at 2,325 million euro.

If account is also taken of the budgetary costs due to abolition of the registration fee on contributions to companies, estimated at 60 million euro, the gross cost of the measures introduced by the law of 22 June 2005 comes to around 2,385 million euro in 2006.

Nonetheless, the net impact of the tax reform introduced by the law of 22 June 2005 on Belgian public revenues does not correspond to the amount of the gross tax

advantage which the risk capital allowance represents for companies plus the effect of the abolition of the registration fee.

In order to proceed from this gross cost to the real impact of the measure on Belgian public finances, it is necessary to make a number of adjustments, as the law made provision for various compensatory measures to limit the negative budgetary repercussions of the reform (cf. section 2.2). In addition, the inflow of foreign capital inflates the gross tax advantage, but most likely has no negative effect on Belgian public revenues. The same applies to the reinforcement in equity capital of domestic origin. Moreover, the coordination centres whose approval has expired but which are pursuing their activities in a different form have in fact boosted the gross effect of the risk capital allowance, but this conversion has not reduced public revenues.

The rest of the analysis in this chapter examines these various factors and then assesses their impact on the budget; finally, an overall view of the budgetary impact of the reform introduced by the law of 22 June 2005 is presented for the year 2006.

#### BUDGETARY COMPENSATORY MEASURES<sup>(2)</sup>

The law of 22 June 2005 provides for a series of compensatory measures to attenuate the budgetary cost of the reform. According to a recent estimate, the proceeds of the reduction in the tax exemption for capital gains could exceed the amount originally expected by around 270 million euro. The revenues generated by the other compensatory measures should correspond overall to the initial estimate.

#### MACROECONOMIC PAYBACK EFFECTS

The corporation tax reform should stimulate economic activity and employment and thus increase public revenues and reduce public expenditure. The government had originally assessed these payback effects at 58 million euro. According to the Bank's econometric model, the contraction in the user cost of capital will probably generate payback effects with positive repercussions on public finances amounting to only around 10 million euro in the first year following the tax reform. Assuming that the reform is neutral *ex ante* for the government budget, the payback effects should reach their maximum level after three years, at slightly more than 100 million euro.

(1) These are data on the amount of the assessments as at 30 June 2008. For the 2007 tax year, these figures were increased by 2.1 p.c. to take account of assessments not yet completed and to obtain an overall view.

(2) The adjustment relating to "villa" companies is not made here because it influences the amount of the risk capital allowance mentioned in the corporation tax return, which is therefore already taken into account.

**TABLE 10** IMPACT OF THE BUDGETARY COMPENSATORY MEASURES IN 2006  
(millions of euros)

	Initial estimate <sup>(1)</sup>	Recent estimate <sup>(2)</sup>
Abolition of tax credit for SMEs .....	17	14
Cuts in the investment reserve scheme .....	60	58
Abolition of the investment allowance for SMEs .....	41	37
Reduction in the tax exemption of capital gains .....	337	608
<b>Total</b> .....	<b>454</b>	<b>717</b>

Sources: FPS Finance, NBB.

(1) According to the report produced on behalf of the Commission for Finance and the Budget at the time of the debate on the law introducing the allowance on risk capital.

(2) On the basis of a recent estimate by the FPS Finance, excluding the tax exemptions for capital gains. In accordance with the method used for the initial estimate, the revenues generated by this measure are assessed on the basis of the tax-exempt capital gains on shares in the 2007 tax year.

#### INFLOWS OF FOREIGN CAPITAL AND EXPANSION OF THE TAX BASE

In the case of foreign capital inflows, a distinction should be made between capital contributions which would still have been effected without the introduction of the risk capital allowance and additional capital inflows. The latter have not normally driven up the net cost for the government. In principle, the increase in the authorised capital of finance companies of foreign origin or the substitution of authorised capital for current loans granted by foreign establishments do not reduce the corporation tax revenues collected by the Belgian State. These flows could even lead to the development of new economic activities and a transfer to Belgium of the tax bases of multinational groups, and therefore generate additional revenues for the Belgian State.

Thus, one might suggest that capital contributions of foreign origin, which have increased the tax advantage for companies by around 465 million euro, are at the very least neutral for the government budget.

In addition, assuming that inflows of foreign capital have expanded the corporation tax base in Belgium, they may even have had a positive impact on public finances. That would be the case, in particular, if the newly-formed finance companies or those which have received additional capitalisation apply interest rates to their outstanding loans which exceed the rate of the risk capital allowance. If a return of 5 p.c. – approximately 1.5 percentage point above the rate of the tax allowance applicable to the 2007 tax year – were obtained on the increase in the authorised capital of foreign origin, taxed at the standard

nominal rate, additional revenues totalling 280 million euro would have been recorded in 2006.

#### SUBSTITUTION OF EQUITY FOR DEBT

The relatively limited rise in the loan capital of non-financial corporations suggests that borrowing has been curbed by the growth of shareholders' equity. This substitution process increases the gross tax advantage for companies, but not the net effect on the budget, since the rate of the risk capital allowance is generally lower than the interest rates payable on borrowings.

Taking as the benchmark the smallest increase in debt levels recorded between 1994 and 2005, the effect of this factor on the gross cost comes to 52 million euro. On the basis of the average increase in debt levels during this period, the effect comes to 309 million euro. Nonetheless, in the latter case there could be substantial double counting due to inflows of foreign capital which have replaced the loans previously granted by foreign establishments. The figure to be taken into account to adjust for this is therefore at least 52 million euro, which corresponds to the impact of capital increases financed by households. If it is also assumed that the average interest rate applied to borrowings which were not effected as a result of the substitution of equity for debt would have been one percentage point higher than the rate of the risk capital allowance, the revenues generated by corporation tax would have risen by 15 million euro in 2006.

## RETENTION OF THE COORDINATION CENTRE CAPITAL

One of the aims of the introduction of the risk capital allowance was to retain the capital of the coordination centres in Belgium following the expiry of the centres' approval. When a coordination centre's approval expires, the company can claim the risk capital allowance in the same way as other companies. If the equity capital of the coordination centre is retained in Belgium, that increases the gross tax advantage of the measure. On the one hand, it is necessary to take account of how the expiry of 44 coordination centre approvals between 2004 and September 2006 affects the gross tax advantage of the risk capital allowance. On the other hand, it is evident from the tax returns that a number of approved coordination centres have switched to the risk capital allowance system. The overall effect exerted by the coordination centres on the gross cost of the measure can be estimated at 561 million euro.

It is not easy to estimate the net impact of this factor on corporation tax revenues. Coordination centre profits already enjoyed significant tax concessions and were taxed at a low effective rate. The real budgetary cost also

depends on the capital which would have remained in Belgium even without the reform, and which would have been taxed at a standard rate. However, the tax base of the coordination centres is extremely mobile, and there are various factors which suggest that the introduction of the risk capital allowance has resulted in more capital remaining in Belgium. In order to assess the net budgetary impact, it is therefore assumed that the tax revenues generated by the capital retained in Belgium as a result of the risk capital allowance compensate for the loss of tax revenues on capital which would have remained in Belgium even without the reform.

## NON-RECOVERY OF EARLIER LOSSES

Since, in the corporation tax return form, the risk capital allowance applies before the deduction of losses brought forward, some companies whose tax base is insufficient cannot take advantage of this measure, whereas the situation would be different if the risk capital allowance could have been calculated after deduction of those losses. Such a provision increases the amount of the risk capital allowance entered in the corporation tax return, and limits the amount deducted in respect of losses brought forward,

**TABLE 11** NET IMPACT ON PUBLIC FINANCES IN 2006 OF THE MEASURES PROVIDED FOR BY THE LAW OF 22 JUNE 2005  
(millions of euros)

Gross tax advantage of the risk capital allowance <sup>(1)</sup>	3,035
Changes in equity taken into account <i>pro rata temporis</i>	-374
Adjustment for permanent establishments abroad	-49
SMEs continuing to apply the investment reserve rules	-13
Other adjustments to shareholders' equity	-274
Abolition of the registration fee on contributions to companies	60
<b>Gross cost<sup>(2)</sup></b>	<b>2,385</b>
Compensatory budgetary measures	-717
Macroeconomic payback effects <sup>(3)</sup>	-10
Foreign capital inflows and expansion of the tax base	-465 to -745
Substitution of debt for equity	-52 to -67
Impact of the coordination centres <sup>(4)</sup>	-561
Non-recovery of earlier losses <sup>(2)</sup>	-149
<b>Net budgetary impact</b>	<b>≈ -140 to -430</b>

Sources: CBFA, FPS Finance, NBB.

(1) On the basis of the 2006 annual accounts; the data were therefore calculated according to the financial position of companies at the end of the financial year.

(2) On the basis of the tax return data relating to the 2007 tax year, obtained from the FPS Finance.

(3) The value stated relates to the macroeconomic payback effects seen in the first year following the tax reform.

(4) This concerns on the one hand the coordination centres which qualified for the coordination centre tax regime for the 2006 tax year but switched to the risk capital allowance in the 2007 tax year, and on the other hand the capital of the coordination centres liquidated during 2005 and 2006, which was transferred to other companies established in Belgium.



but that substitution effect does not influence the tax payable by the companies since that is zero. The impact of this provision can be estimated at 149 million euro.

#### OVERVIEW OF THE BUDGETARY IMPACT

The overall adverse effect on public finances in 2006 of the measures introduced by the law of 22 June 2005 can be estimated at between 140 and 430 million euro. However, this estimate is very uncertain and could be too low, but equally too high.

#### 5.4 Expected impact of the dynamic effects

The introduction of the risk capital allowance has not yet produced all its dynamic effects. The gross tax advantage for companies could still increase considerably in the coming years, as a result of various developments.

The first factor concerns the increase in the equity capital which has occurred in recent years and will probably continue. Thus, substantial inflows of foreign capital were recorded in 2007, and again in the first months of 2008. The equity of companies could also increase as a result of tax optimisation techniques. In practice, therefore, the risk capital allowance could concern a large proportion of the total consolidated capital of companies, rather than just their shareholders' equity. That is particularly true in cases where the sum of the equity capital of companies with cross-shareholdings exceeds the level of the group's consolidated equity.

The abolition of the coordination centre regime will also increase the gross tax advantage for companies, since it can be expected that in many cases the activities of these centres will be pursued in the form of companies using the risk capital allowance.

In addition, the rise in interest rates on linear bonds is driving up the basic rate used to calculate the risk capital allowance. Being dependent on the interest rate on ten-year linear bonds issued by the Belgian State, that rate has already risen from 3.442 p.c. in the 2007 tax

year to 4.307 p.c. for 2009, and it could yet increase further.

Finally, there is the use of the tax reserves formed by companies which had not generated sufficient profits, in the tax year 2007, to take full advantage of the measure.

In principle, the net impact on public revenues of foreign capital inflows and the conversion of coordination centres is still modest and could even be positive. The foreign capital contributions and the substitution of debt for equity financing could expand the corporation tax base in Belgium, notably as a result of effects relating to the allocation of profits among the various companies belonging to the same multinational group. The positive influence of the macroeconomic payback effects on public revenues, resulting from the revival of economic growth, could also increase slightly.

Conversely, other factors could attenuate the net budgetary impact. That is true of the increase in the rate used to calculate the risk capital allowance, the use of the tax reserve created by the unused portion of the tax allowance and the changes made to the structure of companies or groups of companies in connection with tax optimisation techniques. A number of these factors could prove quite significant. It is therefore still possible that, in the future, they could have a serious adverse effect on the public revenues generated by corporation tax.

Of course, the exact repercussions will depend on what happens with these factors. Thus, the budgetary costs could increase if corporate operating profits decline significantly – as they generally do in a period of slackening activity – and if interest rates increase.

In any case, the budgetary impact of the measures introduced by the law of 22 June 2005, as estimated in this study, only relates to the year 2006, and at the moment it is still uncertain how the dynamic effects of the introduction of the risk capital allowance will develop. It will therefore be several years before an overview can be obtained, once the coordination centre regime has been abolished and all the effects of the reform are felt.

**TABLE 1.1** HIGHEST STANDARD NOMINAL RATES OF CORPORATION TAX <sup>(1)</sup>  
(percentages)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Belgium	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	34.0	34.0	34.0	34.0	34.0	34.0
Bulgaria	40.0	40.0	40.2	37.0	34.3	32.5	28.0	23.5	23.5	20.0	15.0	15.0	10.0	10.0
Czech Republic	41.0	39.0	39.0	35.0	35.0	31.0	31.0	31.0	31.0	28.0	26.0	24.0	24.0	21.0
Denmark	34.0	34.0	34.0	34.0	32.0	32.0	30.0	30.0	30.0	30.0	28.0	28.0	25.0	25.0
Germany	56.8	56.7	56.7	56.0	51.6	51.6	38.3	38.3	39.6	38.3	38.7	38.7	38.7	29.8
Estonia	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	24.0	23.0	22.0	21.0
Ireland	40.0	38.0	36.0	32.0	28.0	24.0	20.0	16.0	12.5	12.5	12.5	12.5	12.5	12.5
Greece	40.0	40.0	40.0	40.0	40.0	40.0	37.5	35.0	35.0	35.0	32.0	29.0	25.0	25.0
Spain	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	32.5	30.0
France	36.7	36.7	41.7	41.7	40.0	37.8	36.4	35.4	35.4	35.4	35.0	34.4	34.4	34.4
Italy	52.2	53.2	53.2	41.3	41.3	41.3	40.3	40.3	38.3	37.3	37.3	37.3	37.3	31.4
Cyprus	25.0	25.0	25.0	25.0	25.0	29.0	28.0	28.0	15.0	15.0	10.0	10.0	10.0	10.0
Latvia	25.0	25.0	25.0	25.0	25.0	25.0	25.0	22.0	19.0	15.0	15.0	15.0	15.0	15.0
Lithuania	29.0	29.0	29.0	29.0	29.0	24.0	24.0	15.0	15.0	15.0	15.0	19.0	18.0	15.0
Luxembourg	40.9	40.9	39.3	37.5	37.5	37.5	37.5	30.4	30.4	30.4	30.4	29.6	29.6	29.6
Hungary	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	17.6	17.5	17.5	21.3	21.3
Malta	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Netherlands	35.0	35.0	35.0	35.0	35.0	35.0	35.0	34.5	34.5	34.5	31.5	29.6	25.5	25.5
Austria	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	25.0	25.0	25.0	25.0
Poland	40.0	40.0	38.0	36.0	34.0	30.0	28.0	28.0	27.0	19.0	19.0	19.0	19.0	19.0
Portugal	39.6	39.6	39.6	37.4	37.4	35.2	35.2	33.0	33.0	27.5	27.5	27.5	26.5	26.5
Romania	38.0	38.0	38.0	38.0	38.0	25.0	25.0	25.0	25.0	25.0	16.0	16.0	16.0	16.0
Slovenia	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.0	22.0
Slovakia	40.0	40.0	40.0	40.0	40.0	29.0	29.0	25.0	25.0	19.0	19.0	19.0	19.0	19.0
Finland	25.0	28.0	28.0	28.0	28.0	29.0	29.0	29.0	29.0	29.0	26.0	26.0	26.0	26.0
Sweden	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
United Kingdom	33.0	33.0	31.0	31.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
EU <sup>(2)</sup>	35.3	35.3	35.2	34.1	33.5	31.9	30.7	29.3	28.3	27.1	25.5	25.3	24.5	23.6
EU25 <sup>(2)</sup>	35.0	35.0	34.9	33.9	33.3	32.2	31.1	29.7	28.7	27.4	26.3	26.0	25.5	24.4
EA13 <sup>(2)</sup>	38.5	38.6	38.7	37.2	36.4	35.8	34.1	32.8	32.0	31.4	30.0	29.5	28.5	27.1

Source: EC.

(1) Including local taxes.

(2) Unweighted averages.

## Annex 2

**TABLE 2.1** CHANGES IN THE AUTHORISED CAPITAL OF BELGIAN COMPANIES <sup>(1)</sup>  
 (billions of euros)

	Domestic origin						Foreign origin	Indeterminate origin	Total
	Non-financial corporations	Financial institutions	General government	Households	Non-profit institutions serving households				
<b>Formations</b>									
2004	1.5	0.1	0.0	0.6	0.0	0.4	0.8	2.8	
2005	1.5	0.0	0.0	0.9	0.0	0.9	0.2	2.7	
2006	7.6	2.4	0.5	2.3	0.0	10.8	0.0	18.4	
2007	4.6	0.3	0.0	2.8	0.0	3.6	0.0	8.3	
<b>Capital increases</b>									
2004	18.0	0.2	1.2	0.7	0.0	47.8	0.9	66.7	
2005	15.2	1.2	0.2	0.8	0.0	23.7	2.2	41.2	
2006	50.3	17.0	1.4	2.4	0.0	62.6	4.0	116.9	
2007	65.2	34.1	1.3	4.6	0.0	94.8	11.6	171.6	
<b>Capital reductions</b>									
2004	16.9	0.4	3.2	0.2	0.0	11.9	0.6	29.4	
2005	14.7	0.6	0.3	0.1	0.0	14.2	2.1	31.0	
2006	9.7	0.7	1.3	0.3	0.0	22.3	1.1	33.1	
2007	13.9	0.5	0.0	0.6	0.0	23.4	1.6	38.9	
<b>Net effect on the authorised capital</b>									
2004	2.6	-0.1	-2.0	1.1	0.0	36.4	1.1	40.1	
2005	2.0	0.6	0.0	1.5	0.0	10.5	0.4	12.9	
2006	48.2	18.6	0.7	4.5	0.0	51.1	2.9	102.2	
2007	56.0	33.9	1.3	6.8	0.0	74.9	10.1	141.0	

Source: NBB.

(1) The data on capital increases and reductions have been adjusted for transactions which do not affect the basis for calculating the risk capital allowance, such as the conversion of reserves into capital.

**TABLE 2.2** CHANGES IN THE AUTHORISED CAPITAL OF BELGIAN COMPANIES, EXCLUDING TRANSACTIONS BY COORDINATION CENTRES WHICH WERE STILL APPROVED IN 2004<sup>(1)</sup>  
(billions of euros)

	Domestic origin					Foreign origin			Indeterminate origin	Total
	Non-financial corporations	Financial institutions	General government	Households	Non-profit institutions serving households					
<b>Formations</b>										
2004	1.5	0.9	0.1	0.6	0.0	0.4	0.8	0.8	2.8	
2005	1.5	0.6	0.0	0.9	0.0	0.9	0.2	0.2	2.7	
2006	7.6	2.4	2.4	2.3	0.0	10.8	0.0	0.0	18.4	
2007	4.6	1.5	0.3	2.8	0.0	3.6	0.0	0.0	8.3	
<b>Capital increases</b>										
2004	10.2	8.1	0.2	0.7	0.0	19.3	0.8	0.8	30.3	
2005	9.5	7.3	1.2	0.8	0.0	16.1	2.2	2.2	27.8	
2006	40.7	19.8	17.0	2.4	0.0	48.7	3.9	3.9	93.4	
2007	59.0	19.0	34.1	4.6	0.0	82.3	11.6	11.6	152.9	
<b>Capital reductions</b>										
2004	9.4	5.7	0.4	0.2	0.0	5.3	0.6	0.6	15.3	
2005	7.1	6.0	0.6	0.1	0.0	9.1	2.1	2.1	18.3	
2006	4.6	2.3	0.7	0.3	0.0	5.0	1.1	1.1	10.7	
2007	10.8	9.7	0.5	0.6	0.0	20.9	1.6	1.6	33.2	
<b>Net effect on the authorised capital</b>										
2004	2.4	3.3	-0.1	1.1	0.0	14.4	1.0	1.0	17.8	
2005	3.9	1.9	0.6	1.5	0.0	7.9	0.4	0.4	12.2	
2006	43.7	20.0	18.6	4.5	0.0	54.5	2.9	2.9	101.1	
2007	52.8	10.8	33.9	6.8	0.0	65.1	10.1	10.1	128.0	

Source: NBB.

(1) The data on capital increases and reductions have been adjusted for transactions which do not affect the basis for calculating the risk capital allowance, such as the conversion of reserves into capital. Transactions by coordination centres were also excluded.

**TABLE 2.3** CHANGES IN THE AUTHORISED CAPITAL OF COORDINATION CENTRES WHICH WERE STILL APPROVED IN 2004 <sup>(1)</sup>  
 (billions of euros)

	Domestic origin					Foreign origin	Indeterminate origin	Total
	Non-financial corporations	Financial institutions	General government	Households	Non-profit institutions serving households			
<b>Capital increases</b>								
2004	7.7	0.0	0.0	0.0	0.0	28.6	0.1	36.4
2005	5.7	0.0	0.0	0.0	0.0	7.6	0.0	13.4
2006	9.6	0.0	0.0	0.0	0.0	13.8	0.0	23.4
2007	6.3	0.0	0.0	0.0	0.0	12.4	0.0	18.7
<b>Capital reductions</b>								
2004	7.5	0.0	0.0	0.0	0.0	6.6	0.0	14.0
2005	7.6	0.0	0.0	0.0	0.0	5.1	0.0	12.7
2006	5.1	0.0	0.0	0.0	0.0	17.2	0.0	22.4
2007	3.1	0.0	0.0	0.0	0.0	2.6	0.0	5.7
<b>Net effect on the authorised capital</b>								
2004	0.3	0.0	0.0	0.0	0.0	22.0	0.1	22.4
2005	-1.9	0.0	0.0	0.0	0.0	2.6	0.0	0.7
2006	4.5	0.0	0.0	0.0	0.0	-3.4	0.0	1.1
2007	3.2	0.0	0.0	0.0	0.0	9.9	0.0	13.0

Source: NBB.

(1) The data on capital increases and reductions have been adjusted for transactions which do not affect the basis for calculating the risk capital allowance, such as the conversion of reserves into capital.

## Annex 3

**TABLE 3.1** CAPITAL MOVEMENTS OF ALL BELGIAN COMPANIES AFFILIATED TO FOREIGN COMPANIES: TOTAL  
(capital invested via direct shareholdings<sup>(1)</sup>; billions of euros)

	2001	2002	2003	2004	2005	2006
<b>1. Foreign capital contributions to resident firms</b> .....	<b>64.9</b>	<b>56.2</b>	<b>70.3</b>	<b>60.1</b>	<b>76.2</b>	<b>126.6</b>
1.1 Funds reinvested abroad by the firms concerned .....	35.7	29.2	37.4	31.6	48.5	70.1
In the form of equity capital .....	17.0	11.7	16.4	17.4	3.4	3.3
In the form of interfirm loans .....	18.7	17.5	21.0	14.2	45.1	66.8
1.2 Foreign capital contributions remaining in Belgium .....	29.2	27.0	32.9	28.5	27.7	56.5
<b>2. Foreign capital withdrawals from resident firms</b> .....	<b>31.3</b>	<b>47.9</b>	<b>51.9</b>	<b>37.1</b>	<b>48.0</b>	<b>85.4</b>
2.1 Funds disinvested abroad by the firms concerned .....	5.7	18.5	14.8	16.2	6.7	91.1
In the form of equity capital .....	-0.9	9.2	-2.5	1.9	-1.8	19.7
In the form of interfirm loans .....	6.6	9.4	17.3	14.3	8.4	71.4
2.2 Foreign capital withdrawals not offset by foreign disinvestments .....	25.6	29.4	37.2	20.9	41.4	-5.7
<b>Change in inward foreign direct investment (1 - 2)</b> .....	<b>33.6</b>	<b>8.2</b>	<b>18.4</b>	<b>23.0</b>	<b>28.2</b>	<b>41.1</b>
Net foreign investments by the firms concerned (1.1 - 2.1) .....	30.0	10.7	22.6	15.4	41.8	-21.0
Actual capital increase (+) or reduction (-) in the firms concerned (1.2 - 2.2) .....	3.6	-2.4	-4.2	7.6	-13.6	62.2

Source: NBB.

(1) Direct shareholdings are defined by the holding of at least 10 p.c. of the shares or voting rights.

**TABLE 3.2** CAPITAL MOVEMENTS IN COORDINATION CENTRES AFFILIATED TO FOREIGN COMPANIES

(capital invested via direct shareholdings<sup>(1)</sup>; billions of euros)

	2001	2002	2003	2004	2005	2006
<b>1. Foreign capital contributions to resident firms</b> .....	<b>13.4</b>	<b>21.6</b>	<b>32.3</b>	<b>18.6</b>	<b>34.9</b>	<b>13.5</b>
1.1 Funds reinvested abroad by the firms concerned .....	16.6	12.2	18.4	10.1	38.9	1.9
In the form of equity capital .....	0.0	0.0	0.0	0.0	0.0	0.0
In the form of interfirm loans .....	16.6	12.2	18.4	10.1	38.9	1.9
1.2 Foreign capital contributions remaining in Belgium .....	-3.2	9.4	13.9	8.5	-4.0	11.5
<b>2. Foreign capital withdrawals from resident firms</b> .....	<b>8.4</b>	<b>7.5</b>	<b>22.8</b>	<b>16.2</b>	<b>22.7</b>	<b>32.8</b>
2.1 Funds disinvested abroad by the firms concerned .....	6.2	6.1	12.9	12.9	7.7	65.2
In the form of equity capital .....	0.0	0.0	0.0	0.0	0.0	-0.3
In the form of interfirm loans .....	6.2	6.1	12.9	12.9	7.7	65.6
2.2 Foreign capital withdrawals not offset by foreign disinvestments .....	2.2	1.4	9.9	3.3	15.0	-32.5
<b>Change in inward foreign direct investment (1 - 2)</b> .....	<b>4.9</b>	<b>14.2</b>	<b>9.5</b>	<b>2.5</b>	<b>12.2</b>	<b>-19.3</b>
Net foreign investments by the firms concerned (1.1 - 2.1) .....	10.4	6.1	5.5	-2.8	31.2	-63.3
Actual capital increase (+) or reduction (-) in the firms concerned (1.2 - 2.2) .....	-5.4	8.1	4.0	5.2	-19.0	44.0

Source: NBB.

(1) Direct shareholdings are defined by the holding of at least 10 p.c. of the shares or voting rights.

**TABLE 3.3** CAPITAL MOVEMENTS IN BELGIAN COMPANIES AFFILIATED TO FOREIGN COMPANIES EXCLUDING COORDINATION CENTRES

(capital invested via direct shareholdings<sup>(1)</sup>; billions of euros)

	2001	2002	2003	2004	2005	2006
<b>1. Foreign capital contributions to resident firms</b> .....	<b>51.6</b>	<b>34.5</b>	<b>38.0</b>	<b>41.5</b>	<b>41.3</b>	<b>113.1</b>
1.1 Funds reinvested abroad by the firms concerned .....	19.2	17.0	19.0	21.5	9.6	68.2
In the form of equity capital .....	17.0	11.7	16.4	17.4	3.4	3.3
In the form of interfirm loans .....	2.2	5.3	2.7	4.1	6.2	64.9
1.2 Foreign capital contributions remaining in Belgium .....	32.4	17.5	19.0	19.9	31.7	44.9
<b>2. Foreign capital withdrawals from resident firms</b> .....	<b>22.9</b>	<b>40.4</b>	<b>29.1</b>	<b>21.0</b>	<b>25.3</b>	<b>52.7</b>
2.1 Funds disinvested abroad by the firms concerned .....	-0.5	12.4	1.9	3.4	-1.0	25.9
In the form of equity capital .....	-0.9	9.2	-2.5	1.9	-1.8	20.1
In the form of interfirm loans .....	0.4	3.3	4.4	1.4	0.7	5.8
2.2 Foreign capital withdrawals not offset by foreign disinvestments .....	23.4	28.0	27.3	17.6	26.3	26.8
<b>Change in inward foreign direct investment (1 – 2)</b> .....	<b>28.7</b>	<b>-5.9</b>	<b>8.9</b>	<b>20.5</b>	<b>16.0</b>	<b>60.4</b>
Net foreign investments by the firms concerned (1.1 – 2.1) .....	19.7	4.6	17.2	18.2	10.6	42.3
Actual capital increase (+) or reduction (-) in the firms concerned (1.2 – 2.2) .....	9.0	-10.5	-8.3	2.4	5.4	18.1

Source: NBB.

(1) Direct shareholdings are defined by the holding of at least 10 p.c. of the shares or voting rights.



## Annex 4

**TABLE 4.1** CHANGES IN THE AUTHORISED CAPITAL OF COORDINATION CENTRES STILL APPROVED IN 2004<sup>(1)</sup>  
(millions of euros)

	2004	2005	2006	2007
<b>1. Approval expired between 2004 and September 2006</b>				
<b>Capital increases</b> .....	<b>164</b>	<b>622</b>	<b>373</b>	<b>708</b>
Indeterminate origin .....	0	1	0	0
Domestic origin .....	0	1	0	95
Foreign origin .....	164	620	373	614
<b>Capital reductions</b> .....	<b>13,151</b>	<b>4,627</b>	<b>234</b>	<b>365</b>
Indeterminate destination .....	0	0	0	0
Domestic destination .....	6,015	4,622	149	81
Foreign destination .....	7,136	5	85	285
<b>Net changes in capital</b> .....	<b>-12,987</b>	<b>-4,005</b>	<b>139</b>	<b>343</b>
Indeterminate origin or destination .....	0	1	0	0
Domestic origin or destination .....	-6,015	-4,622	-149	14
Foreign origin or destination .....	-6,972	615	288	329
<b>2. Approval expired between September 2006 and November 2007</b>				
<b>Capital increases</b> .....	<b>50</b>	<b>1,544</b>	<b>4,518</b>	<b>5,200</b>
Indeterminate origin .....	50	0	0	0
Domestic origin .....	0	1,544	4,508	5,200
Foreign origin .....	0	0	10	0
<b>Capital reductions</b> .....	<b>1,653</b>	<b>7,381</b>	<b>4,253</b>	<b>1,508</b>
Indeterminate destination .....	0	0	0	0
Domestic destination .....	1,507	5,852	3,691	1,431
Foreign destination .....	146	1,529	562	78
<b>Net changes in capital</b> .....	<b>-1,603</b>	<b>-5,837</b>	<b>265</b>	<b>3,692</b>
Indeterminate origin or destination .....	50	0	0	0
Domestic origin or destination .....	-1,507	-4,308	818	3,769
Foreign origin or destination .....	-146	-1,529	-552	-78
<b>3. Approval expired between November 2007 and March 2008</b>				
<b>Capital increases</b> .....	<b>10,579</b>	<b>4,363</b>	<b>1,161</b>	<b>5,566</b>
Indeterminate origin .....	0	0	0	0
Domestic origin .....	2,897	1,562	673	199
Foreign origin .....	7,682	2,801	487	5,366
<b>Capital reductions</b> .....	<b>3,474</b>	<b>482</b>	<b>5,019</b>	<b>3,839</b>
Indeterminate destination .....	0	0	0	0
Domestic destination .....	191	351	0	1,686
Foreign destination .....	3,283	131	5,019	2,153
<b>Net changes in capital</b> .....	<b>7,105</b>	<b>3,881</b>	<b>-3,858</b>	<b>1,726</b>
Indeterminate origin or destination .....	0	0	0	0
Domestic origin or destination .....	2,706	1,212	673	-1,487
Foreign origin or destination .....	4,399	2,670	-4,532	3,214

Sources: FPS Finance, NBB.

(1) Any liquidation gains or losses were taken into account.

**TABLE 4.1** CHANGES IN THE AUTHORISED CAPITAL OF COORDINATION CENTRES STILL APPROVED IN 2004<sup>(1)</sup> (continued)  
(millions of euros)

	2004	2005	2006	2007
<b>4. Approval still valid in March 2008</b>				
<b>Capital increases</b> .....	<b>25,607</b>	<b>6,864</b>	<b>17,395</b>	<b>7,236</b>
Indeterminate origin .....	25	12	25	11
Domestic origin .....	4,848	2,627	4,395	776
Foreign origin .....	20,734	4,225	12,975	6,449
<b>Capital reductions</b> .....	<b>752</b>	<b>1,335</b>	<b>13,412</b>	<b>1</b>
Indeterminate destination .....	0	0	0	0
Domestic destination .....	752	497	1,756	0
Foreign destination .....	0	838	11,656	1
<b>Net changes in capital</b> .....	<b>24,855</b>	<b>5,529</b>	<b>3,983</b>	<b>7,236</b>
Indeterminate origin or destination .....	25	12	25	11
Domestic origin or destination .....	4,096	2,130	2,639	776
Foreign origin or destination .....	20,734	3,387	1,319	6,449
<b>5. Total capital transactions of coordination centres</b>				
<b>Capital increases</b> .....	<b>36,400</b>	<b>13,394</b>	<b>23,447</b>	<b>18,710</b>
Indeterminate origin .....	75	13	25	11
Domestic origin .....	7,745	5,734	9,577	6,270
Foreign origin .....	28,580	7,646	13,845	12,429
<b>Capital reductions</b> .....	<b>19,030</b>	<b>13,825</b>	<b>22,918</b>	<b>5,714</b>
Indeterminate destination .....	0	0	0	0
Domestic destination .....	8,466	11,322	5,596	3,198
Foreign destination .....	10,564	2,504	17,322	2,516
<b>Net changes in capital</b> .....	<b>17,370</b>	<b>-432</b>	<b>528</b>	<b>12,996</b>
Indeterminate origin or destination .....	75	13	25	11
Domestic origin or destination .....	-720	-5,587	3,981	3,072
Foreign origin or destination .....	18,015	5,143	-3,477	9,913

Sources: FPS Finance, NBB.

(1) Any liquidation gains or losses were taken into account.

## Annex 5

### Assessment of the impact of the risk capital allowance on the Belgian economy

#### 1. Implementation

The potential impact of the risk capital allowance on the Belgian economy is assessed by means of the Bank's quarterly "Noname" model. As in most models, this assessment is conducted by considering that the effects of corporation tax on company decisions will be felt via the change in the user cost of capital.

Long-term investment demand, conducted by profit maximising companies, depends on output with a unitary elasticity, and on the ratio between the capital cost and the production price with an elasticity determined by the elasticity of the substitution of capital for labour. In the short term, the additional accelerator effect produced by cash flows must also be taken into account.

#### User cost of capital

This tax measure is first introduced into the model by varying the cost of capital. There are various definitions of the cost of capital, depending on the assumptions made or the desired degree of complexity, but all the measures comprise as their main element the opportunity cost of the funds used to finance the project: a lower cost typically results in a higher level of investment. In the absence of taxation, the opportunity cost is equal to the risk-free interest rate plus a risk premium ( $rp$ ). A very minor restriction is imposed by assuming that the risk premium is independent of the measure in question. The opportunity cost,  $co$ , depends on the interest rate,  $R$ , on the return after tax required for an investment financed by equity,  $R^E$ , on the return after tax required for an investment financed by debt,  $R^D$ , and on the proportion of the investments financed by equity,  $\beta_E$ . This opportunity cost can be written as follows:

$$co = \beta_E.R^E + (1 - \beta_E).R^D$$

Before the risk capital allowance had been introduced, only the interest on debts was deductible so that:

$$R^E = rp^E + R$$

$$R^D = rp^D + (1 - t).R$$

where  $t$  is the rate of corporation tax.

If the equity finance also becomes deductible, the rate of return required on these investments becomes:

$$R^E = rp^E + (1 - t).R$$

$$R^D = rp^D + (1 - t).R$$

The introduction of the measure therefore corresponds to a reduction in the opportunity cost equalling

$$co - co^{IN} = (\beta_E.(rp^E + R) + (1 - \beta_E).(rp^D + (1 - t).R)) - (\beta_E.(rp^E + (1 - t).R) + (1 - \beta_E).(rp^D + (1 - t).R))$$

or:

$$\varepsilon^{co} = -\beta_E.t.R$$

which will be the shock applied to the model.

On the basis of the aggregate figures for all non-financial corporations, it seems that over the latest five years available, i.e. 2002-2006, the average of  $\beta_{\epsilon}$  is 43 p.c. The *ex ante* shock to the opportunity cost is therefore:

$$\epsilon^{co} = -0,43.0,33.R$$

For the 2007 tax year, this rate  $R$  is set at 3.442 p.c. (3.942 p.c. for SMEs).

### *Ex ante* budgetary impact

To assess the *ex ante* effect of the measure on corporate cash flows it is necessary to know the budgetary cost, as this cost corresponds to a transfer of resources from general government to the business sector. That cost is particularly hard to assess since the measure does not apply only to new business investments but concerns the whole of the corporate balance sheet. That assessment therefore requires accounting and tax definitions which are beyond the scope of the model; in addition, there is a set of compensatory measures concerning corporate taxation, the impact of which is difficult to ascertain. That is why two simulations were carried out. In the first, the measure is assumed to be neutral for the budget; in the second, it is said to cost one billion euro per annum, or 0.3 p.c. of GDP. Taking account of the volatility seen in the data on both cash flows and corporation tax, the shock is stated directly as a nominal amount rather than by modifying the rate of corporation tax.

## 2. Results

In each simulation, the measure is assumed not to influence the wage negotiations, so that there is no change in labour costs excluding indexation. No fiscal rule is activated ensuring that the public debt adheres to a predefined path, so that the higher public debt caused by the measure is not offset by raising other taxes or cutting expenditure.

Table 1 presents the effects on long-term investment demand where investment reacts to production and the user cost of capital. The shock is applied to the interest rate present in the user cost of capital. Its impact on the actual user cost also depends on the level of the risk premium: the higher that premium, the weaker will be the proportional effect of the shock on the user cost of capital. As already stated, this risk premium is kept constant (at 10 p.c. per annum, corresponding to the value used when estimating the model).

The reduction in the cost of capital stimulates investment demand which in turn boosts domestic demand and demand for imports. The strengthening of domestic demand leads to expanding employment and lower unemployment. If the budgetary cost of the measure is zero, business investment increases by a maximum of 0.8 p.c. and employment expands by around 3,000 units. Such an adjustment to the tax system that is related to investment funding has practically no effect on prices.

Table 2 shows the cumulative long-term and accelerator effects generated by short-term cash flows when they increase by one billion euro.

If the measure causes a reduction in corporation tax, it increases the companies' cash flows. These additional cash flows give rise to investment expansion in excess of that due to the capital-labour substitution resulting from the reduction in the user cost of capital. This cash-flow effect is greater the higher the *ex ante* budgetary effect, and hence the impact on cash flows. If the *ex ante* budgetary effect is one billion euro, the impact on business investment is 1.6 p.c., and the impact on employment is around 6,700 units. Apart from a very small increase in personal income tax and social contributions resulting from job creation, the payback effects on public finances are relatively weak.

**TABLE 5.1** EFFECTS OF THE REDUCTION IN THE COST OF CAPITAL FOLLOWING THE INTRODUCTION OF THE RISK CAPITAL ALLOWANCE IN A SCENARIO OF *EX ANTE* BUDGET NEUTRALITY  
(p.c. differences in relation to the baseline simulation, unless otherwise stated)

	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Prices and costs</b>					
HICP .....	0.00	0.03	0.04	0.03	0.01
HICP excluding energy .....	0.00	0.03	0.04	0.03	0.01
Private consumption deflator .....	0.00	0.03	0.04	0.03	0.01
Deflator of the gross fixed capital formation .....	-0.01	-0.01	0.01	0.01	-0.01
GDP deflator .....	-0.00	-0.00	0.01	0.01	0.01
Unit labour cost .....	-0.01	-0.01	0.04	0.06	0.05
Hourly labour cost .....	0.00	0.02	0.04	0.04	0.02
Productivity .....	0.01	0.02	0.00	-0.02	-0.04
Real compensation per employee .....	0.00	-0.01	0.00	0.00	0.00
Import deflator .....	0.00	0.04	0.04	0.02	0.01
Export deflator .....	0.00	0.02	0.02	0.02	0.01
Terms of trade <sup>(1)</sup> .....	-0.00	-0.02	-0.01	0.00	0.00
<b>Economic activity (at constant prices)</b>					
GDP .....	0.01	0.04	0.05	0.05	0.04
Private consumption .....	0.00	0.00	0.00	0.01	0.00
Public consumption .....	0.00	0.00	0.00	0.00	0.00
Investment .....	0.13	0.48	0.55	0.53	0.52
Exports .....	0.00	0.00	-0.01	-0.02	-0.02
Imports .....	0.02	0.07	0.08	0.07	0.07
Real disposable income of households .....	0.00	-0.01	0.00	0.01	0.01
Household savings ratio (p.c. of disposable income) .....	0.00	-0.01	-0.01	0.00	0.00
<b>Labour market</b>					
Unemployment rate <sup>(1)</sup> .....	0.00	-0.02	-0.04	-0.06	-0.06
Total employment .....	0.00	0.02	0.05	0.06	0.07
<i>of which: market sector</i> .....	0.00	0.02	0.06	0.08	0.08
<b>Budgetary changes (in p.c. of GDP)</b>					
Total revenues <sup>(1)</sup> .....	0.00	0.02	0.03	0.03	0.02
Total expenditure <sup>(1)</sup> .....	0.00	0.00	0.00	-0.01	-0.01
Net financing balance <sup>(1)</sup> .....	0.00	0.02	0.03	0.03	0.03
Primary balance <sup>(1)</sup> .....	0.00	0.02	0.03	0.03	0.03
Public debt <sup>(1)</sup> .....	0.00	-0.01	-0.04	-0.07	-0.10
<b>Gross fixed capital formation</b>					
Housing .....	0.00	0.00	0.00	0.00	0.01
General government .....	0.00	0.00	0.00	0.00	0.00
Enterprises .....	0.19	0.69	0.78	0.77	0.76

Source: NBB.

(1) Absolute deviations from the baseline simulation.

**TABLE 5.2** EFFECTS OF THE REDUCTION IN THE COST OF CAPITAL FOLLOWING THE INTRODUCTION OF THE RISK CAPITAL ALLOWANCE ACCOMPANIED BY AN *EX ANTE* BUDGETARY COST OF ONE BILLION EURO PER ANNUM  
(p.c. differences in relation to the baseline simulation, unless otherwise stated)

	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Prices and costs</b>					
HICP .....	0.00	0.04	0.08	0.07	0.04
HICP excluding energy .....	0.00	0.04	0.08	0.07	0.04
Private consumption deflator .....	0.00	0.04	0.08	0.07	0.04
Deflator of the gross fixed capital formation .....	-0.01	-0.02	0.01	0.01	-0.01
GDP deflator .....	0.00	-0.01	0.01	0.02	0.01
Unit labour cost .....	-0.02	-0.02	0.07	0.11	0.11
Hourly labour cost .....	0.00	0.03	0.08	0.08	0.05
Productivity .....	0.02	0.05	0.01	-0.04	-0.07
Real compensation per employee .....	0.00	-0.02	0.00	0.01	0.01
Import deflator .....	0.01	0.06	0.08	0.05	0.02
Export deflator .....	0.00	0.04	0.04	0.04	0.02
Terms of trade <sup>(1)</sup> .....	0.00	-0.03	-0.04	-0.02	0.00
<b>Economic activity (at constant prices)</b>					
GDP .....	0.02	0.08	0.10	0.10	0.10
Private consumption .....	0.00	0.00	0.01	0.02	0.02
Public consumption .....	0.00	0.00	0.00	0.00	0.00
Investment .....	0.21	0.86	1.12	1.15	1.12
Exports .....	0.00	-0.01	-0.02	-0.03	-0.03
Imports .....	0.03	0.13	0.16	0.16	0.15
Real disposable income of households .....	0.00	-0.02	-0.01	0.01	0.02
Household savings ratio (p.c. of disposable income) .....	0.00	-0.02	-0.02	-0.01	0.00
<b>Labour market</b>					
Unemployment rate <sup>(1)</sup> .....	0.00	-0.03	-0.08	-0.11	-0.13
Total employment .....	0.00	0.03	0.09	0.13	0.15
<i>of which: market sector</i> .....	<i>0.00</i>	<i>0.04</i>	<i>0.11</i>	<i>0.15</i>	<i>0.18</i>
<b>Budgetary changes (in p.c. of GDP)</b>					
Total revenues <sup>(1)</sup> .....	-0.31	-0.27	-0.23	-0.22	-0.22
Total expenditure <sup>(1)</sup> .....	0.00	0.02	0.03	0.03	-0.02
Net financing balance <sup>(1)</sup> .....	-0.32	-0.29	-0.26	-0.25	-0.25
Primary balance <sup>(1)</sup> .....	-0.31	-0.27	-0.23	-0.21	-0.20
Public debt <sup>(1)</sup> .....	0.20	0.48	0.72	0.94	1.14
<b>Gross fixed capital formation</b>					
Housing .....	0.00	0.00	0.00	0.01	0.02
General government .....	0.00	0.00	0.00	0.00	0.00
Enterprises .....	0.30	1.25	1.61	1.64	1.61

Source: NBB.

(1) Absolute deviations from the baseline simulation.

Annex 6

**TABLE 6.1**  
**TAXES ON COMPANIES**  
(millions of euros)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<b>Taxes on corporate profits</b> .....	<b>7,760</b>	<b>7,702</b>	<b>8,089</b>	<b>8,091</b>	<b>8,142</b>	<b>7,912</b>	<b>9,210</b>	<b>10,223</b>	<b>11,835</b>	<b>12,143</b>
Advance payments .....	6,925	6,755	7,115	7,125	6,586	6,600	7,976	8,398	9,033	9,782
Assessments <sup>(1)</sup> .....	143	178	422	347	949	799	540	852	1,821	1,311
Withholding tax on income from movable assets .....	686	763	548	607	581	502	684	964	961	1,032
Other taxes on income .....	6	7	5	13	25	11	10	9	21	18
<b>Other taxes on companies</b> .....	<b>297</b>	<b>295</b>	<b>274</b>	<b>279</b>	<b>308</b>	<b>303</b>	<b>382</b>	<b>631</b>	<b>414</b>	<b>446</b>
Annual tax on undertakings for collective investment .....	67	81	92	96	103	104	151	189	209	253
Levy to combat the non-use of electricity production sites .....	0	0	0	0	0	0	0	0	70	0
Transfer to the Industrial Accident Fund by approved private insurance companies .....	230	215	182	183	205	199	231	229	255	248
Securitisations effected in 2005 and 2006 .....	0	0	0	0	0	0	0	213	-120	-54
<b>Total</b> .....	<b>8,057</b>	<b>7,997</b>	<b>8,363</b>	<b>8,371</b>	<b>8,449</b>	<b>8,215</b>	<b>9,592</b>	<b>10,853</b>	<b>12,249</b>	<b>12,589</b>

Sources: FPS Finance, NAI, NBB.

(1) Including the tax on non-resident companies.

**TABLE 6.2** TAXES ON COMPANIES  
(percentages of GDP)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<b>Taxes on corporate profits</b> .....	<b>3.4</b>	<b>3.2</b>	<b>3.2</b>	<b>3.1</b>	<b>3.0</b>	<b>2.9</b>	<b>3.2</b>	<b>3.4</b>	<b>3.7</b>	<b>3.7</b>
Advance payments .....	3.0	2.8	2.8	2.8	2.5	2.4	2.8	2.8	2.9	3.0
Assessments <sup>(1)</sup> .....	0.1	0.1	0.2	0.1	0.4	0.3	0.2	0.3	0.6	0.4
Withholding tax on income from movable assets .....	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
Other taxes on income .....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Other taxes on companies</b> .....	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>
Annual tax on undertakings for collective investment .....	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Levy to combat the non-use of an electricity production site .....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Transfer to the Industrial Accident Fund by approved private insurance companies .....	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Securitisations effected in 2005 and 2006 .....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
<b>Total</b> .....	<b>3.5</b>	<b>3.4</b>	<b>3.3</b>	<b>3.2</b>	<b>3.2</b>	<b>3.0</b>	<b>3.3</b>	<b>3.6</b>	<b>3.9</b>	<b>3.8</b>

Sources: FPS Finance, NAI, NBB.

(1) Including the tax on non-resident companies.



Annex 7

**TABLE 7.1** IMPLICIT MACROECONOMIC CORPORATE TAX RATES  
(percentages)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<b>In proportion to the gross operating result and other factors<sup>(1)</sup></b>										
Tax on corporate profits .....	15.9	15.4	15.2	15.2	14.4	13.4	13.9	14.3	14.2	14.9
of which: advance payments .....	14.2	13.5	13.4	13.4	11.7	11.2	12.1	11.7	11.7	11.9
Adjusted corporation tax <sup>(2)</sup> .....	16.5	15.7	16.2	16.0	13.7	13.5	14.5	14.4	14.7	14.8
<b>In proportion to the net operating result and other factors<sup>(1)</sup></b>										
Tax on corporate profits .....	29.4	29.2	28.9	30.6	28.5	26.0	25.8	25.4	24.6	25.7
of which: advance payments .....	26.2	25.6	25.4	27.0	23.1	21.7	22.3	20.9	20.3	20.6
Adjusted corporation tax <sup>(2)</sup> .....	30.5	29.8	30.8	32.3	27.1	26.1	26.9	25.5	25.5	25.7

Sources: FPS Finance, IMA, NBB.

(1) Apart from the operating result, the macroeconomic approximation of the tax base includes net interest received, net income from property attributed to the holders of insurance policies, and net income from land and mineral reserves.

(2) The adjustment was made by transferring to the previous year the amount collected by way of the assessments, so as to make them coincide with the advance payments relating to the same tax year. The amount of the assessments to be collected in 2008, which should be compared with the advance payments made in 2007, was estimated at 1,286 million euro. A further adjustment neutralised the influence of the exceptional acceleration in the rate of the assessments in 2006, which boosted public revenues by around 900 million euro, and the influence of one-off receipts estimated at 245 million euro, resulting from the measure introduced in 2007 permitting the distribution or investment of tax-exempt reserves at a reduced rate.