

# REPORT

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# PUBLIC INVESTMENTS

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## ANALYSIS & RECOMMENDATIONS

October 2017

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## **PART 1 – Analysis of public investment in Belgium<sup>1</sup>**

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### **1. Introduction**

In relation to GDP, public investment in Belgium has halved since the early 1970s. The Belgian State is currently among the European countries making the least amount of investment, while its current expenditure remains relatively high. But public investment is also currently at a low level in other euro area countries, often due to significant cutbacks in the wake of the financial and economic crisis. And yet public investment has a beneficial effect on the long-term growth potential of the economy. From this perspective, public investment therefore deserves an additional stimulus, of course without undermining the need to restructure public finances to ensure sustainability.

The first part of this study analyses the different components of public investment, outlines its evolution and compares the Belgian situation with the European situation.

The second part examines the various ways in which increased public investment, which is a worthy goal, can be achieved. The study will end with several conclusions.

### **2. Composition and evolution of public investment**

#### **2.1. Public investment in Belgium**

##### **2.1.1. Definition**

Public investment is defined as gross fixed capital formation by the government. These gross investments are the balance of fixed assets acquired and sold by the federal government, social security, the communities and regions, or the local government. Fixed assets may include buildings, construction works, means of transport, IT or telecommunication infrastructure, armaments, R&D expenditure, etc. In 2016, the investment expenditure of the general government in Belgium amounted to € 9.7 billion, or 2.3% of GDP.

According to a broader definition, public investment could also include the investment grants paid by the government to various entities in the non-profit sector (hospitals, nursing homes, etc.) which fulfil a public interest role. These entities are not part of the public sector in the strict sense, as defined in the national accounts. However, they often receive transfers from the government sector to finance their investments. Although these contributions are not sufficient to fully finance the investments of these entities, they are nevertheless a good approximation. Not only does this give an idea of public investment in the strict sense, but also of public investment in the broad sense. The latter amounted to € 13.3 billion in 2016, or 3.1% of GDP. However, in the follow-up to this study, the narrow definition of public investment, i.e. gross fixed capital formation by the government, is used.

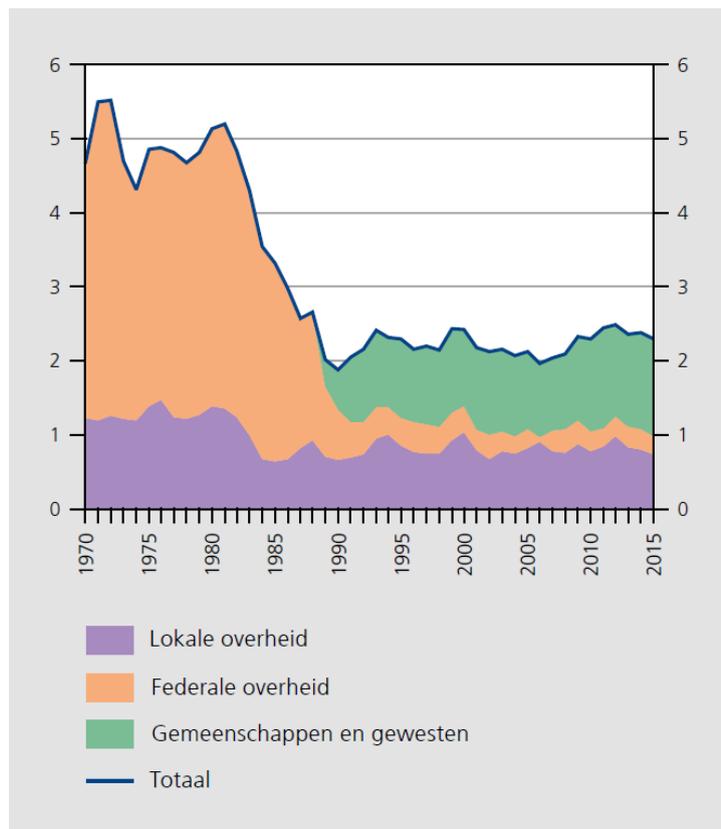
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<sup>1</sup> Authors: P. Crevits, W. Melyn, C. Modart, K. Van Cauter, L. Van Meens

### 2.1.2. Composition

In 2016, more than half of public investment in Belgium was made by the communities and regions. Local government accounts for about one third of the sums invested by the government, even though its share generally fluctuates over a six-year electoral cycle, which corresponds to the duration of a municipal legislature. The federal government, including social security, which invests very little, accounts for only one-tenth of total public investment in Belgium.

**Graph 1 The communities and regions account for the majority of public investment** (public investment per sub-sector<sup>(1)</sup>, in % of GDP)

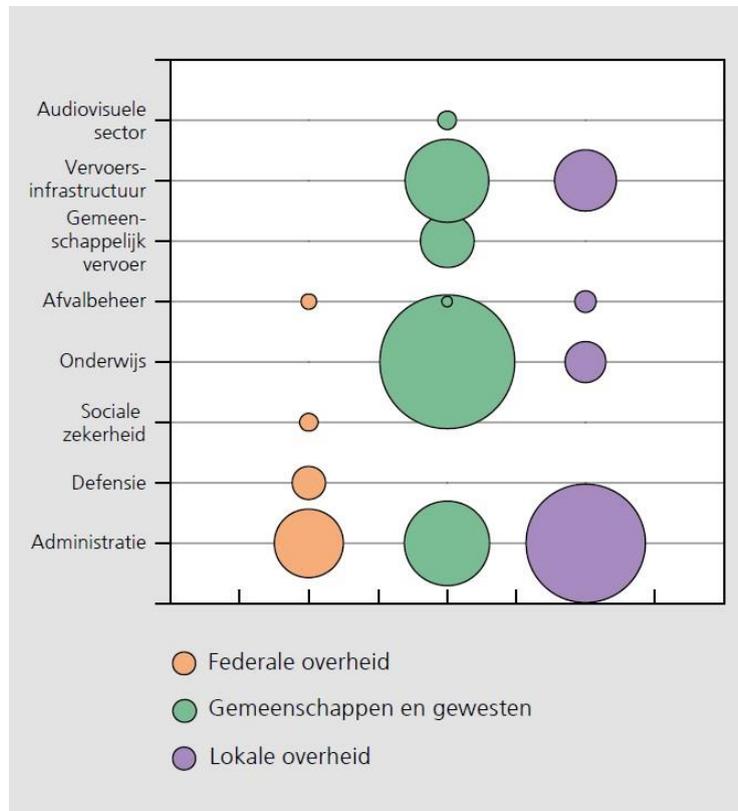


Sources: NAI, NBB.

<sup>(1)</sup> In the national accounts, the Communities and Regions have only been considered as a fully-fledged sub-sector since 1989. In the graph, moreover, all data prior to 1995, for which the NAI does not publish statistics in accordance with ESA 2010 methodology, have been interpolated using the growth percentages from the series of accounts in accordance with ESA95.

Around 40% of public investment is earmarked for the administration in the broad sense. For the rest, the allocation of public investment logically depends on the competences exercised at each policy level. Investment in education, which accounts for almost one third of investment expenditure, is carried out at the level of the sub-regions and, to a lesser extent, at the level of local government. The same applies to transport infrastructure, which accounts for almost one fifth of public investment in total. Investment in public transport, which accounts for one twentieth of the total, is carried out exclusively at the regional level, given that SNCB is not part of the government sector as defined in the national accounts. Finally, investment in defence, which accounts for less than 2% of expenditure, is carried out by the federal government alone.

**Graph 2 Composition of public investment: breakdown by sub-sector and function**  
(share of total public investment<sup>(1)</sup>, 2016)



Sources: NAI, NBB.

<sup>(1)</sup> The area of each circle corresponds to the share of total public investment.

Public investment can take a variety of forms: buildings (purchased or built), construction works (in particular road construction or hydraulic works), equipment, intangible assets. The allocation of the investments largely determines their form. For example, the vast majority of investments made on behalf of the administration and education consist of the purchase and construction of buildings. For its part, transport infrastructure requires investment not only in road construction (including tunnels and bridges) but also in hydraulic works (ports, canals, dikes, locks, etc.) and in other construction works (metro (underground) networks, drainage systems, etc.). Investments in equipment are made in particular for public transport and defence. Finally, the investments in intangible assets, which include R&D expenditure, are made mainly in education. However, it should be noted that investment in construction works has declined over the last decade, while other forms of investment are increasing.

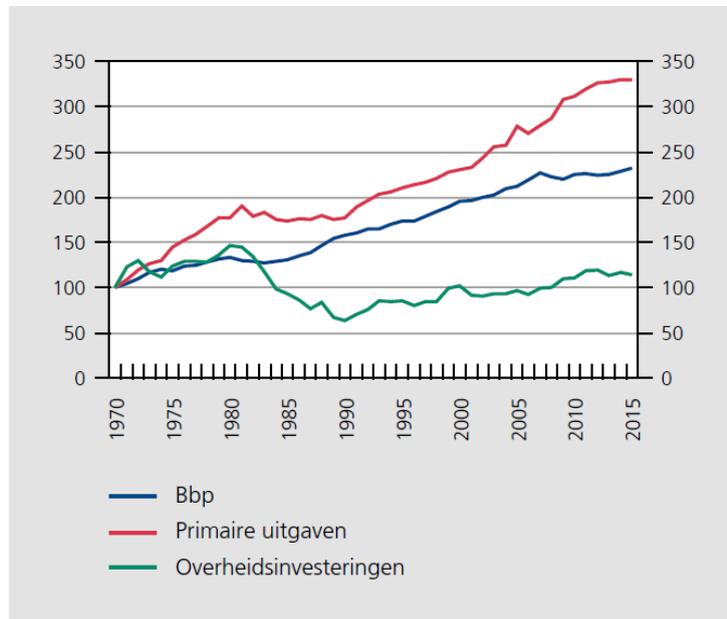
<b>Table 1 - Composition of public investment: breakdown by category</b> (In € millions)					
	<b>1995</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2016</b>
<b>Buildings</b>	<b>800</b>	<b>1,031</b>	<b>1,466</b>	<b>1,963</b>	<b>3,163</b>
Purchases	44	67	-1	4	127
Construction	755	965	1,466	1,960	3,036
<b>Construction works</b>	<b>2,034</b>	<b>2,655</b>	<b>1,828</b>	<b>1,975</b>	<b>2,115</b>
Road construction	738	962	956	964	1,208
Hydraulic works	440	337	374	479	372
Other	857	1,357	498	532	536
<b>Other investment assets</b>	<b>1,629</b>	<b>2,204</b>	<b>3,058</b>	<b>4,202</b>	<b>4,352</b>
Equipment	658	981	1,409	1,843	1,422
Intangible assets	971	1,223	1,650	2,360	2,929
<b>Subtotal (excluding defence)</b>	<b>4,464</b>	<b>5,890</b>	<b>6,351</b>	<b>8,140</b>	<b>9,588</b>
<i>token entry Investment in defence</i>	393	381	274	258	143
<b>Total</b>	<b>4,857</b>	<b>6,271</b>	<b>6,626</b>	<b>8,398</b>	<b>9,731</b>
Sources: NAI, NBB.					

### 2.1.3. Evolution

Since 1970, public investment and total primary expenditure have evolved differently. The former has grown less strongly than GDP, while the latter has grown faster than economic activity. Ultimately, the evolution of public investment is only slightly higher than the inflation recorded over this period.

In relation to GDP, public investment in Belgium has halved between 1970 and 2015. Today, it accounts for just 2.3% of GDP compared to a peak of 5.5% in the early 1970s. This decline occurred mainly during the budgetary consolidation of the 1980s. Indeed, investments are expenditure that is easily scrapped or postponed in times of austerity, since the management of current expenditure often requires unpopular measures. However, at the end of the 1980s, investment stabilised and since then has fluctuated between 2 and 2.5% of GDP.

**Graph 3 Belgian public investment has hardly increased in real terms.**  
(index 1970 = 100, in volume)

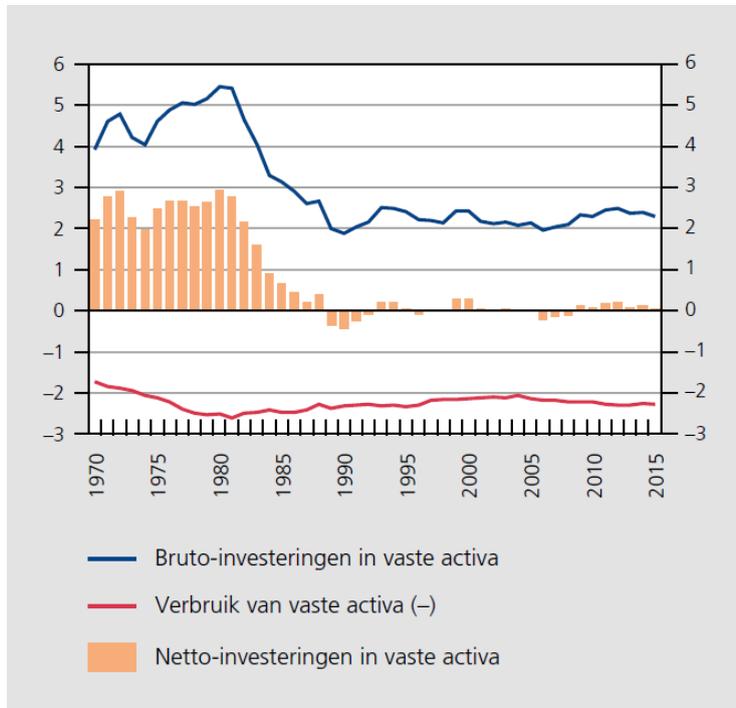


Sources: NAI, NBB.

The evolution of public investment relative to total primary expenditure is even more spectacular. Since the early 1970s, the proportion of expenditure earmarked for investment has practically reduced by two thirds. Currently, public investment expenditure accounts for less than 5% of total primary expenditure.

The decrease in gross investment logically has an impact on net investment. Net fixed capital formation (or net investments) is defined as the difference between the gross fixed capital formation (i.e. gross investment) and the consumption of fixed capital (i.e. the depreciation corresponding to the depreciation of fixed capital due to normal wear and tear and obsolescence). Since the end of the 1980s, the new investments have scarcely been able to compensate for the depreciation of capital in earlier investments. Net investment is therefore very small, and in some years even negative.

**Graph 4 Belgian public investment barely compensates for depreciation**  
(as a % of GDP)

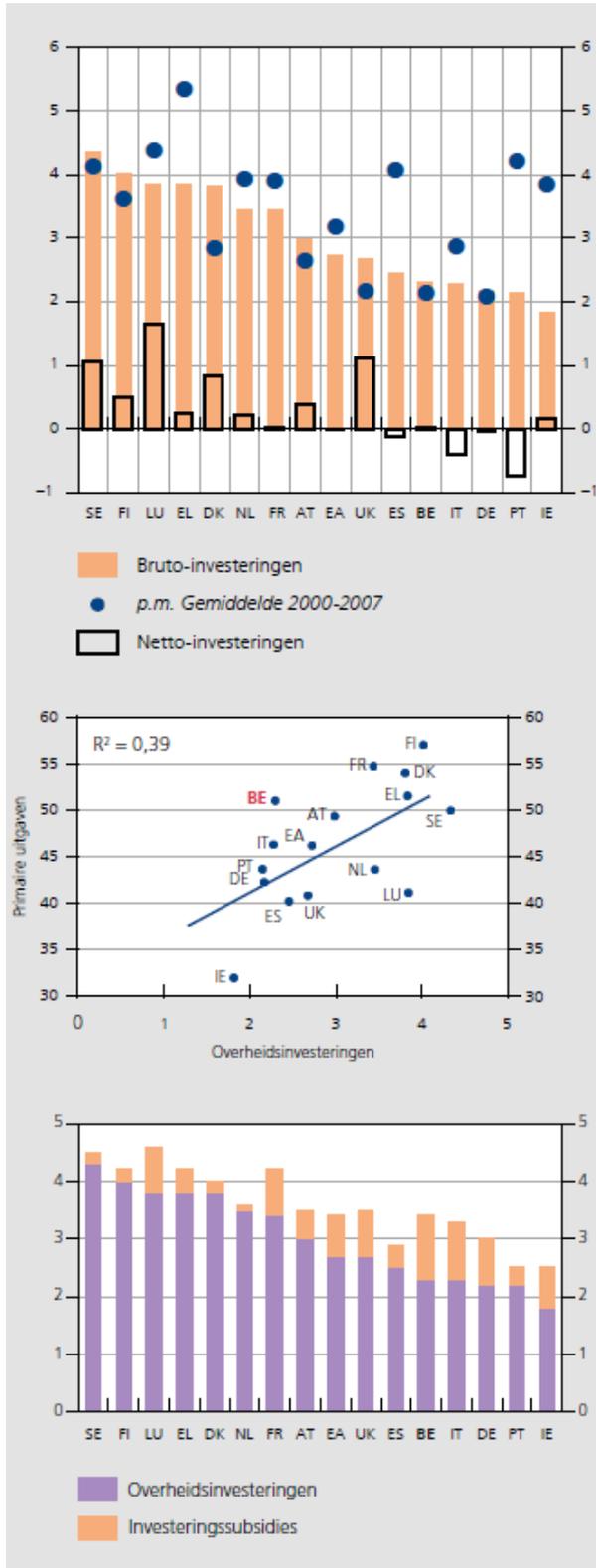


Source: EC

## 2.2. International benchmarking

At the European level, the financial and economic crisis has prompted many countries which are in difficulty to significantly reduce their levels of public investment. This was the case for Ireland, Portugal and the Mediterranean countries. With the exception of Greece, these States, together with Belgium, are among the countries with the lowest levels of public investment at present. Germany is also among these countries; similarly to Belgium, public investment, which was already weak before the crisis, has subsequently shown little sign of improvement. In contrast, in the Scandinavian countries, the level of public investment is twice as high, at close to 4% of GDP. Public investment in France and the Netherlands is also significantly higher than in Belgium.

**Graph 5 Public investment in Belgium is one of the lowest in Europe**  
 (as a % of GDP, 2015)

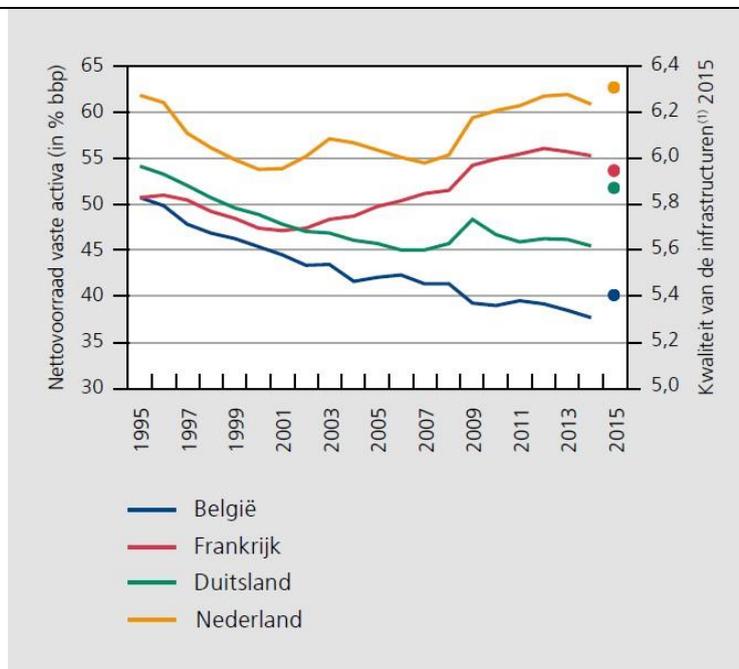


Source: EC

The comparison is even more striking if overall public expenditure is taken into account. While a certain correlation is observed at the European level between the level of public investment and total primary expenditure, Belgium stands out by a combination of weak investment and high expenditure. Among the countries where primary expenditure exceeds 50% of GDP, Belgium therefore has the lowest public investment relative to GDP. In addition, six Western European countries manage to invest more than Belgium, while generally spending less. In the remaining countries, the government has a low investment ratio, but primary expenditure is also significantly lower than in Belgium.

However, in its broadest sense, public investment in Belgium is in line with the European average. In other words, the sum of direct investment and public investment grants is more comparable to the situation elsewhere in Europe.

**Graph 6 The net stock of fixed assets in the government sector, reflecting the quality of infrastructure, is relatively small in Belgium (in % of GDP)**



Sources: EC, World Economic Forum.

<sup>(1)</sup> The quality of infrastructure (e.g. for transport, telephony, energy) is assessed by respondents on a scale from 1 (highly underdeveloped / among the worst in the world) to 7 (extensive and efficient / among the best in the world).

By cumulating net investments over the years, we can see the government's capital stock (or net stocks of fixed assets). In relation to GDP, this capital stock in Belgium has decreased almost continuously since 1995. A similar trend was observed in Germany up to 2005, but since then the capital stock has stabilised. The Netherlands, on the other hand, has returned to its 1995 capital level, and France has managed to increase its stock of public capital during the same period. However, a country's inventory of fixed assets is reflected by assessing the quality of its infrastructure. The score awarded by the World Economic Forum on the basis of a survey ranks countries in an order which more or less corresponds with the ranking of their capital stock. Belgium is consequently ranked behind its main neighbouring countries, not only for its infrastructure as a whole, but also for its road and rail network and its airport infrastructure. Only its port infrastructure receives a more favourable assessment: behind the Netherlands, but

ahead of Germany and France.

These developments, which differ from those in our neighbouring countries, indicate that it is not only possible but also beneficial to stimulate public investment in Belgium. Part 2 sets out the reasons justifying an increase in investment expenditure.

### **3. Macroeconomic impact of public investment**

Public investment has a positive impact on economic activity and on the productive potential of an economy. This is evidenced by the output elasticity of the government's stock of capital goods, which is determined by the sum of all public investments already made, and their depreciation. Numerous empirical studies have attempted to quantify this output elasticity for different countries and periods. Bom and Ligthart (2015) provide an interesting overview of these studies and point to the wide spread of the results. Using meta-analysis, they largely explain this variability and conclude that the output elasticity for the government's stock of capital goods is on average about 0.08 in the short term and about 0.12 in the long term. This means that if the government's capital stock increases by 1%, GDP would increase by 0.12% in the long run.

The impact of public investment is felt through various transmission channels, which can vary significantly depending on the period considered and the nature of the investments. This section will first explain these transmission channels. The impact of an increase in public investment will then be assessed using the investment multipliers, which indicate the extent to which the stimulation of public investment influences economic activity. The strength of the multipliers depends on several factors, which are also discussed.

#### **3.1. Overview of the transmission channels of an investment stimulus**

In the short term, an increase in public investment has a positive demand effect on the economy, with a direct upward impact on GDP. After all, these investments are public expenditure which is part of the spending aspect of GDP. They come about through production; as such, they generate added value and produce revenue.

In the long run, public investment stimulates the supply side of the economy by increasing its overall productivity. It is precisely this positive externality that makes public investment a strong policy instrument for achieving long-term sustainable economic growth. The exact impact of public investment on the long term will obviously depend to a large extent on the nature of the investment. For example, the production capacity of an economy is mainly stimulated by investments in R&D, training and infrastructure. In the case of investments in R&D, the stimulus is both direct - through the impact on productivity and innovation within a country - and indirect - by ensuring that a country can absorb the technology present elsewhere in the world to a greater extent. This absorption capacity is also positively influenced by the general level of qualifications in the economy. Investment in education makes a major contribution to this. Finally, infrastructure investment has an important role to play. Infrastructure investments are a significant input into the production process and support the productivity of the privately-deployed production factors of labour and capital. Investments in transport networks - which link producers and consumers efficiently -, in utilities - which facilitate energy supply and increase energy independence - and in communication networks - which facilitate the exchange and dissemination of information and knowledge - increase the productive capacity of the economy and create agglomeration effects. Indeed, companies will establish themselves in places where such infrastructure investments are made. This leads to a concentration of economic activity in places such as ports and modern industrial sites, which results in significant economies of scale. Targeted investment in infrastructure also stimulates private investment, which perpetuates the long-term impact of public investment.

### **3.2. Short and long-term investment multipliers**

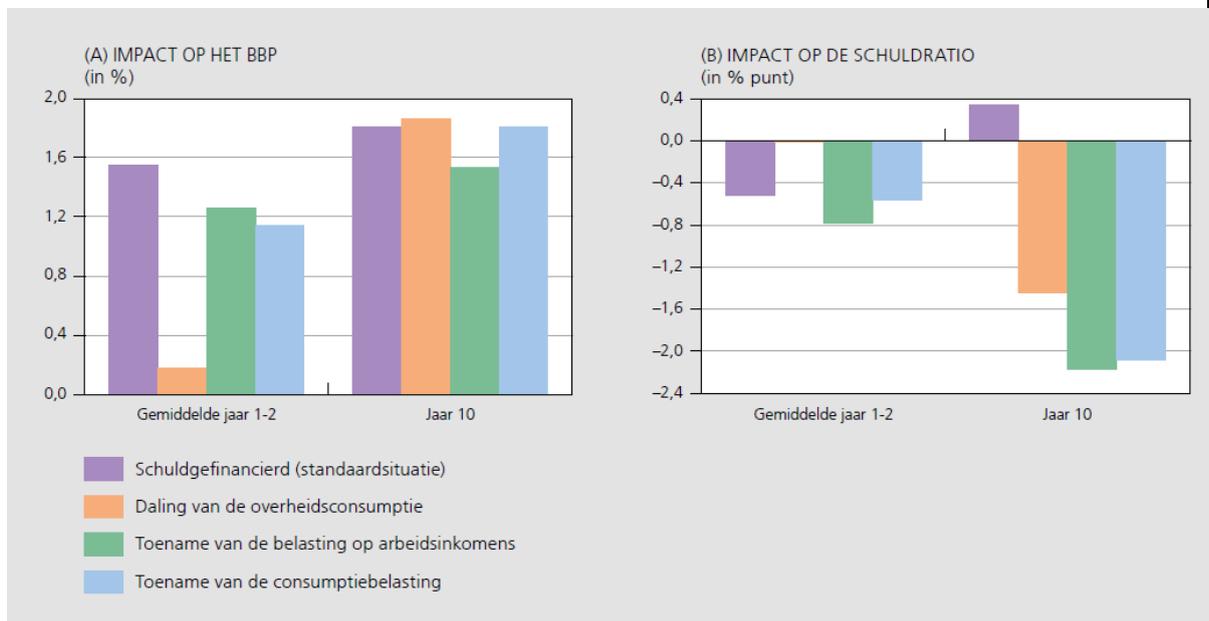
Many econometric models and empirical studies confirm that investment multipliers are positive in both the short and long term. However, the exact size of multipliers depends on various factors such as the period under consideration, the nature of the investments, the way in which they are financed and the monetary policy response.

In order to demonstrate the importance of these factors, which are decisive for the size of multipliers, the results of simulations made by the ESCB on the basis of the EAGLE model<sup>2</sup> are presented. This model was calibrated for four country-(groups), namely Germany, the United States, the rest of the euro area and the rest of the world. On the basis of this model, the effects of a temporary increase in public investment of 1% of initial GDP over a period of five years were assessed; after this, public investment in relation to GDP gradually returns to its original level. The model shows the investment stimulus in Germany, but its impact on GDP and the debt ratio is equally representative for other large euro area countries.

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<sup>2</sup> The Euro Area and Global Economy model (EAGLE model), a basic version of which is discussed in Gomes et al. (2010), is a microfoundation general equilibrium model with a strong theoretical basis to capture cross-border spillover effects of policies.

**Graph 7 Investment multipliers vary depending on the type of financing**  
(deviation with regards to the situation without investment stimulus <sup>(1)</sup>)



Source: ESCB (simulations using the EAGLE model).

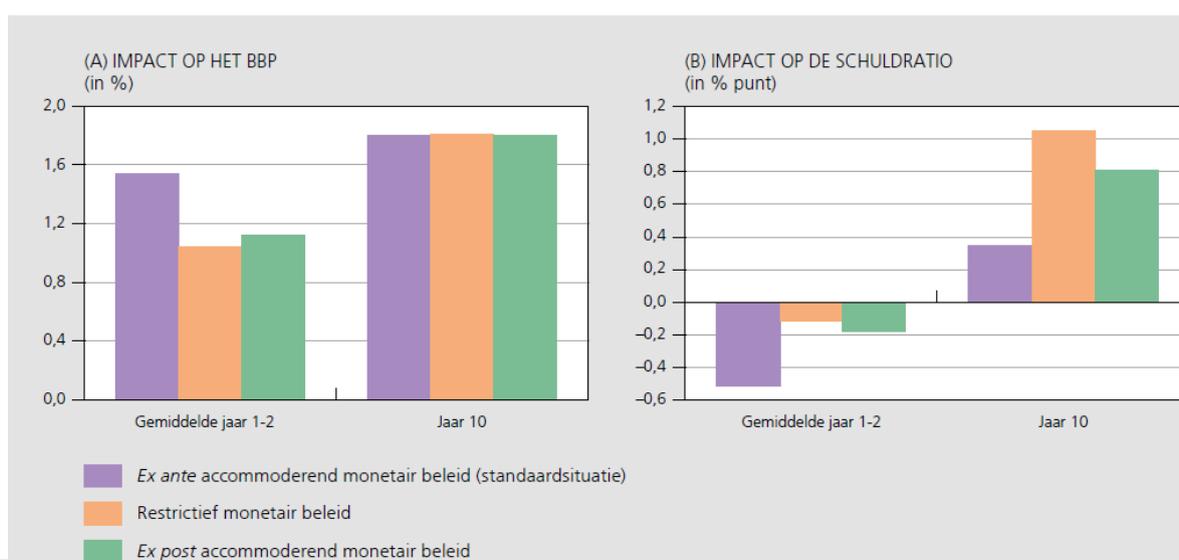
<sup>(1)</sup> This concerns an increase in public investment of 1% of GDP over five years.

In the standard situation, additional public investment is financed through an increase in government debt. This is based on the assumption that governments can borrow at risk-free interest rates. The impact of possible high risk premiums due to the increase in public debt, and the potentially limited access to financial markets for countries with little or no budgetary room for manoeuvre, is not examined here. It is further assumed that the ECB's monetary policy response is fully anticipated, and that the first two years after the investment stimulus are not restrictive. In the standard situation, the increase in public investment has an upward effect on GDP, already in the first two years after the investment stimulus. In the long run, GDP continues to increase by almost 2% compared to the situation without investment stimulus. Although these investments are financed through an increase in public debt, the debt ratio declines in the short term thanks to favourable progression of GDP. The growth of the latter also means that the rise in the long-term debt ratio remains relatively limited.

The way in which additional public investment is financed is very important for the size of the investment multipliers. If the increase in investment is financed by increasing taxes on labour income or consumption taxes, the short-term upward impact on GDP would be somewhat smaller than an investment stimulus financed by an increase in public debt. The short-term impact is almost entirely eliminated when financing is provided through a reduction in public consumption, which virtually neutralises the positive demand effect of an increase in investment. In the long term, the method of financing appears to be much less important in terms of its impact on GDP: the multipliers for investment in the various financing methods are practically the same. On the other hand, the evolution of the debt ratio is largely determined by the choice of financing. If the investment stimulus is not financed by debt accumulation, but is budget neutral, the debt ratio falls sharply in both the short and long term.

The monetary policy response is also important for the macroeconomic impact of an investment stimulus. The case of the ECB opting for an accommodating policy that would be fully anticipated by economic operators has already been discussed in the standard situation above. If this policy is only implemented ex post, and is therefore not fully anticipated, or if the ECB chooses to adopt a restrictive policy, the positive short-term demand effects are apparently much more moderate, with smaller multipliers as a result. In the latter two cases, the debt ratio is also much less favourable.

**Graph 8 The monetary policy response partly determines the size of the investment multipliers** (deviation with regards to the situation without investment stimulus <sup>(1)</sup>).



Source: ESCB (simulations using the EAGLE model).

<sup>(1)</sup> This relates to an increase in public investment of 1% of GDP over five years.

The extent to which a specific public investment contributes to the productive capacity of the economy is also relevant to the size of the multipliers. The standard situation assumes that any public investment is productive and consequently increases the productive capital stock. If the efficiency of public investment declines because, for example, only half of the new investment increases productive capital stock, the short and long-term impact on GDP is much smaller and the debt ratio displays a less favourable evolution. In the extreme case that no public investment is found to be productive and that output elasticity of public capital is consequently reduced to zero, the long-term impact on GDP is completely lost and the debt ratio rises sharply.

Bom and Ligthart (2015) show, inter alia, that the average output elasticity of government capital assets is relatively high for regional and local governments, which may indicate that these authorities tend to focus more on the investments with the largest multipliers. For example, investments in so-called core infrastructure - such as roads, port infrastructure, railways and airports - would have a greater upward impact on production potential than other public investment, for example investment in buildings<sup>3</sup>.

The positive impact of public investment is, of course, also greater the more efficient the processes leading to investment expenditure are, and therefore ensure that the best projects are realised at the lowest possible cost. The IMF's Public Investment Management Assessment (PIMA, 2015) is a useful tool to redirect those processes towards optimal decision-

making. In addition, the focus is on the concrete planning of investments (with attention to coordination between the different policy levels), on allocating an investment to the right project (based on transparent criteria and a long-term vision) and on implementing the selected projects within the set timeframe and within the planned budget.

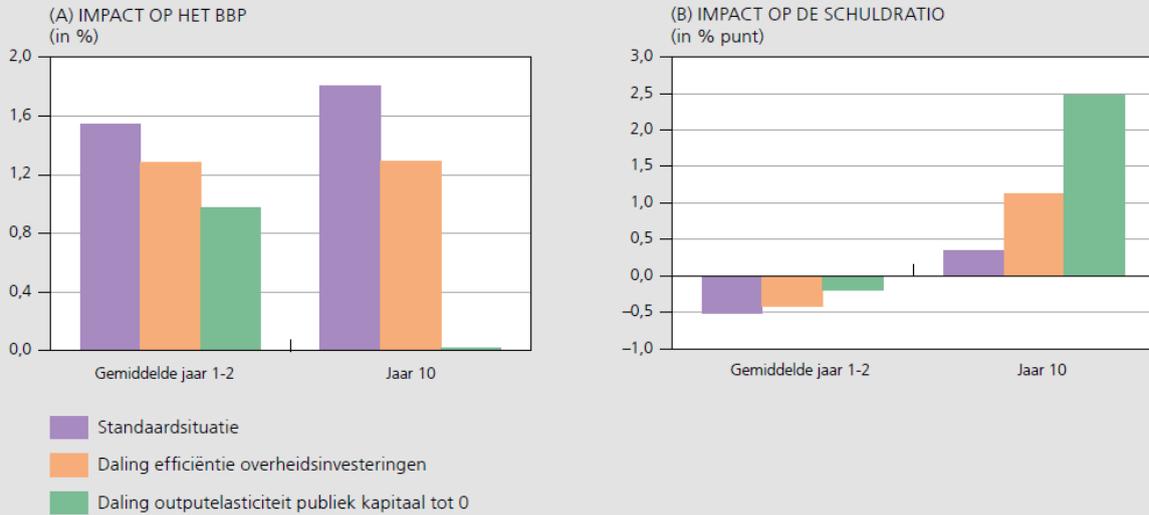
Finally, an investment stimulus in one euro area country also has positive spillover effects on GDP in the other euro area countries. Such a stimulus leads to an increase in domestic demand and an increase in the relative price ratio with other countries, leading to increased exports to the rest of the euro area. The size of spillover effects is determined by the country in which the investment stimulus takes place, the monetary policy response and the method of financing. The impact that an investment stimulus in Germany would have on the GDP of the other euro area countries is shown in Graph 10. The positive spillover effects occur mainly in the short term. In the event of an ex post accommodating monetary policy, these effects would be significantly weakened, and if the ECB chose to adopt a restrictive policy in response to the increased inflation resulting from increased demand, they would almost be eliminated.

Effects similar to those in the simulations discussed above also appear in various empirical analyses, for example in recent work by Abiad et al. (2015). These authors estimate the average short and medium-term macroeconomic impact of an unanticipated increase in public investment by 1 percentage point of GDP over one year. This was the case for seventeen OECD countries over the period 1985-2013. To this end, they calculate the difference between the actual public investment made in a given year and what analysts predicted in October of the same year. This forecasting error is a proxy for the unexpected evolution of public investment, and makes it possible to understand the causal impact of a change in investment on GDP. The results of the estimate once again show the importance of the method of financing. Four years after an unexpected investment stimulus of 1 percentage point of GDP, real output levels appear to be about 3% higher if the stimulus is financed through debt accumulation. The impact is reduced to 0.5% if the additional investment expenditure is offset and has no impact on the general government balance. Overall, these observations support the conclusion that public investment positively influences the productive capacity of an economy.

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<sup>3</sup> Military installations and equipment are not included in most studies.

**Graph 9 Higher efficiency of public investment leads to higher multipliers <sup>(1)</sup>**  
(deviation with regards to the situation without investment stimulus <sup>(2)</sup>)

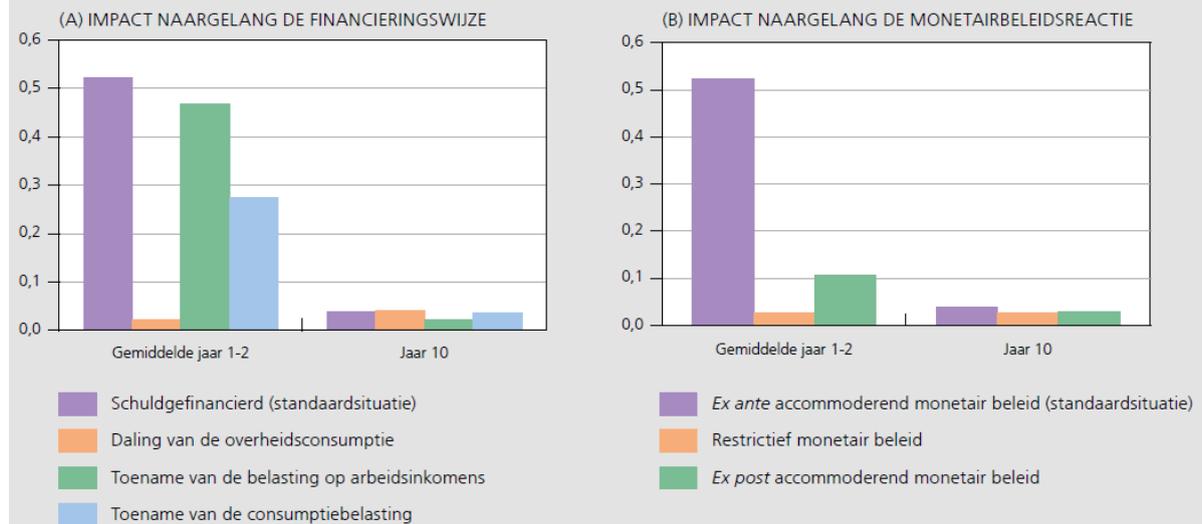


Source: ESCB (simulations using the EAGLE model).

<sup>(1)</sup> In the standard situation, the output elasticity of the government's capital stock is calibrated at 0.10. This is in line with the findings of Bom and Ligthart (2015).

<sup>(2)</sup> This concerns an increase in public investment of 1% of GDP over five years.

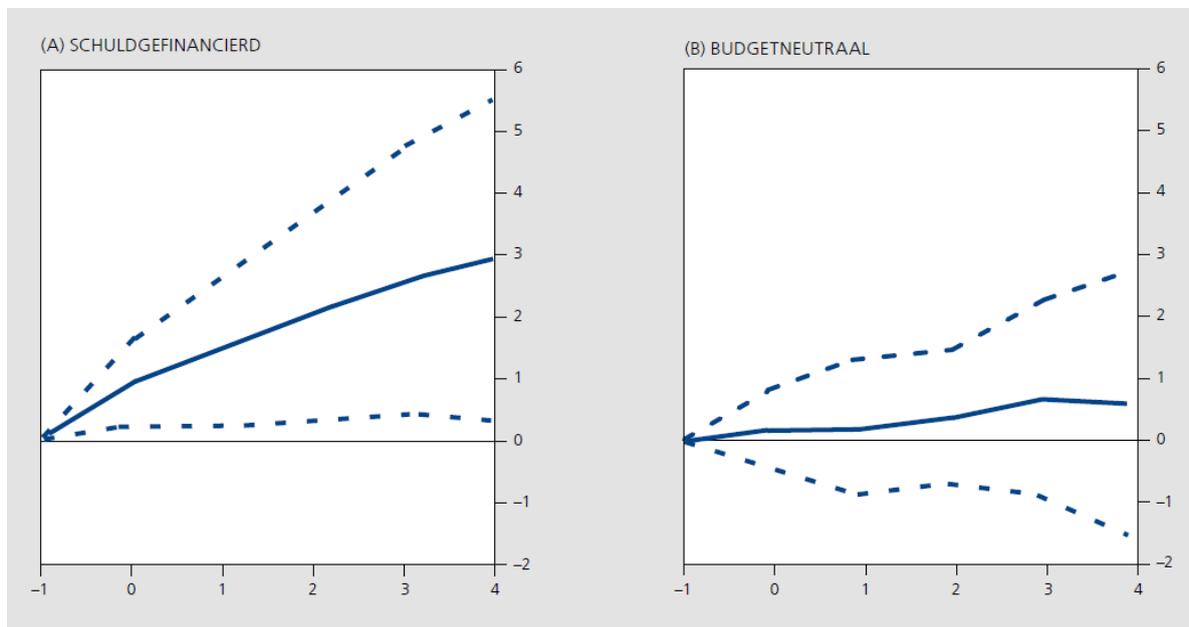
**Graph 10 - Impact on GDP in the rest of the euro area after an investment stimulus in Germany <sup>(1)</sup>** (deviation with regards to the situation without investment stimulus <sup>(1)</sup>, in %)



Source: ESCB (simulations using the EAGLE model).

<sup>(1)</sup> This relates to an increase in public investment of 1% of GDP over five years.

**Graph 11 - Impact on GDP, of an unexpected increase in public investment by 1 percentage point of GDP<sup>(1)</sup> (in %)**



Source: Abiad et al. (2015).

<sup>(1)</sup> The area between dashed lines represents the 90% confidence interval.

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## **PART 2 - How can public investment be stimulated?**

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### **1. Introduction**

Part 1 revealed that public investment in Belgium, as in many other European countries, is currently at a relatively low level. It is advisable to stimulate this investment, given that weak public investment makes a sustainable economic recovery more difficult and, above all, limits the future potential of the economy.

Encouraging investment was a crucial part of the strategy that the European Commission proposed to revitalise the European economy and create more jobs without taking on new debts, when it took office under Jean-Claude Juncker in early November 2014. Indeed, the coordinated stimulation of investment, the renewed commitment to structural reforms and the need to pursue fiscal responsibility are the three pillars of a new integrated approach to economic policy by the European Union. Simultaneous and coordinated action in these three areas is crucial to restore confidence, to remove the uncertainty that hampers investment and to maximise the mutually-reinforcing effects of the three pillars. As part of this new integrated approach, the EC set out guidelines in January 2015 to apply the existing rules of the Stability and Growth Pact as flexibly as possible, in order to strengthen the link between structural reforms, investment and budget responsibility. These guidelines, together with the Investment Plan for Europe, are the main initiatives taken by the Juncker Commission to encourage investment.

This section first describes the recent European initiatives aimed at boosting investment. This is followed by an overview of some alternative proposals to stimulate public investment.

### **2. Recent initiatives to stimulate public investment**

#### **2.1. Investment plan for Europe**

The "Investment Plan for Europe", also known as the Juncker Plan, was proposed by the European Commission at the end of November 2014. The main objective of the plan is to stimulate investment in Europe, especially investment which is essential for the long-term productive potential of the economy. The plan covers all investments, not just public investment.

The implementation of this investment plan and its results to date are discussed in detail in Box 1.

### **Box 1 The Investment Plan for Europe**

The Investment Plan for Europe consists of three mutually-reinforcing components.

#### ***Mobilising additional investment financing***

The first pillar consists of mobilising financial resources for additional investments. To this end, the European Fund for Strategic Investment (EFSI) was established in July 2015<sup>4</sup>. The EFSI was set up as a special management fund within the EIB. The Fund was established mainly to improve risk financing capacity. It does not finance projects itself, but it does provide project financing guarantees from the EIB and the European Investment Fund (EIF), which is part of the EIB Group. The Plan introduces a completely new mechanism - compared to existing European funding structures - based on the provision of guarantees rather than on the direct awarding of grants: existing funding sources can be mobilised without burdening the public finances of Member States.

It is intended to generate a minimum amount, over at least three years (i.e. until mid-2018), of € 315 billion in public and mainly private investment. A guarantee of € 16 billion was created in the EU budget for the launch of the EFSI. For its part, the EIB is contributing € 5 billion. The EFSI therefore starts with a substantial initial capital of € 21 billion. This amount may be supplemented by contributions from private investors or Member States, either directly or through the National Promotional Banks or similar institutions. The EC assumes that for every euro for which a guarantee is provided by the EFSI, € 15 can be invested in the real economy. The € 21 billion in guarantees would thus allow for a potential investment of € 315 billion<sup>5</sup>.

The Fund complements and reinforces existing initiatives supporting investment such as the European Structural and Investment Funds and current project financing by the EIB. The EFSI aims to support projects with high social and economic value. The estimated additional investment resources of € 315 billion will be divided into two parts. On the one hand, risk support is anticipated for long-term investments including major European strategic investments in infrastructure, in particular broadband and energy networks, as well as in transport infrastructure, education, research and innovation, renewable energy and energy efficiency. Three quarters of the funds (€ 240 billion) will be allocated to these areas. The remainder (€ 75 billion) is reserved to expand access in Europe to risk finance for SMEs (up to 250 employees) and mid-cap companies (up to 3,000 employees). The operational implementation of this will be carried out through the EIF.

Finally, it should be stressed that the € 315 billion of 'additional' investments are on top of the existing ones. The criteria for the eligibility of projects make it possible to ensure that funds are allocated to new, more risky projects targeting the sectors and enterprises covered by the plan. The principle of 'additionality' is a key element here: consideration of it ensures that EFSI support will resolve sub-optimal situations in which similar projects cannot be realised.

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<sup>4</sup> EC (2015a) and EC (2015b).

<sup>5</sup> The multiplier effect of 1:15 is, according to the EC, a conservative average, based on previous experience with EU programmes and on EIB experience.

## Structure of the European Strategic Investment Fund (EFSl)

Sources: EC, EIB.

Given the success of the EFSl, the European Commission proposed on 14 September 2016 to extend its duration and increase the investment target to at least € 500 billion by the end of 2020. The proposal also contains a number of improvements, taking into account the lessons learned in the first year of the EFSl.

In particular, the European Commission proposes strengthening additionality and transparency, and improving the focus of the EFSl on the EU's political priorities with regards to climate change. Another important objective of the proposal is to strengthen the deployment of the EFSl in less developed regions and transition regions, as well as the continued focus on supporting SMEs. The proposal was endorsed by the European Council on 6 December 2016, but the European Parliament still has to vote on the proposal.

### ***Initiatives to ensure that additional financial resources reach the real economy***

The second pillar of the investment plan consists of targeted initiatives aimed at ensuring that the additional investment resources generated by the EFSl will meet the needs of the real economy, which means that financing is found for viable projects with clear added value for the European economy.

To this end, a European Investment Advisory Hub will be set up in the first instance within the EIB to provide expertise and technical assistance at all levels of project development.

A one-stop shop will be set up for all questions relating to technical assistance from project operators, investors and governments. The advisory centre will provide guidance on the most appropriate advice for a given project.

In addition, the European Investment Project Portal, which became operational in June 2016, will help investors to find potentially viable projects. This portal is managed by the EC and contains a list of projects that support EU objectives and should start within three years, with or without EFSI funding.

#### ***Measures to improve the investment climate***

The third pillar consists of measures to improve regulatory predictability, remove barriers to investment and strengthen the single market by creating optimal pre-conditions for investment.

The regulatory framework must be simple, clear, predictable and stable at both the national and European level, in order to encourage longer-term investment. The aim is not deregulation, but better regulation. This means that this regulation must focus on removing barriers to growth, minimising costs and ensuring social and environmental sustainability.

Another important measure is to provide new sources of long-term investment financing, including steps towards a capital market union (CMU). In the longer term, this union will contribute to a larger variety of financing opportunities by supplementing bank financing with deeper capital markets. The capital market union is therefore an important element of the medium and long-term investment plan (see below for further details).

Finally, it is advisable to remove obstacles to investment in the common market. This refers more specifically to reforms in the following areas: energy and transport, transport infrastructure and systems, the digital market, services and product markets, research and innovation and foreign investment flows.

#### ***An initial evaluation of the plan***

According to data from May 2017, € 36.9 billion was approved for EFSI projects. These transactions are estimated to generate a total investment of € 194 billion. Overall, these initial results appear to be in line with the objectives set, with total expected investments currently accounting for around 62% of the amount that would be achieved by the end of the three-year period. A total financing volume of € 989 million had been approved for Belgium by the end of May 2017. This is expected to release € 4.8 billion in investments.

However, such results ought to be qualified. In a study by Claes and Alvaro (2016a), compliance with the criterion of 'additionality' was assessed, i.e. whether only risky and viable projects were selected that could not be successfully completed with other financing structures already in place. The study concluded that there are many similarities between the EFSI's new projects and the projects normally carried out by the EIB outside the Plan. Nevertheless, the study also notes that the EFSI projects show a relatively higher level of risk, which is in line with the objectives of the Plan.

In November 2016, the results of an independent evaluation of the first year of the Investment Plan for Europe were published by EY. The conclusions of the study were generally positive for the Plan and the EC sees it as a stimulus to strengthen and expand the EFSI. In more detail, the report notes that EFSI allows the EIB to increase its risk-bearing capacity; that the progress of EFSI implementation is on track; that the multiplier is close to expectations; that governance structures are in place and working well. However, the report also mentions that there is some doubt as to whether the principle of additionality is always observed; that there are serious concerns about geographical distribution; that the measurement and monitoring of the contribution to growth and employment is currently insufficient; and that further communication on EFSI among stakeholders is needed to further raise awareness.

## **2.2. Flexibility in the Stability and Growth Pact with regard to investments**

In January 2015, the EC outlined how it will maximise the flexibility of the existing Stability and Growth Pact rules to ensure growth-friendly fiscal policies. To this end, efforts in the preventive arm will take better account of the cyclical situation in Member States, encourage the effective implementation of structural reforms and stimulate investment.

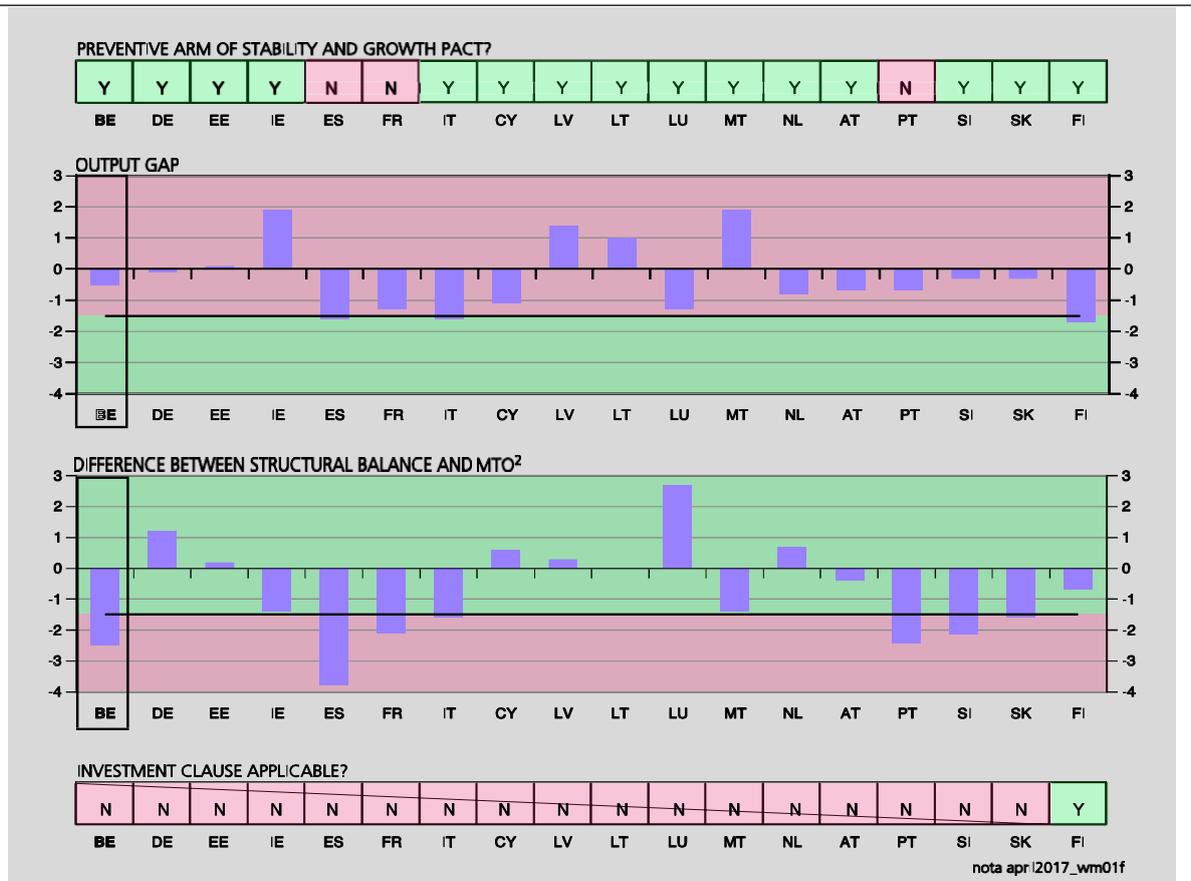
Member States can encourage investment by temporarily deviating from their medium-term objective in the preventive arm of the Stability and Growth Pact, or from the budgetary adjustment path leading there<sup>6</sup>. However, Member States may only apply this so-called investment clause under strict conditions. Indeed, it only applies to countries with either negative GDP growth in terms of volume, or GDP far below potential, which results in a negative output gap of more than 1.5% of GDP. Furthermore, national investment expenditure is only eligible if projects are co-financed by the EU under the Structural and Cohesion policies, the Trans-European Networks and the Connecting Europe Facility, or if they are co-financed by the European Strategic Investment Fund. Investment levels must therefore actually rise. The deviation should not lead to an exceedance of the 3% deficit threshold, and a safety margin should be taken into account. The deviation should also be offset within the timeframe of the Member State's stability or convergence programme, i.e. within four years from the entry into force of the investment clause. The EC implements the latter criterion by requiring that the gap between the structural budget balance and the medium-term objective should not exceed 1.5 percentage points of GDP. These conditions can be qualified as strict, since only a limited number of countries meet them: five euro-area Member States in 2015 to be precise, and only Finland was still eligible in 2016.

In view of these observations, the European Commission should reassess the access criteria for the investment clause in the Stability and Growth Pact. It is advisable to apply less restrictive conditions, which would allow more countries wishing to stimulate public investment to move temporarily away from their budgetary targets or the budgetary adjustment path towards this goal.

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<sup>6</sup> See section 3.2 for more information on the Stability and Growth Pact proposals.

**Graph 12 Application of the investment clause criteria in euro area countries<sup>1</sup>**  
 (Figures from 2016, in % of potential GDP, unless otherwise stated)



Source: EC

<sup>(1)</sup> This graph contains data for countries in the euro area, excluding Greece for which no new MTO has been defined.

<sup>(2)</sup> In percentage point of GDP.

In addition, attempts are made to stimulate investment through flexibility in terms of national financial contributions to the EFSI. These contributions will not be taken into account when determining the budget effort in the preventive or corrective arm of the Stability and Growth Pact. Indeed, they are considered as exceptional one-off measures that do not affect the underlying budgetary position. Furthermore, in the event of a minor and presumably temporary exceedance of the deficit reference value due exclusively to the contributions to the EFSI, the EC will not initiate an excessive deficit procedure. When the EC assesses an exceedance of the debt reference value, it does not take contributions into account.

### **2.3. Guide to the statistical treatment of PPPs**

At the end of September 2016, a "Guide to the Statistical Treatment of PPPs" (public private partnerships), was published. This was the result of a joint exercise by Eurostat and the European PPP Expertise centre (EPEC) of the European Investment Bank (EIB).

This practical guide was compiled in response to calls from PPP stakeholders. The aim is to clarify the statistical treatment of investment projects financed in the form of PPPs, since there is considerable uncertainty regarding their treatment. This leads to difficulties and delays at the various stages of preparation and implementation of investment projects.

Although the manual does not change the rules used by Eurostat in classifying PPPs, it analyses the most common clauses of current PPP contracts under these rules and provides a clear overview of their potential impact on public finances. The manual helps Member States and other PPP stakeholders to better understand the impact of certain clauses of PPP contracts on the government's balance sheet, and will assist the government in making well-informed decisions when preparing and tendering their PPPs. This manual is also a useful tool to help public and private promoters clarify the investment plan and remove perceived barriers to investment.

## **3. Alternative proposals to stimulate public investment**

Despite new initiatives taken by the EU in recent years to stimulate public investment, these investments remain relatively weak. As such, the current European framework has been criticised for not encouraging public investment enough, according to some commentators. As a result, proposals have been made to stimulate investment. Broadly speaking, these proposals can be divided into two categories: adjustments to the statistical treatment of investments and adjustments to budgetary rules.

### **3.1. Statistical rules**

Some observers criticise the statistical rules that need to be followed to incorporate public investment into government accounts, which in turn are part of the national accounts. These rules must comply with the guidelines of the European System of National and Regional Accounts (ESA). ESA 2010 is currently applicable, but the philosophy behind the ESA system has not changed since its first iteration in 1970.

Investments are considered as expenditure according to the logic of the ESA system and therefore have a negative impact on the financing balance. This is logical, since the financing of investments leads to an increase in debt or a decrease in financial assets. These expenses are recorded at the time of the transfer of economic ownership. For example, when purchasing an investment asset, the amount will be imputed in full at the time of transfer. When constructing an investment asset, the amounts will be imputed taking into account the progress of the works and the invoicing.

What has changed in recent years, however, is that Eurostat applies some rules more rigorously and checks Member States more closely for compliance. This tightening mainly concerns the definition of the government's boundaries - i.e. the institutions which belong to the government sector -, various forms of alternative financing of investment expenditure, and public-private partnerships to have the facilities to provide certain public services built, operated and maintained by private companies. As far as these partnerships are concerned, Eurostat issued relatively flexible rules in its methodology manual 'Government Deficit and Debt' in 2004, but its concrete implementation by Eurostat remained strict and the rules were again tightened during the transition to ESA 2010. In any case, statistical data should reflect economic reality. As regards the classification of investments inside or outside the public sector, this raises the question of who can be considered owner from an economic - and not a legal - perspective. Any distortion of the statistical rules is highly undesirable in any case. It is therefore extremely important that Eurostat draws up clear rules, applies them transparently and that the rules are scrupulously observed by all EU Member States. The guide to the statistical treatment of public-private partnerships from September 2016 provides this clarity and transparency (see above).

### **3.2. Budgetary rules of the Stability and Growth Pact**

An important part of the proposals to stimulate public investment aim at adapting the European governance framework in the area of public finances. This framework was laid down in the rules of the Maastricht Treaty and the Stability and Growth Pact. These rules consist of, on the one hand, a preventive arm aimed at avoiding the emergence of unsustainable budgetary situations and, on the other hand, a corrective arm related to the recovery measures for Member States facing excessive government deficits or debt<sup>7</sup>.

The pursuit of the medium-term objective is at the heart of the preventive arm<sup>8</sup>. It is a country-specific reference value for the budget balance, expressed in structural terms. Countries that have not yet reached their medium-term objective should follow an adjustment path in order to converge towards this objective at an appropriate pace. The corrective arm continues to focus on two of the original Maastricht Treaty criteria. First, the nominal general government financing deficit should not exceed 3% of GDP unless it has declined significantly and continuously and reaches a level approaching the reference value or unless the excess is exceptional and temporary and the deficit is close to the reference value. Furthermore, outstanding government debt should not exceed 60% of GDP or, if it does, it should approach the reference value at a satisfactory pace.

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<sup>7</sup> Melyn W., L. Van Meensel and S. Van Parys (2015).

<sup>8</sup> The medium-term objective is proposed by the Member States in their stability or convergence programme, and has to meet a number of minimum requirements. For the euro area countries, this objective for the structural balance should be at least -0.5% of GDP, but for countries whose debt ratio is significantly lower than 60% of GDP and for which the risks to the long-term sustainability of their public finances are limited, it may be equal to -1% of GDP.

The proposals to amend the European budgetary framework generally relate to the introduction of the conventional 'golden financing rule' for public finances<sup>9</sup>. This rule stipulates that current expenditure must be covered by current revenue, and consequently governments cannot borrow to cover this expenditure.

However, for investment expenditure, this rule allows for loan financing. Its introduction is defended on the basis of a number of recurring arguments. First of all, from an economic perspective, it can be said that public investment is a source of future potential growth and, consequently, of future tax revenues. It is also important from a social perspective to ensure intergenerational equality. This means that the benefit of public investment extends over several years and sometimes even generations. Allowing the financing of investment expenditure through loans also spreads the costs over time. Finally, from a financial perspective, investments can be considered as property that can implicitly be used as a guarantee for the loan taken out to finance it.

Some economists also use a cyclical argument to argue for the introduction of the golden financing rule, namely that investment expenditure can be used as an instrument of economic stabilisation. However, public investment is not an appropriate counter-cyclical policy instrument. After all, the preparation, realisation and implementation of efficient investments generally takes a lot of time.

The debate on the introduction of the golden rule has been going on for many years, and it recently flared up again against the background of a possible further adjustment of the Stability and Growth Pact. Some of these recent proposals are briefly outlined below. Wim Moesen (2016) proposes allowing government financing deficits for the purpose of gross investment expenditure. As such, he favours a narrow definition of investment (tangible fixed assets) and advocates the introduction of this rule based on a motivation to put budgetary discipline where it belongs, namely in current transactions. Another proposal to introduce the golden rule was launched by the think tank Bruegel (Barbiero and Darvas (2014)). They propose a so-called asymmetric golden rule whereby, in difficult economic times, the permitted structural deficit is increased by the amount of net investment. In better economic circumstances, the standard rules of the Stability and Growth Pact would continue to apply. Another interesting proposal was made by Henri Bogaert (2016). He proposes an appropriate calculation of the medium-term objective (MTO) taking into account net public investment in addition to the potential growth of the activity, the debt ratio and ageing costs.

An alternative proposal for the introduction of a golden financing rule could be to replace gross investment expenditure with depreciation on investments in calculating the net financing balance. This would equate to easing the current government financing balance of net investment. This would not be an impediment to an investment stimulus.

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<sup>9</sup> In the 'fiscal compact', there is also a golden rule that the budgetary position of the general government should be balanced, or be in surplus. This is deemed to have been respected if the government balance in structural terms complies with the country-specific medium-term objective, or if this balance is in line with the required adjustment path towards this objective.

This corresponds with the proposal of Olivier Blanchard and Francesco Giavazzi in a contribution from 2004. In their opinion, the advantage of this proposal would be, inter alia, that if this corrected budget balance were close to being balanced, the debt ratio would eventually incline towards the government's capital stock.

The European Commission has so far not taken into account the proposals to include the golden financing rule in one of the proposed forms in the reforms of the Stability and Growth Pact. The main reasons for this are the difficulty in defining the categories of expenditure that would be covered by this rule; the fact that public expenditure disruptions may occur whereby there is a preference for physical infrastructure expenditure; and that incentives may arise to present current expenditure as capital expenditure. Following the reforms of the Stability and Growth Pact in 2005 and 2011, no negotiations are currently ongoing to further amend the rules of the Stability and Growth Pact.

However, serious consideration should be given to adjusting the treatment of public investment in the Stability and Growth Pact, given that, following the financial and economic crisis, the consolidation of public finances was shown to have had a severe impact on investment in a number of countries. This approach seems appropriate to encourage public investment in the current context, which is characterised by low levels of public investment, weak demand and low inflation, low potential growth and low interest rates. In particular, a rethink of the proposal to take into account depreciation on public investment rather than investment expenditure would appear to be highly appropriate. However, it is important to maintain fiscal responsibility and the long-term sustainability of public finances.

***Box 2 - Proposal to adjust the European budgetary framework to provide a stimulus to investment***

**1. Core idea of the proposal**

The concrete proposal is to review the way in which public investment is taken into account under the European budget rules of the Stability and Growth Pact, with a view to improving the treatment of this expenditure. This can be done by replacing investment expenditure with depreciation on investments when determining the budget balance to be taken into account. This would equate to correcting the general government financing balance for net investment.

The proposed amendments concern only the preventive arm of the Stability and Growth Pact. The basic rules of the European governance framework on public finances, including the deficit limit of 3% of GDP laid down in Article 126 of the Treaty on the Functioning of the European Union and its Protocols on the corrective arm, remain unchanged. Modification of these basic rules is not appropriate - in principle the deficit limit of 3% of GDP leaves sufficient scope for financing public investment and, combined with the debt rule, limits the risk of unsustainable public finances.

**2. Adjustments to the preventive arm of the Stability and Growth Pact**

The preventive arm of the Stability and Growth Pact seeks to avoid unsustainable budgetary positions. The pursuit of the medium-term objective is at the heart of the preventive arm. The legal basis of the preventive arm is (primarily) Article 121 of the Treaty on the Functioning of the European Union, and its practical application is based on Regulation (EC) No 1466/97 of 7 July 1997 on the strengthening of the surveillance of budgetary positions and the surveillance and coordination of economic policies.

The amendments to the provisions of Regulation 1466/97 relating to the medium-term objective (MTO), the required adjustment path to the MTO and the significant deviation are indicated in bold and underlined in the following texts.

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<sup>10</sup> Similar adjustments should be made in Articles 9 and 10 related to the convergence programmes.

### 3. Stylised example of the application of the current and adapted rules of the Stability and Growth Pact

A stylised example illustrates the impact of the proposal to allow for an investment stimulus by modifying the rules of the Stability and Growth Pact. Since it is proposed amending the rules of the preventive arm of the Stability and Growth Pact, the purely fictitious example refers to a country which is subject to this preventive arm.

The starting point assumes that the government still has a structural budget deficit of 2.4 % of GDP. If the medium-term objective (MTO) is a balanced budget, this government should achieve an improvement in its structural budget balance of 0.6 percentage points of GDP over 4 years in normal cyclical conditions (a consolidation effort is required under the European governance framework for countries with a debt ratio above 60% of GDP and an output gap between -1.5% and +1.5% of GDP). Furthermore, it is assumed that government gross investment expenditure corresponds to depreciation on past investments, resulting in a zero net investment.

In this situation, the structural budget balance should, as a minimum, follow the evolution shown below.

	0	1	2	3	4	5	(...)	32	33
Change in structural budget balance	-	+0.6	+0.6	+0.6	+0.6	0.0		0.0	0.0
Level of structural budget balance	-2.4	-1.8	-1.2	-0.6	0.0	0.0		0.0	0.0
MTO	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0

If the government were to decide on an investment stimulus, with a permanent increase in gross investment of 1% of GDP, the current rules of the Stability and Growth Pact would not change the budgetary path set out in Table 1. Indeed, the government should also achieve an annual improvement in its structural budget balance of 0.6 percentage point of GDP over 4 years. However, this would mean that the increase in public investment would have to be fully offset by other measures. A consolidation effort of 1.6 percentage points of GDP should be achieved in the year of the investment stimulus through savings on non-investment expenditure or revenue-increasing measures.

**Table 2 Situation with an investment stimulus of 1% of GDP under the current rules of the Stability and Growth Pact**  
(in % of GDP)

	0	1	2	3	4	5	(...)	32	33
Change in structural budget balance	-	+0.6	+0.6	+0.6	+0.6	0.0		0.0	0.0
of which:									
- impact of the investment stimulus	-	-1.0	0.0	0.0	0.0	0.0		0.0	0.0
- structural balance excluding investment stimulus	-	+1.6	+0.6	+0.6	+0.6	0.0		0.0	0.0
Level of structural budget balance	-2.4	-1.8	-1.2	-0.6	0.0	0.0		0.0	0.0
MTO	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0

However, if the rules of the Stability and Growth Pact were to be amended, replacing investment expenditure with depreciation on public investment when determining the budget balance to be taken into account, the investment stimulus would have to be offset only to a very limited extent - up to the level of the depreciations mentioned above - by additional savings in non-investment expenditure or by an increase in revenue. This proposal, which would result in a correction of the general government financing balance for net investment, would result in the budgetary path shown in Table 3. In this stylised example, public investment is assumed to be depreciated over a period of 33 years, leading to an annual increase in depreciation on these investments of 0.03 percentage points of GDP.

**Table 3 Illustrative budgetary path with an investment stimulus of 1% of GDP per year with the amended rules of the Stability and Growth Pact.**  
(in % of GDP)

	0	1	2	3	4	5	(...)	32	33
Change in structural budget balance	-	-0.37	0.63	0.63	0.63	0.03		0.03	0.03
of which:									
- impact of the investment stimulus	-	-1.0	0.0	0.0	0.0	0.0		0.0	0.0
- structural balance excluding investment stimulus	-	0.63	0.63	0.63	0.63	0.03		0.03	0.03
Level of structural budget balance	-2.4	-2.77	-2.14	-1.51	-0.88	-0.85		-0.03	0.0
Depreciation (evolution)	-	0.03	0.03	0.03	0.03	0.03		0.03	0.03
MTO	0.0	-0.97	-0.94	-0.91	-0.88	-0.85		-0.03	0.0

It should be noted that the medium-term budgetary objective (MTO) is also adjusted to take account of net investment. In the first year the net investment would be 0.97% of GDP - gross investment would increase by 1% of GDP and depreciation by 0.03% of GDP - but due to the permanent nature of the investment stimulus, depreciation would increase annually by 0.03% of GDP, bringing it to 1% of GDP after 33 years and, consequently, net investment would fall back to zero.

**Table 4 - Evolution of the structural budget balance excluding investment expenditure**  
(in % of GDP)

	0	1	2	3	4	5	(...)	32	33
Without investment stimulus	-	0.6	0.6	0.6	0.6	0.0		0.0	0.0
Investment stimulus of 1% GDP and current SGP rules	-	1.6	0.6	0.6	0.6	0.0		0.0	0.0
Investment stimulus of 1% GDP and amended SGP rules	-	0.63	0.63	0.63	0.63	0.03		0.03	0.03

This stylised example shows that countries in the preventive arm of the Stability and Growth Pact can only give an investment stimulus if they make savings in other categories of expenditure or increases in revenue for the amount of the investment stimulus. This requirement obviously hinders the development of an investment stimulus. However, if the rules of the Stability and Growth Pact were to be adapted in line with the proposal contained in this paper, an investment stimulus would have little impact on the consolidation effort: the required improvement of the structural budget balance excluding investment expenditure would in this case only be increased by the amount of depreciation related to the investment stimulus.

**Table 5 Level of the structural budget balance**  
(in % of GDP)

	0	1	2	3	4	5	(...)	32	33
Without investment stimulus	-2.4	-1.8	-1.2	-0.6	0.0	0.0		0.0	0.0
Investment stimulus of 1% of GDP and current SGP rules	-2.4	-1.8	-1.2	-0.6	0.0	0.0		0.0	0.0
Investment stimulus of 1% of GDP and amended SGP rules	-2.4	-2.77	-2.14	-1.51	-0.88	-0.85		-0.03	0.0

If an investment stimulus were provided, the budgetary path would be eased in the short term with the adjusted rules of the Stability and Growth Pact, which would include depreciation on public investment instead of investment expenditure compared to the current rules. The initial easing of the path is accompanied by the requirement for a very gradual improvement in the structural budget balance, leading to the same long-term structural budgetary objective. Indeed, in the long run, not only would gross investment expenditure have been 1% of GDP higher than the baseline situation, but depreciation on public investment would have increased by 1% of GDP in the scenario with the investment stimulus.

## **Conclusions**

Public investment has a highly positive impact on economic activity and on the productive potential of an economy. However, public investment in Belgium and many other euro area countries is currently at a low level. It is therefore advisable to encourage such investment.

As such, stimulating public investment was rightly one of the main priorities put forward by the EC under Jean-Claude Juncker's leadership when it took office. This objective was reflected in the Investment Plan for Europe. The so-called investment clause in the application of the Stability and Growth Pact also sought to stimulate public investment, but the conditions required are strict, which means that only a limited number of countries are complying.

Despite these initiatives, public investment remains weak and the question arises as to whether additional measures could be taken to promote public investment through adjustments to the statistical treatment of investments or changes in European budget rules.

For the statistical treatment of investments in the ESA 2010 methodological framework, the basic rules are clear and a redrafting of these rules is undesirable. However, it is crucial that Eurostat provides full clarity on the practical application of these rules, so that it is clear how investment expenditure made through public-private partnerships or other alternative financing methods is accounted for. With regards to the investments financed by public-private partnerships, Eurostat has provided the requested clarity following the publication of its Guide in September 2016.

The concrete proposal is to review the way in which public investment is taken into account under the European budget rules of the Stability and Growth Pact, with a view to improving the treatment of this expenditure. In the short term, less strict conditions would need to be applied for the investment clause in the Stability and Growth Pact, so that more Member States wishing to stimulate public investment are allowed to move temporarily away from their budgetary targets or the budgetary adjustment path towards this budget objective. In the medium term, the way in which public investment is taken into account within the preventive arm of the Stability and Growth Pact could be reviewed. This can be done by replacing investment expenditure with depreciation on public investments when determining the budget balance to be taken into account. This would equate to correcting the general government financing balance for net investment. This proposal would allow for an investment stimulus, which is highly desirable in the current context of low public investment, weak demand and low inflation, low potential growth and low interest rates.

## **Bibliography**

Abiad, A., D. Furceri, and P. Topalova (2015), The Macroeconomic Effects of Public Investment: Evidence from Advanced Economies, IMF Working Paper 15 / 95.

Barbiero F. and Z. Darvas (2014), In sickness and in health: protecting and supporting public investment in Europe, Bruegel policy contribution 2014 / 02, February.

Blanchard O. and F. Giavazzi (2004), Improving the SGP Through a Proper Accounting of Public Investment, CEPR discussion paper 4220, February.

Bogaert H. (2016), Improving the Stability and Growth Pact by integrating a proper accounting of public investments: a new attempt, Federal Planning Bureau, Working Paper 1-16, January.

Bom, P.R.D. and J.E. Ligthart (2014), "What Have We Learned from Three Decades of Research on the Productivity of Public Capital?", Journal of Economic Surveys, 28(5), 889-916.

Butzen P., S. Cheliout, E. De Prest, S. Ide and W. Melyn (2016), "Why is investment in the euro area continuing to show only weak recovery ?", NBB, Economic Review, September, 81-98.

Claes G. and L. Alvaro (2016), 'Assessing the Juncker Plan after one year', Bruegel blog post, 17 May.

[http://bruegel.org/2016/05/assessing-the-juncker-plan-after-one-](http://bruegel.org/2016/05/assessing-the-juncker-plan-after-one-year/)

[year/](http://bruegel.org/2016/05/assessing-the-juncker-plan-after-one-year/) EC (2004), Public finances in EMU 2004, European Economy, 3.

EC (2014a), An Investment Plan for Europe, communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank, 26 November.

EC (2014b), Annual Growth Survey 2015, communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank, 28 November.

EC, EIB (2014), Factsheet 1 – Why does the EU need an investment plan? An Investment Plan for Europe, 26 November.

EC (2015a), Regulation (EU) 2015/1017 of the European Parliament and of the Council of 25 June 2015 on the European Fund for Strategic Investments, the European Investment Advisory Hub and the European Investment Project Portal and amending Regulations (EU) No 1291/2013 and (EU) No 1316/2013 — the European Fund for Strategic Investments, Official Journal of the European Union, 1 July.

EC (2015b), The Investment Plan for Europe: Questions and Answers, fact sheet, 20 July.

EC (2015c), Making the best use of the flexibility within the existing rules of the Stability and Growth Pact, communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank, 13 January.

EC (2015d), Investing in jobs and growth – Maximising the contribution of European

Structural and Investment Funds, Communication from the Commission, 14 December.

EC (2015e), Regulation (EU) 2015 / 1017 of the European Parliament and of the Council of 25 June 2015 on the European Fund for Strategic Investments, the European Investment Advisory Hub and the European Investment Project Portal and amending Regulations (EU) No. 1291 / 2013 and (EU) No. 1316 / 2013 – the European Fund for Strategic Investments, Official Journal of the European Union, 1 July.

EC (2016), Combining European Structural and Investment (ESI) Funds and the European Fund for Strategic Investments (EFSI) – Frequently Asked Questions, 22 February

EC and EPEC (2016), A Guide to the Statistical Treatment of PPPs, September. EC (2017), The Investment Plan for Europe, State of Play, March.

ECB (2016), "Public investment in Europe", Economic Bulletin, 2, 75-88.

Ernst & Young (2016), Ad-hoc audit of the application of the Regulation 2015/1017 (the EFSI Regulation), Final Report, 14 November.

EU (2015), Regulation (EU) 2015 / 1017 of the European Parliament and of the Council of 25 June 2015 on the European Fund for Strategic Investments, the European Investment Advisory Hub and the European Investment Project Portal and Amending Regulations (EU) No 1291 / 2013 and (EU) No 1316 / 2013 – the European Fund for Strategic Investments, Official Journal of the European Union, 1 July.

Gomes, S., P. Jacquinot, and M. Pisani (2010), The EAGLE. A model for policy analysis of macroeconomic interdependence in the euro area, ECB Working Paper 1195.

IMF (2014), "Is it time for an infrastructure push? The macroeconomic effects of public investment", World Economic Outlook, chapter 3, 75-114, October.

IMF (2015), Making public investment more efficient, Staff Report, June.

NAI (2014), National accounts ESA 2010. The new reference framework for the national accounts, September.

Juncker J-C (2014), A New Start for Europe: My Agenda for Jobs, Growth, Fairness and Democratic Change, Political Guidelines for the next European Commission, Opening Statement in the European Parliament Plenary Session, 15 July.

Melyn W., L. Van Meensel and S. Van Parys (2015), "European governance framework for public finances: presentation and evaluation", NBB, Economic Review, 81-108, September.

Moesen W. (2015), De begroting als een publieke grabbelton versus civiel kapitaal, leuvense economische Standpunten, (The budget as a public lucky dip versus civil capital, Leuven Economic Positions) 2015 / 147, 12 March.

Moesen W. (2016), De begroting van de begroting, de gouden financieringsregel en andere bekommernissen (The grazing of the budget, the golden financing rule and other concerns), 17 February.

NBB (2016), "Fragile recovery of investment in the euro area", Report 2015, box 3, 69-73.

Truger A. (2015), Implementing the Golden Rule for Public Investment in Europe:

Safeguarding Public Investment and Supporting the Recovery, Welfare, Wealth, Work for Europe, Policy Paper 22, March.