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An investment initiative for fiscally constrained EU member states: The role of synergetic financial instruments

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An Investment Initiative for Fiscally Constrained EU Member States – The Role of Synergetic Financial Instruments

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An Investment Initiative for Fiscally Constrained EU Member States – The Role of Synergetic Financial Instruments

Severin Zeilbeck

Abstract: The economy of the European Union has not recovered from the impact of the economic and financial crisis. Growth rates remain low and investment activity is weak. This questions current economic policies of the Economic and Monetary Union, known as austerity. In opposition to fiscal contraction measures, expansive fiscal action policies are often called for to initiate economic recovery. But the national interests of austerity's main proponent, performed in an asymmetric intergovernmental bargaining arena, render most of the proposed expansive action plans impossible and hence austerity is expected to prevail. The Juncker-Plan constitutes an expansive action plan which respects the restrictive budgetary rules. Nevertheless an investment volume of 315 billion Euro should be made available, enabled by 21 billion Euro of public money. The budget contribution should lever private funds by a multiplier of 15. The crucial factor of 15 rests on experience with Synergetic Financial Instruments which have been increasingly executed during the last budget period. This work assesses the impact of expansive public investment conducted through these Synergetic Financial Instruments and thus gathers information to undertake an appraisal of the Juncker-Plan, foremost of its crucial mechanisms and resulting numbers. By this, the potential of financial instruments as means of fiscal policy and the validity of the Juncker-Plan can be assessed.

JEL Code: G23, E61, E62, E65, G01, G11, H62, H63

Keywords: Economic and Monetary Union, austerity, fiscal policy, public investment, financial instruments, Juncker-Plan, European Fund for Strategic Investment

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List of abbreviations

CEF	- Connecting Europe Facility
CF	- Cohesion Fund
COSME	- Competitiveness of Enterprises and SMEs
EC	- European Commission
ECB	- European Central Bank
EEEF	- European Energy Efficiency Fund
EFG	- Equity Facility for Growth
EFSI	- European Fund for Strategic Investment
EIB	- European Investment Bank
EIF	- European Investment Fund
ELENA	- European Local Energy Assistance
EMU	- Economic and Monetary Union
EPMF	- European Progress Microfinance Facility
ERDF	- European Regional Development Fund
EU	- European Union
FTT	- Financial Transaction Tax
GDP	- Gross Domestic Product
GIF	- High Growth and Innovative SME Facility
IL	- Instrument leverage
JASMINE	- Joint Action to Support Micro-finance Institutions in Europe
JASPERS	- Joint Assistance to Support Projects in European Regions
JEREMIE	- Joint European Resources for Micro to medium Enterprises
JESSICA	- Joint European Support for Sustainable Investment in City Areas
LGF	- Loan Guarantee Facility

LGTT	- Loan Guarantee Instruments for Trans-European Transport Network Projects
ME	- Multiplier effect
MPF	- Multiannual Financial Framework
NCM	- New Consensus on Macroeconomics
OPs	- Operational Programmes
PL	- Project leverage
PPPs	- Public Private Partnerships
R&D	- Research & Development
RSFF	- Risk Sharing Finance Facility
SFIs	- Synergetic Financial Instruments
SMEG	- SME Guarantee Facility
SMEs	- Small and Medium Size Enterprises
TTP	- Technology Transfer Pilot Project
UK	- United Kingdom

1. Introduction

Seven years after the beginning of the global financial and economic crisis the 2014 elections of the president of the European Commission (EC) were dominated by the repercussions of this turmoil. Electoral campaigns of both candidates, Jean-Claude Juncker and Martin Schulz, featured an explicit focus on growth and employment issues. The European Union's (EU) economy still suffers from the crisis's impact and shows only modest signs of recovery. The 2014-world economic outlook of the International Monetary Fund (IMF) exhibits this (IMF, 2014). Gross Domestic Product (GDP) growth in 2013 was nearly zero and stagnated in the second quarter of 2014 along with projections of slightly above one per cent of overall EU-28 GDP growth in 2014. Output is not on track with pre-crisis levels and the economic lull is illustrated by persistently low inflation rates, too. Inflation of 0.5 per cent is far below the official price stability target rate of the European Central Bank (ECB) (two per cent) and may indicate the danger of deflation. Overall, instead of indicating a recovery from the crisis, the economic projections for the EU are rather sobering. Recovery continues to be the core challenge of European policy, which was reflected by the electoral campaigns of both EC presidency candidates. This also sheds light on the question if previous economic policy action, based on the idea of fiscal contraction, contributed to recovery or if alternative ways, proposed mostly in form of expansive action, are more appropriate for recovery.

In the aftermath of the election, the Commission's new president, Jean-Claude Juncker, launched an initiative called "An Investment Plan for Europe".¹ The Juncker-Plan promises to deploy substantial funds available for strategic investment. This expansive action policy is based on comparably few EU-budget resources which should lever a multiple of the initial funds. This mechanism rests on experience with financial instruments which use synergies between EU-budget programmes, multilateral lending institutions like the European Investment Bank (EIB) and private investors. This work assesses the impact of expansive public investment conducted through these Synergetic Financial Instruments (SFIs)² and thus gathers information to undertake an appraisal of the Juncker-Plan.

The following methodology will be conducted. Section two illustrates the need for expansive fiscal action by reviewing the outcomes of recent EU economic policies, looking at the state of (public) investment in Europe and introducing the Juncker-Plan in detail. Section three

¹ Subsequently the plan will be referred to as the "Juncker-Plan".

² The acronym 'SFI' is the author's choice to overcome the confusing use of terms by EU institutions. The instruments have various names but mostly they are referred to as 'Financial Instruments' or 'Innovative Financial Instruments', despite they are not innovative and "any form of financial transfer is really a 'financial instrument'" (Núñez Ferrer, et al., 2012, p.18).

examines if the EU investment architecture is an appropriate vehicle to conduct strategic investment. As a part of EU-level investment tools, SFIs will be analysed in section four. Section five draws inferences from this progressive way of fiscal policy about the reasonability of the Juncker-Plan and provides a critical assessment. This will be amended by alternative proposals to the critical aspects of the Juncker-Plan.

2. Recent EU Economic Policies

For a sound understanding of the topic, it's useful to clarify why an expansive action plan is needed. Recent changes in economic policy coordination within the Economic and Monetary Union (EMU) obviously failed to overcome the impact of the crisis. The European economic regime is shaped according to a mainstream economic belief, often called the New Consensus on Macroeconomics (NCM). Highly stylised, the cornerstones are an independent central bank focussing on price stability, a marginalised stance on fiscal policy which should primarily guarantee budgetary stability and the perception of a supply-side determination of economic activity, namely output and employment (Arestis and Sawyer, 2004; Sadeh and Verdun, 2009; Hein, et al., 2011; Scharpf, 2011). The EMU's design is sometimes also called the 'Brussel-Frankfurt Consensus' (Jones, 2013). This indicates the transfer of the German Bundesbank's historically rooted conduct of monetary policy, influenced by the economic concept of Ordoliberalism, to the European level. Core components are price stability, sound public budgets, supply-sided reforms shaping free, efficient markets and, with respect to European integration, national responsibility for fiscal issues (Featherstone, 2012; Bibow, 2013b; Boyer, 2013; Jones, 2013). Accordingly, the European Central Bank (ECB) is independent and its mandate is to guarantee stable prices. The European fiscal capacity is comparably weak and national budgets are subject to the Stability and Growth Pact (SGP). The SGP is concerned with coordination and mutual surveillance of fiscal policy and imposes (one-size-fits-all) thresholds to national public debt.³

In the wake of the economic and financial crisis national public debt levels accelerated because governments took over private debt to dampen damage to the real economy. In turn, government bond spreads rose in periphery countries due to a loss of confidence and panic inside financial markets, rendering the refinancing of governments impossible (De Grauwe and Ji, 2012, 2013a). The widespread interpretation of the crisis cited public profligacy as the main cause of the governments' inability to refinance their budgets, which is perceived as a fundamental

³ The two central thresholds require member states' annual budget deficit must not exceed 3 per cent of GDP and public debt must not be bigger than 60 per cent of GDP.

mistake (Hein, 2012; Bellofiore, 2013; De Grauwe, 2013a).⁴ European decision-makers launched a series of rescue actions and reforms of the EMU framework to defend the common currency. On the one hand, liquidity was provided to countries under pressure by the build-up of country-specific, or EU-wide, bail-out funds and the ECB's credible intervention in the government bond market as a quasi-lender of last resort. This eased government bond spreads' climax (De Grauwe, 2013b; Saka, et al., 2014). On the other hand, a series of reforms to the framework of fiscal coordination was launched. A revised SGP and the new Fiscal Compact comprised tightened budget rules, enforcement of sanctions, increased surveillance of fiscal policy and the introduction of technical indicators controlling for macroeconomic imbalances (Buti and Carnot, 2012). Overall these operations urge national governments to pursue fiscal contraction and supply-sided reforms to meet the objectives of the reformed EMU rules (Schilirò, 2013). Countries claiming bailout fund-benefits were subject to specific austerity programmes. Fiscal austerity for restoring budgetary stability is well suited to the NCM's attitude with the respect to government expenditure's effects on economic activity, like Briotti (2005) shows. As fiscal policy's impact on growth is perceived to be small, fiscal contraction should also have no big negative effects. Based on the assumption of Ricardian equivalence, budgetary stability supports restoring the confidence of financial markets. Together with supply-sided reforms, this strategy should help to reduce government bonds spreads and well-working markets should induce growth.

2.1. The Impact of Austerity

Recent economic developments in the Eurozone seem to contradict these assumptions. Austerity rather amplified recessionary developments. De Grauwe and Ji state: "The more intense the austerity, the larger the subsequent increase in debt-to-GDP ratios. (...) Thus, it can be concluded that the sharp austerity measures that were imposed by market and policy-makers' panic not only produced deep recessions in the countries that were exposed to the medicine, but also that up to now this medicine did not work." (2013a, p.37). Rising debt-to-GDP ratios revealed the difficulty of deleveraging in the absence of economic growth (Darvas and Pisani-Ferry, 2011) which became obvious when austerity measures did not overcome the credit crunch or lower the risk adversity of economic agents.⁵ Declining lending volumes of banks have had a negative effect on the real economy (Acharya, et al., 2014). Despite the intensity of

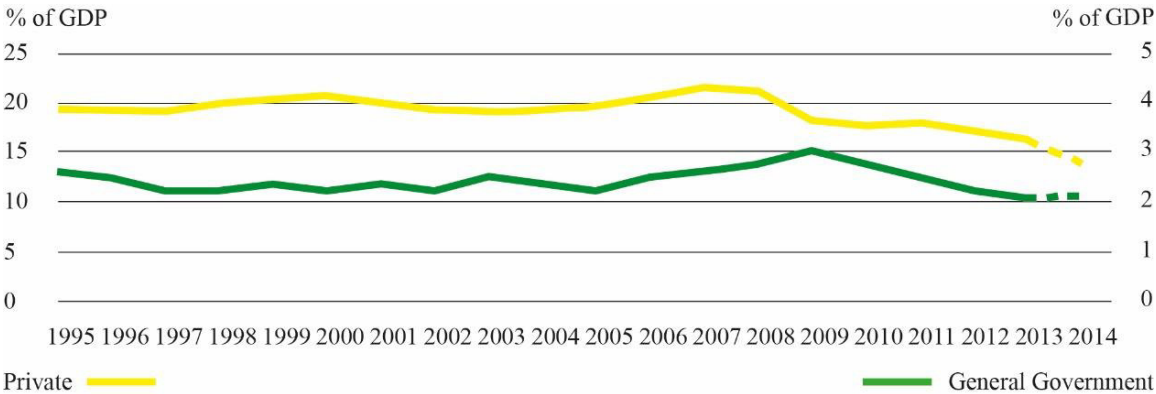
⁴ See Scharpf (2011), Gros (2012), Paúl and Uxó (2013) and Zezza (2012) for evidence, that rather private debt and macroeconomic imbalances debt are the roots of the crisis. See Heipertz and Verdun (2010) and Boyer (2013) for deficiencies of SGP's governance design.

⁵ It's important to note that government-debt interest rates declined, but foremost due to the ECB commitment and not fiscal consolidation measures or political action (Smeets and Zimmermann, 2013; Saka, et al., 2014).

austerity measures increasing in accordance with interest spreads, confidence was not restored. (De Grauwe and Ji, 2013a; b). These pro-cyclical adjustment policies (Truger, 2014) can be called “The Self-Defeating Austerity Syndrome” (Independent Annual Growth Survey, 2012). This interpretation is sustained by the latest IMF data, revealing low inflation, persistently high government debt in crisis countries, weak investment activity, an ongoing credit crunch and little output growth for the EU (IMF, 2014). The negative impact of fiscal contraction was largely underestimated (IMF, 2012, 2014).

Public investment seems to be the most auspicious element of fiscal policy with regard to growth.⁶ There is a broad consensus that investment in human capital, infrastructure and research and development (R&D) leading to innovation are the most significant determinants in attaining a sustainable long-term growth path and are of the utmost importance in raising the non-price competitiveness of uncompetitive member countries (Barro and Sala-i-Martin, 1994; Darvas and Pisani-Ferry, 2011; Seccareccia, 2012; Zachmann, 2012; Barbiero and Darvas, 2014). Darvas and Pisani-Ferry (2011) or Aiginger (2013) show that eastern and southern periphery countries have deficits in these three growth determinants. Also, expenditure on the determinants has been cut in these countries to meet budgetary rules (Barbiero and Darvas, 2014). The European Commission states: “Fiscal consolidation measures which began to be implemented at the end of 2010 have resulted in significant changes in the composition of public expenditure in a number of Member States. In particular, growth-friendly expenditure has been cut back disproportionately as part of fiscal consolidation measures.” (2014e, p.140). Figure 1 displays how private and public investment rates both went down in the EU after fiscal consolidation measures were in place.

Figure 1: Private and government gross fixed capital formation



Source: (European Commission, 2014e, p.143)

⁶ The common measure for investment is gross fixed capital formation. See Barbiero and Darvas (2014) for definition and discussion of measurement with respect to public investment.

2.2. The Moment For Expansive Public Investment

A long-lasting and controversial debate on the effect of expansive fiscal policy can be observed within the body of empirical literature. The discussion's focus is the size of the Keynesian multiplier. Empirical literature indicates that the Keynesian multipliers range between -0.2 and 5.5 percent, whereby most estimates range between 0.2 and 2.5 (Hemming, et al., 2002; Briotti, 2005; Fedelino and Hemming, 2005; Arslanalp, et al., 2010; Independent Annual Growth Survey, 2012). A recent work by 17 economists from North-American and European central banks proposes a multiplier of 1.5 for public investment (Coenen et al., 2012). The size of the multiplier is heavily dependent on, first, the economic circumstances under which fiscal policy is conducted and, second, which composition these policies feature. Multipliers are generally lower for tax changes, during times of economic prosperity or if they are long-term oriented. They are higher for expenditure changes, in times of economic slowdown and if short-term oriented. The economic context plays an important role. Several articles of Auerbach and Gorodnichenko (2012a; b, 2013) show that multipliers are 2.5 percent during an economic slowdown and when the interest rate is close to zero. Also, the IMF recently corrected its multiplier's size within their models, most notably with regard to forecasted errors of the effects of past fiscal contraction measures (IMF, 2012; Blanchard and Leigh, 2013). In times of sluggish economic activity and especially if interest rates are close to zero, multipliers are above 1. All in all, empirical literature supports the assumption that fiscal policy is an appropriate way to generate growth, because the decisive characteristics of the current economic circumstances indicate a multiplier larger than 1.

Besides austerity not producing its intended results, empirical literature supports a significantly positive impact of expansive fiscal policy in the prevalent economic environment of the EU.. Public investment as the most growth-friendly expenditure should therefore be extended. Despite the fact that expansive fiscal measures would play a favourable role in a different economic policy mix, the heads of states and the EC do not depart from the path of austerity and alternative policies have to adhere to a number of restrictions. Therefore the role of austerity's most prominent proponent is important.

2.3. Restrictions to Expansive Action and The Juncker-Plan

Germany's economic philosophy is influenced by the concept of Ordoliberalism, entailing a laissez-faire market styled economy with a focus on currency policy (Bibow, 2013b). The statement "At it's most simplistic, the Bundesbank mantra holds that (price) stability causes growth." (Bibow, 2013b, p.14) expresses Germany's preferences. Political science analyses call

this model ‘conservative-corporatist’ (Esping-Andersen, 1990), while economy-focused studies often use the term ‘(neo-) mercantilist’ (Hein, 2012; Lucarelli, 2012; Bibow, 2013a). It aims at “macroeconomic stability, inclusive social policy and a sustained growth of industrial production” (Bonatti and Fracasso, 2013, p.1028). Common grounds are an export-led growth model underpinned by price stability, the upholding the manufacturing foundation in consent with a socially protected core workforce, an approach of competitiveness advantages possible through wage disinflation, sound public finance and flexibility on the firm level (Bonatti and Fracasso, 2013), while domestic demand is of minor importance (Bibow, 2012).

The German model is highly compatible with the NCM-styled EMU framework and its reliance on price stability and supply-sided determination of economic activity. A reversal of its historic ideology and a deterioration of its competitiveness through wage increases, fiscal expansion and higher inflation seem unlikely, most of all if this would be perceived to jeopardise its export capacity and position in the global economy. (Bibow, 2012; Bonatti and Fracasso, 2013). To uphold international competitiveness after its reunification and failure to meet SGP rules in the early 2000s, Germany undertook painful domestic supply-sided reforms. German authorities refer to its past adjustments when justifying and promoting a German-styled reform process for deficit countries, insisting that supply-sided reforms, underpinned by sound public finance to restore confidence of financial markets, are the most promising way of recovery (Weidmann, 2012; Schäuble, 2013).

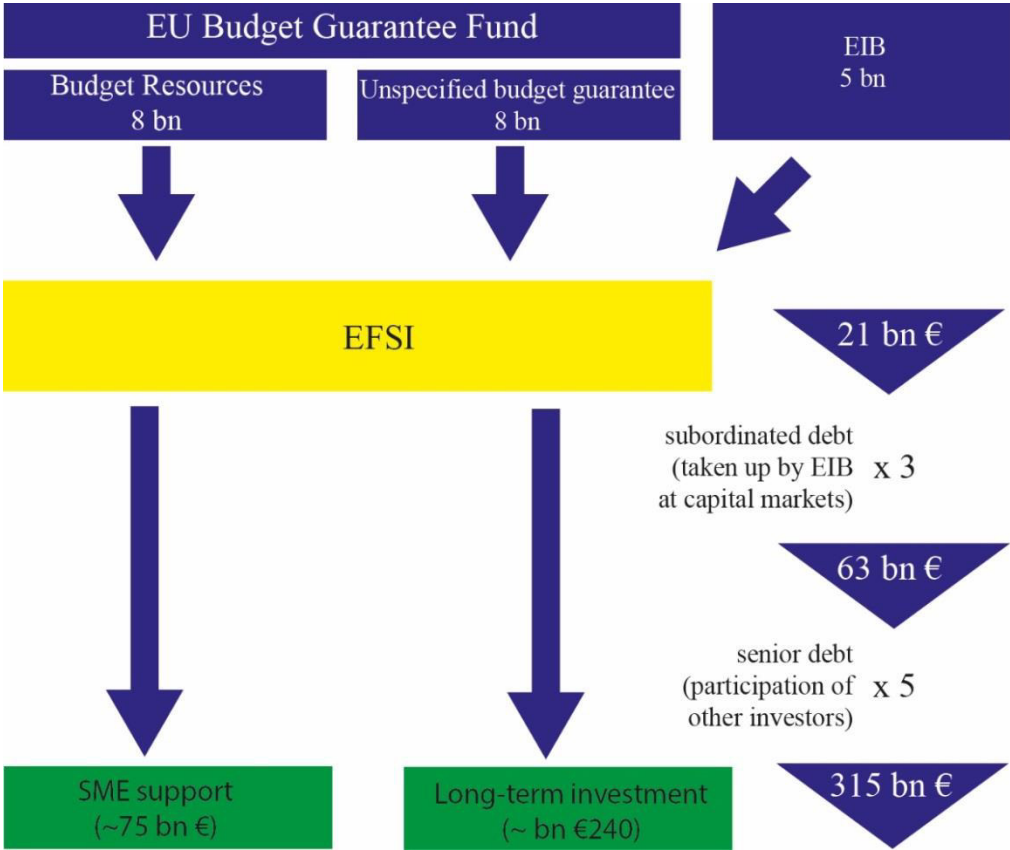
Moravcsik (2012) shows that recent EMU policies are largely driven by German perceptions, which is grounded in the core country’s bargaining position and higher relative power which was amplified by the dynamic of the crisis. As the greatest creditor for deficit countries, Germany has to ensure re-payment of debt and secure its guarantees, thereby ruling out the danger of moral hazard arising from the common belief that a Euro-breakup is not an option. Hence, tight budgetary rules for debtor countries provide security grounded on the rational deliberation of Germany. Scharpf (2014, p.11) supports this claim: “[...] the present euro-rescuing regime is institutionally entrenched as an extremely asymmetric intergovernmental negotiation system in which debtor governments have practically no bargaining power.” Additionally, Germany profits from its safe-haven status, making very low domestic interest rates possible (Bibow, 2012). The complex picture of crisis management and reforms for prevention the breakup of the eurozone reflects Germany’s reluctance toward financial transfer mechanisms, communalisation of public debt (Bonatti and Fracasso, 2013) or any major advances in fiscal integration (Boyer, 2013). Besides national responsibility for fiscal issues being a prominent ordoliberal principle (Featherstone, 2012), German public opinion opposes

increased financial accountability and relaxation in terms of adjustment efforts of debtor countries by referring to their own domestic reform process. This renders relaxed rules and deepened fiscal integration even more unlikely (Bonatti and Fracasso, 2013; Glencross, 2013). Hence, an investment initiative cannot be based on the relaxation of fiscal rules, higher inflation levels, wage increases in creditor countries or enhanced fiscal integration. Therefore, calls for a fundamentally different economic policy mix (Hein, Truger and van Treeck, 2011; Hein and Truger, 2013) or deepened fiscal integration in the form of new institutions taking up new -, or communalising existing debt (Dullien and Schwarzer, 2011; Bibow, 2013b; De Grauwe, 2013a; Pisani-Ferry, Vihriälä and Wolff, 2013) are reasonable, but, by now, rather improbable.

In November 2014 the Juncker-Plan (European Commission, 2014b, 2015) was presented as an initiative to give a growth impetus. According to the plan, a European-level fund is able to make 315 billion Euro of public and private money available in three years. The funds can be used for investment in strategically important areas, like R&D, education, competitiveness of small and medium sized enterprises (SMEs) and infrastructure. Simultaneously, the restrictive fiscal rules of the EMU shall be respected. A 16 billion Euro guarantee under the EU budget will be complemented by 5 billion Euro of EIB capital, forming a 21 billion Euro guarantee scheme. This scheme will back the newly set-up European Fund for Strategic Investment (EFSI) which operates at project-level. The fund is administered by the EIB and its purpose is the leverage of additional money. First, the EIB, by using the typical instruments, raises funds on capital markets as subordinated debt. Second, private investors, (public) lending institutions or member states are invited to participate (senior debt). The plan is rather unspecified at this point and offers no concrete advantages and possible consequences of this process (Horn et al., 2015).

Overall, the plan expects that the initial contribution can be multiplied by a factor of 15. See figure 2 for visualisation of functioning. The EFSI offers risk-finance and long-term investment support with a focus on SMEs. “The main idea is to provide greater risk-bearing capacity through public money in order to encourage project promoters and attract private finance to viable investment projects which would not have happened otherwise.” (European Commission, 2014b, p.6). A further component to reduce the barriers for investment is an attempt to channel the raised funds to the real economy by creating a task force which identifies viable projects (“project pipeline”) and by offering technical assistance (investment advisory hub). Additionally, the plan aims at improving the European regulatory environment, creating a Capital Markets Union which fosters long-term finance and, unsurprisingly, strengthening the Single Market. At the national level, the Juncker-Plan invites the member states to increase to use of SFIs within cohesion policy.

Figure 2: The Juncker-Plan



Source: Author

The discussion on the Juncker-Plan is not very extended and the plan is perceived rather with scepticism. Claeys et al. (2014) raise doubts on adequate selection of attractive projects by the authorities and Veugelers (2014) highlights the fact that shifting budget resources could create opportunity costs if other programmes in turn lack funds.⁷ Despite some short statements questioning the multiplier's size (Rabesandratana, 2014; Horn et al., 2015), insufficient attention is paid to experience with SFIs the Juncker-Plan refers to and builds on. Hence, starting from the question if it is appropriate at all to rely on EU-level instruments, the reasonability of the suggested mechanism and proposed numbers of resource volumes will be assessed by an extended analysis of the SFI-use, allowing for an appraisal of the Juncker-Plan. As both, SFIs and the ESFI, are EU-level investment tools, it is useful to examine, if EU-level investment is an appropriate way to support recovery and induce growth.

⁷ Both aspects will be referred to later on, as they take up important questions, which also occur regarding SFIs.

3. The EU Investment Architecture

As national fiscal leeway is restricted, the European fiscal capacity is the instrument left to act. The budget is organised as a seven-year Multiannual Financial Framework (MFF). The current framework lasts from 2014 until 2020 and its volume amounts to 1082,56 billion Euro (Council of the EU, 2013; EC, 2013a).⁸ The MFF is organised in six spending categories ('headings') of which heading 1 ('Smart and inclusive growth', with subheadings 1a 'Competitiveness for growth and jobs' and 1b 'Economic, social and territorial cohesion'), is the one concerned for public investment (total volume roughly 508,921 billion Euro). See Appendix 1 for programmes and concrete numbers.

Subheading 1a can be labelled 'direct budget support' or 'centrally managed'. It amounts to 142,130 billion Euro or 13.1 per cent of the whole budget. Programmes are under control of the EC and explicitly approach human capital, infrastructure and R&D/innovation by offering financial support to business. Subheading 1b is widely known as 'cohesion policy'. It is conducted via the Structural and Cohesion Funds which are under 'shared management'.⁹ They aim at "reducing disparities between the levels of development of the various regions" (EU, 2012a, Art. 174). Cohesion policy is perceived "to contribute – through investments into structural change – to reducing socio-economic differences" (Nyikos, 2013, p.164). As regional redistribution, channelled through growth-enhancing public investment, is the purpose of cohesion policy, assessments of the EU's fiscal capacity primarily refer to this policy. Resources from the Structural and Cohesion Funds are managed by a national Managing Authority (MA). The MA selects national projects or portfolios and merges these into an Operational Programme (OP) which will be evaluated by the EC. The EC ultimately decides on the grants provided to the MAs and constantly monitors the process of spending. Eligibility for specific funds and subsequently allocated volumes depend on the member states' size and level of development (EC, 2014a). Project costs are never totally covered by EU grants, but have to be completed by national resources because "Support (...) shall not replace public or equivalent structural expenditure by a Member State." (EU, 2013c, Art. 96). This is the principle of additionality.

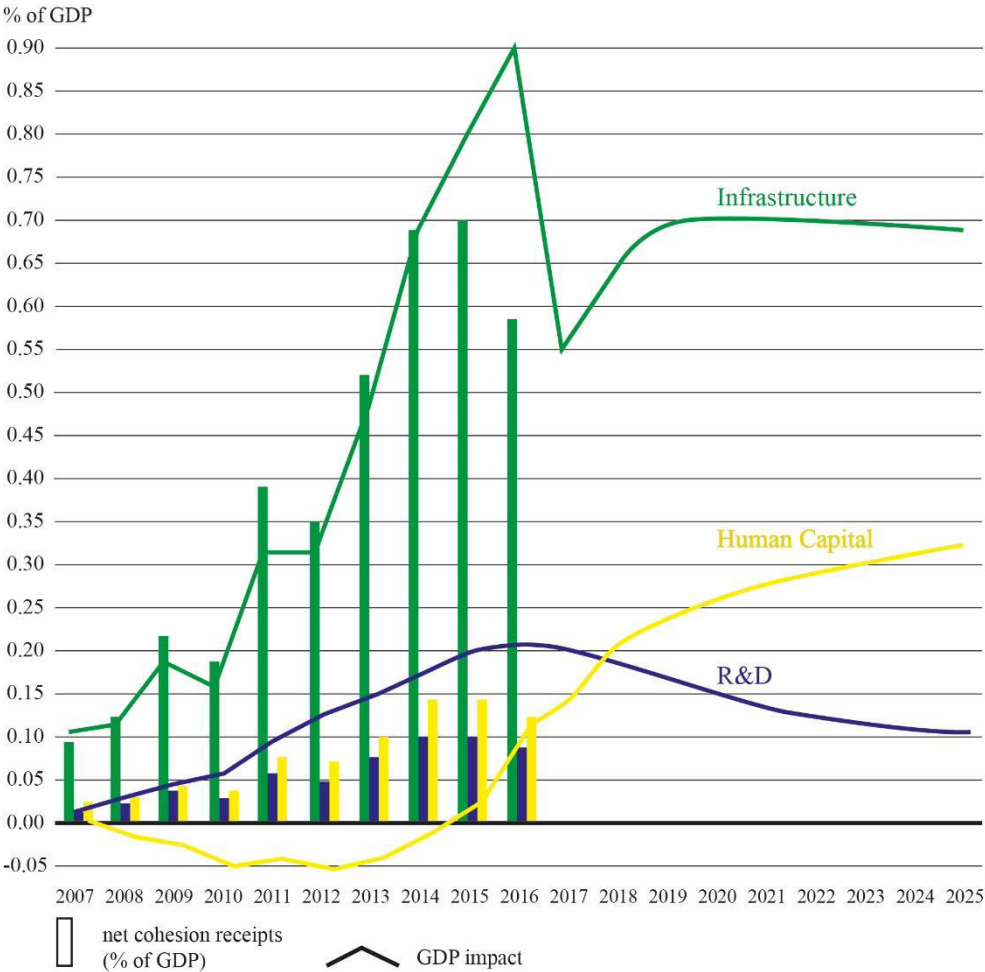
Similar to the discussion of fiscal policy, theoretical and empirical literature on the impact of cohesion policy is inconclusive (Allard, Choueiri, Schadler and Van Elkan, 2008; Marzinotto,

⁸ Volumes are denoted in 2014 prices. The EU budget is a relatively small one, compared to the national budgets of all member states. In 2011 national government expenditure was almost 50 per cent of EU's GDP (EuroStat, 2014b), while the 2011 EU budget was approximately 1,2 per cent of EU's GDP (EuroStat, 2014a; European Commission, 2014c).

⁹ Cohesion Fund (CF), European Social Fund (ESF), European Regional Development Fund (ERDF)

2012; Haisch, Müller, Primhak and Schneider-Sliwa, 2013; Nyikos, 2013). Regression-based econometric studies are rather ambiguous, while macro-model simulations show modest (Quest model) to substantial (Hermin model) positive impacts. Varga and in 't Veld (2010) review different models and elaborate a novel micro-founded general equilibrium model, based on the EC's Quest III model. They apply it to member states receiving most of cohesion spending.¹⁰ Foremost, spending on infrastructure in the short-run as well as R&D and human capital in the medium and long run respectively, attain positive output effects. An example is given for Greece in figure 3.

Figure 3: Cohesion spending and output effect in Greece



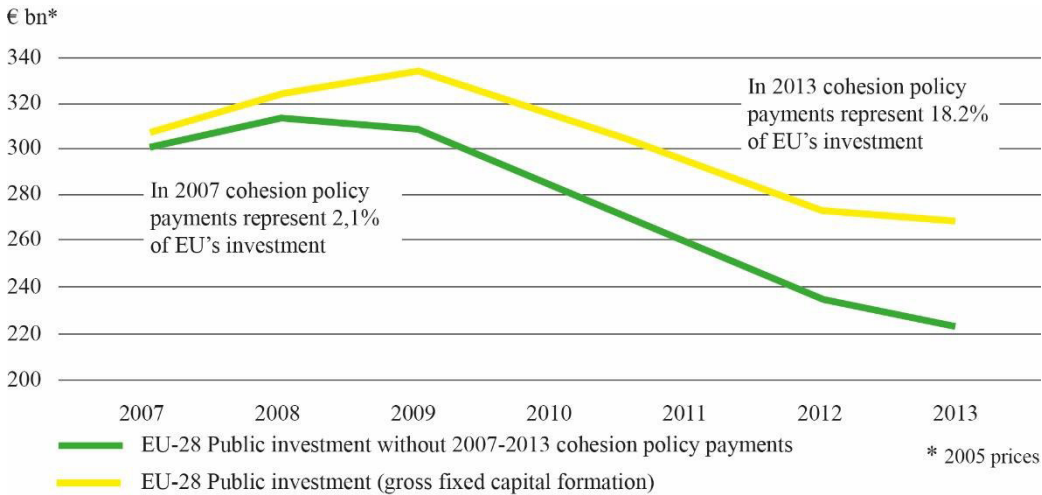
Source: Varga and in 't Veld (2010, p.43)

Financial appropriations generate growth on an equal scale. Cohesion policy's meaning for public investment also underlines its importance for growth creation. For example, figure 4 expresses the difference of public investment with and without cohesion spending and underlines the importance of EU budget expenditure in times of economic downturn. Healy and

¹⁰ Member states of the 2004-enlargement, as well as other biggest receivers.

Bristow (2014) show that the economic and financial crisis reduced national resources available for co-financing Structural and Cohesion Fund-supported projects. The pressure on national budgets led to a temporary relaxation of the additionality-principle, so that 95 per cent of co-financing was allowed for member states under financial assistance. This came along with prolonged availability of OP funds from the MFF 2000-2006, relaxation of rules of automatic de-commitment of appropriations after a certain period of non-spending as well as antedated payments for large projects to counter the impact of the crisis (Smail, 2010).

Figure 4: Public investment with and without cohesion spending



Source: (European Commission, 2014e, p.155)

Cohesion policy hence features flexibility to counter unanticipated developments and can play a vital role for economic recovery because it acts as an incentive to national authorities to uphold public investment (Alegre, 2010; Marzinotto, 2011a). Besides the impact on GDP, there are non-financial effects of cohesion policy amplifying the use of funds. An extensive study of ÖIR-Management Dienste (2007) gives evidence that cohesion policy positively affects strategic policy, institutional capacity building and societal cohesion building of Europe. This is sustained by econometric analysis (Rodríguez-Pose and Novak, 2013). Despite learning effects, weak administrative capacity and governance deficits curtail the effectiveness of cohesion policy. Low absorption and delays in spending are seen as the outcome of governance deficits and the main impediment to a more effective impact of cohesion policy (Marzinotto, 2011a; Haisch et al., 2013).

Another institution of concern for public investment activities is the EIB. It is the biggest multilateral lending institution in the world (Clifton, et al., 2013). The bank’s owners are the 28 member countries. It holds subscribed capital of 243,284 billion Euro. The bank so far recorded surpluses and built up own funds of 58 billion Euro (EIB, 2013b). The EIB is

autonomous, non-profit oriented and finances its activities on capital markets. In 2013, lending operations amounted to 64,019 billion Euro within the EU, and to nearly 300 billion Euro from 2009 to 2013 (European Investment Bank, 2013d). The EIB does not service its shareholder in the form of dividends and holds a triple-AAA credit ranking. Thus it borrows and lends at low cost, mostly long-term orientated, and by treaty provisions, its activities have to be in line with EU objectives (European Union, 2012a; European Investment Bank, 2013e). The EIB's main fields of action are financial assistance in less developed regions (European Investment Bank, 2013d) with respect to financing of SMEs,¹¹ innovation projects, climate change action and infrastructure (Clifton, Fuentes and Revuelta, 2013), but also human capital (Tuijnman, 2009). The bank finances up to 50 per cent of total project costs which means that third parties, private or public, have to fill the remaining gap, similar to the additionality principle of cohesion policy. Robinson's (2009) analysis shows EIB loans lever a great amount of additional resources to cover project costs, which often stem from public or private institutions. This is possible due to the bank's excellent credit ranking. Total volumes which are inflated through leverage of private funds are "far in excess of the total budget of the EU" (2009, p.655).¹² See Appendix II for concrete numbers. EIB activity gives incentive to national budget decisions and, by low interest rates and long-term orientation, enables projects which wouldn't be undertaken otherwise. By its size and lending practice the EIB takes on a quasi-fiscal role (Honohan, 1995). Above all, this supranational lending body plays an important role in mitigating informational deficits in credit markets, thus overcoming the credit crunch (Fedele, et. al., 2010). Comparable to cohesion policy, EIB activity has "important implications for the development of regional governance, building partnerships (...) and enhancing lessons drawing." (Robinson, 2009, p.666).

4. Combining Different Funding Components: Synergetic Financial Instruments

A small part of the EU budget is deployed for the use of SFIs. Most of these became operational in 2007, but have been used in previous MFF in minor ways. They attracted more attention as public budgets were obliged to do more with fewer resources. Officially, the EU defines SFIs as the following:

"financial instruments" means Union measures of financial support provided on a complementary basis from the budget in order to address one or more specific policy objectives of the Union. Such instruments may take the form of equity or quasi-equity investments, loans

¹¹ This includes global loans to financial intermediaries or direct loans to projects, but also blending with EU-grants and advisory operations.

¹² Measured on an annual basis.

or guarantees, or other risk-sharing instruments, and may, where appropriate, be combined with grants.” (European Union, 2012b, Art. 2). They combine prominent features of both, EU-budget support and EIB financial products. The outstanding feature of budget support is its capability to support, uphold and enhance public investment, and in turn growth. The exceptional feature of EIB activity is its ability to lever great amounts of resources from public and private bodies. Both elicit supplementary non-financial effects. Several extensive reports address SFIs and provide aggregated data. The following analysis draws on Núñez Ferrer et al. (2012), Robinson and Bain (2012), Spence et al. (2012), EIB (2013a), Núñez Ferrer and Katarivas (2014) and on a report of the EC (2014f) which all refer to SFIs in force during the MFF 2007-2013.

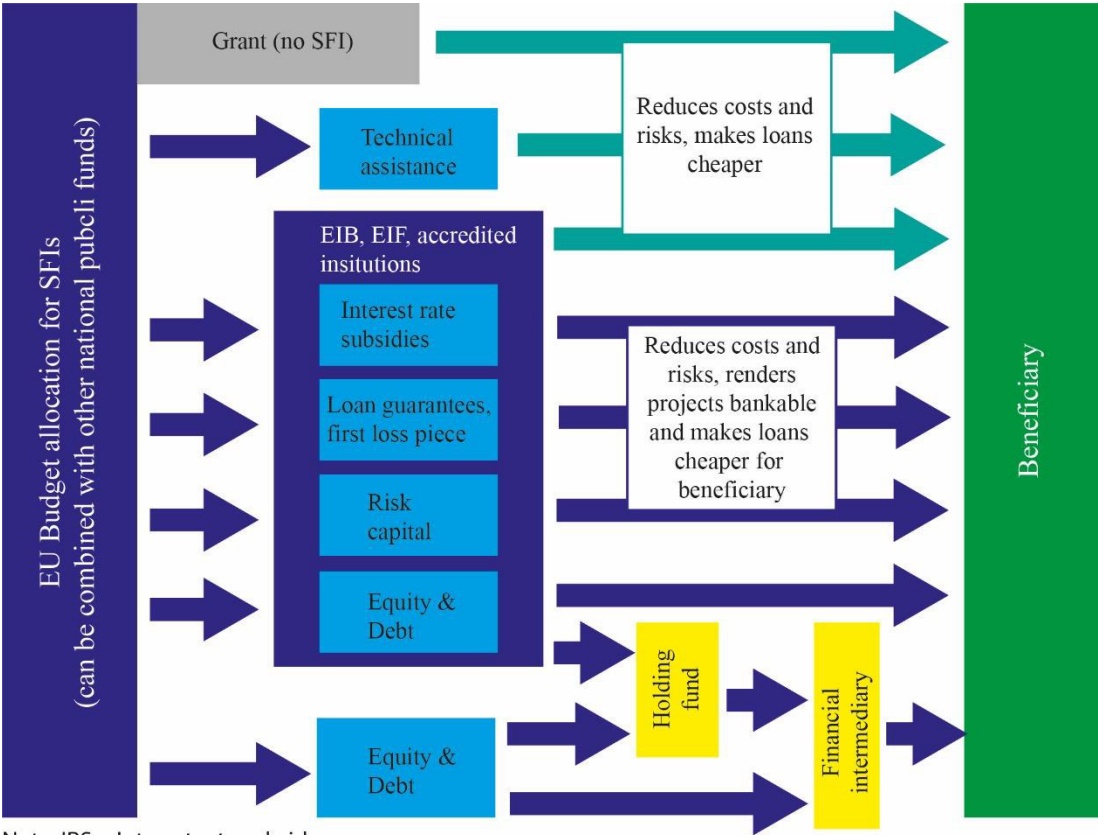
SFIs are funding instruments which conflate EU budget contributions with the characteristics of a financial product and offer financial assistance different from simple grant-giving. Grants can also be blended with financial instruments/SFIs established by associated financial institutions, for example the EIB (EU, 2012b). 24 SFIs were established during the past MFF, of which 13 were EU-internal instruments and 11 for activity outside of the EU.¹³ Despite they are interrelated and reinforce one another, they can be clustered according to the EU budget’s division, central management (subheading 1a or direct budget support) and shared management (subheading 1b or cohesion policy). 9 centrally managed SFIs are EC controlled EU level funds, while SFIs under shared management can be divided into two groups: 4 promoting and assisting instruments, enhancing the use of small scale SFIs at the level of nationally controlled OPs.

Concrete management and implementation is delegated to an entrusted entity which is the financial intermediary the financial product stems from. Hence the EIB and the European Investment Fund (EIF) in most cases execute this task. But funds can be also provided to an ordinary commercial bank which is then obligated to channel the money to thematically agreed projects in line with the budget programmes’ legislature. Figure 5 expresses the construction and mechanisms of SFIs in general, but the figure is also applicable to centrally managed SFIs. EU budget resources become financial products of various shapes and are directed via holding funds, financial intermediaries or directly to the beneficiary. Table 1 lists all SFIs under central management and exhibits their related field of investment activity as well as the volume of funds which initially haven been allocated. Because implementation is delegated to EIB-bodies or other financial intermediaries to guarantee proper execution, SFIs contain monitoring and

¹³ Only internal instruments are of concern for analysis’s purpose. Also the Project Bond initiative is an SFI, but the instrument is still under testing and evaluation studies are not available yet. Projections based on ex-ante studies shall not be part of this thesis to avoid inaccuracies. Furthermore, the initiative is fuelled only with non-absorbed resources of the last MFF. Future budget allocation is not fully comprehensible. Hence, the initiative will not be part of the analysis.

reporting obligations audited by the EC and the European Court of Audits. Furthermore, SFIs are similar but not equal to classic Public Private Partnerships (PPPs) on project level. SFIs can offer assistance to PPPs by providing a funding instrument above the project level where public and private funds are pooled. Only the provision of funds can be described as a ‘partnership’ but dispersion of resources to the beneficiary level is uncoupled of the claims of private investors and subject to European objectives. The third party participator is not integrated in “designing, building and operating (...) projects” (De Clerck, et al., 2012), like it is commonplace in ordinary PPPs.

Figure 5: The functioning of SFIs



Note: IRS = Interest rate subsidy

Source: Núñez Ferrer and Katarivas (2014, p.9)

Figure 6 explains the functioning of SFIs under shared management. Four instruments under shared management are technical assistance or promotion instruments called JESSICA, JEREMIE, JASPERS and JESSICA (JJJs).¹⁴ They promote and assist small scale, project based SFIs at the level of OPs. These SFIs receive funding from the Structural and Cohesion Funds and from national resources. Funds are under the control of the national Managing Authority which performs the OP and allocates the funds towards SFIs. The financial instruments are set up by a financial intermediary and related to a specific project, unlike SFIs

¹⁴ See table 2 for full names of JJJs.

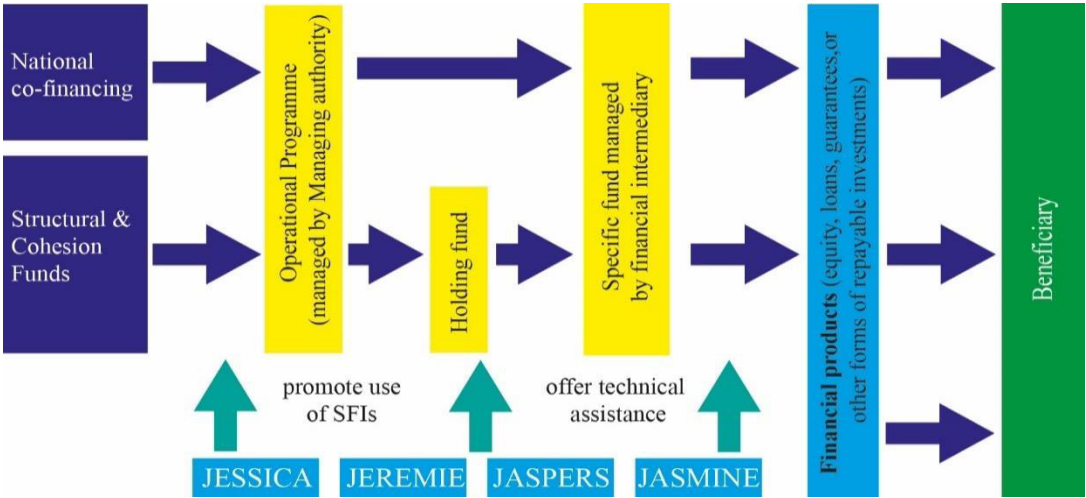
under central management. By the end of 2013, 941 specific SFIs within OPs had been established (EU, 2013c). Most of these financial products are concerned with SME-support.

Table 1: Single SFIs under central management (Mio Euro)

SFI	Field of action	Type of instrument	Budget contribution
High Growth & Innovative SME Facility (GIF)	SMEs (particularly innovative & R&D-related)	Equity investment / Venture capital	623
SME Guarantee Facility (SMEG)		Guarantee platform (for loans, equity, mezzanine, securitisation)	506
Risk Sharing Finance Facility (RSFF)	R&D	Risk-sharing	1 000
Loan Guarantee Instruments for Trans-European Transport Network Projects (LGTT)	Infrastructure	Risk-sharing	500
Marguerite Fund	Infrastructure, Energy & Climate	Equity	80
European Progress Microfinance Facility (EPMF)	Micro-credit	Guarantee, Equity	100
Technology Transfer Pilot Project (TTP)	R&D	Equity	2
European Local Energy Assistance (ELENA)	Urban energy efficiency	Technical assistance	97
European Energy Efficiency Fund (EEEF)	Energy efficiency	Equity / Technical assistance	146,3

Source: Núñez Ferrer et al. (2012), Spence et al. (2012), Núñez Ferrer and Katarivas (2014)

Figure 6: SFIs under shared management



Note: graphic amended by author; Source: EC (2014f, p.13)

Table 2: Single SFIs under shared management

			(Mio Euro)
SFIs (shared management)	Field of action	Type of instrument	Budget contribution
Joint Action to Support Micro-finance Institutions in Europe (JASMINE)	Non-bank Micro-credit set-up	Technical assistance	5
Joint Assistance to Support Projects in European Regions (JASPERS)	Large-scale infrastructure projects	Technical assistance	35
Joint European Support for Sustainable Investment in City Areas (JESSICA)	Promotion of SFI set up & use (for urban development)	Equity, loan, guarantees	63
Joint European Resources for Micro to medium Enterprises (JEREMIE)	Promotion of SFI use (for SME support)	Equity, loan, guarantees	700
941 SFIs within OPs	SME support	Equity, loan, guarantees etc.	9 597,62

Source: (Núñez Ferrer and Katarivas, 2014; European Commission, 2014f)

4.1. Economic Rationale

SFIs target structurally important areas of public investment and “could provide an important new financing stream for strategic investments, supporting long-term, sustainable investment at a time of fiscal constraint.” (EC, 2011, p.3). They should address “market failures or sub-optimal investment situations, which have proven to be financially viable but do not give rise to sufficient funding from market sources.” (EU, 2012b, Art. 140). SFIs shall increase the reach of the EU’s fiscal policy in times of austerity and overcome symptoms of the crisis-induced credit crunch respectively approach the risk-aversion of economic actors by risk-bearing. SFIs go beyond ordinary grant allocation. EU budgetary resources are pooled with a financial product, open to the participation of other public or private investors. The involvement of a public institution (grant element) mitigates risk for investors and reduces the costs of setting up the instrument (Núñez Ferrer et al., 2012). Hence, the concrete project benefits from lower risk and faces lower costs of funding, especially important if the project “either does not generate sufficient revenue to cover the interests of a loan, or because the risks are too high according to the assessment of private investors.” (Núñez Ferrer and Katarivas, 2014, p.8). The loan element of SFIs assures financial discipline and encourages the productivity of a project. The instruments are designed to address market imperfections, if a project is risky or not bankable for private investors in times of mistrust, as well as encouraging the pooling of funds, hence making large-scale projects which wouldn’t been undertaken by a single financial institution more viable. The risk-sharing character of SFIs increases their attractiveness and ultimately levers a multiple amount of the initial budget contribution from third parties. The leverage of a SFI is measured in a threefold way:

1. The initial EU budget contribution levers resources from SFI-associated institutions, like the EIB.¹⁵ This is the instrument leverage (IL). $IL \text{ ratio} = \text{funds triggered by instrument from associated institutions} / \text{initial budget contribution}$.
2. The instrument further attracts funds from third parties (other public or private financial institutions or investors) which is the project leverage (PL). $PL \text{ ratio} = \text{total funds} / IL$.
3. The comparison of total funding to the initial budget contribution is called the multiplier effect (ME). $ME = \text{total funds} / \text{initial budget contribution or IL ratio} \times PL \text{ ratio}$ (Spence, et al., 2012).

The PL is the measure for the attractiveness of the instrument and builds upon the IL. The ME expresses the EU budget contribution's reach if pooled with an SFI, but it is "just one element of the overall measure of the impact of any given investment." (Núñez Ferrer et al., 2012, p.26). The actual investment volume at the beneficiary level can be different to the leverage ratio, as many SFIs are still running and actual investment also depends on demand or existence of appropriate projects. It represents the temporary status quo of SFIs' impact. SFIs generate revenues, receptive to re-use, which establish a revolving and thus sustainable character. The instruments are subject to different governance principles and are consistently monitored (EU, 2012b, Art.140). They should not substitute for national expenditure,¹⁶ so projects always have to be co-financed. SFIs must be in line with European objectives (European value added) which is difficult to define, but enhancing growth by public investment in structurally important areas according to empirical evidence can be considered sufficient. Besides, extensive risk-evaluation is unalterable to minimise risk exposure to the EU-budget contribution, whereas Spence et al. (2012) discern that SFIs do not imply more risk than simple grants.

4.2. Impact Assessment

Taking all SFIs (also externals) together, approximately 1.3 per cent of the MFF 2007-2013 resources were allocated to SFIs (Núñez Ferrer et al., 2012). The total volumes of SFIs under central management are listed in Table 2. An initial budget contribution of 3,064 billion Euro triggered available funds of 55,025 billion Euro of which actual investments at the beneficiary level amount to 30,923 billion Euro. This means an average ME of 18. It's difficult to generalise IL and PL due to inconsistent data in the available reports. In contrast to the final volumes of

¹⁵ Also the EIF or the European Bank for Reconstruction and Development must be mentioned here.

¹⁶ Principle of additionality also applying.

SFIs, the EIB-group contributions couldn't be reconstructed completely, but final numbers suggest that IL- and PL-ratios are actually higher than in Table 3, which features all SFI-programmes and its volumes. This is also the reason why equation $IL \times PL = ME$ is not correct on the aggregate level. Single instruments are of better explanatory power. R&D investment by SFIs is a good example for the potential of centrally managed SFIs. The Risk Sharing Finance Facility (RSFF) is targeted at risky innovation-projects and innovative SMEs and, in case of default, bears potential losses of investments. The RSFF levered great amounts of additional resources. Its multiplier is 16, which can be expressed as 1 billion EU budget resources attracted a further 1 billion Euro by the EIB and in 2010 total available funds reached 16,2 billion Euro ($ME = 16.2$) of which 4,8 billion Euro haven been disbursed to this point of time. Núñez Ferrer and Katarivas (2014) show that leverage effects tackle an important deficient of European R&D investment. Public government expenditure on R&D is comparable to innovation-leaders like Japan and the United States, but private risk-capital is lacking and innovations face difficulties to become profitable in sizable productions. The RSFF fills this gap by attracting and channelling private risk capital. Covering and spreading risk makes projects more bankable and "The RSFF has started at a moment where investment in R&D has been affected by the crisis, providing a welcome financial injection in an area of highest priority for the EU." (Núñez Ferrer and Katarivas, 2014, p.12).

The case of SFIs under shared management, particularly specific SFIs within OPs, is different and leverage of additional funds only reached low numbers. The summary report of the EC and an EIB-study (European Investment Bank, 2013a; European Commission, 2014f) show that 14,278 billion Euro of OP contributions were provided. 12,648 billion Euro became operational in 941 SFIs. Out of these, 7,929 billion Euro stem from the Structural and Cohesion Funds, and 4,217 billion Euro falls under additionality. Private participation occurs within national co-financing and, separately measured, by outside-OP contributions.¹⁷ But as only 45 SFIs received outside-OP funds, the aggregate leverage ratios of table 4 as a measurement of the instruments' mechanism are distorted.

¹⁷ Only outside-OP contributions are treated as real leverage.

Table 3: SFIs programme volumes (central management)

(Mio Euro)

SFI (central management)	Budget contribution	EIB-Group contribution	Total Leverage	Actual Investment
GIF	623	n.a.	2 300 (ME =3,6)	1 900
SMEG	506	n.a.	14 200 (ME=28)	9 400
RSFF	1 000	1 000 (IL=1)	16 200 (PL=16,2; ME=16,2)	4 800
LGTT	500	500 (IL=1)	20 000 (PL=40; ME=40)	12 000
Marguerite Fund	80	100 (IL=1,25)	1 500 (PL=15; ME=18,75)	780
EPMF	100	100 (IL=1)	225 (PL=2,25; ME=2,25)	178
TTP	2	n.a.	n.a.	n.a.
ELENA	97	n.a.	Ratio > 20 (expected)	1 600
EEEF	146,3	75 (IL=0,51)	600 (PL=8; ME=4,1)	265
Total:	3 064,3	1775	55 025	30 923
Ø Leverage ratio:		Ø IL=0,95	Ø PL=16,3 Ø ME=18	

Source: Núñez Ferrer et al. (2012), Spence et al. (2012), Núñez Ferrer and Katarivas (2014)

Table 4: SFIs programme volumes (shared management)

(Mio Euro)

SFIs (within OPs)	Budget contribution	National co-financing contribution	Total Leverage	Actual Investment
941 SFIs	7 929,49 (initially allocated: 9597,62)	4 217,04	432,39	6 678,2
Total			12 578,92	
Ø Leverage ratio:		IL =0,53	PL=2,99 ME=1,6	

Source: (European Commission, 2014f)

To get a more precise picture, one can look at the data given for these 45 SFIs. A 335,77 million Euro budget contribution was matched by 309,55 million Euro of national co-financing and levered 423,39 million Euro private capital. See figure 5 for details. This calculation will be helpful for an assessment of the future impact of SFIs under shared management. It is obvious that a crucial deficit of SFIs within OPs is the inability to lever private funds. This point will be taken up in the next sections. What can be stated is that the initial EU budget contribution of 7,929 billion Euro made 12,578 billion Euro available and triggered investments of 6,678 billion Euro at the beneficiary level as at the end of 2013.

Table 5: SFIs within OPs exhibiting private participation

			(Mio Euro)
SFIs (within OPs which received external funds)	Budget contribution	National co-financing contribution	Total Leverage
45 SFIs	335,77	309,55	432,39
Total			1 068,71
Ø Leverage ratio:		IL =0,92	PL=3,45 ME=3,16

Source: (European Commission, 2014f)

Measured against the EU-28 GDP in 2013 (EuroStat, 2014a), resources available for investment amount to about 67,603 billion Euro or 0.52 per cent of GDP and actual investment to 0,28 per cent of GDP. Given the small amount of deployed budget resources (0,09 per cent of GDP), the impact is significant. The findings of section 2.2 suggest that public investment in recessionary times causes a multiplier of above 1. Applying Coenen et al. (2012) who propose a multiplier of 1.5, the available investment volume of 67,603 billion Euro or 0.52 per cent of EU-28 GDP ultimately could raise this by 0.78 per cent. Overall, SFIs successfully address market failures and lever great amounts of additional resources from third parties. The public risk-bearing capacity and various financial products with public participation attract a multiple of the deployed resources. Investment is ensured to align with European objectives and target structurally important areas, so that SFIs are also able to guarantee long-term capital inflows for less developed member states by their revolving character, enhance non-price competitiveness as well as serve the implications of empirical analysis of section 2.2. SFIs do not interfere with the predominant paradigm of austerity as they do not increase public debt and therefore provide a possibility to circumvent the currently restrictive nature of the EMU.

Table 6: Aggregated data and multipliers

		(Mio Euro)	
SFIs (aggregate)	Central management	Shared management (+JJJJs)	
Budget contribution	3 064,3	7 929,49	(+ 803)
		= 8 732,49	
Available funds	55 025	12 578,92	
Ø ME	18	1,4	
Total	67 603,92		

Source: author's calculation based on cited reports (p.21)

4.3. Estimate of Future Volume

Volumes of funds allocated to SFIs are perceived to increase according to regulations of the most important subheading 1a-programmes for the MFF 2014-2020. The Horizon 2020 regulation (EU, 2013b) for R&D and SME support establishes otherwise unspecified equity and debt instruments (successors of the RSFF) and allocated funds will be almost tripled. Infrastructure investment will be organised under the Connecting Europe Facility (CEF) (EU, 2013d) and not further specified equity and debt instruments (successors of the LGTT and the Marguerite Fund) can get up to 10 per cent of the CEF's resources. Support for innovative SMEs will be organised under the COSME programme (EU, 2013a) and comprise the Loan Guarantee Facility (LGF) and the Equity Facility for Growth (EFG) (successors of SMEG and GIF) which should closely interact with Horizon 2020. 60 per cent of the Competitiveness of Enterprises and SMEs (COSME) programme funds could be allocated towards the two SFIs. Appendix 3 provides conceivable amounts of subheading 1a-SFIs for the MFF 2014-2020.

With regard to cohesion policy (subheading 1b), SFIs are perceived to expand, too (EU, 2013c). Future allocations are impossible to assess, because it's upon the MA how many SFIs for which eligible projects will be set up and the process is highly demand-driven. Taking into account the deficiencies of the past MFF period, a further increase in numbers and leverage, as well as decreases in delays and unused funds can be expected. However, the most recent evaluation exhibits that funding and absorption continuously accelerated (European Commission, 2014f). Increased experience should lead to enhanced absorption of committed funds, whereas national co-financing is constant due to fiscal constraints. Additionally, it is conceivable that the SFIs' central mechanism, the leverage of private funds, becomes effective throughout all instruments due to learning effects. The assumption of general dispersion of leverage is reasonable against

the backdrop of sustained risk aversion of investors and increased experience with SFIs within OPs. With the given information on allocations, the impact of SFIs during the next MFF can be assessed. For this, all funds for SFI-use out of authorised programmes originating in subheading 1a of the upcoming MFF (Appendix 3) will be the first component. The ratio of IL, PL and the ME from the old instruments (section 4.2) are projected on the new ones.¹⁸ Their values stay equal, as the inherent logic of SFIs remains the same. With regard to subheading 1b allocations, it is not possible to foresee how many funds will be allocated to SFIs within OPs over the next six years. Hence reliance on past experience seems the best option, so starting with numbers from table 4 and the number of initially allocated, but not fully absorbed funds (9597,62). The PL of the 45 SFIs which levered private funds (table 5) will be applied to all instruments to gauge the assumed dispersion of the leverage effect (PL*). By this, a ME of 1,66 emerges. Table 7 demonstrates the potential volumes of resources which are yet decided on, moreover amended by volumes building on numbers of the past MFF, adjusted by assumptions of higher absorption and leverage.¹⁹

Table 7: Aggregated data of future volumes of SFIs

	(Mio Euro)	
	Central management	Shared management
Budget contribution	7 545,6	9 597,62
Associated institutions / National co-fin.	≈ 7168,32	4 680,58
Leverage ratios	IL ≈ 0,95 PL ≈ 16,3	IL= 0,48 PL*=3,45
ME	18	1,66
Total available funds	135 820,8	15 932, 1

Source: author's calculation based on Appendix 3 and section 4.2

It's obvious that decided allocations of subheading 1a instruments considerably raise the impact of investment activity by SFIs in comparison to the past MFF by a tripling of the initial budget contribution and a constant leverage ratio. Regarding subheading 1b instruments, the impact is

¹⁸ Notwithstanding section 4.2. exhibits that EIB contribution was not comprehensible for all SFIs and hence the IL not exact, the application of the value is reasonable as concerned instruments coincide with those past ones for which the IL was applicable.

¹⁹ The volume of JJJJs' funds (+803 million Euro) will be left out of the calculation as for technical assistance and promotion facilities no explicit leverage was observable and future of these is uncertain.

bigger due to the dispersion of the PL to all SFIs.²⁰ Taken together, future available funds would amount to 151,752 billion Euro.

Calculations of SFIs under central management consider allocations which are already known, but it is possible that more SFIs will be set up and those in testing (Project Bonds) become fully implemented. The success so far could raise attractiveness, too, which is also not included here. Hence, the given volume depicts a minimum. Notwithstanding higher absorption and extension of the ME to all SFIs under shared management, the volumes above are also cautious calculations as the instruments seem attractive alternatives in times of suppressed fiscal capacity and shifts in a period of 6 years are possible, especially with regard to the fact, that left over resources from Structural and Cohesion Funds could be another source of funding.

5. Comparison and Critical Assessment

Experience shows that the functioning and the concrete numbers of the Juncker-Plan, the leverage of private funds by a factor of 15, are feasible in principle. The logic of the crucial mechanism, to offer public risk-bearing for attracting private funds, is sustained by the analysis of SFIs and hence a reasonable way to look for new sources of funding investments. The EFSI's targeting of investment fields and the provided financial products (European Commission, 2015) are congruent to the above presented analysis of SFIs-use. In terms of IL and PL, SFI analysis and the Juncker-Plan show differences in calculation. The ESIF as a whole is treated as the initial budget contribution. This includes the EIB participation of 5 billion Euro which is not treated as IL here. Ongoing from that, leverage is divided in the fund-raising activity of the EIB on capital markets as the IL (ratio = 3). This means the EIB is enabled for operations of 63 billion Euro, backed by the ESIF. In the second step the participation of private or other investing institutions appears as the PL (ratio = 5). The plan remains vague on the concrete financial operations or about what is expected from this twofold strategy of fund raising. However, if the EIB participation for the creation of the 21 billion Euro budget guarantee scheme which backs the ESIF is counted as an initial budget contribution, the calculation reveals that the Juncker-Plan puts more weight on the shoulders of the EIB through the high IL (63 billion Euro taken up by ordinary EIB operations) and comparably low PL (PL ratio of 5). Criticism on the imprecise explanation of this part of the Juncker-Plan are comprehensible (Horn et al., 2015). But as the success of both steps of fund raising are dependent on the attractiveness of the public risk bearing capacity, the logic of the ESIF is comparable to SFIs.

²⁰ Counterintuitively the ME is smaller than in table 5. Regarding the case of 45 SFIs which levered funds of third parties, the formerly high IL decreases if the aggregate level is concerned given the limitation of national co-financing.

By this, a multiplier of 15 is not unreasonable, but fits the past performance of SFIs under central management and exploits the synergies existing between EU budget support as well as EIB credit worthiness and implementation expertise. The implied centralisation of the plan through control of the EC seems appropriate, given the disappointing performance of SFIs under shared management. Foremost if SFI are executed and promoted by national authorities in countries with a weak administrative capacity.

Nevertheless, the instruments' attractiveness must be maintained for constant success. As this depends on risk aversion of investors who utilise risk-sharing with a public institution, SFIs attractiveness could diminish coincidentally with risk aversion also declining during economic recovery (Cohn, et al., 2014). But as long as the economic outlook for the EU and particularly periphery countries is sobering, crisis induced capital flight and retrenched lending activity of commercial banks don't seem to reverse (Acharya et al., 2014). The economic environment is advantageous for the EFSI. The attractiveness of the EFSI depends on how the risk-bearing is designed. The Juncker-Plan proposes first-loss or full guarantees (European Commission, 2015). Claeys et al. (2014) show that a first-loss guarantee significantly increases incentives for investors to participate. This is sustained e.g. by the RSFF, which bears risk also as a first-loss piece and exhibits a high multiplier. The higher the projects' risk, the more attractive is a first-loss guarantee. This leads to another issue, the question of how to, on the one hand, properly select projects with an attractive risk character, and, on the other hand, avoid default but also windfall profits, which could occur if risk is lower and private investors would have undertaken the projects also without risk sharing (Horn et al., 2015). Politicised project selection is hence unfavourable (Claeys, Sapir and Wolff, 2014). The Juncker-Plan foresees a Steering Board consisting of the EC and EIB members, as well as seats for all kinds of EFSI-contributors to guarantee productive governance. The board should decide in consensus and a veto right is guaranteed to the EC and EIB.

The disappointing performance of SFIs under shared management highlights the SFIs' complexity and problems of integration of SFIs in the grant-based cohesion framework. The Juncker-Plan demands an enhanced use of SFIs within OPs, but does not include that in the calculation for the emerging investment volume for good reason. Further issues, also concerning SFIs under central management, arise from a lack of coherence and coordination between the instruments (Núñez Ferrer et al., 2012), questions of eligibility (European Court of Auditors, 2012) as well as from a trade-off between visibility and transparency (Robinson and Bain, 2012). All kinds of SFIs will undergo comprehensive restructuring and re-naming during the MFF 2014-2020. The EC proposes the general term 'equity and debt instruments' for all

kinds of SFIs to introduce a standardised set of principles and rules, which can be seen as a reaction to difficulties performing SFIs in the regulatory framework of various budget programmes which creates unnecessary complexity (EC, 2011). Also, the Juncker-Plan recognises that the use of financial products is challenging and approaches this by the set-up of an investment advisory “Hub” which should offer technical assistance at all levels. Mutual learning and knowledge-sharing between public and private institutions is required to improve implementation and performance.

Another critical point to the Juncker-Plan is the endowment with- and origin of- resources apart from the EIB-contribution. A 16 billion Euro EU guarantee fund originating in the budget should back the EFSI. 50 per cent of that guarantee would be provisioned as real budget resources until 2020. These funds are shifted from Horizon2020, the CEF and other unspecified budget margins. If already allocated resources for specific programmes or projects, which also yield returns, are taken away, an opportunity cost emerges (Veugelers, 2014). Especially, Horizon 2020 and the CEF are promising tools and it's not specified which parts will be abandoned in favour of the EFSI. To decrease the amount available for CEF-, or Horizon2020-SFIs would be highly unreasonable (a reduction of the volumes in table 3 would be possible, especially funds are shifted away from SFI-use), the aggregate impact of EU budget support would not increase and, in the end, the plan could depict pure eyewash. The proposal regulation says: “Should the guarantee be called, the volume of guarantee would be reduced below the original EUR 16bn. However, future revenues due to the Union from the EFSI activities should be allowed to reinstate the EU guarantee up to this original amount.” (European Commission, 2015, p.5). Hence, the EFSI's target leverage could be changed over time as it primarily depends on the initial budget security scheme.

Furthermore it is unclear if the proposed amount of funds can be gathered in three years. SFIs, like the RSFF, often need the full six years of the last MFF to attain the resulting multiplier. Funds were fed in on an annual basis and the amounts differed from year to year (European Investment Bank, 2013c). But it is also possible that the great prominence of the EFSI and its high visibility could lead to faster leverage.

6. Alternative Ways of Funding

The question arises if there are possibilities left to financially underpin the ESIF as the planned endowment of the ESIF is questionable. The past negotiations on the EU budget showed no room for enlargement in times of austerity (Marzinotto, 2011b). An often recalled proposal to raise funds for economic recovery is the introduction of a Financial Transaction Tax (FTT).

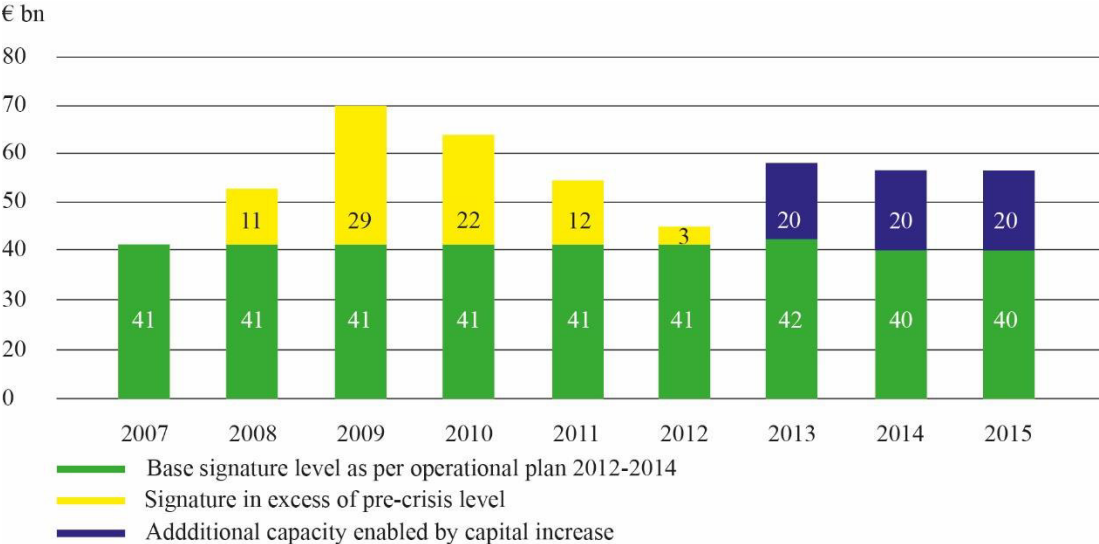
The EC (2013b) proposes the introduction of a FTT with support of 11 member states which recently renewed their commitment for an introduction by 2016 (Council of the European Union, 2015).²¹ But the circle misses the most important European financial centre: the United Kingdom (UK) and London. Hence, the budget revenues generated by the tax are remarkably lower for only 11 member states than for the EU-28. However the budgetary revenue is estimated to between 30 and 35 billion Euro if a tax on shares and bond of 0.1 per cent and on derivatives of 0.01 per cent will be introduced (EC, 2013b). The question is how revenues will behave if international banks relocate transactions to their subsidiaries located in non-FTT countries. Despite this being un-assessable, it is possible to simulate different legal states of subsidiaries as Schulmeister (2014) does. The first scenario treats subsidiaries as incorporated in UK-law and thus not subject to a FTT (relocation effect). The second scenario assumes all subsidiaries as branches of their parent companies (no relocation effect). If all subsidiaries were subject to UK law, revenues for the 11 FTT-introducing member states still amount to 28.3 billion Euro (see Appendix 6). Recent literature rules out negative effects on growth and even suggests a positive impact on GDP (Griffith-Jones and Persaud, 2012). How can the newly generated funds support the Juncker-Plan? As the FTT probably won't be introduced in the EU-28, but only by 11 member states, national ownership of revenues comes into play. But the regulation proposal of the EC declares that "part of receipts generated by the FTT shall constitute an own resource for the EU budget." (European Commission, 2013b). Table 8 demonstrates that the overall share of national funds fed in SFIs is low given the amount of money allocated to grant giving through the structural and cohesion funds. As the ESIF can be expected to yield more success than SFIs under shared management, it should be considered to assign more national contributions to financial engineering instruments. FTT revenues could substitute for the EU budget resources the Juncker-Plan wants to shift in favour of the ESIF (which maybe dampens the budgets' overall impact) and be fed into the ESIF as national contributions. Besides, it is doubtful if the cohesion policy framework is adequate to execute the use of SFIs given the remarkable low multipliers (see table 6), it is therefore reasonable to direct national funds, generated by the FTT, towards a centrally managed funding instrument. Another option to further increase the reach of EU expenditure is the expansion of EIB's lending capacity (Griffith-Jones and Cozzi, forthcoming). The last rise of EIB's capital by the member states of about 10 billion Euro in 2012 significantly increased the bank's lending activity (EIB, 2013b; EIB and EC, 2013). See figure 7 for changes of lending capacity. The EIB

²¹ It is important to note, that these 11 member states account for about 90 per cent of Eurozone's GDP, including e.g. Germany, France and Italy.

is able to offer 60 billion Euro more loans over three years (2013-2015) by a capital increase of 10 billion while maintaining its triple-A rating which depends on a ratio of bank’s capital and its lending volumes (EIB and EC, 2013). The proposal of an further increase of EIB’s capacity is supported by decisive voices in European economic decision making, like Wolfgang Schäuble, the finance minister of Germany (Mussler, 2014), EIB president Werner Hoyer (Buergin, 2014) or EC’s and European Parliament’s heads, Jean-Claude Juncker and Martin Schulz (Traynor, 2014). Hence, the approach to again increase the EIB’s capital by 10 billion Euro can be considered a realistic option.

It is speculative to which operating sites these new funds will be allocated to. After the 2012 capital increase a Joint EIB-EC report (EIB and EC, 2013) notifies that “the additional lending enabled by the capital increase is supporting viable projects within all Member States with a particular focus on (i) Innovation and skills; (ii) SME access to finance; (iii) Resource efficiency; and (iv) Strategic infrastructure.” (EIB and EC, 2013, p.8). These will happen via the expansion of existing lending strategies, introduction of new initiatives, a strengthened risk capital mandate, amplified interaction with national public lending institutions, the project bond initiative and other already established risk-sharing SFIs. Overall, the report expresses the EIB’s and EC’s diversified strategy how to proceed with increased capacity.

Figure 7: EIB capital increase and lending capacity



Source: (EIB and EC, 2013, p.8)

Table 8: Member States' Contribution to SFIs

(Mio Euro)

Member state	National co-financing	Deviation until 2013	National funds allocated to SFIs	
Germany	12 200	+ 2 % (12 444)	525,9	4,4 %
Italy	31 300	- 37 % (19 719)	1 523,3	7,73 %
Spain	15 000	- 29 % (10 650)	271,72	2,56 %
Austria	1 150	+ 1 % (1 161,5)	5,27	0,4 %
France	13 900	- 4 % (13 346)	92,09	0,7 %
Estonia	450	0 % (450)	75,33	
Greece	5 700	- 34 % (3 762)	279,78	
Belgium	2 500	- 12 % (2 200)	234,89	
Portugal	3 600	- 42 % (2 088)	110,70	Ø 5,6 %
Slovakia	2 000	+ 2 % (2 040)	16,73	
Slovenia	700	0 % (700)	15,87	
others			1 065,46	n.a.
Total:			4217,04	

Source: (European Commission, 2014f)

A report on behalf of the European Parliament investigating EIB co-financing practice concludes that EIB's "transition in terms of risk appetite has happened gradually, although the pace of evolution does appear to have hastened recently with the bank accepting more commercial risk today. However in most of its operations the EIB remains a very conservative lender." (Robinson and Bain, 2012, p.82). Also Núñez Ferrer et al. (2012, p.26) ascribe a "excessively stringent interpretation of risk that impacts on the final leverage and multiplier effect" to the budget component of SFIs. Núñez Ferrer et al. (2012, p.27) further state: "A more reasonable risk assessment – even conservative – would considerably enhance the leverage and multiplier effect of the instruments." A gradual departure from restrained lending activity can be attested by a statement in the Joint EIB-EC report: "the Risk Capital Mandate was reinforced and established as an open ended" (EIB and EC, 2013). Hence, it seems a viable option to moderately take on more risk in the MFF 2014-2020 if a capital increase, again, improves the capital adequacy ratio of the EIB. The EIB's entrenched role in commercial bank-type activities, emerging through SFI-related investment and project based credit risk assessment

(Robinson and Bain, 2012) hasn't had negative effects on its credit ranking, with especially "the EIB's capital buffer providing a significant cushion. Following the recent capital increase, the bank's Basel II capital adequacy ratio amounted to 28.7 per cent as of the end-2013 (compared to 23.1 per cent at the end of 2012), which is high relative to the 8 per cent minimum for commercial banks." (Moody's Investors Service, 2014). Hence, the Juncker-Plan's intention to upgrade the role of the EIB also in terms of obligations to the capital markets would be solidly underpinned by a capital increase and the elevation must not deteriorate the EIB's paramount credit rating. Taken together, there is considerable room to magnify the volume of resources without increasing public debt. Both possibilities do not violate EMU budgetary rules or do not imply further transfer to, or liabilities, especially for periphery member states. Also the Juncker-Plan assures that the EC treats contributions to the ESIF benevolently with respect to public debt investigation. The EIB plays a conspicuous role in leveraging resources by enhancing creditworthiness and above all, in implementing SFIs. Therefore it is reasonable to expand its mandate.

7. Conclusion

The European economy is hallmarked by the ramification of the self-imposed fiscal constraint of national budgets and the inability of recovery from the economic crisis. Tight budgetary rules are likely to persist, as they fit the basic theoretical paradigm the EMU is built on and the perception of the most powerful negotiation party, Germany. But the fiscally constrained member states, foremost the periphery countries, need expansive economic policies to create a growth impetus. Such an initiative can only be placed within the current framework of fiscal coordination and surveillance and may not increase public debt levels. A pragmatic approach hence should recognise these restrictions and simultaneously achieve maximum impact in terms of well-targeted investment which promises to attain positive effects on growth in the current economic environment.

The Juncker-Plan is an initiative for investment activity acknowledging the EMU budgetary rules and proposing an EU-level investment vehicle. Suppressed national budgets shift the focus on the EU budget. Recent literature shows that the EU's fiscal capacity is appropriate to support economic recovery. Besides positive growth effects, it features the required flexibility to react to economic downturns. Also the EIB is successful in its lending operations and offers experience in long-term investment, leverage of additional funds and expertise in implementation of complex financial products. Hence, it is reasonable to rely on EU-level instruments.

The Juncker-Plan's very own purpose is the leverage of private funds by risk-bearing and – sharing. The volumes of funds raised for the EFSI depend on the multiplier effect, ergo the attractiveness of the financial product for investors and the potential projects. This mechanism builds on experience with SFIs. The analysis of SFI-use during the last MFF allows for an examination of the Juncker-Plan's central number: the multiplier of 15. SFIs under central management, which means under control of the EC and EIB, attain convincing results. They lever great amounts of private funds by conflating EU budget resources with financial products. Especially first-loss risk sharing instruments experience significant participation of private investors and confirm that the multiplier's size of the Juncker-Plan is reasonable. As the EFSI dominating parties will be the EC and the EIB, efficient implementation can be expected. Project selection and technical assistance are the main challenges facing the EC and the EIB.

As the EFSI's purpose is to give security for project-investment it is problematic to supply the EFSI with an unspecified financial endowment. The guarantee scheme of the budget backing the EFSI is not properly specified, and the total leverage depicts rather a maximum. Failing projects and in turn potential calls on the guarantee scheme could diminish the volume of the guarantee. Additionally, the impact of the budget as a whole could be damaged if already allocated resources are shifted in favour of the EFSI. Especially, if SFIs, the parts of the budget with the highest return, will lack funds, shifting is undesirable. Hence, it is important to find alternative ways of increasing the solidity of the EFSI's financial backing. First, the FTT could depict a source of funding if the member states are willing to increase their support to progressive fiscal policy instruments. This is important against the background of the poor performance of SFI-use via cohesion policy and under managing participation of member states. Given the low leverage potential, it is worth to reconsider the operation of SFIs in cohesion policy at all. Second, the enhanced role of the EIB should be underpinned by a capital increase which gives the bank a solid financial foundation to execute more risky projects.

The experience with SFIs shows that the Juncker-Plan is no cloud-castle. But deficiencies of endowment of the investment initiative reflect that the Juncker-Plan is also no solution to the basic problems induced by austerity. To rely on progressive fiscal instruments can activate participation of private investors in growth-friendly economic areas and at least help to overcome the state of weak investment activity in Europe.

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Appendix 1

The MFF 2014 – 2020

(EUR million - current prices)

COMMITMENT APPROPRIATIONS	2014	2015	2016	2017	2018	2019	2020	Total 2014-2020
1. Smart and Inclusive Growth	63.973	66.813	69.304	72.342	75.271	78.752	82.466	508.921
1a: Competitiveness for growth and jobs	16.560	17.666	18.467	19.925	21.239	23.082	25.191	142.130
1b: Economic, social and territorial cohesion	47.413	49.147	50.837	52.417	54.032	55.670	57.275	366.791
2. Sustainable Growth: Natural Resources	59.303	59.599	59.909	60.191	60.267	60.344	60.421	420.034
of which: Market related expenditure and direct payments	44.130	44.368	44.628	44.863	44.889	44.916	44.941	312.735
3. Security and citizenship	2.179	2.246	2.378	2.514	2.656	2.801	2.951	17.725
4. Global Europe	8.335	8.749	9.143	9.432	9.825	10.268	10.510	66.262
5. Administration	8.721	9.076	9.483	9.918	10.346	10.786	11.254	69.584
of which: Administrative expenditure of the institutions	7.056	7.351	7.679	8.007	8.360	8.700	9.071	56.224
6. Compensations	29	0	0	0	0	0	0	29
TOTAL COMMITMENT APPROPRIATIONS	142.540	146.483	150.217	154.397	158.365	162.951	167.602	1.082.555
as a percentage of GNI	1,06%	1,05%	1,05%	1,04%	1,03%	1,03%	1,03%	1,04%
TOTAL PAYMENT APPROPRIATIONS	135.866	141.901	144.685	142.771	149.074	153.362	156.295	1.023.954
as a percentage of GNI	1,01%	1,02%	1,01%	0,96%	0,97%	0,97%	0,96%	0,99%
Margin available	0,22%	0,21%	0,22%	0,27%	0,26%	0,26%	0,27%	0,24%
Own Resources Ceiling as a percentage of GNI	1,23%	1,23%	1,23%	1,23%	1,23%	1,23%	1,23%	1,23%

Source: EC (2013a, p.3)

(Mio Euro)

Subheading 1a			Subheading 1b		
Programme	Investment category	Volume	Programme	Investment category	Volume
Connecting Europe Facility (CEF)	Infrastructure (energy, telecommunication, transport)	21 936,76	Cohesion Fund (CF)	Investment according to national Operational Programmes (OPs)	74 928,36
Copernicus	Infrastructure	4 291,48	Less developed regions (ESF, ERDF)		185 374,42
Competitiveness of Enterprises and SMEs (COSME)	Competitiveness and Entrepreneurship	2 298,24	More developed regions (ESF, ERDF)		55 780,14
Erasmus+	Human Capital	14 774,52	Outermost and sparsely populated regions		1 562,99
Galileo	Infrastructure	7 071,73	Territorial cooperation		10 228,81
Horizon 2020	R&D	79 401,83	Transition regions		35 701,31
ITER	R&D	2 985,62	Youth employment initiative		Education
Excluded programmes: Customs, Taxation and Fight against Fraud (908,01), Employment and Social innovation Programme (7 057,69), Nuclear decommissioning assistance programmes (225,32). These programmes are excluded because they do not concern public investment categories.					

Source: (European Commission, 2014d)

Appendix 2

EIB loans and leverage effect

(Mio Euro)

	2004				2005				2006			
	Aggregated project cost	Total approvals	%	implied leverage	Aggregated project cost	Total EIB approvals	%	implied leverage	Aggregated project cost	Total EIB approvals	%	implied leverage
France	17,187.4	4,705.2	27.4%	3.7	17,233.7	4,611.3	26.8%	3.7	33,259.4	5,719.6	17.2%	5.8
Belgium	2,165.1	785.0	36.3%	2.8	3,152.9	1,154.2	36.6%	2.7	1,971.2	795.0	40.3%	2.5
Luxembourg	986.6	459.4	46.6%	2.1	132.7	65.6	49.4%	2.0	150.0	55.0	36.7%	2.7
Netherlands	1,786.3	647.6	36.3%	2.8	3,255.9	1,025.9	31.5%	3.2	5,139.4	1,405.0	27.3%	3.7
Germany	32,184.7	6,744.7	21.0%	4.8	20,708.4	7,064.8	34.1%	2.9	19,126.6	7,720.3	40.4%	2.5
Austria	2,882.9	965.6	33.5%	3.0	2,711.1	1,020.0	37.6%	2.7	3,433.7	1,350.0	39.3%	2.5
Bulgaria	160.0	50.0	31.3%	3.2	472.6	60.0	12.7%	7.9	1,165.0	430.0	36.9%	2.7
Spain	20,202.1	6,612.9	32.7%	3.1	19,621.1	7,358.3	37.5%	2.7	25,697.2	7,859.2	30.6%	3.3
Portugal	3,696.7	1,701.0	46.0%	2.2	6,176.1	1,651.3	26.7%	3.7	4,984.4	1,492.8	29.9%	3.3
UK	18,428.6	3,664.0	19.9%	5.0	25,197.7	4,742.8	18.8%	5.3	15,060.8	3,817.8	25.3%	3.9
Ireland	2,747.6	772.8	28.1%	3.6	2,803.9	1,050.0	37.4%	2.7	1,917.3	753.0	39.3%	2.5
Denmark	2,750.1	514.5	18.7%	5.3	173.3	86.6	50.0%	2.0	167.8	83.8	49.9%	2.0
Finland	1,975.8	662.1	33.5%	3.0	3,267.3	995.0	30.5%	3.3	1,821.6	670.0	36.8%	2.7
Italy	16,499.5	5,840.0	35.4%	2.8	18,878.0	6,466.3	34.3%	2.9	23,395.2	5,644.6	24.1%	4.1
Romania	1,408.4	410.6	29.2%	3.4	3,643.6	970.0	26.6%	3.8	2,473.1	1,023.0	41.4%	2.4
Slovenia	902.1	310.0	34.4%	2.9	2,776.3	387.0	13.9%	7.2	832.2	350.0	42.1%	2.4
Czech Republic	2,474.1	570.6	23.1%	4.3	9,235.7	971.3	10.5%	9.5	4,438.8	1,564.4	35.2%	2.8
Estonia					2,340.0	25.2	1.1%	92.8	50.0	15.0	30.0%	3.3
Greece	1,364.0	680.0	49.9%	2.0	3,245.8	1,518.0	46.8%	2.1	2,972.9	977.0	32.9%	3.0
Hungary	36,012.4	1,470.0	4.1%	24.5	4,382.7	806.7	18.4%	5.4	43,537.3	1,234.3	2.8%	35.3
Lithuania	128.0	43.0	33.6%	3.0	2,370.0	29.1	1.2%	81.3	50.0	5.0	10.0%	10.0
Latvia	1,150.0	180.0	15.7%	6.4	2,596.1	98.7	3.8%	26.3	122.0	41.0	33.6%	3.0
Poland	6,424.0	2,143.6	33.4%	3.0	8,602.9	2,654.9	30.9%	3.2	6,750.3	2,853.1	42.3%	2.4
Sweden	3,540.2	800.9	22.6%	4.4	1,934.5	535.1	27.7%	3.6	1,037.3	291.7	28.1%	3.6
Slovak Republic	2,483.2	244.0	9.8%	10.2	6,662.2	277.0	4.2%	24.1	1,526.8	464.0	30.4%	3.3
Cyprus	1,059.8	280.0	26.4%	3.8	220.0	110.0	50.0%	2.0	212.0	100.0	47.2%	2.1
Malta					130.9	13.0	9.9%	10.1				
Total	180,599.5	41,257.5	22.8%	4.4	171,985.4	45,747.9	26.6%	3.8	201,292.3	46,715.1	23.2%	4.3

Source: Robinson (2009, p.656)

Appendix 3

MFF 2014-2020 estimates for SFIs' volume (central management)

(Mio Euro)

MFF 2007-2013 instruments	MFF 2014-2020 instruments	Allocated budget resources
RSSF, GIF	Horizon 2020 → Two instruments (equity and debt)	2 842,3
LGTT, Marguerite	CEF → Two instruments (equity and debt)	3 324,3
SMEG	COSME – LGF & EFG	1 379
Total		7545,6

Source: European Union (2013a; b; d)

Appendix 4

Scenarios of FTT introduction

(Billion Euro)

	Subsidiaries in the UK treated as part of parent financial institutions No relocation effects				Subsidiaries in the UK treated as British financial institutions Including relocation effects			
	Exchange traded stocks&bonds	Exchange traded derivatives	OTC without Foreign exchange spot	Total	Exchange traded stocks&bonds	Exchange traded derivatives	OTC without Foreign exchange spot	Total
Germany	10,60	7,25	5,17	23,02	3,03	2,46	1,27	6,76
France	8,30	5,24	5,50	19,04	2,33	1,60	1,24	5,16
Italy	4,53	1,62	2,72	8,87	3,94	1,10	1,13	6,17
Spain	4,96	1,83	2,94	9,72	4,43	1,25	1,23	6,91
Belgium	1,12	0,48	0,49	2,08	0,59	0,22	0,22	1,02
Austria	0,64	0,30	0,29	1,23	0,35	0,16	0,21	0,72
Other FTTCs	0,91	0,54	0,43	1,89	0,73	0,42	0,40	1,55
11 FTTCs	31,05	17,26	17,53	65,84	15,39	7,20	5,70	28,30

Note: numbers in billion Euro; Source: Schulmeister (2014, p.22)

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