THE FUNDING FOR GROWTH SCHEME

The first 18 months

2014

ESSAYS AND STUDIES ON THE RESULTS OF THE FUNDING FOR GROWTH SCHEME ACHIEVED TO DATE

The Funding for Growth Scheme
The first 18 months

This publication presents the Funding for Growth Scheme launched nearly 18 months ago and its results achieved to date.

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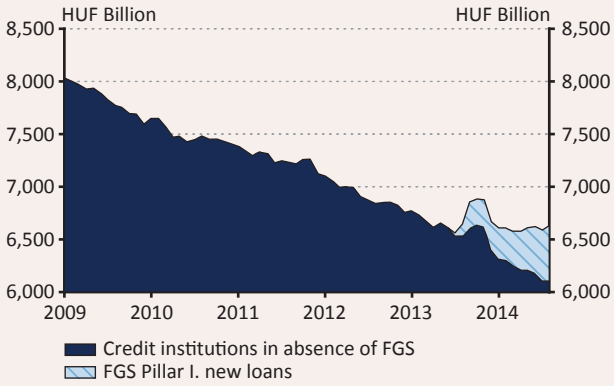
Foreword

The Magyar Nemzeti Bank launched its Funding for Growth Scheme (FGS) one and a half years ago, in June 2013. By end-October 2014, more than 16,000 micro, small and medium-sized enterprises (SMEs) had taken out loans under the scheme, in a total amount of HUF 1,153 billion,[1] accounting for one sixth of all corporate loans outstanding and one quarter of SME loans. The size of the FGS is outstanding compared not only to various domestic SME financing programmes, but also to the magnitude of other international lending incentive programmes.

Effect of new loans provided within the FGS on corporate loans outstanding



Source: MNB.

The MNB's scheme stimulates the economy through various channels. In the first phase, in addition to new loans, there was strong emphasis on loan redemptions as well, which generated competition among credit institutions, and by reducing the burdens of earlier disbursed – mostly foreign currency denominated – loans contributed to the improvement in enterprises' creditworthiness, the pick-up in business activity and the preservation of jobs. In the second phase, the emphasis was on new loans, and within that on investment loans. As a result, the effect of the scheme on economic growth and job creation mostly materialises through the expansion of production capacities.

[1] The studies in this publication may contain different borrowing data valid at earlier points in time owing to the different periods of time required for the underlying analyses.

Since the launch of the scheme, we have gained enough experience to be able to present a comprehensive picture of its effects and the achievement of the set targets. The most important question is to what extent the FGS contributes to the mitigation of credit market problems and through that to economic growth. Economic data for the recent period paint a favourable picture of the developments in both corporate lending as well as investment and output. Therefore, it is an important question what role the FGS may have played and plays in it, and it is especially timely to perform a deep analysis evaluating the past 18 months.

The studies in this volume elucidate from various aspects the main features of the scheme, its significance and its results that might already be seen.

The first study looks at the Hungarian scheme in the context of similar unconventional lending incentive programmes of other central banks. These types of central bank instruments are usually new and their application was almost unprecedented prior to the crisis. As the set of instruments is not canonised, and each central bank that uses unconventional instruments faces different challenges, responses to the problems vary. At the same time, however, it is possible to implement new, creative ideas as well. The comparison of the volumes of the programmes examined reveals that the largest amount as a proportion of GDP was disbursed within the framework of the FGS.

The second study presents the Funding for Growth Scheme on the palette of domestic SME funding programmes. It establishes that – compared to the conditions of other preferential loan schemes – the FGS offers the most advantageous conditions with regard to most of the parameters. In terms of the credit costs to be paid by the enterprises, the wide range of the purposes of use and the maximum amount of loan that can be taken out, the FGS offers the most favourable conditions, and it is one of the most advantageous programmes in terms of maturity as well. The introduction and rapid expansion of the FGS influenced the domestic SME funding market considerably. The ratio of the combined amount of the preferential loan schemes and of the FGS, which works as a monetary policy instrument, within SME loans outstanding tripled in slightly more than one year. By 30 September 2014, this ratio was close to 40 per cent, which had a considerable impact on the conditions and structure of the whole SME lending market.

The third study compares the two phases of the FGS. According to the analysis, the share of micro-enterprises has substantially increased in the scheme due to the longer available time frame and fine-tuning of the scheme, in line with the decline in the average loan size. Although the MNB does not have any sectoral preferences, the share of agriculture is prominent in the second phase, which is partly attributable to the fact that a considerable portion of loans borrowed for the prefinancing of EU funding is directed into this sector. The increase in the share of agriculture also resulted in a decline in regional concentration of SME lending.

With the objective of obtaining first-hand micro-level information on the real economy effect, the MNB conducted a questionnaire survey among the enterprises participating in the scheme.

The fourth study summarises the findings of this survey. Perhaps the most important one is that without the FGS nearly 40 per cent of the amount of the loans provided within the scheme would not have been disbursed at all, and another nearly one third would have been disbursed only partly. Many of the responding businesses described themselves as stable enterprises with average income and limited in borrowing by a number of factors (mainly the high borrowing rates) prior to the launch of the scheme. It should be emphasised that nearly one quarter of the respondents formulated the idea of new investment explicitly because of the opportunity provided by the FGS.

The fifth study searches for an answer to the 'ultimate' question, i.e. what real economy effects the FGS had at the macro level. The authors use various methods to provide an estimate on the credit supply and investment loan demand sides as well. Based on the credit supply approach aggregate GDP growth of 0.5-1.1 per cent is generated, while from the demand side aggregate GDP growth of 0.3-0.9 per cent is generated as a result of the loans disbursed within the scheme in 2013 and 2014. All of this is in line with the MNB's preliminary expectation and corroborates that the FGS plays an important role in putting the Hungarian economy on a growth path.

We hope that the various approaches and different methodologies of the studies will provide an intellectual experience for those who are interested in the world of unconventional central bank instruments and the operating mechanism of lending incentive programmes as well as for those who are simply concerned how the Hungarian economy can recover from the shock caused by the greatest global economic crisis of the past nearly one hundred years, and what role the Magyar Nemzeti Bank plays in this recovery.

Laura Komlóssy – Kristóf Lehmann – Árpád Vadkerti: International review of lending incentives of central banks

SUMMARY

Central banks' unconventional instruments can be described as new tools and, except for the Bank of Japan, their application prior to the crisis was typically unprecedented. Therefore, as the set of instruments is not canonized and each central bank which deploys unconventional instruments faces various challenges due to the differences in their financial markets as well as in social and economic circumstances, responses to the problems depended on the starting position. Just like the Funding for Growth Scheme (FGS), the programmes introduced in the UK, Japan and the euro area and analysed in this review are young, and several of them have not come to an end yet. Their evaluation is based on international literature and evaluations by central banks, but it is difficult to quantify the relevant effects also in view of the fact that these programmes are young. In most cases, the analyses measure the effects in a qualitative manner, estimating the impacts of a counterfactual scenario.

The comparison of the volumes of the programmes under review (Table 1) reveals that the largest amount as a proportion of GDP was disbursed within the framework of the FGS. The National Bank of Hungary provides refinancing loans of this magnitude because the amount of corporate loans outstanding has steadily shrunk since the outbreak of the crisis. Moreover, in a regional comparison, the largest decline was experienced in Hungary.

Table 1
Volumes of central banks' programmes to stimulate lending[2]

	Amount disbursed as a percentage of GDP	Available amount as a percentage of GDP
FGS (Hungary)	4%	6%
FLS (United Kingdom)	3%	–
LSP (Japan)	3%	–
TLTRO (euro area)	1%	5%

Sources: websites of central banks (Bank of England, Bank of Japan, ECB, MNB)

UNCONVENTIONAL INSTRUMENTS AND THEIR CLASSIFICATION

During the rapid deepening of the global financial crisis in the autumn of 2008, the disorders in the functioning of the banking sector and financial markets as well as the subsequent major fall in real economy performance and the dangers of deflation could not be efficiently addressed by developed central banks using conventional monetary policy tools (interest rate policy), and consequently they expanded their set of tools to include unconventional measures.[3]

Unconventional instruments were basically used in three cases. First, when the central bank base rate sank to the zero lower bound or close to it, and monetary policy wanted to continue to ease monetary conditions, thus depressing different segments of the yield curve. Long-term yields can be further reduced using forward guidance (e.g. repeated verbal commitment to the low base rate) and by purchasing longer-term financial market instruments.

Second, the application of unconventional instruments may also be needed if a market segment becomes unable to function (e.g. the swap market freezes), because of some acute market turmoil or panicked sentiment. In this case, the objective of central bank intervention is to ease the tensions: to mitigate excessive panic-like risk aversion and to reduce yields and spreads to a justified level in the given financial market. For this reason, almost all central banks carried out general or targeted liquidity expansion during the crisis, attempting to thus remedy the disorders of the financial system through the liquidity of the banking sector. Within this framework, central banks provided high volumes of loans to banks against collateral and not necessarily with the

[2] The comparison is based on 2013 gross domestic product (at market prices) and the amounts drawn down during the programmes to date. As neither the Bank of England, nor the Bank of Japan discloses the amounts available in their respective schemes, they are not included in the analysis. In the case of the ECB, the available amount in the TLTRO is only an estimated figure (EUR 400–450 billion).

[3] For more details on unconventional instruments handling the disorders due to the zero lower bound and handling money market turbulences, see Krekó et al. (2012).

usual maturities.[4] In the case of treating money market turbulences, some developed country central banks purchased riskier money market instruments as well, thus also including unsecured (or partly secured) instruments in their respective portfolios. However, the purchase of risky instruments impairs the quality of a central bank's portfolio, which may carry considerable risk in terms of the central bank's profit/loss. Central banks typically mitigate this risk by purchasing risky instruments when, due to market turmoil, their prices are presumably below what is justified by the fundamentals, and they conclude preliminary guarantee agreements with the state (ministry of finance) on the compensation of losses from the budget.

Finally, as a result of the deleveraging following the financial crisis, the aforementioned instruments were unable to significantly stimulate the banking sector's lending activity; in recent years, some central banks attempted to support the stimulation of bank lending in a targeted manner. It is a global trend that both the household and corporate sectors as well as the state started to reduce the pre-crisis debt levels. The effect of this process was partly the opposite of that of the other instruments because the necessary stimulation of the real economy was not attained in spite of the lower yields. Therefore, in order to encourage investment, central banks started to apply various instruments to support lending. These instruments were mostly able to only limit or stop the massive decline in lending, but did not in their own right result in any significant increase in lending as there were uncertainties on the demand side as well.

In the following, the unconventional measures taken by some developed country central banks which affected the banking sector indirectly or directly are presented and evaluated, focusing in particular on how successful they were in attaining the targets discussed.

PROGRAMMES THAT SUPPORT THE BANKING SECTOR INDIRECTLY AND STIMULATE CORPORATE LENDING DIRECTLY

In the presentation of targeted liquidity providing instruments, those globally important central banks were selected that have (had) targeted liquidity providing and/or refinancing facilities among their tools. Accordingly, below is a presentation of the programmes announced by the Bank of England, the Bank of Japan and the ECB. However, in order to provide a comprehensive picture of central banks' efforts made in order to create a supportive financial environment, the unconventional easing programmes included among their tools are also presented.

[4] Central banks applied several-month, then one-year and three-year secured loan tenders as well instead of the usual short terms, for example: the 3-year LTRO and TLTRO facilities of the European Central Bank.

THE BANK OF ENGLAND'S ASSET PURCHASES AND FLS

Following the outbreak of the crisis, the Bank of England reduced the Bank Rate to 0.5 per cent within a short time. Upon reaching the zero lower bound of the base rate, the conventional tools of monetary policy ran out, and therefore the Bank of England launched an asset purchase programme to further ease monetary conditions. The goal of this unconventional instrument was identical to the conventional monetary policy objective, i.e. to keep inflation close to 2 per cent. In 2012, asset purchases reached GBP 375 billion (26.9 per cent of GDP), and the stock of assets has remained unchanged since then. The asset purchases were successful in treating money market tensions and reducing long-term yields (Joyce et al., 2011). According to the opinions of central bank decision-makers and analysts, economic performance could have been much worse, had the central bank not started with unconventional easing following the interest rate cut.[5] With their multiple time series model, Kapetanios et al. (2011) came to the conclusion that government securities yields would have been 100 basis points higher without the asset purchase programme, whereas economic growth and the consumer price index would have been almost 1.5 per cent lower. At the same time, quantitative easing had a limited impact on lending.

In 2012, in view of the deepening European debt crisis, European banks' refinancing became more expensive, and liquidity strains were seen in the interbank market. Due to the difficulties in the banking sector and the tensions in Europe, in July 2012 the Bank of England and HM Treasury announced a new type of instrument (Funding for Lending Scheme, FLS) with the aim easing banks' lending conditions through a reduction of the banking sector's funding costs, in order to stimulate economic growth in the United Kingdom. The commercial banks which participated in the programme and extended more loans received liquid Treasury Bills from the Bank of England for a low fee in exchange for eligible collateral; they could then exchange the Bills for more liquid instruments using repo transactions in the government securities market. The FLS meant lending at a yield linked to the level of the Bank Rate. In line with expectations, following the announcement of the programme, banks' funding costs declined considerably in the United Kingdom. Nevertheless, as a result of the deleveraging owing to the crisis, there was no major pick-up in lending.

In connection with the FLS, as bank lending failed to pick up, the idea of expanding the programme arose. According to data published by the Bank of England,[6] net lending by FLS participants declined by GBP 2.4 billion in 2012 Q4. In 2012 H2, borrowing banks reduced their lending to households and non-financial corporations by a total 0.15 per cent. However, this did not necessarily mean the failure of the programme. Funding costs declined considerably following the announcement of the FLS, and there were signs of improving credit conditions as well.

[5] Ian McCafferty: The UK economy: the road ahead?, speech, Bank of England, 23 April 2013, http://www.bankofengland.co.uk/publications/Documents/speeches/2013/speech651.pdf
[6] http://www.bankofengland.co.uk/publications/Pages/news/2013/044.aspx

Credit statistics following the introduction of the programme and the 2013 Q2 lending survey[7] continued to show a negative growth rate in lending. Outstanding loans declined in both the SME and large enterprises sectors, and total net lending was only positive in the consumer credit segment during the period. In the survey, respondents indicated that the Bank of England's FLS also contributed to the reduction of the funding costs. The supply of credit increased for large enterprises, but remained unchanged in the SME sector. The effective interest rate of new corporate loans remained broadly unchanged during the three months under review.

Table 2
Evaluation of the changes in credit conditions between the launch of the FLS and December 2013

	Expected developments following launch of the FLS	Developments to date (July 2012 – Dec. 2013)	Were they in line with the expectations?
Participation in the programme	Majority of credit lenders	85% of loans outstanding in the United Kingdom originate from the banks participating in the FLS	It was in line with the expectations.
Phase 1 Banks' funding costs	Banks' marginal funding costs to decline by approx. 150 basis points, including market funding costs as well	Funding costs in retail and wholesale trade fell by 150–200 basis points; creditors directly drew down GBP 41.9 billion	Decline in marginal costs was in line with expectations, but the amount drawn down was lower than expected.
Phase 2 Credit conditions and credit supply	Spread indicators to decline by some 100 basis points for households and corporations as well	Spread indicators declined by 100 basis points and 150 basis points for households and corporations, respectively.	Decline in the spread indicator was largely in line with expectations, although the rate of decline in spread indicator was slower than expected.
Phase 3 Credit applications and approvals	A quarterly average of 200,000 accepted mortgage loans	A quarterly average of 175,000 accepted mortgage loans	Somewhat below expectations.
Phase 4 Credit flow and effective rates	Net lending to be around GBP 20 billion between 2012 Q3 and 2013 Q4; of which: GBP 28 billion is net lending to households, while the decline in corporate lending will amount to GBP 8 billion	The total increase in net lending was approx. GBP 12 billion, of which GBP 19 billion was net lending to households, while corporate loans fell by GBP 7 billion	Overall less than expected, as a result of lower lending to households.

Source: Bank of England

In order to increase the efficiency of the programme, at the end of April 2013 the Bank of England and the British Government announced the expansion of the Funding for Lending Scheme (FLS).

[7] Trends in Lending April 2013 http://www.bankofengland.co.uk/publications/Documents/other/monetary/trendsapril13.pdf

The changes served three purposes. First, significant tension was still observed in the financial markets, which undermined lending and thus the pick-up in real economy. In order to remedy this situation, the programme was extended until January 2015 to continue to provide cheap funds for programme participants if their net lending increases. Second, while banks' funding costs had declined considerably since the introduction of the FLS in 2012, resulting in declining credit costs, the improvement in credit conditions was less perceivable in the SME sector compared to large enterprises and households. In order to stimulate lending to SMEs, within the programme, greater emphasis was put on funds devoted to lending to the SME sector. It was specifically intended that lending to the sector should pick up as soon as possible in the short run.[8] Finally, the programme was extended to non-bank credit lenders as well (e.g. leasing and factoring companies), which played an important role in the financing of the real economy. There was no change in the fee calculation of the FLS financing; it continued to depend on lending performance. The results since the launch of the FLS are summarised in Table 1.

In the quarters since the launch of the FLS, positive net lending was mainly attributable to the household segment. SME loan conditions improved, but to a lesser extent than those of household loans. This situation was intended to be remedied by the announcement of the Bank of England and HM Treasury in November 2013[9] on re-focusing the incentives in the FLS towards supporting business lending.

According to the latest data release by the Bank of England,[10] in 2014 Q2, participants borrowed GBP 2.4 billion through the scheme, and thus total loans outstanding reached GBP 45.7 billion. Net lending to the SME sector by the banks participating in the extension of the FLS was slightly negative (GBP -0.4 billion), representing an improvement compared to previous quarters. Net lending to the corporate sector as a whole amounted to GBP -3.9 billion, but at the same time, banking data suggest that SME lending expanded in the case of some participants. Lending activity, which is weak in spite of banks' declining funding costs, may also reflect weak credit demand among smaller companies.

THE BANK OF JAPAN'S PROGRAMMES TO STIMULATE BANK LENDING

The Bank of Japan launched its first quantitative easing (QE) programme on 19 March 2001 and ended it in March 2006.[11] Following that, two other large-scale monetary easing programmes were

[8] The amount of the available central bank funds depends on the borrowing sector. Net loans extended to the SME sector between 2013 Q2 and Q4 count tenfold, whereas ones extended in 2014 counts fivefold. Loans provided to other sectors count once.

[9] http://www.bankofengland.co.uk/publications/Pages/news/2013/177.aspx

[10] Trends in Lending July 2014 http://www.bankofengland.co.uk/publications/Documents/other/monetary/trendsjuly14.pdf

[11] The Bank of Japan may be considered a pioneer in terms of quantitative easing programmes: by the turn of the millennium, there remained no scope for action for Japanese monetary policy, as it had reached the zero lower bound in 1999. Therefore, it resorted to unconventional instruments. No other central bank had applied quantitative easing before (the term also originates from here).

launched by the Bank of Japan. The first of these was started in October 2010 (Comprehensive Monetary Easing, CME), and then expanding this and accelerating asset purchases, the Bank of Japan announced Quantitative and Qualitative Easing (QQE)[12] in April 2013, as a pillar of the economic policy known as Abenomics. In addition to the QQE, other measures were also introduced, including the 'Measures to Support Financial Institutions' Efforts toward Strengthening the Foundations for Economic Growth', which is a framework for providing liquidity increasing support to financial institutions, and tools for the stimulation of bank lending are also put into action.

QUANTITATIVE EASING, 2001–2006

The Bank of Japan launched its quantitative easing programme in March 2001 with the aim of supporting the economy and countering deflation expectations by relaxing monetary conditions, after reaching the zero lower bound. By then, the Bank of Japan had reduced its policy rate to 0 per cent, and further monetary easing was needed in view of the money market tensions following the bursting of the dot-com bubble. Therefore, the Bank resorted to unconventional instruments. The programme was ended in 2006, when it attained its target, i.e. when the annual core inflation rate became positive. Three kinds of intervention were applied during the programme, one of which was the announcement of the objective of the programme itself and the commitment to it. Changing the policy instrument and pushing down the government securities market yield curve were the other two interventions. During implementation, the central bank announced a reserve target, and thus the central bank balance sheet was expanded considerably by raising central bank reserves. In the meantime, the Bank of Japan also started to purchase long-term (10- and 20-year) government securities, resulting in shortening in the assets of the banking sector. In January 2002, the Japanese central bank extended the programme to short-term government securities as well, and it ensured the attainment of the reserve target by trebling the monthly value of purchases.

COMPREHENSIVE QUANTITATIVE EASING, 2010–2013 AND QUANTITATIVE AND QUALITATIVE EASING, 2013–

The Bank of Japan started its new Comprehensive Monetary Easing programme as an experiment to neutralise the effects of the 2008 global crisis in October 2010.[13] Similarly to the previous one, the newer programme consisted of three main elements: a policy rate level between 0 and 0.1 per cent (which means the zero lower bound), commitment to maintaining the policy rate level and a new asset purchase programme. The asset purchases were more diversified than in the programme launched in 2001 (see Table 3), as the central bank purchased some other securities as well in addition to long-term government securities. The planned and actual values of the asset

[12] The names of the programmes are: Quantitative Easing, Comprehensive Monetary Easing, Quantitative and Qualitative Easing and Measures to Support Financial Institutions' Efforts toward Strengthening the Foundations for Economic Growth and to Stimulate Bank Lending.

[13] Comprehensive Monetary Easing, Bank of Japan, 5 October 2010, https://www.boj.or.jp/en/announcements/release_2010/k101005.pdf

purchases were also broadly identical to those in the previous programme. The monetary base increased considerably, but the plan to mitigate deflationary pressure on the economy failed.

Table 3
Overview of the Quantitative Easing Programmes of the Bank of Japan

Program	Period	Target	Policy rate (per cent)	Purchased Assests	Government Bond Holdings (trillion ¥)	Change in Monetary Base	"Change in reserves
Quantitative Easing	March. 2001– March. 2006	Positive Inflation rate	0–0,25	Long and short term JGBs	34,883	62%	no data**
Comprhensive Quantitative Easing	Oct. 2010– March. 2013	Making monetary conditions accomodative to support growth	0–0,1	Long term JGBs, Treasury bonds, ABS, Corporate Bonds, Corporate Securities, ETFs	35,000	68%	31%
Quantitative and Qualitative Easing *	April 2013–	2 percent CPI target, doubling the monetary base	0	Long term JGBs, ETFs, J-REITs, etc.	88,484	61%	44%

**Cut-off date for data: September 2014*
***Data is accessible only for the period followingthe closing of the program. Between January 2005 to April 2006 (date of closure) the excess reserves held at the BoJ contracted by 67,5 per cent*
Source: Bank of Japan

This programme was restructured and supplemented by the BoJ's experts in April 2013 in order to support the reform-based economic policy in ending the period lasting since the end of the 1990s which has been characterised as the lost decades, due to the deflation and economic stagnation. They intended to provide this support by creating positive inflation expectations and attaining a low but steadily increasing price level. Within the framework of the QQE,[14] the Bank of Japan intends to raise inflation expectations close to the target and anchor them there, as well as to achieve its numerical target (2 per cent inflation) announced in early 2013. During the easing, great emphasis is put on the purchasing of long-term government securities[15] in order to thereby depress yields and thus reduce the financial sector's stock of outstanding government securities as well as to mitigate maturity risks. The purchases are open-ended, and thus there is no pre-determined point of time for stopping them. The attribute 'qualitative' in the name of the programme is an indication that the central bank intends to double the maturity of the government securities it holds, thus replacing the more liquid instruments in its balance sheet

[14] Introduction of the "Quantitative and Qualitative Monetary Easing", Bank of Japan, 4 April 2013, https://www.boj.or.jp/en/announcements/release_2013/k130404a.pdf

[15] The Bank of Japan purchases securities with an annual value of approximately JPY 60–70 thousand billion, thus carrying out the most aggressive purchase in its history.

by less liquid ones, which results in a consolidation of market participants' balance sheets owing to the shortening of the asset side.

TARGETED LIQUIDITY PROVIDING PROGRAMMES

In addition to its large-scale quantitative easing programmes, the Bank of Japan took two smaller, targeted liquidity providing measures as well. Their objective was to support the financial environment, which was becoming more benign as a result of the quantitative easing programmes, from the credit supply side as well by widening the fund raising opportunities of the financial system. The instrument entitled 'Measures to Support Financial Institutions' Efforts toward Strengthening the Foundations for Economic Growth' was launched in 2010. Within this, to date the Bank of Japan has provided funds for applying financial institutions in an amount of JPY 7 thousand billion at a low interest rate spread of 0.1 per cent. The essence of the programme is to increase the productivity of the Japanese economy by supporting developments and new investment financed from lending[16] as well as to reduce the disinflationary pressure on the economy by facilitating closure of the negative output gap. (Financial institutions could apply for drawing the funds by submitting lending and investment plans; only the lending programmes for the fields of use, geographical regions and adequate maturities determined by the central bank received positive judgement. The programme conforms with the objectives of the growth programme of the Japanese government announced in 2010, as a pre-condition of the support to lending is that the financial institution should provide funds to companies operating in one of the 18 growth regions.) Financial institutions play a major role in it through lending, because companies' funding costs influence their later profitability, so cheap development loans may encourage them to innovate. Following its announcement, the programme was expanded several times; originally it was maximised at JPY 3 thousand billion and 8 quarters. In addition, the Bank of Japan also provided refinancing loans on a dollar basis from its foreign exchange reserves up to a limit of USD 12 billion.

At end-2012, a new liquidity providing measure was announced within the Loan Support Programme (LSP). The Bank of Japan provides long-term (4-year), low-interest (0.1 per cent) unlimited funds for applicants. The value of the refinancing loans provided is double the increase in the net value of outstanding loans,[17] thus the availability of funds is tied to the increase in lending activity. The measure aims at reducing the costs of lending and thus to increase the credit demand of the household and corporate sectors. In view of the wider scope of the ultimate target group, in the application phase the range of eligible loans that serve as a basis for providing the refinancing loan is also wider; moreover, the programme was announced without a limit.

[16] See: Fund-Provisioning Measure to Support Strengthening the Foundations for Economic Growth, Bank of Japan Review, September 2010, https://www.boj.or.jp/en/research/wps_rev/rev_2010/data/rev10e05.pdf

[17] The programme was extended and expanded in March 2014, because according to the original conditions the amount of loan provided by the Central Bank to the financial institution equals the value of the net credit growth. https://www.boj.or.jp/en/mopo/outline/other.htm/

LTRO AND TLTRO PROGRAMMES OF THE EUROPEAN CENTRAL BANK

The ECB did not announce asset purchases for the whole area similar to the quantitative easing programmes of the BoE and the BoJ, but within the framework of the Securities Markets Programme (SMP) launched in 2010 it deployed a lower-volume government securities purchasing instrument. Central bank intervention was also needed in order to restore market participants' confidence, because the sustainability of debt paths became uncertain in an increasing number of EU countries with the escalation of the Greek crisis. However, with its bond purchase programme the ECB was unable to successfully reduce the long yields of periphery countries. Therefore, in December 2011 it introduced a new instrument, which also aimed to reduce bond yields in an indirect manner. As the ratio of government securities was high in banks' portfolios, the increase in yield impaired portfolio quality considerably, partly pointing to a restraining of credit supply and tightening of credit conditions, which was exacerbated by the end-2011 liquidity tensions as well. As a result, the ECB was compelled to introduce further instruments.

The new three-year credit facility (Long-Term Refinancing Operations, LTRO) primarily intended to mitigate the negative impact of sovereign risks on the banking sector and to avoid the collapse of lending. The LTRO mostly succeeded in resolving the tensions in the interbank market, but even though banks used part of the cheap three-year loan for purchasing government securities as well, it only managed to temporarily reduce government bond yields of periphery countries. Overall, the risk of a collapse of lending dropped considerably, but it was not possible to achieve an increase in loans outstanding and a permanent decline in government securities market yields.

In 2012, debt crisis management remained the priority for the ECB. In some euro-area countries, historically low sovereign premiums evolved, while record high levels were reached elsewhere. The ECB's communication strived to restore the unjustifiably high periphery yields and the damaged monetary transmission channel using the OMT (Outright Monetary Transaction) programme announced in September 2012. Within that, the ECB can contribute to the lowering of government securities market tensions and the management of transmission difficulties by purchasing shorter-maturity (max. 3-year) government securities. For the time being, the OMT can be considered as verbal intervention, because the securities of countries with high premiums have not been purchased yet. From a central bank point of view, solving this situation is difficult because requiring an improvement in fiscal conditions is not within the central bank's powers. The ECB eliminated this problem by requiring participation in the EFSF/ESM programme,[18] which includes fiscal consolidation, as a condition of using the instrument. A further condition is the given country's presence in the primary bond market (government bond issuance). Following the September announcement, amidst some fluctuations, short- and medium-term government

[18] The EFSF (European Financial Stability Facility) and the ESM (European Stability Mechanism) are crisis funds whose objective is to solve payment and refinancing difficulties and to maintain financial stability in Europe.

securities yields and sovereign CDS spreads of periphery countries declined considerably. This improves banks' balance sheets, which may also indirectly contribute to a pick-up in corporate lending, although the lending figures received to date do not corroborate this.

By 2014, euro-area inflation had declined permanently below the ECB's target, and therefore further monetary easing was announced. In September, the Governing Council of the ECB reduced the main refinancing rate to 0.05 per cent, and announced several unconventional measures. The new measures include the asset-backed securities purchase programme (ABSPP), the covered bond purchase programme (CBPP) and the targeted longer-term refinancing operations (TLTROs). These three instruments jointly may improve the position of the banking sector and may thus stimulate bank lending, as well as mitigate the risk of the development of a deflationary environment.

Changing long-term refinancing (LTROs) into targeted long-term refinancing (Targeted LTROs = TLTROs) allows the refinancing of bank lending amounting to approx. EUR 400–800 billion in several steps. Its objective is to stimulate corporate lending, excluding households' home purchases. The long-term credit facility will expire in September 2018, and its periodic revision will be held in September 2016. In addition, banks may receive further refinancing up to three times the amount of net loans they extend in every quarter between 2015 and June 2016. The refinancing rate equals the main refinancing rate plus 10 basis points (currently: 0.15 per cent). At the same time, the scope of eligible collateral that had been expanded earlier was extended until at least September 2018. 255 banks applied for a total EUR 86 billion in the first allocation of the TLTRO.

The asset-backed securities purchase programme (ABSPP) and the covered bond purchase programme (CBPP) may improve lending through various effects. These not-too-active markets may be stimulated by purchasing ABSs and covered bonds, which leads to a decline in yields, and this may make banks reflect in their lending rates their low funding costs charged by the ECB in the targeted longer-term refinancing operations (TLTROs). This is because there is a direct and close relation between the credit spreads that evolved in the ABS secondary markets and the interest rates charged by banks for their loans provided against these same securities used as collateral. Secondly, a portfolio effect may also be achieved with this facility, as non-bank investors may be attracted to the ABSs market, and thus SMEs may rely on a more diversified scope of investors and backers. There is already a significant amount of ABSs in the market, but the growth of the market may pick up with the entry of the ECB.

A REVIEW OF EFFECTS AND RESULTS

We evaluated the effects of unconventional central bank easing programmes and targeted liquidity increasing measures relying on international literature, through reviewing the findings of research. The evaluation describes the real economy effects of the programmes – such as output, unemployment and inflation expectations – relating to lending (Charts 1, 3 and 4) and economic activities.

While the impact on lending activity is a factor that can be observed relatively well in practice, the exploration of the effects of each specific programme on real economy variables and the estimation of their size involve a lot of uncertainties. These facilities have been introduced recently. Moreover, the programmes have not been closed yet, thus the number of studies examining the various effects is limited, and the findings should be treated cautiously owing to the difficulty of separating the effects. The estimates are different from a methodological aspect as well: various models are used on various time series, examining different variables. Therefore, the results are not always significant statistically or cannot be compared directly. However, the findings point in a similar direction. As real economy developments depend on a number of other events and shocks as well, the estimates and thus the presented results may contain significant statistical errors. The studies mainly provide qualitative results, i.e. they provide information on the direction of effects and the ongoing processes; in view of the complexity of the analyses, few can present quantitative results. It can be established in general that the 'lender of last resort' role of central banks has appreciated as a result of the crisis. The unconventional instruments contributed to restoring market participants' confidence, but were able to have only a limited effect on stimulating the real economy. Consequently, it became necessary to launch targeted instruments that influence credit market activity.

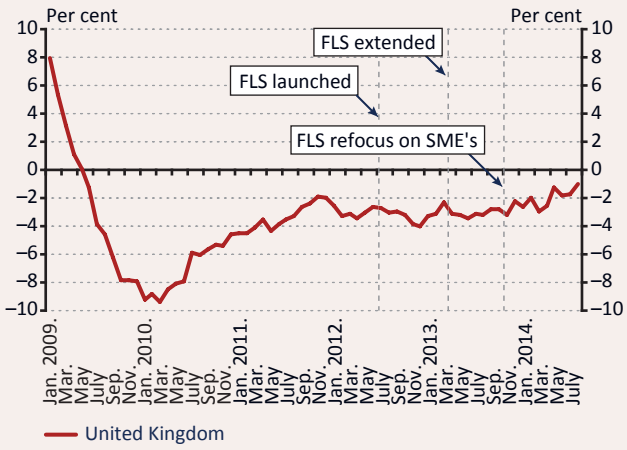
Studies examining the impact of the programmes on GDP (Hayashi et al. (2013), Beaumester et al. (2011), Berkmen (2012), Darracq et al. (2013)) yielded a general qualitative result: the increasing of asset purchases (may have) added to output through an increase in the central bank balance sheet and downward pressure on government securities market spreads. Through the same channels, monetary easing (may have) triggered an inflationary effect as well, in addition to increasing output. In its May 2014 Inflation Report, the BoE established that its measure had boosted lending to the real economy, while Saito et al. (2014), Belke (2012), Andrade et al.(2014), Darracq (2013) provided a more detailed explanation in connection with the developments in credit conditions and effects. According to Saito et al. (2014), in addition to the portfolio rearrangement, the long-term asset purchases of the Bank of Japan increases lending, while this latter effect cannot be observed in the case of purchasing short-term assets. In Belke's opinion (2012), the LTRO may have resulted in an improvement in credit conditions, whereas according to Andrade et al. (2014) the two 3-year LTROs – each loan amounting to EUR 1 billion and provided to a bank operating in France – increased lending to French companies by EUR 107 million. The first LTRO is considered to have had a greater impact.

FUNDING FOR LENDING SCHEME

The May Inflation Report of the Bank of England dealt with the evaluation of the scheme in more detail.[19] The lending incentive programme of the BoE was successful in reducing banks' funding costs and in easing the credit conditions both in the households and non-financial corporations sectors (Chart 1).

[19] Inflation Report May 2014 http://www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14may.pdf

Chart 1
Effect of the FLS of the Bank of England on lending in the non-financial corporations sector
(year-on-year change)

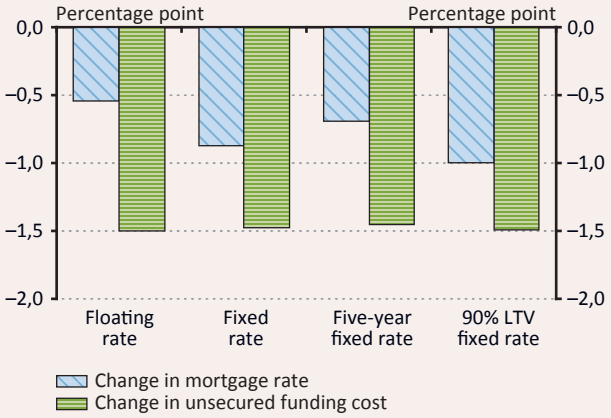


Source: Bank of England

Chart 2 shows the estimates of the Bank of England concerning mortgage loan rates[20] and banks funding costs.[21] Between June 2012 and April 2013, a decline can be seen on both variable and fixed rate maturities. Banks' uncovered funding costs declined by nearly 1.5 percentage points at all maturities, while the decline was between 0.5 and 1 percentage point in the case of mortgage loan rates. As a result of the positive effects, net lending entered positive territory in the past quarters, which is mainly attributable to the household segment. However, the exact impact of the scheme is difficult to estimate, as it cannot be known what would have happened without it. Funding costs increased in the years prior to the introduction of the FLS, which was partly attributable to the uncertain economic recovery of the euro area. However, in addition to the FLS, other economic events and policy initiatives may also have contributed to the ensuing decline in funding costs, which reduced English banks' willingness to participate in the scheme. Participation in the scheme would have probably been much higher if these events had not taken place. Apart from that, the FLS continues to support lending by functioning as a kind of barrier even when the conditions of financing from the market deteriorate. Overall, during its operation to date, the scheme has played a role in the reduction of funding costs, and added to real economy l ending.

[20] Two-year mortgage loan with 75% cover.
[21] Funding costs calculated as the sum of the indicative secondary market bond spread and the swap rate.

Chart 2
Decline in mortgage loan rates and funding costs
between June 2012 and April 2013



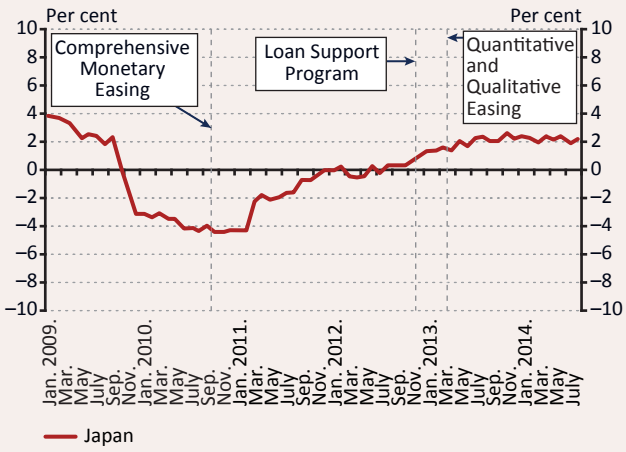
Source: Bank of England

PROGRAMMES OF THE BANK OF JAPAN

The quantitative easing programmes of the Bank of Japan made the economic environment more favourable for companies and financial institutions. With regard to inflation and output, the studies reviewed came to similar conclusions (the easing added to the value of variables), although their strengths are different. The amount of loans provided increased after the launch of each programme. In view of companies' balance sheet adjustment, the QE programme at first made its impact only in a limited manner and slowly; its successful closing[22] can be a good example for other central banks. The studies that reviewed the programme made their evaluations mainly on a channel basis; a (more) reliable result was provided by Hayashi – Koeda (2013) on the basis of multivariate structural vector autoregressive model estimates: central bank reserves growing as a result of government securities purchases increased output and inflation. In connection with the CME, Baumeister and Benati (2010) established that the effect of the change in government securities market long-term yields on inflation and output declined as of the end of the 1990s, but strengthened again by the end of the 2000s. Examining the effect of the QQE on lending, Saito – Hogen (2014) concluded that the short-term government securities purchases by the central bank did not result in any change in financial institutions' lending activity, while during the portfolio rearrangement the long-term government bond purchases led to an increase in

[22] As the programme ended, the Bank of Japan closed the asset purchases gradually. As a result of this and its credibility, financial markets did not freeze again, while inflation expectations remained unchanged.

Chart 3
Effects of the unconventional instruments of the Bank of Japan in the non-financial corporations sector
(year-on-year change)



Source: Bank of Japan

lending. In terms of their size, the targeted liquidity providing programmes look small beside the quantitative easing programmes, while running in parallel with them. Consequently, few people deal with the identification of the effects, although on the basis of the central bank's data, there seems to be demand on the financial institutions' side for cheap refinancing loans. In addition, some analysts of the Japanese Banking Association believe that the programme influences lending activity mainly through the reduction of risk spreads, rather than by reviving demand for loans.[23]

ECB PROGRAMMES

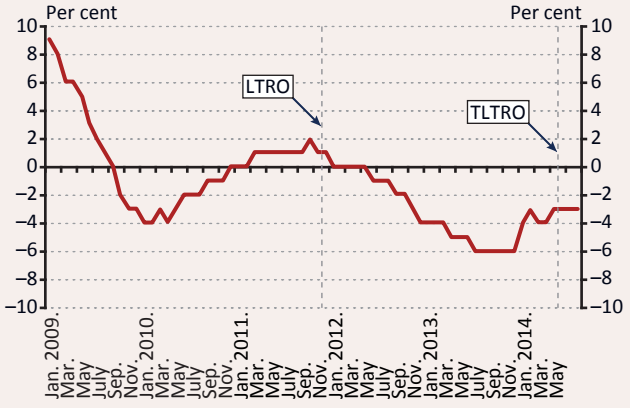
In the case of the ECB, it is especially difficult to quantify the exact effects of the presented instruments, as the effects on monetary transmission of many programmes overlapped one another, and the euro area was exposed to a number of shocks. According to impact studies, without the ECB's liquidity increasing measures, euro-area GDP growth would have been one percentage point lower, and there would have been deflation in the currency union.[24]

According to the preliminary survey of the ECB, in the case of the first LTRO, banks would have intended to use one third of the total amount of the funds for lending (and the remaining amount for

[23] http://www.ft.com/intl/cms/s/0/1878f224-9853-11e3-8c0e-00144feab7de.html
[24] Fahr, Motto, Rostagne, Smets, Tristani (2010): Lessons for monetary policy strategy from the recent past. ECB conference paper.

refinancing and asset purchases). Instead, banks spent the available nearly EUR 500 billion entirely on refinancing (to replace the funds obtained from the interbank market) and on government bond purchases.[25] As Chart 1 shows, lending to euro-area non-financial corporations did not pick up following the LTRO, although the deepening of the debt crisis, which this facility was able to manage only temporarily, also played a role in it. In Belke's opinion (2012) it may have improved credit conditions, credit conditions were tightened to a lesser extent compared to the findings of bank surveys, and it may have indirectly added to the consumer price index. At the same time, it may have increased the probability of a late response to inflation. Based on the estimate of Andrade et al. (2014), in the two 3-year LTROs each EUR 1 billion lent to a bank operating in France increased the banks' corporate loan supply by EUR 107 million. The first LTRO (December 2011) is believed to have had a greater impact on lending. On the basis of the estimate of Darracq – Santis (2013), output increased by 0.7–0.8 per cent as a result of the two LTROs, with the effect reaching its maximum in mid-2013. By end-2014, real GDP may be 0.2–0.4 percentage point higher than without the two programmes. In addition, the impact of the tenders on inflation may have reached its peak in early 2014, when inflation was 0.15–0.25 percentage point higher than without the programme. The impact on lending to non-financial corporations appears in a protracted manner, reaching its maximum in 2014 H2. Then, the amount of loans provided by banks is 2–2.5 percentage points higher than without the programme. As the programmes did not result in a change in lending on aggregate, the ECB announced new measures in 2014. No comprehensive impact studies had been prepared on the announced new instruments before this study was completed as only one tender of the TLTRO took place; there is even less information about the other instruments, so their use is also uncertain.

Chart 4
Effects of the ECB's unconventional instruments in the non-financial corporations sector
(year-on-year change)



Source: ECB

[25] ECB presentation, Philippe Moutot: The ECB's non-standard monetary policy measures during the crisis. ECB Workshop on Non-standard monetary policy measures, 25–26 June 2012, Frankfurt.

REFERENCES

Andrade, P. – Cahn, C. – Fraisse, H. – Mésonnier, J.S. (2014): Can Unlimited Liquidity Provision Help To Avoid A Credit Crunch? Evidence From The Eurosystem's LTROs (2014, under publication, ECB conference discussion paper)

Bank of England (2014): Inflation Report, May 2014

Bank of England (2013): Inflation Report, May 2013

Bank of Japan (2010): Fund-Provisioning Measure to Support Strengthening the Foundations for Economic Growth, Bank of Japan Review, September 2010

Baumester, C. – Benati, L. (2011): Unconventional Monetary Policy and the Great Recession, ECB Working Paper no. 1258, 2011/10

Belke, A. (2012): 3-Year LTROs – A First Assessment of a Non-Standard Policy Measure (April 2012)

Berkmen, S. Pelin (2012): Bank of Japan's Quantitative and Credit Easing: Are they now more effective? IMF Working Paper, 12/2

Darracq, M. – De Santis, R. (2013): A Non-Standard Monetary Policy Shock: The ECB's 3-Year LTROs And The Shift In Credit Supply IMF (2013): Unconventional Monetary Policies – Recent Experience and Prospects, IMF, 2013

Hayashi, Fumio – Koeda, Yunko (2013): A Regime-switching SVAR Analysis of Quantitative Easing, CARF Working Paper, 2013

Joyce, M., Lasaosa, A., Stevens, I. and Tong, M. (2011), 'The financial market impact of quantitative easing in the United Kingdom', International Journal of Central Banking, Vol. 7, No. 3, pp. 113–61

Kapetanios, G, Mumtaz, H, Stevens, I and Theodoridis, K (2011), 'Assessing the economy-wide effects of quantitative easing', Bank of England Working Paper

Krekó, J. – Balogh, Cs. – Lehmann, K. – Mátrai, R.– Pulai, Gy. – Vonnák, B. (2012): International experiences and domestic opportunities of applying unconventional monetary policy tools, *MNB Occasional Papers* 100

Saiot, Masashi – Hogen, Yoshihiko (2014): Portfolio Rebalancing Following the Bank of Japan's Government Bond Purchases: Empirical Analysis Using Data on Bank Loans and Investment Funds, Bank of Japan Reports & Research Papers, June 2014

Ugai, Hiroshi (2007): Effects of the Quantitative Easing Policy: A Survey of Empirical Analyses, Monetary and Economic Studies, March 2007

Dr. László Szöllősi – Péter Pogácsás: Preferential financing schemes for Hungarian SMEs and the FGS

SUMMARY

The introduction and rapid rise of the FGS has significantly changed the domestic SME financing market. Adding up the outstanding stocks of the various subsidised credit schemes and the FGS, which is a monetary policy instrument of the central bank, the ratio of outstanding loans with preferential conditions within SME lending has tripled in slightly more than 1 year. By 30 September 2014 this ratio was close to 40 per cent, which has a significant effect on the market conditions and structure of the entire SME lending market.

Assessing the conditions of the preferential-rate credit schemes currently available for SMEs and their development last year, we can observe a crowding-out effect of the FGS in relation to development and working capital credit programmes operated by the MFB for enterprises. At the same time, we do not observe this crowding-out effect in relation to the Export Promoting Credit Programme of Eximbank and the Széchenyi Card Programme, and in the case of the various micro loan programmes, as these operate in a different market segment.

Comparing the subsidised credit schemes with the FGS, in terms of most parameters the FGS offers the best conditions. The FGS offers the most favourable conditions in respect of the loan costs payable by the enterprises, the wide scope of objectives for which the loan may be utilised, the highest available loan amount, and its long tenor also makes it one of the most favourable plans.

THE FUNCTION OF SUBSIDISED CREDIT SCHEMES AND THE FGS IN THE FINANCING OF SMES

Recognising the economic and social significance of SMEs over and over again, governments have taken several measures to improve the situation of this sector. The most important areas of intervention are usually tax benefits, imposition of different requirements by the authorities and for administration, alleviation of sanctions and assistance in access to finance.

Due to the asymmetry in the information and lower profit that financing entities have on smaller companies, small enterprises have lower chances in obtaining external sources. In order to mitigate the disadvantages, both the Hungarian State and the institutions of the EU urge the implementation of programmes aimed at increasing SMEs' access to finance.

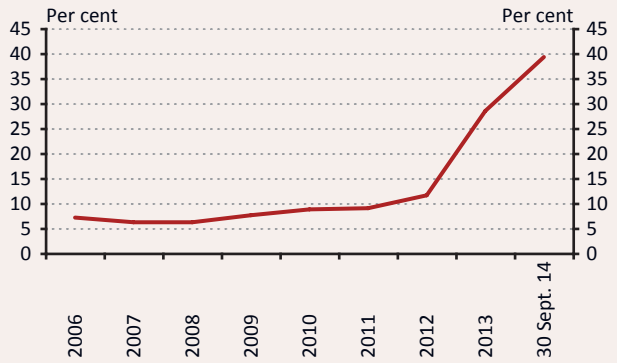
At the time of the financial crisis, domestic SMEs not only faced a drastic drop in demand for the goods they produce, but the financial sector also strongly restrained its lending activities to these enterprises. Some of the SMEs which faced market and financing problems switched over to trade credits, stacked up accounts payable or went bankrupt, further aggravating the financing problems of their business partners. The MNB's reports on lending trends[26] state that in the years following the crisis the market for short-term SME loans became rather demand-driven, while that of development loans became supply-driven. Sensing an increase in their losses and risks, credit institutions cut back on their short-term and liquidity financing, while credit demand related to investments was reduced by the corporate sector.

Hungarian SME development policy offers a wide variety of preferential financing programmes to alleviate the market failures in certain financing sub-markets for SMEs. After the launch of the Széchenyi Plan in 2001, grants, preferential development, investment loans, preferential overdrafts and working capital loans aimed at supporting operations have continuously existed in various forms, and since 2011 venture capital schemes for financing the growth of SMEs in their early stages have expanded significantly.

The subsidised financing instruments are only aimed at specific sub-markets characterised by inappropriate operations, and thus even in those years when lending was generally contracting, they could not expand their operations to such an extent as to exert a noticeable anti-cyclical effect on the financing of the entire SME sector. In the recent period, the ratio of subsidised financing provided through credit institutions and financial enterprises within SME lending has remained limited, at 6-8 per cent, although a slight increase has been observed since 2012, when Eximbank started becoming more active in lending. Compared to the size and market-influencing capability of subsidised SME financing, the FGS, which was launched as an instrument in the toolset of monetary policy, brought about a radical turn. As of 30 September 2014, the

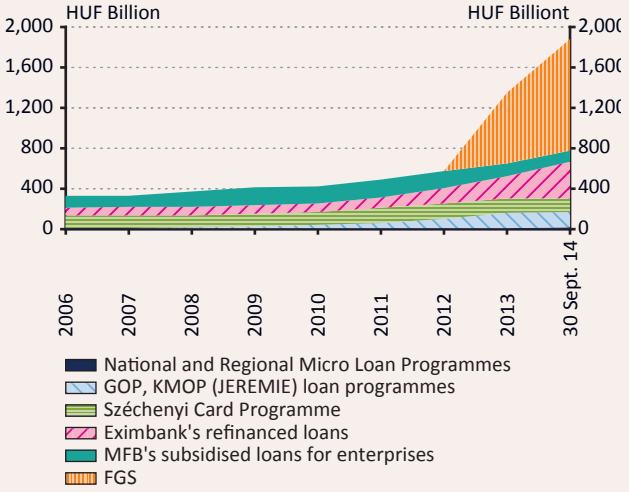
[26] http://english.mnb.hu/Kiadvanyok/trends-in-lending

Chart 1
Ratio of the aggregate stock of subsidised loans and of the FGS within total SME financing
(at the end of periods)



Source: Supported programmes, MNB.

Chart 2
Aggregate stock of subsidised loans and of the FGS at the end of the period
(billion HUF)



Source: Supported programs, MNB.

outstanding stock of loans extended via the FGS in a period 15 months constituted about one-fourth of the total outstanding stock of SMEs' loans, which is one and a half times more than the stock financed via subsidised credit schemes. As of 30 September 2014, the combined ratio of

the subsidised credit schemes and the outstanding lending of the FGS already amounted to 40 per cent. The lending of such a significant portion of SME financing at low interest rates and fees also has a decisive impact on the market conditions for SME financing as a whole.

According to the access to finance surveys which are conducted by the European Commission in Member States every two years,[27] in the period between 2009 and 2013 Hungary was one of those countries with the highest ratio of SMEs using only internal sources for the financing of their operations and development.

The online questionnaire surveys of the Ministry for National Economy and Századvég Gazdaságkutató Zrt. conducted in 2013 and at the beginning of 2014 among 3,000 small and medium entrepreneurs, show a similar result:

Table 1
Have you used any external financing sources in the last one year?
(frequency expressed as a percentage of respondents)

	Yes		Applied, but was rejected completely	
	2012	2013	2012	2013
Internal sources of financing (retained earnings, sales of assets, shareholder, friend, family funding)	41.6%	39.6%	1.2%	0.7%
Grants	14.1%	13.6%	4.9%	4.5%
Bank overdrafts	17.0%	15.3%	5.0%	3.8%
Bank working capital loans	6.5%	6.2%	5.1%	4.2%
Bank investment loans	5.3%	4.9%	4.5%	3.5%
Bank loans guaranteed by guarantee institution	3.9%	3.3%	1.6%	1.2%
Bank loans of Széchenyi Card Programme	10.8%	9.2%	4.0%	2.9%
Other types of subsidised loans (for example MFB, Exim)	2.6%	2.8%	1.8%	2.4%
Factoring	1.8%	1.3%	0.5%	0.5%
Leasing	12.0%	10.2%	0.8%	0.6%
Micro loans (New Széchenyi Loan Programme, National Micro Loan Programme)	4.1%	3.9%	3.1%	2.0%
Equity invested by external investors (risk capital, business angels)	1.1%	0.9%	0.9%	0.6%
MNB Funding for Growth Scheme		3.0%		2.4%

Source: The situation of small and medium enterprises in Hungary 2012, 2013 NGM, Századvég.

[27] http://ec.europa.eu/enterprise/policies/finance/data/index_en.htm

The questions are about financing in the years 2012 and 2013, and the responses to the individual types of financing show similar ratios. For domestic SMEs, the most frequent source of financing is family ties and friendly connections. Overdraft loans provided by banks, grants, lease financing and the Széchenyi Card Programme are much less significant, but are still a key factor in the frequency of external financing for SMEs. It is conspicuous that from 2012 to 2013 the frequency of each element decreased slightly, but the Funding for Growth Scheme appears tangibly among the channels of financing. It is likely that the FGS has partly taken over the role of the previous financing channels in terms of both development and working capital financing.

Considering the fact that – among the Member States of the European Union – the ratio of SME financing from internal sources has been the highest in Hungary for several years, and the ratio of external finance has remained among the lowest, one of the priority aims of domestic SME development policy is to encourage borrowing by enterprises. This is especially important for the financing of developments, which is of key significance for growth potential and efficiency improvement.

CONDITIONS OF PREFERENTIAL INTEREST RATE SCHEMES

The subsidised SME development policy financing programmes are aimed at sub-markets and stages, in which the market is not able to efficiently finance business activities that promise to be profitable using its own tools. The aim of the supported programmes is to have financing promote the implementation of developments, and to improve their return on investment and sustainable operation.

Act **XLII of 1994 on the Hungarian Export-Import Bank and on the Hungarian Export Credit Insurer** was enacted by the Hungarian Parliament with the following aims: to promote external trade relationships, within that especially the export of Hungarian goods and services,

- to implement the export-related interests of the state,
- to enhance the competitiveness of exporters in foreign markets,
- to share those financial risks of export that cannot be insured by conventional market tools,

to further develop the system of financial institutions, within that the system of export financing and export credit insurance, by market economy tools and in accordance with the international standards. The involvement of the state in financing is justified by the need to manage the special risks of export activities. The loans offered by Eximbank are available for export or supply transactions, investments, measures aimed to improve the international competitiveness of domestic enterprises, furthermore, for the investments of foreign enterprises in Hungary. Export financing and export loan insurance applied by Eximbank and MEHIB, provided with conditions defined in accordance with the agreement of OECD member states and the Communication

of the EU Commission, do not to distort international trade and are considered financing with market conditions.

Since 2013 Eximbank has been offering the full range of financing options for enterprises in direct or indirect relationship with export, from large corporations all the way to micro enterprises. In the framework of the Export Promoting Credit Programme (EHP), considered the flagship product of Eximbank, low-cost refinancing is offered to domestic financial organisations for the provision of investment and working capital loans to companies with turnover not exceeding HUF 15 billion. The sources of refinancing are also available for financial enterprises for lease financing. Although the Bank makes efforts to offer financing also available for smaller enterprises, owing to the export profile most of its customers come from the upper part of the SME segment and from large corporations. The interest bases of the EHP are low: at present the euro reference interest rate for loans within 2 years is 0.44%, and the euro CIRR interest rate applying to loans exceeding 2 years, for a tenor of between 2 and 5 years, is currently 0.99%. The maximum permissible interest surcharge (4%+ other costs) are such that the banks providing the loans have a large latitude for pricing costs and profitability. At the same time, owing to the type of transactions, the average interest rate applied in EHP is lower than even half of the maximum rate. The parallel dynamic growth of the EHP and the FGS indicates that the FGS has no crowding-out effect on the EHP. For 2 years Eximbank has been expanding its lending activity dynamically, and this year it expects to lend HUF 350 billion.

The functions of the Hungarian Development Bank (MFB) are summarised in Act XX of 2001, Article 2, which is still valid at present. This Article provides that the MFB shall participate

- in the performance of functions related to the development of infrastructure, environmental protection by the state and other development projects managed by the state, furthermore, in the fulfilment of the tasks related to the operation of the completed developments and investments;
- in the planning and mediation of funding sources of the state in an efficient manner, as part of banking operations, it participates in the harmonisation of state aids, benefits and market requirements;
- in the performance of functions related to disbursements from the individual indicative targets of the state, including the payouts of grant applications, the settlement and assessment of the utilisation of the payouts.

The scope of functions of MFB has been supplemented

- from 2003, by financing of investments of economic organisations domiciled in Hungary – within that, primarily small and medium enterprises – in the form of providing development loans and capital financing; and

- from 2005 by the provision of development loan financing for investments by primary agricultural producers and family farmers.

Of the diverse functions indicated above, the current priorities are designated for MFB by Government resolutions. In the scope of financing options that are difficult to obtain from the market, MFB primarily offers investment and working capital loans for the implementation of long-term development aims for the SMEs and the sector of large corporations. Within the product offering of MFB, the Enterprise Financing Programme and its agricultural equivalent, the New Hungarian Agricultural Development Loan Programme, serve the financing of long-term investments by lending. In the Enterprise Financing Programme, enterprises may borrow as much as HUF 3 billion, while in the Agricultural Development Loan Programme up to HUF 1 billion for terms of up to 15 years. MFB operates the Food Industry Working Capital Loan Programme and the Agricultural Working Capital Loan Programme to address the special working capital needs of the food industry and agriculture. In these two schemes, SMEs and large enterprises belonging to the relevant sectors may receive working capital loans of up to HUF 500 million, for terms of up to 6 years. In the loans of MFB, a refinancing interest rate spread of 1.5 per cent for the Enterprise Financing Programme, 3 per cent for the agricultural loan schemes is added to the EURIBOR base rate (at present 0.081 per cent), which the banks may further increase by a surcharge of up to 3.5 per cent and additional costs. At the same time, the Food Industry and Agricultural Working Capital loans receive an interest subsidy of 50 per cent from the Ministry of Agriculture. Despite the interest subsidy, the loan programmes of MFB are more expensive, both for the intermediary banks and the enterprises than the FGS, which also offers long-term investment-working capital financing. In the programmes of MFB, activity decreased noticeably last year, owing to the crowding-out effect of the FGS.

The **aims of the Government for the Széchenyi Card Programme** (SZKP) are defined in Government Decree 1011/2002, which launched the scheme:

- to create an efficiently operating option with an appropriate history and a simplified procedure, for working capital financing, which
- any credit institution may join,
- for minor loans the collateral is the guarantee of the owner and Hitelgarancia Zrt.

Launched in 2002, the Széchenyi Card Overdraft, the flagship product of SZKP, was designed to provide to SMEs with an overdraft facility without any asset collateral, which was a facility that did not exist in the market at that time. Instead of asset collateral, the collateral of the Széchenyi Card Overdraft is comprised of the fine-tuned system of conditions, the 80% guarantee of Garantiqa Hitelgarancia Zrt., the personal surety of the borrower and an interest margin that covers the risk, as well as the related interest subsidy. The scheme had expanded significantly by the middle of the 2000s and its success prompted several banks not participating in SZKP to develop similar

products in the market. However, these competing products disappeared from the market at the time of the financial crisis, although small enterprises struggling with liquidity problems would have needed a low-cost overdraft precisely at that time. It should be considered the success of SZKP that Széchenyi Card Overdraft was able to maintain its former level of financing in the toughest periods of the crisis, continuing to serve its original mission.

Based on the success of Széchenyi Card Overdraft, in 2010 the Government authorised the expansion of the Széchenyi Card Programme as part of Action Plans I and II. The decisions prompted the implementation of the Széchenyi Working Capital Loan, the Széchenyi Investment Loan, the Széchenyi Own Contribution Loan (Széchenyi Supplementary and Advance Grant Loans), and the Agricultural Széchenyi Card. After introduction the new loans started surging gradually. According to the experiences so far, the evolution of the individual loans of SZKP has not been significantly influenced by the advent of FGS. The main reason for that was probably the fact that the Széchenyi Card offers a simplified, standardised procedure and system of collateral, while the more regulated system of conditions of the FGS does not offer all these options.

The New Széchenyi Loan Programme (Investment and Working Capital Loan) was created in the framework of the Financial Instruments of GOP and KMOP (JEREMIE) from the EU funds resources available between 2007 and 2013. It could even be a bank loan scheme considering its maximum loan amount and several parameters, however, owing to its significant elements it primarily functions as a micro loan, similarly to the National and Regional Micro Loan Programmes with a history of 20 years. The aim of micro loan financing is to enable enterprises that experience difficulties in obtaining commercial bank loans or cannot get such loans at all, to obtain financing matching their life situations. It is a priority to help natural persons, especially disadvantaged groups (unemployed persons, young people, senior citizens, Roma persons) in establishing their own enterprises and to support developments by smaller companies. Micro loans are frequently linked with business consulting, mentoring activity. Owing to the lack of credit history and other important business information, micro lending involves special risks, which are made more manageable for the lender by higher margins or possibly schemes for loss sharing. Each micro loan programme is available to the undertakings through financial enterprises (or the local Enterprise Development Foundations, which operate similarly). Micro finance represents a market segment different from the scope of SMEs financed by the FGS, and their respective operations do not overlap.

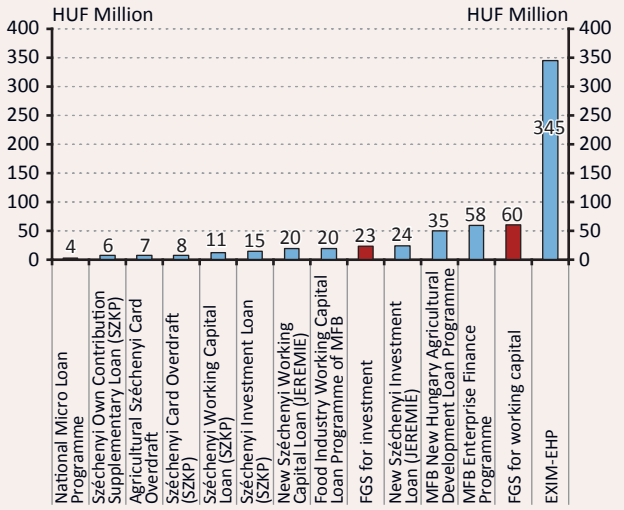
Venture capital schemes yield to the capital investors much higher profits than the price of the loans (assuming a successful exit), and in exchange, the investors undertake a risk and participation in the operation of the target enterprises which goes significantly beyond bank financing. In terms of parameters the activities of **Új Magyarország and Új Széchenyi Venture Capital** planned and that of **Széchenyi Tőkealap-kezelő Zrt.**, which are currently active in the SME finance market, are not comparable with the subsidised loans or with FGS, but in certain cases they can be treated as alternative options or supplements to these schemes.

Launched in June 2013, the stated purpose of the **Funding for Growth Scheme** was to alleviate the disturbances in the loan market by facilitating the access of small and medium enterprises to HUF-based loans, to strengthen financial stability and to stimulate economic growth. The need to increase competition among credit institutions was also formulated as a short-term objective. It is also clear from the comprehensive aims that the FGS is not a subsidised development programme, but rather a monetary policy instrument implemented as a temporary arrangement to attain the objectives mentioned above.

The short-term objectives were already accomplished in the first phase of the FGS. The programme has significantly stimulated demand from the side of enterprises and has also called the attention of credit institutions to the SME sector, which increased competition for customer acquisition and retention. When the budget appropriation for the scheme was distributed, the allocation mechanism applied by the MNB served to invigorate competition, as did the option of changing banks, which resulted in an increased share of small and medium banks and cooperative banks within the outstanding loans of SMEs. In loan redemption, 20 per cent of the customers took advantage of this option.

With regard to the success of this plan, on 11 September 2013 the Monetary Council of the MNB decided on its continuation. In the second phase it already became possible to give priority to new loans, which enabled the FGS to focus more on stimulating economic growth. Thus, 90 per

Chart 3
Average amount of loans borrowed in 2014



Source: Supported programs, MNB.

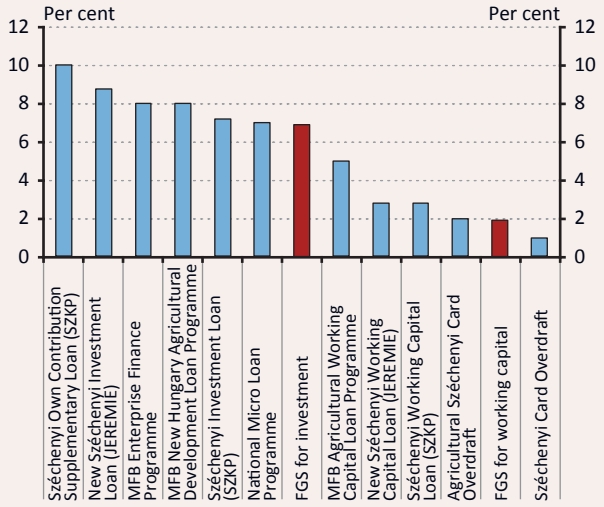
cent of the entire framework amount can be provided only in the form of new loans to SMEs. In the second phase of the FGS, the focus of lending was successfully shifted towards smaller enterprises, and the ratio of smaller enterprises among the borrowers increased and the average loan size decreased. A further significant increase in lending can probably be achieved through the stronger involvement of small-size enterprises in the plan.

DIFFERENCES BETWEEN SUBSIDISED FINANCING SCHEMES AND THE FGS

A comparison of the conditions of the most important currently operating subsidised financing programmes and those of the FGS reveals that, in terms of the maximum available credit amount, the aims and activities eligible for financing, the loan costs payable by the borrower and the budget of the scheme, the FGS is the financing opportunity offering the best conditions for those who are eligible.

Other than the FGS, the highest **credit amount** is offered by the Enterprise Finance Programme of the MFB and the Export Promoting Credit Programme of Exim, in the amount of HUF 3 billion. While the other two credit schemes are also available for large corporations, at present the FGS offers loans of up to HUF 10 billion, which may only be extended to SMEs. A comparison of the average amounts of loans borrowed indicates that the FGS competes with the segment of low-cost credit programmes in which the average credit amount is higher. The data imply that the transactions of Exim EHP do not typically serve the financing of SMEs.

Chart 4
Average tenor of outstanding borrowing as of 30 September 2014
(in years)



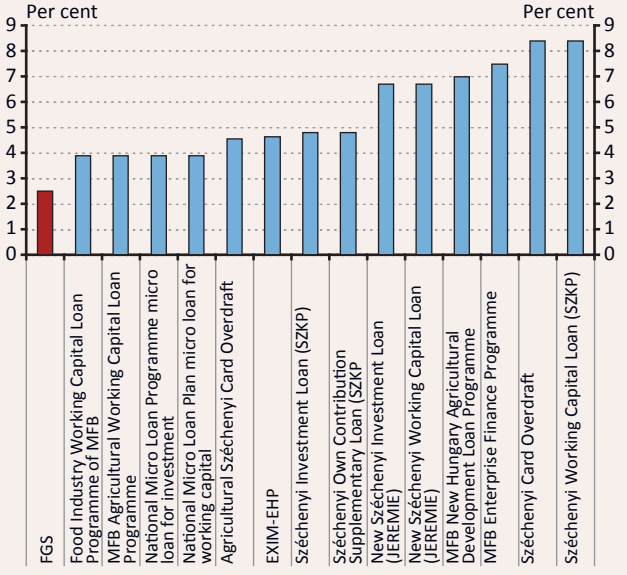
Source: Supported programs, MNB.

The development loan programmes of the MFB offer the longest possible **term** of 15 years, followed by the development loans and micro loans of the FGS and SZKP. Based on a comparison of the average tenors of the outstanding low-cost loan stock, on average the FGS has been borrowed by the enterprises for a somewhat shorter term than the rest of the loans.

The subsidised credit programmes, development grants and venture capital programmes are often targeted at the financing of certain activities. In addition, the state aid rules used for their operation and institutional characteristics also exclude areas which cannot be covered in certain schemes:

- Programmes operating under the general de minimis state aid rules are not allowed to finance activities aimed at export, agriculture, coal and steel industry, acquisition of road freight transport vehicles granted to undertakings performing road freight transport and enterprises in a difficult situation.
- Agricultural de minimis state aid may only be aimed at agricultural activities.
- Programmes operated on the basis of regional development state aid rules exclude certain un-focused branches and the Mid-Hungarian Region.

Chart 5
Maximum loan costs calculated for the first year of a loan of HUF 10 million borrowed in the SME loan programmes (%)
(%)



Source: Supported programs, MNB.

- The EHP of Eximbank narrows down the scope of financing to transactions related to export activity.
- Programmes aimed at development prohibit the purchase of business shares and loan redemption.
- The state aid rules applying to venture capital excludes from investment targets firms in difficulty, agriculture, the coal and steel industry, the financial sector, real estate development for sale, loan redemption and the acquisition of equity stake financed from the investment.

In the case of the FGS, the issue of state aid is not applicable, since the central bank provides liquidity to the credit institutions as part of the set of monetary policy instruments, and therefore no restrictions similar to the ones listed above apply to the scope of SMEs. In addition to the loans of Exim, the FGS is the only programme that enables the finance of export-related activities and investments; furthermore, in addition to the MFB Agricultural Development Loan Programme, the FGS is the only programme that permits the purchase of arable land and lending for agricultural investments. The FGS is the only programme that permits the loan to be spent on loan redemption, although the opportunity for this is restricted in the second stage.

The rules of state aids also limit the amount of the grant equivalent of the financing. This means a narrow limit primarily concerning aids provided on a de minimis basis for agricultural purposes, where the grant equivalent allowed to be used by one company group within a period of 3 years is only EUR 15,000. Owing to the narrow de minimis restriction, agricultural enterprises are only rarely able to use the low-cost financing. This is probably one of the reasons why the FGS is especially popular with them.

Based on a comparison of the maximum value of the updated, **purely interest-type costs**, the costs of the FGS are among the lowest, preceded only by the Food Industry and Agricultural Working Capital Credit Programmes of the MFB and the Széchenyi Own Contribution Supplementary Loan are close to this value. However, if we quantify other, fixed charges in the price of the loans, the FGS is clearly considered the most favourable scheme. Based on the maximum amount of loan costs calculated for the first year for a loan of HUF 10 million, the FGS is the cheapest loan source. The Food Industry and Agricultural Working Capital Credit Programmes of the MFB comes in second, as do the loans of the National Micro Loan Programme with 1.4%, while loans of the Agricultural Széchenyi Card and Exim-EHP carry higher costs by over 2%. However, it must be noted that the indicated values show the highest applicable cost level, while it is possible to apply lower levels. This often happens in plans operating with a low refinancing base. The deviation from the maximum cost level is the most significant in the case of Exim EHP, where the average interest level has been around 2.1%.

In the following table, we summarised the characteristics of financing programmes offering better interest rates than those available on the market.

Table 2
Comparison of the conditions of the FGS and the most important investment finance programmes

Item	Target group	Loan amount	Areas excluded from financing	Tenor	Factor that enables preferential financing cost	Interest-type costs	The maximum loan cost in the first year of a loan of HUF 10 million (interest-type + fixed costs)
FGS	micro, small and medium enterprises	HUF 3 mn – 10 bn	–	max. 10 years	refinance by the central bank at 0% cost of funds	max. 2.5%	max. 2.5%
MFB Enterprise Finance Programme	micro, small, medium and large enterprises	HUF 5 mn –3 bn	activities aimed at export, agricultural activity, mining, acquisition of road freight transport vehicles granted to undertakings performing road freight transport, enterprises in a difficult situation, purchase of business shares	15 years	state aid provided through cheap refinancing, general de minimis aid rules	3-month EURIBOR + RKV + max 3.5% which is currently approx. 5.1%	max. 7.5%
MFB New Hungary Agricultural Development Loan Programme	micro, small, medium and large enterprises	HUF 1 mn –1 bn	activities aimed at export, enterprises in a difficult situation, purchase of business shares, loan redemption	8 or 15 years, depending on the aim of the loan	considered state aid provided to an agricultural undertaking	3-month EURIBOR + RKA + max 3.5% which is currently approx. 5.1%	max. 7.0%
EXIM-EHP	undertakings with turnover below HUF 15 bn	EUR 40,000 (HUF 12.5 mn) – EUR 10 mn (HUF 3.1 bn)	activities aimed at the domestic market, reexport, export of military equipment, agricultural products	0.5 – 5 years	cheap financing based on the reference interest rate applicable to OECD and EU export credit	on EUR base min. CIRR – max. CIRR + 4% = at present 1.29% - 5.05%;	max. 4.65-5.6%

Széchenyi Investment Loan (SZKP)	micro, small and medium enterprises	HUF 1 – 50 mn	export and agricultural activities, mining, production of arms, ammunition and combat vehicles, gambling, firms in difficulty, acquisition of road freight transport vehicles granted to undertakings performing road freight transport, purchase of business shares	1-10 years	5% interest subsidy, 50% guarantee fee support, 85% counter-guarantee by the state, general de minimis legal title	BUBOR+4.5%-5% interest subsidy.+0.8% service charge+1.3% guarantee fee-0.65% guarantee fee support= at present 3.05%	max. 4.8%
Széchenyi Own Contribution Supplementary Loan (SZKP)	micro, small and medium enterprises	HUF 1 – 50 mn	export activity, agricultural activities, mining, production of arms, ammunition and combat vehicles, gambling, betting, firms in difficulty, acquisition of road freight transport vehicles granted to undertakings performing road freight transport, purchase of business shares	1-5 years	5% interest subsidy, 50% guarantee fee support, 85% counter-guarantee by the state, general de minimis legal title	BUBOR+4%-5% interest subsidy+0.8% service charge+1-3% guarantee fee-0.65% guarantee fee support= at present 2.55%	max. 4.8%
New Széchenyi Investment Loan (JEREMIE)	micro, small and medium enterprises	HUF 1 – 50 mn	activities aimed at export, agricultural activity, coal production, firms in difficulty, acquisition of road freight transport vehicles granted to undertakings performing road freight transport, purchase of business shares	1-10 years	state aid provided through cheap refinancing, general de minimis title	max. 6.5%	max. 6.7%
National Micro Loan Programme micro loan for investment	micro enterprises	HUF 0 – 10 mn	activities aimed at export, agricultural activity, coal production, firms in difficulty, acquisition of road freight transport vehicles granted to undertakings performing road freight transport, purchase of business shares	1-10 years	state aid provided through cheap refinancing, general de minimis title	3.9%	max. 3.9%
Grants on the expansion of the production capacities of micro, small and medium enterprises	micro, small and medium enterprises in the manufacturing industry	between HUF 10 and 100 mn	certain industries outside priority manufacturing industries, purchase of business shares, projects implemented in the area of the Mid-Hungarian region	–	grant under the regional development state aid rules	up to 50% grant	–

Table 3
Comparison of the conditions of the FGS and the most important working capital and overdraft investment finance programmes

Item	Target group	Loan amount	Areas excluded from financing	Tenor	Factor that enables preferential financing cost	Interest-type costs	The max loan cost in the first year of a loan of 10 million HUF (interest-type + fixed costs)
FGS	micro, small and medium enterprises	HUF 3 mn – 10 bn	–	for working capital loan up to 3 years	refinance by the central bank at 0% cost of funds	max. **2.5%**	max. 2.5%
Food Industry Working Capital Loan Programme of MFB	micro, small, medium and large enterprises in food industry	HUF 5 – max. 500 mn	non-food industry activity, activities aimed at export, agricultural activity, enterprises in a difficult situation, purchase of business shares	2 to 6 years	state aid provided through cheap refinancing, general de minimis and fishery de minimis rules	3 months' EURIBOR + RKV + max 3.5% which is **currently approx. 5.1%**	max. 7.5%
MFB Agricultural Working Capital Loan Programme	micro, small, medium and large enterprises in agriculture	HUF 1 – max. 500 mn	activities aimed at export, enterprises in a difficult situation, purchase of business shares	1-6 years	state aid provided through cheap refinancing, general de minimis, agricultural de minimis and fishery de minimis rules, interest subsidy for up to 50% of the on interest, but up to 4% per annum	3 months' EURIBOR + RKV2 + max 3.5%- 50% interest subsidy = **currently approx. 2.4%**	max. 3.9%
Széchenyi Card Overdraft	micro, small and medium enterprises	HUF 0.5 – 25 mn (increases by units of HUF 1 mn)	export activity, agricultural activities, mining, production of arms, ammunition and combat vehicles, gambling, betting, firms in difficulty	1 +1 years	up to HUF 10 mn 1%, there is no interest subsidy for the part above HUF 10 mn, 50% guarantee fee support, 85% counter-guarantee by the state	BUBOR+4%-1% interest subsidy+0.8% service charge + 1.4% guarantee fee-0.7% guarantee fee support = **at present 6.6%**	max. 8.4%

Agricultural Széchenyi Card Overdraft	agricultural micro, small and medium enterprises	HUF 0.5 – 25 mn (increases by units of HUF 1 mn)	activities other than the production, processing or distribution of agricultural products, export-related activity, firms in difficulty	1+1+1 years	4% interest subsidy, 50% guarantee fee support, 85% counter-guarantee by the state	BUBOR+4%-1% interest subsidy+0.8% service charge + 1.7% guarantee fee-0.75% guarantee fee support = **at present 3.85%**	max. 4.55%
Széchenyi Working Capital Loan (SZKP)	micro, small and medium enterprises	HUF 0.5 – 25 mn (increases by units of HUF 100,000)	export activity, agricultural activities, mining, production of arms, ammunition and combat vehicles, gambling, betting, firms in difficulty	1-3 years	2% interest subsidy, 50% guarantee fee support, 85% counter-guarantee by the state	BUBOR+5%-2% interest subsidy+0.8% service charge + 1.6% guarantee fee-0.75% guarantee fee support = **at present 6.75%**	max. 8.4%
New Széchenyi Working Capital Loan (JEREMIE)	micro, small and medium enterprises	HUF 1 – 50 mn	activities aimed at export, agricultural activity, coal production, firms in difficulty, purchase of business shares	1-3 years	state aid provided through cheap refinancing, general de minimis title	max. 6.5%	max. 6.7%
National Micro Loan Plan micro loan for working capital	micro enterprises	HUF 0 – 10 mn	activities aimed at export, agricultural activity, coal production, firms in difficulty, purchase of business shares	max. 3 years	state aid provided through cheap refinancing, general de minimis title	3.9%	max. 3.9%

4. táblázat
Comparison of the conditions of the FGS and the most important capital programmes

Item	Target group	Size of loan / direct investment	Areas excluded from financing	Tenor	Factor that enables preferential financing cost	Costs of finance
FGS	micro, small and medium enterprises	HUF 3 mn – 10 bn	--------	for investment and EU grant pre-financing loan up to 10 years, for working capital loan up to 3 years	refinance by the central bank at 0% cost of funds	max. 2.5%
Joint and co-investment growth funds of New Hungary Venture Capital Programme and New Széchenyi Venture Capital Programme	micro, small and medium enterprises founded within 5 years, up to HUF 5 bn in revenues	within a period of 12 months up to EUR 2.5 mn in investment, which may be repeated multiple times	firms in difficulty, shipbuilding, coal and steel industry, financial sector, agricultural loan redemption, commercial real estate development, acquisition of shareholding	max. 10 years	state sources transferred temporarily for direct investment with favourable conditions, according to the state aid rules applying to venture capital investments	profit transferred through the increase of the value of the sold business share
New Széchenyi Venture Capital Plan Joint Seed Money Fund Sub-programme	micro or small enterprises founded within 3 years, up to HUF 200 mn in revenues	within a period of 12 months up to EUR 150,000 of direct investment, which may be followed once by a further EUR 150,000 in monetary loan	firms in difficulty, shipbuilding, coal and steel industry, financial sector, agricultural loan redemption, commercial real estate development, acquisition of shareholding	max. 10 years	state sources transferred temporarily for direct investment with favourable conditions, according to the state aid rules applying to venture capital investments	profit transferred through the increase of the value of the sold business share

Capital fund of Széchenyi Tőkealap-kezelő Zrt.	micro, small and medium enterprises	max. EUR 200,000, to which a member loan amounting to twice the invested capital may be added	activities aimed at export, agricultural activity, coal and steel industry, firms in difficulty	max. 5 years	state sources transferred temporarily for direct investment with favourable conditions, according to the state aid rules applying to general de minimis or venture capital investments	profit transferred through the increase of the value of the sold business share

Dániel Módos – Csilla Bokor – Balázs Hidasi: Main features of FGS loans and companies borrowing under the scheme

SUMMARY

Compared to the first phase, many changes have taken place in the conditions of the second phase of the Funding for Growth Scheme. The limitation of loan redemptions, the participation of financial enterprises as providers of funds and, consequently, the permission of financial leasing as a type of financing – in addition to other changes – have resulted in many positive changes in the scheme compared to the first phase. By limiting loan redemption, new loans account for almost 98% of lending, within which investment loans are predominant. The share of micro-enterprises has substantially increased in the scheme due to the longer available time frame and fine-tuning of the scheme. While the share of micro-enterprises was only 25% in new loans in first phase, this has increased to 34% in second phase; but, for instance, this rate is almost 60% in financial leasing. The activity of large banks has increased in second phase, but it is still true that the smaller credit institutions grant proportionally more investment loans.

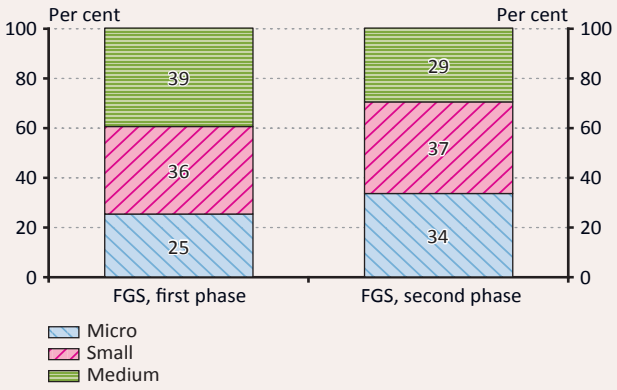
The share of agriculture was already substantial in the first phase, but has only become outstanding in the second phase partly due to the fact that the majority of loans for pre-financing EU grants is realised in this sector. The increase in the share of agriculture has also resulted in a decrease in regional concentration. Nevertheless, there are large discrepancies in the regional concentration of loans by size of companies. While the regional distribution of borrowing of small enterprises has not substantially changed, the borrowing of micro- and medium-sized enterprises has changed significantly.

The profitability, the equity-to-total assets and the indebtedness ratios of enterprises participating in the first phase are slightly better than those of the enterprises participating in the second phase in the period between 2008 and 2012; however, there is no genuine difference with regard to the liquidity rate.

IN THE CASE OF NEW INVESTMENT LOANS GRANTED UNDER THE SCHEME, THE SHARE OF SMALLER ENTERPRISES AND SMALLER LOAN AMOUNTS INCREASED SUBSTANTIALLY IN THE SECOND PHASE

In the first two phases of the FGS, the credit institutions participating in the scheme granted loans to more than 14,000 enterprises for a total amount of almost HUF 1,040 billion until the end of August 2014.[28] More specifically, almost 10,000 enterprises have received new investment loans (including financial leasing) and loans pre-financing EU grants in the first and second phases of the FGS, for an amount of almost HUF 430 billion. Almost 60 per cent of this amount has been implemented in the second phase. Apart from the fact that, partly due to the longer available time frame, the volume of new investment loans is greater, the distribution of new investment loans[29] by type of companies is also a significant difference between the two phases. While only one-fourth of the companies were micro-enterprises in the first phase, this rate is almost one-third in the second phase. The increase in the share of micro-enterprises is quite spectacular in the case of new investment loans. Their share has increased from 33 per cent to 43 per cent since the first phase.

Chart 1
Shares of certain types of companies in new loans in the first and second phases of the FGS



Source: MNB.

The average loan size has declined in the second phase of FGS, which is particularly significant in the case of new investment loans where the average loan size has decreased from HUF 49 million to HUF 24 million. Due to the decrease in the indicator, the share of loan amounts below HUF 10 and HUF 50 million has increased substantially, which is explained by two reasons: on the one

[28] During the analysis, our calculations are based on the data available on 29 August 2014.
[29] Financial leasing and EU loans are, and remain, included in this.

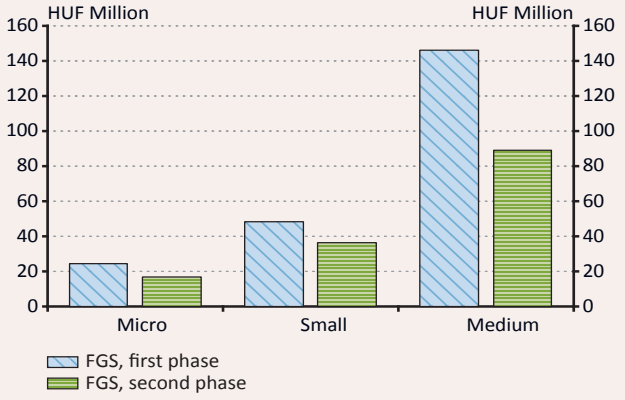
hand, the share of micro-enterprises usually applying for a smaller loan amount has significantly increased; on the other hand, the decrease in the loan size can be observed by every type of company. The average loan size has dropped nearly by half from HUF 28 million to HUF 17 million in the case of micro-enterprises (largely due to the financial leasing) and from HUF 145 million to HUF 75 million in the case of medium-sized enterprises.

Table 1
Average loan size in the first and second phases of the FGS by loan purpose

	First phase (HUF millions)	Second phase (HUF millions)
New loans	49	30
New investment loans	49	24
New working capital loans	51	57
Loans for pre-finance EU funds	24	37

Source: MNB.

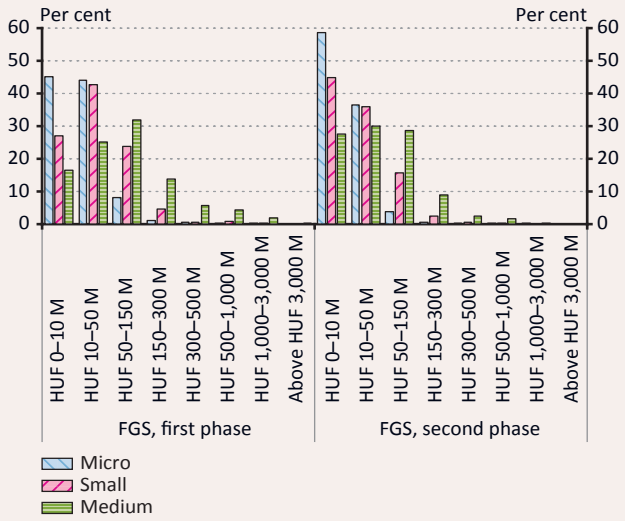
Chart 2
Average loan size in the case of new loans by type of enterprise



Source: MNB.

In the case of micro-enterprises, the share of transactions below HUF 10 million was around 45 per cent in first phase, while it has increased to 60 per cent in second phase. This trend can be also observed in the case of small- and medium-sized enterprises. In the case of small enterprises, the share of transactions below HUF 50 million has increased from 70 per cent to 81 per cent, while, in the case of medium-sized enterprises, it has increased from 42 per cent to 58 per cent.

Chart 3
Distribution of loan size in the case of new investment loans by type of enterprise in the first and second phases of the FGS



Source: MNB.

This positive development can be attributed to a combination of several factors:

1. **Because of risk and labour demand, the credit institutions first focus on the larger and less risky clients and the loan demand of more smaller clients with a younger and shorter loan history are only satisfied to a smaller extent or alternatively.** The enterprises relatively larger in size which have more stable activity, a longer operational and loan history and whose shock-resisting capacity is greater than the average represent a smaller risk, while smaller companies which are mostly characterised by a shorter loan history are considered riskier and have a relatively higher labour demand. The longer available time frame of the second phase allows sufficient time to also serve the riskier clients. It also takes into account that the loan demand of enterprises operating in different sectors arises in different periods of the year and with different seasonality. Due to the longer available time frame, the above relationship is also present for certain types of companies, which is indicated by the fact that the average loan size by type of companies has also shrunk in the second phase of the FGS.

2. **The permission of financial leasing as a type of financing in the scheme has also positively contributed to the higher participation of micro-enterprises.** In the framework of the scheme, almost 2,200 enterprises made use of financial leasing in the amount of more than HUF 25 billion until the end of August 2014. The share of micro-enterprises is 60% in the case of this type of financing, the average loan size is also smaller and typically covers the purchase of

commercial vehicles or machines and equipment. The characteristics of the construction explain the higher share of micro-enterprises. In comparison to bank loans, financial leasing has the advantage of providing the slightly riskier enterprises that – in the absence of an adequate collateral – might not be granted a loan with a chance of obtaining funds.

3. **In addition to the first phase of the scheme, 7.6 per cent of SMEs have also participated in the second phase with regard to new investment loans.** The low rate of companies participating in both phases indicates that most of the loan demand of companies participating in the first phase was satisfied during the borrowing process, but it also means that such SMEs participate mostly in the second phase that have not previously applied for loans in the framework of the FGS.

THE SHARE OF LARGE BANKS IN NEW INVESTMENT LOANS HAS INCREASED; THE SMALLER CREDIT INSTITUTIONS HAVE MAINLY GRANTED NEW INVESTMENT LOANS WITHIN THEIR OWN LENDING

The share of large banks has increased from 58 per cent to 67 per cent in new loans in the second phase of the FGS. The share of large banks has slightly increased more – from 47 per cent to 61 per cent – in new investment loans. However, it can also be said that almost half of the lending of the large banks is new investment loans, almost 20 per cent of it is EU loans, while approximately one-third of it is new working capital loans. By contrast, almost 80 per cent of the lending of smaller credit institutions[30] is new investment loans. There are a number of reasons for the above developments:

1. **In the first phase of the FGS, the larger share of loan redemptions, due to changing banks, promoted the activity of smaller credit institutions as they were able to acquire new clients from large banks.** By contrast, large banks focused more on their own clients. By limiting loan redemption, this opportunity has decreased in the second phase.

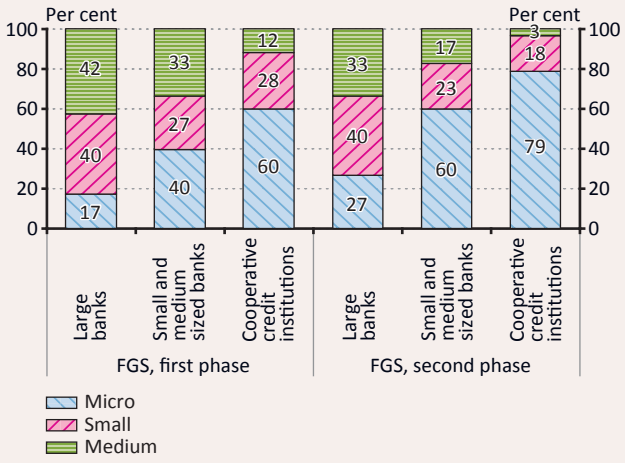
2. **Large banks mainly focused on their own clients in the first phase but** – compared to the clients of small banks – **they mainly redeemed the existing loans of clients,** which has put some strain on the majority of banking capacities that have been released for the second phase, enabling the higher activity of large banks in the scheme.

3. In comparison to smaller credit institutions, a higher share of large banks fund medium-sized enterprises. **Medium-sized enterprises apply for proportionally more working capital loans than small enterprises.** Consequently, large banks will benefit from a significant part of the working capital loans granted in the scheme.

[30] Smaller credit institutions mean the small and medium-sized banks and credit institutions.

However, in addition to the above, it can be generally said that the share of micro-enterprises has grown significantly in the case of every banking group, which has been accompanied by a decrease in the share of medium-sized enterprises. While it remains true for the large banks that they focus on larger enterprises, a change in the business policy of several banks can be assumed due to the growth potential among smaller enterprises and intensifying competition, which has brought the micro-enterprises even more into focus than before. This is clearly highlighted by the fact that the share of micro-enterprises in new investment loans has increased from 17 per cent to 26 per cent in the second phase.

Chart 4
Lending of certain banking groups to certain types of enterprises within new investment loans



Source: MNB.

BANKS ARE STILL WILLING TO GRANT LONG-TERM INVESTMENT LOANS

While the distribution of maturity periods was relatively steady in the existing SME loan portfolio in the case of maturity periods below 10 years prior to the launch of the scheme, the share of loans with a maturity period of less than one year and between 1-3 years is excessively high in relation to loans granted in 2012, prior to the launch of the scheme. This means that there are longer-term loans – which were more likely disbursed earlier – in the existing portfolio, while, due to the financial and economic crisis, considerably fewer investment loans were granted in recent years. On the credit supply side, the shortening of the maturity period of loans disbursed in the period prior to the scheme is explained by the limited risk-taking of banks and tightening of funding opportunities. Demand factors have also played an important role in the continuous deterioration in the corporate sector's long-term loans since – due to the crisis and the difficult,

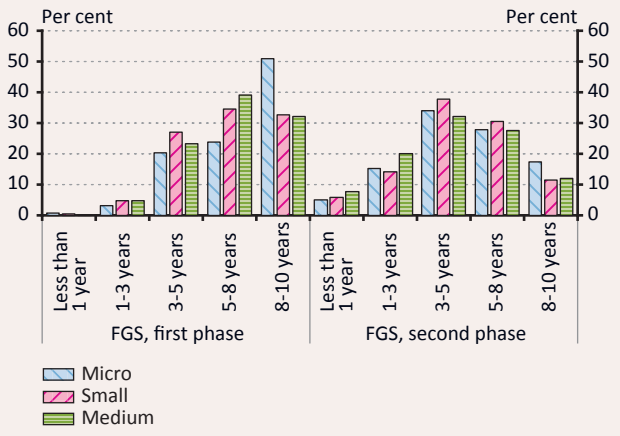
uncertain financial environment – enterprises have partly postponed their investments for maintenance and fully postponed their investments aimed at expansion.

In light of the above, it can be regarded as positive that enterprises under the scheme received funding with a maturity period longer than the average. The average maturity period of new investment loans weighted by the contract amount (excluding EU loans) was 8 years in the first phase of the FGS, while it was almost 7 years in the second phase. Furthermore, as shown in the chart below, the distribution is steadier in second phase. The slight shortening in the maturity period could have several reasons:

1. **The purchase of commercial vehicles and machines, equipment represents a considerable part of financial leasing, the maturity period of which is typically around 3-5 years.** There are a relatively large number of lease transactions so due to in part to this, the average maturity period of new investment loans has decreased. This particularly applies in the case of micro-enterprises since the share of this type of enterprises is around 60 per cent within financial leasing.

2. Micro-enterprises are basically considered riskier than enterprises larger in size. Credit institutions may have the possibility to reduce risk by granting loans with a shorter maturity to enterprises. Under such conditions, the short maturity period may be regarded as favourable since this implies that these enterprises also have access to sources of financing. The share of micro-enterprises has substantially increased in the second phase of the FGS and this will lead to an increased effect.

Chart 5
Distribution of maturity period for new investment loans by type of enterprise in the first and second phases of the FGS
(by number)



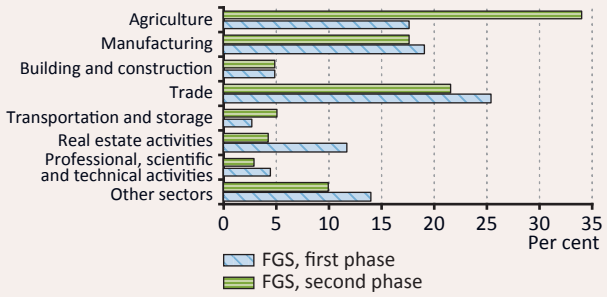
Source: MNB.

3. Due to the changes in conditions, the share of loans granted for purchasing a real estate, and primarily funded by longer-term loans, has decreased in the second phase.

THE SHARE OF AGRICULTURE HAS SIGNIFICANTLY INCREASED IN THE SECOND PHASE

Similarly to the first phase, three key industries can be identified in the second phase: agriculture, manufacturing and trade. Their combined share amounts to almost three-fourths of the loans granted in the second phase. Agriculture is dominant among the three sectors; its share already exceeded its proportion in the SME loan portfolio in the first phase, but its share has become even more significant in the second phase. As shown in the chart below, the share of agriculture was around 17 per cent in the first phase, while it was almost twice this value, or approximately 35 per cent, in the second phase. EU loans have played an important role in increasing the role of this sector; this loan purpose totals up to one-third of the resources directed to the sector in the second phase.

Chart 6
Sectoral distribution of new loans in the first and second phases of the FGS

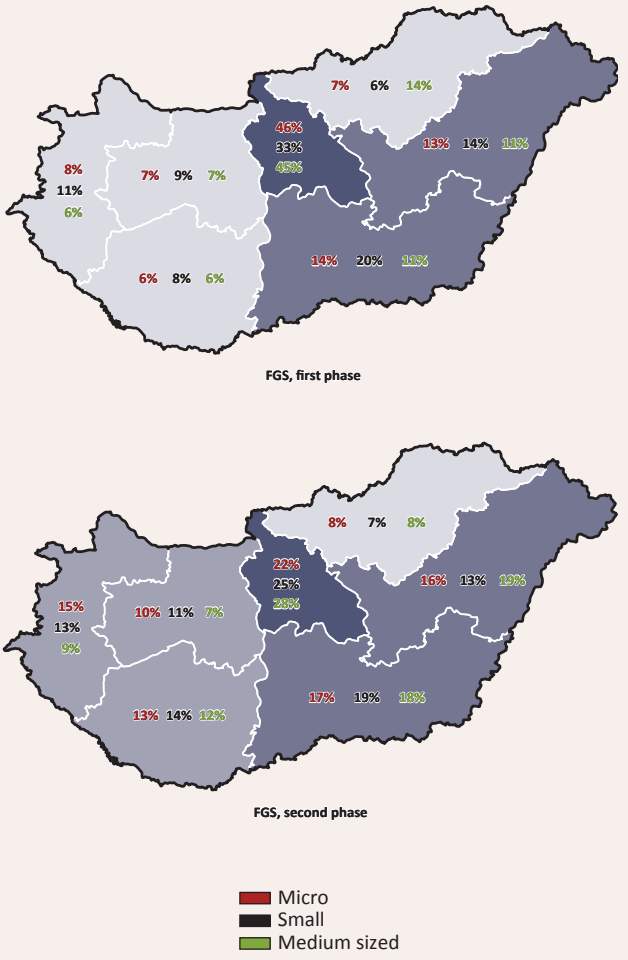


Source: MNB.

REGIONAL CONCENTRATION HAS SIGNIFICANTLY DECREASED IN THE SCHEME

While the region of Central Hungary accounted for 56 per cent of the SME loan portfolio prior to the launch of FGS, the share of the region decreased to 41 per cent in the first phase and 24 per cent in the second phase of the scheme. Simultaneously with the decrease in the share of the region, the share of the regions in the Great Plain has risen in line with the increase in the share of agriculture, and the share of the region of Southern Transdanubia also started to rise following the second quarter of 2014.

Chart 7
Regional distribution of new investment and EU loans in the first and second phases of the FGS by type of enterprise



Source: MNB.

If we look at the regional distribution in the new investment and EU loans, by type of enterprise, it can be said that micro-enterprises and medium-sized enterprises have been the driving force behind the decrease in the share of the Central Hungary region. Compared to the first phase, the share of these two groups approximately halved in the second phase. Compared to the first phase, the share of micro-enterprises has mostly increased in the regions of Southern and Western Transdanubia. Compared to the first phase, the share of small enterprises has also significantly

increased in the region of Southern Transdanubia. The share of medium-sized enterprises has mainly increased in the regions of Southern Transdanubia and Northern Hungary.

ANALYSIS OF KEY FINANCIAL INDICATORS OF ENTERPRISES PARTICIPATING IN THE SCHEME

In line with the previous chapters, in this chapter we still only examine the enterprises that were granted a new loan. We analysed the balance sheet and income statement data between 2008 and 2013 of approximately 5,500 of the almost 15,000 enterprises participating in the scheme. The comparability of data is made more difficult by the fact that the 2013 financial data of enterprises taking out loans in 2013 already include loans received in the framework of the FGS, while in the case of enterprises taking out loans in 2014 they do not contain it. Therefore, the 2013 data of enterprises taking out loans in 2013 influenced by the immediate effects of the loan received in the framework of the FGS on the balance sheets and income statements (e.g. enterprises taking out loans in 2013 may have higher indebtedness ratios, while the positive effect of the received loan on income and profitability is not necessarily observable yet). Therefore, in this regard, clear conclusions cannot be drawn from the 2013 data.

In order to manage the volatility of data, we use "median enterprise" in place of "average enterprise" in the document. The enterprises[31] participating in the first and second phases of the FGS are compared using the most important indicators in the analysis. The indicators used are divided into three groups: 1) profitability indicators, 2) indicators describing the wealth situation, and 3) the liquidity ratio.

One of the most important findings of this chapter is that the enterprises participating in the two phases have basically the same financial indicators, even though the enterprises participating in the first phase had slightly better indicators in the period between 2008 and 2012. On the one hand, this is partly explained by the fact that the service provision to clients is characterised by a sort of queuing due to the scarce capacities of credit institutions. First, better enterprises are provided with a service, and subsequently smaller enterprises with a shorter loan history. The longer available time period of the second phase is of great help in providing services to the latter group. On the other hand, the financial situation of SMEs might have generally improved due to the improving macro-economic environment, and therefore such enterprises were also able to receive a loan in the framework of the scheme that had not been able to receive it previously with the interest margin of 2.5 per cent.

[31] Enterprises participating in both phases are not taken into account since their inclusion either among enterprises participating in the first phase or enterprises participating in the second phase would distort the comparison of data.

PROFITABILITY SITUATION OF ENTERPRISES PARTICIPATING IN THE SCHEME

With regard to the income position of enterprises participating in FGS, it can be said that the profitability of both groups of companies deteriorated significantly between 2008 and 2010 due to the financial and economic crisis. However, in line with the gradual improvement in the macro-economic environment, the profitability situation of enterprises participating in both the first and the second phases has improved since 2010; their ROAs are close to the pre-crisis level, but their ROEs are still slightly below the pre-crisis level. In addition, the ROE indicator of enterprises participating in the first phase slightly exceeded that of enterprises participating in the second phase.

Further observations can be made about the profitability of enterprises participating in the scheme based on the type of enterprise. On the one hand, the profitability of micro-enterprises was lower than that of the other types of enterprises until 2011; however, it has been almost the same since 2012 and it already exceeds the values of the small- and medium-sized enterprises in the case of enterprises participating in the second phase. Furthermore, the return on equity of medium-sized enterprises participating in the second phase is lower than it was in the first phase.

WEALTH SITUATION OF ENTERPRISES PARTICIPATING IN THE SCHEME

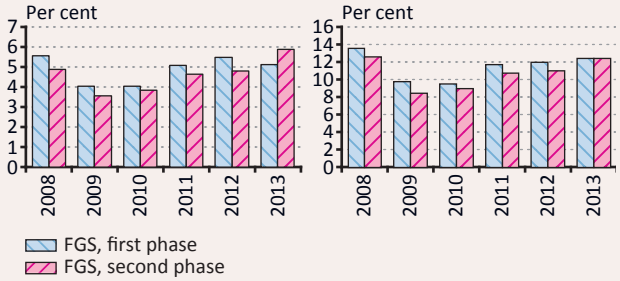
In the analysis of the wealth situation, we studied the two most important indicators, i.e. the equity-to-total assets ratio and the indebtedness ratio. We calculated the indebtedness ratio[32] as the proportion of the long- and short-term liabilities to total assets. In the case of a high value, there is a potential risk that the enterprise is less likely to satisfy the obligation to pay interest or cannot renew its maturing loans or its further borrowing possibilities are significantly reduced due to the increasing interest expenses (deteriorating interest coverage ratio). From the supply side, the high indebtedness ratio and the resulting high interest burden weaken the propensity of banks to grant further loans, i.e. the excessively high debt ratio may limit the growth of the enterprise. The financial situation of enterprises participating in the scheme may be regarded as basically sound in terms of both the equity-to-total assets and indebtedness ratios. Between 2008 and 2012, the equity-to-total assets ratio and indebtedness of enterprises participating in the second phase were slightly worse than that of enterprises participating in the first phase.[33]

It can also be observed that enterprises participating in the scheme have deleveraged since the onset of the crisis. The indebtedness of enterprises participating in the first and second phases decreased by 18 and 19.3 percentage points between 2008 and 2012. If it is assumed that

[32] In the case of the indebtedness ratio, we did not take into account inter-company loans among long-term liabilities.

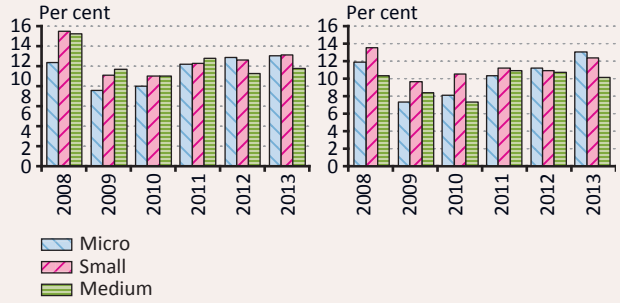
[33] Similarly to the return on total assets, these indicators are also distorted in case of enterprises participating in the first phase since this indicator includes the loan received in the framework of the FGS in 2013.

Chart 8
Return on assets (ROA; left side) and return on equity (ROE; right side) of median enterprises participating in the first and second phases of the FGS



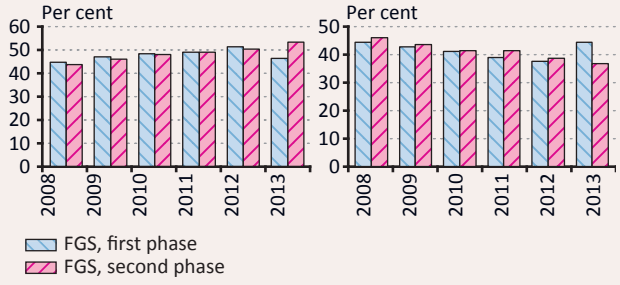
Source: MNB.

Chart 9
Return on equity (ROE) of enterprises participating in the first (left side) and second phase (right side) of the FGS, by type of enterprise



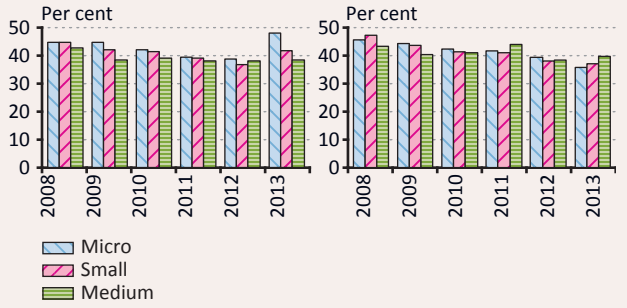
Source: MNB.

Chart 10
Equity-to-total assets ratio (left side) and indebtedness (right side) of enterprises participating in the first and second phases of the FGS



Source: MNB.

Chart 11
Indebtedness of enterprises participating in the first (left side) and second phase (right side) of the FGS, by type of enterprise



Source: MNB.

indebtedness has an optimal level taking into account the financial and competition situation, the growth outlook and position in the market of the enterprise, then the permanent divergence from this position in any direction (permanent increase or decrease in the debt level) may indicate disturbances in the operation of the enterprise. This may be due to a permanent change in the macroeconomic, industrial environment or an individual change in the course of business of the enterprise. If it is assumed that the indebtedness of enterprises participating in the scheme was around the optimal level prior to the crisis, then the decline in the indebtedness from 2008 may also indicate that the enterprises postpone or do not sufficiently carry out new investments. One reason for the lack of investments may be the decrease in demand for the products and services of the enterprise, the effects of which were strongly felt in the years of crisis. On the other hand, the strict lending conditions arising from the weakening risk appetite of banks may also play a role in the decrease of indebtedness since enterprises that would take out a loan and used to be creditworthy are not able to obtain bank funding, due to the tighter lending conditions. If an enterprise experiences too high interest expenses or too strict non-price conditions, then it will postpone taking out a new investment loan.[34] The competitiveness of the enterprise may be reduced due to investments which are postponed or not implemented. On the one hand, the postponement of new investments is an opportunity cost; on the other hand, the postponement of replacement investments reduces the effectiveness of the existing machines and equipment, which also negatively affects the profitability of the enterprise. Since the favourable conditions of the FGS significantly increased the credit demand of participating enterprises, it can therefore be said that the scheme is also able to effectively address the problem.

More observations can be made about the indebtedness of enterprises participating in the scheme by type of enterprise. Micro-enterprises are the most indebted companies, small-sized enterprises

[34] The statement is less true for working capital loans if they are assumed to be indispensable to the operation of the enterprise in both long and short terms.

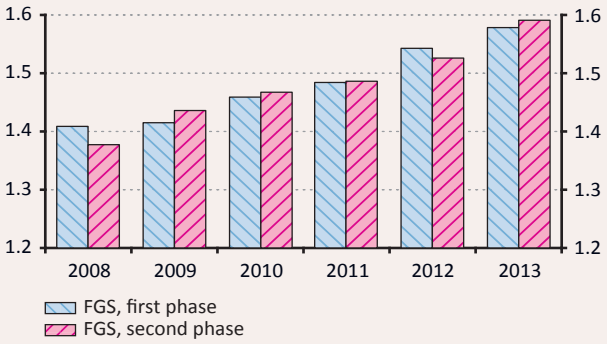
are less indebted and the least indebted companies are the medium-sized enterprises. This is partly due to the fact that the leveraged purchase of one machine or equipment has a higher impact proportionally on the indebtedness in the case of a smaller enterprise than in the case of a larger enterprise.

Another important finding is that deleveraging by medium-sized enterprises participating in the first phase essentially ended in 2009. By contrast, a decrease in the debt stock of the micro- and small-sized enterprises can be observed since 2009, which is slightly higher in the case of micro-enterprises. The difference between the smaller and medium-sized enterprises stems from the fact that a greater proportion of the latter produce for export. Due to external demand, the income and financial situation of enterprises producing for export was able to remain relatively stable during the crisis, in contrast to the smaller enterprises that typically produce for the domestic market.

LIQUIDITY SITUATION OF ENTERPRISES PARTICIPATING IN THE SCHEME

The liquidity situation of enterprises participating in the scheme can be regarded as good. In the case of enterprises participating in the first phase, the liquidity rate shows continuous growth for every type of enterprise; this can particularly be observed in the case of medium-sized enterprises. The liquidity rate of enterprises participating in the second phase was slightly higher than the liquidity rate of enterprises in the first phase in the majority of the period under review, even though the difference is not relevant. Broken down by banking group, it can be said that enterprises which have taken out loans from small or medium-sized banks or savings co-operatives have a slightly lower liquidity rate than enterprises taking out loans from large banks.

Chart 12
Development in the liquidity rate of enterprises participating in the first and second phases of the FGS



Source: MNB.

Csilla Bokor – Zita Fellner – Ádám Plajner: The use and expected impact of loans taken out in the Funding for Growth Scheme – results of a questionnaire-based survey

EXECUTIVE SUMMARY

Of the enterprises taking out loans in the framework of the Funding for Growth Scheme (FGS) and participating in the MNB's questionnaire-based survey, 55 per cent defined themselves as stable enterprises with average profitability, but 65 per cent of them indicated that difficulties – primarily the high interest rates on loans – had limited their borrowing prior to the launch of the scheme.

Almost 40 per cent of the investment and working capital loans disbursed in the scheme and around 20 per cent of the loans pre-financing EU funds would not have been taken out at all by the enterprises, and a further 30-33 per cent would have been taken out in a smaller amount for every loan purpose without the FGS. Of the respondents, 58 per cent stated that they had used the opportunity for a favourable loan to fund an investment that had just become necessary during their operations, but almost one-fourth indicated that the idea for some of the investments was specifically conceived because of the opportunity provided by the FGS. The object of the investment was the purchase of machinery and vehicles in most cases. Of enterprises taking out new investment loans, 53 per cent took out loans for capacity expansion purposes, i.e. not for changing an existing, obsolete or used asset.

Of the respondents, 63 per cent hope that the loan will open new growth opportunities for them, while 56 per cent of them think that the use of the FGS loan will have a positive impact on the number of employees of the enterprise; more than 80 per cent of them expect their revenues to grow, and 59 per cent of them plan to take out further FGS loans.

INTRODUCTION

In October 2014, the MNB conducted a questionnaire-based survey among the micro-, small- and medium-sized enterprises (SMEs) which had taken out loans in the framework of the Funding for Growth Scheme (FGS). The aim of the survey was to receive feedback on the impact of the scheme from other sources, i.e. the enterprises themselves, in addition to the available statistical data or surveys conducted amongst the credit institutions, and to obtain certain information that is more difficult to quantify. With the help of the questions we intended to explore the profitability situation and borrowing possibilities of the enterprises receiving loans in the framework of the scheme, how they used these loans and what expectations they have for the result of that use. The MNB has also previously conducted questionnaire-based surveys among the enterprises, but it is unprecedented that the targeted group of enterprises taking out loans in the FGS reports its own management situation, and particularly the expected impacts of the use of the loans taken out in the scheme, from its own perspective.

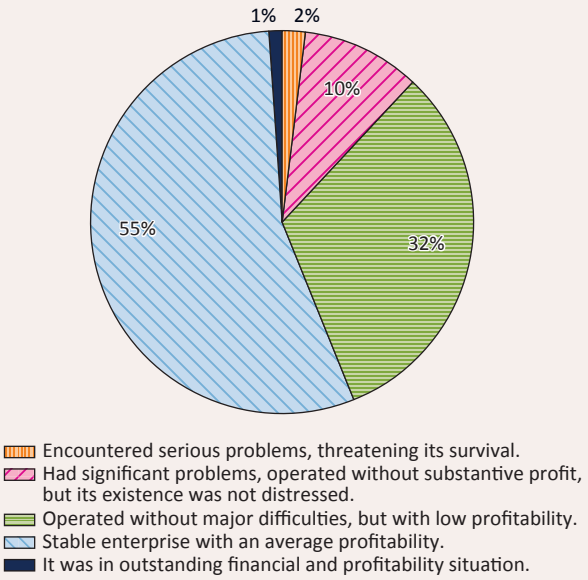
The MNB as a central bank is only in contact with its credit institution partners, but not with the borrowing SMEs. The link to the questionnaire that could be completed using a web form was sent to the enterprises through the participating banks, and the credit institutions sent this to their clients participating in the scheme. More than 3,500 enterprises had completed the questionnaire by the given deadline and almost 3,000 questionnaires were able to be used for the evaluation. This is around 20 per cent of the enterprises taking out loans in the FGS and the amount of loans taken out by these enterprises covers 31 per cent of the amount of the loan agreements concluded in the two phases of the FSG. The sample cannot be considered representative.

ECONOMIC SITUATION AND BORROWING POSSIBILITIES OF ENTERPRISES TAKING OUT LOANS IN THE FRAMEWORK OF THE SCHEME

The questions in the first part of the questionnaire focused on the borrowing enterprises' views on their position prior to the use of the FGS loan. There was a small number of respondents which considered themselves particularly profitable; the majority of respondents (55 per cent) defined themselves as stable enterprises with average profitability. Nevertheless, one-third of the respondents reported to have low operating profit and another 12 per cent of them replied that they encounter significant or even serious problems threatening their survival. It can be therefore concluded from the responses that the scheme has also been able to reach enterprises in a particularly difficult situation, although, with an interest margin capped at 2.5 per cent limiting the risk-taking possibilities of credit institutions, only in a smaller proportion.

Of the enterprises, 65 per cent indicated that the difficulties encountered in accessing loans had limited their expansion and profitability prior to the launch of the FGS. On the basis of the responses, the credit market limitations had significantly influenced the possibilities of enterprises

Chart 1
How do you judge the position of the enterprise prior to taking out the FGS loan?



Source: MNB survey.

in every business size, although the larger the enterprise, the smaller the extent of influence. While 69 per cent of the micro-enterprises said that the credit market conditions – primarily the high interest rates – had posed problems in their financial management prior to the launch of the FGS, this rate was only 54 per cent in the case of medium-sized enterprises.

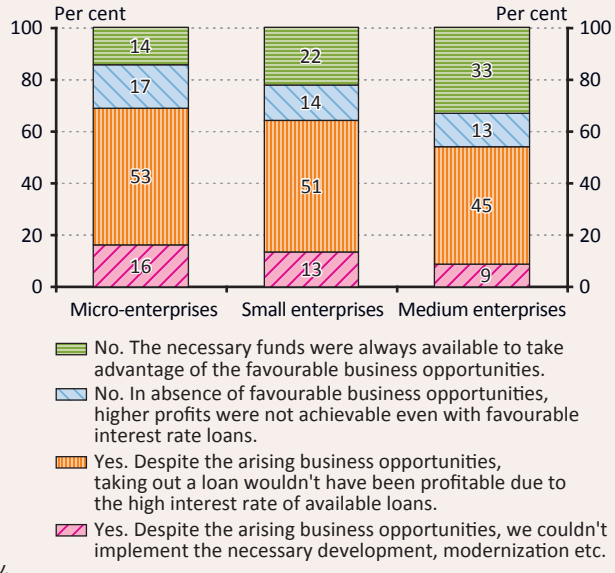
The responses also confirm that the more favourably the enterprise judged its financial situation, the less problems it had encountered with borrowing even prior to the launch of the scheme. A total 57 per cent of stable, average enterprises indicated that they had faced some constraints, while this proportion was already around 80 per cent in the case of enterprises operating without any significant profits.

Taking into account these two factors, the largest proportion (26 per cent) of the enterprises taking out FGS loans are stable enterprises that, in spite of their average profitability, had problems to take advantage of the newly arising business opportunities due to the high interest rates on loans.

THE TAKING OUT AND USE OF THE FGS LOAN

The questions in the next part of the questionnaire focused specifically on the conditions of taking out and using the FGS loan.

Chart 2
Did the difficulties encountered regarding access to loans limit the expansion and profitability of the enterprise in the years preceding the launch of the FGS?



Source: MNB survey.

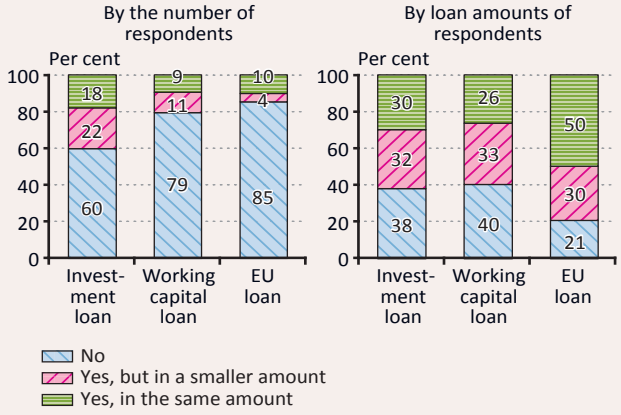
Regarding both phases of the scheme, a very high proportion of enterprises replied that they had only submitted their application for a loan to one credit institution. This is true for 79 per cent of the enterprises in the case of the first phase launched on 1 June 2013, and 89 per cent of the enterprises in the case of the second phase launched on 1 October 2013. The proportion of enterprises submitting an application for a loan to more than one credit institution is the smallest among the micro-enterprises (16 per cent for both phases), while this rate is higher in the case of medium-sized enterprises (28 and 22 per cent). A possible explanation for this is that the larger enterprises, due to their size, have usually several connections to banks, a higher level of financial awareness and, due to their higher headcount, the extra resources required for applying for a loan at more than one bank.

Accordingly, medium-sized enterprises would have been more likely to have been offered funding from more than one credit institution. With regard to the first and second phase, this answer was marked by 25 and 20 per cent of the medium-sized enterprises, respectively, while, in the case of micro-enterprises, the rate of this answer was only 6 and 9 percent, respectively.

On the basis of the responses, the majority of the companies taking out new loans would not have taken out a loan for the loan purpose implemented in the framework of the scheme without the FGS. 60 per cent of the enterprises taking out an investment loan, 79 per cent of the enterprises

taking out a working capital loan and 85 per cent of the enterprises taking out a loan provided for the pre-financing of EU funds would not have taken out a loan at all. Based on the amount of loan taken out by the responding enterprises for a given loan purpose in the scheme, it can be said that approximately 40 per cent each of the investment and working capital loans, around 20 per cent of the loans pre-financing EU funds would not have been taken out at all and a further 30-33 per cent of the loans would have been disbursed only in a smaller amount without the FGS. The difference between the distribution observed on the basis of the number of enterprises marking the given answer and on the amount of loans taken out by them is a result of the fact that mainly micro-enterprises – typically taking out a smaller amount of loan – indicated that they would not have taken out a loan without the FGS. The enterprises applying for a higher amount of loan would have been more likely able to implement their planned projects even without the support of the FGS loan.

Chart 3
If you had taken out a new loan in the scheme, would you have taken out a loan for the same purpose without the FGS?

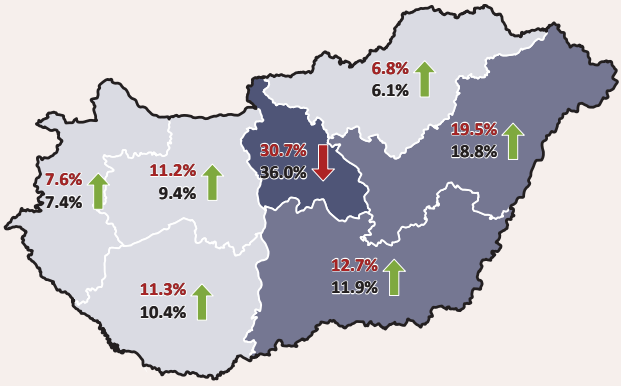


Source: MNB survey.

Almost 56 per cent of the loan portfolio granted to small- and medium-sized enterprises was linked to enterprises domiciled in Central Hungary (Budapest and Pest County) prior to the launch of the FGS. The territorial concentration is much lower in the case of loans taken out in the framework of the FGS, as roughly 36 per cent of the total amount of the loan agreements concluded in the first two phases is limited to the central region. However, the location of the actual use of the loan is different from the domicile of the enterprise in many cases. We tried to identify the extent of this difference with the help of the questionnaire. With regard to certain regions, the numbers in the upper line in Chart 4 indicate the share of a given region according to the actual use of loans, while the numbers in the lower line indicate it according to the distribution of enterprises taking out loans, broken down by domicile. The responses show that the concentration is lower regarding the actual use of loans and, in reality, a higher share of the loans are used outside of the

central region than it would be assumed on the basis of the domicile of the enterprises. The share of the amount of loan contracts concluded with respondents with domicile in Central Hungary is 36 per cent (which corresponds to their share among the total number of enterprises taking out FGS loans), while only 30.7 per cent of the actual use can be linked to this region.

Chart 4
Difference between the location of actual use of loans, based on the replies (upper value) and the domicile of the enterprises taking out loans (lower value)

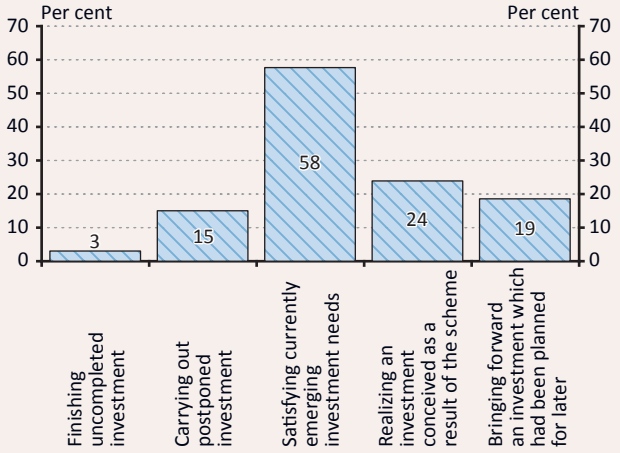


Source: MNB survey.

With the help of the questionnaire, we tried to examine from many aspects what kinds of investments were funded from the FGS loan by the enterprises taking out a new investment loan (including leasing). In the case of these questions, there was a possibility to mark more than one answer since the majority of the enterprises had taken out more investment loans in the scheme that could be spent on different kinds of investments. 58 per cent of the respondents indicated that one of their FGS investment loans satisfies the currently emerging investment needs, i.e. they had used the opportunity for a favourable loan to fund an investment that had just become necessary during the operation; however, almost one-fourth of the respondents indicated that the idea for the investment was specifically conceived because of the opportunity provided by the FGS. 19 per cent of them replied that the FGS loan funded an investment which had been planned for later, but was brought forward.

The replies to the questions regarding the specific object of the investment confirmed that the most frequent investment purpose among the enterprises taking out a new investment loan was to purchase machinery or vehicles. Almost 70 per cent of the borrowers replied that they purchased machinery, means of production (27 per cent), particularly agricultural machinery (25 percent) or a commercial vehicle (25 per cent) from some of their loans. The purchase of machinery and means of productions is particularly typical for medium-sized enterprises, half of which indicated that they had use the investment loan for this purpose. It can be observed that the share of enterprises purchasing commercial vehicles is much higher (28 per cent) among

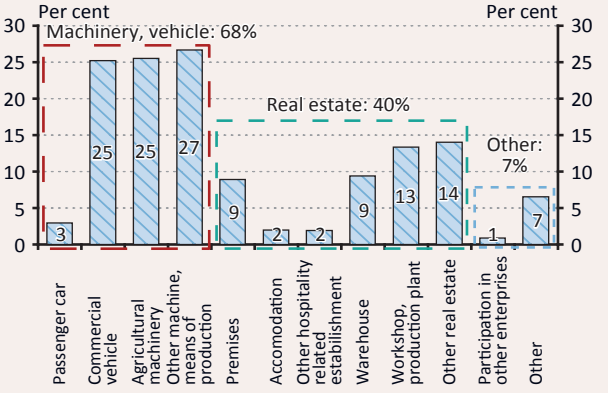
Chart 5
What kind of an investment is funded by the loan based on the chronological appearance of the investment needs?



Source: MNB survey.

enterprises participating only in the second phase of the FGS than among the enterprises taking out an investment loan only in the first phase (in this case, the rate is only 15 per cent). In addition to commercial vehicles, a higher proportion can be observed for agricultural machinery in the second phase. This is probably due to the fact that financial leasing is the typical financing form for these two classes of assets, which was included in the scheme by the MNB in the beginning of 2014 in order to ensure the availability of the FGS to a wider group of enterprises.

Chart 6
What kind of an investment is funded by the loan based on the object of the investment?

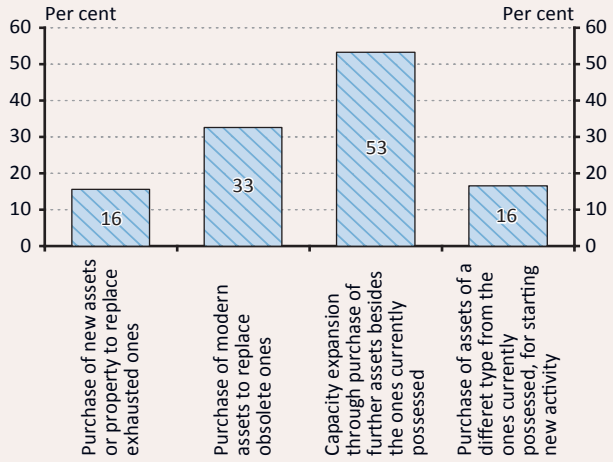


Source: MNB survey.

Some 40 per cent of the respondents indicated that they spent their loans on purchasing real estate (e.g. workshop, production plant, warehouse, premises, etc.). It is important to note that the replies were aggregated according to the number of respondents marking the given category. Based on the amount of loan spent on the specific loan purposes, the loans spent on real estate financing would have a higher share, considering the generally higher loan demand related to these loans.

More than half of the respondents taking out new investment loans have (also) taken out loans for capacity expansion purposes; one-third indicated that they have changed their obsolete assets for modern ones and 16 per cent of them purchased a new asset instead of a used one. As it turns out from the descriptions of enterprises at the end of the questionnaire regarding the actual use, energy efficiency, environmental and work safety aspects were enforced through the replacement of used, obsolete assets in many cases. Around 16 per cent of the respondents have also indicated that the investment can be linked to such an activity which is a novelty compared to the activity profile of the enterprise.

Chart 7
What kind of an investment is funded by the loan based on the purpose of the investment?

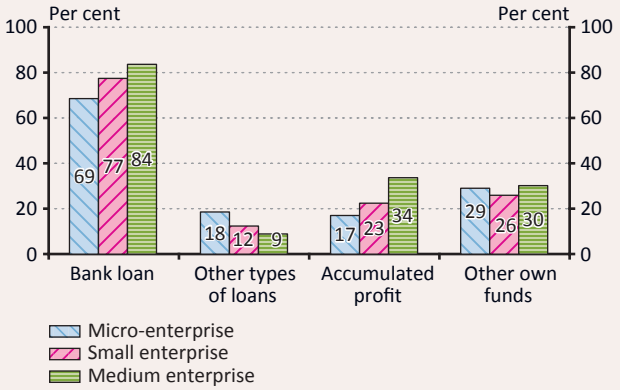


Source: MNB survey.

We have also asked enterprises taking out new investment loans whether they would have carried out the investment even in the absence of the FGS and if yes, from which source. A large majority of respondents would have taken out a bank loan. 84 per cent of the medium-sized enterprises would have used this financing form, while this rate is 15 percentage points lower for micro-enterprises, in parallel with the fact that other types of loans would have been used by enterprises in this segment at almost a 10 percentage points higher proportion (18 per cent). This is likely the result of the fact that the micro-enterprises have more limited opportunities to obtain bank

loans so they are more dependent on other, non-bank loans. Since the accumulated profit of these enterprises is much smaller, they are less likely to fund their investments from this source than the medium-sized enterprises.

Chart 8
If the investment had been carried out in the absence of the FGS, by which source it would have been funded?



Source: MNB survey.

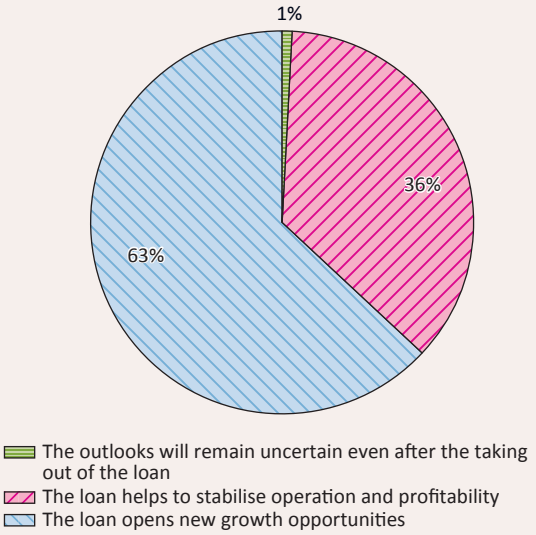
EXPECTED IMPACT OF THE LOAN

In the final part of the questionnaire, we studied the specific impacts that taking out the FGS loan may have on the general financial situation, headcount and turnover of the enterprises.

63 per cent of the respondents specifically hope that their enterprises will be able to grow, while 36 per cent of them believe that their situation will stabilise and only 1 per cent of them said that their outlooks will remain uncertain even after the taking out of the loan.

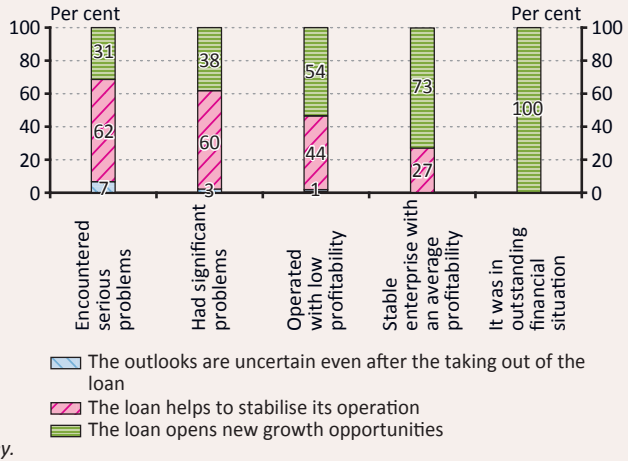
There is a strong correlation between the feedback on the period prior to taking out the FGS loan and the impact expected from the use of the loan. The typical expectation of enterprises in difficulties is that their economic situation will be stabilised by the loan, while the companies that were, in their view, stable prior to the taking out of the FGS loan were more likely to expect growth.

Chart 9
How do you judge the prospects of the enterprise after taking out the FGS loan?



Source: MNB survey.

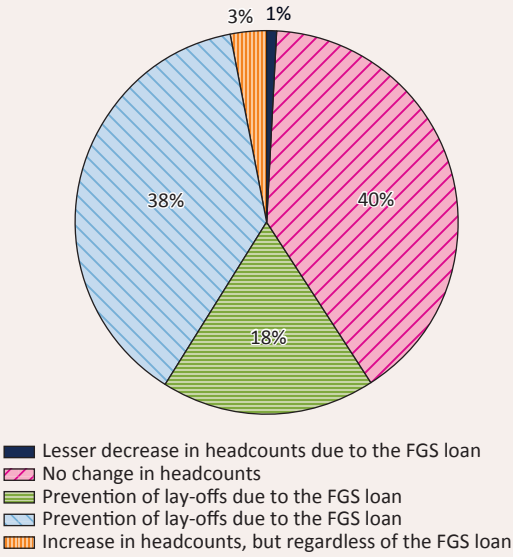
Chart 10
The situation of the enterprise before and after taking out the loan



Source: MNB survey.

Around 56 per cent of the enterprises expect that the use of the FGS loan has a positive impact on the number of employees, while 44 per cent of them believe that the loan will not have such an impact. The expectations regarding the increase in the number of employees are the most typical for micro- and small enterprises, 40 per cent of which marked this answer, respectively, while this rate was only around 31 per cent in the case of medium-sized enterprises that more likely mentioned the prevention of lay-offs as an example of positive impact. While 15 per cent of the micro-enterprises indicated that the FGS helps them to maintain their current headcount, this rate was 23 per cent for medium-sized enterprises.

Chart 11
How has the number of employees changed/how will the number of employees change due to the use of the FGS loan?

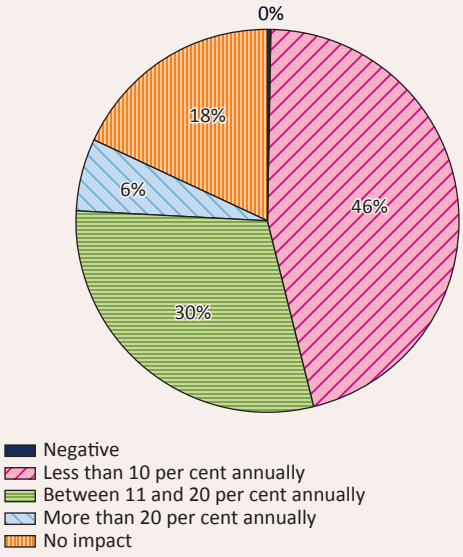


Source: MNB survey.

More than 80 per cent of the enterprises expect their revenues to grow due to taking out the FGS loan, although it is true that most of them expect an increase at a maximum annual rate of 10 per cent. Mostly the enterprises with an investment loan expect a more than 20 percent annual increase in revenues. Around one-third of the enterprises participating in the scheme only for loan redemption purposes or having a loan pre-financing EU funds believe that the loan will not have any impact on their revenues.

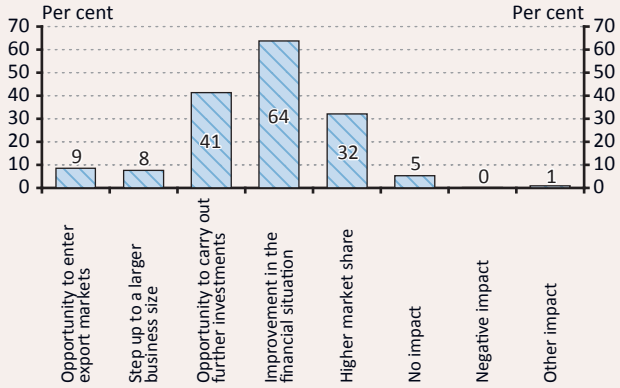
In the view of almost every enterprise, the use of the FGS loan has or will have a positive impact on its economic situation in some form, while only 5 per cent of them think that it does not have any impact. The majority of them (64 per cent of the respondents) expect to see an improvement

Chart 12
To what extent do you expect the revenues to grow due to the use of the FGS loan between 2014 and 2016?



Source: MNB survey.

Chart 13
What impacts do you expect the use of the FGS loan has on the economic situation of your enterprise?

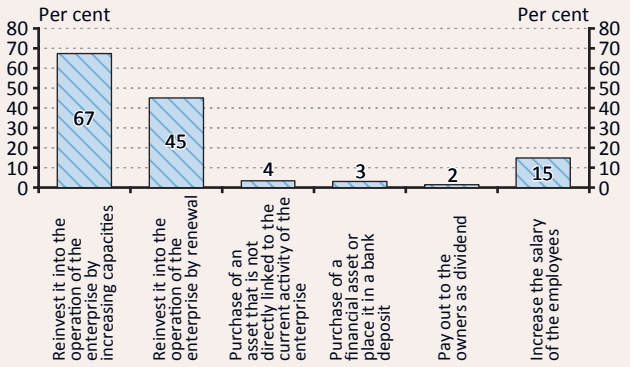


Source: MNB survey.

in their financial situation. More than 40 per cent of the enterprises expect to see an opportunity to carry out further investments due to the scheme, 32 per cent of them expect their market share to grow, while 9 and 8 per cents of the respondents respectively indicated that they will be able to enter the export market or achieve a larger business size with the help of the loan.

It was possible to mark more answers also regarding the use of interest savings resulting from the use of the FGS loan, i.e. in comparison to the loans redeemed now or currently available apart from the FGS. The majority of the respondents claim that they will reinvest the saved amount into the operation of the enterprise. 67 per cent of the respondents reinvest through capacity expansion and 45 per cent of them reinvest through renewal, while 15 per cent of them indicated that they will increase the salary of the employees.

Chart 14
On what will your enterprise spend the interest savings resulting from the use of the FGS loan?



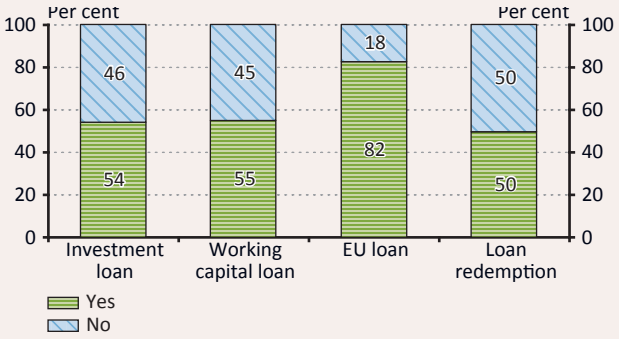
Source: MNB survey.

Of the responding SMEs, 59 per cent plan to take out an FGS loan in the future. This rate is exceptionally high (over 80 per cent) among enterprises only taking out a loan for the pre-financing of EU funds, while 54-55 per cents of enterprises with only an investment or working capital loan plan to take out further loans. The extension of the scheme until the end of 2015 provides the opportunity to satisfy the still significant demand.

Enterprises also had the opportunity to explain the specifically realised specific loan purpose and the related plans. Some characteristic descriptions from these are selected below.

On the basis of the responses, loans spent on machinery purchases – which was marked by the most respondents within the investment loan purposes – are particularly important for the enterprises because the replacement of obsolete, used machines allows for a faster, safer, more environment friendly and less labour intensive operation and capacity expansion.

Chart 15
Do you plan to take out further FGS loans?
(SMEs borrowing only for the given loan purpose in the columns)



Source: MNB survey.

Among the investments related to real estate, there are loans granted for purchasing, renovating or building premises. On the basis of the responses, the purchase of the previously rented premises reduced the dependence on the lessor, allowed for the better planning of costs and made the implementation of further development investments simpler. The majority of SMEs used the loan taken out for the renovation of existing own premises for the renovation or reconstruction of the premises less likely for profit increasing purposes, but rather for improving working conditions. In addition, many investments were aimed at energy modernisation. The enterprises modernised their heating and electrical system for energy saving purposes and carried out investments based on renewable energy sources (solar energy) in many cases. In some cases, enterprise resource planning systems were introduced, new IT and logistics software were purchased, with which the business efficiency and data security could be significantly increased.

Enterprises claimed that, by establishing new premises, they were able to get closer to their target markets, serve their customers in a more efficient way and, through the merger of previously remote premises, they could raise the labour efficiency within the organisation. Furthermore, the additional costs and employee's burden resulting from commuting could be eliminated.

On the basis of the summaries of the enterprises, the working capital loans enable larger stock-keeping possibilities and a wider selection of goods in the case of enterprises engaged in trade, with the help of which they can meet the needs of their clients better and so they can become more competitive against their multinational competitors. The loans taken out for customer financing provide the enterprises with an opportunity to settle their trade payables in the shorter time.

Overall, the FGS enabled the realisation of quite diverse investments to improve the operation, profitability and future opportunities of companies.

Mariann Endrész – Zsolt Oláh – Gábor Pellényi – Viktor Várpalotai: Macroeconomic effects of the first and second phases of the FGS in 2013–2014

SUMMARY

Following the outbreak of the crisis, it became more difficult for the sector of small and medium-sized enterprises to raise external funds. The tightening of the bank lending conditions may have contributed to the fact that investment activity hit a historical low in 2012. The easing cycle launched in 2012 substantially decreased the costs of borrowing and thus the cash flow position improved for the entire corporate sector and the rates of return on investments increased. Nevertheless, the general decrease in credit costs was less successful in reducing other problems of the SME sector, such as the open exchange rate position, the instalment burdens of earlier loans, and the difficulties in accessing longer-term loans. Therefore, in addition to cutting interest rates, the Funding for Growth Scheme aimed at SMEs might have also contributed to restoring lending, stimulating investment activities and fostering a turnaround in economic growth. The macroeconomic effects resulting from the first and second phases of the Funding for Growth Scheme in 2013-2014 are estimated in our analysis.

The Funding for Growth Scheme fundamentally influences SME lending, and hence growth in the real economy through two channels: the bank funding cheaper than funding available on the market of forint loans stimulates credit demand, which can be used to finance the new investments or working capital needs of enterprises. On the other hand, the lower loan instalments improve the creditworthiness of current and potential clients, which may result in easing lending conditions and increasing credit supply.

We provide several estimates on the effects of the scheme capturing both the supply and the demand side. In the most likely scenario, based on the credit supply approach, the Funding for Growth scheme increased GDP by 0.5-1.1 per cent and, based on the demand side approach, the Funding for Growth scheme boosted GDP by 0.3-0.9 per cent in 2013-2014.

INTRODUCTION

The financial crisis which broke out in the autumn of 2008 forced economic agents which had become excessively indebted in previous years to reduce their debts. The balance sheet adjustment taking place both globally and in Hungary resulted in a persistent decline in demand. In addition, due to the deteriorating quality of the corporate loan portfolio, the lending capacity and propensity of banks also declined. The demand and credit supply factors jointly resulted in a downturn in investment. At the same time, the significant slowdown in corporate capital accumulation had a negative effect on the growth potential of economies as well.

The weak demand and the credit crunch especially hit the micro-, small- and medium-sized (SME) sector in Hungary, similarly to other European countries. The SME sector predominantly produces for the domestic market and was thus unable to profit from the recovery in Hungary's export markets and the rapid growth in emerging countries. Moreover, only the largest enterprises finance themselves by raising funds directly from the capital market, while bank loans are the most important external sources for smaller companies (on the importance of the SME sector in the economy, see Box 1). Persistently subdued domestic demand and credit constraints both worsened the earnings potential of the SME sector and contributed to the rise in the number of bankruptcies, which resulted in the deterioration of production capacities.

The Funding for Growth Scheme (FGS) launched by Hungary's central bank facilitates a revival in lending to the SME sector, and hence supports the growth of the SME sector by ensuring low-interest funding, in addition to cutting interest rates. Moreover, if the scheme results in a pick-up in investments and a decline in corporate bankruptcies, it may also contribute to the increase in growth potential.

Box 1

Importance of the SMEs in the corporate sector

The share of SMEs in the economy is significant (Table 1). The majority of private enterprises operating in Hungary belong to this sector. SMEs produce around 40 per cent of total corporate value added and employ almost two-thirds of private sector employees. The SME sector carried out 40 per cent of total corporate investments even in 2012, which indicates that the consequences of credit supply constraints for the sector may be serious at the macro level as well.

The financial situation of the SME sector has deteriorated due to the crisis; the instalments of outstanding loans have increased, while the profitability of enterprises has fallen. Consequently, the profit from operating activities increasingly failed to meet the debt servicing obligations. The number of companies whose financial expenditure exceeded their operating profit increased significantly between 2007 and 2011 (Chart 1). The reduced ability to repay debts also increased the number of corporate bankruptcies . Due to the crisis, the share of enterprises entering winding-up proceedings increased remarkably in the entire corporate sector between 2009 and 2012 (Chart 2).

Table 1
Share of SME sector on the basis of corporate tax returns
(average for 2005-2012)

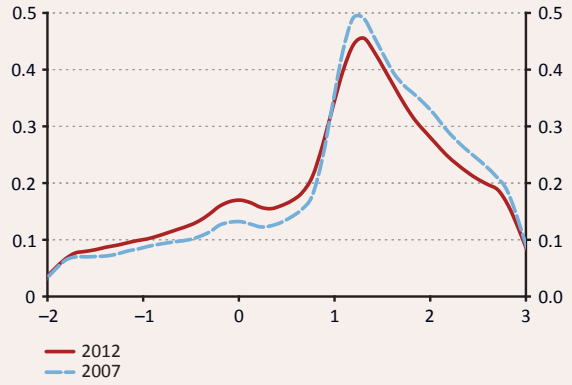
	Medium-sized enterprise	Small enterprise	Micro-enterprise	Non-classifiable[36]	SME sector
Number of enterprises	1.5%	7.9%	76.2%	12.9%	85.6%
Net sales	17.6%	15.6%	12.1%	1.3%	45.4%
Export sales	14.4%	7.1%	2.8%	0.4%	24.3%
Added value	17.0%	13.2%	8.8%	1.2%	39.0%
Employment	20.4%	21.6%	23.0%	0.0%	65.0%
Investment	14.7%	14.5%	16.5%	13.9%	45.7%
Real capital stock	14.2%	12.4%	13.6%	9.3%	40.2%

Note: Based on data cleaned by the MNB.

[35] Many enterprises do not report their number of employees in the NAV data base. If a company cannot be classified into a business category by size neither on the basis of turnover nor on the basis of balance sheet total, it is included in the non-classifiable category

Chart 1
Distribution of the coverage of financial expenditure by operating income in the SME sector

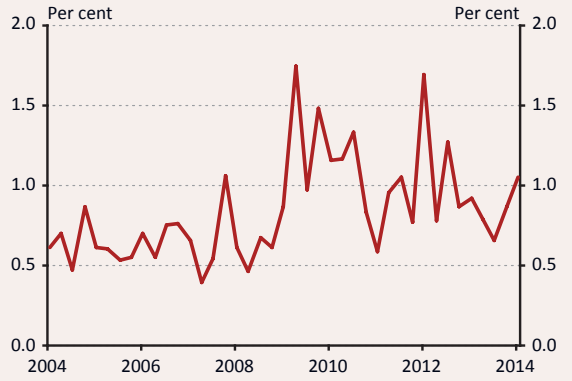
(The horizontal and vertical axes represent the ratios of financial expenditure to operating profit and the frequencies, respectively)



Source: Corporate tax returns, data cleaned by the MNB.

Chart 2
Bankruptcy rate weighted by real capital in the corporate sector

(number of enterprises in winding-up proceedings without the construction industry and real-estate sector)



Source: OPTEN.

MACROECONOMIC EFFECTS OF THE FGS – MAIN MECHANISMS

The FGS fundamentally influences lending to the SME sector, and hence growth in the real economy through two channels.

Economic theory suggests that the user cost influences developments in corporate investments. The user cost of capital is the unit cost for the use of capital assets of the enterprise, which also depends on the costs of external resources used for the financing of investments. The FGS reduces the average cost of funds of enterprises, and hence lessens the user cost both in the case of new and refinanced loans. This may, *ceteris paribus*, lead to a rise in (investment) **credit demand**.

At the same time, the decline in the repayment burden improves the internal accumulation ability (cash flow) of enterprises. The propensity to invest may also be increased due to the more favourable profitability. However, it is unclear whether this implies an increase in loan demand – some results indicate that, due to the larger internal resource accumulation, enterprises require fewer loans for financing their investments. Nevertheless, there is an agreement in the theoretical and empirical literature, that the cash flow situation does indicate the enterprise's creditworthiness to banks. Accordingly, improving cash flow may lead to an increased propensity of banks to lend, i.e. an ***increase in the credit supply***. Moreover, the improving cash flow position provides enterprises with an opportunity to increase the labour force, salaries and, through the payment of dividends, equity income.

On the one hand, therefore, credit demand may be stimulated as a direct impact of the FGS. Bank funding cheaper than the funding available on the market may motivate SMEs to carry out previously planned or newly developed projects. On the other hand, credit supply can also increase because the lower instalments may improve existing and potential clients' creditworthiness, which may result in an easing of credit constraints. Therefore, ***due to the Funding for Growth Scheme, the amount of the loans disbursed may increase***, while the ***FGS loans*** that have more favourable conditions than the loans on the market ***may reduce the average loan interests.***

Nevertheless, these impacts may apply to a different extent in the two phases of the Funding for Growth Scheme and in its specific pillars. First, we review to what extent the macroeconomic effects of the specific pillars may differ.

Loans received in the framework of the ***first pillar of the first phase of the Funding for Growth Scheme*** may only be used for investment, working capital financing, pre-financing of EU grants or the redemption of SME loans or financial leasing originally disbursed for this purpose. If we count the possible objectives, it can be said that, on the one hand, the investment loans create demand on the market of capital goods and, on the other hand, they contribute to the permanent expansion of the supply potential of the economy. In the case of working capital loans, the

size of production capacities will not change, the increase in credit demand is reflected in the rise of the product market demand and the improvement of capacity utilisation. The further objectives primarily improve the profitability of SMEs and, through that, their creditworthiness. ***The second pillar of the first phase of the Funding for Growth Scheme*** assisting SMEs with an open exchange rate position by converting their foreign currency denominated loans into forint loans at low interest rates has the same effect. The redemption of foreign currency denominated loans improves the profitability of enterprises and mitigates the risks resulting from their open exchange rate position. Accordingly, their creditworthiness may also improve, which may also indirectly contribute to the subsequent increase in the loan portfolio. However, the profitability may improve more in the first pillar than in the second pillar due to the fact that the FGS provides a larger advantage in terms of the interest rate in the case of forint loans than in the case of foreign currency denominated loans.

Due to the similar objectives, the impact mechanisms of the pillars of ***the second phase of the Funding for Growth Scheme*** are very similar to that of the first phase. ***The first pillar of the second phase of the FGS*** ensures wider applicability, allowing leasing financing as well in addition to the financing possibilities of the first phase. ***The second pillar of the second phase of the FGS*** ensures the redemption of foreign currency denominated or forint loans previously taken out, which improves the creditworthiness of SMEs through a reduction in their financing costs.

The macroeconomic effects of the two phases of the Funding for Growth Scheme may differ. The first phase of the programme was available for a shorter time, but its aggregate volume is of the same size as the amount likely to be disbursed until the end of 2014[36]under the second phase. The composition of the loans disbursed in the two phases is also different. Transactions for loan redemption dominated in the first phase, while investment loans dominated in the second phase. The high credit costs prior to the announcement of the scheme might have prevented SMEs in carrying out their investment projects. Thus, the macroeconomic effects of the first phase of the FGS might have been strengthened by the fact that the cheaper funding of the FGS had contributed to the implementation of postponed projects. Second, as the availability of the scheme was limited in time, SMEs may have also been motivated to bring forward the implementation of their investments planned for the near future. The real economy effects of the second phase might be more moderate due to, on the one hand, the "absence" of additional investments brought forward to the first phase and, on the other hand, the decrease in the advantage in terms of the interest rate ensured by the FGS in a declining yield environment. Nevertheless, the macroeconomic effects of the second phase might have been strengthened by the fact that more time was available to develop new investments plans, and the composition of the loans taken out in the scheme is also favourable: the amount of investment loans taken out

[36] The extension of the second phase of the scheme with one year, until the end of 2015 was recently announced; its impact was not calculated here.

in the second phase of the FGS until the end of September already exceeds the total volume of loans taken out for similar purposes in the first phase of the FGS.

ESTIMATES OF THE MACROECONOMIC EFFECTS OF THE FGS

In the following section, we quantify the macroeconomic effects caused by the first and second phases of the Funding for Growth Scheme relative to a base scenario. The actual observations on economic outcomes already include the effects of the FGS, and thus, in order to identify these effects, we compare the observations with the unrealised (counter-factual) case, i.e. a scenario which would have occurred in the absence of the FGS. Regarding this scenario, we made the following assumptions:

- The announcement of the scheme did not influence the central bank base rate and the exchange rate. This means that, in the case of a scenario without the FGS, we assume the same reduction in returns and development of exchange rates as in the actually realised scenario.
- The effective interest rates of loans available to SMEs on the market would be the same in the absence of the FGS as in the actually realised scenario. Since the FGS might have strengthened competition between banks on the credit market, this assumption might make the base scenario overly favourable. Therefore, the beneficial macroeconomic effects of the FGS might be underestimated.

Using our available models, we can provide estimates for the macroeconomic effects of the FGS both from the increase in the loan portfolio and the side of aggregate demand. These two approaches estimate the same effect from different directions; therefore, the numerical values cannot be added up. Based on past experiences, on the supply side we can examine the contribution of the expansion in bank lending to GDP growth. On the demand side, with the help of several tools we quantify to what extent access to cheaper loans increases corporate investment demand. In addition, we take into account the effect of loan redemptions realised in the framework of the FGS on improving cash flow.[37]

ESTIMATION OF THE IMPACT OF CREDIT SUPPLY SHOCKS ON GROWTH USING AGGREGATE TIME SERIES

The real economy effects of the credit supply shocks on the corporate loan market were quantified using a structural vector autoregressive (SVAR) model.[38] The model was estimated on quarterly data between 1995 and 2009; credit supply shocks were identified using sign and zero restrictions. The effect of the FGS on GDP was estimated with the help of these credit supply shocks.

[37] The effect of decreasing bankruptcy probabilities was not taken into account in the calculations.

[38] Further information: Tamási Bálint - Világi Balázs (2011): Identification of Credit Supply Shocks in a Bayesian SVAR Model of the Hungarian Economy, MNB Working Paper 2011/7.

Three such shocks (risk-taking, interest rate spread, monetary policy) identified in the above model may be potentially suitable for calculating the effects of the FGS. When selecting the shock best suited for analysis, it was taken into account that the FGS is not a traditional monetary policy measure, since it does not result in a change in the interest rate environment determining the whole economy, but mitigates the credit conditions of some enterprises only and over the duration of the scheme. It was also an important aspect that the FGS does not directly and widely influence the risk appetite of the banking sector; therefore, according to our presumption, the credit supply of banks will not shift towards riskier enterprises as it would – in the logic of the model – in a scenario of technological change or competition on the market. For these reasons, the so-called interest rate spread shock was selected for evaluating the effects of the FGS.

The size of the shock was calibrated in two ways. According to the first method, the effects of the FGS new disbursements were decomposed from the aggregate corporate loan interests in the period between the second quarter of 2013 and the second quarter of 2014 and the resulting hypothetical loan interest rates were subtracted from the actual aggregate average in each period.

This difference is the shock on the credit spreads which was (phase-by-phase or jointly) caused by the new loans of the FGS in total lending. The total effect is likely to be overestimated through this method, since the FGS is not an unlimitedly available loan scheme resulting in a general decline in spreads but rather a funding opportunity available only within the limit of the announced budget, for a specified period of time. In view of this, we have also performed a calibration where the impact of the shock on corporate lending is identical to the difference between the MNB forecast prior to the announcement of the FGS (March 2013) and the actual data in the period under review. This difference and the increase in the loan portfolio might have mainly been caused by the disbursements of the FGS. Although in this case the quantified impact is smaller than in the previous case, this approach fails to take into account other factors (cuts in the central bank rate, improving growth expectations) that, in addition to the FGS, might have played a role in improving the lending path so this can also be regarded more as an upper estimate.

Based on the two types of shock calibration, the aggregate effect on GDP may amount to 0.5-1.1 per cent in 2013-2014. The previously mentioned distortion in the estimation and the effect of loans likely to be disbursed until the end of 2014 were already taken into account in this rate.

DEMAND-SIDE ESTIMATES OF THE MACROECONOMIC EFFECTS

The FGS can stimulate aggregate demand through several channels. The pick-up in investments may be the most important channel.

The results of several empirical analyses, conducted in the past by the central bank and mostly already published, were used to quantify the effects of the FGS on investments. Estimates based on

micro- and macro-level data are also among the studies. They include analysis inspired by a classic investment model, but the majority of them also take into account financial constraints in some way. The models are heterogeneous with regard to taking into account the utilisation and composition of the scheme (how many investment loans were taken out). Therefore, when presenting the results, it is sensible to state a band, but the average or median estimates will also be indicated.

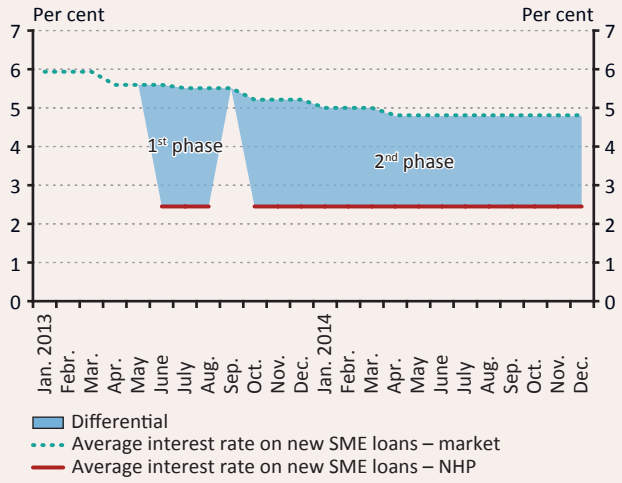
In all cases, the FGS is interpreted as a change in user costs caused by the decrease in borrowing costs. This is the primary input of the calculations. Some of the models use the average borrowing costs calculated on the outstanding stock of loans, while others use the marginal borrowing cost and changes therein. Therefore, as a first step, the average interest rate is estimated on the loan portfolio and on newly disbursed loans for the whole SME sector, with and without FGS loans. Since the statistics on interest rates do not differentiate between SMEs and large enterprises and there are only estimates available for the previously used credit spreads, the calculated credit cost shocks only provide crude estimates. When calculating the marginal shock, we assume that the scheme has an effect during its originally announced period of time (the first phase of the FGS until August 2013, while the second phase of the FGS until the end of 2014).[39] The average credit cost shock (on outstanding loans) is forecasted by taking into account the maturity of FGS loans. Although the average interest rates on FGS loans did not change during the two schemes, the calculated credit cost shocks differ in the first and second phases. There are several reasons for this. On one hand, the cost of alternative (non-FGS) resources has been constantly decreasing due to the cuts in interest rates; the interest rates of non-FGS loans – both of outstanding loans and new disbursements – decreased with more than 100 basis points in one year, from the second quarter of 2013 (the announcement of the first phase of the FGS) to the effective launch of the second phase of the FGS. On the other hand, in the case of the average borrowing cost shock, the size of shock caused by the second phase of the FGS is related to an already lower average interest rate caused by the first phase of the FGS.

The maximum of the average credit cost shock caused by the scheme was around 50 basis points in the first phase of the FGS (3rd quarter of 2013), while it was only 20 basis points in the second phase of the FGS (3rd-4th quarters of 2014). We calculate two versions of the marginal shock. In the first case, which gives the upper estimate, we take the difference between the interest rate of the FGS loans and an estimated SME spread added to the corporate benchmark interest rate (shock between 250-300 basis points) (Chart 3). According to the actual lending practices, FGS did not make other loan products cease. Therefore, by an alternative estimation approach, we also take into account to what proportion banks granted loans in the framework or outside of the FGS. This calculation yields a lower cost shock (Chart 4).

Next we briefly introduce the specific methods used in the estimation.

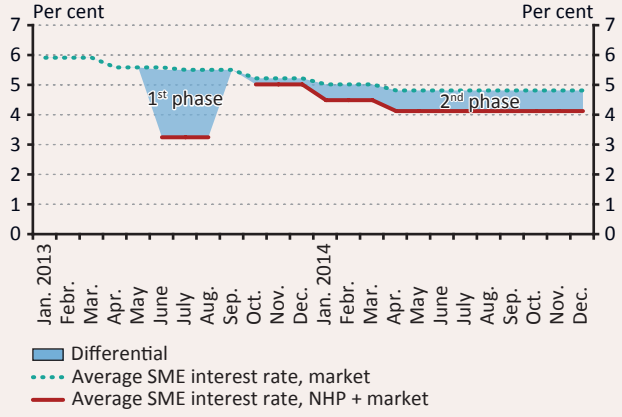
[39] In the case where the actually disbursed loan volumes are also taken into account, an annualised cost shock is calculated in practice.

Chart 3
Interest rate differential of FGS and market-priced loans, new placements
(percentage point)



Source: MNB.

Chart 4
Average (FGS and market) interest rates of SMEs



Source: MNB.

ESTIMATION CONDUCTED ON MICRO DATA REGARDING THE INVESTMENT OF MANUFACTURING COMPANIES

Capital accumulation is explained by the user cost of capital, cash flow and firm-level productivity.[40] The estimation is based on the financial reports of manufacturing companies between 1992 and 2000. As a result of the scheme, the average cost of external resources declines, reducing the user cost. The decline in average credit costs identified in the first and second phases of the FGS leads to a roughly fifty per cent decrease in the user cost (we assume that the costs of internal sources are not changed). Second, the decline in the repayment burden on the outstanding loan portfolio improves corporate cash flow. Their quantified values were included in the investment equation estimated in the referred article.

ESTIMATION CONDUCTED ON MICRO DATA REGARDING THE EFFECT OF FOREIGN CURRENCY LOANS ON INVESTMENT

The study used examines the contribution of foreign currency denominated loans to the increase in corporate investment in the entire corporate sector between 2005 and 2008.[41] In the period prior to the crisis, the interest rate differential between forint and foreign currency denominated loans was persistently high, which made the much cheaper foreign currency denominated loans more attractive to enterprises (the difference between the interest of an average euro and forint loan was almost 400 basis points for several years). Both foreign currency lending and the FGS led to a significant decrease in interest rates on loans. Lower interest rates also contributed to the easing of liquidity constraints in both cases, which was the specific aim in the latter case, while it was a natural side product in the former case. Since lower interest rates help to improve the liquidity and profitability of enterprises, enterprises that previously were not able to receive loans may also get access to them. The estimation quantifies the increase in investment by companies with foreign currency denominated loans due to the interest rate differential and the easing of liquidity constraints, compared to similar firms that did not take foreign currency denominated loans.

For the analysis of the effect of the scheme, we compared the interest rate differential at the time of the granting of foreign currency denominated loans to the size of borrowing cost reduction caused by the FGS. We assume that the impact on the investment is proportional to the interest rate shock. We ignore the duration of the shock, but we take into account the macroeconomic

[40] Further information: Kátay G. – Wolf Z. (2004): Investment Behaviour, User Cost and Monetary Policy Transmission - the Case of Hungary, MNB Working Paper 2004/12.

[41] Further information: Endrész M. - Harasztosi P. (2014): Corporate Foreign Currency Borrowing and Investment. The Case of Hungary, MNB WP 2014/1

share of the enterprises receiving loans. We are only concerned with the enterprises taking out investment loans – we use their share in investment in the calculation of the aggregate effects.

ESTIMATION CONDUCTED ON MACRO TIME SERIES CONCERNING INVESTMENT AND CREDIT DEMANDS

The link between corporate investments and credit markets was estimated using a vector error correction model (VECM) on quarterly data between 1997 and 2008.[42] The model identifies three long-term cointegration relationships: investment and credit demand depend on output and the average credit cost, whereas credit supply is determined by the aggregate cash flow of the corporate sector. The impact of the scheme on average credit costs indicates the development of the corporate credit cost shock. The average impact of the first and second phases of the FGS on corporate investments is based on the impulse response functions of the model in the first one or two years after the shock.

SIMULATION OF INVESTMENT ACTIVITY WITH A MACROECONOMIC MODEL

DELPHI, the macroeconomic model of the Hungarian central bank is a forecasting and impact assessment tool indicating the relationships in the Hungarian economy.[43] In the investment block of the model, corporate investment is driven by the difference between the marginal product and marginal cost of capital, according to Tobin's q theory.

According to Tobin's q theory, the return on investments equals the user cost in the equilibrium. If an additional return can be realised ($q>0$), it is worth increasing the investment until the additional return disappears due to the decreasing marginal product or increasing marginal cost:

$$q = \text{marginal product} - \underbrace{(\text{amortisation} + \text{real interest rate of loans} + \text{risk premium})}_{\text{user cost}}$$

The latter term is the costs of capital (user cost), where the variable of loan interest represents the costliness of raising external resources for enterprises. A decrease in interest rates on loans will stimulate corporate investments. In order to assess the effects of the Funding for Growth Scheme, the variable of loan interest was shocked as presented in Charts 3 and 4.

[42] Further information: Endrész M. (2011): Business Fixed Investment and Credit Market Frictions. A VECM Approach for Hungary, MNB Working Paper 2011/1.

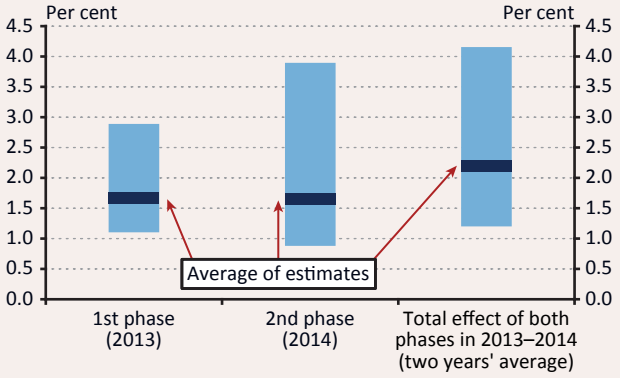
[43] Further information: Horváth Á. – Horváth Á. – Krusper B. – Várnai T. – Várpalotai V. (2010): „DELPHI modell", MKE Conference, Budapest, 2010, http://www.mktudegy.hu/files/DELPHImodellVarpalotaiViktor.pdf)

IMPACT OF THE FGS ON THE ECONOMIC ACTIVITY

The direct impact of the FGS on corporate investments was analysed until the end of 2014, and the results of the estimates are summarised in Chart 5. The first phase of the FGS primarily exerts its impact in 2013, while the second phase primarily exerts its impact in 2014.[44] Nevertheless, we also calculate with the impacts of phase one carried over to 2014 when presenting the joint impact of the two schemes. The total impact shows the amount by which the two schemes increased the value of private sector investments until the end of 2014. According to our calculations, the level of corporate investments was increased by an average of 1.2%-4.1% by the Funding for Growth Scheme in 2013-2014. The median of the point estimates based on the methods used for the calculations shows an investment impact of around 2.2%.

In quantifying the impacts on economic activity, two more factors were taken into account in addition to the direct investment impact. On the one hand, the interest rates of non-investment FGS loans are approximately 300 basis points lower than the average rate on the market. This results in a long-term income transfer of approximately 0.1% of annual GDP to the enterprises concerned. On the other hand, the investment loans taken out in the framework of the FGS do not only have similarly low interest rates as the non-investment FGS loans but, compared to the previous SME loans, they also have a significantly longer maturity (around 7 years on average),

Chart 5
Impact of the FGS on corporate investments
(direct impact)



Source: MNB.

resulting in a lower repayment burden of SMEs. These two effects may annually improve cash-flow by 0.2% of GDP in comparison to the scenario without the FGS.

[44] Excluding the additional impacts of the extension of the second phase of the scheme.

Using the estimates on the investment impact of the FGS and the above factors, the spillover effects was also quantified by the DELPHI model. The macroeconomic effects exert their influence through the following major channels. Increasing investments – over their import need – will improve domestic aggregate demand, resulting in GDP growth. On the income side, the growth in GDP leads to surplus wage and corporate profit, with the latter increasing the dividend-type incomes paid to households. The effects of the rising cash flows of the enterprises are exerted through the same channels. The increase in households' income will improve their consumption, initiating second-round demand effects. Employment will be higher due to additional capacities resulting from the investments and the rise in the demand. The evolving processes of economic activities increase the tax base related to wage, consumption and profit and therefore will generate additional budget revenue.

Table 2
Macroeconomic effects of the first and second phases of the FGS
(direct and indirect impacts, demand side estimates)

	Cumulative impact in 2013-14
Corporate investment	2.4–8.3%*
Consumption	0.1–0.5%*
GDP	0.3–0.9%*
Employment	3,000-9,000 persons

**In proportion to the 2013 values*

Based on the demand side estimates, the Funding for Growth Scheme resulted in a total GDP surplus of 0.3%-0.9% in 2013-14. In addition to the increase in investments, the 0.1%-0.5% increase in household consumption also contributed to this. As an additional effect, the employment rose by 3,000-9,000 persons. As a result of the additional investments, the capital stock also increased, and thus the level of the potential output might increase by 0.1%-0.3% in the medium term.

The supply and demand side approaches quantifying the macroeconomic effect of the Funding for Growth Scheme estimate similar GDP effect (0.5%-1.1% and 0.3%-0.9%, respectively).

REFERENCES

Tamási B., Világi B. (2011): Identification of Credit Supply Shocks in a Bayesian SVAR Model of the Hungarian Economy, MNB Working Paper 2011/7

Kátay G., Wolf Z . (2004): Investment Behaviour, User Cost and Monetary Policy Transmission – the Case of Hungary, MNB Working Paper 2004/12

Endrész M., Harasztosi P. (2014): Corporate Foreign Currency Borrowing and Investment. The Case of Hungary, MNB Working Paper 2014/1

Endrész M. (2011): Business Fixed Investment and Credit Market Frictions. A VECM Approach for Hungary, MNB Working Paper 2011/1

Horváth Á., Horváth Á., Krusper B., Várnai T., Várpalotai V. (2010): DELPHI model, MKE Conference, Budapest, 2010, http://www.mktudegy.hu/files/DELPHImodellVarpalotaiViktor.pdf

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