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# FINANCIAL AND ECONOMIC REVIEW

September 2015

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The Great Degeneration in Brief: European  
and Hungarian perspectives

Niall Ferguson

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crisis: academic and economic policy lessons

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More efficient payment services?

László Bodnár – László Delikát – Bence Illés –  
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# Difficulties in the management of the global financial crisis: academic and economic policy lessons

Orsolya Csontos – Zoltán Szalai

*In this paper, we examine the causes and economic policy lessons of the fact that – compared to previous recessions – the global economic crisis which started in 2007 and intensified in 2008 appears to be deeper and more lasting, and the recovery is taking longer. We demonstrate that the financial crisis may be regarded as a special balance sheet recession accompanied by portfolio imbalances, which alone explains why the present downturn results in higher macroeconomic costs than a recession taking place in the traditional business cycles. The current fragile recovery is also explained by the incorrect diagnosis and management of the nature of the crisis, and the effect of misconceived economic theories and policies which were widespread before the crisis can also be demonstrated in this regard. One of the economic policy lessons learnt from the balance sheet recession and the rather unsuccessful European crisis management is that there is a need for countercyclical fiscal policy, which during times of downturn provides sufficient leeway for the management of a balance sheet recession and, by increasing the deficit, may support balance sheet adjustment by actors in the private sector. The present financial crisis also highlighted the fact that without proper prudential regulation the self-regulation capacity of the market is limited under the modern financial system and is inefficient in preventing the build-up of financial instabilities. Regulation must be transformed so that it takes the macroeconomic nature of the financial instabilities into consideration. In accordance with this, the monetary policy strategy must be also reconsidered to ensure that the financial processes and the financial stability risks receive increased attention, in addition to real economic considerations. All in all, the individual economic policies should support the recovery of the real economy without building up excessive financial imbalances. If no proper economic policy response is given bearing these principles in mind, the balance sheet recession may continue over the long run or become a recurring phenomenon.*

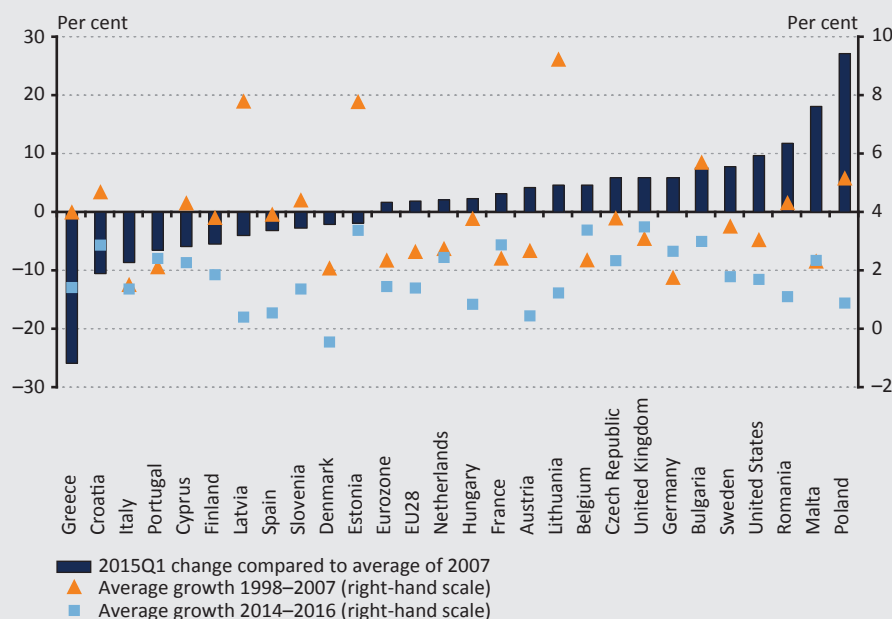
**Journal of Economic Literature (JEL) Classification:** E42, E61, G01

**Keywords:** monetary policy, fiscal policy, macroprudential policy, coordination, financial cycles, monetary analysis.

## 1. Assessment of the global economy

*Recovery from the global economic crisis that started in 2007 and intensified in 2008 appears to be longer compared to the previous recessions (Figure 1). Although global growth last year came close to its historical average, the recovery is still fragile and there are substantial differences between regions. The recovery continued in the developed countries, which was more visible in the United States and in the United Kingdom, and more moderate in the euro area and in Japan (Figure 7). At the same time, the emerging countries lost momentum and within this group there are also significant differences between countries. Seven years after the crisis, output still lags behind the production capacities in most countries and unemployment – an indicator often referred to due to the uncertainties in the measuring of the output gap – is still high, especially in the euro-area countries (Figure 2; MNB 2014).*

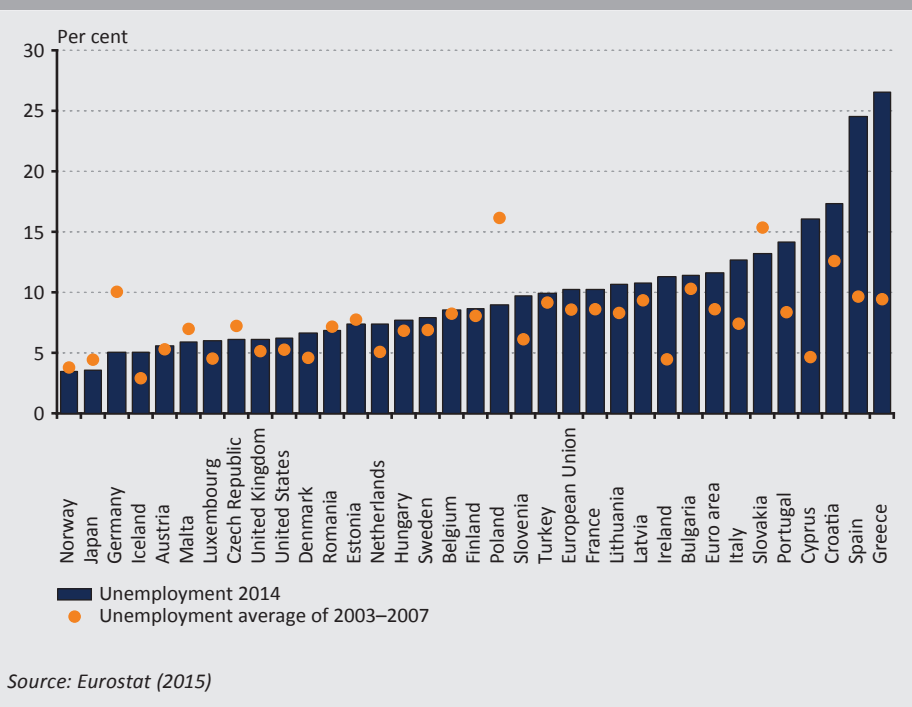
**Figure 1.**  
Average output growth before and after the financial crisis



Source: European Commission (2015)

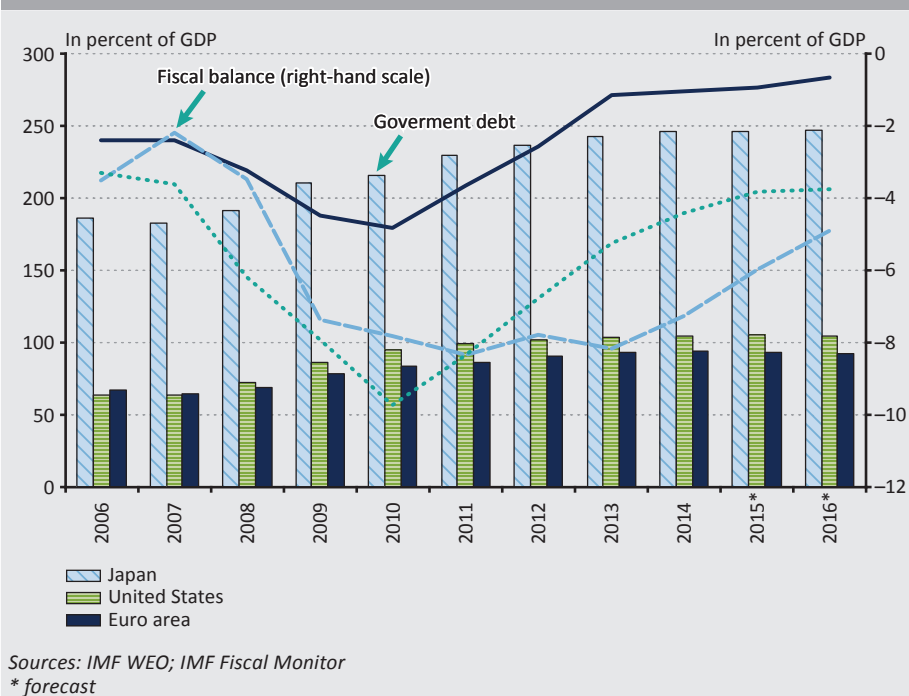


**Figure 2.**  
Unemployment rates before and after the financial crisis



Substantial improvement in long-term growth prospects is hindered by the fact that *most developed countries have high government debt*. By the end of 2015, the gross debt-to-GDP ratio may reach 120 per cent in the developed countries, while it was 75 per cent on average before the crisis (*BIS 2015*). In certain countries, outstanding government debt was also increased – in addition to the fiscal deficit – by direct debt assumptions such as, for example, bank recapitalisation. In the future, this will substantially reduce the room for fiscal manoeuvre. Following the initial years of the crisis, fiscal deficits temporarily fell in the global economy, but on the other hand, in certain countries the deficit was high from the outset, while in other countries the deliberate increase of expenditures caused further increases in deficits, the collective purpose of which was to curb and stop the economic decline. On the whole, the outstanding debt-to-GDP ratio continued to increase both in the developed and in the emerging countries (*Figure 3*).

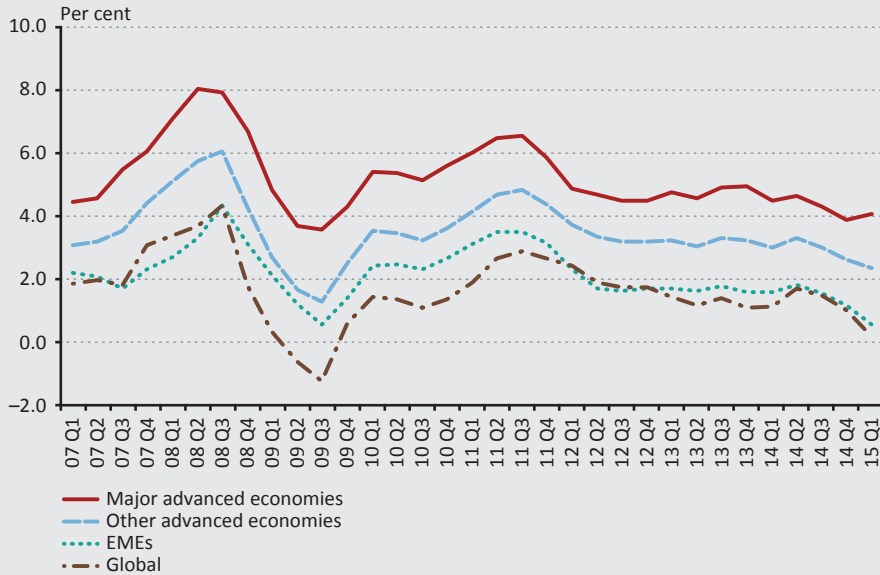
**Figure 3.**  
**Fiscal deficit and government debt**



In recent years, inflation fell in most countries and looking ahead the indicator is also expected to remain below the target (*Figure 4*). The unexpectedly low inflation seen in recent months is to a large extent attributable to volatile factors such as oil prices. At the same time, the core inflation measures – eliminating the food and energy prices in addition to the oil prices – were also low, which raises the question whether the inflation trends are dominated by the medium-term (cyclical, financial) or the long-term (secular, real) factors (*BIS 2015*).

It can thus be seen that both output and employment are lagging behind the pre-crisis peak in several developed countries. The unfavourable consequences of the pre-crisis debt overhang on investments and productivity can be still felt. Although fiscal deficits have typically fallen in recent years, outstanding sovereign debt is still high, which is primarily attributable to the slow economic growth that followed the downturn. Globally, the poor real economic performance is accompanied by a trend of decreasing inflation. In the rest of this paper, we examine the factors that may contribute to the fact that even seven years after the outbreak of the crisis the global economy's performance is still moderate. *Compared to the recoveries that usually follow recessions, the present slow recovery is partly attributable to the fact that a global financial crisis erupted in 2008, prior to which economic agents*

**Figure 4.**  
**Development of inflation rates**



Source: BIS 2015

Notes: Consumer price index: Major developed countries: euro area, Japan, United States. Additional developed countries: Australia, Canada, Denmark, New Zealand, Norway, Sweden, Switzerland, United Kingdom. Emerging countries: Argentina, Brazil, Chile, China, Taiwan, Columbia, the Czech Republic, Hong Kong, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Russia, Saudi Arabia, Singapore, South Africa, Thailand, Turkey.

– typically the private sector – had become overly indebted, which was followed by major cuts in their expenditures. Although such financial or balance sheet recessions are typically followed by a slower recovery, the fragility of the recovery may also be attributable, to some extent, to the mistaken economic policy reactions to the balance sheet recession. In this paper, we elaborate on these potential explanations.

The advanced economies were surprised by this crisis both intellectually and institutionally. The pre-crisis dominant or mainstream economic policy mix – which is also often referred to as the Brussels-Frankfurt-Washington Consensus<sup>1</sup> after *Fitoussi and Saraceno (2004)* – may be regarded as the application of the so-called New Keynesian Model. At the time when this was created the economic governance system of the European monetary union was also based on this dominant economic policy knowledge. The less successful crisis management in Europe highlighted the

<sup>1</sup> For more details on the most important elements of the Brussels-Frankfurt-Washington Consensus, in the context of the euro area, see *MNB (2011)* Section 1, and Table 1-1 of subsection 1.3.

fact that a number of basic assumptions and economic policy guidelines of this economic policy framework proved to be false.

In the following, we also deal in more detail with the fact that the mainstream economics was based on the assumption of the markets' self-regulation and self-adjustment, where independent monetary policy is able to fine-tune the remaining moderate cyclical movements and the consequences of the external shocks via short-term interest rates. According to the consensus, monetary policy and financial stability goals are independent of each other;<sup>2</sup> the primary objective of the central bank is to ensure price stability, and financial stability is achieved as a by-product thereof. The role of fiscal policy in this fine-tuning is minimal, as it is implemented primarily through the operation of the automatic fiscal stabilisers, and it must be limited mostly to ensuring the proper functional frameworks for the markets. If the conduct of the private actors is not distorted by extra-market factors, the above-mentioned institutional frameworks ensure the achievement of outcomes close to the social optimum.

It became clear during the crisis that this approach is based on a number of erroneous basic assumptions. Price signals led actors on a path that later proved to be unsustainable; price stability was accompanied by severe financial system risks and open banking crises, i.e. macroeconomic stability proved to be insufficient for achieving financial stability. In addition, in managing the private sector's debt overhang, fiscal policy accumulated volumes of debt that were previously seen only during wartime. The unprecedented expansion of monetary policy during crisis management was still insufficient to mitigate the severe consequences of the crisis to the expected level, and thus the demand-stimulating fiscal policy, inspired by Keynes, also appears to be essential.

## 2. Special features of balance sheet recessions

One of the possible explanations of the present economic processes described in the previous section, is the balance sheet recession and the balance sheet adjustment phenomenon.<sup>3</sup> The term 'balance sheet recession' was first used by *Koo (2008)* for the Japanese recession in the 1990s, generated by the corporate debt overhang, during which instead of the maximisation of their profit, the enterprises focused on the minimisation of their debts, and as such they used their revenues for reducing

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<sup>2</sup> According to Anna J. Schwartz – a colleague of Milton Friedman – financial stability is a by-product of macroeconomic stability. Before the financial crisis this monetarist approach was also part of the economic mainstream.

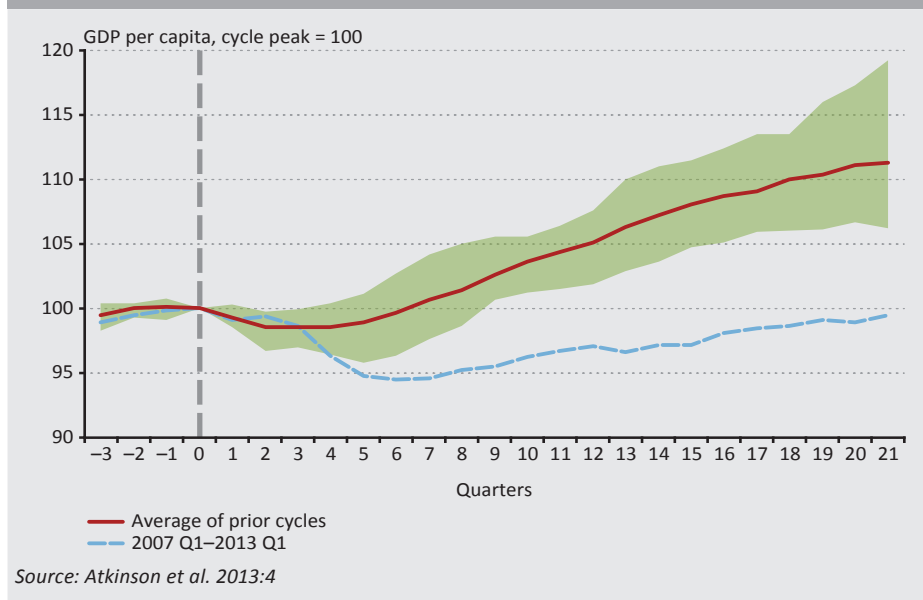
<sup>3</sup> According to another possible explanation, economic slowdown in the developed regions had started before the outbreak of the financial crisis and the low growth rates are here to stay also in the post-crisis decades. According to this explanation – while it acknowledges the significance of the explanation related to the balance sheet recession – the long-term stagnation is attributable to structural and real economic changes. For more details on this, see *MNB (2015)* subsection 6.1.

their existing debt. In the sense of Koo, *balance sheet recession* is a widely-used term for all recessions in which – after an unsustainable financial boom resulting in the accumulation of high debts – economic agents drastically increase their savings and cut their consumption and investments expenses.

## 2.1. Dynamics of balance sheet recessions

The underlying reason for the current balance sheet recession is that in the years preceding the financial crisis, in a period of sustained upswing coupled with low and stable inflation, economic agents – households, governments and often even banks – became highly indebted. After the burst of the asset price bubble, the agents realised that while they had to repay their accumulated debts, the value of the assets securing their debts (e.g. properties) had substantially decreased. The accumulated outstanding debts may be reduced by savings from current revenues, which is a time-consuming process when indebtedness is high. However, as a result of the increased uncertainty and stronger savings motivations, due to the slower-than-expected growth rate of revenues, growth in savings may also prove to be slower than intended.<sup>4</sup> As a result of this, balance sheet recessions are much more protracted in terms of the economic output than the traditional business

**Figure 5.**  
Output in previous recessions and after the current financial crisis



<sup>4</sup> The phenomenon, when the outcome achieved as the interaction of the individual saving intentions frustrates the original intention, is referred to – after Keynes – as the “paradox of thrift”. It refers more generally to the fact that macro-level outcomes cannot be derived mechanically from simply adding up the individual intentions. We regard Keynes as one of the forerunners of modern macroeconomics due to this and other similar insights.

cycles and thus they are also much more expensive than a usual recession: they are deeper, followed by a weaker recovery and generate a lasting loss in the output level, while the financial sector is also severely damaged (*Figure 5; Koo 2014*).

*Figure 6 illustrates the dynamics of the balance sheet recession outlined by Koo (2008).* The outbreak of a balance sheet recession is preceded by the bursting of the asset price bubble, which formed as a result of economic agents' excessive optimism about the future. The bursting of the bubble may be attributable to the tightening of monetary policy in response to the overheating in the economy, but it may also collapse on its own.<sup>5</sup> The plunge in asset prices causes considerable damages in the balance sheets of the private sector, forcing them to reduce their debts. During the deleveraging process, the efficiency of traditional monetary policy lessens and it will not regain its former efficiency until such time as the private sector completes deleveraging and its willingness to borrow strengthens sufficiently. In addition, the interest rate channel of monetary policy weakens, and the efficient operation of the exchange rate channel is also hindered by several factors.<sup>6</sup> Accordingly, fiscal policy is able to play a material role in supporting aggregate demand through timely fiscal stimulus of sufficient length. At the same time, the pressure to reduce debts may cause such a trauma for most economic agents that the aversion to borrowing may remain a determinant factor even after deleveraging.<sup>7</sup>

For actors in the private sector, it takes a rather long time for fears of repeated indebtedness to fade and for confidence to strengthen, and thereafter the implementation of the investments – which may as well be based on debt overhang – and the build-up of the next bubble take decades, or even generations. This is attributable to the fact that those who once experienced the consequences of the bubble bursting will not commit the same mistake again, and thus the next bubble will not burst until such time as the previous generation that went through the previous one forms part of the labour force.

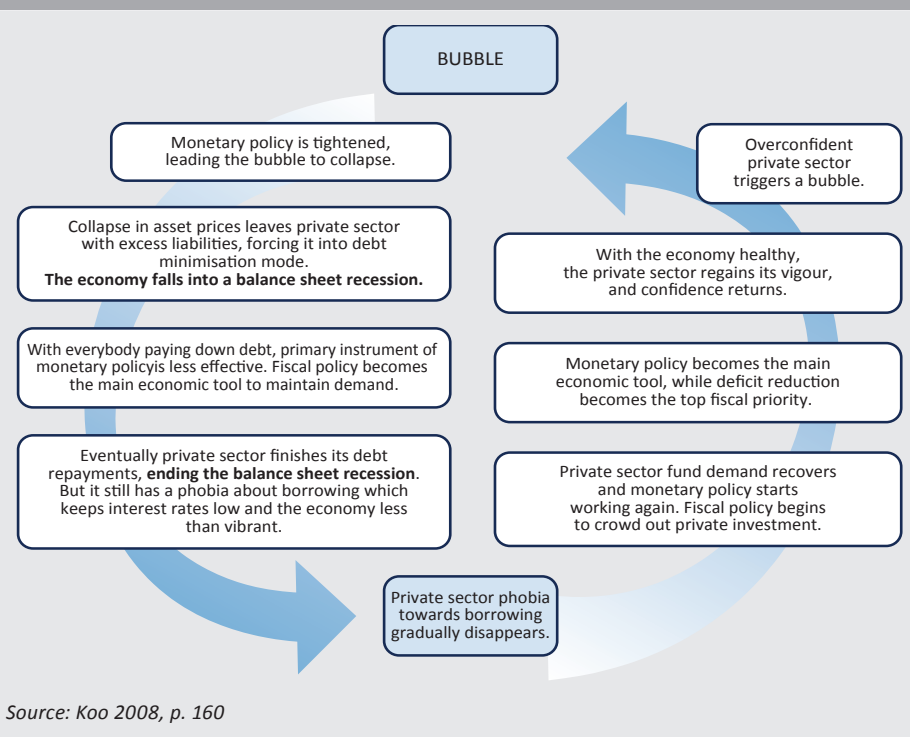
<sup>5</sup> *Borio (2012)* demonstrates that in the first decades of the post-war period the bursting of bubbles was typically attributable to the tightening of monetary policy and the private sector's sharp changes in sentiment after financial liberalisation in the 1980s.

<sup>6</sup> It may occur that – with accommodating monetary policy – weakening of the exchange rate may also contribute to consolidation of balance sheets, due to the fact that depreciation has a favourable impact on the output and the income flow. (The example of the Scandinavian countries illustrates that an export-driven creditless recovery is one possible way of recovering from the financial crisis.) This may be hindered if economic agents have foreign currency-denominated debts, because then the weakening of the exchange rate reduces disposable income in the short run. It can be also less efficient in the case of large countries with closed economies, because such policy may give rise to undesired exchange rate appreciation and capital inflows in other countries, especially when the economic and financial cycles are not synchronised (*Borio 2012*). Finally, *BIS (2014)* also mentions that if everybody resorts to weakening the exchange rate it would have a negative overall effect and the domestic costs thereof would exceed the resulting benefits.

<sup>7</sup> This is confirmed by previous experiences; for example, following the crisis in 1929 the actors that adjusted their balance sheet typically never borrowed once again in their lives; or, after the completion of the Japanese companies' balance sheet adjustment around 2005, there are still no signs of increased willingness to borrow, even at the current, historically low interest rate levels.

Figure 6.

## Dynamics of balance sheet recessions and adjustment



When the economy expands strongly (right side of the Figure), private-sector balance sheets are sound and companies strive to maximise their profits. In this period, the significance of fiscal policy lessens, as the increase in fiscal expenditures may crowd out private investments. However, forward-looking economic agents have strong credit demands, and thus monetary policy plays a major role in the stimulation of the economy and it may work with adequate efficiency. On the other hand, in periods of economic downturn (left side of the Figure), the opposite statements are valid: as a result of declining asset prices, private-sector balance sheets are hit severely and the actors focus on reducing their debts. In this phase, *the efficiency of traditional monetary policy tools decreases, as the private sector's demand for funds – through which the interest rate channel of monetary policy could exert its impact – practically disappears*. In view of the fact that the government is not in the position to force private actors not to focus on deleveraging, it can only act in the opposite manner, i.e. by borrowing the savings accumulated by the private sector and returning it to the income flow. Accordingly, fiscal policy becomes crucially important, which is also attributable to the fact that the crowding-out effect does not appear, as the private sector is repaying its debt rather than taking loans for new investments. Based on these considerations, Koo proposed

attaching much higher importance to fiscal stimulus, inspired by Keynes, in crisis management, in addition to the easing policy of the central bank, just like it was proposed by Keynes in connection with the management of a crisis that was similar to the current one in many respects.<sup>8</sup>

## 2.2. Balance sheet recession as portfolio imbalance

*A common mistake in the current mainstream literature and the economic policy responses to the current balance sheet recession is that they ignore the special features of balance sheet recessions and fail to manage them accordingly.* In the case of the traditional business cycle, the problem to be managed is that the economy becomes overheated, as demand exceeds potential output, and this generates inflation and – in open economies – an excessive foreign trade deficit. In such situations, the objective of adjustment is to curb the growth rate of aggregate demand to a level consistent with the sustainable rate of output growth. This requires the restraint of incomes – in certain cases even in the absolute sense – in order to prevent overheating and the potential accumulation of excessive internal and external indebtedness; depending on the specific situation, this can be achieved by cutting fiscal expenditures and tightening monetary conditions, or by a combination of these.

*However, a balance sheet recession that has developed as a result of financial imbalances is different in nature; in contrast to the aforementioned flow imbalance, it represents a stock or portfolio imbalance, the optimal management of which is also different.* As described above, a balance sheet recession is such stock imbalance, which builds up when “flow” imbalances can accumulate over a longer period or when economic agents take large value loans for purchasing certain high-value financial or real assets. Repayment usually takes place over several years from current incomes, but there are also cases when it is financed from the market appreciation of the asset purchased from the loan (e.g. in the US housing market before the crisis). The tight connection between the market value of the asset – as collateral and source of revenue – and current income can be perceived from this in such a context.

The value of the assets depends on the demand for them, which may deviate from the “fundamental value” of the assets,<sup>9</sup> especially when it is easy to take out

<sup>8</sup> See Koo (2008) Chapter 3: The Great Depression was a Balance Sheet Recession, pp. 85–124. Koo elaborates on the constraints of Keynes – giving credit to his achievements – or even more to the constraints of those who later cited Keynes. It should be borne in mind that the work of Keynes, and particularly his chief work entitled *General Theory of Employment, Interest and Money* is interpreted in several ways. In the above, Koo criticises primarily the mainstream interpretations. We regard the interpretation by Hayes (2006) and Tily (2007) – contrary to the mainstream interpretation – as authentic, which in our view does not contradict to Koo’s basic argumentation.

<sup>9</sup> Fundamental value means the market value that is confirmed by the actual cash flow of the securities (share dividend, bond interest or property rental income) in the future. This depends on whether the income that provides the holder with cash flow is indeed generated. Naturally, securities are negotiable, but the buyers assess the probability of this in the valuation. Bubbles are generated when the valuation of the securities steadily departs from this value. See more on the subject in Schiller (2000).



a loan to purchase them due to increasing market price expectations. If doubts arise with regard to the repayment capacity due to the debt overhang, a reduction of income is not an optimal tool for adjustment, as it can lead to mass fire sales, capital losses and bankruptcies/liquidations – that is *the overheating may lead to significant overcooling, i.e. to a very substantial negative output gap*. The severity of the downturn may increase if many actors simultaneously start to adjust their balance sheets or several countries resort to austerity at the same time. In the management of this type of crisis, it is crucially important to curb and stop the adverse feedback loops and panic sales, as well as to stabilise actors' revenues, as these measures may ensure the continuity of repayments and maintain financial and macroeconomic stability.

Differentiation between the two types of crisis started in the 1990s, based on the lessons learnt from the Mexican crisis in 1994 and the East-Asian crisis in 1997. The Asian crisis was no longer a current account recession – where the domestic use outstrips domestic output – that used to characterise developing countries, but a “capital account” recession that evolved as a result of the large-scale direct and bank-mediated capital inflows (*Baghwati 1998; IMF 1999; Kregel 1998*). At that time, the East-Asian region had already shown very rapid convergence for many years and – expecting this to continue – a large number of investments were implemented financed from foreign capital inflows. Doubts about the viability of these started to increase and the process led to a currency crisis. The IMF played a key role in the management of the crisis: in order to protect foreign currency exchange rates, its first reaction was to demand fiscal austerity, in addition to the monetary tightening, despite the fact that the instability was generated by the excessive investments of the private sector rather than by the fiscal spending overrun. Subsequently, the IMF also admitted that it had underestimated the depth of the crisis and should have corrected the fiscal austerity measures earlier.<sup>10</sup> The error may be attributable to the fact that the international organisation regarded the crisis in East-Asia as one that evolved as a result of the formerly typical flow imbalances and managed it accordingly. The consequence of the error was a protracted crisis, the unjustified capital loss of the Asian countries and the privatisation of part of the assets below their value, primarily to Western companies that had easy access to loans to finance the acquisitions.<sup>11</sup>

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<sup>10</sup> See *IMF (1999)* p. 64, video interview: “Fiscal policy is another important topic covered in the paper. Here a degree of budget-tightening was envisaged at the outset of each of the three programs, in part to pay for some of the substantial and inevitable costs of reform of the financial sector. This tightening was planned at a time when the Fund, like most other observers, thought these countries could get away with a comparatively mild slowdown in growth. The tightening was put into reverse once it became apparent that the recessions these countries faced were going to be deeper than expected and that expansive budget policies would be needed to help cushion the economies as the recessions developed.”

<sup>11</sup> This experience traumatised the East-Asian countries impacted by the crisis of 1997 (e.g. South Korea, Thailand), the result of which is a lasting distrust of the IMF (*Baghwati 1998*). There was also a common belief that the accumulation of foreign currency reserves that preceded the present crisis was a “self-insurance” to prevent the repetition of this case (e.g. *Bernanke 2005*).

### 2.3. Errors in the assumptions included in the theories and models used before the financial crisis of 2008 in the light of the experiences of the balance sheet recession

*The current crisis management approaches implicitly assumed that companies strived to maximise their profits – i.e. the right side of Figure 6 continuously dominates – and easing of the monetary stance leads to increased investments.* In this spirit, the economic policy answers proposed monetary policy stimulus and – to prevent crowding-out – a reduction of the budget deficit. However, based on the foregoing, the traditional monetary policy instrument is less effective when the credit demand of the private sector is weak due to macroeconomic uncertainties and inadequate aggregate demand (left side of Figure 6). In addition, the reduction of the budget deficit also has an unfavourable impact on the economy, as in the context of strong deleveraging by the private sector and close to the zero lower boundary, the coefficient of fiscal multipliers is higher,<sup>12</sup> which – in a synchronised balance sheet recession – increases the real economic costs of budgetary adjustments. *Due to this, the confidence-building effect expected from reducing the deficit may not materialise, or – in an unfavourable situation – it may even worsen due to the deterioration of the debt ratio, arising from the faster decrease of the denominator (GDP) than that of the numerator (debt).*

*Unfortunately, the traditional macroeconomic and econometric models often used before the crisis were unable to properly capture this increased multiplier effect without being adapted to the circumstances of the crisis, because they were built on the assumption that the economy was in a state of equilibrium (or close to it) without fiscal stimulus, i.e. it would stay close to some kind of long-term equilibrium growth path. Thus, the standard econometrics models were unable to show the magnitude of the fiscal multiplier in an economy which was not in a state of equilibrium (Koo 2008:145–146). The models also assumed that when the economy is not exactly on the equilibrium path this was caused by an external reason (shock), and that the market automatism steers the economy towards equilibrium. In this approach, the role of economic policy is to merely accelerate this return, which*

<sup>12</sup> The 2012 Public Finance Report of the European Commission contains comprehensive analyses for the estimation of the fiscal multipliers. According to the analysis, the magnitude of the multiplier depends strongly on the cyclical position of the economy, which is particularly important during a balance sheet recession. According to the analysis, the value of the multiplier is higher if the degree of unused capacities in an economy is larger. As a result of this, at the time of a balance sheet recession the fiscal consolidation reduces output considerably, while fiscal expansion increases it significantly. Namely, during the fiscal consolidation the decline in growth is higher than the improvement of the budget balance (Szalai 2012; Christiano et al. 2011). Blanchard-Leigh (2013) published an estimation on how the underestimation of the multipliers led to the underestimation of the recession effect of the adjustments. Caggiano–Castelnouvo (2015) demonstrate that if the expectations of the actors, the non-linearities and severity of the downturn can be properly controlled methodologically, the fiscal stimulus helps stabilise GDP just then when it is needed the most. However, one of the conditions of this is that the sustainability of the debt should be unquestionable.

happens independently of it as well. Social welfare improves because the economy is on a non-equilibrium path for a shorter period.

The dynamic stochastic general equilibrium (DSGE) models which were *widely used before the crisis* typically had a New Keynesian foundation and were essentially based on real business cycle models, despite featuring nominal stickiness and financial frictions. These models strive for equilibrium. In addition, *in these essentially real models the functioning and role of the financial sector was negligible*, and thus the existing equilibrium trends were not significantly influenced by financial and lending processes; the most that could happen was that when those did not work in a sufficiently friction-proof manner they slowed the return to the equilibrium (Buiter 2009; Haldane 2012). However, after the crisis the dominant role of the financial sector has become increasingly acknowledged in the functioning of the economies, the triggering of the crisis and the explanation of the severity thereof. Economists representing different schools urge to return to traditions where the cycle-reinforcing function of the financial sector is strong and interacts with such a real economy sector where there is no or only weak tendency to strive for equilibrium – *thus the financial sector is able to endogenously generate a recession of similar degree and length that was experienced in the present crisis*.<sup>13</sup> In such a framework, the overheating and overcooling of the real economy may assume much greater proportions, debts may accumulate much faster and the adjustments may result in a much longer recovery. *According to these approaches, the assumptions of the new models inspired by Keynes which ignored financial cycles and were applied before the financial crisis to the balance sheet recessions that developed due to excessive lending, are not valid.*

In addition to ignoring the financial sector, the benchmark assumption of the pre-crisis mainstream economics and the New Keynesian analytical framework – related to reasonable expectations and representative actors – according to which the economy and the model will reach a state of equilibrium as a result of the profit maximisation of those actors, also proved to be erroneous. These models ignore not only the present complexity of the economy and the financial system, and the interaction between actors, but also certain behavioural norms and (economic) psychological aspects confirmed by behavioural economics (Haldane 2012).

In this approach, *market automatisms and market self-regulation failed both in terms of the volume of investments (so-called intertemporal choice between current*

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<sup>13</sup> This would primarily mean returning to the “monetary analysis”, hallmarked by the names of Wicksell, Schumpeter and Keynes, as opposed to the theories based on the “real” analysis. See a more detailed description in Aglietta (1995/2005), Borio et al. (2011) Appendix, Borio (2012), Minsky (1986), Roger (1989), Tamborini et al. (2009), and in the literature listed there.

*and future consumption) and the industrial-structural distribution (intratemporal choice within a given period).* Although taking a longer horizon, economies typically appear to move around a more or less sustainable path – there is not always a crisis or recession – from time to time deviation from the sustainable path leads to a crisis in an endogenous and cumulative way, as a result of the financial market and real economy interactions. Although in this sense there are self-regulatory and self-adjusting processes in the economy, they do not always work. Accumulation of the intertemporal and intratemporal imbalances often takes several years and even the actors fail to notice it or notice it too late. The above mentioned cycle-reinforcing functioning of the financial sector plays a key role in this.

*Since, as opposed to the mainstream theory that preceded the financial crisis, the existing deposits (interpreted in real terms) do not restrict the modern banking system in lending, the demand – supply – price mechanisms known from micro-economy (Marshall cross) do not work either in a self-regulatory manner, as described in the textbooks.* In models that contain endogenous money creation, better capturing the functioning of the modern financial system, banks do not simply lend under the constraints of existing savings, as they are also able to generate purchasing power in the absence of these and thereby indirectly influence the level of the resource utilisation (output gap), the distribution thereof among the sectors, as well as the choice between the present and future consumption (Nealy et al. 2014). Thus, in practice the lending constraint within the given prudential regulatory framework is the credit demand of solvent clients. In such a financial system, the credit expansion justifies itself in the initial phase, as the price of the borrowing company or of the real or financial property purchased from the credit increases and the related risk premium decreases. As the definition of the optimal level and sectoral distribution of indebtedness is uncertain, there is a high risk of excessive lending with an unsustainable industrial structure, which acts toward the strengthening of the financial cycle. Thus, the price and exchange rate do not provide adequate information on the fundamental values and the related market and credit risks, and therefore they do not guide the actors in their decisions in a stabilising manner.<sup>14</sup> The adjustment of financial imbalances is slow and costly, and sometimes it is realised only through a crisis. On the financial side, it requires the adjustment of the balance sheet and deleveraging, while on the real economy side it demands the lower utilisation, the slow phasing-out and reallocation of the capacities of excessive volume and unsustainable industrial proportional structure in accordance with the sustainable structure.

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<sup>14</sup> Minsky (2008) has placed this mechanism in the centre of the “financial instability” approach, represented by him, in the course of which he relied essentially on the work of Wicksell and Keynes (Aglietta 1995/2005; Borio–Disyatat 2011).

Based on these experiences in the future those models may serve as guidelines that assume heterogeneous interacting actors, where the actors make their decisions under fundamental uncertainties and do not assume that the consolidation of individual decisions that appear reasonable would automatically lead to equilibrium, and capture money creation via the endogenous lending. These models – containing nonlinearities and multiple equilibriums – are very data- and calculation-intensive, and thus it may still take a long time before they become widespread and widely acknowledged, and on the other hand the (technical) assumptions of these are still novel in economics, but are not unknown for the psychological, physical or ecological models, and thus in the future economics may learn a lot from these sciences (*Haldane 2012*). As referred to before, these assumptions and approaches are not necessarily new; most of them have been present in economic thought for a long time – however, as old crises are forgotten and in calm economic times supporters of these theories were typically pushed into the background or driven out of the mainstream (*Borio 2012*).

### **3. Economic policy lessons**

Bearing all of this in mind, economic decision-makers should recognise the debt-bearing capacity of the economy *ex ante* and prevent excessive debt accumulation since that makes the economy vulnerable to real economic and financial shocks, requiring distressing adjustment. If this fails, then during the *ex-post* intervention economic policy should focus on reducing the costs of adjustment. In the following, we review the tasks that the individual policies should perform in the prevention and management of the balance sheet recession.

#### **3.1. Reconsidering crisis prevention and the tasks of individual policies**

BIS, which has kept the topic on its agenda for many years, once again emphasised in its latest annual report (*BIS 2015*) that strong control over financial booms and the efficient management of financial crises require that the fiscal, macroprudential and monetary policy framework be broadly reconsidered.

*The duty of fiscal policy in the prevention of the balance sheet recession or, in case of its failure, in the management thereof would have been to curb – by means of its countercyclical behaviour – the overheating of the economy during recoveries and provide itself with sufficient room for manoeuvre for the management of financial crises during times of economic downturns to support the balance sheet adjustment of the private sector. In the previous chapter, we noted that Koo (2008; 2014) also regards fiscal policy to be efficient in the management of the balance sheet recession; in addition, he also recognises that during the period of balance sheet adjustment, households and enterprises will use their surplus income for the faster reduction of their debts instead of taking new loans or implementing new investments. Having recognised this, Koo believes that fiscal stimulus must*

be maintained for several years even after the completion of balance sheet adjustment, as the sudden withdrawal thereof may revive deflationary risks.<sup>15, 16</sup> *Borio (2012)*, as well as *BIS (2015)* emphasise the significance of fiscal policy in the management of balance sheet recession; however, they disagree with the aggregate demand supporting role of fiscal policy, since in their opinion this has already been exhausted. They believe that the existing room for fiscal manoeuvre must be used specifically for cleaning up the balance sheet, for the recapitalisation, nationalisation and then for the reprivatization of the banks, while in the case of the non-banking sector for the mitigation or restructuring of the debts.<sup>17</sup> Accordingly, public funds could be used most efficiently if directed at the root of the problem, rather than by the non-targeted increase of the government deficit, spending or tax reduction.

The priority for *macroprudential policy* should have been to mitigate the financial system's excessive procyclical behaviour and strengthen its shock resilience, i.e. it should have worked as a symmetric macroprudential framework. Thus, for example, the countercyclical capital buffer or the debt brake rules could have restrained the boom in the financial cycle; later, after the bursting of an asset price bubble the withdrawal of the formerly accumulated capital and liquidity buffers could have mitigated the damage to the financial institutions and the economic losses. However, if during the boom no such buffers were implemented in the system, then the recovery of the financial institutions' balance sheet is more difficult<sup>18</sup> (*Borio 2012; BIS 2015*).

<sup>15</sup> In addition to Koo, *Rogoff (2015)* also emphasises that initially fiscal policy was efficient in crisis management; however, tightening was introduced prematurely, as a result of which the recovery took a "U" shape rather than a "V" shape.

<sup>16</sup> At the same time, Koo recognises that modern democracies run into a number of difficulties when trying to maintain the fiscal stimulus at the proper level and for an adequate time. This is in part attributable to the fact that the majority of the economic agents (e.g. media, men in the street) are not familiar with the phenomenon of balance sheet recession, and therefore they do not understand that the balance sheet adjustment is a proper response in a crisis of this type; as a result of all this they may regard the demand stimulus measures of the government as "wasting the taxpayer's money". On the other hand, the maintenance of fiscal stimulus in peacetime is a particularly big challenge, while in wartime – when the survival of the nation is at stake – nobody disputes the necessity thereof (e.g. spending on armaments). Similarly, when the economy is hit by a major shock such as the Lehman bankruptcy for example, thereafter the challenge is represented by the maintenance of the government's demand stimulus for an adequate time rather than the implementation thereof.

The crisis of 1933 also provides an example of this, when both Germany and the United States suffered from balance sheet recessions. Then both Roosevelt and Hitler started a government demand stimulus programme; however, Roosevelt stopped it in 1937, which generated a "W" crisis and the unemployment rate once again was around 20 per cent; by contrast, Hitler maintained the stimulus and unemployment fell to 2 per cent. However, nothing is more dangerous than when a politician implements a correct economic policy with vicious objectives.

<sup>17</sup> Apart from them, *Rogoff (2015)* also emphasises that the economic policy-makers should have paid more attention to the debt write-off, as well as to the restructuring and recapitalisation of banks.

<sup>18</sup> In this case one potential pitfall is that the focus is only on bank recapitalisation without writing off the losses, as in this case the bad loans also remain in the system, while good borrowers face higher costs. Accordingly, in the course of crisis management – when the fall in the debts and the asset prices is unavoidable – the emphasis should be on the quality and allocation of the loans rather than on the volume thereof in general. The incorrect allocation may reduce the potential output and growth, which after the hysteresis may lead to permanent output loss.

Although based on this the guidelines for the application of certain macroprudential tools are clear, the efficient practical application of such involves a great deal of challenges. One shortcoming of macroprudential policies is, for example, that tightening banking regulation may divert the operation from the banking sector to the shadow banking sector or from domestic financial institutions to foreign ones (*Teulings–Baldwin 2015*). An additional difficulty may be the identification of the risks arising from the lending by the non-bank intermediaries; e.g. in the case of the asset management companies, the failure of individual companies generates no significant anxiety, but the one-way behaviour of such companies may represent substantial stability risk due to the impact on asset prices, market liquidity and financing costs. Another relevant challenge in connection with macroprudential tools is the identification and management of the risks arising as a result of sovereign exposures (*BIS 2015*).

The significance of macroprudential policy and regulation is strengthened by the fact that – as we described above – the self-regulation capability of the market is limited in the sense that – recognising the potential instability of the markets – market actors create rules on their own for the prevention of crises and severe imbalances. *The present crisis proves that without elaborating the appropriate prudential regulation and the sufficiently strict application of such in the modern financial system the market on its own does not efficiently restrict the build-up of the financial instabilities and also does not succeed in preventing panic-stricken market adjustments.*<sup>19</sup> Although compared to other economic agents the financial markets and the banking systems have always been subject to more regulatory requirements, in the longer run it can be observed that the rules were tightened after the crisis and after the fading of the memory of the last severe crisis the rules are eased once again. Prior to the present crisis, the internal and external liberalisation that started in the 1990s reinstated to a large degree the less regulated conditions of the period before 1950s–1970s. As it was demonstrated by *Aglietta (1995; 2005)*, *Borio (2012)* and others after liberalisation financial instabilities became increasingly frequent, first in the less developed and later on also in the developed countries. In the developed countries, this did not manifest itself in real economy volatility for a long time, and it was accompanied by price stability not seen before – this is why the pre-crisis period was referred to as the “Great Moderation” – which contributed to the continuation of liberalisation.

The most frequent argument brought up in disputes against government regulation is that the government does not have more reliable information than market participants on the fundamentally grounded prices, interest rates and the volumes

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<sup>19</sup> “As I wrote last March, those of us who have looked to the self-interest of lending institutions to protect shareholders equity, myself especially are in a state of shocked disbelief. Such counterparty surveillance is a central pillar of our financial markets state of balance. If it fails, as occurred this year, market stability is undermined.” (*Greenspan 2008*)



of credits that may be prudently extended. However, regulation is justified not because the public authority has better information on the sustainable prices and credit volumes – as presumably this is not the case – but because the motivation of the state regulator may be different. Private actors are competing with each other and want to realise a profit, thus they are interested in and can contribute to the market stability only indirectly. Self-regulation may work in a market with limited number of actors that know each other well,<sup>20</sup> but the conditions of this do not exist in a modern global financial system. *After the crisis, regulation must be transformed rather than simply tightened; it must treat the financial instabilities – which are increasingly of macroeconomic nature – at their roots (Borio 2012).*

The sequence of applying individual economic policy measures is of key significance, due to the potential output losses. In an ideal situation, accommodating monetary policy and measures that reinforce the banking system should be implemented first, thereby ensuring the smooth flow of funds again. Thereafter, fiscal policy may only introduce tightening measures if the recovery is sufficiently solid to cope with a downturn. Ideally, the adjustment does not require separate major measures as the operation of the automatic fiscal stabilisers ensures this: during the boom, tax revenues increase and expenditures, such as unemployment benefits and other economic stimulus measures decrease. To put it simply, this type of crisis management was implemented in the United States, while in the euro area fiscal austerity preceded the restructuring of the banking system, which finally impeded growth (for more details on this, see subsection 3.3). At the same time, this optimal sequence may only be implemented if the balance of the general government and the credibility of fiscal policy are sufficiently strong for initially increasing its indebtedness to provide support for deleveraging by the private sector. (See more details on the limits of the various economic policies in the box.)

In the euro area, the institutional structure of the region and the “incompleteness” of the monetary union impeded optimal crisis management. Although the euro area as a whole was less indebted than the USA or the United Kingdom, it still started to move back towards the three-percent deficit target earlier. The decision-makers feared that the market’s distrust of the more severely indebted countries would also spread to the “core countries”, which acted as the final insurers of the region’s stability. Although in theory euro is an irreversible single currency, in the absence of proper common institutions it was not clear how the monetary union as a whole would be able to manage financial strains, or even the potential bankruptcy of individual states or the banking systems thereof. Crisis management

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<sup>20</sup> Goodhart (1988) gives a good description of the English banking system’s initial capability of self-regulation (operating in a club-like manner); however, with the transformation of the market, the increase in the number of actors and the entry of foreign banks a regulatory authority was required. One of the commercial banks, which could fulfil this role, has split away, but it could no longer have its own profit interests as it would have distorted competition.



at the level of the euro area means the sharing of risks: initially the common central bank, as lender of last resort, may manage the liquidity crisis and then fiscal policy may address the solvency problems (bank recapitalisation, debt write-off and restructuring, etc.). When the euro area was established, no lender of last resort function was declared; this function of ECB could only be derived from its responsibility for the smooth management of payments. Fiscal capacity was also missing during the crisis; therefore the governments contributed to the stabilisation of the banking system only by ad hoc measures, and often informed the Commission of the steps only after the fact. The development of the “banking union’s” institutions – built on ad hoc decisions made under the pressure of the crisis – already represents a step forward for filling the gap of the institutions ensuring financial stability. However, it is still an outstanding issue as to how to ensure that the income distribution side-effects arising from the unavoidable sharing of risks do not result in such permanent transfers that the general public is not ready to accept. Permanent transfers are permissible only in such unions where the fiscal policies are also adequately centralised; a political union is a precondition for this. For the time being, the European integration is not yet mature enough for this level of integration.

### **3.2. Lessons learnt from the balance sheet recession with regard to monetary policy**

*In the light of the experiences of the financial crisis, the primary task of the monetary policy is to apply financial stability considerations in a more symmetric manner, both during the recovery and the adjustment phases of the real economy and financial cycles.* The reason for this is that – prior to the financial crisis – the major growth in lending and asset prices took place in a context of low and stable inflation, and then the outbreak of the crisis highlighted the fact that it is rather expensive to ignore the financial cycles, bearing in mind the severe and lasting consequences thereof. Through historical experiences, *BIS (2014)* shows that if the recession is accompanied by financial downturn (i.e. the real economic and business cycles coincide), accommodating monetary policy will be less efficient in strengthening the recovery. *Borio et al. (Borio 2012; BIS 2014)* demonstrate that the number and degree of financial instabilities have increased since the 1980s even in the developed countries and the fluctuations of the financial cycles have also increased. If decision-makers fail to make macroeconomic policy symmetric, i.e. during an upturn they do not curb fluctuations and after the bursting of a bubble they react with fast, large-scale easing, they no longer stimulate the write-off and restructuring of the bad loans and keep increasing the fluctuations of the subsequent cycles, thereby exacerbating the negative consequence thereof, since the new financial cycles start from increasingly higher levels of indebtedness.

*In the spirit of this, the framework must permit monetary policy to be (relatively) stricter during the upturn in the financial cycle, even if inflation is low and stable, and to implement less aggressive and persistent easing during the downturn.* The fact that monetary easing can only have a limited impact on aggregate demand during the downturn is attributable to several factors, including that the financial system is damaged and the actors of the private sector are overly indebted, as well as that resource allocation implemented incorrectly during the upturn reduces potential output (BIS 2015). However, at the same time, all of this does not mean that accommodating monetary policy has no role in stimulating the recovery after a balance sheet recession; simply, over time it is less and less efficient and it becomes increasingly evident that it is unable to handle such basic problems as the cleaning of balance sheets.

According to those thinking within the traditional framework, the financial stability objectives must be managed by macroprudential tools and interest rate policy must be reserved for the management of macroeconomic stability, i.e. the overheating and overcooling of the real economy.<sup>21</sup> However, according to BIS – the institution which, well before the crisis, was one of the first to propose the development and application of macroprudential instruments – experiences do not really confirm this separation principle. They are of the opinion that targeted macroprudential instruments cannot be as efficient in curbing excessive risk-taking as the key interest rate, which is valid in the entire financial system. In the spirit of this, it would be overly risky to rely solely on macroprudential policy for the purpose of managing financial instabilities, thus these two instruments supplement rather than substitute each other. In addition, the empirical results also confirm that monetary policy is able to influence aggregate demand more efficiently via financial channels. Box IV of BIS (2015) describes that the key interest rate has a significant effect on lending and asset price (particularly on property prices), while it generates greater volatility in the financial variables, if it focuses on short-term inflation and output.

The determination of the appropriate monetary policy steps fundamentally depends on the degree of capacity utilisation in the economy. Based on the foregoing and the recent experience, it can be stated that the methods that *integrate the information provided by the financial cycles, such as the trends in lending and property prices, provide a much more reliable estimate of potential output* than traditional methods that focus solely on inflation. This is also suggested by the fact that before the crisis the methods often applied during the economic policy decision-making process

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<sup>21</sup> This is the so-called Tinbergen principle, according to which each economic policy instrument is suitable to attain a single objective, and economic policy needs as many dedicated instruments as it has goals. This is consistent with the interpretation of the economy according to which in terms of its tendency it is characterised by stability and only external shocks may dislodge it from equilibrium. After the crisis, it became a common theory that in practice this comfortable separation of the objectives and instruments cannot be implemented, as both the objectives (macro and financial stability) and the instruments (macroprudential instruments and the key interest rate) impact each other.

were unable to identify that the output expanded at a degree which was higher than sustainable.<sup>22</sup>

One of the most important questions for monetary policy is how *this strategy can be harmonised with the inflation targeting strategy – i.e. financial stability with macroeconomic stabilisation*. The build-up of financial vulnerabilities takes a longer time, and as such financial recessions also have lasting macroeconomic – including inflationary – effects, as financial cycles are longer than traditional real business cycles. Thus, for example, the prolongation of the traditional two-year monetary policy horizon to three years could help harmonise the financial stability and traditional objectives. However, this means not the simple prolongation of the present forecasts performed by real models but rather that the financial factors that exert their impact on this longer horizon should be also taken into account systematically. At the same time, the uncertainties attached to longer-term forecasts must not be ignored.<sup>23</sup> Some central banks have already started to modify their framework by providing the monetary policy with greater flexibility. One of these measures is that in certain cases it explicitly permits inflation to return to its long-term target only in an extended timeframe, depending on the factors that explain the deviation from the target. However, in other cases it may happen that the central bank must apply tightening measures already when there is still no sign of inflationary pressure over the previously traditional shorter horizon, but the financial imbalances threaten collapse and a negative output gap over a longer horizon and signal the risk of significantly undershooting the inflation target.

The question arises as to how long and to what extent departure of inflation from the target can be tolerated. This depends on the risks attached to deflation and on the issues related to the central bank's credibility and mandate. According to the Annual Report of BIS (*BIS 2015*), the most important consideration is that the monetary policy should use the available room for manoeuvre while its analytical framework systematically takes financial stability risks into account. The monetary policy mandate must be amended only failing all else, which must be carefully explained to the public.

### **3.3. Where do we now stand in crisis management?**

The room for monetary policy manoeuvre in the management of the balance sheet recession decreases as the years go by, continuously testing the limits thereof. Meanwhile, after the post-crisis expansion, fiscal policy gradually tightens as sustainability problems mount.

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<sup>22</sup> Borio et al. (2014), Ábel et al. (2014) Box 1, MNB (2014:70–72).

<sup>23</sup> Apart from the extension of the horizon, financial processes can be considered in several ways: on the one hand, by including certain financial variables (e.g. asset prices, property price index) in the monetary policy reaction function, or by integrating certain indicators signalling the build-up of imbalances in the traditional monetary policy analytical framework (see more details in Csontos–Szalai 2014).

In the present situation, the task of fiscal policy is to keep sovereign debt on a sustainable path, as this is the precondition for lasting monetary, financial and macroeconomic stability. If the sustainability of the debt path becomes questionable, it would not be prudent to continue with the expansive fiscal policy. On the other hand, those countries that still have sufficient room for fiscal manoeuvre should utilise it as efficiently as possible. This means that the fiscal policy should first of all facilitate balance sheet cleaning in the private sector, support innovation and reforms that improve long-term productivity and use its funds for rational investments rather than for transfers.

*Monetary policy* should properly assess and take into account the macroeconomic and financial risks related to the present policies. In addition to considering country-specific factors, it is also necessary to apply macroprudential tools actively, but no excessive expectations should be attached to such. It should be borne in mind that key interest rates have been at a historic low level for quite a while, investors' search for risk and yield is continuously strengthening, and thus the normalisation will not be smooth. Due to this, it would be dangerous to shift the full management of financial stability risks to macroprudential policy.

*One potential lesson learnt from the foregoing is that the individual economic policies should support recovery in the real economy without building up excessive financial imbalances.* Based on the foregoing, it appears that this requires, in addition to central bank interventions, further targeted fiscal policy measures concerning which, however, no economic policy consensus has yet been reached. In the absence of this, *the balance sheet recession may become a lasting or recurring phenomenon.*

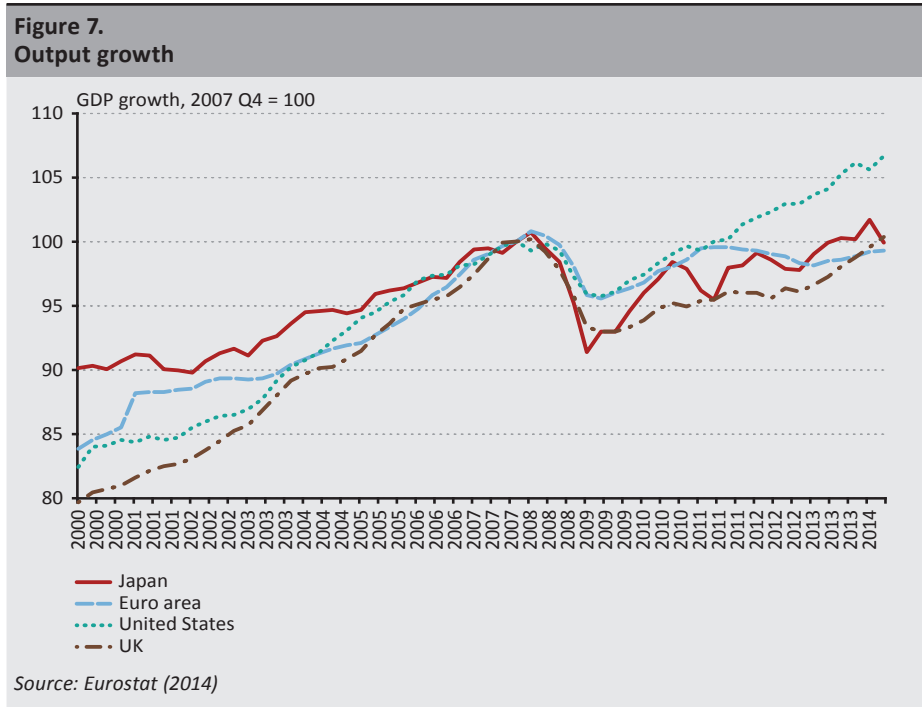
Furthermore, in addition to the appropriate economic policy measures, the question arises whether the technical improvement and increased efficiency of the financial markets and the more intensive testing of corporate decision-makers in terms of the financial performance criteria (e.g. maximisation of enterprises' stock exchange value) automatically ensure the balanced and sufficient growth of the economies that is sustainable both in social and environmental terms. All this is important because experience shows that financial innovations are not necessarily followed automatically by real economy innovations and they do not support lasting, sustainable productivity growth.<sup>24</sup>

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<sup>24</sup> Mariana Mazzucato organised a conference on this topic, which was attended by leading researchers and economic policy-makers, including Andrew Haldane, chief economist of Bank of England. The presentations of the conference are available here: *Mazzucato–Penna (2014)*. On the role of the financial sector and the lessons of the crisis, see also the presentation of *Zingales (2015)* held in 2015 in his capacity as the chairman of the American Financial Company.

### 3.4. Successes and failures in crisis management

Following the outbreak of the crisis, the processes in the countries with debt overhang which were hit hardest were similar both in terms of the economic downturn and the recovery that followed between 2009 and 2011. Due to the global nature of the financial crisis, the downturn took place almost simultaneously, while similar trends could be also observed during the recovery, which is attributable to the fiscal and monetary easing coordinated at the global level. However, after 2011 more significant differences surfaced in the economic performance of the individual countries, which was attributable to their different starting positions and circumstances, as well as to the difference in the applied economic policies and the constraints of those (Figure 7; MNB 2014).



After the outbreak of the crisis in 2008, the United States, the European Union and several developed countries responded to the worsening macroeconomic situation with *fiscal easing*, as part of which they permitted the automatic fiscal stabilisers to operate freely and applied various stimulus packages. However, after this the fiscal policy of the individual countries showed significant differences. After the start of the recovery, the United States and Japan were more cautious in launching consolidation, in order not to jeopardise the fragile upturn by premature fiscal tightening. In 2009 several economists supported fiscal stimulus,

but were pushed to the background, and at the meeting held in 2010 in Toronto the G-20 member countries agreed in the gradual budgetary consolidation at different rates, corresponding to the cyclical position of the regions. In accordance with this, a stricter fiscal policy was implemented in the United Kingdom, after the change of government in 2010, and after the slight improvement in growth prospects the adjustment of excessive deficits started in the euro area as well. This was necessitated primarily by compliance with the euro area's fiscal rules and increased fears related to the solvency of certain countries. The demand-restraining fiscal policy led to a new downturn in 2012, pushing several developed countries – including the United Kingdom and a large part of the euro area – in a “W” crisis. By contrast, the USA recognised the misguided nature of the Toronto agreement and the risks of stopping the demand-stimulating measures too early, and at the meeting held in 2013 in St. Petersburg – relying on the lessons learnt – the other developed countries also emphasised the importance of fiscal stimulus.

Apart from fiscal policy, after the outbreak of the crisis, the general government also has a dominant role *in the rescue and recapitalisation of the banks*. Due to the panic that followed the Lehmann bankruptcy, certain sub-markets temporarily froze and distrust with regard to the solvency of certain financial institutions increased. The governments of the developed countries tried to restore market confidence by loan guarantees and direct recapitalisation of the banks. At the same time, there were significant differences in the degree and timing of the intervention in the functioning of the financial markets that the individual countries intended and had the opportunity to apply (Kiss–Szilágyi 2014). As we mentioned earlier, there is also a considerable difference in this respect between the economic policy of the USA and the euro area. In the euro area, bank recapitalisation took place only with a delay, which kept the insolvent institutions in operation for a long time, thereby prolonging banks' balance sheet adjustment. Simultaneously with this, undercapitalised banks restrained their lending. In addition, the downturn in the euro area was further exacerbated by the fact that fiscal consolidation started already before the restructuring of the banking system, which in the end generated considerable losses in output (Teulings–Baldwin 2014).

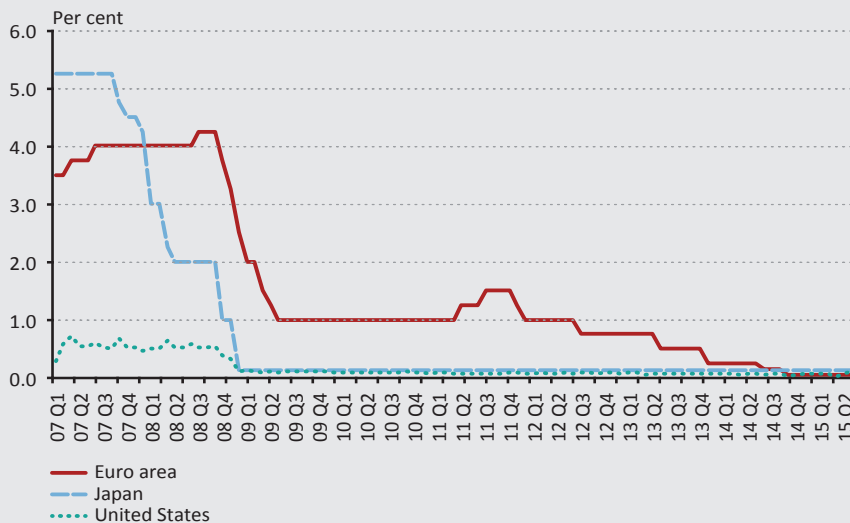
Following the outbreak of the financial crisis, central banks in the developed countries responded to the economic downturn and the worsening inflation outlooks by interest rate cuts, and once they reached a close-to-zero interest level (see Figure 8), they started to apply unconventional methods.<sup>25</sup> In the years after the outbreak of the crisis, monetary policy in the United States, the United Kingdom and Japan, on the whole, was more accommodating than that of the euro area, where after the initial swift easing the shrinking of the ECB balance sheet started in

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<sup>25</sup> For the details on the applied unconventional monetary policy instruments, see Krekó *et al.* (2012).

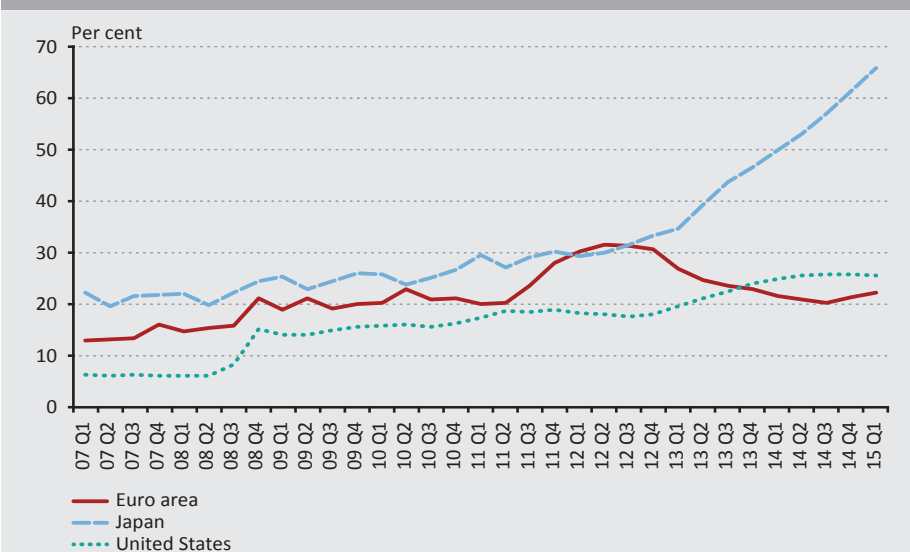
2012 (Figure 9). As of 2014, regional differences in macroeconomic developments started to strengthen, which was partly attributable to the different economic policy mix applied earlier and by now it has finally led to the divergence of the monetary policies. The Fed has kept the key interest rate constant – in the 0–0.25 per cent band – since 2009, and in October 2014 it terminated its two-year quantitative easing programme; according to its current communication a gradual increase in the key interest rate may start as early as 2015. Meanwhile the ECB – seeing the lasting low inflation environment and the falling inflation expectations – further eased its monetary conditions, announcing a new asset purchase programme at the beginning of 2015. Japan, in an effort to attain the inflation target of 2 per cent, also opted for the extension of its asset purchase programme. While in some of the countries deleveraging is still in progress, in other countries indebtedness may remain high or even increase further as a result of the lasting accommodating monetary policies, and thus the financial stability concerns related to the build-up financial imbalances may gain increasing importance. As a result of this, the trends in lending and the asset price developments gain increasing weight in the central bank’s communication. On the whole, although the central banks’ decisions were consistent with the short-term macroeconomic developments, financial market considerations appeared in the central banks’ decision-making process only to a limited extent, which – looking ahead – may contribute to the build-up of additional financial imbalances (BIS 2015).

**Figure 8.**  
**Key interest rates in major developed countries**



Source: BIS 2015

**Figure 9.**  
**Central banks' assets to GDP**



Source: BIS 2015

#### Box: Constraints of certain economic policies

The differences in the economic policy mixes applied by the individual countries are attributable not only to the different judgement or preferences of the decision-makers, as the various country-specific factors, the different starting positions, development levels and potentials of the countries also greatly contribute to it; in our analysis above we primarily focus on the analysis of the experiences of the developed countries and regions. Depending on these, in certain cases some countries' room for manoeuvre was limited in terms of implementing the economic policy mix deemed optimal. In the box we consider these.

In terms of fiscal policy, decision-makers may have been hindered in the implementation of the (targeted) fiscal measures of adequate degree; these include the amount of initial government debt and the market's confidence in the state's future solvency, as well as the constitutional budgetary rules or other institutional constraints. As the crisis progressed, differences in the solvency of the individual countries became increasingly obvious. In addition, several studies pointed out that the fiscal policy of the emerging and developing countries intensified economic volatility (i.e. contrary to the developed countries, it is procyclical); this on the one hand is attributable to the weaker institutional system of these countries and on the other hand to the flight to quality. On the whole, under the fiscal stimulus, it is a challenge to identify the debt level that can be maintained in the long run (Blanchard 2015).



The degree of intervention in *money and banking market* processes may depend on the level of damage to the individual sub-markets, the degree of market distrust, the level of assistance that the banking system required, as well as on institutional embeddedness. In the spirit of this, the euro-area member states could participate in the European Central Bank's programmes directly, while others could receive only indirect assistance. Furthermore, in those countries where a major part of the banking sector is owned by foreign banks, bankruptcies and bank rescue programmes were not inevitable as the parent banks could provide their subsidiaries with the required capital.

The *monetary policy* of the developing and emerging countries was substantially hindered by the fact that due to the increasing uncertainties resulting from the financial crisis the financing of these countries may stop abruptly in certain cases, and thus they may be able to protect their exchange rates and preserve their financial stability only at interest rate levels that are higher than those of the developed countries. This means that the emerging countries had less opportunity to curb the economic downturn by easing the monetary stance and cutting the key interest rate, and – in certain cases – they were even forced to increase the interest rate due to the financial stability considerations. It was even more difficult to manage the downturn for those countries whose economic agents had major foreign currency debts, as in this case the interest rate cut may have a stimulating effect via the exchange rate weakening that takes shape via the channel of cost diversion, while via its balance sheet channel it may act as a brake, and this latter often proved to be a stronger effect.

Beyond the aforementioned difficulties, the countries without an independent monetary policy were in a special situation, because they are the members of a currency union (e.g. euro area) or have a pegged exchange rate regime (e.g. Bulgaria). The monetary policy of the members of the euro area is determined by the European Central Bank. The monetary policy in the countries operating with a pegged exchange rate regime is fully subordinated to the maintenance of the pegged exchange rate, thus they cannot use it as a stimulus in times of recession. In order to regain their competitiveness, these countries typically resorted to internal devaluation, that is the cutting of prices and wages (Kiss–Szilágyi 2014).

#### **4. Conclusions**

The paper demonstrated that, seven years after the outbreak of the crisis, the output and employment still fall short of the pre-crisis peak in several developed countries. In addition, the unfavourable consequences of the pre-crisis debt overhang on investments and productivity can be still felt. Although fiscal deficits typically decreased in recent years, outstanding sovereign debt is still high and in the context of poor real economic performance there is a global trend of decreasing inflation. A number of factors may contribute to these processes.

The aforementioned phenomena suggest that the *financial crisis that started in 2008 may be regarded as a special balance sheet recession accompanied by portfolio imbalances*, which alone explains why the present downturn incurs higher macroeconomic costs than a recession that takes place as part of the traditional business cycle. This is attributable to the fact that before the bursting of the bubble, economic agents of several sectors had a debt overhang, and afterwards they were forced to adjust their balance sheet, that is, they increased their savings to a great degree and curbed their consumption and investment expenditures. Prior to and during the balance sheet recession, economic agents make their decisions such that in the periods of upturn monetary policy has a substantial role, while fiscal policy is less important in terms of economic policy. On the other hand, in periods of economic downturn the efficiency of the traditional monetary policy instrument decreases, as the private sector's demand for funds practically disappears, while fiscal policy has greater importance in stimulating demands.

The common shortcoming of the present mainstream academic literature of mainly New Keynesian grounding and the economic policy responses to the balance sheet recession is that they both ignore the special feature of the financial crisis, namely that as a result of the build-up of financial imbalances it represents a portfolio imbalance. However, this has a number of economic policy consequences: *the portfolio nature of the balance sheet recession alone highlights the false nature of certain economic theories which were widespread and regarded as mainstream before the crisis and the economic policies built on them, and the incorrect diagnosis and management of the balance sheet recession also contribute to the present fragile recovery.*

*The current approaches to crisis management all assumed that the current crisis was similar to previous ones; it developed due to flow imbalances and that the economic agents strived to maximise their profits.* Accordingly, the economic policy answers proposed monetary policy stimulus and – to prevent crowding-out – a reduction of the budget deficit. However, during the adjustment that followed the balance sheet recession – due to the decline in the private sector's credit demand – the interest rate channel of monetary policy weakens and the efficient functioning of the exchange rate channel is also hindered by a number of factors. In addition, the reduction of the budget deficit also has an unfavourable impact on the economy, due to the fact that on the context of strong deleveraging by the private sector and close to the zero lower bound the coefficient of the fiscal multipliers is higher, which – in a synchronised balance sheet recession – increases the real economic costs of budgetary adjustments. Due to this, the confidence-building effect expected from the reduction of the deficit may not happen, or – in an unfavourable situation – it may even worsen due to the deterioration of the debt ratio, arising from the faster decrease of the denominator (GDP) than that of the numerator (debt).

*One of the economic policy lessons learnt from the balance sheet recession is that in times of downturn it is the duty of fiscal policy to provide itself – through its countercyclical behaviour – with sufficient room for the management of the balance sheet recession and for the support of deleveraging by the actors of the private sector. Some believe (Koo) that for the stimulation of aggregate demand it is sufficient to implement the aggregate demand-stimulating fiscal policy inspired by Keynes, while others (Borio; BIS) say that the existing room for fiscal manoeuvre must be used in a targeted manner, e.g. for bank recapitalisation and the support of debt restructuring. Apart from them, the IMF also acknowledged that it was a mistake to treat the East-Asian crisis as a “traditional” crisis and that fiscal austerity prolonged the crisis.*

*In addition, the present financial crisis also highlighted the fact that without elaborating a proper prudential regulation and applying it with due strictness, the self-regulation capacity of the market is limited in the modern financial system and it is inefficient in preventing the build-up of financial instabilities. Thus, in addition to disciplined fiscal policy, macroprudential policy must also play a key role in crisis prevention; it can contribute to strengthening the financial system’s shock resilience by mitigating the procyclicality of the financial system. After the crisis, this regulation must be transformed, which means that it is not enough to simply tighten it, but rather it must treat the financial instabilities – which are increasingly macroeconomic in nature – at their roots. In addition, experience shows that it would be too risky to rely solely on macroprudential instruments in the management of financial instabilities.*

This is suggested by the fact that, prior to the financial crisis, the strong growth in lending and asset prices took place in conjunction with low, stable inflation, while the outbreak of the crisis then highlighted the fact that it is rather expensive to ignore the financial cycles, bearing in mind the severe and lasting consequences thereof. In light of the experiences of the financial crisis, monetary policy strategy must be reconsidered in such a way that in addition to the real economy cycles the financial cycles must also play an explicit role in the shaping thereof.

*The pre-crisis mainstream economics ignored the development of the financial cycles, thus in the future – in order to prevent the development of new crises – financial stability risks must be systematically considered in the analytical framework of monetary policy. In the case of certain central banks, the shift to this approach has already started, which manifests itself – amongst other things – in the fact that the trends in lending and the asset price developments play an increasing role in the central bank’s communication.*

*The experiences of recent years have highlighted the failure of European crisis management, based on the mainstream, New Keynesian economic principles and*

*they confirm the success of the aforementioned crisis management strategies:* during the recovery between 2009 and 2011 there was globally harmonised fiscal easing; however, the United States and Japan were subsequently more cautious in commencing consolidation, while certain euro-area countries started to adjust the deficits that were deemed excessive, and the negative consequences can be still felt in the slower recovery. In addition, the bank recapitalisation in the euro area took place only with a delay, which prolonged banks' deleveraging. Finally, in the years that followed the outbreak of the crisis on the whole the monetary policy of the United States, the United Kingdom and Japan were more accommodating than that of the euro area; at the same time, as a result of the lasting accommodating monetary policies, the financial stability concerns related to the build-up of financial imbalances started to gain increasing importance. Based on the foregoing, it is necessary to revise the Brussels-Frankfurt-Washington consensus, recognise the importance of the macroprudential and fiscal policies and to ensure the cooperation thereof.

All in all, in light of the above, individual economic policies should support the recovery of the real economy without building up excessive financial imbalances. Thus, looking ahead, the attainment of sustainable growth requires, in addition to central bank intervention, further targeted fiscal policy measures concerning which, however, no economic policy consensus has yet been reached. This may be achieved by stimulating aggregate demand to an adequate degree and for an adequate period, by government measures aimed at the improvement of productivity and the boosting of investments, as well as by the direct support of the private sector's balance sheet adjustment. However, this is only possible if government debt is on a sustainable path in the long run as well, that is if fiscal policy has first created the room for manoeuvre of proper degree for the management of the downturn. *However, if no proper economic policy responses are given, the balance sheet recession may persist over the long run or become a recurring phenomenon.*

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# The impact of the easing cycle on the Hungarian macroeconomy and financial markets

*Dániel Felcser – Gábor Dániel Soós – Balázs Váradi*

*This paper examines the easing cycle initiated by the Magyar Nemzeti Bank in August 2012 and its macroeconomic and financial market impacts. It first presents the operation of the transmission mechanism under normal economic conditions and then addresses the main challenges of the post-crisis period. It gives an overview of the impact of the interest rate cycle on various financial markets and the macroeconomy. The paper concludes that based on the estimates provided by the Magyar Nemzeti Bank's forecasting model, the easing cycle has decreased the rate of the undershooting of the central bank inflation target and significantly contributed to increasing the level of economic output.*

**Journal of Economic Literature (JEL) Classification:** E43, E52

**Keywords:** easing cycle, monetary policy transmission

## 1. Introduction

The global financial and economic crisis which started in 2007–2008 sharply reduced global economic growth, due to the slump in investment activity and consumption demand. In addition, the protracted balance sheet deleveraging of economic agents indebted prior to the crisis and the tight lending conditions maintained by banks led to a downturn in lending activity, while the economic recession led to a material rise in unemployment, and the global drop in demand triggered decreasing inflation, followed by a sustained low-inflation environment in most economies. Following the onset of the crisis, advanced economies initially responded to adverse macroeconomic developments with both fiscal and monetary easing. Globally influential central banks (the European Central Bank, the Federal Reserve, the Bank of Japan and the Bank of England) first reacted to the economic recession by cutting their base rates, which relatively quickly reached or approached the nominal lower bound. In most cases, however, these steps proved to be insufficient monetary easing on their own to foster recovery, and thus other non-conventional monetary policy tools (such as quantitative easing or forward guidance) were needed, besides

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traditional interest rate policy. The crisis also affected Hungary deeply, and thus the necessary economic policy and monetary policy responses were needed. The Magyar Nemzeti Bank (MNB) responded with several measures to the challenges of the persistently low inflation environment, restrained lending activity and Hungary's external vulnerability.

The Magyar Nemzeti Bank responded to the challenges stemming from the sustained low inflation environment that emerged in the wake of strong disinflationary impacts by initiating an easing cycle in August 2012, and has since cut the key policy rate by 565 basis points in total over the past three years. The easing cycle affects the economy and economic agents' expectations through numerous channels (*MNB 2012b*). Alongside gradual interest rate cuts, the MNB also applied other non-conventional tools to address the monetary policy transmission difficulties caused by the crisis, in order to achieve the 3 per cent inflation target, boost economic growth and decrease Hungary's external vulnerability. In April 2013, the central bank launched its Funding for Growth Scheme in an effort to alleviate the disruptions in the lending to small and medium-sized enterprises and thus foster quicker economic growth. In view of the robust demand exhibited by enterprises for the Scheme, in September 2013 the Monetary Council of the MNB decided to continue the FGS. The programme managed to halt the shrinking volume of corporate credit and created credit conditions which improved enterprises' investment appetite, thereby improving monetary policy transmission. In order to boost the positive impact of the Funding for Growth Scheme, in February 2015 the Monetary Council decided to launch the FGS+, a scheme similar to the FGS but independent of it (*MNB 2015a*).

Besides fostering lending activity and economic growth, several other programmes were launched to mitigate Hungary's external vulnerability. In April 2014, in an effort to increase the financing of government debt from internal funds and concurrently reduce its dependence on external funds, in other words to reduce Hungary's external vulnerability, the central bank launched its self-financing programme and began the associated transformation of its set of monetary policy instruments. In the context of the latter, in August 2014 two-week MNB bills were first converted to a two-week deposit facility, and since the end of September 2015, the three-month central bank deposit has served as the MNB's main policy instrument. The Magyar Nemzeti Bank's support for the forint conversion of foreign currency-based mortgage household loans also contributed to mitigating Hungary's external vulnerability, and enabled financial system participants to prepare for averting the adverse impacts from exchange rate risk (*MNB 2015b*).<sup>1</sup> Monetary policy

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<sup>1</sup> On 15 January 2015, the Swiss central bank abandoned the exchange rate cap against the euro, resulting in the sudden and significant appreciation of the Swiss franc and causing significant money market turmoil worldwide. In Hungary, the conversion exchange rate for foreign currency-based mortgage household loans had already been fixed in November 2014, shielding the Hungarian banking system and households with Swiss franc-denominated loans from the strengthening Swiss franc.

transmission improved along with a material reduction in the volume of foreign currency loans: once forint loans became predominant, and the effectiveness of both the interest rate channel and the exchange rate channel improved.<sup>2</sup> This paper examines in more detail the rate cut cycle initiated by the Magyar Nemzeti Bank in August 2012 and its macroeconomic and financial market impacts.<sup>3</sup>

## **2. The monetary policy transmission mechanism in a traditional and non-traditional environment**

Modern central banks engaged in inflation targeting attempt to shape prices and developments in inflation mostly taking into account fluctuations in economic output as well. The monetary transmission mechanism refers to a complex, multi-level process through which monetary policy can exert influence on macroeconomic developments. In this section, we first present the operation of the transmission mechanism under normal economic conditions and then address the main challenges of the post-crisis period.

In advanced economies, central banks primarily shape market developments using short-term financial instruments. These instruments are mainly loans or deposits with the maturity of one or two days or a few weeks, and are made available to commercial banks at an interest rate set by central bank decision-makers. In Hungary, this instrument has been the three-month MNB deposit since September 2015, which replaced the earlier two-week deposit, with a yield equal to the central bank base rate. The use of longer-maturity instrument is not without precedent; many countries have opted to introduce longer-maturity active or passive central bank instruments in recent years. Although there are fewer international examples of central bank policy instruments having maturities of three months or longer, some examples can nevertheless be found: the Swiss central bank's key policy rate is the 3-month reference rate for unsecured interbank loans (LIBOR).<sup>4</sup>

Typically, five different channels of monetary policy transmission can be distinguished (*Figure 1*): the interest rate channel, the exchange rate channel, the asset price channel, the credit channel and the expectations channel. Each of these channels represents a unique mechanism through which monetary policy actions reach market demand. Prices can only react to changed demand with some lag, resulting in output temporarily diverging from its long-term level. Monetary

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<sup>2</sup> Due to the elevated ratio of foreign currency loans, an expansive monetary policy step taken earlier may have, contrary to the central bank's intentions, held back the consumption demand of households indebted in a foreign currency due to its impact in terms of exchange rate depreciation.

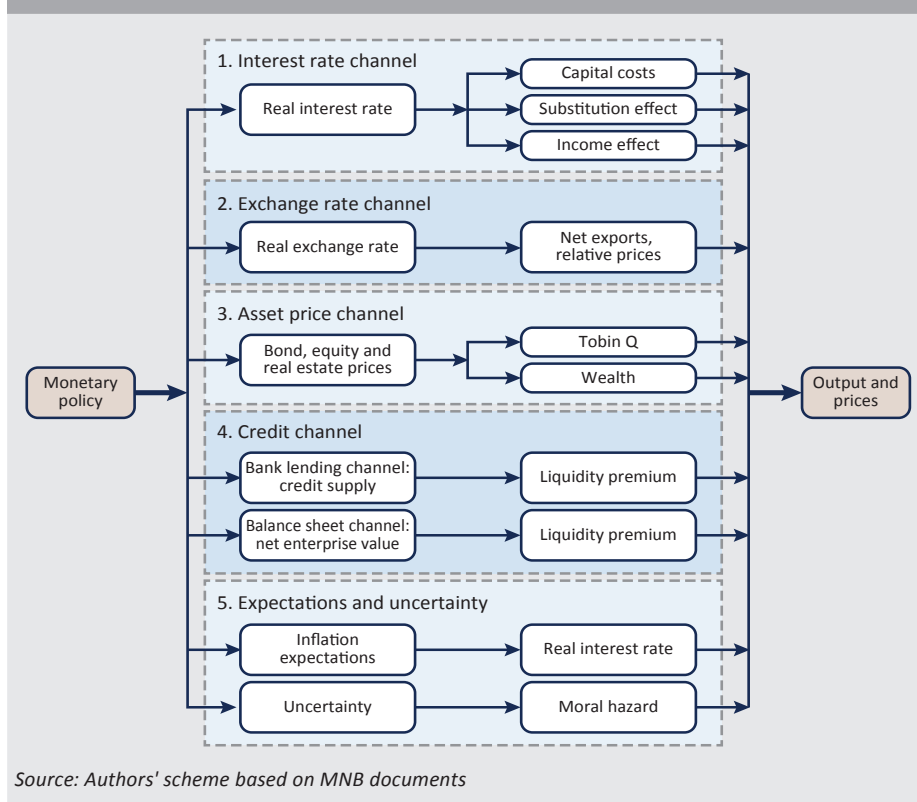
<sup>3</sup> The results of the first one and a half years of the FGS are presented by MNB (2014d).

<sup>4</sup> In addition, the Czech central bank holds a 3-month repo tender when necessary as another sterilisation instrument, while the Bank of England and the Swedish and Israeli central banks also use sterilisation instruments with maturities of one month or longer.

policy also impacts the supply side through production costs. The following section presents in detail the functioning of three channels of transmission during normal times.

**Figure 1.**

**A schematic illustration of the transmission mechanism**



The simplest monetary policy channel which transmits impulses is the interest rate channel. For example, commercial banks can access loans from the central bank at a lower cost following a central bank interest rate cut (if the key policy rate is linked to a loan instrument), or banks receive a lower interest on their deposits placed at the central bank (if the key policy rate is linked to a deposit instrument), which results in commercial banks cutting interest rates on their loans extended to customers or on the deposits placed with banks. Lower interest rates spur households to borrow more and reduce their savings, in other words, to consume more. Corporations are mainly influenced by interest rates in terms of their investment decisions: a lower interest rate enables more projects to generate the return needed for companies to be profitable, which boosts investments.

The economic impact of central bank interest rate cuts fundamentally depends on the extent and speed at which the interest rate cut passes through to the interest rates relevant for corporations and households. *Horváth et al. (2004)* demonstrated that in Hungary, commercial bank interest rates substantially follow changes in the central bank interest rate within a few months, in other words banks effectively transmit monetary policy decisions. In case of the corporate segment, loans and deposits typically feature short-term maturities and are therefore repriced relatively quickly. On the household side, however, repricing takes longer and only appears in forint-denominated instruments.

At the same time, in addition to its direct impact, a declining policy rate can also impact price-setting and production decisions through the exchange rate channel. In the case of free international movement of capital, exchange rates may react sensitively to interest rate policy. Interest rates and exchange rates are linked by interest rate parity. As international portfolio investors can choose freely among currencies, the returns achieved on various currencies cannot diverge for long. Actual return is determined by changes in the interest rate and the exchange rate together. If the total of interest rate and exchange rate gains falls short of the return attainable elsewhere, investors will turn from the specific currency until either interest rates or the appreciation of the exchange rate once again render it competitive. The exchange rate channel plays a prominent role particularly in small, open economies (such as Hungary) due to the fact that the value of domestic currency directly impacts the price of imported goods and the competitiveness of exported goods. A depreciation of the exchange rate triggers higher external demand for export goods, but it may go hand-in-hand with a decline in the import of foreign goods, which become more expensive. Domestic output thus expands overall, while prices increase due to tradable goods becoming more expensive.

The expectations channel is an important component of the transmission mechanism both in itself and as a part of other channels. If the monetary policy target is credible, rational economic agents expect it to be attained. In an inflation targeting system, this means that the inflation expectations of economic agents are anchored by the central bank inflation target. If an inflation shock hits the economy, economic agents trust that monetary policy will do everything in its power to neutralise the shock (e.g. react with an interest rate cut to expectations of sustained low underlying inflation), and thus they will not expect inflation to diverge significantly from the target in the medium term. Expectations anchored to the central bank's inflation target make the central bank's work "easier" in this case, as pricing behaviour and wage demands will not exert extra inflationary pressure and the inflation target can be achieved with a minimal growth sacrifice. Expectations therefore have often key importance in terms of monetary policy.

It is important to stress that in some cases, the monetary policy transmission mechanism functions differently than the theoretical framework. This is because in practice, various transmission channels are often unable to work effectively enough in the expected manner based on theory. After the crisis, the transmission mechanism was hindered in many countries across the world (for the euro area, see for instance *ECB 2013*).<sup>5</sup> The underlying reason was the excessive indebtedness of economic agents accumulated prior to the crisis and the protracted deleveraging that followed the onset of the crisis, in the context of which economic agents significantly increased their savings and restrained their consumption and investment expenditures (*Csortos–Szalai 2015*). As a result, the effectiveness of traditional monetary policy is decreased through deleveraging, and this prevails as long as the private sector engages in deleveraging and borrowing appetite does not begin to recover. In the wake of the reduction in the private sector's need for funding, the traditional instrument of monetary policy loses some of its effectiveness and thus the interest rate channel partly loses its ability to impact the economy. Nevertheless, deleveraging by economic agents may be fostered in different ways. For example, fiscal policy may be instrumental in encouraging the deleveraging of the private sector. The exchange rate cap scheme launched in spring of 2012 is an example of this applied in Hungary, which helped alleviate the exchange rate risk and interest burden of consumers with foreign currency loans. In addition, concurrently to cuts to the policy rate, state interest expenses and debt renewal costs decrease alongside government securities yields, leaving more leeway for fiscal policy to stimulate the economy. It also stimulates deleveraging if the depreciation of the real exchange rate contributes to economic recovery by improving competitiveness and thus contributing to export growth.

For Hungary, besides the interest rate channel of monetary policy, the smooth functioning of the exchange rate channel was also hindered due to the high ratio of foreign currency-denominated debt. Normally, a depreciating exchange rate alongside an accommodating monetary policy is able to contribute to the balance sheet deleveraging process by positively impacting output and income flow. In Hungary's case, however, given the high ratio of foreign currency debt held by economic agents prior to forint conversion, a potential exchange rate depreciation would have stimulated export, but adversely affected economic agents' net income position and resulted in weaker demand. This adverse correlation was somewhat offset by the early repayment scheme and the introduction of the exchange rate cap, while the forint conversion of foreign currency-based household mortgage loans in 2015 essentially put an end to households' high sensitivity to the exchange rate.

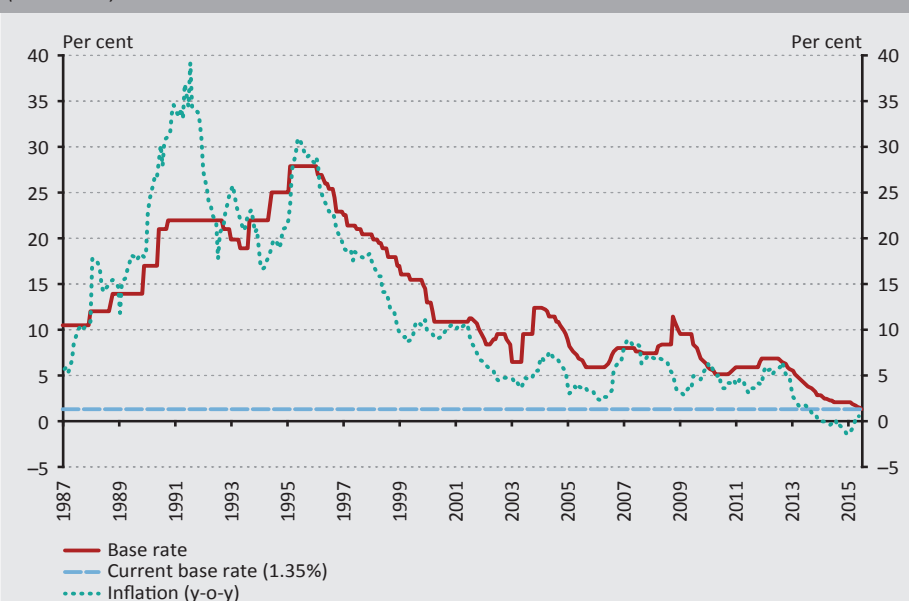
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<sup>5</sup> Conversely, according to the findings of *Borstel et al. (2015)*, the effectiveness of the euro-area interest rate channel did not change compared to the pre-crisis period, although traditional monetary policy lost some of its ability to shape premiums on bank loans. *Kucharčuková et al. (2013)*, examining several channels, also failed to identify any significant change in monetary policy transmission resulting from the crisis.

### 3. Phases of the Hungarian rate cut cycle

Starting from August 2012 the Magyar Nemzeti Bank deployed various tools to achieve its mandate defined in the Central Bank Act, first and foremost of achieving and maintaining price stability, and supporting — without jeopardising the primary objective — the maintenance of financial stability and the government's economic policy with the available instruments. Gradual interest rate cuts implemented starting from the end of summer 2012 have brought the central bank's key policy rate down by 565 basis points overall, to a historic low (*Figure 2*). The easing cycle was initially enabled by Hungary's gradually improving risk perception and the permanently loose monetary policy stance adopted by globally influential central banks, and also supported by Hungarian fiscal policy actions. During the second phase of the easing cycle — while Hungary's risk perception continued to improve — strong disinflation and supporting economic growth called for a continuation of monetary easing. The uncertainty in the international financial environment nonetheless warranted a cautious monetary policy, which was implemented with a smaller step than the earlier 25 basis points. The third phase of the easing cycle commenced in March 2015, when increasing downside risks to inflation pointed in the direction of further easing of the monetary stance.

**Figure 2.**  
**Developments in the policy rate and inflation in Hungary**  
(1987–2015)



Source: MNB, Pénzügyi Közlöny, CSO, based on Madarász–Novák (2015)

At the beginning of the easing cycle, the increase in international risk appetite and the gradual improvement in Hungary's risk perception supported rate cuts implemented in gradual steps. In addition, the sustained accommodative monetary policy conducted by globally influential central banks and the fiscal actions taken in Hungary both increased the room for manoeuvre in Hungarian monetary policy. At the beginning of the rate cut cycle, although inflation substantially exceeded the central bank's 3 per cent inflation target, the baseline projection assuming an endogenous interest rate trajectory predicted inflation decreasing to the central bank's target over the horizon relevant for monetary policy along with the opportunity for a material easing of monetary conditions, in the case of a sustained improvement in risk perception and the fading of shocks increasing the price level (*MNB 2012a*). This is because above-target inflation was mainly attributable to idiosyncratic factors, and once these transient factors had faded, a strong disinflationary period commenced from late 2012.

Prior to the start of the easing cycle, global investor sentiment was favourable. The material improvement in risk appetite was mainly linked to the positive events surrounding the euro area's stability. The still uncertain financial market environment in early 2012 had significantly improved in the wake of the Greek elections in June, the Spanish bank bailout package and governor of the ECB, Mario Draghi's statement issued in late July,<sup>6</sup> and later by the announcement of the introduction of non-conventional tools (relaunch of the ECB's bond purchases<sup>7</sup>). As risk appetite increased, the expected premium on emerging market assets decreased tangibly. In parallel, the Hungarian risk spread also shrank significantly: from the beginning of June 2012 until the end of August, the Hungarian five-year CDS spread shrank by 200 basis points, and ten-year yields also fell strongly in line with these developments. With the improvement in risk perception, Hungary's required risk premium gradually declined to reach the emerging market average, which was also fundamentally driven by improving fiscal discipline (*MNB 2014a*). Following budgetary adjustments, Hungary's fiscal deficit according to the ESA methodology edged down to 2.3 per cent of GDP in 2012. In addition, government debt embarked on a downward path, which went hand-in-hand with a reduction in Hungary's external vulnerability. In the context of the supportive global monetary policy setting, the Monetary Council of the MNB first cut its key policy rate in

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<sup>6</sup> In his speech given on 26 July 2012, Mario Draghi alluded to the possibility of the ECB conducting a more flexible monetary policy in the future, firmly helping crisis management within the euro area. In his statement, the governor of the ECB stressed that increase in the size of sovereign premia, amongst other things, hampers the functioning of the monetary policy transmission channel, and that the central bank will use every tool within its mandate to address the issue and to maintain the stability of the euro (*ECB 2012a*).

<sup>7</sup> The ECB announced on 2 August 2012 that, within the framework of the so called "Outright Monetary Transactions" (OMT) programme, the ECB if needed – and if the given euro-area member state fulfils criteria laid down by the ECB – will purchase sovereign government bonds on the secondary market to ensure the adequate functioning of the monetary transmission mechanism (*ECB 2012b*).



increments of 25 basis points from the initial 7 to 4 per cent between August 2012 and July 2013.

Hungary's risk perception continued to improve during the second phase of the easing cycle thanks to its more positive net lending capacity compared to vulnerable emerging countries, disciplined government policy and the lifting of the excessive deficit procedure in place since 2004. In addition, the monetary policy of globally influential central banks remained accommodative during this period, and thus in this broadly supportive international money market sentiment, Hungary's risk spread shrank to pre-crisis levels. Besides these supportive factors, subdued domestic demand, the negative output gap, the reduction of administered prices in a series of steps, moderate imported inflation and the gradual reduction in inflation expectations gave rise to a strongly disinflationary environment within the Hungarian economy, warranting a continuation of the easing cycle.

The disinflation observed from late 2012 was the combined result of several factors. The drop-out of former indirect tax rises from the base and the series of administered price cuts significantly reduced the direct inflationary impacts stemming from government measures. In addition, the slack that emerged during the crisis and continues to prevail in the economy, subdued domestic demand and waning global inflation also reinforced disinflation in Hungary. As a result of these factors, indicators reflecting developments in underlying inflation gradually declined in 2013 and continue to remain low.<sup>8</sup> Falling inflation expectations also contributed to sustained low inflation environment alongside a decline in actual inflation. In addition, inflation expectations aligned with the central bank target also reduced inflationary pressure from the labour market through lower wage dynamics, further increasing the room for manoeuvre in monetary policy.

Overall, the lasting disinflationary environment, inflation falling below the central bank's 3 per cent target and, looking forward, the inflation outlook warranted a further easing of the monetary stance. Accordingly, the central bank cut the key policy rate by an additional 190 basis points to 2.1 per cent by July 2014, in increasingly smaller increments in light of potential adverse external shocks, and then ended its two-year continuous easing cycle. In its forward guidance, the Monetary Council stressed that "the macroeconomic outlook points in the direction of persistently loose monetary conditions" (*MNB 2014b*).

The central bank then maintained the base rate at 2.1 per cent until March 2015. In the Monetary Council's assessment, there continued to be a degree of slack in the economy and the real economy's disinflationary impact decreased looking forward, and maintaining the prevailing monetary conditions would be conducive

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<sup>8</sup> From January 2014, the Magyar Nemzeti Bank publishes its measures of underlying inflation with monthly frequency.

to inflation in line with the target over the medium term. Reacting to the further decline in inflation mainly due to falling energy prices, in its December 2014 Inflation Report the central bank signalled that downside risks to inflation had increased (*MNB 2014c*), but macroeconomic prospects at the time did not warrant further cuts to the key policy rate.

In March 2015, however, following a comprehensive assessment of the current Inflation Report, the Monetary Council decided to relaunch the easing cycle and carry out a 15-basis-point interest rate cut. Further monetary easing was warranted by increasing downside risks to inflation, as decision-makers deemed that “the probability of second-round effects taking hold in the wake of the change in inflation expectations has increased” (*MNB 2015c*). To achieve the inflation target over the monetary policy horizon, the central bank cut base rate in steps of 15 basis points to 1.35 per cent by July 2015, and then ended its interest rate-cutting cycle renewed in March. The Magyar Nemzeti Bank cut its key policy rate by an overall 565 basis points between August 2012 and July 2015, which was in line with the accommodative monetary policy conducted by globally influential and regional central banks in an international context.<sup>9</sup> In its announcement closing the cycle, the central bank indicated that based on its forecast, macroeconomic prospects pointed in the direction of loose monetary conditions over a sustained period.

#### 4. Impact of the easing cycle on Hungarian financial markets

The gradual decrease in the central bank base rate fed through to financial market interest rates as the first step of monetary policy transmission, while also exerting a positive impact on government securities yields. In addition to monetary policy easing, other international and domestic events and developments (such as changing risk perception) are also reflected in interest rate and yield levels, but over a longer time horizon spanning several years a close correlation can be identified between the key policy rate and market interest rates. Based on these similar tendencies, monetary policy may have contributed substantially to bringing interest rates and yield levels to a historical low. Meanwhile, the gradual, cautious interest rate moves and central bank’s forward guidance helped the easing cycle

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<sup>9</sup> During the period under review, the Federal Reserve maintained its 0–0.25 policy rate following the tapering of its asset purchase programme and continued to maintain a very loose monetary policy stance. After the base rate had reached the nominal lower bound, the ECB announced additional non-conventional instruments and began its government bond purchase programme in March 2015 in an effort to further ease monetary conditions. The Bank of Japan, with interest rate had been zero per cent for a sustained period, has also rolled out additional non-conventional tools: it announced its Quantitative and Qualitative Monetary Easing Programme in April 2013. The Bank of England was also incapable of implementing monetary easing using conventional tools once its key policy rate reached 0.5 per cent, and so it launched its Funding for Lending Scheme in July 2012. Central banks within the region also carried out substantial monetary easing during this period: the Romanian central bank cut its base rate by 350 basis points and the Polish central bank by 325 basis points between August 2012 and July 2015, while the Czech central bank, reaching its nominal lower bound, used the koruna’s exchange rate as a monetary policy instrument to further ease monetary conditions.

unfold without disrupting the market or jeopardising financial stability. The following section looks at the impact of the interest rate cycle on various financial markets and looking forward market analyst expectations.

Interest rate cuts gradually fed through to short-term money market yields (*Table 1*). During the easing cycle, short-term money market yields correlated strongly with the declining base rate while remaining within the interest rate corridor. Hungarian ex-ante real interest rates (over a one-year period) remained close to the emerging market average for a large part of the period in the low inflation environment coupled with the falling interest rate (*MNB 2014a*).

Although the narrowing of the Hungarian interest spread may have partly contributed to the depreciation of the forint against the euro, thanks to the gradual nature of interest rate cuts and the forward guidance, this impact was felt gradually, coupled with a trendlike decline in risk indicators and without triggering a rise in volatility. Most of the volatility in the exchange rate and risk perception stemmed from international and domestic factors independent of the MNB (primarily the tapering of the Federal Reserve's quantitative easing, geopolitical tensions and the uncertainty surrounding foreign currency loan contracts prior to forint conversion). Interest rate cuts broadly went hand-in-hand with a depreciation of the forint exchange rate consistent with the achievement of the inflation target and not giving rise to financial stability risks.

**Table 1.**  
**Developments in the central bank base rate and various interest rates and yields**

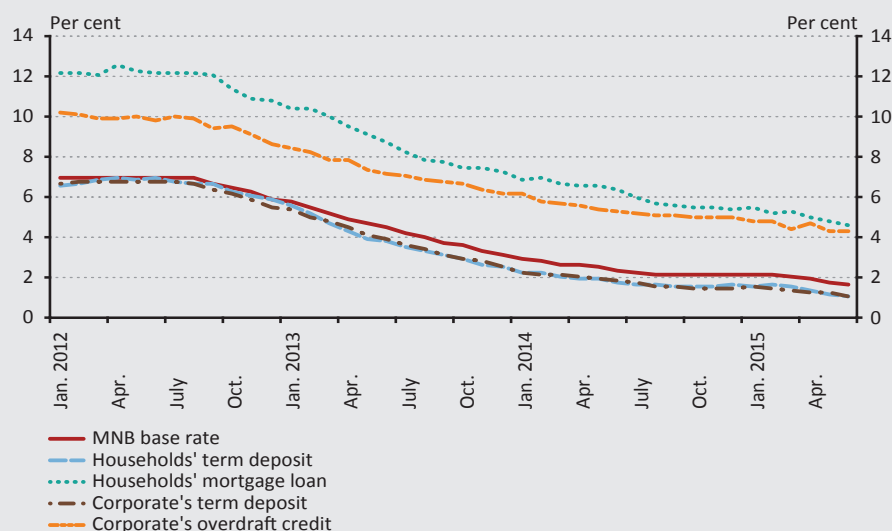
	Base rate	BUBOR 3M	Government securities' yields					Bank interest rates				CDS (5-year)
			3-month	12-month	3-year	5-year	10-year	Households' term deposit	Households' mortgage loan	Corporate's term deposit	Corporate's overdraft credit	
<b>Start of interest rate cycle</b>	7.0	7.15	6.8	6.8	6.8	7.1	7.4	6.7	12.1	6.6	9.9	425.0
<b>End of 2-year cycle</b>	2.1	2.14	1.8	1.9	3.0	3.3	4.2	1.7	5.9	1.7	5.2	169.9
<b>Re-start of the cycle</b>	2.1	1.97	1.5	1.7	2.1	2.5	3.2	1.6	5.3	1.4	4.4	131.5
<b>Current</b>	1.35	1.36	0.9	0.9	2.2	2.8	3.7	1.1	4.6	1.1	4.3	149.8

*Note: Interest rates on bank products include averages weighted by the contractual amount (June). Dates: start of the interest rate cycle: 28 August 2012, end of the two-year interest rate cycle: 23 July 2014, relaunch of the interest rate cycle: 24 March 2015, current: 31 July 2015.*

*Source: Bloomberg, MNB, Government Debt Management Agency*

Cuts to the central bank base rate also decreased bank interest rates. Due to reference pricing, the prudent reduction in the central bank base rate exerts a continuous impact on the interest rates on bank products. Since the launch of the interest rate cycle, an overall decline of 750 basis points was observed in household mortgage loans and a nearly 570 basis point decline was observed in corporate overdraft credit (Figure 3). The former also saw an additional decline of 50-60 basis points compared to February 2015 since the relaunch of the easing cycle. The easing cycle significantly reduced corporate and household interest burdens through lower bank interest rates on loans.

**Figure 3.**  
**Developments in the MNB base rate and the interest rates of certain forint loan and deposit products**



Note: With interest rate fixation of at most one year for household mortgage loans.

Source: MNB

Households' net savings remain elevated despite the interest rate cuts. The interest rate cuts therefore — unsurprisingly in the context of deleveraging — did not materially change households' consumption and savings decisions: households' borrowing appetite remained subdued despite falling interest rates on loans on the lending side, while the reduction in savings that should have theoretically occurred due to falling deposit rates was offset by several factors (MNB 2014a). Firstly, households taking part in the early repayment scheme saw a sharp reduction in their financial assets, which may have significantly increased their propensity to save, and secondly, GDP-proportionate savings increased further due to higher income growth. Finally, self-provision and pre-savings have also played a role,

reinforced by the tax allowances on longer-term savings, uncertain growth prospects during the years of the crisis and demographic trends.

Despite the decreasing interest rate level, Hungary's external surplus has been elevated for a longer period now, which reduces the risk premium. The yield curve was pushed downward in the wake of central bank measures and fiscal consolidation, also decreasing the financing costs of forint debt. Lower forint interest expenditures may have also narrowed the income balance deficit and thus improved the external balance. Over the past period, certain debt ratios with significant relevance in terms of Hungary's vulnerability have also improved, which may have contributed to the decrease in the risk premium.

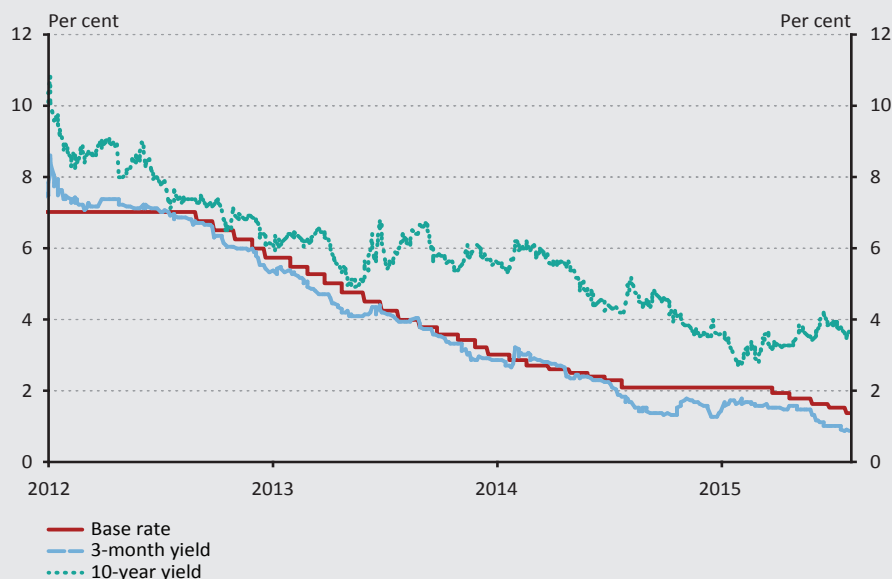
Government securities yields have also fallen substantially since the start of the easing cycle. Central bank programmes (the easing cycle, the self-financing programme, transformation of central bank instruments) also contributed markedly to falling yields and higher demand for government securities, along with the international environment, the favourable outlook for the Hungarian economy and disciplined Hungarian fiscal policy. The decline in yields varied across various maturities, standing at 585 basis points on average for maturities of one year or less, and 355 basis points on average for longer maturities (10 and 15 years) by the end of July 2015. The self-financing programme set the objective of changing the structure of government debt financing, and may have also contributed to declining yields. The fall in yields translated to a 420 basis point and 170 basis point decline until the announcement of the self-financing programme (April 2014), while the central bank cut the key policy rate by 440 basis points. The decline in yields since August 2012 has been of 480 basis points on average over the past period. From March 2015, the average impact of the relaunch of the interest rate cycle and the second phase of the self-financing programme on shorter maturities was in line with the cut to the key policy rate, however in case of longer maturities, international trends resulting in rising yields prevailed.

During the easing cycle, yields on short and medium (3–5 years) maturities closely moved with the falling base rate, and after the announcement of the self-financing programme, they are materially lower than the Hungarian key policy rate due to rising demand. Long-term yields did not follow the decline in the base rate as closely, but did nonetheless exhibit a broad trend-like decrease. This is no surprise, as monetary policy is able to influence short-term yields more effectively, but the central bank is also able to impact longer maturity yields through a predictable interest rate cycle and forward guidance. The decline in longer maturity yields was supported by falling inflation expectations, disciplined fiscal policy and significantly improving external balance, while developments in international risk appetite also supported the process throughout the majority of the period. At the same time, long-term yields (10 years or more) began rising in mid-2015 mainly due to the

heightened probability of Greek sovereign default, rising inflation expectations for the euro area and expectations regarding the Fed's interest rate hike (Figure 4).

**Figure 4.**

**Developments in government securities yields and the base rate**



Source: MNB, Government Debt Management Agency

In the wake of the significant decline in Hungarian government securities yields, general government interest savings may be over 1.7 per cent of GDP in the long run (Kicsák 2015). The degree of interest rate savings will increase in parallel with the gradual repricing of debt. Compared to the initial 2012 trajectory — assuming an unchanged base rate and government securities yields — interest expenses had decreased by nearly 0.6 per cent of GDP by 2014, while estimated interest expenses may shrink by an annual 1.7 per cent of GDP in the long run, assuming a sustained low interest environment, a reduction in the ratio of foreign currency debt parallel to a rise in forint financing and a stable forint exchange rate (Table 2). Based on the estimate, 0.2 per cent of the decline in the long run is linked to the transformation of the set of instruments announced in June and implemented in September 2015.

The interest rate cuts also materially improved the MNB's net interest income. The key policy rate cut directly reduces the central bank's interest expense on one hand, while exerting indirect impacts on the other hand: demand for cash, representing an interest-free source of funding for the central bank, increases due to its lower opportunity cost, and falling deposit rates lead to substantial portfolio restructuring

among households (Kékesi *et al.* 2015). The MNB's cumulative interest savings since the start of the easing cycle by mid-2015 is nearly 2 per cent of GDP, despite the rise in the volume of sterilisation instruments. At the same time, the financing costs and risks of the consolidated general government are also shrinking.

<b>Table 2.</b>										
<b>An estimate of cumulative interest savings by the state and the MNB</b>										
		2012	2013	2014	2015	2016	2017	2018	2019	After 2020
Government's interest saving	– percentage of GDP	0.04	0.3	0.6	0.9	1.1	1.3	1.4	1.5	1.7
	– billion forint	12	93	192	291	400	496	542	592	721
MNB's interest saving	– percentage of GDP	0.01	0.5	1.4	1.8					
	– billion forint	4	143	452	620					
<i>Note: The MNB's interest savings based on the forint interest expenses on the stock of sterilisation instruments, reserve requirements and government deposits. The 2015 value factors in the MNB's interest savings until the middle of H1.</i> <i>Source: Kicsák (2015), MNB calculation</i>										

The gradual feed-through of prudent interest rate cuts into market yields, the flat interbank forward yield curve and analysts' inflation expectations signal that market participants regard the low inflation environment as being in line with the central bank's inflation target. The median interest rate expectations of market participants for end of 2015 and 2016 fell in parallel with the easing cycle, while inflation expectations are gradually approaching the 3 per cent inflation target following a temporary negative inflation environment (MNB 2014a). Looking forward, when one-off price level reducing items have a smaller impact on forecasts, inflation expectations remained firmly anchored.

## 5. Domestic macroeconomic impacts of the easing cycle

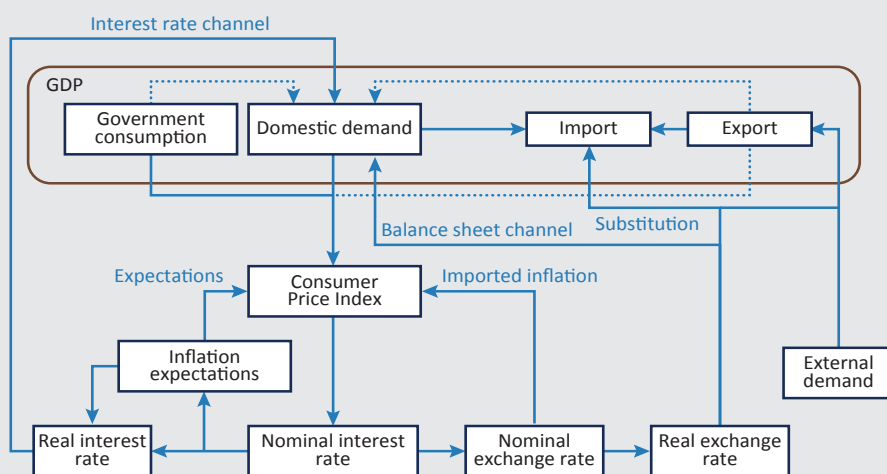
### 5.1. Brief summary of the forecasting model

The MNB's macroeconomic forecasts are prepared based on numerous expert and partial models in addition to the main Monetary Policy Model (MPM). At the same time, the central model incorporates and compresses the different expert inputs and illustrates the main channels of monetary policy transmission. These characteristics make it suitable for estimating the macroeconomic impacts of the easing cycle on the Hungarian economy. Before presenting the estimates, we briefly present the main features of the model.<sup>10</sup>

<sup>10</sup> For a more in-depth description of the model, see Szilágyi *et al.* (2013).

The MPM is a quarterly macroeconomic model containing the main macroeconomic indicators and relationships, calibrated based on theoretical and empirical relations, and describing a small, open economy. The members of this family of models share the common trait of describing key mechanisms through four relations. (i) Domestic demand depends on disposable income and the real interest rate. (ii) The exchange rate depends on current and future interest rate spreads and the risk premium. (iii) Inflation depends on demand and production costs. (iv) The interest rate path implied by the model is described by the Taylor rule, according to which the interest rate path is shaped by the expected indirect tax-adjusted rate of inflation and the current cyclical position of the real economy.

**Figure 5.**  
**Flowchart of the MPM**



Source: Szilágyi et al. (2013)

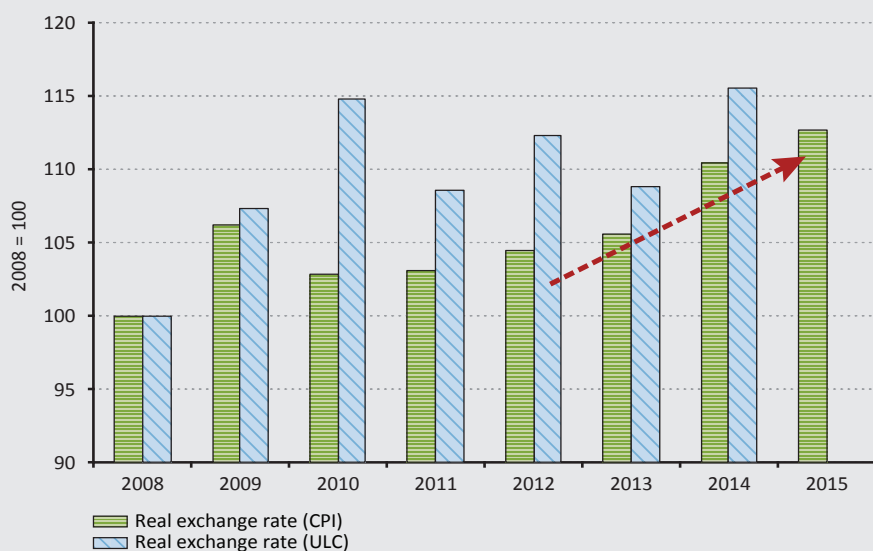
## 5.2. Macroeconomic impacts of the easing cycle

In small, open economies such as Hungary, interest rate cuts bolster the economy's price and cost-based competitiveness through depreciation of the real exchange rate, thereby fostering more dynamic export growth. Hungary has seen both its so-called unit labour cost-based and consumer price-based real exchange rate depreciate over the past period (*Figure 6*). In the first part of the review period, the direct interest rate channel may have been less effective on households' consumption and savings decisions due to the high outstanding foreign currency debt burden accumulated prior to the crisis, and thus the stimulating effect of interest rate cuts on the economy may have been tied to the pick-up in exports,



rather than to rising consumption. At the same time, the forint conversion undertaken this year removed a large portion of the high-risk item that was foreign currency credit from household balance sheets, and therefore looking forward, the stimulating effect of the interest rate channel may increase, and thus interest rate cuts may contribute to a greater extent to stimulating consumption this year and next year, helping boost domestic demand. In summary, interest rate cuts may have thus boosted the Hungarian economy through exports stimulated through the depreciating real exchange rate prior to forint conversion, and rising consumption may contribute increasingly to Hungarian economic growth going forward after forint conversion.

**Figure 6.**  
**Developments in real exchange rate indicators**



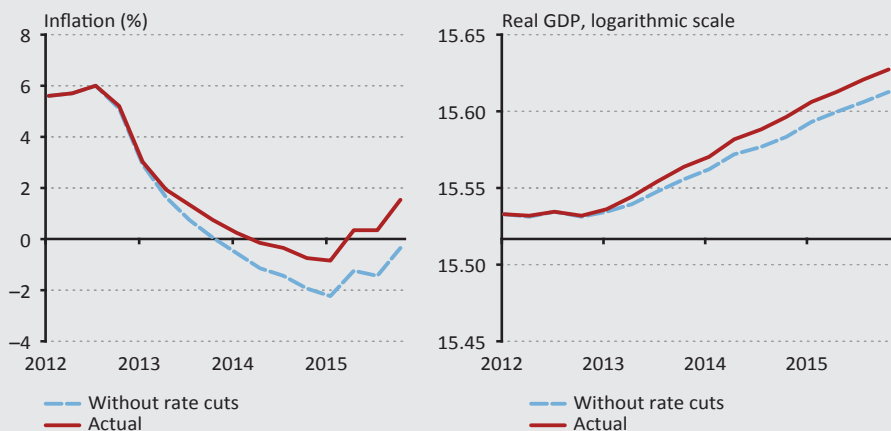
Notes: A higher value represents depreciation. Average taken until April in 2015.  
Source: MNB calculation

Since August 2012, the key policy rate has gradually declined to its current level, which – while decreasing the rate of undershooting the central bank inflation target – also contributed substantially to elevating the level of economic output. The central bank’s changes in the interest rate feed through to prices with a certain lag (typically from one year), so the interest rate cuts of the past period will exert their impact this year and next year. The overall easing cycle may have increased average inflation by 1.1 percentage point last year and may increase average inflation by 1.6

percentage point this year. Without interest rate cuts, inflation would have possibly dipped significantly into the negative range (below –1 percent) both last year and this year, creating the risk of a period of persistent deflation (*Figure 7*).

**Figure 7.**

**Actual developments in inflation and real GDP, and estimated developments in the absence of interest rate cuts**



Source: CSO, MNB calculation

Since the beginning of the easing cycle, the Hungarian economy's price and cost-based competitiveness has improved in regional terms, which may have contributed to economic growth through the pick-up in exports. In addition, the falling key policy rate also gradually boosted consumption and investments. In 2013 and 2014, the stimulating effect of interest rate cuts may have been felt primarily through improving export performance thanks to the gradually depreciating real exchange rate. At the same time, from 2015 — in the wake of the forint conversion of the majority of households' foreign currency loans — the interest rate channel of monetary policy transmission will increase in efficiency, so a far lower interest environment will exert a much more direct impact on households' consumption and savings decisions, thereby increasing the contribution of domestic demand to growth. Overall, due to the above impacts, interest rate cuts have in and of themselves boosted the performance of the Hungarian economy in the last three years (*Table 3*).

**Table 3.**

**Impact of the easing cycle on inflation and GDP level<sup>11</sup>**

Period	Inflation (percentage point)	GDP level (per cent)	Contribution of domestic demand to GDP	Contribution of net export to GDP
2013	0.4	0.5	0.1	0.4
2014	1.1	1.1	0.5	0.6
2015	1.6	1.4	0.9	0.5

Source: MNB calculation

## 6. Conclusion

The Magyar Nemzeti Bank's three-year easing cycle has decreased the rate of undershooting the central bank inflation target and contributed materially to elevating the level of economic output, primarily through the interest rate channel and exchange rate channel of the monetary policy transmission mechanism. Of these two channels, the relative role of the interest rate channel may have grown after the forint conversion of foreign currency household mortgage loans, and thus the conversion may have reinforced the impact of monetary policy looking forward.

Interest rate cuts fed through gradually to short-term money market yields, which moved closely with the declining base rate during the cycle. The base rate cuts significantly reduced corporate and household interest burdens through lower bank interest rates on loans, while lower government securities yields allowed substantial interest savings for the general government.

According to the Magyar Nemzeti Bank's most recent forecast (June 2015), price stability can be achieved in the medium term with persistently loose monetary conditions. A degree of slack continues to prevail in the economy and the inflationary environment is likely to remain low for a sustained period. Based on the expected measures to be taken by the central banks of advanced economies (USA, euro area, Japan) and the region, a low interest rate environment is expected to persist at the international level, which promotes maintaining the low interest rate level currently prevailing in Hungary. A potential future deterioration in global

<sup>11</sup> Average impact calculated for each period. We quantified the macroeconomic impacts of the easing cycle using our current forecasting model (the Monetary Policy Model). This model incorporates and compresses the different expert inputs and illustrates the main channels of monetary policy transmission. At the same time, the model, like any economic model alone, only capable of illustrating a simplified form of reality and can only be interpreted with a certain degree of parameter uncertainty. Parameter uncertainty in this case is primarily linked to the key parameters of the transmission channels shown in the model, the values of which we set using a 90 per cent confidence interval based on the model's past data to obtain the uncertainty stemming from point estimates. Based on this, by the end of the estimation horizon (2015), the model's parameter uncertainty gives rise to a  $\pm 0.3$ – $0.4$  percentage point range for the impact applying to inflation and output levels compared to the point estimate included in the table.

money market sentiment could also affect Hungary's risk perception adversely, but if the country's risk perception does not deteriorate markedly, it could maintain the low level of interest rates for a sustained period.

The Funding for Growth Scheme and the FGS+ managed to halt the shrinking volume of corporate credit and created credit conditions improving enterprises' investment appetite in the recent period. Looking forward, these programmes may provide further incentive for economic agents to reduce their risk aversion, which increased significantly during the financial crisis, and for the easing of credit terms, thereby restoring lending activity and allowing it to continue with healthier dynamics. The forint conversion of foreign currency-based household mortgages and the lower dependency on external funding thanks to the central bank's self-financing programme have decreased Hungary's external vulnerability. In addition, these credit schemes, forint conversion and the transformation of the set of monetary policy instruments are also expected to improve monetary policy transmission.

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# Phasing out household foreign currency loans: schedule and framework

*Pál Péter Kolozsi – Ádám Banai – Balázs Vonnák*

Due to a peculiar constellation of demand, supply and institutional factors, Hungary faced the 2008 economic crisis with a massive portfolio of household foreign currency loans. After several measures to mitigate the exposure of households, the permanent solution of phasing out foreign currency and foreign currency based mortgage loans was achieved in 2014. In this article, we argue that at the time of conversion the legal and economic conditions reduced the unavoidable risks to a reasonable level, where the expected social and welfare benefits of the conversion offset such risks. The implementation of the conversion was made possible by the coordinated foreign currency sale programme of the MNB. Under the programme, the MNB provided a total amount of EUR 9.1 billion to the banking system in a coordinated fashion, while promoting banks' cooperation and ensuring central bank FX reserve adequacy. Owing to the central bank's programme, the conversion took place without significant impact on the forint exchange rate.

**Journal of Economic Literature (JEL) Classification:** E58, E65, G21

**Keywords:** mortgage loans, financial stability, monetary policy, debt consolidation, conversion

## 1. Introduction – The circumstances of foreign currency lending to households in Hungary

On 15 January 2015, the Swiss National Bank decided to abandon the exchange rate cap on the Swiss franc against the euro. As a result, the forint exchange rate tumbled nearly 20 per cent against the Swiss currency. A few months earlier, these developments would have had a major impact on the financial position of hundreds of thousands of Hungarian families, the functioning of financial markets and the stability of the banking system, as had been seen on numerous occasions during the years of the crisis when the forint exchange rate experienced sharp downward swings. In this case, however, a shock did not materialise; by the time

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The manuscript was closed in July 2015 so the study does not include the phasing out process – launched in August 2015 – of the other foreign currency and foreign currency based loans.

of the announcement a large portion of households' foreign currency mortgage debt had been converted, in economic terms, into forint contracts.

The excessive foreign currency indebtedness of households has been a prominent topic in public policy discussions in recent years. While public discourse was dominated by the predicament of debtors, foreign currency lending posed a risk to the national economy in general and to all stakeholders of the economy in particular, typically not immediately during the accumulation of foreign currency debt, but after the deterioration of the economic environment. These risks and systemic problems led to the intervention of the state against unsecured foreign currency loans to households<sup>1</sup> and the phasing-out of the affected foreign currency mortgage loans in the autumn of 2014.

According to the literature, while households' indebtedness in foreign currency may have rational reasons (see, for example, *Ize 2005*), it may entail substantial risks for households. Households are generally incapable of managing the exchange rate risks arising from foreign currency borrowing or are unwilling to purchase products providing protection against exchange rate risk as they thus lose their "proceeds" from the interest spread. Ultimately, they take on an open exchange rate position. Debtors can still be prepared to handle the ensuing problems, provided that the amount of the borrowing does not exceed the amount that they could repay in the domestic currency. In this case, debtors would be able to make monthly payments even under an adverse exchange rate shock and higher instalment amounts. More often than not, however, debtors opt for foreign currency borrowing precisely because it allows them to borrow a larger amount than they would have access to in the domestic currency. In short, they are unprepared for the negative effects of increased long-term exchange rate volatility. Foreign currency loans, therefore, essentially facilitate the debt overhang of households. It should be noted that initially banks in Hungary offered products providing protection against the exchange rate risk, but they did not become popular among households and subsequently they gradually dropped out of the range of banking products, while mandatory exchange rate insurance has not been implemented.<sup>2</sup>

As opposed to households, the banking sector has access to a far more extensive toolset to mitigate the risks arising from foreign currency loans to households. Nevertheless, foreign currency lending to households with no natural hedge to eliminate exchange rate risk could represent a significant additional risk factor.

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<sup>1</sup> Unsecured foreign currency loans to households mean that, following the disbursement of foreign currency loans, a high percentage of households began to run open foreign exchange positions.

<sup>2</sup> For details on the possibility of a mandatory exchange rate insurance scheme, see *Asztalos (2013)*. We should also consider the axiom that the more protection a customer purchases against exchange rate risk, the more his interest rate will converge to the interest rate on a forint loan. Therefore – in extremis – the mandatory introduction of full exchange rate insurance coverage would be tantamount to putting a ban on foreign currency lending.

Typically, banks do not – and due to regulatory constraints, cannot – take on large open exchange rate positions; therefore, exchange rate movements do not have a direct impact on their loan portfolio. Debtors' exchange rate risks, however, may manifest themselves as increasing credit risks for banks. A shock-related, drastic surge in defaults may give rise to an unmanageable degree of losses. In addition, exchange rate depreciation raises the forint-denominated capital requirement of foreign currency loans, which will also have an adverse effect on capital adequacy. Besides increasing credit risks, banks may also have to face rising liquidity risks as a result of foreign currency lending. Banks often take recourse to foreign exchange swaps to obtain the foreign currency liquidity required for lending in foreign currency, and exposure to the swap market may involve severe risks, partly because of the short maturity of swap contracts, and partly because these contracts generally stipulate a margin requirement.

Due to these problems, the banking sector and households may impose a heavy burden on the state and ultimately, even the state faces increasing risks associated with foreign currency loans. If credit risks materialise, state intervention may become necessary both in the banking sector and the household sector. On the one hand, the government is expected to address the *en masse* default of debtors in light of the social problems involved. On the other hand, state involvement may also become necessary if the solvency of certain banks falters. Supervisory tools may need to be mobilised to resolve the situation of the affected bank, with a possible need for the indemnification of customers through the deposit guarantee scheme. Both cases may deplete state coffers. Depending on the bank's size, ownership structure and systemic position, the state may have to undertake the recapitalisation of the bank. Problems stemming from the increasing liquidity risks may also call for state intervention. Excessive foreign currency lending is also problematic because of the vulnerabilities<sup>3</sup> resulting from the domestic sector's exposure to exchange rate risk and the positions reflecting this exposure in the financial system, which, in turn, may distort monetary policy transmission and impair the efficiency of the central bank's monetary policy.

In the following, we address the issue of the phasing-out of Hungarian households' foreign currency and foreign currency based loans. The study is composed of the following parts: In the first chapter, we provide a brief overview of the accumulation of the portfolio in Hungary and the measures adopted during the crisis to tackle and alleviate the problem. In the second chapter we argue that before 2014 the conditions were not suitable for a comprehensive and efficient conversion. The third chapter presents the framework and parameters of the central bank's foreign currency sale programme supporting the phasing-out of household foreign currency loans. Finally, we sum up the expected positive effects of phasing out household foreign currency loans on the national economy.

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<sup>3</sup> See: Kovács (2013) and Lentner (2015).



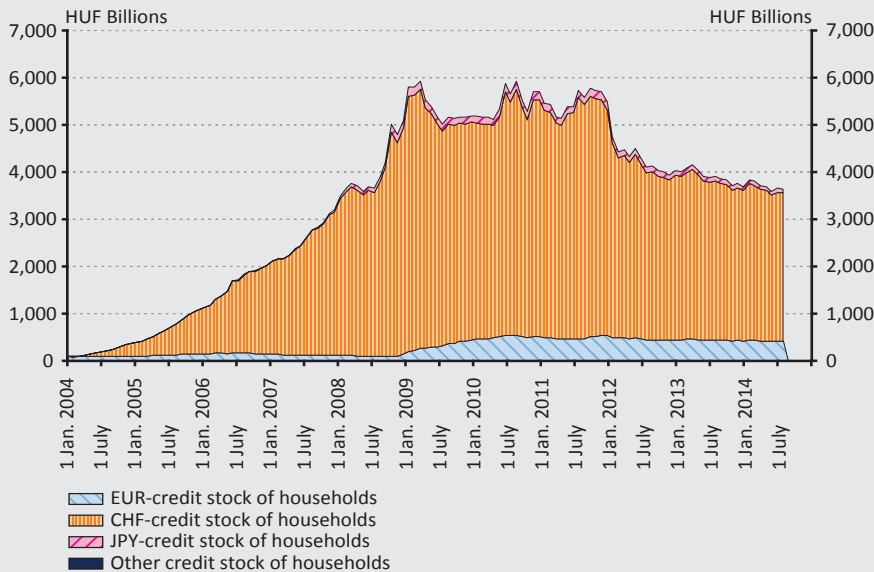
## 2. Evolution and proliferation of foreign currency household lending in Hungary and measures aimed at the mitigation of risks

Numerous empirical studies have focused on the driving forces behind the evolution of foreign currency lending, especially since the crisis.<sup>4</sup> The publications typically distinguish between demand, supply and institutional factors. In the following, we review the reasons behind the surge in foreign currency lending to Hungarian households and argue that most of the potential triggers may have contributed in Hungary. We proceed by describing government and central bank measures conceived before 2014 to address the problem.

### 2.1. Determinants of the surge in foreign currency household lending in Hungary

Foreign currency lending to households embarked on a steady rise in 2004, and the sector remained a net borrower up until 2009. Even after foreign currency lending had come to a halt, the portfolio was boosted further by the depreciation of the forint in 2009 and 2010 (*Figure 1*).

**Figure 1.**  
Foreign currency loan portfolio of the Hungarian credit institution sector, 2004–2014

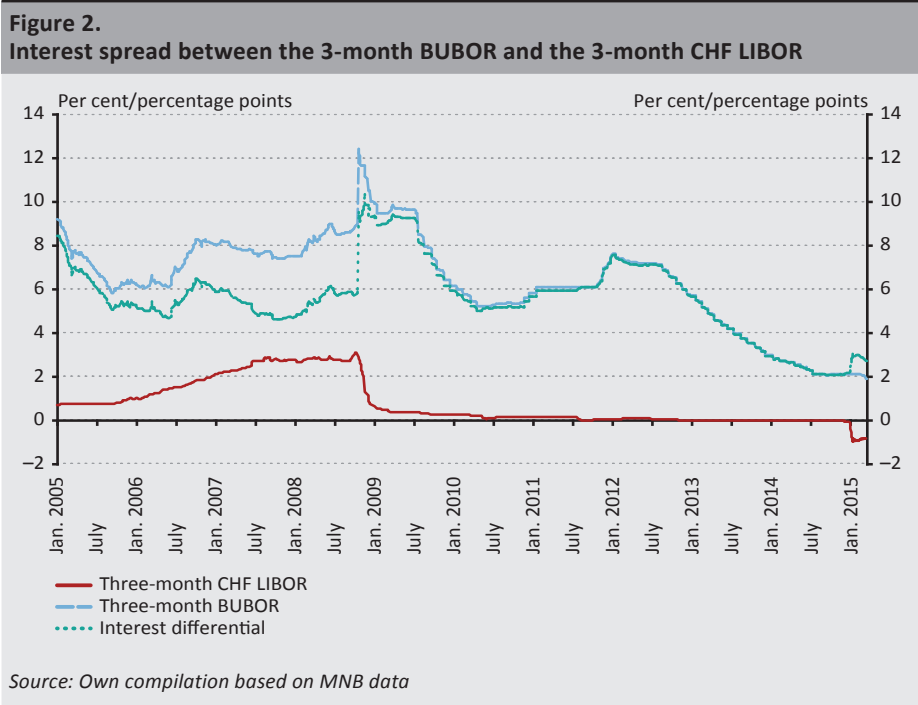


Source: Own compilation based on MNB data

<sup>4</sup> For a more comprehensive overview of the literature and a meta-analysis of the findings, see Cuaresma et al. (2011). In addition, see: Brown et al. (2014), Beer et al. (2010) and Brown et al. (2013).

As described in detail below, demand, supply and institutional reasons contributed equally to the spread of foreign currency household loans in Hungary. The description of the demand and the supply sides below relies strongly on the analysis of *Hudecz (2012)*.

The beginning of the 2000s saw the evolution of high nominal forint interest rates due to lax fiscal policy, high government debt and risk premia, and a level of inflation which was considered high by international standards (*Figure 2*). The difference between forint interest rates and the interest rates prevailing in developed countries (especially euro and Swiss franc interest rates) was persistently larger than those observed in other CEE countries unaffected by FX lending.<sup>5</sup>



It is a common phenomenon that economic agents (typically households, but occasionally creditors as well) underestimate the exchange rate risk of foreign currency loans. In Hungary, this effect was reinforced by the relatively stable forint exchange rate, which concealed the threats and risks of exchange rate depreciation.<sup>6</sup>

<sup>5</sup> In economic terms, this interest spread could have been offset by the effect of the covered interest rate parity, i.e. the change in exchange rate; however, this effect does not necessarily take hold in practice, consequently, the interest spread may be effective.

<sup>6</sup> In addition, as the forint exchange rate was bolstered further by a speculative financial transaction in January 2003, chances of a potential weakening of the forint appeared rather slim.

As a consequence of the practically dual target system of the monetary policy regime – namely, inflation targeting and the intervention band of the exchange rate – from 2003 until the abolition of the band at the beginning of 2008, the central bank had to subordinate interest rate policy to the stability of the exchange rate, which led to more volatile interest rates and a more stable exchange rate in international comparison. Popularity of foreign currency loans increased even further as lower interest rates enabled a higher loan amount. In the virtual sense, i.e. without taking into account the exchange rate risk, the creditworthiness of the borrower improved. Having socialised in an environment of state paternalism, households may have been more inclined to undertake the moral hazard associated with the borrowing, i.e. they may have counted on the assistance of the state. This is consistent with the model developed by *Schneider and Tornell (2004)*, where the implicit bailout guarantee of the state encourages domestic actors with no foreign currency income to ease their liquidity constraint by foreign currency borrowing.

Since Hungary's accession to the euro area would have eliminated a part of the exchange rate risk associated with foreign currency loans (i.e. the risk of a shift in the EUR/HUF exchange rate), in anticipation of the imminent adoption of the euro,<sup>7</sup> households may have, to a certain degree, reasonably undertaken the exposure to the exchange rate risk. At the time of the surge in foreign currency household loans in Hungary, relatively fast accession (within 3–5 years) to the European currency union may have seemed a realistic possibility. It should be stressed that the proliferation of Swiss franc-denominated loans implied substantially higher vulnerability relative to potential indebtedness in euro, as the Swiss franc had historically been considered a safe-haven currency, and in the case of a crisis it could be expected to appreciate significantly.

As regards the supply side, importantly, Hungary made the forint fully convertible in 2001, and after capital controls had been dismantled, by the beginning of the 2000s it became legally possible for Hungarian economic agents to obtain some of the surplus liquidity of developed markets.

While global markets were characterised by loose monetary conditions and an abundance of liquidity, in view of the mounting inflation problems and the increased country risk, in 2003 the MNB raised the key policy rate significantly. Because of the level of the interest spread, banks were able to apply high interest margins in the case of FX loan products, given their more favourable interest rates compared to interest rates on forint loans. The emergence of foreign currency household lending generated fierce competition in the Hungarian banking market. Credit institutions, in turn, found themselves in the midst of risk-based competition; indeed, the desire

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<sup>7</sup> The MNB publication entitled "On the road to the euro" (2001) concluded that Hungary may become a member of the Monetary Union as early as 2006–2007.

and need to obtain a market share often led to excessive risk-taking. From 2003, subsidised forint loans were gradually phased out, steering not only customers, but also banks with significant accumulated capacities, automatically toward foreign currency loans. It is also important that, at the time of the FX lending boom, the securities potentially financing forint mortgage loans (mortgage bonds, covered bonds) did not have a sufficiently extensive market in Hungary that would have allowed banks to offer low-premium forint loans, possibly with fixed rate coupon, to their customers; on the other hand, given the high interest rate differential, this deficiency may not necessarily have been an actual constraint (*Csajbók et al. 2010*).

Besides demand and supply factors, we should also consider the formal and informal institutional environment in which the surge in foreign currency household lending took place. Based on the classification system of Williamson, a classical author of institutional economics, first of all we should explore the spiritual, mental and intellectual specificities characterising the community as a whole, and identify the formal regulatory characteristics that were relevant to the increasing popularity of foreign currency loans at the time. Some of these factors are more qualitative in nature and as such, are difficult to quantify: these may have included the “get-rich-quick” attitude emerging in the wake of the euphoria accompanying the political transition (convergence promise), banks’ excessive willingness to take risks, potentially lax and deficient regulations and the low level of Hungarian financial literacy.<sup>8</sup>

According to *Rodrik and Subramanian (2003)*,<sup>9</sup> the basis of sustainable development is an institutional system of adequate quality, comprising in particular institutions responsible for creating, operating, stabilising and legitimising markets. Although at the time of the Hungarian FX lending boom the legal framework ensuring the existence of the market was in place already, as has been clearly demonstrated by the uniformity decision of the Kúria, the ensuing FX debtor litigations and the escalation of the FX debtor problem, the market did not function adequately in the social sense of the word, and the underlying institutional system failed to address the arising problems. It also pointed to market failure that the fragmented group of national financial supervisory authorities was faced with a highly integrated financial sector dominated by massive financial conglomerates (*Bethlendi (2012)*). While information deficiencies were typical in financial supervision, the banking sector was characterised by a far more efficient and comprehensive knowledge and information transfer (“paralysis from the dividedness of supervision”). *Rodrik (2000)* holds that a high quality policy environment (*i*) sends clear signals to producers and investors with a view to achieving a socially optimal outcome; (*ii*) precludes rent-seeking; (*iii*)

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<sup>8</sup> The lack of widespread financial skills and knowledge and the discrepancy between financial knowledge and financial decisions have been confirmed by several surveys. See the MNB’s 2006 survey and the financial literacy research of the *State Audit Office (2013)*.

<sup>9</sup> See: *Rodrik and Subramanian (2003)*.

does not waste economic resources; (iv) is consistent with the specificities of the country and the administrative capabilities of the government; and (v) maintains social peace and stability. The spread of foreign currency household lending in Hungary signals that the Hungarian institutional system did not work adequately; incentives facilitated a socially sub-optimal outcome that allowed for the accumulation of excessive debt and ultimately posed severe stability risks to Hungary.

## **2.2. Pre-2014 measures taken to manage the problem of the accumulation of households' foreign currency mortgage debt**

The issue of foreign currency household lending also affected other countries in the Central and Eastern European region; however, experience shows that most of these countries took steps to curb and restrict the indebtedness of households in foreign currency. *Bethlendi (2011)*, *Bethlendi et al. (2015)* and international experience demonstrate that it would have been possible to curtail unsecured foreign currency loans to households both through macroeconomic measures (increasing national economy savings, reducing the interest rate differential,<sup>10</sup> higher exchange rate volatility) and through restraint on demand and supply (enhancement of widespread financial literacy, administrative and supervisory restrictions, moral suasion, market development). At the same time, it should be emphasised that there is no guarantee that these measures would have been efficient; in Romania, for example, the intervention failed to prevent the accumulation of a substantial foreign currency loan portfolio.

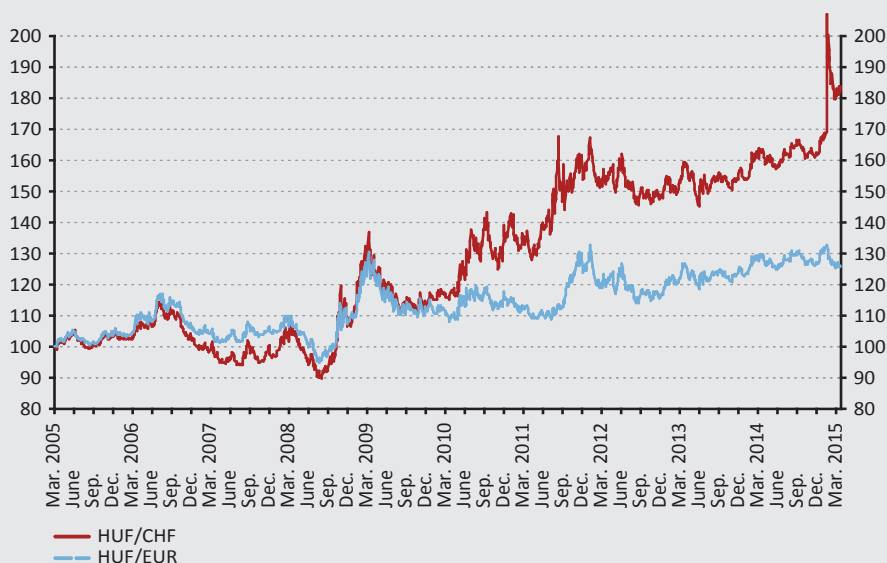
The situation of foreign currency debtors worsened in parallel with the deterioration in macroeconomic prospects. It should not be surprising, then, that the risks arising from foreign currency loans, in particular, households' mortgage debt, became the pivotal issue of the Hungarian history of the financial crisis. Since most households draw their income in forints and have limited ability to manage the exchange rate risk stemming from FX-denominated instalment amounts, developments in the forint exchange rate were particularly crucial. In March 2009 – as a result of a one-off shock sustained by the Central and Eastern European region – and in the second half of 2011, the forint depreciated significantly against the euro. In addition, the previously fairly stable EUR/CHF exchange rate experienced sharp swings from the summer of 2010. Between 2008 and 2011 the forint depreciated against the Swiss franc by 60–70 per cent overall. This hit Hungarian borrowers especially hard, as most FX debtors were indebted in CHF (*Figure 3*).

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<sup>10</sup> The reduction of the interest rate differential is often associated with the easing of monetary conditions, e.g. *Bethlendi (2011)*. We must bear in mind, however, that persistently low interest levels may only be achieved by restraining inflation, which requires – on a temporary basis – tight monetary policy. In the first years of the FX lending boom, a significantly lower level of interest rates would have led to higher inflation in Hungary, which would have resulted in higher nominal interest rates than those prevailing at the time. At the same time, the Hungarian situation calls attention to the special feature of the monetary regime, namely, that the intention to contain inflation gave rise to an exchange rate that stabilised at the strong edge of the intervention band, mitigating the level of the perceived exchange rate risk.

**Figure 3.**  
**EUR/HUF and CHF/HUF exchange rates from 2005**

(01/03/2005 = 100)



Source: Own compilation based on MNB data

Several government measures were adopted in response to the shocks to the exchange rate, with a view to alleviating the problems of distressed household and mitigating their exposure. As these measures have been discussed in detail in several publications and papers (e.g. *Banai et al. 2011*), we provide only a brief summary.

Although public discourse focused mainly on rising monthly payments due to exchange rate depreciation, banks' practice of raising interest rates also weighed on the debt burden of borrowers. Owing to the possibility of unilateral interest rate increases, during the years of the crisis interest rates rose sharply, occasionally even by 2 or 3 per cent compared to the initial levels, despite a significant decline in the EUR and CHF central bank base rate (*MNB 2014b*). For this reason, first in 2009 and subsequently in 2010, measures were taken to curtail banks' ability to raise interest rates. As a result, banks were only permitted to adjust their interest rates based on certain rules (pegged to a reference rate) or on a regulated basis (according to itemised provisions). This regulation, however, was often circumvented by credit institutions; banks prepared "cause and effect lists" with rather general explanations in order to justify increases in interest rates or other charges (*MNB 2010*). The pricing problem was eventually resolved by the adoption of the Home Protection Act which, however, only affected new loans. These steps succeeded to ease the problems surrounding the existing portfolio only to a limited degree.

The exchange rate cap system was launched at the end of 2011 as part of the Home Protection Package. Debtors entering the programme were entitled to repay their loans at an exchange rate far more favourable than the market rate (at CHF/HUF 180, EUR/HUF 250 and JPY/HUF 2.5 for CHF, EUR and JPY loans, respectively) until the end of the programme. The difference between the real and the preferential payment was shared between the state, the debtor and the banking sector. The principal part of the differential was transferred to a pool account, to be repaid by the debtor with the proviso that payments would start only after 2017. Thus, the programme implicitly assumed that the economic environment would improve significantly by 2017. The interest part of the loan was shared between the state and the banking sector. Participation in the programme rose sharply from 2012; by the summer of 2013, however, the increase virtually came to a halt. That notwithstanding, more than 40 per cent of debtors opted to enter the programme, which involved a portfolio of nearly HUF 1,500 billion.

Of the government measures taken before 2014, only the early repayment scheme succeeded in generating a considerable decline in debt. At the end of 2011, debtors with foreign currency based mortgage loans were given an opportunity for the early repayment of their loans (full prepayment) at the exchange rates of CHF/HUF 180, EUR/HUF 250 and JPY/HUF 2 for CHF, EUR and JPY loans, respectively). As the regulation did not require banks to provide, on a mandatory basis, forint loans to participants, three fourths of the debtors relied on savings to repay their debt at the preferential exchange rates. The total portfolio repaid by the participating 170,000 debtors amounted to around HUF 1,300 billion, of which HUF 310 billion was repaid from forint loans (*MNB 2012*). The opportunity was only available for a limited period of time: debtors were required to indicate their intention to take recourse to the early repayment scheme by the end of 2011, and within 60 days of the notice they were expected to close the transaction. Therefore, the programme was a realistic opportunity primarily for creditworthy customers or debtors with substantial savings (wealth). For debtors, the programme implied a debt relief of 20–30 per cent, while the banking sector sustained a loss of more than HUF 300 billion.

The National Asset Management Agency (NET) is tasked with assisting defaulting mortgage debtors. In cooperation with the banks, the institution is intended to offer a solution to some of the non-performing debtors in order to help them avoid eviction. With that in mind, the NET purchases the real property collateral behind non-performing loans and allows the former debtor to remain in the property as a tenant. Thus, although they lose their ownership, debtors can dispense with their debt and retain their home. During the purchases the NET is expected to consider the social circumstances of debtors, and institution is only permitted to purchase the property of socially disadvantaged debtors.<sup>11</sup>

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<sup>11</sup> According to the first schedule, the objective was for the NET to purchase 25,000 properties by the end of 2014 and, according to information as at September 2014, this goal is likely to have been achieved (NET already owned more than 22,000 properties at the time).

### 3. Factors permitting the phasing-out of Hungarian foreign currency household loans

The measures described above were unable to permanently and irrevocably resolve the problem of foreign currency debtors; household FX loans remained in the balance sheets of both banks and households. *Per definitionem*, the solution may have been the phasing-out of foreign currency and foreign currency denominated household loans in the autumn of 2014.

In the following, we present a list of the factors relevant to the timing of the measure, which demonstrates that the conversion took place at the first possible time when both the legal background and economic conditions were in place.

#### 3.1. Legislative environment

The first pre-requisite was the announcement of the Kúria's uniformity decision in June 2014, with binding effect in respect of all previous legal disputes and conflicting interpretations; indeed, this decision laid the foundation, in the legal sense, for the conversion. The uniformity decision of the Kúria provided clear guidelines on three issues:

- (i) Passing the exchange rate risk on to customers is not considered to be unfair in itself. However, if the relevant text of the contract is not clear and intelligible for the average customer, the contract concerned may be deemed null and void (requirement of transparency). Consequently, from an economic perspective, the exchange rate risk is essentially borne by the debtor.
- (ii) Unilateral interest increases are unfair if the contract fails to clearly and intelligibly define how and to what extent changes in the circumstances affect the customer's payment obligations. Pursuant to the Kúria's decision, the principles of proportionality, factuality and symmetry are applicable to interest rate increases.
- (iii) The charging of foreign exchange margins as a fee is unfair and null and void in all cases under any circumstances.

The Kúria's decision was particularly significant in view of the fact that, in parallel to the post-crisis deterioration of the macroeconomic environment and households' income position, the resolution of foreign currency household loans shifted increasingly toward litigation.<sup>12</sup> Consequently, before a comprehensive government measure could be taken in relation to foreign currency household loans, any open legal issues resulting from the lawsuits had to be closed.

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<sup>12</sup> The Advocacy Organisation of Bank Debtors was established in 2009.



- i.* The Kúria's decision obliged banks to settle with customers the overpayments deriving from unilateral interest rate and fee increases and the application of foreign exchange margins.
- ii.* As the Kúria's decision closed all legal disputes permanently and irrevocably, the legal grounds and legitimacy required for the settlement and the conversion were in place. Without these building blocks the entire process would have been jeopardised; indeed, the possibility of a conflicting legal decision would have raised the risks significantly, increasing the unpredictability of the programme.
- iii.* The Kúria's decision was also required in order to be able to establish the exchange rate to be applied for the purposes of the conversion; without this it would have been impossible to phase out foreign currency household loans. This was one of the most crucial legal issues in respect of household FX loans – the entire conversion exercises hinged upon the exchange rate at which the loans would be converted to forint contracts. The Kúria's decision in respect of the exchange rate risk stipulated that debtors were required to bear the exchange rate risk, which points to application of the market rate.

Taken together, the Kúria's uniformity decision laid the foundations for the comprehensive resolution of the problems with the foreign currency and foreign currency based loans of households, which the government implemented by law. In this context, the government formulated a regulation on the settlement of the contractual terms of foreign currency loans. Pursuant to the regulation, after the review of the exchange rate margins and unilaterally raised interest rates, damages arising from the contract amendments which were declared invalid were refunded to borrowers. In September 2014, Parliament adopted Act XXXVIII of 2014, pursuant to which – except for overdrafts, credit card debts and subsidised loans – the overpayments of debtors were to be considered, on a retrospective basis, as principal pre-payments for all loans granted after 1 May 2004 and those that were not terminated before 26 July 2009. Consumer claims were calculated as the difference between the original principal debt and the outstanding principal debt thus recalculated, and the difference between the original debt and the recalculated, matured debt. In the case of live contracts, the amount calculated accordingly will be deducted first from matured debts, then from the main debt (*MNB 2014b*). In addition to the settlement, the interest rates on loans are likely to have returned to levels prevailing at the disbursement of the loan, which is a significant result, considering that the rate increases were extremely high on occasion (debtors could expect a reduction by around 2 percentage points). Another important measure affecting household lending was the amendment of the legislation on consumer loans, which ushered in the so-called "fair banking system". The regulation prescribes the application of fixed or reference interest rates for all

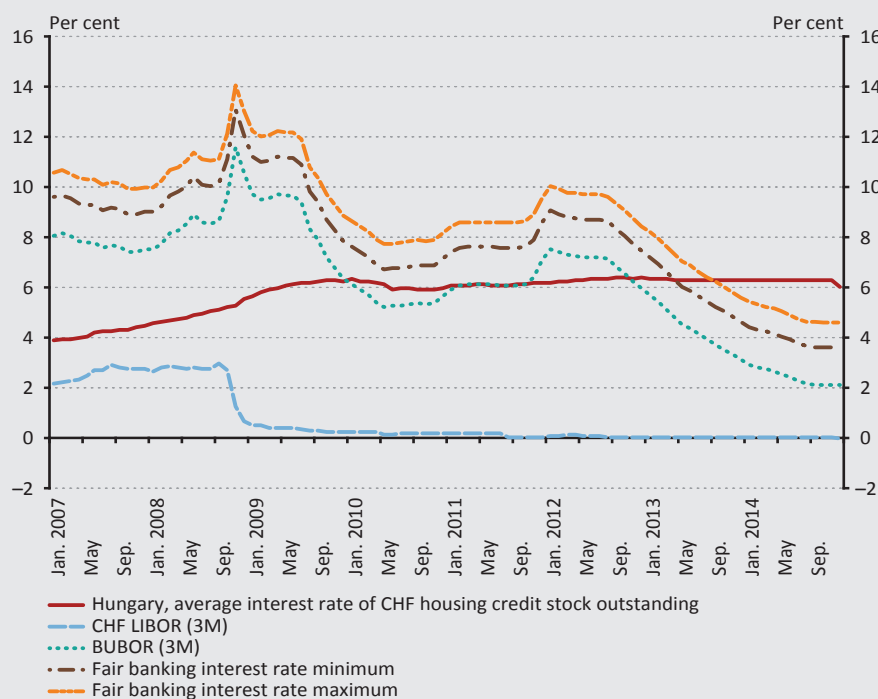
newly concluded or existing consumer loan contracts, essentially extending the rules of “transparent pricing” effective from April 2012 to all new mortgage loans.<sup>13</sup>

### 3.2. Forint interest rates

The reduction of forint interest rates was a crucial factor in the conversion. The MNB launched its easing cycle in 2012, bringing down the central bank base rate from 7 per cent to 2.1 per cent by the summer of 2014. In parallel with the cuts, a corresponding interest rate reduction took place in the entire economy. This was particularly important in ensuring that the conversion did not entail an increase in interest and monthly payments, which strengthened the legitimacy of the conversion. For households, the legislation on fair banking eased the transition

**Figure 4.**

**Retrospective comparison of Hungarian FX household loans and forint interest rates calculated in accordance with the fair banking regulation**



Source: Own compilation based on MNB data

<sup>13</sup> In the case of loans with a maturity of less than three years, the interest rate and the spread is fixed for the entire term of the loan, without the possibility of modification. In the case of loans with a maturity of more than three years, the interest rate or the spread may be modified no more than five times during the term of the loan, once every three years at most. Modification of the interest rate and the interest rate spread is conditional upon changes in measurable indicators designed to capture, primarily, changes in circumstances beyond the financial institution's direct control (e.g. cost of funds, changes in liquidity premia). These indicators are reviewed by the MNB and published on its website.

to forint loans and provided a transparent framework for potential future price adjustments. Overall, by 2014 the interest rates were reduced to a level that ensured – subject to compliance with the regulations on fair banking – that foreign currency debtors did not have to face an interest rate increase on account of the conversion (*Figure 4*).

### **3.3. Risk perception**

The timing of the phasing-out of foreign currency household loans is affected by macroeconomic conditions and the macroeconomic environment. The conversion of foreign currency loans into forints without substantial exchange rate depreciation is possible only if a domestic sector takes the exchange rate position in a manner that reduces the country's exchange rate risk. Owing to the economic policy consolidation in general and to the consolidation of the general government in particular (steadily declining government deficit, reduction of public debt<sup>14</sup>), and thanks to the improving risk perception of Hungary, by 2014 an economic environment emerged that permitted the implementation of the phasing-out of foreign currency household loans. This also required a substantial decline in sovereign risk premia: at 150–170 basis points in the autumn of 2014, the value of the 5-year sovereign CDS is considered low by international standards.

### **3.4. Central bank room for manoeuvre**

On the one hand, phasing out FX loans, i.e. the settlement and the conversion, affects bank's results, while on the other hand, it significantly rearranges banks' balance sheets. As regards balance sheet effects, both the settlement and the conversion point to a decline in banks' foreign currency receivables with a parallel opening in their exchange rate position. For operational and regulatory reasons, banks are expected to close their positions,<sup>15</sup> and purchase foreign currency for this purpose. The need to cover the foreign currency requirement of the settlement and conversion of foreign currency loans would have weighed on the forint exchange rate if the foreign currency had to be purchased from the market. For a smooth implementation of the conversion, therefore, the MNB needed to provide banks with a sufficient amount of foreign currency while ensuring that the level of its foreign exchange reserves did not drop below the level expected by the market and by the international organisations either at present, or looking ahead.<sup>16</sup> By reducing external debt – the determinant of reserve adequacy – in particular, short-term external debt, by 2014 the reserve adequacy of the MNB reached a level that guaranteed the safe implementation of the conversion (*Figure 5*).

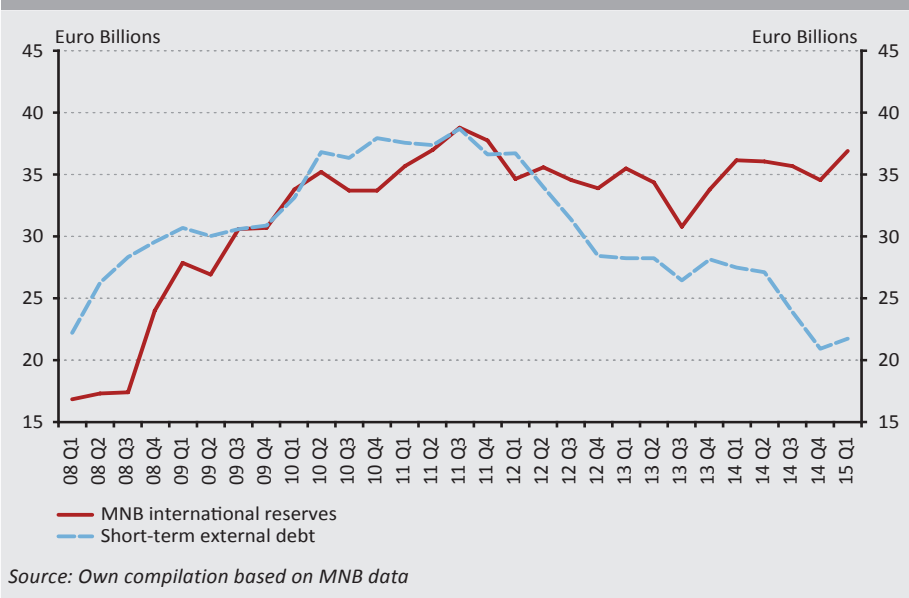
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<sup>14</sup> For further details see: *Baksay, Palotai and Szalai (2015)*.

<sup>15</sup> Although not all of the banks close their open positions completely, an open exchange rate position entails an additional need for capital, which may be costly. On the other hand, banks are also reluctant to undertake excessive risks in respect of the exchange rate and accordingly, most of them strive to achieve nearly closed positions.

<sup>16</sup> For more details about modern central banks' objectives of holding foreign exchange reserves, see *Nagy and Palotai (2014)*.

**Figure 5.**  
**The MNB's foreign exchange reserve and short-term external debt**



### 3.5. Outstanding foreign currency loans

The size of the portfolio to be converted is also relevant for the feasibility of the programme. As a result of the abolition of foreign currency lending, the early repayment scheme and the decline in loans outstanding due to normal operations, the portfolio of FX mortgage loans to be converted fell from its peak of EUR 19 billion to EUR 9 billion by 2014. Combined with the expansion in foreign exchange reserves, this meant that the proportion of FX reserves to be used for the conversion dropped to a mere 25 per cent, compared to significantly higher values that would have been required in previous years.

While the legal and economic conditions listed above did not completely eliminate the risks associated with the conversion by 2014, they reduced the risks to a level at which, on the whole, the expected net social and welfare benefits of the conversion justified the commencement of the conversion.<sup>17</sup>

<sup>17</sup> A number of other proposals have been made for the resolution of the FX debtor problem, of which the concept proposed by György Surányi, Tomas Spurny and György Barta in 2011 received the most publicity. Although the package developed by the authors offered a solution to a number of relevant problems, in the absence of the conditions detailed above it would have entailed a prohibitive level of risk. Even the authors pointed out the risk associated with the insufficient level of the central bank's foreign exchange reserve; however, they did not discuss several other risks, perhaps the most important of which is the lack of a uniform legal assessment of household foreign currency loan contracts. In the absence of social consensus on the legality of the contracts, any conversion programme would have run the risk of its "fairness" being called into question later on the grounds of potential court rulings, which, ultimately, would undermine the irrevocability of the solution.

## 4. The central bank's foreign currency sale programme supporting the phasing-out of foreign currency household loans

In the case of FX loans, conversion in the legal sense and conversion in the economic sense are different. In the legal sense, the foreign currency conversion takes place when the loans previously recognised in foreign currency are recognised in forint in banks' books. In the economic sense, an FX loan pegged to a fixed exchange rate should be considered a forint loan as henceforth, the portfolio "behaves" as a forint loan (especially since the size of the portfolio will no longer be subject to changes in the exchange rate). In the economic sense, the conversion was complete upon signature of the agreement between the government and the banks on 9 November 2014, the pegging of the exchange rates of the conversion in the agreement and the subsequent hedging. In the legal sense, banks were required to update their books with the conversion by 31 March 2015.

### 4.1. Hedging requirement stemming from the phasing-out of foreign currency loans

Due to differences in banks' characteristics and the business policy pursued by banks, several financing and FX position hedging models have evolved in the Hungarian banking sector. According to a stylised and schematic approach, the following two basic models can be identified.

- FX lending from FX financing (on-balance sheet hedging of the FX position);
- FX lending from forint financing (hedging of the FX position by FX contracts).

Neither of these two prototypes exists in a pure form; banks typically use a combination of the financing and hedging models. Nevertheless, some banks are more committed to one model than to the other. Regardless of the preferred financing model, banks will respond to the settlement and the conversion by closing their open exchange rate position. Depending on the FX lending model and the costs incurred, this either implies the repayment of FX liabilities or the closure of foreign exchange swaps. Both solutions require foreign currency, i.e. increase the foreign currency demand. Therefore, in case of a market purchase, the sheer magnitude of the programme would trigger an exchange rate effect, leading to a marked change in monetary conditions.

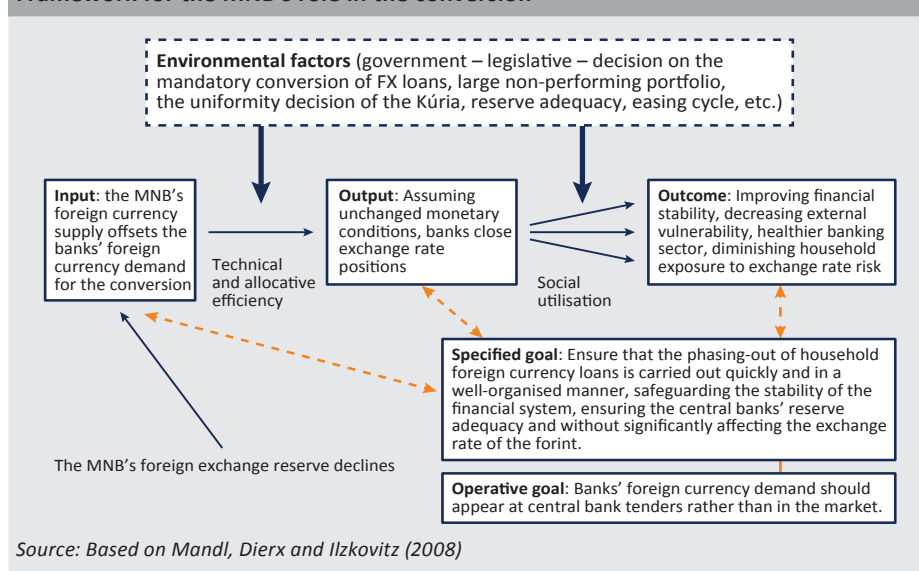
The magnitude of the foreign currency demand stemming from the conversion of FX based household mortgage loans is in the range of EUR 10 billion (HUF 3,000 billion). If this demand had emerged on the market, it would have generated a steep depreciation of the forint exchange rate. This magnitude of forint sales has been unprecedented so far, but according to *Kiss and Molnár (2012)*, in 2008 the

forint position of non-resident participants fell by HUF 2,000 billion in the span of two months, which translated into a 30 per cent depreciation of the forint. The appearance of the conversion-related foreign currency demand in the market may have induced even more severe weakening of the exchange rate, given the larger volume and the concentrated nature of the demand. In addition, domestic forint sales may have prompted non-resident participants to follow suit, further exacerbating the exchange rate weakening. All things considered, potential exchange rate depreciation of 30 per cent is probably an optimistic lower estimate. All of these considerations called for a public policy intervention embodied in a central bank foreign currency sale programme. The fact that, pursuant to the Act on the Magyar Nemzeti Bank, the MNB's mandate is to maintain financial stability, also underpinned the need for the creation of an MNB programme; namely, provided that the programme does not jeopardise the primary objective (price stability), the central bank will need to "assume an important role in the well-organised phasing-out, settlement and conversion of foreign currency loans".<sup>18</sup>

#### 4.2. Framework and the form of the MNB's role

With respect to the efficiency of public policy measures, in accordance with the conceptual model of *Mandl-Dierx-Ilzkovitz (2008)*, we should distinguish between short-term technical goals (input), longer-term, more socially grounded objectives

**Figure 6.**  
**Framework for the MNB's role in the conversion**



<sup>18</sup> Magyar Nemzeti Bank: The Magyar Nemzeti Bank provides the necessary amount of foreign currency to Hungarian banks to phase out households' FX loans. Communication, 24 September 2014.

(output) and the efficiency and social impact embodying the relationship between these categories (outcome). Exogenous factors, i.e. those unaffected by the given programmes, may have key significance in respect of both outputs and outcomes (“environmental factors”). The conversion programme of the MNB can be aligned to the above model as follows.

The FX supply of the MNB can be considered the input factor of the programme, which is contingent upon the MNB’s reserve adequacy. Under the programme, banks have access to foreign currency, and thus they are able to close the positions opening up as a result of the phasing-out of household FX loans, which, as an outcome at the social level, strengthens financial stability, reduces external vulnerability, ensures healthier balance sheets for banks and eliminates households’ exposure to exchange rate risk. The above process is also affected by environmental factors, mainly, the economic, legal and social environment in which it takes place, and the relevant reaction of individual stakeholders, in particular, banks.

At the same time, however, it is not self-evident and intuitive which instruments should be used to achieve the central bank’s objectives. The MNB declared that the aim of the programme is to ensure the rapid, well-organised phasing-out of household foreign currency loans, while safeguarding the stability of the financial system and without significantly affecting the exchange rate of the Hungarian forint,<sup>19</sup> which means that the central bank instruments to be used should be selected or designed along these lines. In addition, the MNB stipulated that the reserve adequacy of the central bank must be maintained throughout the programme. The MNB is also entitled to opt for a direct foreign exchange market intervention to prevent undesired and justified exchange rate movements; however, in this case the well-organised manner of the process would not have been ensured. Moreover, in the case of an intervention it is not guaranteed that the foreign currency provided by the central bank is used in accordance with the central bank’s objectives. In the case of uncoordinated central bank FX sale tenders – those subject to banks’ immediate, discretionary decisions – utilisation other than for central bank purposes can be practically ruled out; however, from the aspect of stability it must be considered that, due to banks’ unique strategies, substantial FX demand may appear in the FX market, which may undermine the efficiency of the central bank programme and have other, undesired implications. Coordinated central bank tenders ensure, even at a theoretical level, that the foreign currency is used strictly in accordance with central bank objectives; in addition, we can rule out the possibility of banks’ purchasing the required foreign currency in the open market. Consequently, this form of central bank involvement provides optimal conditions for the achievement of the MNB’s declared objectives.

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<sup>19</sup> Magyar Nemzeti Bank: The Magyar Nemzeti Bank provides the necessary amount of foreign currency to Hungarian banks to phase out households’ FX loans. Communication, 24 September 2014.

### 4.3. Parameters of the central bank's coordinated foreign currency sale programme

The next chapter presents the parameters of the central bank's coordinated foreign currency sale programme. Each parameter is described in the context of its relation to central bank (specified and operative) goals.

We assume that the conversion of foreign currency loans and the appearance of banks' hedging requirement are separate events, given that the latter manifests itself immediately after the announcement of the conversion exchange rate, while the actual conversion may take place at a different time. The appearance of banks' hedging requirement and the related use of central bank FX reserves are also separate events, as the change in the exchange rate position and the use of the foreign currency – i.e. the repayment of FX liabilities and the closure of swap transactions – do not necessarily coincide in time. Consequently, the FX requirement related to the settlement and the conversion may materialise gradually, stretched over a period of years; in other words, the use of reserves is not necessarily concentrated either.

The MNB announced a fixed price<sup>20</sup> tender for both euro sale facilities, in consideration of bank limits. The MNB provided euro liquidity to the banks, and banks are required to cover the exchange rate risk between the EUR and the CHF.<sup>21</sup> The table below presents the parameters of the central bank programme aligned to the declared central bank objectives (*Table 1*).

<sup>20</sup> A number of approaches may provide guidelines for pricing. Consideration should be given to the no-arbitrage band of FX swaps and to the fact that, due to the term premium, long-term funds are typically available with higher interest rates; therefore, their continued holding and the repayment of short-term funds implies a more expensive financing structure for the bank compared to the early repayment of long-term funding.

<sup>21</sup> The central bank announced the settlement phase on 23 September 2014, and the conversion phase was handled by the extension of the settlement programme. The Monetary Council decided on the latter at its meeting on 4 November 2014.

<sup>22</sup> Banks' ability to reduce short-term external debt may be limited by exogenous factors (certain client deposits, margin accounts linked to derivative transactions) and by the difficulties surrounding the early repayment of short-term external debt.

<sup>23</sup> *Magyar Nemzeti Bank (2015)*

<sup>24</sup> The conversion tenders represented a novelty compared to the settlement from two perspectives: (1) by nature, the conversion imposed far more substantial foreign currency demand, and (2) the hedging requirement arose in a far more concentrated fashion. The latter can be attributed to the fact that, due to legal differences and the different accounting methods applied, banks' FX requirement did not arise simultaneously in the case of settlements, while banks' FX positions immediately opened upon the announcement of the conversion exchange rate, accompanied by an immediate hedging requirement.

<sup>25</sup> The agreement was signed by all banks with a significant portfolio of FX and FX based mortgage loans. Consequently, no bank had an opportunity for conversion in the open market and the potential acquisition of unfair advantages.

<sup>26</sup> In the conversion phase the MNB defined a simultaneously valid, combined limit amount for both FX sale instruments, while in the settlement phase separate limits were stipulated. For the unconditional instrument, in addition to the existing 2016–2017 maturities the MNB announced, albeit to a limited degree, the instrument for 2015 maturities as well, which may have benefited banks that finance their foreign currency loans through short-term foreign exchange swaps.

<sup>27</sup> Selected Decisions and Resolutions of the International Monetary Fund.

<sup>28</sup> Pursuant to Decision No. 6790-(81/43) (20 March 1981) of the IMF, MCP is defined as: "action by a member or its fiscal agencies that of itself gives rise to a spread of more than 2 percent between buying and selling rates for spot exchange transactions between the member's currency and any other member's currency would be considered multiple currency practice and would require the prior approval of the Fund".



<b>Table 1.</b> <b>Parameters of the central bank's foreign currency sale programme and the declared objectives of the MNB</b>	
<b>Specified central bank objectives</b>	<b>Parameters of the MNB's settlement and conversion related foreign currency sale tenders</b>
<b>Speed</b>	<p>The timing of the phasing-out of foreign currency household loans largely depends on the speed at which the central bank can provide banks with the required foreign currency. This, in turn, depends on the reserve adequacy. Therefore, it was a key criteria for the programme to ensure ample room for manoeuvre for the MNB in respect of its reserves by autumn 2014. Banks' adjustment plays an important role in the central bank's ability to ensure the adequacy of reserves; indeed, a cooperative attitude on the banks' part may help reduce the reserve requirement. The individual elements of monetary policy instruments ensure that banks have a vested interest in reducing the short-term external debt which is fundamentally important from the perspective of reserve adequacy. If banks fail to reduce short-term debt,<sup>22</sup> their access to foreign currency will be stretched out over a longer period of time. With that in mind, the MNB introduced two central bank instruments:<sup>23</sup> a facility conditional upon the reduction of short-term external debt, and a longer-term, unconditional instrument.</p> <p>In the case of the conditional instrument, banks must reduce their short-term external debt by at least 50 per cent of the foreign currency received. The foreign currency liquidity is rolled over by banks in swap transactions with the MNB until the repayment of the short-term debt; thus the amount received will remain with the MNB until its actual use.</p> <p>The longer-term, unconditional instrument is typically a foreign exchange swap transaction (usually a cross currency interest rate swap – CIRS –) combined with a spot euro sale transaction. It is designed to provide a hedging opportunity for banks that cannot reduce their short-term external debts due to their financing structure built on long swap-transactions or long-term liabilities. In the settlement phase, in the context of the unconditional transaction, banks had access to FX liquidity on long-term maturities only. Subsequently, as the level of reserves ensured more room for manoeuvre, the MNB announced as many as three maturities for 2015 for the conversion tenders (owing to the short term of the tenders, in these cases the MNB entered into FX swap contracts, and banks' recourse was limited).</p> <p>Both facilities support the adequacy of reserves. In the case of the conditional instrument, the foreign exchange reserves decrease in the short run, whereas the MNB's need for foreign exchange reserves also declines through the repayment of short-term external debt and, in turn, the MNB's existing room for manoeuvre expands. The unconditional instrument does not reduce the level of foreign exchange reserves in the short run: the utilisation of the reserves – adjusted to banks' needs – will be spread out over time.</p>
<b>Well-organised manner</b>	<p><b>Timing of the programme</b></p> <p>On 23 September 2014 – two months before the adoption of the act on the conversion on 25 November 2014 – the MNB decided to provide to the Hungarian banking system with the foreign currency needed to phase out household foreign currency loans, including their settlement and conversion into Hungarian forint. As a result of the decision, banks were aware that they would not have to obtain the FX liquidity needed for the settlement and the conversion in the market, as they were given an opportunity to do so at the MNB, in a well-organised manner.</p> <p><b>Formal agreements</b></p> <p>The MNB had announced the upper limit of banks' recourse at consultations with the banks during the settlement phase; however, on 7 November 2014 it entered into formal agreements with each affected counterparty regarding their participation at the conversion tenders.<sup>24</sup> The MNB undertook to provide the credit institutions concerned with the entire FX requirement for the hedging transactions related to the conversion. The credit institutions, in turn, undertook to obtain the full amount of foreign currency required for their hedging transactions from the central bank instead of from the FX market.<sup>25</sup> On 7 November 2014, the MNB signed an agreement with the Hungarian Banking Association as well, with the intention to regulate the key business terms and conditions of the transactions related to the conversion.</p> <p><b>Parameters of the instruments</b></p> <p>The parameters of the instruments providing FX liquidity (especially their maturity) were aligned to the maturity structures of banks, the applied financing models and the specificities of the hedging instruments, which ensured flexibility and provided an incentive for banks. In the conversion phase, the MNB adjusted the conditions on the FX sale instruments in line with the improving reserve latitude, increasing the flexibility of the instruments even further.<sup>26</sup></p>
<b>Financial stability, exchange rate neutrality</b>	<p>In the spirit of exchange rate neutrality, the spot FX sale transaction was executed at the official EUR/HUF exchange rate of the MNB effective on the day of the bids. This is consistent with the relevant provision of the International Monetary Fund,<sup>27</sup> under which IMF members are prohibited to pursue multiple currency practices (MCP) without the permission of the IMF.<sup>28</sup> The MNB's programme provided the full amount of the foreign currency required for the phase-out of foreign currency based household mortgage loans. There was no need for banks to obtain FX liquidity in the market, which strengthened financial stability.</p>

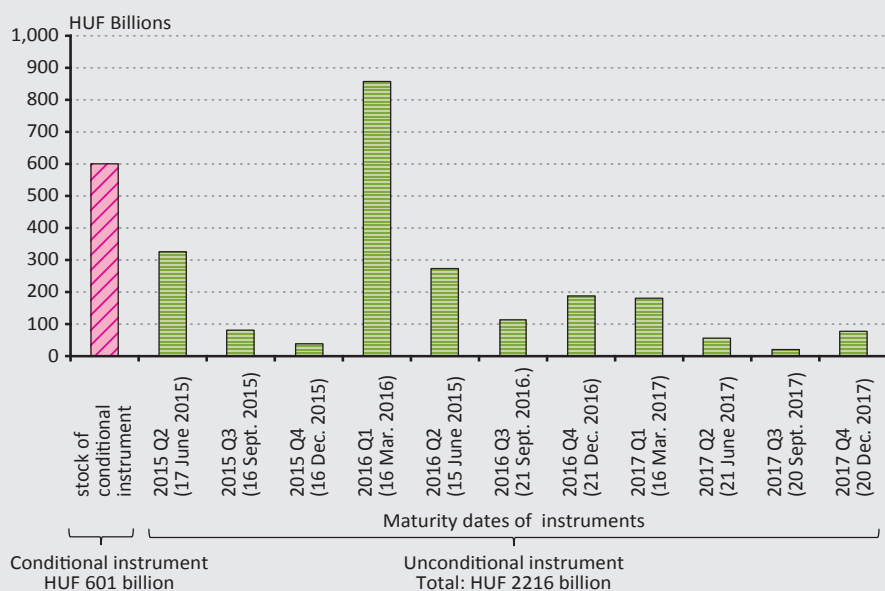
#### 4.4. Central bank foreign currency sale programme and the liquidity of the banking system

Under the programmes related to the phasing-out of foreign currency household loans, the banking sector can purchase foreign currency in exchange for forint liquidity held with the MNB. For a successful resolution of the FX debtor problem, banks need to have the required forint liquidity available on the one hand, and, on the other hand, the liquidity of the banking sector should not drop below the critical level even after the expiry of the settlement and conversion swaps, as liquidity is equally indispensable for normal banking operations and lending.

In the autumn of 2014, the liquidity conditions for the phasing-out of foreign currency household loans were clearly given: although there were some differences on an individual bank basis, the forint liquidity surplus of the banking sector as a whole significantly exceeded the liquidity required for the settlement and the conversion.<sup>29</sup> In the autumn of 2014, banks typically held HUF 4,800–5,100 billion in the key policy instrument of the MNB, while the forint requirement of the phasing-out of FX loans amounted to around HUF 2,800 billion. For the temporal smoothing

**Figure 7.**

**Forint value of the foreign currency funds allocated through the MNB's FX tenders by instrument and maturity**



Source: Own compilation based on MNB data

<sup>29</sup> The significance of the liquidity level of the banking system lies in the fact that, assuming smoothly functioning interbank markets, an adequate level of liquidity would also be sufficient to address potential one-off bank liquidity problems.

out of FX use, it needs to be considered that, on a structural basis, the liquidity of the banking sector increases year after year (particularly owing to the inflow of EU funds and the Funding for Growth Scheme).

Based on the conditions on central bank FX sale instruments, the decline in forint liquidity will be gradual, with limited market effects. That notwithstanding, it is advisable to take into account the potential channels of bank adjustment because the expiry<sup>30</sup> (Figure 7) of the related FX swaps will alter the liquidity structure of the banking sector significantly, and the adjustment may affect additional markets as well, such as government securities markets.<sup>31</sup>

#### 4.5. Results of the central bank tenders

The first tender of the settlement phase was held on 13 October 2014. Tenders of the conversion phase commenced on 10 November 2014. The MNB held a total of 12 tenders, selling EUR 9.1 billion to banks with high concentration (Table 2).

<b>Table 2.</b>					
<b>Results of the settlement and conversion tenders</b>					
Allocation of central bank instruments related to settlement and forint conversion (EUR billion)					
Tender dátuma	Instruments related to settlement		Instruments related to forint conversion		Total
	Conditional instrument	Unconditional instrument	Conditional instrument	Unconditional instrument	
13.10.2014	230	750	–	–	980
20.10.2014	0	0	–	–	0
27.10.2014	0	0	–	–	0
03.11.2014	13	0	–	–	13
10.11.2014	0	0	1627	6207	7834
11.11.2014	–	–	28	32	60
17.11.2014	0	0	–	–	0
24.11.2014	0	0	–	–	0
01.12.2014	0	0	–	–	0
08.12.2014	50	38	–	–	88
22.12.2014	–	–	–	50	50
23.01.2015	–	–	–	102	102
Total:	293	788	1655	6391	9127
"–": tender for the instrument was not announced on the given date					
Source: Own compilation based on MNB data					

<sup>30</sup> In March 2015, in consideration of its increased latitude in respect of the FX reserves, the MNB announced that it would allow the partial early termination of bank FX swap contracts concluded in relation to the phasing out of household FX loans. Source: Magyar Nemzeti Bank: Banks are given early access to a portion of the foreign currency purchased for the conversion. Communication, 30 March 2015.

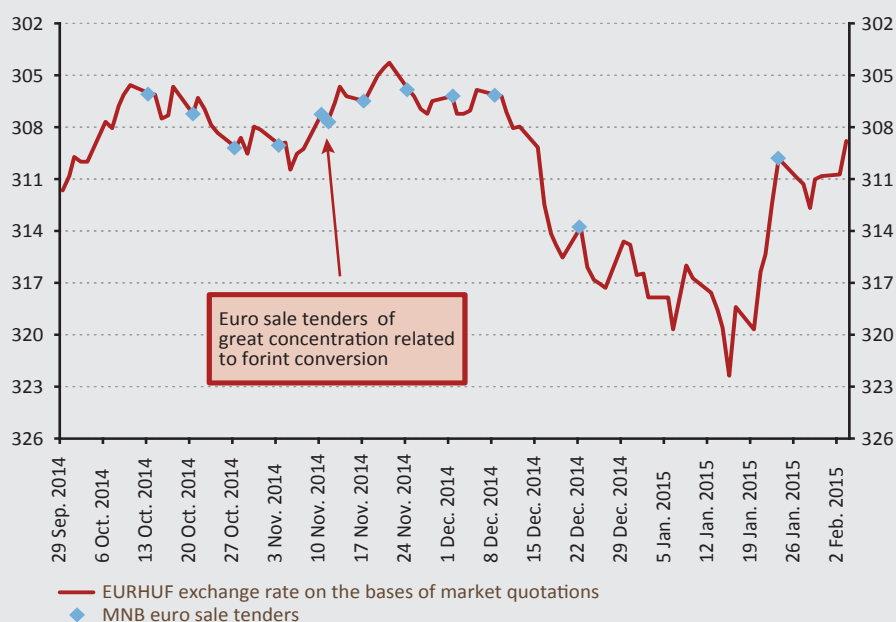
<sup>31</sup> For further details see: Hoffmann, Kolozsi and Nagy (2014).

The banking system's portfolio of foreign currency and foreign currency based consumer mortgage loans amounted to EUR 10.8 billion before the settlement. As a result of the settlement, this amount was reduced to EUR 9 billion. The conversion requirement was smaller than this: on the one hand, stock numbers had to be adjusted for a depreciation of EUR 1.5 billion on the affected loan portfolio and, on the other hand, for the value released from this amount as a result of the settlements (EUR 0.4–0.6 billion). Accordingly, banks' hedging requirement in relation to the conversion can be estimated at EUR 8 billion.<sup>32</sup> In summary:

- taking recourse to the EUR 8 billion allocated at the conversion tenders of the MNB, banks covered the related hedging need nearly in full at the MNB;
- the MNB allocated nearly EUR 1 billion to the banking sector to hedge the bank settlements related to the application of the foreign exchange margins and unilateral interest rate or interest rate premium increases, which was probably a somewhat smaller amount than the total hedging requirement of the settlement.

Overall, the central bank's FX sale programme covered the banking sector's entire foreign currency demand for the phase-out of household FX loans which,

**Figure 8.**  
Developments in the forint exchange rate and central bank FX tenders



Source: Own compilation based on MNB data

<sup>32</sup> Magyar Nemzeti Bank: The MNB's foreign currency tender has brought success; banks have almost entirely covered the forint conversion. Communication, 10 November 2014.

in addition to correspondence between FX stock data and the volume of foreign currency sold by the central bank, is confirmed by the lack of a material exchange rate effect. If the foreign currency required for the settlement and the conversion had been purchased in the market, it would have generated substantial exchange rate depreciation; exchange rate data confirm that such depreciation failed to materialise. On the days of the FX tenders the exchange rate did not deviate from “normal” values, neither in terms of volatility nor the direction of the movement, which demonstrates that banks relied on the central bank to obtain their foreign currency requirement (*Figure 8*).

## 5. Summary

In 2014, foreign currency household mortgage loans were phased out. The implementation of the phasing-out was made possible by changes in legislation, the central bank’s increased room for manoeuvre, the decline in CDS spreads, the reduction of the foreign currency loan portfolio and the reduction of interest rates. The settlement and especially the conversion, generated substantial foreign currency demand, which was satisfied through the MNB’s foreign currency sale programme.

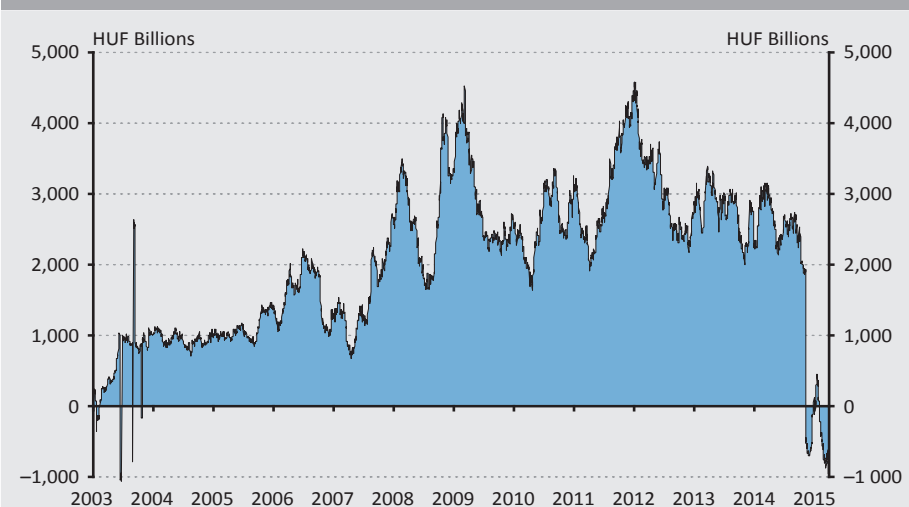
Since household FX lending posed a risk not only to the finances of households but also to the financial system and the economy as a whole, the phasing-out of FX denominated mortgage loans affected more than just the financial position or exchange rate exposure of households.<sup>33</sup> As a result of the conversion, the net worth and monthly disposable income of households will no longer depend on fluctuations in the exchange rate; the exchange rate risk previously faced by households has disappeared. The settlement and the “fair banking system” regulation also points to a lower and more predictable household debt burden, which may improve their consumption and investment intentions.

On the whole, the conversion has a positive effect on the stability of the banking system. As a result of the euro sale transactions between the MNB and the affected banks, and the net FX swap exposure of the banking sector practically disappeared: compared to a typical stock of HUF 2,000–3,000 billion, by the end of the year the portfolio practically shrank to zero (*Figure 9*); the position vis-à-vis the rest of the world is nearly entirely hedged by the offsetting stock vis-à-vis the MNB. The conversion may reduce short-term external liabilities as well, generating a downward shift in rollover risk. From 1 January, with the announcement of the fixed conversion exchange rate, the credit risk associated with the affected FX loans

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<sup>33</sup> For more details on the elimination of foreign currency household lending, see: *Erhart, Kékesi, Koroknai, Kóczyán, Matolcsy, Palotai and Sisak (2015)*.

**Figure 9.**  
**Net swap stock of the banking sector, 2003–2015**



Source: Own compilation based on MNB data

declined, which improves the quality of banks' loan portfolios and mitigates the sensitivity of the capital adequacy ratio to exchange rate movements.

The two additional substantive elements of the phasing-out of the FX loans, namely the establishment of the regulatory framework for the settlements and for "fair banking", are likely to have exerted a direct, negative impact on the profitability and capital accumulation capacity of the banking sector over the short term; these effects, however, should be assessed in light of the net balance of the entire "package". It is important to see, however, that the settlement is a *legal* measure in substance; in other words, it should not be considered a policy move; indeed, regardless of the form of the settlement, banks would not have been able to save the related expenses in any case. Reducing the interest rates to "fair" levels and guaranteeing the transparency of interest rate changes (also in relation to existing contracts) – *ceteris paribus* – may serve the interests of credit institutions over the medium term through the regained confidence of customers; thus, overall, the package resolving the problem of households' foreign currency loans may have a positive impact on financial intermediation both directly and indirectly.

The strengthening of the banking sector and thus, the entire financial system, reduces Hungary's risk premia, with a beneficial effect on banks' expenses and the central budget's cost of funds. Declining yields in the government securities market reduces the interest expenses of the state, allowing the fiscal policy to achieve a faster reduction of government debt and/or a more pronounced economic upswing.

Conversion improves the efficiency of the monetary policy transmission and expands the central bank's room for manoeuvre. With the mitigation of financial stability risks, market shifts in the exchange rate affect the real economy and inflation through the traditional channels once again; the effects of temporary rebounds and downward shifts are dampened, and thus the interest rate policy of the central bank is allowed to focus increasingly on long-term trends. On balance, both directly and through indirect channels, the resolution of the problem of foreign currency loans reinforces the financial system and supports economic growth in a sustainable manner.

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# An analysis of the determinants of labour productivity in financial sectors in the context of intellectual property rights

Domicián Máté

*This paper is intended to assist in clarifying the role of Intellectual Property Rights (IPRs) by providing an empirical analysis of knowledge-intensive financial sectors that have received somewhat less attention in research and policy debates so far. The purpose of the study was to estimate the performance of these financial sectors primarily in the context of labour productivity (output per capita) and intellectual property rights between 1990 and 2010. The first objective of the research was to gain an insight into how and to what extent physical and human capital accumulation and changes in total factor productivity (TFP) affected the growth rate of output per capita at the sector level. A growth accounting approach was applied to conduct calculations for a sample of fourteen OECD countries. The results, on the one hand, point to an increased contribution of auxiliary financial and insurance services to the aggregate performance of the financial sectors. On the other hand, the methodology applied revealed that technological progress in the broad sense (TFP) contributed the most to changes in productivity growth across the financial sectors. At the same time, the secondary objective of the study was to explore the determinants of productivity from the perspective of institutional economics, in the context of which a dynamic panel regression model was applied to determine the impact of intellectual property rights (such as trademarks and patents) on productivity growth. It was found that in long run trademarks tended to correlate negatively with productivity in the financial sectors in the model specifications. The conclusions support the view that the existing intellectual property rights systems are in need of reform in the financial sector.*

**Journal of Economic Literature (JEL) Classification:** E25, J24, O47

**Keywords:** sectoral approach, intellectual property rights, labour productivity

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## 1. Introduction

The biggest breakthrough in modern economic history was the period of the industrial revolution in England, which ushered in relatively rapid and sustainable economic growth across the world. The fact that this growth has persisted to date is perhaps one of the most puzzling mysteries of economics. In exploring one of the primary sources of economic development and examining the effects of social norms, culture and beliefs, A. Smith was among the first to advocate the protection of intellectual property as a means to facilitate trade and innovation (*Smith 1759*). Similarly, J. S. Mill held the view that patent monopolies were justified (*Mill 1862*). *Coase (1960)* proposed a possible explanation in the one-off production (transaction) cost of inventions, in the absence of which it would not be possible to harness innovation (R&D) processes for the efficient allocation of capital. According to *Jones (2002:86)*, intellectual property rights benefited inventors by preventing the unrestricted copying of inventions. Thus initially, in an adequately regulated environment, patents, trademarks and other copyrights stimulated the birth of new ideas and inventions.

In the empirical research of the 1950s, Solow's theories ignited interest in technological progress (*Solow 1956*). However, total factor productivity (TFP) – an essential component of economic growth formally deduced by Solow – was to be dismissed for a long time to come as an unexplainable “residual” that exclude the effects of capital accumulation. While in the classical sense, technological progress may appear to be a rather “obscure” process, *Jones (2002:36)* held that technological progress should be viewed as a Harrod-neutral – labour augmenting – phenomenon, consistent with employees' acquired and accumulated knowledge over time. Moreover, technology is defined by *Caselli (1999)* as a combination of machines and equipment of a certain type and workers who have the skills necessary to use them, and technological progress, in turn, means their continuous improvement. In this context, TFP may also include complex factors that cannot be classified into the “traditional” (capital) factors that determine production, either stemming from improving technological quality, economies of scale or management skills, or bearing on the external effects of production – such as innovation, market competition, regulation, etc.<sup>1</sup>

However, there is no consensus in the literature in respect of the channels through which technological progress exerts its impact mechanisms. The latest trends of growth theory attribute a special role to the phenomenon known as “creative destruction” as a basis for innovation, and to “learning by doing” as a possible determinant of the characteristics of economic growth (*Aghion–Howitt 1992*). Others argue that the benefits of new technologies stem primarily from the

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<sup>1</sup> I would like to offer my special thanks to one of the anonymous reviewers for this addendum.

adaptation of existing ones rather than from narrowly interpreted technological progress, including innovation (*Losoncz 2008*).

The impact of technological progress (TFP) on output can also be examined from the aspect of institutional economics. The traditional determinants of the institutional perspective conceived by North distinguished between formal rules and informal constraints, which could influence economic, social and political interactions in market operations. In this context, intellectual property rights – which had gone through an extremely slow and incremental evolution over time – may contribute to economic welfare and a higher level of productivity (*Taylor 1994*). According to *Gould and Gruben (1996)*, IPRs have a positive impact on growth, which is stronger in more open economies. Clarity is obscured even further by the scepticism toward intellectual property rights; as *Machlup (1958)* aptly put it, however, patent systems have been existed for a long time, it would be irresponsible to recommend abolishing it. *Boldrin and Levine (2002)* went even further by suggesting that market mechanisms would be more efficient in allocating resources than the patent system. The elimination of intellectual monopolies may reduce transaction costs without hindering technological progress.

Despite the abundance of negative criticism, the patent protection of innovations had been reinforced significantly by the end of the 20<sup>th</sup> century; however, in the new era of the internet and increased legal costs, the problems have become increasingly evident and quite complex. It has become obvious that in their existing form, patent systems will be less and less capable of meeting the requirements of certain sectors, such as IT, bio-technology, etc. (*Szűcs 2015*). In addition, the findings of empirical studies typically suggest that the existence of patent protection is not necessarily indispensable (*Boldrin–Levine 2009*). Moreover, a significant part of the analyses devoted to intellectual property rights yielded fairly different conclusions when IPRs were examined at the sector level. Intellectual property rights tend to fulfil their role more efficiently in certain sectors (e.g. the pharmaceutical and chemical sectors, etc.) (*Cohen et al. 2000*), and the willingness to patent may vary widely across sectors. The authors attributed this to the complex process of innovations, which are less subject to public and thus can be kept secret more readily than, for example, specific product innovations or innovations related to the accumulation of special financial portfolios. In addition, compared to patenting in other sectors, patent protection in the financial sector is also different in that financial products can be copied relatively easily. *Lerner (2008)* demonstrated that the number of lawsuits involving intellectual property rights is 30-40 times higher than where no such infringements are involved.

This brief study presents a cross-section analysis of various OECD countries focusing on a segment of the services sector (namely, the financial sector), which has been somewhat neglected so far in the empirical literature due to a lack of sufficient data. The first objective of the study was to gain an insight into how and to what extent

physical and human capital accumulation and changes in total factor productivity (TFP) affected the growth rate of output per capita at the sector level. In search of more in-depth explanations, dynamic panel regression models were applied for the period between 1990 and 2010 to test the impact of intellectual property rights (trademarks and patents) on changes in productivity over the long run. In the following sub-chapters, we first present the data available and the applied methods. Finally, we attempt to draw a number of brief conclusions from the results of the analyses, which will hopefully contribute to clarifying the empirical and policy debates on the role of intellectual property rights.

## **2. A brief note on the data used for the analyses**

Financed from European Union resources, a unique, publicly available database has been set up under the KLEMS Project. This project makes it possible to examine, among other factors, economic growth, employment and capital expenditure in around 56 industries. Thanks to the latest update, data for numerous OECD countries are now available until 2011. Individual financial sectors were classified on the basis of the international standard ISIC (Indicators of Activities for Industry and Services) Rev. 3 (EU 2015). Besides financial service activities<sup>2</sup> (D64) and insurance, reinsurance and pension funding (D65), this database also distinguishes between activities auxiliary to financial service and insurance activities, such as investment consulting or real estate and portfolio management services (D66).

In order to measure intellectual property rights, further variables are needed. The empirical literature has a long tradition of employing composite indices. *Park (2008)*, for example, proposed a so-called “GP index”, which was used to measure, among other things, the protection of patents and their validity period. The Economic Freedom Index, constructed by the Fraser Institute, has been frequently used as a proxy to measure the enforcement of intellectual property rights (*Gwartney et al. 2000*). Subjectivity is often cited as a legitimate criticism against such indices; therefore, in order to ensure more robustness in our models, for the purposes of this research, data from independent institutions were used, such as the number of applications in a given year. From the statistics database (*WIPO 2015*) of the World Intellectual Property Organisation (WIPO), we first tested trademark data. The Dow Jones, FTSE, and the NASDAQ indices or other intellectual property rights covering S&P-managed portfolios are perhaps among the most widely recognised trademarks, logos, etc. in the financial sectors. Trademarks related to insurance, financial and monetary affairs were derived from Class 36 (*WIPO 2015*), based on the international (NCL) standard under the Nice Agreement (*WIPO 2011*). In addition, for the purposes of our calculations we used the number of patents registered in knowledge-intensive sectors as control variables, relying on (*EUROSTAT*

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<sup>2</sup> Division 64 includes various transactions and activities related to traditional lending, deposit collection, etc.

2015) data provided by the European Patent Office (EPO). In the sector of financial services, financial intermediaries (insurance firms, investment funds, etc.) typically seek patent protection for the procedures and methods developed for building investment portfolios, calculating pension benefits, etc.

### 3. Output, employment and investment in the financial sectors

Before testing the methodologies, a number of descriptive statistics should be examined. *Table 1* provides a comparison of the changes in the sectoral structure of output, employment and investment, based on the averages of the OECD countries under review. Average annual changes in output indicate that output increased by around 2.5 per cent in the period between 1990 and 2010. Growth, however, was more impressive (nearly 7.6 per cent) in industries engaged in activities auxiliary to financial service and insurance activities (D66). Moreover, the sectoral distribution ratios reveal that the contribution of sectors providing traditional financial services (D64) to total output remains unquestionable, despite a decline in the sectoral distribution ratio from 66 per cent to 60 per cent. At the same time, owing to structural changes in output, D66 accounted for an increasingly large share in output (rising to 16 per cent from 8 per cent) in the period examined.

Globalisation changes in employment in recent decades triggered redistribution in nearly every country in the world. *Dachs et al. (2003)* essentially attribute this process to the continuously increasing income elasticity of demand for services. Knowledge-intensive financial services show a clear regional concentration of employment in cities (Frankfurt, London, New York, etc.) and countries (United States, United Kingdom, Germany) serving as main financial centres with major stock exchanges (*Schricke et al. 2012*). Based on employment data available in the KLEMS database, the average annual growth rate of employment (0.5 per cent) appears to be fairly moderate in some financial sectors. This, however, merely reflects a shift in employment from D64 and D65 to D66, i.e. the sectors providing auxiliary services, which recorded a significant rise (1.36 per cent) in employment. The growing weight of the sector in the years between 1995 and 2010 is also demonstrated by the increase recorded in labour market penetration (from 16 per cent to 20 per cent) at the expense of the other industries.

Moreover, our analysis of investment activity found that the acceleration observed in D65 and D66 (5 per cent and 8 per cent, respectively) was higher than the average OECD growth rate (3 per cent). Although the combined weight of the two sectors gained increasing significance compared to D64, most of the investment projects (62 per cent) were implemented in the traditional financial sectors.

Data provide clear evidence of an *improvement in the aggregate performance – i.e. economic growth, employment and investment activity – of the financial sectors in the OECD countries under review in the examined period*. Furthermore, descriptive statistics point to an *increasing need for auxiliary financial services, i.e. financial services more geared toward personal interaction*.

**Table 1.**

**Average rates of changes in output, employment and investment and structural developments (%) in the financial sectors vs. OECD averages**

Years/Sectors	Total	Financial service activities	Insurance, reinsurance and pension funding	Activities auxiliary to financial service and insurance activities
Output growth (%)				
1990/2010	2.54%	1.83%	1.53%	7.61%
Output distribution (%)				
1995	100%	66.10%	25.54%	8.36%
2000	100%	59.41%	26.73%	13.86%
2005	100%	60.45%	23.82%	15.73%
2010	100%	60.72%	22.52%	16.76%
Average employment growth (%)				
1990/2010	0.50%	−0.15%	−0.06%	1.36%
(%) of total employment				
1995	100%	50.82%	32.30%	16.88%
2000	100%	49.73%	31.83%	18.44%
2005	100%	50.85%	30.77%	18.38%
2010	100%	48.52%	31.32%	20.15%
Average GFCF growth (%)				
1990/2010	3.07%	1.95%	5.56%	8.42%
(%) of total investment*				
1995	100%	74.92%	15.68%	9.39%
2000	100%	64.13%	16.95%	18.92%
2005	100%	68.10%	17.66%	14.24%
2010	100%	62.29%	24.40%	13.31%

Source: own calculations and edited from the EU (2015) KLEMS database

Note: \* for the calculation of the investment-to-output ratio, sectoral GFCF was divided by GVA in the financial sectors.

#### 4. Performance of the financial sectors according to the growth accounting approach

Naturally, numerous methods can be used to describe the evolution of output, productivity and their determinants. In respect of methodology, our first choice was to apply the technique of growth accounting, which allows for the decomposition of output growth into such components as the accumulation of physical and human capital or technological progress (often referred to as total factor productivity or TFP), the effects of which can be thereby estimated directly (*Jorgenson–Griliches 1967*).

The KLEMS dataset is suitable for testing the methodology in practical terms. The decomposition of growth from a growth accounting perspective requires, on the one hand, the time series of output, which – for the sake of consistency across sectors – is generally measured as real gross value added (GVA) expressed in constant (2005) prices (*cf. Jorgenson et al. 1987, van Ark et al. 2003, etc.*). By definition, gross value added equals GDP adjusted for taxes and subsidies (*Koszerek et al. 2007*). On the other hand, besides the number of employees in individual financial sectors, we also used investment data for the purposes of our research. Investment was calculated for the different financial sectors using the value of gross fixed capital formation<sup>3</sup> (GFCF) measured in real terms. This allowed us to explore the performance of 14 OECD<sup>4</sup> countries in the period 1990–2010.

The methodology can be best explained using a neo-classical Cobb-Douglas production function as a starting point (*Equation 1*).

$$Y_t = A_t K_t^\alpha L_t^{(1-\alpha)} \quad (1)$$

where  $Y$  means output, replaced for the purposes of our analyses by gross value added (GVA).  $K$  stands for physical capital stock, represented by real, gross capital formation expressed in constant prices as at 2005.  $L$  is human capital, capturing the actual number of employees in the financial sectors. For the production process, we used the assumption of constant returns to scale in proportion of the capital and the human factor. While in the real sector the generally accepted value for  $\alpha$  is 1/3, this ratio is highly questionable in the financial sectors. With that in mind, in our calculations the proportions of production factors were indexed, for each

<sup>3</sup> As defined by OECD (2015a), GFCF is measured by the total value of a producers' acquisitions, less disposals of fixed assets during the accounting period plus certain additions to the value of non-produced assets, such as improvements in the quality of productivity, research, etc.

<sup>4</sup> For the purposes of this study the following abbreviations are used: Hungary (HUN), Austria (AUT), Belgium (BEL), Czech Republic (CZE), Denmark (DEN), Finland (FIN), France (FRA), the Netherlands (NED), Germany (GER), Italy (ITA), Norway (NOR), Sweden (SWE), Slovenia (SLO) and United States (USA).



country and each financial sector, on the basis of the *OECD (2015b)* database in accordance with each year under review.

$A$  denotes TFP at the appropriate time  $t$ . By rearranging *Equation 1*, we are able to estimate the previously mentioned, “unexplainable” component of output growth known as the Solow residual. This residual is often attributed to institutional effects in the literature, but in our case, it may well be associated with intellectual property rights.

The change in TFP was derived from *Equation 2*.

$$\frac{\dot{A}}{A} = \frac{\dot{Y}}{Y} - \alpha \frac{\dot{K}}{K} - (1 - \alpha) \frac{\dot{L}}{L} \quad (2)$$

In accordance with the methodology, by taking the log (3) and the differential (4) of both sides of *Equation 1*, we receive the discrete-time approximation of the equation.

$$\ln Y_t = \ln A_t + \alpha \ln K_t + (1 - \alpha) \ln L_t \quad (3)$$

$$\ln Y_t - \ln Y_{t-1} = (\ln A_t - \ln A_{t-1}) + (\alpha \ln K_t - \alpha \ln K_{t-1}) + ((1 - \alpha) \ln L_t - (1 - \alpha) \ln L_{t-1}) \quad (4)$$

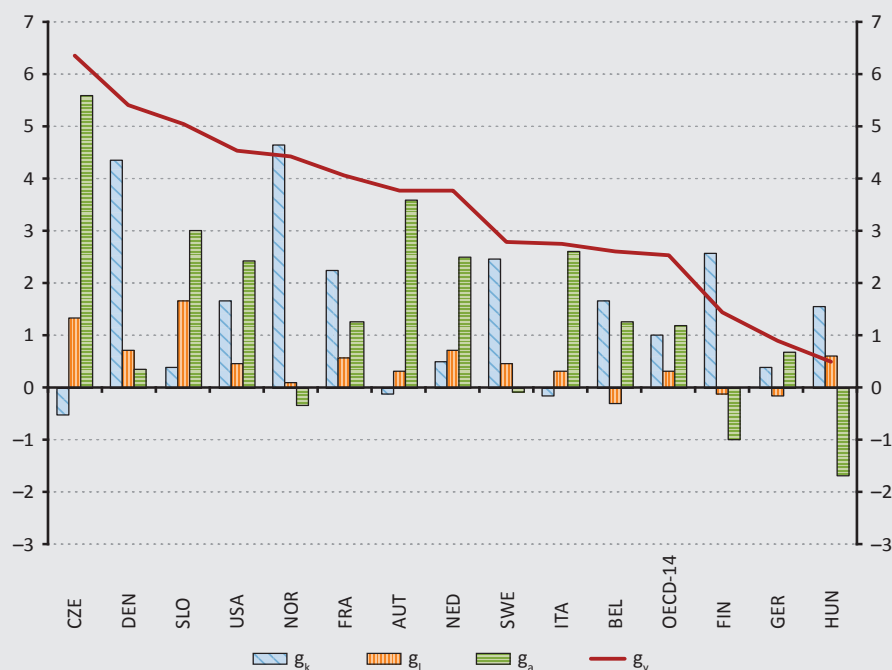
For the sake of simplicity and in line with the differences, we indicate the changes in average output  $g_y$ , total factor productivity  $g_a$ , physical capital  $g_k$  and human capital  $g_l$  compared to the previous period.

$$g_y = g_a + \alpha g_k + (1 - \alpha) g_l \quad (5)$$

With the growth accounting method applied, we can now quantify the *percentage points* by which physical ( $g_k$ ) and human capital stock ( $g_l$ ), as well as TFP ( $g_a$ ) contributed to average changes in output ( $g_y$ ) in the financial sectors. Based on data obtained from the *EU (2015) KLEMS* and *OECD (2015b)* databases, *Figure 1* presents the average changes in each component in the period 1990–2010.

Modern economic growth is a phenomenon clearly distinct in space and time and has been relatively even so far, without showing signs of a deceleration (*Maddison 1995*). Our findings are consistent with this view in demonstrating that *economic growth moved on a relatively stable growth path* in the financial sectors of each country under review. Once we disregard the fluctuations of the business cycles we also find that the primary determinants of output are not related to the accumulation of production factors (capital and human resources). The growth accounting approach confirmed that in the period 1990–2010 *the total factor productivity, i.e. technological progress in the broad sense, contributed the most to average output* in OECD countries. All of this supports the previous findings

**Figure 1.**  
Determinants (in percentages) of average changes in output ( $g_y$ ) in the financial sectors of the OECD countries under review between 1990 and 2010, based on Equation 5.



Source: Own calculations based on the EU (2015) KLEMS and OECD (2015b) databases.

of Bosworth et al. (1995) and Klenow and Rodríguez-Claire (1997) derived from researches based on methodologies similar to the one presented above.<sup>5</sup>

Compared to the average output growth of OECD countries (2.5 per cent), Hungary lagged behind, recording the worst performance (0.5 per cent) among the countries under review. In the financial sectors, the contribution of investment ( $g_i$ ) and employment ( $g_k$ ) to output growth was 1.5 and 0.6 per cent, respectively (surpassing the respective average OECD growth of 1 per cent and 0.3 per cent). Hungarian output growth, on the other hand, is likely to be the result of unfavourable total factor productivity developments (which reduced output by 1.6 per cent). Due to the deficiencies of the growth accounting method, we cannot offer an explanation for this phenomenon; therefore, in the remaining part of the paper we propose a number of more sophisticated analyses. At this junction, the main goal – not only

<sup>5</sup> We have arrived at similar conclusions in our previous research on machinery manufacturing (Csugány-Máté 2012).

for researchers, but also for policy makers – is to identify which institutions may have the most profound impact on the productivity of financial sectors in the long run (either as obstacles or as drivers).

## 5. Analysis of the long-term effects of intellectual property rights on productivity in the financial sectors

Using the production function presented in *Equation 1*, we describe the effects of intellectual property rights on productivity across the financial sectors on the basis of *Mankiw et al. (1992)* for a very long period, known as the steady state ( $y^*$ ). In this horizon, not only the available capital stock, labour force and technology are subject to change, but also institutional factors (intellectual property rights). The economy, in turn, tends to move toward long-term equilibrium in the model specification.

Firstly, we divide both sides of *Equation 1* by  $[L]$  to receive *Equation 6* below:

$$y_t = a_t k_t^\alpha \quad (6)$$

where  $y$  is output per capita at time  $t$ , and  $k=K/L$ , reflecting the efficiency of the capital factor. Consistent with the neo-classical model,  $k$  is the difference between the investment ratio  $s_k$  and the labour force growth rate  $n$ , depreciation  $\delta$  and the presumed  $g$  ratio of long-term technological progress. In line with the original model, for the sake of simplicity the value of the latter two is assumed to be constant at 0.05. We further assume that  $a=A/L$  and TFP correspond to the effects of institutional factors such as intellectual property rights. After the appropriate substitutions, we take the log of the equation and the differential of the dependent variable.

$$\ln(y^*)_t = \alpha \ln(s_k)_t - \alpha \ln(n+g+\delta)_t + \gamma \ln(IPR)_t \quad (7)$$

In the next step, the relationship between intellectual property rights and output per capita is tested in dynamic panel regression models to ensure that the contribution of historic data can also be considered in the financial sectors concerned. In an attempt to confirm the endogenous growth theories, we apply the model specification developed by *Arellano and Bond (1991)*, as it is capable of explaining the dynamic relationship between the steady state and its explanatory variables over the long run. As suggested by the literature on methodology (*Windmeijer 2005*), a two-step GMM technique was chosen to address the problem of endogeneity in each case. Based on this methodology, the models include

lagged values both for the dependent and the exogenous explanatory variables as instruments. In our case, only a lag by one year was permitted for each variable.

Equation 7 can be written in a dynamic regression model specification as follows:

$$\Delta \ln Y_{it} = \beta_0 + \beta_1 \Delta \ln Y_{it-1} + \beta_2 \ln(s_k)_{it} + \beta_3 \ln(n+g+\delta)_{it} + \beta_4 \ln(\text{patent})_{it} + \beta_5 \ln(\text{trmark})_{it} + e_{it} \quad (8)$$

Note:  $\Delta$  – variable in first differences,  $\ln$  – variable in logarithm,  $_{t-1}$  – variable lagged by 1 year.

In the equation, the dependent variable ( $Y_{it}$ ) is the ratio of output per capita of the financial sectors of country  $i$  for the period  $t$ . In accordance with the dynamic model specification, the explanatory variables include productivity change lagged by one year. Based on the neo-classical model, investment in physical capital was substituted by the share of gross fixed capital in sectoral output ( $s_k$ ). Factors ( $n+g+\delta$ ) denote the growth rate of the labour factor (increased by 0.05). In the models, intellectual property rights are represented by the logarithm of the number of trademarks ( $\text{trmark}$ ) and patents ( $\text{patent}$ ), while  $\varepsilon$  is the error term. Table 2. presents the standard statistics prepared of the variables.

**Table 2.**

**Mean, standard deviation, minimum and maximum values of the variables of Equation 8.**

Variables	Mean	SD	Min	Max
$\Delta \ln(y)$	0.02	0.06	−0.24	0.26
$\ln(s_k)$	2.08	0.51	0.60	3.94
$(n+g+\delta)$	0.05	0.03	−0.03	0.18
$\ln(\text{patent})$	6.80	2.29	1.09	10.51
$\ln(\text{trmark})$	6.69	1.43	3.88	9.85

Source: own calculations based on the EU (2015) KLEMS and OECD (2015b) databases.

Note:  $\Delta \ln(y)$ : productivity differential,  $\ln(s_k)$ : investment ratio,  $(n+g+\delta)$ : growth of labour factor increased by the constant,  $\ln(\text{patent})$  and  $\ln(\text{trmark})$ : logarithm of the number of patents and trademarks.

The panel under review represents unbalanced sample sizes encompassing the period 1990–2010, covering 14 countries and 216 and 83 observations, respectively. In the following section, we set out to test the effects of the neo-classical theory (*Model 1 and Model 2*), trademarks (*Model 3*), and patents (*Model 4*), as well as their combined effect, for productivity. After estimation of the equations, we used numerous standard tests to verify the accuracy of the results. In every case, significant Wald tests confirmed the significance of the dynamic model specifications. Autocorrelation between the observations was ruled out by the Arrelano-Bond (AR) tests. Sargan tests were used to test for the presence of over-identifying problems arising from the instrumenting exercise, and the null-

hypotheses assuming their presence were rejected. As regards the presence of stationarity, by using Im-Pesaran-Shin (IPS) standard panel unit root tests we ruled out the possibility of variable shocks being permanent in time. The results of the tests are presented in more detail in *Table 3* below.

<b>Table 3.</b>					
<b>Results of dynamic panel regression models based on the estimates of Equation 8</b>					
Dependent variable: $\ln(y)_{it}$					
independent variables	1	2	3	4	5
konstans	0.036 (5.49)***	-0.234 (-7.41)***	0.037 (0.98)	-0.609 (-1.89)*	0.15 (0.24)
$\ln(y)_{it-1}$	-0.043 (-0.43)	-0.203 (-4.28)***	-0.043 (-0.80)	-0.19 (-3.71)***	0.074 (0.40)
$\ln(s_k)_{it}$	0.122 (4.62)***	0.142 (11.01)***	0.099 (6.43)***	0.148 (12.91)***	0.097 (2.71)***
$\ln(n+g+\delta)_{it}$	-0.664 (-5.13)***	-0.602 (-6.62)***	-0.594 (-3.50)***	-0.613 (-7.57)***	-0.574 (-2.57)**
$\ln(trmark)_{it}$			-0.015 (-2.25)**		-0.026 (-1.78)**
$\ln(patent)_{it}$				0.049 (1.25)	0.047 (0.53)
Number of observations	83	216	83	216	83
Number of countries	14	14	14	14	14
Wald test	67.5***	246.9***	93.58***	561.42***	12.97***
AR test	(-2.47)**	(-1.99)**	(-1.64)*	(-2.17)**	(-2.07)**
Sargan test	8.78	11.98	9.34	9.91	10.02

Source: Edited from own calculations.  
 Note: heteroscedasticity robust z-statistics are in parentheses; p-values \*\*\* significant at 1%, \*\* 5%, \* 10%, respectively.  $\Delta \ln(y)$ : productivity differential,  $\ln(s_k)$ : investment ratio,  $(n+g+\delta)$ : growth of labour factor increased by the constant,  $\ln(patent)$  and  $\ln(trmark)$ : logarithm of the number of patents and trademarks.

In dynamic models, the first control variable represents the lagged values of the dependent variable ( $Y_{it-1}$ ). Except for *Model 5* we received negative coefficients, but they correlated significantly only in *Models 2 and 4*. As expected, investment ratios ( $s_k$ ), showed significantly positive  $p$ -values in each model. Consistent with the conclusions of the neo-classical growth model, the component capturing employment growth and other (constant) components capturing depreciation and technological progress ( $n+g+\delta$ ) showed negative correlation with productivity in all five models.

Using *Models 3, 4 and 5* we can also examine some institutional effects related to intellectual property rights on the basis of data obtained from the *WIPO (2015)* and *OECD (2015)* databases. Based on *Models 3 and 5*, our calculations indicated that changes in trademarks (*trmark*) correlated significantly and negatively with changes in productivity growth. By contrast, neither model for patents (4 and 5) showed significant statistics. In these cases, the lack of significance merely implies that, *ceteris paribus* (assuming that the previously mentioned explanatory variables are constant), the changes in the number of patents do not entail productivity growth in the financial sectors.

These findings are consistent with the results of *Park (2003)* in that they point to patent protection's positive effect on productivity and the negative impact of trademarks and intellectual property rights on productivity in the manufacturing sectors; however, the direct effects of these intellectual property rights were not significant in Park's research. *Hu and Png (2012)*, in turn, have found a positive correlation between productivity growth and patent rights and patent intensity in certain sectors. *Chen and Puttitanun (2005)* have confirmed, through the example of numerous OECD countries, the presence of a U-shaped relationship between IPRs and economic development. All of this indicates that, owing to developing countries' stronger inclination to imitate, the low level of intellectual property rights stimulated productivity growth. Up to a certain level, productivity declines in line with the increase in intellectual property rights as the given country's level of development improves, but afterwards the innovation mechanisms in place prompt an increase in productivity in developed countries once again.

In the "family" of intellectual property rights there are additional protections that are not included in the models due to restricted access to data or the lack of a sector-specific nature. Some intangible assets past the conception phase such as industrial designs or utility models clearly correlate with the increase in productivity. The validity of our conclusions is limited by the bias caused by the exclusion of these variables.

## 6. Summary and conclusions

Labour markets have shown increased demand for knowledge-intensive services requiring personal interaction (*Schricke et al. 2012*). The most prominent findings of our research provide clear evidence of an improvement in the aggregate performance – i.e. economic growth, employment and investment activity – of the financial sectors in the OECD countries under review in the examined period. Furthermore, descriptive statistics point to an increasing need for auxiliary financial services, i.e. financial services more geared toward personal interaction. *Dachs et al. (2003)* attribute the strengthening of the service sectors to the increasing

income elasticity of demand. In this context, the realignment observed in the financial sectors presages a shift in the structure of the economy toward these more productive financial sectors, in parallel to the increasing prominence of services.

The application of the growth accounting approach also revealed that economic growth was on a relatively stable growth path in the financial sector of each individual country in the review period. The primary determinants of output, in turn, appear to be factors other than those contributing to the accumulation of production factors (capital and human resources). In the review period (1990–2010) the most significant contribution to average output in OECD countries stemmed from total factor productivity, i.e. technological progress in the broad sense. This supports the previous findings of the research conducted by *Klenow and Rodriguez-Claire (2002)* on the basis of a similar methodology. Due to deficiencies in the methodology, however, it is impossible to identify with certainty the institutional factors that may impact the performance of financial sectors.

Thus, we also examined the long-term effects of intellectual property rights on productivity through dynamic panel regression models. Although IPRs appear to function appropriately in certain industries, evidence on the financial sectors suggested otherwise. Our results indicated that the changes in trademarks correlated significantly and negatively with changes in productivity growth. At the same time, neither model for patents yielded significant statistics.

This study was not intended to call into question the utility of intellectual property rights. The innovation activity providing the basis for patents is a complex process with a long history of evolution, the economic effects of which are extremely hard to observe. Although intellectual property rights have been an organic part of the economy for centuries, we cannot draw universal conclusions in respect of the social and economic impact of trademarks and patents.

Despite some recent progress in institutional reforms, significant changes are expected to be required in the period to come. One such change would be the adoption of new legislation that would allow third parties, besides the European Patent Office (EPO), to inspect reports on and raise objections against, as appropriate, the infringement of patents (*Venulex 2011*). In 2013 a framework for uniform patent and court decisions was developed and, headquartered in Paris, a Unified Patent Court (UPC) was established to address irregularities concerning the European License Agreement. *Boldrin and Levine (2009)*, however, do not recommend the immediate elimination of existing patent systems in view of the potentially substantial financial losses, instead; they propose a multi-step process. Over the long term, an alternative solution could be the reduction of the validity period of intellectual property rights.

In our concluding remarks we should also take mention of possible research directions. The theoretical starting point in this context could be the existence of transaction costs. In examining how political power and the degree of democracy affect economic growth, *Aghion et al. (2008)* found that freedom of entry was especially enhancing for economic growth in sectors close to the technological frontier, while it tended to impair productivity in undeveloped sectors. The next research topic to be explored should focus on the effects of such institutions in the sectors providing financial services.

In addition, numerous other phenomena have been observed in global markets in recent decades that contributed significantly to mounting financial market risks and uncertainties in a rapidly changing economic environment (*Tóth 2014*). Therefore, the need to gain an insight into the relationship between intellectual property rights and financial crises – which tend to recur in parallel to the rapid globalisation of the economy – calls for further research.

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# Incentives and restrictions in venture capital contracts

Anita Lovas – János Pereczes – Viktória Rába

*In venture capital markets, contracts between investors and enterprises stipulate special incentives and restrictions in order to address the occurrence of severe asymmetric information, to reduce investor risk, and to facilitate successful exits. The purpose of this paper is to provide an overview of the international literature on venture capital contracts with a primary focus on empirical aspects, and to compare the authors' findings with the Hungarian practice as reflected in the questionnaire-based survey conducted among venture capital funds. We concentrated our research on management control rights, the application of convertible debt, cash flow rights, voting rights, and drag-along and tag-along rights. In the article we describe the key features of venture capital contracts, the characteristics of selected contract elements and their impact on corporate operations and the contracting parties. After the presentation of individual contract elements, we summarise the relevant empirical evidence of international papers and draw conclusions in light of the Hungarian contracting practice.*

**Journal of Economic Literature (JEL) Classification:** G24, G32, D86

**Keywords:** venture capital, contract, management control, convertible debt, voting rights

## 1. Introduction

Venture capitalists can be best described as organisations investing in projects that offer high return potential but also high risk (Sahlman 1990), typically setting a pre-determined time horizon for their investments (Karsai 2012). The most prominent difference between venture capitalists and other financial intermediaries is that VCs play a role above and beyond traditional financial intermediaries in that they provide not only capital, but also professional support to the selected firms and as such, they are actively involved in the enterprises as owners (Hellmann–Puri 2002).

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During the term of the investment, as well as in the pre-screening and contracting phase, a condition of asymmetric information may arise from the fact that the investor and the entrepreneur typically do not know each other's product,<sup>1</sup> and they have no control over each other's activities or the result thereof. The first issue may give rise to adverse selection, while the second may become problematic because of the presence of moral hazard. The degree of adverse selection and moral hazard is usually higher in venture capital finance, which is typically aimed at innovative, high-risk projects with uncertain outcome. Moreover, the problems may also become double-sided, running the risk of double moral-hazard situations where not only the entrepreneur, but also the venture capitalist assumes an active role, with both parties functioning as agents.<sup>2</sup>

Venture capitalists develop their contract design carefully, and subsequently continue to monitor the enterprise (*Sahlman 1990*) so that they can recognise and manage the effects of information asymmetry. Venture capital markets, in particular, the relationship between the venture capitalist and the entrepreneur and the contract elements defining the particulars of the investment (including their characteristic features and impact on the future success of the project) are topics that have been discussed increasingly often in the international literature since the early 2000s. This paper is intended to contribute to these discussions by providing a comprehensive review of the findings of international empirical studies on the one hand and, on the other hand, to start bridging the gap in the Hungarian literature by offering an analysis on the special features of the continuously expanding Hungarian venture capitalist and entrepreneur community. In the absence of a contract database, we settled for the next best solution, and employed a questionnaire-based survey to obtain an insight into the relevant Hungarian practice. The experience gleaned from the exercise reflects the responses of 15 Hungarian equity fund managers, complemented with the full contents of 32 syndicate agreements.

## **2. International research used for this paper**

Over the past ten years, the empirical analysis of venture capital contracts has come into special focus. In our research, we collected empirical studies that investigated the elements of venture capital contracts.

*Table 1* presents a summary of the databases accessed by the authors of the empirical studies reviewed. The majority of the results reflect investor practices in the United States, with most researchers relying on US contracts for their analyses.

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<sup>1</sup> The word "product" is used in the most comprehensive sense of the term. The entrepreneur's product may be the project itself, or the entrepreneur's managerial skills. The venture capitalist's product may embody his professional network or investment expertise.

<sup>2</sup> A description of the so-called "Principal and Agent" problem in Hungarian (*Rees 1985*).

This can be partly attributed to the fact that the United States boasts the longest history of the venture capital industry, and partly to transparency – or the lack thereof. Due to the reluctance of fund managers, it is difficult to gain access to venture capital contracts in most countries. Apart from the United States, exceptions include Germany, where Hirsch and Walz compiled an impressive database from the investment records of German private equity funds, and Italy, where Caselli et al. succeeded in collecting a nearly full set of Italian investment data.<sup>34567</sup>

**Table 1.**  
**Summary table of the empirical research reviewed**

Author, date	Examined period	Geographical focus	No. of companies	Contracting stage <sup>3</sup>
Trester, 1998	n.a.	United States	kb. 100 <sup>4</sup>	n.a.
Kaplan–Strömberg, 2003	1992–2001	United States	119	first and further stage contracts
Kaplan–Strömberg [2004]	1992–2001	United States	67 <sup>5</sup>	first and further stage contracts
Kaplan et al., 2007	1998–2001	23 countries <sup>6</sup>	145	first and further stage contracts
Cumming, 2008	1996–2005	Europe	223	n.a.
Bengtsson, 2011	2006–2007	United States	182	first stage contracts
Hirsch–Walz, 2013	1990–2004	Germany	290	first stage contracts
Caselli et al., 2013	1999–2005	Italy	563 <sup>7</sup>	first and further stage contracts

*Source: Own compilation based on the used studies.*

The studies reviewed for this paper did not provide any details about additional characteristics of the groups of enterprises included in their samples, such as the size of the target firms or the ratio of the funds raised to firm size. Thus, we interpret the results as being pertinent to the venture capital market in general. State participation and thus the proportion of government support varies from country to country. According to the data (for 25 countries and over 22,000 investments) of

3 Under the first venture capital financing round, the authors examine early stage investments: these firms are “pre-revenue enterprises” not yet involved in actual operations. Later round venture capital financing usually refers to a second financing round; entry is made at a later stage when the growth-stage company is already collecting revenues.

4 The author did not offer precise information in the article.

5 The sample is the sub-sample of *Kaplan and Strömberg (2003)*.

6 For the most part, 1–5 contracts per country, except Israel (15), the United Kingdom (10), Germany (14), Switzerland (27) and Sweden (23).

7 The authors disclosed the number of contracts but not the number of enterprises.

*Brander et al. (2015)*, venture capital funds typically rely on private investors in the United States, while government sponsorship is more prominent in Germany and several other European countries, with state involvement as high as 30 or 50 per cent. In Hungary, there is a strong<sup>8</sup> presence of funds in public-private partnership, especially after the recent launch of the JEREMIE programme;<sup>9</sup> accordingly, our research primarily covers JEREMIE funds.

In the course of the empirical research referred to above, the authors sought answers to numerous questions, such as the preferred proportion of incentives and restrictions in contracts, or the impact of certain restrictions on exit options and thus the venture capitalist's profit. In the following, we highlight the most typical findings.

### **3. Management control, control rights and board control**

Besides cash flow rights, control rights in venture capital contracts have the most extensive literature of all venture capital incentives. Empirical evidence shows that this is no coincidence; both control and cash flow rights constitute an organic and inseparable part of the contracting process. As with most incentives, control rights are designed to handle the principal-agent problem, granting the investor, whose compensation depends entirely on the success of the enterprise, a measure of control over the operation of the business.

*Management control* rights mean the right to appoint or fire executive officers, i.e. the chief executive officer (CEO) and the chief financial officer (CFO). Under management control, in case of a failure to meet a pre-agreed and contractually stipulated observable measure of performance, the investor is entitled to replace the CEO (*Fried–Hisrich 1995*). Such a metric for the CEO may be a significant deviation from the business plan agreed upon contract conclusion (shortfall in revenues, overspending, substantial underperformance of after-tax profit goals). The appointment of the chief financial officer by the investor may be an efficient means to ensure financial oversight over operations. Essentially, the goal of the venture capitalist is to have input into business strategy, to oversee financial processes and to ensure the adequate utilisation of the invested funds; it is less likely to intervene at the operational level.

Board control entitles the investor to elect or delegate members of the supervisory board or the board of directors and, through their position, exert an influence

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<sup>8</sup> For more details on the JEREMIE programme and the so-called JEREMIE Funds available under the programme, see *Lovas and Rába (2013)*.

<sup>9</sup> The first JEREMIE programmes were launched in June 2009 in Hungary. By now, 28 venture capital funds have been established under the programme with co-financing from the European Union, and they currently account for around 70 per cent of the market (*MNB 2015*).

on corporate strategy and assume operational control (*Sahlman 1990*). The involvement of the venture capitalist in the supervisory board or the board of directors through a delegated proxy is more common for high-risk investments. Board representation ensures more in-depth insight into the conduct of business and control over decisions in the case of higher exposure.

### 3.1. International experiences

Board control rights are commonly used tools by venture capitalists in the first round contracts examined by Bengtsson. In the reviewed sample, the venture capitalists had not only one, but 2.1 board seats on average. Remarkably, in nearly one fifth of the cases (18%), the investor had full control over corporate decisions by virtue of controlling a majority of board seats (*Bengtsson 2011*). Based on US contracts, Bengtsson argues that protective covenants<sup>10</sup> in the form of veto rights are less common when investors negotiate weaker control rights; investors are more likely to stipulate such covenants when they have more substantial exposure – such as debt contracts – and exercise them even if they have majority control over business decisions (*Bengtsson 2011*).

With respect to management control, the research by *Cumming (2008)* focuses on the replacement of the CEO, while it addresses the investor's majority position on the board in the context of board control.<sup>11</sup> The author's multivariate logit model describes the marginal effects of changes in veto rights – veto rights in connection with asset sales, asset purchases, changes in control and issues of equity. He found a statistically significant correlation between the stipulation of management/board control and veto rights, and the exit vehicle of acquisition.

Negotiating the right to replace the CEO increases the probability of acquisition by 38.6 per cent in itself; however, when all other correlating variables are taken into account – such as board control, veto rights, drag-along right and anti-dilution protection – this rate drops to 23.6 per cent.

The investor's majority position on the board and its majority voting right, *ceteris paribus*, increase the probability of an acquisition exit by 23.7 per cent. As in the previous case, Cumming explores the effect of the correlating variables mentioned above; namely, that each individual variable increases the probability of an acquisition exit by 12.2 per cent.

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<sup>10</sup> Covenants are commitments intended to bring in line the interests of the investor with those of the entrepreneur and protect collateral. For further details, see *Walter (2014)*.

<sup>11</sup> It should be noted that the Hungarian and Anglo-Saxon practice of corporate governance differ from one another with respect to decision-making. In the Hungarian practice, significant decisions are made at the General Meeting or the Member's Meeting, while in the Anglo-Saxon system decision-making takes place at the Board Meeting, and anyone without representation will miss the chance of having an input.



Investment write-offs are 31.7 per cent less likely to take place when the right to replace the CEO (founder) is negotiated, and 18.2 per cent less likely when control rights (drag-along rights and anti-dilution protection) are granted to the investor. Although the correlation between the stipulation of the right to replace the CEO and control rights is 0.54 in Cumming's model, this does not affect the significance of the positive effect of control rights provisions on acquisition and their negative effect on write-offs.

On the whole, *Cumming (2008)* found that contractual clauses pertaining to these rights are more likely to lead to acquisition and weaker control rights tend to facilitate IPOs (initial public offering) or the unsuccessful closure of the investment, i.e. write-offs.

*Kaplan and Strömberg (2004)* investigated the relationship between the use of control rights and certain risk factors surrounding the investment. They classified risks into three categories. Risks in the first group – internal risks – arise from a condition of asymmetric information, such as the investor's difficulty in monitoring the enterprise or the entrepreneur's capital utilisation habits. By contrast, VCs and founders may face risks that are equally uncertain for both parties. Examples of such external risks include the response of competitors or future demand for the enterprise's products. Finally, the third group comprises execution risks. These risks materialise when, despite a seamless relationship between the entrepreneur and the investor and both parties' high expectations about future demand, the parties fail to implement the corporate strategy. Empirical evidence confirmed the assumption that the exacerbation of both internal and external risk factors is in equal proportion to the increase in investor control. The riskier the enterprise's operating environment, the stronger investor control can be expected. Execution risks, however, showed no correlation with the degree of control, and appear to be related to other contractual mechanisms, such as vesting structures and liquidation rights<sup>12</sup> (*Kaplan–Strömberg 2004*).

*Caselli et al. (2011)* examined 834 private equity deals, seeking a correlation between the composition of the board and expected returns. Since their sample included 563 venture capital contracts as well, their results are also relevant to this segment of private equity. They found that the number of contemporaneous and previous seats on boards was negatively related to performance; moreover, internally appointed VC board members correlated negatively with performance. While this finding may have numerous explanations, there is one clear conclusion for venture capitalists: a firm will perform better with external experts on the board of directors, i.e. when the appointed director's relationship with the fund is weaker.

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<sup>12</sup> Vesting structures can be viewed as the "gradual acquisition of stake". Under liquidation rights, upon the sale or the liquidation of an enterprise, venture capitalists enjoy a higher rank in the hierarchy instead of simply collecting the proceeds on a pro-rata basis. For further details, see *Zsembery (2014)*.

### 3.2. Hungarian market experience

In examining Hungarian practice, we essentially sought to find answers to two questions: is it important for Hungarian fund managers to have an option to change executive officers, and do they exercise any control over their portfolio companies through board seats? Our results confirmed our initial hypothesis that, consistent with the evidence of international research, these two mechanisms were also important in Hungary.

Most respondents (13 funds out of 15) negotiate contract clauses ensuring seats on the board, while nearly all respondents (all except 1) retain the right to recall and appoint executive officers (CEO/CFO). However, in Hungary the role of the Board of Directors is different from the Anglo-Saxon practice in that all important decisions are made at the General Meeting or at the Member's Meeting. Reflecting on the analysis performed by Caselli et al., i.e. whether fund managers prefer to appoint "outside" or "inside" board members, nearly half of Hungarian respondents (6 out of 15) appointed external experts from time to time, while in most cases, they had their own employees sit on boards who are actively involved in different sectors and investments. There may be two reasons behind this result: on the one hand, Hungarian fund managers are smaller in size compared to their international peers and, due to their limitations in size, they are less likely to have sufficient resources and connections to recruit suitable external experts and employees. On the other hand, of the limited pool of such experts, few can afford to accept a job with entry-level pay at a high-risk start-up in Hungary and similarly, there is an extremely limited number of experts who, besides having experience obtained at multinational corporations, are also capable of managing a small enterprise.

## 4. Voting rights

For an investor, the allocation of *voting rights* and the assumption of *veto rights* are also conditional on investor control in certain questions (Sahlman 1990). The investor may clinch a control position through the appropriate allocation of voting rights in the Member's Meeting or General Meeting of the enterprise, but even without having a majority voting position, an investor seeks to stipulate a veto right (in the articles of association or the statutes) in several questions (such as the election or replacement of executive officers, the entry of new members, acquisition of stake in another enterprise, approval of the business plan). As a result, in certain issues no decision can be made without the investor in any case.

### 4.1. Empirical results in the international literature

Bengtsson (2011) found that the allocation of voting rights (minority vs. majority) was related to the number of contractual covenants (e.g. restrictions on capital injection and asset acquisition, election of management). In the case of the

investor's controlling interest, 2.45 covenants are applied on average compared to 3.06 covenants for minority shareholding, which underpins the higher risk assumed by minority shareholders (*Bengtsson 2011*).

Empirical evidence from the analysis of German contracts demonstrates that the allocation of voting rights largely depends on the type of the venture capitalist, i.e. whether the VC controls the assets of independent private investors, or the funds of an institution (bank or government). In the first case, venture capitalists receive more than 50 per cent of voting rights on average, while this ratio is less than 25 per cent in the latter case (*Hirsch–Walz 2013*).

In the first round US contracts analysed by Kaplan and Strömberg, the voting power of venture capitalists was a minimum of 41 per cent, but in one case it was as high as 69 per cent (*Kaplan–Strömberg 2003*). Similar ratios were seen in contracts outside of the United States: investors held 37 per cent of the votes on average (*Kaplan–Strömberg 2003*).

#### **4.2. Hungarian market experience**

In Anglo-Saxon countries some stakes (business share at LLCs) do not ensure voting rights or board membership. By contrast, in Hungary ownership rights and voting rights almost always go together, and they are rarely separate from one another. The proportion of voting rights (and thus, ownership rights) varies widely in Hungarian practice, ranging between 25 per cent + 1 vote to as high as 75 per cent; it is equally common to have minority rights or the majority of votes. This is also consistent with Kaplan and Strömberg. With reference to Bengtsson's conclusions, we identified the relevant covenants, but due to the small size of our database, we failed to find a correlation with investor share. As most of the funds reviewed involved independent, private investors providing capital in a mixed model alongside European Union financing, we were unable to identify any relevance of Hirsch and Walz's research to the practice observed in the Hungarian venture capital market.

### **5. Cash flow rights**

In a world without information asymmetry, there would be no need to use cash flow rights. In reality, however, the outcome of a firm's activity hinges upon the will and the abilities of the entrepreneur, and since investors have no opportunity to fully observe and monitor this (or it would be prohibitively costly), they needed to find a way to protect themselves from unsuccessful outcomes. At a theoretical level, *Holmstrom (1979)* demonstrated that, with limited liability and risk averse investors, an optimal contract design could provide maximum downside protection, allocating 100 per cent of cash flows to the investor. In the real world of venture capital contracts, however, this is not the case: most clauses ensure some payoff to the entrepreneur even in the case of a failure.

Cash flow rights diverted from ownership ratios for a share in corporate cash flows, however, are not only intended to provide downside protection. The additional functions of cash flow rights play an especially important role in the case of innovative start-up companies; indeed, these enterprises do not have any accumulated assets to be liquidated in the case of default. Cash flow rights are designed to serve three purposes: not only do they ensure priority share for investors from the “recoverable” cash flow, but they also protect the investor’s share from being diluted when additional financing happens at a lower valuation; thirdly, cash flow rights define the exit payment hierarchy, and as such, they allow the investor to achieve the expected return.

The most commonly used cash flow rights can be classified into seven categories (based on the classification of *Bengtsson and Sensoy 2011*). By their design, *cumulative dividend rights*, *liquidation preference* and *participation rights* secure a higher share for the investor from corporate cash flows in case of poor performance or indeed, allocate all of the cash flow to the investor. *Anti-dilution rights* protect the investor against future share issues at a lower valuation than the current – protected – round (i.e. the investor’s investment), by allocating additional shares to the investor in such cases. As a result, the venture capitalist’s share in the enterprise will not decrease excessively. At the same time, anti-dilution provisions also serve as a means to sanction poor performance by the entrepreneur. *Redemption rights* allocate a put option to the investor, allowing him to sell his own share to the enterprise or to the original owners in case of poor performance. By contrast, *pay-to-play rights* are intended to protect the entrepreneur against the cash flow rights described above, by determining the extent to which the investor will lose his rights if he chooses not to participate in the next financing round. In most Hungarian venture capital contracts, *liquidation preference* provisions define the payment hierarchy and the extent to which the investor receives proceeds from the exit price, depending on the internal rate of return (IRR).

Investment in the form of convertible debt and convertible preferred equity allows for an endogenous allocation of cash flow rights, and it is a common form of financing provided to start-up enterprises (*Hellmann–Puri 2002*). Through convertibility, the features of loans and shares are combined in a single security, providing protection to the venture capitalist for the eventuality of underperformance, for example, by way of the debtors’ rank in the payment hierarchy during liquidation. If the enterprise is successful, the VC can choose to convert the security and enjoy additional proceeds relative to the loan payment.<sup>13</sup>

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<sup>13</sup> For more detail about the risks and cash flow effects of mezzanine finance, see *Kőszegi and Walter (2014)*.

### **5.1. International experiences**

*Bengtsson and Sensoy (2011)* investigated the relationship between cash flow rights – in particular, downside protection rights – and investor abilities. Their main finding was that more experienced venture capitalists with superior abilities typically obtain weaker downside protection rights. These VCs prefer the use of board representation and voting control as a means to ensure the success of the portfolio company.

*Kaplan and Strömberg (2003)* confirmed the assertion proposed in the first part of the chapter, namely, that the degree of cash flow control correlates with the enterprise's performance and project stage. In the authors' sample, the portion of cash flows to which investors were entitled under the worst-case scenario exceeded the portion received under the best-case scenario by 8.8 per cent. Another, even more important observation was the fact that venture capitalists controlled almost half of the cash flows in the sample despite being, for the most part, minority shareholders in the portfolio company. By way of comparison, in this sample, founders were entitled to a third, while other stakeholders to a fifth of cash flows. The authors also provided evidence that venture capitalists tend to consider the protection of their investments as a priority when the enterprise is sold or performs poorly. Of the 213 financing rounds in the sample, it was only in one case that founders' claims were not preceded in seniority by investor claims, and 98 per cent of these claims were at least as high as the originally invested amount. Evidently, for the time being, investors are not inclined to share the non-performance of the entrepreneur. The frequency of anti-dilution provisions (95 per cent) is similar to the frequency of liquidation rights.

In Cumming's research, common equity investment usually entailed fewer and weaker control rights than those stipulated in the case of convertible preferred equity investment. IPO as an exit vehicle was 12 per cent more likely in the case of common equity investments. Acquisition exits, in turn, were far more likely when the form of finance was convertible preferred equity (*Cumming 2008*).

The share of convertible securities in the financing structure varies across countries. According to Kaplan and Strömberg, 96 per cent of the contracts included convertible securities, while 79 per cent of US contracts exclusively stipulated convertible stock (*Kaplan–Strömberg 2003*). A few years later, an American study (*Bengtsson 2011*) confirmed the significance of convertible securities, but their share was only 58 per cent according to this research. Compared to the financing structure prevailing in other countries, convertible preferred equity was used only in 54 per cent of non-USA investments (*Kaplan et al. 2007*).

Evidence shows that the proportion of convertible securities correlates with the severity of information asymmetry. Preferred equity is the dominant contract in

early stage financing when the condition of asymmetric information is more likely to arise.<sup>14</sup> As the enterprise ages and matures and the control of the enterprise simplifies, the preference tends to shift to debt contracts (*Trester 1998*).

## 5.2. Hungarian market experience

*Bengtsson and Sensoy (2011)* found overall that the effect of cash flow rights declines in line with the improvement in performance, and eventually it dissipates altogether. This statement, however, is only true for markets where IPO is a realistic goal for an enterprise. In Hungary, however, this exit vehicle is far less common in an environment of low liquidity, high issue costs, small firm sizes and the lack of transparency demanded by the stock exchange. An enterprise has reached the pinnacle of success when it is sold on the private market, where cash flow rights, through liquidation preference, are still credited with great significance.

While Bengtsson and Sensoy concentrated on downside protection rights, based on the analysis of 32 Hungarian syndicate agreements we found that liquidation preference had become an indispensable part of syndicate agreements. In our questionnaire-based survey, we focused on the manner in which upside payoffs were shared.

Liquidation rights essentially mean that the investor receives a larger share of the exit proceeds than the pro-rata allocation would be until the expected return is reached, and as soon as the share to which he is entitled based on his ownership coincides with the expected return, the remaining proceeds are divided between the entrepreneur and the investor in a pre-defined proportion.

In the survey, we wanted to find out whether Hungarian investors were prepared to relinquish a certain portion of the exit payoffs to the entrepreneur before reaching the expected return on their investment and, should the return surpass expectations, were they willing to grant a larger proportion of the proceeds to the successful entrepreneur than the pro-rata payment.

Of the 15 respondents, 13 fund managers applied exclusive liquidation preference up to the invested amount plus an expected return. As the survey examined fund manager practices rather than individual contracts, this does not necessarily mean that, in most exits, it is only the fund manager that collects proceeds up to the amount of the expected return; however, it shows that diverting the purchase price is a common practice in the Hungarian venture capital market for the protection of the investor. More than a half of the fund managers (9 out of 15) stipulated pro-rata allocation even when the expected return was exceeded. The former

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<sup>14</sup> As preferred equity is considered to be equity financing, it does not increase leverage relative to convertible bonds. For more detail on leveraged finance, see *Berlinger et al. (2012)*.

result is not surprising: meeting the expected return is a minimum objective for all investors; the message of the latter, however, is intriguing. In a certain sense it means that the investor appreciates the entrepreneur's efforts in making the enterprise succeed only to the extent of the entrepreneur's shareholding – even after achieving sufficiently large payoffs (above the critical amount), the investor is unwilling to share the proceeds beyond a pro-rata basis.

## **6. Drag-along and tag-along rights**

The use of drag-along and tag-along rights has become so widespread that these rights are now identified with the venture capital contract itself. During a potential divestiture, conflicts of interest may arise both on the part of the investor and the entrepreneur. This “hold-up” problem occurs when one party wishes to sell its stake but the other party makes it impossible by refusing to sell its own, when the buyer is only interested in acquiring a 100 per cent ownership. The so-called “co-sale” obligation or drag-along right was designed to solve this problem by allowing the investor to force the entrepreneur to sell his stake under identical terms and conditions (*Berglöf 1994; Zsembery 2014*). Tag-along rights (co-sale rights) are meant to ensure that, should the entrepreneur want to sell his stake, the investor has the opportunity to sell his own with the same terms, and vice versa (*Feld–Mendelson 2012*).

It is precisely because of the various contractual mechanisms that minority and majority status is not the most important issue for venture capitalists. These contractual stipulations may divert certain control and cash flow rights from the ownership ratio. The use of drag-along and tag-along rights independent of ownership share is an excellent example. Without going into details, it is important to note that not only the investor but usually all other shareholders have equity issuance rights and the right of first refusal, which allows them, in case of the enforcement of the drag-along right, to retain ownership in the enterprise by purchasing the stake of the investor; for this, however, they must offer at least the same price as the third-party buyer.

### **6.1. International findings**

Empirical studies focusing on the use of drag-along and tag-along rights are scarce for the time being, perhaps because it has become so common that the incorporation of these rights into the contract is taken for granted. *Caselli et al. (2013)* appear to confirm this assumption by pointing out that these two rights are the two most frequently used covenants in venture capital contracts: they were observed in 87 per cent of the contracts comprising the authors' sample. The same study explored the correlation between these rights and returns and found that

their use did not correlate either with future returns or the success of the project. This observation also underpins their role as default covenants.

Since their significance is limited to a potential sale situation, we might think that there is some correlation between their use and the exit vehicle (write-off, acquisition, IPO). Relying on the database Cumming developed for Europe, he concentrated on the effect of drag-along rights when making comparisons between the exit vehicles of IPOs and acquisitions. It should be noted that *Cumming (2008)* discusses drag-along rights alongside additional control rights such as the investor's right of first refusal at sale and anti-dilution protection (extra control rights). In addition to management, board control and veto rights, the author incorporated drag-along rights, the right of first refusal and anti-dilution protection into his model and found that each individual variable increased the probability of acquisition exits by 12.2 per cent, and the extra control rights reduced the likelihood of write-offs by 18.7 per cent. Drag-along rights proved to be far more important and determinant than the rest of the extra control rights under review; drag-along provisions reduced the probability of IPOs by 15.8 per cent, and increased the likelihood of acquisition exits by 31.5 per cent (*Cumming 2008*).

## **6.2. Use of drag-along and tag-along rights in Hungary**

Our analysis of 32 syndicate agreements revealed that, although fund managers had drag-along and tag-along rights in all cases, they could not always exercise these rights without restriction.<sup>15</sup> In most cases, the use of drag-along rights was subject to conditions. The conditions imposed can be classified into four groups. The first group is associated with profitability, which means that, for the protection of the entrepreneur, investors could only exercise their right if the purchase price (adjusted for 100 per cent ownership) reached a multiple of a certain profitability indicator (typically EBITDA). The second group included conditions where this purchase price was linked to a nominal value. The third group of conditions focused on the performance of the business plan: the investor was only entitled to exercise his drag-along right in the case of missed milestones. The last restriction linked the enforcement of drag-along rights to a date which, once again, protected the entrepreneur by allowing him ample time to prove himself, without being forced to exit the project prematurely. The typical period stipulated by the contract was three years from the date of investment. In most cases, a combination of these conditions was used.

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<sup>15</sup> From the aspect of Hungarian practice, it should be noted that the enforcement of these rights by court order is considered by several legal counsels to be highly questionable in the case of limited liability companies.



**Table 2.**  
**Restrictions on the use of drag-along rights among Hungarian respondents**

Restriction	% of usage among asset managers
EBITDA	27.30%
Nominal	36.40%
Busniess Plan	9.10%
Timing	100%
Other	18.20%

*Source: Own compilation based on our own survey.*

As indicated by the results presented in *Table 2*, in their contracts, Hungarian fund managers stipulate various restrictions on the use of drag-along rights. It should be stressed that all fund managers employ some temporal restriction, which prevents entrepreneurs from having to bail out prematurely.

## 7. Summary

Investors can choose from a wide variety of options to manage the risk of adverse selection and moral hazard, including control rights, liquidation rights, drag-along and tag-along rights. Evidence shows that the number of incentives and restrictions applied varies in function of the geographical area, investment types and the risk-level of the project. They have a profound impact on exit options and thus, the profitability of the enterprise; for instance, stronger investor rights increase the probability of IPOs.

We found that the mechanisms applied by Hungarian venture capitalists were similar to those employed in international markets, and were included in venture capital contracts in a similar fashion. Some observations, however, were interesting: for example, fewer Hungarian fund managers elect external members to sit on the board of their portfolio companies, and domestic fund managers explicitly prefer to render the use of certain rights conditional on the profitability (EBITDA) of the enterprise.

The reason behind both observations is likely to be the same: the smaller size of Hungarian fund managers. On the one hand, they have fewer resources to search for and recruit external board members; and on the other hand, they cannot rely on statistical samples in managing their portfolio companies, so in each case, they must give priority to profitability in order to ensure the expected return of their own investors.

Results pertaining to market entry and investment exits are unavailable for the time being, as the JEREMIE funds constituting the backbone of our research are still in the capital allocation phase; the evaluation of their success should be the subject of future research.

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# **Savings cooperatives + integration = More efficient payment services?**

*László Bodnár – László Delikát – Bence Illés – Ádám Szepesi*

*After a short introduction of the history of savings cooperatives, the article focuses on the sector's role in payments in general. Its drawbacks from a payments point of view are examined, which are mostly be associated with the decentralised operation of the sector and the high level of manual procedures. The authors elaborate what possible effects the new integration might have on domestic payments, specifically focusing on those areas where further improvement is needed. Finally, they conclude that the ultimate solution for the lawful operation of an integrated model with multiple participants would be a unified accounting system.*

**Journal of Economic Literature (JEL) Classification:** G21, E42, P13, R11

**Keywords:** savings cooperative, integration, payment inspection, Takarékbank, Payment Services Act

## **1. Introduction**

Based on the experiences gained during inspections of the savings cooperative sector's payment systems, the purpose of this paper is to raise awareness and focus on the reinforcement and importance of legal compliance, within the framework of the current on-going development of the integration's IT-infrastructure. In this paper, after a brief description of the history of the integration, we present the role of the savings cooperative sector in payment services, and then detail the anticipated impacts of the new integration on domestic payments turnover and discuss the areas of payment services where there is still room for improvement.

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The views expressed in this article are those of the authors and do not necessarily reflect the official view of the Magyar Nemzeti Bank.

*The Act on the integration of cooperative credit institutions and the amendments of certain economic laws*<sup>1</sup> (hereinafter: Integration Act) was promulgated on 12 July 2013. This Act expects the members of the integration to participate in significantly centralised cooperation with mandatory membership prescribed for the savings cooperatives and the institutions that participated in the previous integration in their capacity as a bank, where the members provide cross-guarantees for each other, pursue a concerted business policy and build on common synergies. The Act prescribes, amongst others, the establishment of a unified IT system by 1 July 2016, which also serves as a good opportunity for the sector to revise its payment functions and role. At present, savings cooperatives provide their customers with their products and services (account management, lending, investments, etc.) under quite different conditions (working day periods, deadline for submission for same-day settlement and processing deadlines).

The framework for the domestic payments is determined by the Act on Payment Services<sup>2</sup> (hereinafter: Payment Services Act), while the rules pertaining to the management of payment services are governed by the MNB Decree on the management of payment services<sup>3</sup> (hereinafter: MNB Decree). Compliance with these laws is mandatory for all players, not only in the framework contract on payment services (announcement, operating rules, general terms and conditions, individual contracts), but also in daily practice. The requirements outlined in the legislation must be adapted to the payment processes and operating rules of the given savings cooperative; in addition, the related other IT systems should also work accordingly.

At present, the savings cooperative sector is heterogeneous in regards to the applied account management systems. The savings cooperatives currently use five account management systems developed by different manufacturers, but also the same system might have various versions in use simultaneously, due to the difference in time of purchases and ad-hoc developments. The features and essential properties of the individual systems are fundamental determinants of the savings cooperatives' payment processes and opportunities, ultimately defining the way they can comply with legal requirements. An essential expectation vis-à-vis the unified IT system prescribed in the Integration Act is that it should simplify the sector's account management processes, and as a system that determines the payment services of the entire sector, it should reduce the number of violations of the payment legislation arising from the heterogeneity of the present systems and the different solutions, and by increasing the service quality it should contribute to raising the customers' confidence in payment services.

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<sup>1</sup> Act CXXXV of 2013.

<sup>2</sup> Act LXXXV of 2009

<sup>3</sup> MNB Decree 18/2009 (VIII.6)

In addition to the data of the payment and settlement systems, we also relied on the experiences of the payment services inspections conducted by the MNB in the period 2012–2014. It should be emphasised that the inspection experiences in the savings cooperative sector – in terms of the number of payment legislation violations and the frequency of violations – do not materially differ from the inspection experiences at banks. The infringements identified during the payment inspections conducted at the credit institutions have been made available for the public in MNB's annual reports before, and the resolutions passed upon the completion of the individual inspection procedures were also published on MNB's website;<sup>4</sup> in the chapter on inspection we analyse the findings of the individual resolutions with regard to the savings cooperative sector.

## 2. History of the integration of the savings cooperatives

Smaller regional banks serving households and small enterprises were established all over Europe and the world in the last third of the 19<sup>th</sup> century. However, from the middle of the 20<sup>th</sup> century there was an increasing demand for the standardisation of their services as banking groups, organised in networks by countries. These integration efforts were implemented successfully in the developed countries; local small banks maintained their independence in business decisions, while, as part of the national integrity, they established a super bank – operating as a commercial bank – common risk funds and other centralised service organisations in order to reduce their costs and improve service quality. As a result of the successful integration they achieved a market share of 20 to 30 per cent, allowing them to become significant players in the financial sector in all countries. This was the pattern that was followed by the German, Italian, French, Dutch, Austrian and Finnish cooperative movements (*Kiss 2009*).

The first organisation that provided financial services as a cooperative society in Hungary was established more than 150 years ago; however, in the framework of this paper we only go back in their history up to the end of the 1980s, which was the period when integration efforts really started to accelerate. In the two-tier banking system established by the end of the 1980s, due to the market competition there was increasing demand among the savings cooperatives, which were fully independent entities both in legal and business policy terms, to establish an organisation that was capable of representing their interests and, in part, ensuring their governance and supervision more efficiently.<sup>5</sup> For the purpose of creating

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<sup>4</sup> [www.mnb.hu/A\\_jegybank/kozerdeku\\_informaciok/tevekenysegre\\_mukodesre\\_adatok/teljesitmenyeskapa\\_citas\\_20100115](http://www.mnb.hu/A_jegybank/kozerdeku_informaciok/tevekenysegre_mukodesre_adatok/teljesitmenyeskapa_citas_20100115)

<sup>5</sup> Since 1956 the organisation of the savings cooperatives, the representation of their interests, and in part their governance and supervision was conducted by the National Association of Cooperative Societies (SZÖVOSZ) and the County Association of Cooperative Savings Societies (MESZÖV).

the new super institution, first they established the Bank of Hungarian Savings Cooperatives Ltd (Takarékbank) in 1989, followed by the establishment of the National Association of Savings Cooperatives in 1990, as the legal successor of the National Association of Cooperative Societies. The National Association of Savings Cooperatives was in charge of developing the uniform market strategy and the independent and concerted representation of interests, while Takarékbank performed a kind of central banking function, limited to account management and the support of liquidity management, for the savings cooperatives and banks that were transformed from savings cooperatives. Takarékbank kept the bank accounts of these institutions, managed part of their payments while these joined the national and international payment infrastructure indirectly, via Takarékbank. The duties of Takarékbank included the centralised management of individual institutions' liquidity and participation in the development of the business plans and strategies, business policies, system development concepts and sample regulations. With the establishment of Takarékbank it became possible for the customers of the savings cooperatives to avail themselves of services that the individual savings cooperatives would not have been able to provide alone or could have done so only at high costs (e.g. bankcard services, foreign currency payments). In addition to standardising the services, the savings cooperatives also aimed at cooperation in the area of information technology, as a result of which they established Takinfo Ltd. in 1994 with the support of Takarékbank. The duty of the new organisation was to provide the savings cooperatives and Takarékbank with a unified IT background, direct connection between Takarékbank and the savings cooperatives and to coordinate the IT developments necessary for the sector.

At the beginning of the 1990s the integration continued to develop. The National Savings Cooperatives Security Fund was established in 1991, and then in 1996 out of the 256 then existing savings cooperatives 246 signed the *Integration Agreement*, thereby creating the National Savings Cooperatives Institution Protection Fund. The purpose of the uniform institution protection fund was to strengthen the confidence in savings cooperatives, guarantee the protection of the deposits, as well as to strengthen financial stability and solvency. For the purpose of fulfilling its duties more efficiently, the new organisation also had extensive audit rights. Those ten savings cooperatives that did not sign the integration agreement created 2 separate business federations, and thus in 1993 the National Interest-Representation Association Of Savings Cooperatives was established with the National Savings Cooperatives Institution Protection Fund as its institution protection fund. After this, in 2010, one bank and six savings cooperatives established the Institution Protection Fund of Regional Financial Institutions. In addition to the aforementioned organisations, the First National Voluntary Deposit Insurance and Institution Protection Fund of Credit Unions – an institution protection organisation comprised only of credit unions – was also established. Based on their functional systems

and regulations, the former four institution protection funds managed the risks in different manner and with different capital cover, and as such they were unable to serve the interests of the sector and customs efficiently.

In addition to the coordination of the business and risk management functions, attempts at cooperation were also made in the area of information technology by those credit institutions that had no contractual relationship with Takinfo Ltd. A few members of the National Savings Cooperatives Institution Protection Fund established TAK-INVEST Information Technology and Service Provider Private Limited Company in 2002, which developed a state-of-the-art centralised bank IT software (Eurobank), performed the operation of the system and provided continuous stand-by services at moderate service prices and costs.

By 1997 – at the initiative of the Hungarian State – Deutsche Genossenschaftsbank, the German super bank of Volksbank and Raiffeisen Bank, became the controlling owner of Takarékbank, of which the sector expected improved capital supply, broadened the product range and expertise, and introduced modern processes, thereby making it possible for credit institutions operating in the form of cooperative societies to become successful in Hungary as well, similarly to the advanced market economies (Kiss 2009). Following the privatisation of Takarékbank in 1997, DZ Bank AG became the majority owner (71.95%), while the savings cooperatives had right of veto in the General Assembly of Takarékbank despite their minority ownership interest (23.05%). In 2003, the savings cooperatives acquired a call option for the share of DZ Bank AG, which they exercised in 2010 (Moizs and Szabó G. 2012). With this, the central bank of the savings cooperatives was transferred to national ownership; accordingly the decision on developments was the sole competence of the savings cooperatives based on their own interest independently of the potential profit expectations of an external owner.

An important milestone in integration was reached in 2008 when 15 savings cooperatives and Takarékbank established the TakarékJpont network, offering standardised household and SME products and services under a uniform brand name and logo (Moizs and Szabó G. 2012). In addition to the existing services, the savings cooperatives participating in the TakarékJpont cooperation provided their customers with uniform banking, investment, advance savings for housing and insurance products. However, the standardised corporate profile and product development did not become a determinant factor; at the beginning of 2015 only 23 savings cooperatives made use of the opportunity to standardise their products; thus, the sector still has not implemented a service portfolio – and in particular standardised payment products – that is more competitive than before. Despite the numerous initiatives (e.g. TakarékJpont programme, TakarékJ



Academy,<sup>6</sup> KÖT Biztosító Egyesület,<sup>7</sup> TAK-INVEST Ltd. etc.), in the absence of proper authorisation and legal basis the National Association of Savings Cooperatives, the National Savings Cooperatives Institutions Protection Fund and Takarékbank could not serve as the engine of mutual business development. Since the integration agreement represented a loose legal relationship and could be breached without any consequences or sanctions, efficient cooperation between the members of the integration could not be enforced, and thus individual interests and consideration continued to dominate the sector and the members failed to capitalise on each other's strengths with a view to attaining common goals. One of the consequences of this was that no significant measures were taken with regard to the standardisation of the functionality, operation and development of the savings cooperatives' account management systems.<sup>8</sup>

Due to the partial failure of the previous initiatives aimed at integration, in 2013 the legislator – with the goal of standardising the sector and thereby increasing its competitiveness – prescribed stricter, mandatory membership in the institution protection fund and shared responsibility to strengthen the financial stability and the efficient functioning of the sector. In 2013, with the Act on the integration of cooperative societies, Parliament adopted a law that clearly pointed in the direction of a heavily centralised integration prescribing mandatory membership, undertaking cross-guarantees towards each other, pursuing concerted business and releasing common synergies. The Act established the Integration Organisation of Cooperative Credit Institutions (hereinafter: Integration Organisation) with all of its members being cooperative credit institutions (including savings cooperatives that were transformed into banks), Takarékbank and the Hungarian Development Bank.

The Integration Organisation has become the common institution protection organisation of the cooperative credit institutions operating in Hungary, which regulated the internal procedures and thus it replaced – and became the legal successor of – the institution protection funds that previously operated separately. The Integration Organisation may prescribe binding regulations for its members, monitor the solvency and capital adequacy of Takarékbank and the cooperative credit institutions, and may also perform crisis management functions, as necessary.

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<sup>6</sup> Takaréék Academy was set up within the framework of the National Association of Savings Cooperatives with the purpose to organise the education tasks in a uniform education and development system.

<sup>7</sup> An insurance company established by the National Association of Savings Cooperatives.

<sup>8</sup> This chapter is partially based on the following documents:  
Magyar Takaréék. (no date indicated). Integration Groupings and Their Institutions. Time of download: 12 May 2015.  
Source: Országos Takarékszövetkezeti Szövetség: <http://www.magyartakarek.hu/integracios-csoportosulasok-es-intezmenyeik>; Magyar Takaréék. (no date indicated). Our History. Time of download: 12 May 2015. Source: Országos Takarékszövetkezeti Szövetség: <http://www.magyartakarek.hu/tortenetunk>

Takarékbank has become the central bank of the new Integration Organisation with regard to all savings cooperatives, vested with extensive audit rights. Its primary duty is to develop uniform business operation along a common strategy and business policy, which covers product development, marketing and standardised risk and liquidity management, and last but not least the implementation of a unified IT system, which bears the utmost significance in terms of providing payment services. The cooperative credit institutions are obliged to use the sample regulations issued by Takarékbank as central bank, implement the business measures related to the integration, have their accounts managed by Takarékbank and also to keep their disposable funds at Takarékbank or in instruments distributed by it. By the end of 2014, the Integration Organisation completed the due diligence review of the savings cooperative sector with the goal in mind to set up a risk pool (SZHISZ 2015); however, the integration process and the development of closer cooperation among the savings cooperatives has not come to a halt; as a result of the anticipated mergers and amalgamations by 2016 less than 90 institutions will remain out of the 256 savings cooperatives counted in 1993.

### **3. Payment turnover of the savings cooperative sector**

In Hungary, banks provide financial services typically in larger settlements, whereas savings cooperatives traditionally tend to serve the population of smaller settlements. Customers can manage their finances in person and use the services provided by the payment infrastructures by means of savings cooperatives or the Post in one third of all settlements. The customer base of the entire savings cooperative network – which at the end of 2014 comprised of 1,500 branches (agencies) of 114 savings cooperatives – included 870,000 natural person customers qualifying as consumers, 160,000 enterprises and other organisations (mostly micro-enterprises) and 1,100 local governments (SZHISZ 2015).

Based on its special customer base, the savings cooperative sector is less active in the money and capital markets, and plays a more dominant role in the payment turnover of households and small enterprises. In addition to its dominant household customer base, it is continuously increasing its market share in SME financing with the major support of the Funding for Growth Scheme launched by the MNB. The payment services of Takarékbank and the integration of savings cooperatives can be divided into three parts:

*i. payments “outside” the integration*, which includes the payment turnover initiated by Takarékbank and the savings cooperatives covered under the aegis of the integration and sent to the members of the national payment systems

(ICS<sup>9</sup> and RTGS<sup>10</sup>). The foreign currency transactions sent abroad – also with the intermediation of Takarékbank – also forms part of the turnover outside the integration; however, in this analysis we only focus on the turnover of the forint payment systems in Hungary.

- ii. payments within the integration*, which includes the payment orders of the savings cooperatives and their customers sent to each other. The accounting and settlement of these are performed by Takarékbank, and as such they do not appear in ICS or RTGS.
- iii. the internal, so-called “on-us” payment turnover of the savings cooperatives*, where the payment order is executed in the given saving cooperative’s own account management system between two payment accounts.

We have detailed figures only with regard to the payment turnover managed by Takarékbank outside the integration, based on which we performed an analysis covering the period 2012–2014. Consequently, the payment turnover of Takarékbank includes not only its own turnover, but – as the central bank of the integration – also that of the savings cooperatives; therefore hereinafter the turnover managed by Takarékbank shall mean the payment turnover of the integration.

### **3.1. RTGS turnover of the integration**

The share of debit turnover of the savings cooperatives integration in the total turnover executed in RTGS is negligible: based on the transaction value it accounted for 0.5–2 per cent on average, while in terms of quantity it was around 1–1.5 per cent. A considerable part – as high as 5–10 per cent – of the outward turnover of Takarékbank (calculated on the basis of the transaction value) are cash items; at other banks this ratio is barely 1 per cent, which suggests that the customers of the integration pursue cash-intensive activity. Furthermore, a notable amount of transactions are cleared via the intraday clearing platform of ICS, whose settlement (i.e. the actual financial completion) takes place in RTGS. The share of these items within Takarékbank’s debit turnover fulfilled in RTGS accounted for 15–30 per cent on average in value terms.

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<sup>9</sup> The ICS (Interbank Clearing System) is a gross payment system, working on the principle of batch processing, operated by GIRO Ltd, which mainly performs the settlement of small value transfers, direct debits based on authorisation letters (e.g. public utility bills) and other payment operations linked to administrative transfers. ICS operates two clearing models, i.e. overnight clearing (InterGiro1, IG1) and the multiple intraday clearing (InterGiro2, IG2). The latter clearing module is available for the customers and credit institutions since July 2012. Originally it settled the transfers daily in 5 cycles, which was increased to 10 cycles per day from 7 September 2015.

<sup>10</sup> The Real-Time Gross Settlement System (Hungarian RTGS) is the payment system for the large value, urgent forint payments, which handles – amongst others – the settlement of the interbank and the IG2 clearing by the central bank (financial settlement).

### 3.2. ICS turnover of the integration

The turnover of the savings cooperative integration in ICS – which settles small value payment transactions – is significant, accounting for 8 per cent of the total turnover of ICS in volume terms and 4 per cent in value terms, i.e. the sector typically sends a large volume of small value payment orders to the payment system, similarly to other credit institutions with a large household customer base. Intraday settlement accounts for two thirds of the savings cooperative integration's turnover sent to ICS on average, while the remaining one third is settled in the overnight system. Its share compared to the banking sector's total turnover was similar on both settlement platforms during the period under review: its turnover sent to the overnight system and to the intraday system accounted for 4 per cent and 8 per cent of the total turnover, on average, based on transaction value and volume, respectively.

Looking at the distribution of the intraday transfers sent by the savings cooperative integration, it can be stated that – based on the value of the settled transactions – it is higher in the afternoon: roughly half (47–52 per cent) of its turnover settled in the intraday clearing system is typically fulfilled in the third and fourth settlement cycles. On the other hand, based on the number of items, a large part of its turnover (30–35 per cent on average) is already submitted in the first clearing cycle; i.e. in the morning hours it fulfils a large volume of small value orders (*Figure 1*). This is attributable to the fact that the settlement of the payment orders submitted by the household and small enterprise customers (value dated orders, standing orders) are due already at the start of the specified debit day, and that the customers submit a large number of payment orders after the cut-off time, the settlement of which takes place the next morning. Compared to the other participants of the banking sector, this is not a unique phenomenon, and a similar intraday trend can also be observed at credit institutions with a large household customer base.

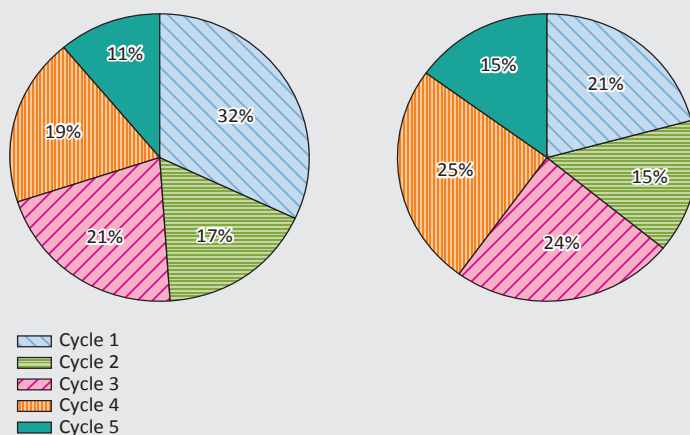
As a result of the Integration Act of November 2013, the direct membership of 15 savings cooperatives and credit unions<sup>11</sup> has terminated, and from this moment on these institutions continued their operation under the “umbrella” of the integration as indirect participants of the system (*MNB 2014*). Simultaneously there were also examples of exits: certain savings cooperatives<sup>12</sup> – which wanted and could remain outside the new integration – were transformed into banks after leaving the integration, thereby becoming direct participants in the clearing systems. On

<sup>11</sup> Mecsek Takarékszövetkezet, Szarvas és Vidéke Takarékszövetkezet, Szegvár és Vidéke Takarékszövetkezet, Hajdúdorog és Vidéke Takarékszövetkezet, Füzes Takarékszövetkezeti Hitelintézet, Alsónémedi és Vidéke Takarékszövetkezet, Nagykáta és Vidéke Takarékszövetkezet, Örkényi Takarékszövetkezet, Pilisvörösvár és Vidéke Takarékszövetkezet, Turai Takarékszövetkezet, Tisza Takarékszövetkezet, Tiszántúli Első Hitelszövetkezet, Magyar Vidék Hitelszövetkezet, Szentesi Hitelszövetkezet, Széchenyi I. Hitelszövetkezet

<sup>12</sup> Duna Takarékszövetkezet (later: DUNA Takarékszövetkezet Zrt.), Polgári Takarékszövetkezet (later: Polgári Bank Zrt.)

**Figure 1.**

**Distribution of debit turnover of the savings cooperative integration by intraday clearing cycles, based on the number of items (left panel) and the value of payment transactions (right panel), (figures from 2014)**



Source: MNB

the whole, the changes in membership did not have a considerable impact on the ICS and RTGS turnover of the integration. The growth in turnover seen after 2013 was primarily attributable to the expansion of the real economy – which also increased the systemic payment turnover – rather than to the changes taking place in the integration. Looking at the relative share of the integration's debit turnover compared to the aggregated ICS turnover, it can be noted that it has not changed significantly even after the end of 2013, i.e. it was consistently around 4 per cent in terms of value and around 8 per cent in terms of volume of items.

#### 4. Payment inspections

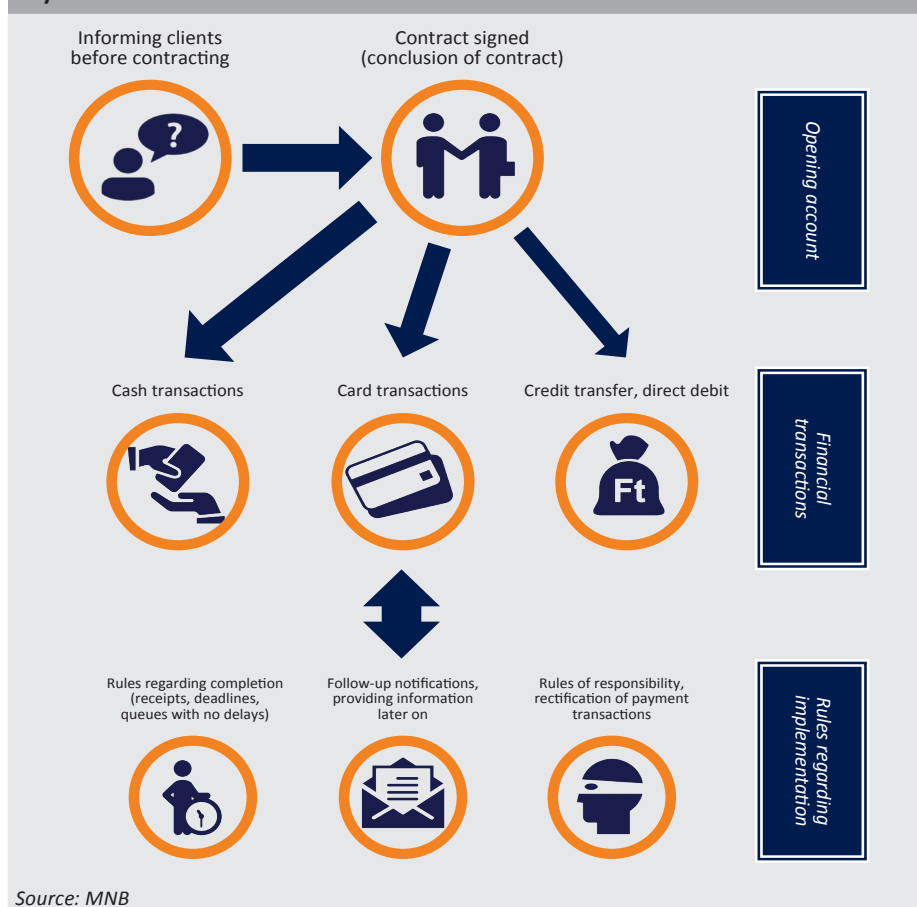
The regulations of the payment services legislation (Payment Services Act and MNB Decree) ensure that the provision of payment services is managed smoothly in a calculable and secure way. The Payment Services Act contains, amongst others, those provisions of the EU Directive on Payment Services in the Internal Market<sup>13</sup> (hereinafter: PSD) that relate to the provision of information to customers, contracting, framework contract, the approval and adjustment of payment transactions, as well as to the liability and compensation for losses. The MNB Decree is another important legal regulation, in addition to the Payment

<sup>13</sup> Directive 2007/64/EC

Services Act, which contains (in addition to the rules stipulated in PSD with regard to the execution deadline of the payment order and payment transactions, and the value date governing interest calculation) the requirements related to the unified designation of the payment accounts, the general and special rules applicable to the execution of payment transactions, the detailed requirements pertaining to certain methods of payments and provisions related to clearing turnover.

Flexible access to payment services and, in certain cases, the statutory provisions require payment service providers (typically credit institutions) to conclude framework contract with their customers and manage payment accounts for them. The service providers manage the funds of their customers on the payment accounts, execute their payment orders to the debit of such accounts and credit the amount of the payment transactions received in favour of them also to these payment accounts. The noncompliance of payment services may lead to customer

**Figure 2.**  
**Payment services based on framework contract**



complaints. If the payment orders are executed incorrectly, the Payment Services Act provides the payer with the right to adjustment or to claim the refund of the payment transaction amount. The execution process of the payment orders based on framework contract is illustrated in *Figure 2*.

As a result of the asymmetric information characterising the payment services market, it is not easy – and sometimes it is even impossible – for the customers to enforce their consumer interests. A vast majority of the payment services involves multiple parties; e.g. a payment transaction is often carried out with the mutual cooperation of 5–6 actors (beneficiary – beneficiary’s service provider – clearing house – settlement bank – clearing house – payer – payer’s service provider), and the parties at the two end of the payment chain do not necessarily have direct contact with each other in terms of the payment; accordingly, they have different information with regard to the payment transaction, they may have no direct access to certain information at all, as it is available only for the other party from its own service provider.

In Hungary, compliance with the statutory provisions related to payment services by the institutions providing payment services (at present the credit institutions and Magyar Posta Ltd.) is authorised by MNB, the institution vested with public authority powers, and it conducts such inspections<sup>14</sup> in accordance with standardised requirements, within the framework of an administrative procedure, based on the rules of the Act on the General Rules of Administrative Proceedings<sup>15</sup> the MNB Act. The institutions are selected for the inspection based on risk considerations.<sup>16</sup> Upon planning of the selection, the payment services market share of the credit institutions is assessed based on the number of bank accounts managed by the given institution and the turnover transacted with ICS, RTGS, the Posta Clearing Centre and number of foreign currency payments (hereinafter: payment services weight). In the case of savings cooperatives, the applied account management system is also taken into account for the purpose of planning, as experience shows that this is a major determinant of their automatic and manual processes.

#### **4.1. Special features of the savings cooperative sector’s account management systems**

The account management system used by the credit institutions has outstanding significance in terms of the practical implementation of the payment services. At present, the savings cooperatives use five different account management systems developed by four vendors (*Table 1*).

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<sup>14</sup> In the period 2010–2013 MNB’s payment service audits also covered the provisions of the MNB Decree, and the provisions of the Payment Services Act after the integration of HFSA in MNB on 1 October 2013.

<sup>15</sup> *Act CXL of 2004*

<sup>16</sup> The inspection plan is compiled considering the institutional risk ranking determined based on the breakdown of the risks of payment services function to the given institution.

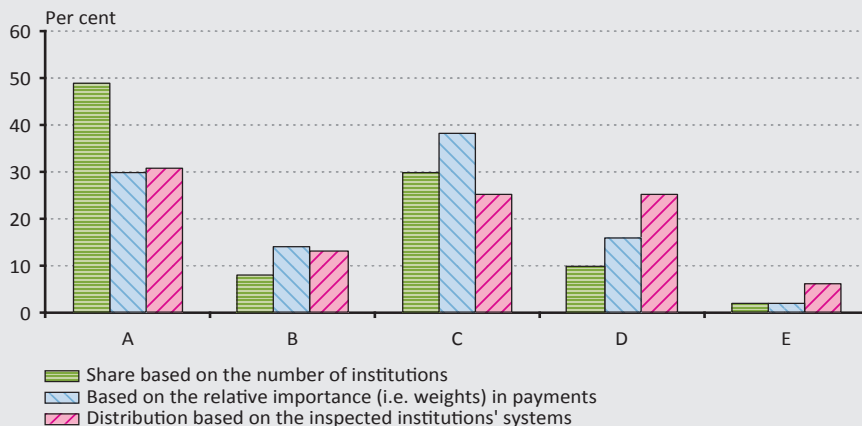
**Table 1.**  
**Key data of the account management systems**

Name of the system	Developer	Year of introduction
KisbankiBOSS	Online Zrt.	1990
Eurobank	Takinvest Kft.	2003
Polaris Dream	Integra Zrt.	2007
Globe	Bank Assistance Zrt.	2008
Moonsol	Online Zrt.	2010

Source: Own compilation.

For business data protection reasons, in the following we refer to the account management systems in anonymous form (A, B, C, D and E). Based on the number of institutions using the individual systems and the payment services weight thereof, it can be concluded that two systems are dominant in the savings cooperative sector (Figure 3), as these two systems cover almost 80 per cent of all savings cooperatives, and the payment turnover transacted by these systems reaches almost 70 per cent of the sector's total payment turnover.<sup>17</sup>

**Figure 3.**  
**Market share of savings cooperatives' account management systems and distribution of the inspected institutions' systems**



Source: Takarékbank, MNB

<sup>17</sup> See payment services weight.



Within the framework of payment services inspections conducted by the MNB in the period 2012–2014, all account management systems used in the sector were inspected,<sup>18</sup> and thus MNB has payment experiences with all account management systems. At the same time, it should be emphasised that the purpose of inspection is to verify compliance with the payment services legislation rather than to audit the savings cooperatives' systems; however, as previously mentioned, the practical implementation of certain legal rules and provisions is largely influenced by the features and capabilities of the applied IT systems.

#### **4.2. Findings of inspections of the savings cooperatives' payment services**

As already mentioned in the introduction, the experiences gained in the savings cooperative sector do not differ substantially from the experiences gained during audits of banks in terms of the ratio of violations of the payment services legislation or other infringements, but the reasons giving rise to the violations are often typical of the sector, and therefore – in order to terminate the violations in an efficient manner that impacts several institutions – we deemed it essential to process the experiences of payment services inspections conducted in the savings cooperative sector. In the period 2012–2014, the MNB conducted payment inspections at 30 savings cooperatives. In most of cases, the deficiencies found in connection with the payment services functions of savings cooperatives could be attributed to the decentralised operation characterising the sector and to the high degree of manual processing.

Based on the topics and chapters of the respective legislation, for the purpose of performing a more in-depth analysis, we grouped the violations identified during payment inspections conducted at the savings cooperatives, as follows: violations related to (i) the conclusion of contracts, (ii) the obligation to provide information and notification, (iii) acceptance, execution and rejection of orders, (iv) queuing and partial payments, (v) restriction of the right to refund, (vi) making of the payment transaction amount available to the beneficiary immediately, (vii) the application of value dates.

In addition, we also grouped violations by the source of the deficiencies. According to this, we identified deficiencies (i) related to the framework contract (e.g. obligations to provide information and notification, limiting the right to refund, etc.), (ii) in the IT-system (e.g. queuing and partial payment, making the payment transaction amount immediately available for the beneficiary, application of value dates, etc.), and (iii) failures due to manual processing or omissions (e.g. compliance with the conditions for opening a current account, acceptance, execution or rejection of payment orders).

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<sup>18</sup> Between 2012 and 2014 more than 30 savings cooperatives were inspected in total.

These two types of grouping are required because in terms of compliance with the legislation and from the perspective of the customers using the payment services, the way the service provider ensures compliance bears no significance. The same statutory provision may also be breached due to manual processing or a failure in the system; e.g. a payment transaction may be credited with delay due to the incorrect parameterisation of the IT system which does not start the processing on time, but also because the administrator in charge of making the credit entry fails to perform his/her duty in a timely manner. Identification of the dominant source of the violations characterising the savings cooperative sector may be instrumental in the elimination of the failures and contribute to the design of the IT system to be implemented in the future in a proper, compliant manner.

#### *4.2.1 Typical violations*

##### *4.2.1.1 Fulfilment of conditions related to the opening of current accounts*

The Payment Services Act stipulates the documents and instruments that the service provider must require from their customers as a condition for opening a current account.

It is a general inspection experience that the internal regulations clearly regulate – albeit differently at each savings cooperative – the range of documents to be presented on a mandatory basis upon the opening of a current account.<sup>19</sup> Due to administrative failures and/or the absence of proper control points, certain savings cooperatives often failed to have legal person customers, already registered at time of the opening of the current account, present the required documents not older than 30 days, confirming that the legal person is in the prescribed registry. Occasionally, the savings cooperatives opened the current account based on documents older than required or even in the absence of the instrument.

##### *4.2.1.2 Obligation to provide information and notification*

The Payment Services Act regulates the credit institutions' obligations to provide prior and subsequent information with regard to the payment services framework contract and the payment transactions. In addition to the obligation to provide information, it also regulates the cases when the payment service provider may charge a fee for the information and the cases when it may not do so. The key principle related to the obligation to provide information with a prescribed content is that it must be complied with in a clear, easy-to-understand and accurate form, and that the subsequent information on the execution of the payment transactions should be consistent with the prior information.

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<sup>19</sup> The payment service provider fulfils the payment transactions on the payment account opened for one or several customers. The current account is a payment account opened by the account holder, based on its statutory obligation, for the purpose of managing its payment turnover within the framework of its regular economic activity.

In accordance with the general practices, the savings cooperatives meet their obligation to provide subsequent information with regard to the execution of the payment transactions in the form of bank account statements. In this respect, the Payment Services Act specifies that in the case of customers qualifying as consumers and micro-enterprises subsequent information on the execution of the payment transactions must be provided at least once a month – even on paper if the customer requests so – free of charge. Namely, the statutory provision does not permit the charging of a fee for the delivery of the bank account statement. However, the vast majority of the inspected savings cooperatives charged a fee for the delivery of the account statements, typically when it was sent by post, but there were also cases when the fee was charged for personal provision as well. In addition, the savings cooperatives often failed to specify in the framework contract – or did not specify clearly enough – the way they would ensure the statutory exemption of the subsequent information from the charges.

It was also a frequent failure that savings cooperatives charged their customers fees, commissions or costs that they failed to announce earlier, or announced not clearly enough, or compared to the prior information the designation of the subsequently charged fee was not clear. It was also a typical failure that they debited customers' payment account with the fee, commission or cost elements specified in the prior notification in aggregate rather than item by item, thus based on the debited amount customers were unable to ascertain that the fees were charged in accordance with the announcement or could verify this only with difficulties.

Out of the requirements related to the obligation to provide customers with information, specified in the MNB Decree, the rules pertaining to the notification related to the execution, queuing or rejection of official transfer orders and collection orders were violated the most often.

The typical failures resulting in the violation of the obligation to provide information – which were generally attributable to the incorrect interpretation or occasional misinterpretation of the legal provisions, or to the incorrect stipulation thereof in the framework contract – are capable of generating direct or indirect financial losses for customers and also suitable for misleading customers or influence their decision-making in certain cases. In terms of volume, these kind of failures affected a large number of customers. With the fee charged for the delivery of the subsequent information the savings cooperatives obtained unjust financial gain to the detriment of their customers.

#### 4.2.1.3 Acceptance, execution or rejection of payment orders

The rules of executing payment orders are regulated by the MNB Decree, the purpose of which is to guarantee minimum service quality and, by the transparent definition of the unified requirements for the acceptance and execution of the

payment orders, to ensure that payment orders are executed in a predictable manner by customers.

In most cases, the violations identified in the management of payments related to debiting earlier than prescribed or to late execution. Consequently, the payment orders were completed in an unpredictable manner for consumers. Due to early debiting, customers no longer had the opportunity to change the sequence of the execution of the payment orders, whereas in the case of late execution the beneficiaries were unable to dispose over the amounts belonging to them at the earliest time prescribed by law. These violations may have occasionally generated financial losses for customers. At savings cooperatives, the most frequent reason for earlier debiting than justified was that they incorrectly scheduled the start-of-day and end-of-day procedures in their account management system. In such cases, in the account management system a given working day was opened for accounting entries already on the previous calendar day, usually after the completion of the end-of-day procedure of the previous working day, and thus the amount of the ad-hoc or standing orders, transfers or direct debits becoming due (value dated) on the opening working day were removed from the customers' disposal earlier than stipulated in their order. Due to earlier debiting than the due date, the payer could no longer dispose of its own funds in the period remaining until the due date of the payment order. The impact of the earlier debiting than justified is greater on Fridays, because if the credit institution executes the debiting of the payment order already on Friday, late at night, while the order was originally due on Monday, and thus the customer cannot spend the funds during the weekend by bank card, although the funds for the payment order could be provided either by a transfer credited or a cash deposit made on Monday.

#### 4.2.1.4. Queuing and partial payment

If the payment order submitted by the customer cannot be executed due to shortage of fund, the credit institution may – depending on the agreement with the customer – queue or reject it. According to the established practice, if the payment order is queued the savings cooperatives regularly check – several times a day – the availability of the funds until such time as the funds are provided or until the end of the queuing period, and if the fund is credited to the payment account, they execute the payment order. If during the queuing period the funds required for execution are not received, execution of the order is rejected on the last day of the queuing period. Experience showed that savings cooperatives often performed the queuing process incorrectly, as they occasionally kept the payment order queued for a period other than specified in the agreement with the customer or queued it without an agreement, or on the contrary, they failed to queue the payment order despite the agreement.

The failure in the practice of the savings cooperatives was mostly caused by the fact that the number of days set in the system as the queuing period was not consistent with that specified in the framework contract, and as such the payment orders were not executed in accordance with the provisions of the framework contract. It was also a frequent failure that the start date of the queuing period captured in the system of the savings cooperative did not comply with the statutory provisions which also caused the duration of queuing to be inadequate. It was a less frequent failure that upon the migration of customers, which accompanied the merger of the savings cooperatives, the settings were not standardised and as such they not always ensured the standard queuing in accordance with the provisions of the framework contract.

The failures related to queuing make the predictability of the execution of the payment orders uncertain for customers.

#### 4.2.1.5. Restriction of the right to refund

In the case of collection orders, the Payment Services Act provides an opportunity for the refund of the payment transaction amount if the payer party qualifying as a consumer or micro enterprise was not aware of the amount to be collected at the time of approval and if the amount of the transaction was not reasonably expectable in the given situation. According to the statutory provisions, the payment service provider is obliged to investigate the legitimacy of the refund claim on a case-by-case basis, and depending on the result of the investigation it should either refund the customer for the already collected amount or reject the claim of the payer party. The framework contract of the savings cooperatives – with the goal in mind to prevent their payer customers from potentially misusing their right to refund – generally restricted the customers' right to refund, bypassing the investigation of individual claims. At the same time, the savings cooperatives' customer complaint registers did not contain any customer claim for the refund of the payment transaction amount, thus it could not be established whether the customers have lodged any claim with the savings cooperatives for refund at all, or such claims were rejected by the savings cooperatives by default with reference to the contractual terms and conditions.

The general restriction of the right to refund may have a particularly detrimental impact due to weakening the confidence in the payment services, and particularly in direct debits.

#### 4.2.1.6 Making the payment transaction amount immediately available for the beneficiary

Pursuant to the requirement to credit incoming payments immediately, as specified in the MNB Decree, the payment service provider of the beneficiary must ensure that the amount of the payment transaction is at the disposal of the beneficiary

customer immediately after it has been credited to its own account. The typical failure at the savings cooperatives in this area was attributable to the manual processing of the postal cash transfers, the foreign currency and RTGS payments and pending items. The delay existed not only within the same day, but also for one or several days, i.e. the beneficiary customer was not able to dispose of the amount belonging to him even for several days in certain cases. It should be noted that at most of the savings cooperatives these payment transactions are credited by manual processing. The length of the delay is significantly impacted by whether the payment transaction amount is credited in the head office of the savings cooperative or in the branches/agencies thereof. Delays of several days occur more frequently in the latter case, as the crediting process is longer than in the case of central processing and it is done by several administrators thereby increasing the risk of omission.

A typical example characterising the erroneously parameterised IT system includes the timing of the intraday crediting of the transfers, the frequency of which was not set identically at the savings cooperatives. Takarékbank processes the payment orders under the intraday clearing standard – which, in addition to the payment transactions received from the ICS intraday clearing system, includes the payment orders between the savings cooperatives, settled by Takarékbank – every 15–20 minutes, i.e. practically on a continuous basis, after which the savings cooperatives are able to receive the credit transfers in their own system and credit them to the payment accounts of their beneficiary customers. Some of the savings cooperatives launched the process to credit the incoming payments every 20–30 minutes, while others did so only every 1.5–2 hours. This latter setting did not ensure, at the vast majority of the incoming credit transfers, that the payment transaction amount was made available immediately for the beneficiary, as occasionally those were credited to the beneficiary's payment account only roughly 2 hours after receipt. It was also a typical failure that the savings cooperatives' end-of-business day was not aligned with the operating time of the clearing systems, as a result the payment transaction amounts received on the respective day were only credited to the beneficiary's account on the next business day.

The not immediate, delayed crediting of the credit transfers provides the credit institutions with unlawful financial gain as the amounts not yet credited to their customers' payment accounts provide them with free liquidity.

#### 4.2.1.7 Application of value dates

Applying disadvantageous value dates for consumers – which is not in conformance with the provisions of the MNB Decree – usually occurred in case of those, not-immediately credited payment transactions whose crediting took place only the following business day or even later. The application of a value date later than prescribed typically occurred in the case of manually credited payment transactions; however, the failure was often attributable to the fact that the account management

system of the savings cooperative did not permit the application of backdated value date for the credit entry, as required.

The application of a later credit value date than prescribed results in loss of interest for the customer and interest gain (float) for the credit institutions.

#### *4.2.2 Source of violations*

##### *4.2.2.1. Failures related to the framework contract*

The source of a major part of the violations related to the provisions of the Payment Services Act is the framework contract for the provision of payment services. It is typical of these failures that they affect a wide range of customers qualifying as consumers and micro enterprises and are often attributable to incorrect interpretation of the law. At the same time, there were examples of applying a contractual condition, violating the provision of the Payment Services Act, where the credit institution wished to gain an illegal advantage to the detriment of the customer. The failures mentioned first include the charging of fees contrary to the provisions or providing prior or subsequent information with incorrect or unclear content, while the latter ones include the application of contractual conditions that generally restrict the customers' right to refund of the payment transaction amount, bypassing the investigation of individual claims or the unlawful charging of fees.

##### *4.2.2.2 IT system failures*

The system failures often related to the account management system, and thus the same problem also existed at other savings cooperatives using the given system. The general experience is that while these system errors were fixed at the savings cooperatives inspected on the basis of MNB's administrative procedure, the software vendor has not always eliminated the error – which it became aware of it in this way – at the savings cooperatives not yet inspected.

There are two types of distinctive IT system errors. *(i)* The account management system has the appropriate feature necessary for compliant operation, but the credit institution is not familiar with it or sets the parameters incorrectly. Example of this cases include, as mentioned earlier, the improper timing of the process of crediting the credit transfers received during the intraday clearing or the setting of the queuing period contrary to the agreement. *(ii)* The account management is not capable of performing certain process in compliance with the rules; the system requires development to make it compliant. An example of this case is the lack of applying a credit value date earlier than the booking date.

##### *4.2.2.3 Failures attributable to manual processing or omission*

The savings cooperatives often launched with delay such computer-assisted processing routines the start of which required the intervention of the operator rather than being controlled by integrated automatism. In addition to the delayed

launch of the computer processing, a number of violations could be attributed to the decentralised operation and the large degree of manual processing, which characterises the savings cooperatives. Experiences show that ad-hoc failures committed by the administrator occur significantly more frequently at savings cooperatives where manual tasks were performed by the branches, with respect to the payment accounts opened by them, rather than by the back office in the savings cooperative's head office. The improper setting of the queuing period in the account management system, as well as the delayed rather than immediate crediting of the postal cash transfer, the RTGS and the foreign currency credit transfers were also attributable to manual processing.

#### **4.3 Failures in the payment services of the savings cooperative sector**

During the inspection of payment services conducted in the period 2012–2014 at savings cooperatives and other credit institutions, failures were identified on more than 360 occasions. In evaluating the experiences we ignored the impact of the different number of audited items, arising from the size of the credit institutions, and we considered only the number of infringements per credit institution. In this way, we made the inspection experiences at the savings cooperatives comparable with the payment service inspection experiences at other credit institutions.

The number of failures identified was roughly the same at both institution types. However, at savings cooperatives it was a general inspection finding that (i) in connection with the framework contract and the obligation to provide information similar failures were identified, attributable to the application of the contract templates and sample regulations issued by Takarékbank and the National Savings Cooperative Institution Protection Fund,<sup>20</sup> and (ii) the number of failures attributable to manual processing was higher.

*Figure 4* illustrates the average number of failures by institution type, grouped as indicated in Chapter 4.2.

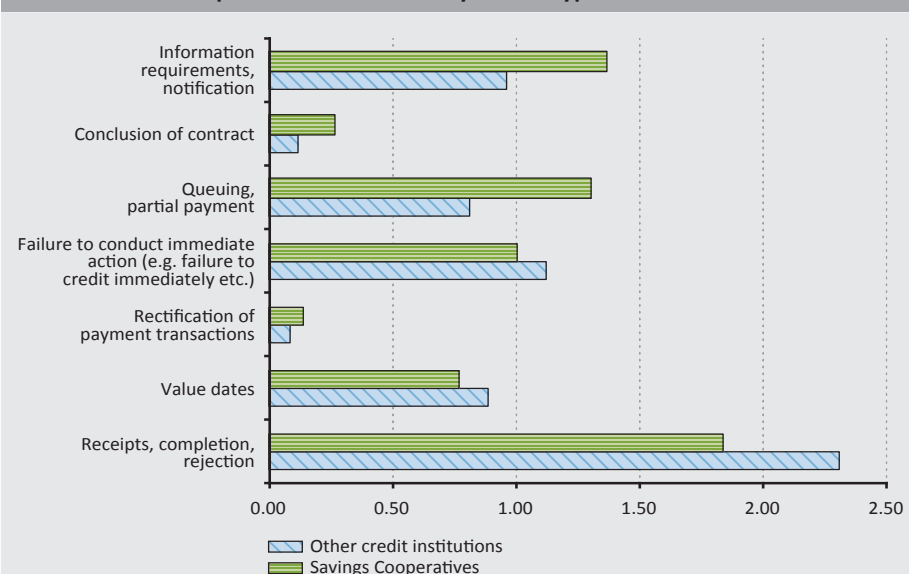
On the whole, based on the inspections two major risk factors can be identified in the savings cooperative sector. One of them is the large degree of manual processing present in the payment functions of the savings cooperatives, which typically led to ad-hoc failures and in these cases for compliant functioning in-process control, development and/or automation is needed. The other risk factor is the degree to which the requirements of the payment services legislation were taken into consideration upon designing the process of the applied systems. Accordingly, the probability of compliant processes also depended significantly on the account management system applied by the given savings cooperative. According to the

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<sup>20</sup> We only have inspection experience related to the provisions of the Payment Services Act from 2014 onwards.



**Figure 4.**  
**Number of failures per credit institution by failure type**



Source: MNB

inspection findings, institutions of the former integration where the IT function and/or the account management was outsourced (to TAKINFO or TAK-INVEST) comprehend the processes of their payment functions to a lesser extent and in connection with this they are aware of the failures and risks thereof to a lesser extent than those institutions that did not outsource the function. We found that some of the savings cooperatives have no significant influence on the outsourced function and on the developments necessary for statutory compliance, and it is not always clear whether the failure giving rise to an infringement was caused by the savings cooperative or the company that performs the outsourced function.

Based on the inspections, the MNB notified Takarékbank several times of its findings related to the payment services of the savings cooperatives and the functioning of their account management system. Takarékbank did take MNB's findings into account and changed its processes, but there is a lot to do after the entry to force of the law regulating the integration of the cooperative credit institutions. The implementation of a unified account management system may offer a solution for the standardised and compliant operation of the multi-player integration model.

## 5. Potentials of the unified IT system of the savings cooperative integration

Taking into consideration the deadline of 1 June 2016 – prescribed by the Integration Act for the implementation of the uniform IT system – Takarékbank has launched its project, which covers the setup of a data centre, a unified account management system and front office system and the migration of the legacy systems. In February 2015, the first IT system that is unified at the level the integration was launched at all savings cooperatives and it manages the investment products and services.

There are basically three options for the implementation of the unified account management system. One is the implementation of a completely new system, the advantage of which could be that it may incorporate all relevant considerations necessary for the efficient and professional functioning and at the same time ensure full compliance with the payments services legislation. Another option could be to choose one of the present account management systems that all savings cooperatives would apply uniformly in the future. In this case, the existing known failures of the system must be eliminated, and it must be prepared for the management of the considerably higher turnover by increasing its capacity. As a third option, the present stand-alone systems would be preserved, but with appropriate development and a unified front-office system they would be linked, thereby ensuring standardisation of the sector's payment services. Although the first option would be the most expensive solution in the short run, in the long run the operating and development costs of a new, modern system could be significantly lower than the parallel maintenance and operation of the existing systems. At the same time, irrespective of the way the integration complies with the obligation to implement a unified payment system, with the implementation of the new system compliance risk will significantly increase anyway, as the non-compliant specification of the system will have a negative impact on the payment turnover of not only one savings cooperative or a minor group of the savings cooperatives, but on that of the entire sector.

The design of a unified account management system have to provide the savings cooperatives with the opportunity to eliminate the earlier payment failures typical of the sector and take account of the anticipated developments in payment services in Hungary and globally. In our view, upon developing the standardised payment service processes the following criteria must be considered:

- i. Acceleration of money transfers.* The immediate (prompt) crediting of the credit transfers received as part of the intraday clearing, and the reduction of the time required for the execution of the payment orders initiated by the customers of the savings cooperatives, to be executed in the intraday clearings, from the

maximum 6 hours permitted by the MNB Decree, would help increase the competitiveness of the sector. In the new integration of the savings cooperatives 15 savings cooperatives and credit unions have lost their direct membership and become indirect ICS and RTGS members. As a result of this, the time required for the execution of domestic forint payments increased roughly by 30 minutes (Császár 2015) compared to the previous practice in case of these institutions. At the same time, this did not lead to an infringement in their case as instead of the general 4-hour rule<sup>21</sup> they came under the effect of the 6-hour rule.<sup>22</sup> The longer time required for the execution in the case of these savings institutions as a result of the standardisation was an unavoidable drawback and definitely prejudices their competitiveness, since they lost the possibility of faster payments provided by the direct ICS membership. This, in their case, conflicts with the international trends and with MNB's efforts to focus the development of the payment service processes on the acceleration of the payments. In order to accelerate the payment services of the savings cooperatives an integrated, real-time online system should be implemented, which – in addition to accelerating the payments outside the integration – could attain the realisation of immediate payments within the integration, and make it possible for the account holders of the savings cooperatives to manage their finances in the branch of any savings cooperatives (i.e. also other than their home savings cooperative). This would be a major step forward also in the prompt clearing of the cash withdrawals made within the integration at a savings cooperative other than the one that manages the account. A properly specified system would also permit the termination of violations – as found and criticised earlier during the payment services inspections conducted by the MNB – and the revision of the processing routine of the sector related to the intraday clearing to achieve faster processing, and it would also create the conditions for connecting to a prompt money transferring system operating 7 x 24 hours.

- ii. Postponing the close of business day.* In order to enhance the competitiveness of the sector the end of business day should be set to a later time on all working days of the week than now, and the early afternoon cut-off times for the acceptance of the payment orders for same day execution – generally characterising the savings cooperative sector – should be prolonged in order to ensure the customer-friendly acceptance and execution of the forint and foreign currency payment orders. The extension of working hours is also required by the anticipated future national and international payment services development trends (7x24 availability, introduction of prompt money transfer).

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<sup>21</sup> Section 17 (2) of the MNB Decree

<sup>22</sup> Section 17 (3) of the MNB Decree

iii. *The highest possible level of automation in the processing of payment transactions.* In order to increase efficiency and strengthen compliance, in addition to the credit and periodic credit forint and foreign currency payment orders it could be expedient to provide proper IT support for the processing of public authority payments by the savings cooperatives, and the processing of postal money orders centrally, at the level of the integration.

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## **The Great Degeneration in Brief: European and Hungarian perspectives**

*Niall Ferguson*

Since the turn of the new millennium, the world has grown fond of oppositions: humanity versus technology, corporations versus disruptors, planners versus the people, governments versus innovators.

Hungary is the perfect place to think about such oppositions because this kind of dualistic thinking seems to be in Budapest's DNA.

As every tourist soon learns, Budapest consists of two cities, Buda and Pest, joined by bridge. It is a city that has lived between two religions at least; it lived through more than one hundred and forty years of Ottoman occupation after 1541. It is also a city that experienced a kind of semi-independence as part of the Austro-Hungarian dual monarchy until 1918. It is a city that lived in the middle of the twentieth century between fascism and communism. It is a city that was up to a quarter Jewish until the catastrophe of the Holocaust struck in 1944. It was a communist city from 1949 until 1989. But it was also the scene of the biggest of all the revolts in Eastern Europe against communism in 1956. "If you come from Paris to Budapest, you think you are in Moscow. But if you go from Moscow to Budapest, you think you are in Paris." Those were the words of the avant-garde composer György Sándor Ligeti.

Today, Budapest is still a city with a split personality, somehow undecided, or doubly committed, between West and East. It is part of the European Union now, but not, it seems, a wholly comfortable part of it. In the summer of 2015 there were scenes of mayhem in Hungary, as asylum seekers from Kosovo, Afghanistan, Syria, Pakistan and Iraq poured into the country. For many, Budapest's railway stations were gateways from East to West. When the trains would not carry them, thousands opted to walk to the Austrian border.

For all these reasons, Budapest is the perfect place to ask the question: what is Europe in the 21<sup>st</sup> century? What are its problems? Where is it going? How does it need to change? In my eyes, the European integration in 2015 is an incomplete and maybe an uncompletable process. There is a confederation called the European

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Union, which has a Monetary Union at its core, but not all the members of the European Union are members of the monetary core. The country I come from, the United Kingdom, is a member of the European Union, but it is not a country that has adopted the euro as its currency. Partly because of this half-in, half-out status, Britain is a country that conceivably as soon as next year will be holding a referendum on whether or not to leave the EU. Certainly this is an incomplete project when a key member, one of the biggest economies in the European Union, is at least contemplating the possibility of leaving it altogether.

The near death of the euro and the near collapse of the Monetary Union in the crisis years 2011 to 2013 has revealed something very important: namely, that the critics of the original design of Europe's Economic and Monetary Union (and I was one of them) were right about the fundamental mismatch between monetary unity and fiscal decentralisation. Let me take you back in time, all the way back to 2000. In that year, my good friend Laurence Kotlikoff and I published an article in the American journal *Foreign Affairs*.<sup>1</sup> In that article we argued that Europe's monetary union would degenerate—that was the term that we used. And this degeneration would happen, we claimed, because there was a fundamental incompatibility between creating a monetary union but leaving the member states to do their own thing in terms of fiscal policy.

We got this right, because we claimed that it would work for about ten years, and then fiscal imbalances would cause the whole thing to come apart. That very nearly happened. The enormous disparities in public debt, with Greece at one extreme with the largest of all public debts, very nearly blew the monetary union up. Indeed, if you go back to 2012, the vast majority of economists who wrote on this subject predicted that Greece would leave, there would be “Grexit” and the monetary union would quite possibly fall apart. It did not happen, but at this moment, the possibility of Grexit is still being discussed and it remains unclear whether or not a solution will be found to the fundamental crisis in Greek public finances that will allow Greece to remain inside the monetary union.

Now we have, as a crazy solution to this problem, a fiscal compact. And this fiscal compact essentially requires all members of the euro area to become more and more like Germany in economic terms, if not in any other respect. What does that mean exactly? Well, it means first of all that they all have to run more or less balanced budgets. No more of those enormous deficits that we saw particularly in the period of economic crisis after 2008. If you look at the International Monetary Fund's projections running to 2020, by that year only one country in the European Monetary Union—Slovenia—will have a bigger deficit than 1.5 percent of GDP.

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<sup>1</sup> Ferguson, N. – Laurence, K. (1999): *The Degeneration of the EMU*. *Foreign Affairs*. March/April Issue, pp. 110–121.

Seven member states will actually be running budget surpluses. So this is the first step in the direction of what Angela Merkel has called the “Bundesrepublik Europa”, the Federal Republic of Europe: a European Union that looks more and more like the Federal Republic of Germany, at least in the way that it handles its public finances. No big deficits, a more or less permanently balanced budget.

But that is not the only way that Europe is becoming more like Germany. In the past, member states sometimes ran quite large current account deficits. But those days are gone. Partly as a consequence of doing what is often described disparagingly as austerity, fewer and fewer euro zone member states now have current account deficits. In fact, looking once again the IMF’s projections, by 2020 only three members of the euro zone will have current account deficits, and they will be really small ones.

Moreover, everybody, it seems, is going to have low, maybe even negative inflation if they want to be part of the “Bundesrepublik Europa”. This year, Austria (of all countries) will be the member state with the highest inflation rate and that will be just 1.1 percent per annum, according to the IMF. Furthermore, five countries inside the euro zone now have negative inflation rates—they actually have deflation.

If these are the economic consequences of solving the problem of fiscal imbalance, then the big question is whether or not this solution is going to be conducive to economic growth and the creation of jobs.

The answer to that question seems to be, only if this policy is mitigated by the European Central Bank’s doing quantitative easing (QE). This strange phrase has come into usage by economists, sometimes I think, mainly in order to baffle the public. What exactly does it mean? Well, some naïve critics say that it just means printing money, but that is not quite true, or at least it involves the creation of a special kind of money: not the money you or I are able to carry around in our pockets or keep in bank accounts, but the money that banks can keep in their accounts at the central bank. These reserves, a special kind of money, are the thing that is created when the European Central Bank does quantitative easing. And what it does when it creates this new money is to buy assets, to buy bonds to be precise, although other assets could conceivably also be purchased.

What is the effect of quantitative easing then? Well, it seems to be to drive down already low interest rates, lowering already quite low borrowing costs. A side effect is to expand the balance sheet of the central bank. That was probably a good idea if only because the balance sheet of the ECB had been shrinking, while the Bank of England’s or the Federal Reserve’s had been growing in the aftermath of the financial crisis. When the ECB adopted QE it was essentially playing catch up, adopting an unconventional monetary policy that had already been taken on by

the other major central banks of the developed world. Now, one thing is clear: quantitative easing is not about to cause runaway inflation. The question really is whether it can suffice to avoid runaway deflation and on that question, I think, the jury is still out, although the outlook—at least as far as the projections I have already referred to—is reasonably good. The problem is that it is not yet clear that quantitative easing at the time of fiscal austerity is going to produce growth. And it is growth that matters for ordinary Europeans, because without economic growth it is highly unlikely that Europe is going to be able to solve its chronic problem of unemployment, and particularly youth unemployment, much less to absorb hundreds of thousands, if not millions, of refugees from the Middle East, North Africa and South Asia.

Now let us shed more light on growth. At the moment there is no question that Europe is underperforming. The IMF is currently predicting that the European Union as a whole will grow by just 1.8 percent this year. What is more worrying is that it does not expect that rate to go above 2 percent all the way down to 2020. So, for the foreseeable future, Europe is in low growth mode. Moreover, that means that unemployment rates, which are extremely high on the periphery of the European Union, are likely to stay high. Right now unemployment rates range from 4.9 percent in Germany, which is the lowest, to 23 percent in Spain, an amazingly high figure that implies that quarter of the workforce are in fact unemployed.

The unemployment data require close scrutiny. There is a problem of youth unemployment, which is well known to everybody, particularly if one looks at Southern European countries. The extent to which young people are struggling to find work is really quite extraordinary. But there is something that is also important, and I want to underline it because it gets much less attention in public discussion. That is the differential in unemployment rates between native-born Europeans and those born abroad. Foreign born workers are not significantly more likely to be unemployed in the United States than native born workers. That is also true of my own country, the United Kingdom. But when you come to the European continent, you notice something very remarkable. That is that foreign born workers are much more likely—more than twice as likely in some countries—to be unemployed than people born in the country in question. That is a problem. Why? Because if a society cannot offer employment prospects to immigrants, and this also applies to the children of immigrants and even their children, then it is highly likely to fail at one of the most important things a modern society has to be able to do. That is to assimilate, to integrate new comers into the host society.

Let us add all this together, and try to work out what it means in the great historical scheme of things. Europe is not quite stagnating, but it is certainly not growing dynamically. Europe is failing to create jobs, and it is failing especially to create jobs for young people and for immigrants.



If one sets this in a broad historical perspective, it tells me at least that the great shift from the West to the Rest is continuing apace. Now, this is the biggest economic change the world has seen in five hundred years.

Let me explain what I mean by that. Five hundred years ago, if you had gone on a world tour, you would not have been especially struck by Western Europe compared with some of the other great civilizations you could have visited. Five hundred years ago, it would not have been obvious to a traveller that for the next five centuries there would be a huge divergence in living standards between the West and the Rest. Five hundred years ago, Ming China was in many ways the most sophisticated civilization in the world. It certainly had some of the biggest cities. If you take Nanjing or Beijing, those cities were far larger than Paris or London, for example. But beginning in around 1500 to 1600, a great divergence occurred that saw living standards, measured in almost every conceivable way, dramatically improve in Western Europe and in places where West Europeans settled in large numbers, notably North America, relative to living standards in China but also in the rest of the world. This great divergence is the most striking feature of modern history.

To give you an example, in around 1600 there was no huge difference in living standards between Eastern China and Western Europe. Indeed, Eastern China was probably richer in terms of per capita GDP than North America on the eve of large-scale European settlement. In statistical terms, the ratio of per capita GDP in North America to that in China was around about unity, one. As a result of the great divergence, by the 1970s, the ratio of North American per capita GDP to Chinese was twenty two to one. The average American, when I was a teenager, was more than twenty times richer than the average Chinese. That was the great divergence.

It was a divergence that manifested itself not only in economics. Life expectancy by the middle of the twentieth century was double in the West what it was in most of the rest of the world. In other terms too, the West dominated the world of the early 20<sup>th</sup> century. The great empires that emerged from Europe together dominated the world's geopolitical landscape. They may have accounted for a relative minority of the world's population, but those European empires controlled a huge proportion of the rest of the world's people.

In our time all of this has changed. In our lifetime the great divergence stopped and it went into reverse. Let me give you an example. In the late 1970s, the average American was twenty-two times richer than the average Chinese. Today that ratio is down to four to one. From twenty two to one, to four to one in just the space of my adult life. And we see this convergence manifesting itself in all kinds of different ways. Let me give you just one example. China's GDP back in the

late 1970s, when the People's Republic first embarked on economic reform, was a really small percentage of the world's total and the European Union's was a really big percentage. But next year, unless the projections turn out to be wildly wrong (which seems unlikely as it is only a year away) China's GDP will exceed that of the European Union. It will become a bigger share of the world economy than the EU is right now.

Let me focus a little bit on what I mean by "the West." In a wonderful book called *The Clash of Civilizations*, Samuel Huntington, the late great Harvard political scientist, defined the West essentially as being Western Europe and those places where West Europeans settled in large numbers: North America, for example, or Australia. Back in 1950, when Sam Huntington was just beginning his academic career, Westerners, according to his definition, were around a fifth of the world's population. By 2050, according to the United Nations' projections, that share will be down to ten percent, or a tenth. That is a halving of the Western share of the world's population in the space of a century. These are huge shifts. What they mean is that people like me, white men from Northern Europe, are much less important and much less powerful than they used to be. We are still richer than most people, and in relative terms we are still quite powerful, but we are declining. We are a bit like the Elves in Tolkien's *The Lord of the Rings*. Our time is passing. Our time has, in many ways, passed and the future belongs not to the West but to the Rest.

The question that we need to ask ourselves is what are the real drivers of this shift? Why is this happening? I think there are two answers to that question. One of them is a good news story, and one of them is a not so good news story. The good news story is, as I have argued in the book called *Civilization*, that the Rest have essentially downloaded the West's killer applications. These were the things that after 1500 made the West so successful. You may wonder what those were. One was the idea of competition in economic as well as in political life, a very Western idea that you would not really have even encountered in Ming China. Another was the notion of science in the sense of the Scientific Revolution of the 17<sup>th</sup> and 18<sup>th</sup> centuries. That was an essentially Western project. There were no Newtons in the Ottoman Empire.

Number three: the notion of the rule of law based on private property rights. That was a Western innovation, especially deeply rooted in the English-speaking parts of the West. And then, number four, modern medicine: that branch of the scientific revolution that doubled and then more than doubled life expectancy. Killer app five was the consumer society, the notion that we should all have a great many clothes in our wardrobes. (There is no point, by the way, in having an industrial revolution if people do not a great many clothes because the main achievement of the industrial revolution was radically to reduce the unit costs of things like the shirt and the suit that I am wearing. In addition, if my demand for shirts and suits was not really price

elastic, if I did not buy more the cheaper they got, then the industrial revolution would not have succeeded.)

Finally, we have the sixth killer app: the work ethic, the thing that got me out of bed at 6 o'clock this morning to write the final version of this essay. If I did not have the work ethic, I really would not have bothered, and this essay would be significantly worse than it actually is.

Those killer applications for around five hundred years were monopolized by people in the West. They really did not exist in the rest of the world. But in our time that has changed. A hundred years ago there was really only one non-Western society that understood the importance of my killer apps, and that was Japan. It was the first non-Western society to download everything that I have just listed, from the notion of competition in economic life through to the work ethic. But Japan was an outlier. Most non-Western societies did not do that. Indeed, they spent much of the 20<sup>th</sup> century trying other models. Think for example of what Chairman Mao tried to do to China. He had killer applications all right, but they actually killed people, and killed them in their millions. Only in the late 1970s, after Mao's death, when Deng Xiaoping was in charge, in China did that change. Only then did China begin to download the killer apps that had made Western civilization so prosperous. And, lo and behold, as soon as he did that, China's growth rate dramatically increased. Prosperity came and hundreds of millions of people were pulled out of poverty.

So part of what we have seen in the world today, is a belated adoption by the rest of the world of the institutions and ideas that really worked well for the West. That is great news. That is a cause for celebration. It can only be good news that more and more Asians and now Africans too are leaving poverty behind and discovering the benefits of competition, of science, of the rule of law, of modern medicine, of the consumer society, of the work ethic. Get the champagne out: history turned a corner, in our lifetimes. That is the good news.

The bad news? Well, the bad news is that, even as the rest of the world is getting better institutionally, that is to say getting better in its thinking, we in the West appear to be getting worse. You can download the killer applications if you are a non-Western society, but you can also delete them, or at least fail to update them, if you are a Western society. That is the problem that concerns me the most today. We in the West, in Europe, also in the United States, are suffering from a strange institutional degeneration. Let me give you some insights into the four aspects of degeneration that I see today.

The first is generational, in the sense that our policies in nearly all Western states are calculated to create enormous imbalances between the generations. The way our welfare states and pension systems work, in the context of an aging population,

is bound to create burdens for the next generation that they will have to shoulder to finance our retirements. The Baby Boomers are exiting the workplace. They are putting their feet up and looking forward to a long and cushy retirement. But who is going to pay? Their children, their grandchildren, their great grandchildren.

Let me focus on Hungary since this essay is being published in a Hungarian journal. Well, right now just around ten percent of the Hungarian population is aged between fifteen and twenty four. Those are the crucial years educationally, in many ways they are the formative years, the years that produce great creative minds. It is all downhill from your late twenties in my experience. So just one in ten Hungarians are in that magical age group we call “youth.” Meanwhile, we have the percentage, aged sixty five or over, rising from 17 percent to, perhaps, as high as 27 percent by 2060. And that is by no means the worst example. Germany, Italy, Portugal, Spain are all ageing more rapidly. By the middle of this century, in those countries, the population aged 65 or over will be one third of the total; one in three of retirement age and older. In Hungary, by the end of this century, one in ten people are projected by the UN to be 80 or older. This huge demographic shift, which has its roots in changing patterns of fertility and mortality, is making Europe an old and ageing society. But we are still set up with welfare states that were designed in the post-war period for youthful societies, with relatively large proportions of the population in employment. Either we fix these systems radically, or young people are going to be shouldering a rising burden of taxation to support the entitlements of the elderly.

The second way in which we are degenerating as a society is that excessive regulation is tying our economy up in knots. It is a distinctive feature not just of the United States, but also of the European Union, that it is staffed by bureaucrats who like nothing better than to draw up enormously complicated regulations and impose them on the rest of us. That is what bureaucrats live to do. This excessive regulation is going through a boom right now in the wake of the financial crisis. Why? Because the idea has taken root--an idea that I think is quite wrong--that the financial crisis of 2008 happened because of deregulation. Because deregulation caused the crisis, reason the bureaucrats, we now need regulation and plenty of it to prevent another crisis from occurring. The great Viennese satirist, Karl Kraus, famously claimed that psychoanalysis was the disease of which it pretended to be the cure. Well, the same is true of regulation. It is the disease of which it pretends to be the cure. The more we regulate our financial system, the more unstable it becomes, in just the way that complex systems tend to be more unstable the more complex they become.

Third, the rule of law, which I am strongly in favour of, is something less good when it becomes the rule of lawyers. And regulation, in all its complexity, is a gravy train

to lawyers. The one part of every business that is rapidly expanding at the moment on both sides of the Atlantic is the compliance department, staffed by people with law degrees.

Fourthly, and finally, I think we see a degeneration of the institutions of civil society. By civil society I mean the voluntary non-governmental agencies that used to do so much in Western civilization, and which today have largely been marginalized by the ever expanding public sector, the all-powerful state.

I do not think it is too much to write that we are witnessing a slow, creeping crisis of the Western civilization. And there is also, in addition to the threats from within that I have just described, a threat from outside.

Radical Islam is the ideological epidemic of our time, just as Bolshevism was an ideological epidemic a century ago. It is an astonishing fact that up to four and a half thousand Europeans have left the European Union to join the Islamic State in Iraq and in Syria. Think of it: four and a half thousand people opting to join the Caliphate in a misguided and murderous attempt to turn the clock back to the times of the prophet Mohamed.

Or consider the fact that by 2030 Muslims may account for as much as 10% of the populations of Belgium, France and Sweden, 9% of the population of Austria, 8% of the Dutch, Swiss and British populations, and 7% of all Germans and Greeks.

I have a number of remedies for the institutional degeneration of the West that I have described to you. You can improve public financial accounting to end the phenomenon of vast off-balance-sheet liabilities. You can introduce “sunset” clauses for laws and regulations so that they are expiring rather than accumulating. You can reform legal systems, simplify the laws as well as the regulations. And, to upgrade our civil society, you can do a lot worse than to found new and better independent schools.

All of these things can do much to halt our institutional degeneration. But I do not believe that reforms like these alone will suffice to solve the fundamental imbalance or imbalances that I see today. The imbalance between an aged and an ageing Europe and a youthful Muslim world. The imbalance between a wealthy Europe and a poor Muslim world. The imbalance between a post-Christian Europe – a secularized, unbelieving Europe – and an increasingly devout Muslim world. The imbalance between a disarmed Europe and an increasingly militarized Muslim world.

In its long history, Budapest has experienced first-hand what these tendencies can lead to. Our best solutions to the challenges that we face, from the challenges of public financial overstretch to the challenges of mass migration across the

Mediterranean, may well come from technology But if we do not address the issues of institutional degeneration that I have mentioned in this essay, then technology alone will not save us. The early 20<sup>th</sup> century saw staggering technological advances, much greater than the ones in our time (compare Twitter with the atomic bomb). But what the great technological innovations of the 20<sup>th</sup> century did not do was to inoculate us against fascism and communism.

That seems to me to be a very, very important lesson to learn in Budapest.

## Prospects for Growth

*István Kőrösi*

*Péter Halmi:*

*Krízis és növekedés az Európai Unióban – Európai modell, strukturális reformok*  
(*Crisis and Growth in the European Union – European Model, Structural Reforms*)

*Akadémiai Kiadó, 2014, p. 370*

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Professor Péter Halmi's research and work as a professor as well as his publications are widely known and acclaimed. Knowing his earlier, valuable works, I read his latest book with great interest.

Halmi's well-structured, very comprehensive work consists of 7 chapters. The past, present and future of economic growth determine our fate, they are crucial issues. The erosion of European growth has gone on for decades. The economic-financial crisis that started in 2008 led to a protracted growth crisis. The problems posed by the crisis are persistent, and addressing them is a long-term process. The previous "European growth model has been shattered to the core as a result of the erosion and the crisis", the author states clearly in the introduction (p. 6).

*Chapter 1* offers a thorough description and analysis of the system of growth theories. Economic growth is pivotal in macroeconomics (too), since even a small difference in the per capita growth rate, if lasting, can lead to significant disparities. Halmi gives a complete review of the main aspects of growth theories in macroeconomics. The book takes a unique approach and analyses the major streams as parts of a system, comparing them to each other. The Harrod–Domar model has neo-Keynesian foundations, while Robert Solow and Trevor Swan are the founders and establishers of the neoclassical stream. Paul Romer and Robert Lucas ushered in a new era by presenting the endogenous growth theory. A common tenet of growth theories is that poor countries can catch up with more developed ones by kick-starting growth and by staying on the course of sustained growth. This requires appropriate, well-run institutions. Halmi is right to point out that the path for economic growth, technological advancement and the operation of institutions is largely determined by the country's history, its cultural, civilizational heritage

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and their impacts. He underlines how much the quantitative analyses of economic history contributed to the new results in growth analysis (p. 13). After a thorough review of the Solow model, the author lists the sources of growth. Important factors that help less advanced countries catch up are the flow and spillover of intellectual capital, the diffusion of the economic policies and institutions of successful countries, and the attraction of capital. Halmai presents the components of the convergence mechanism and the relevant findings of the endogenous growth theory through a skilfully detailed analysis of the literature and a meticulous description of the theories' interrelationship. He cites Romer's memorable remark that in order to catch up, countries need to close the "idea gaps" rather than the "object gaps" (p. 28). Halmai also fairly presents the limits of the neoclassical theory. It is an intriguing question whether a new synthesis of the theories can arise, and if so, on what grounds? The author indicates that a "unified approach to growth", that is, the joint analysis of ideas, the population, the accumulated human capital and the institutions might lead to the creation of an endogenous synthesis (p. 40).

Among the features of globalisation and integration, the deregulation of trade, the openness and the geographical location of countries are all vital. The latter is important with regard to the existence of resources and their exploitation, the production site advantages of increasing sizes and spatiality, as well as the utilisation of market opportunities. The impact of trade liberalisation is certainly significant, but it is important to note that more than one third of world trade is directly, and 70 percent is directly or indirectly related to transnational corporations, that is, trade is not free, but intra-corporate. It is also evidently negative that in weaker countries, the export and working capital investments by TNCs actively squeeze out domestic products. In my opinion, Halmai is right to call our attention to the "curse" of natural resources. In some cases, precisely those countries have fallen behind in development that are rich in certain resources, due to the misuse of allowances, wastefulness, political instability and misguided economic policies.

The quality of institutions and policies is of great importance as regards growth and convergence. Halmai makes a valid point when he states that "in successful economies, the accumulation of human and physical capital goes hand in hand with constant technological advancement" (p. 45).

The "golden age" of Western European growth from the end of World War II until about 1973 was largely supported by the social market economy, and the development of the – at that time – well-functioning international trade policies and financial institutions. (Some analysts, however, consider the era between 1960 and 1973 merely a "silver age".)

Chapter 2 describes the interrelationship between European integration and economic growth. The author gives a good overview of the main stages of economic



integration and their characteristics. Intense competition is meant to contribute to increasing efficiency, and thus, to rising living standards. On the other hand, solidarity aims to boost social and economic cohesion. Economic integration has an impact on trade, income levels, the balance of payments and economic growth. I find the detailed, well-documented historical analysis of the European growth process particularly insightful. After 1973, convergence weakened considerably but did not stop. In the two decades after the golden age, labour productivity continued to grow faster in Europe than in the United States. Halmai uses data to prove that the productivity gap between Europe and the United States narrowed even further between 1973 and 1995. In this period in the EU-15, real GDP per working hour rose from 62.9 percent to 85.3 percent, but the growth rate of productivity decreased, which may have been a warning sign. In the section analysing the effects of European integration on growth and productivity, the author gives a detailed, well-documented account of how markedly, due to integration, the openness, and trade and income levels grew in EU Member States. The author declares that “the accumulative effect of the European integration is based on the logic of economic growth theory. In a national economy, per capita income can only grow sustainably if workers have a steadily rising supply of physical, human and/or intellectual capital. Consequently, European integration can only influence the growth rate to the extent it affects the accumulation of physical, human and intellectual capital” (p. 105).

Halmai provides an instructive overview of the features of the European growth model that evolved in the second half of the 20<sup>th</sup> century. When the internal market was created, a great degree of institutional openness and integration was discernible. The trade-to-GDP ratio was higher than in any other region of the global economy. Capital flows within the EU also became substantial. EU membership provided long-term growth stimulus, which for a long time brought about faster income convergence in the Member States than in other parts of the world. Yet, I think it is important to underline that the population of Central and Eastern European countries perceived it as a disadvantage that the convergence of prices was much more rapid than that of wages and wage-like benefits. In fact, the ratio of wages to aggregate income dramatically dropped. In his analysis, Halmai states that the EU-wide average redistribution rate is higher than in the EU’s major competitor countries. In many European countries, the continued and excessive overspending by the state led to massive public debt. The author is right to point out that in the EU “the institutionalised supranationality is not accompanied by fiscal federalism. Even in the long term, the common budget will stay at around 1 percent of Member States’ GDP. Despite the close integration, there are still huge disparities between the quality of the institutions in the various Member States” (p. 110).

*Chapter 3* discusses the erosion of the European growth potential. By way of introduction, the author clearly defines potential output, actual output and the

output gap. “The growth rate of potential output reflects the economic dynamics sustainable over the long-term (in other words, the growth potential). Unlike actual growth, potential growth does not contain cyclical factors” (p. 111). Halmai focuses on the analysis of potential growth when presenting growth processes and the effects of the economic-financial crisis. He demonstrates that potential growth can be analysed in various time dimensions. Over the short term, the difference between potential and actual output gives us the degree by which demand can rise without threatening equilibrium, while over the medium term, a rise in domestic demand coupled with an increase in investments creates an output capacity supporting growth dynamics. In the long term, output is linked to future technological advancement and the growth rate of labour potential. Comparing past processes of potential and actual growth teaches us valuable lessons. Looking ahead, we can only make estimates based on the extrapolation of growth trends. When calculating potential growth, the structural and cyclical components of economic growth can be determined. The author presents the application of the production function approach for calculating potential growth. Then he uses comprehensive data series to analyse the changes in growth potential in the USA and in the EU-15. The potential growth rate in the United States has been consistently higher than in the EU-15. Halmai proves that the negative trend in total factor productivity (TFP) led to a decrease in the investment ratio. Before the 2008–2009 crisis, “at the same time when the investment rate temporarily rose to 20–22 percent in the EU-15, total factor productivity declined. The unfavourable investment environment contributed to a higher level of capital outflow, and a significant rise in the share of imported products and services” (p. 127). This had serious negative consequences. The author gives a systematic analysis of the changes in the productivity gap between the EU and the USA.

In Europe, competition on the product markets is less intense than in the USA, which has had a negative effect on innovation. After 1995, GDP per capita in the EU Member States also declined compared to the USA (from 70 per cent in 1995 to 67.5 per cent in 2007). Halmai demonstrates that the sole reason for the divergence is the difference in labour productivity. Institutions and R&D policies are key for succeeding in the competition in innovation. One of the factors ensuring the advantage of the USA is that knowledge-based investments are higher than in the EU Member States. Another is the flexibility of the labour market. Income inequalities are higher in the USA, but this facilitates outstanding salaries for prominent scientists, researchers and innovators. Higher qualifications are valued more in the USA than in Europe. Taxes on labour are also lower overseas, but the welfare system is much less developed. The author points out that the difference in productivity between the USA and the EU cannot be explained by the investment rate alone, even though it has been constantly higher in the USA than in the EU-15 since 1993. Halmai makes an important point by stating that “at or near the

forefront of technological development it is inevitable to reshape (refocus) policies and institutions for the innovation-based economic model" (p. 153). I found the nuanced description of the long-term strategies for potential growth very useful. One of the novelties of the book is the analysis of the trends of structural factors, labour potential and total factor productivity.

As regards future growth, the expected developments of the labour potential are vital, and the author presents them through a wealth of relevant data.

Chapter 4 deals with the effects of the crisis on potential economic growth. The crisis has severely affected the long-term avenues for potential growth. The author presents the interrelationship of the transmission mechanisms of the financial crisis. Halmai convincingly proves that the aftermath of the 2008-2009 crisis for potential growth is more persistent than in previous recessions. I also agree that "a structural adjustment and the overhaul of the reallocation of resources are essential" (p. 172). The financial burden of crisis management produced a steep rise in general government deficits and outstanding debt. Based on the detailed model calculations of the growth factors and components, Halmai demonstrates that the potential growth in the EU has weakened over the medium term as well. The situation of the different groups of EU Member States varies greatly, due to the diverse developments in growth factors. The recovery after the crisis is characterised by lingering structural problems. The author paints a detailed picture of the necessity of balance sheet adjustments, budgetary consolidation and the fragmentation of the European banking system and financial markets. In the group of countries classified as vulnerable, the catching-up process was halted. In fact, as a result of the crisis, their divergence is perceptible again. Halmai aptly calls this a "convergence crisis". In order to mitigate and offset the negative effects, economic policies need to be overhauled.

In Chapter 5, another crucial topic is discussed. Catching-up and convergence are vital issues for Central and Eastern European countries. Halmai indicates that these concepts are not the same. As he concisely puts it: "catching-up means the distance to be covered, while convergence is the progress" (p. 215). For convergence, less developed countries need to consistently exhibit greater economic growth than developed ones. Nowadays, the prerequisites for admission into "convergence clubs" are appropriate human resources and good institutions. In today's problem-fraught world, we cannot only assert that integration – if it functions well – promotes convergence, but also that sustainable convergence is a must for integrational development. The author takes a look at each country group, and gives a detailed analysis of the avenues of convergence in Europe. The 2008-2009 crisis posed new challenges. Among the new Member States, the countries that were faced with external and internal imbalance proved to be more vulnerable than the average. During the crisis, payment terms for them dramatically deteriorated.

I believe the nuanced description of the interrelationship between the quality of catching-up and real convergence is very important in this chapter. Tackling the challenge of restoring the convergence mechanism is of vital importance for the future of integration.

Chapter 6 is concerned with the growth model of the new Member States. To employ Tibor Palánkai's apt expression, for us, Europe is a "modernisation anchor". Both László Csaba and Péter Halmai share this opinion. Halmai analyses the main components of the growth model of the EU-10, and the effects of the increasing openness, capital inflows and total factor productivity developments. We cannot return to the pre-crisis growth model, a new growth path needs to be chosen. For this, the amount of domestic savings needs to be increased, and, I would add, it would have to be used for viable domestic investments in the real economy.

The last chapter of the book deals with the interrelationship of structural reforms and growth potential. Europe's economic prosperity rests on three pillars: economic growth, stability and fairness. The economic-financial consolidation requires efficient growth linked to fairness. In order to restore growth potential, reforms in the product and labour markets are essential. Tightening financial market regulations should guarantee the prudent operation of financial institutions and reduce the cost of capital for investments in the real economy. Improvements bolstering knowledge and innovation are extremely important, just like fiscal and labour market reforms. The author gives us a comprehensive overview about the reforms' main points and expected effects. The integrated system of the knowledge triangle (education, R&D, innovation) is crucial for the future. Whether the European growth potential can be restored and whether a new growth model can be developed depends on how well the challenges are addressed. Halmai derives relevant final conclusions from his in-depth analysis. According to his closing summary, "only solutions based on economic rationality, international competitiveness and the knowledge economy can be successful in the long run. The general purpose of these endeavours should be fair growth and shared prosperity" (p. 342).

Halmai's book is an exceptionally valuable analysis of the growth theories and the factors of long-term potential growth. It chronicles the chronic conditions of our age. The author has also added lots of fresh material to the international literature of the topic. Halmai has contributed substantially to economic science with the comparative analysis of the theories, the modelling of growth potential and its factors, the long-term time series quantitative analysis of the components of full productivity, and the analysis of new Member States' growth model. He also provides economic policy experts a series of useful insights by presenting the convergence potential and its limits. He explains the role and effects of structural reforms in restoring growth potential. His model calculations of long-term growth potential until 2060 are, of course, based on the extrapolation of recent trends.

The forecast is only accurate if the current economic policies are maintained. His diagnosis was prepared precisely to bring about change, so that economic policies lay the foundation for new, positive trends. Oswald Spengler's book, "The Decline of the West" was written in order to encourage humanity and the cultural community responsibly shaping its historical fate to revive itself and delay this decline.

Having read Halmai's book, we are reminded of the chance for and necessity of revival and renewal. The work is of a very high standard. His analysis incorporates the theoretical, methodological, exact modelling and economic strategy aspects of economic science. This book is also a valuable synthesis because it combines precise econometric analysis with the aspects of economics linked to humanities. The book's exceptionally extensive bibliography is also worth mentioning. It covers 28 pages and contains more than 900 works. I am certain that Halmai's book will be a widely-used basic reading in academic research, at university courses and in doctoral programmes. I especially recommend it to researchers, professors and university students. And it can also teach important lessons to decision-makers and analysts preparing economic policy decisions. *Tolle et lege!*

## **New Directions – Redefining the Human Intellect in View of Technological Progress**

*Éva Henger*

*Clive Thompson:*

*Smarter Than You Think – How Technology is Changing Our Minds for the Better*  
*Penguin Books, 2013, p. 352*

*ISBN: 978-0-143-12582-2*

Many people believe that technology and technological progress are inherently bad, destroying the intellectual capabilities and social skills of humanity, dulling our minds and, due to our excessive dependence on them, making us vulnerable. As far as the first criticism is concerned, let us not forget the successes of technological innovation that enabled the creation of a safer and more liveable world (e.g. medical innovation), and the achievements that have long excited human imagination (e.g. space exploration, landing on the moon). It is indisputable that technology has always had a transforming effect in the history of humanity, it has always pushed us to take a new perspective. One only has to think of the discovery of writing or how our ancestors realised the benefits of using fire.

Clive Thompson discusses the relationship of humans and machines from this positive-utopian perspective. The book's "protagonists" are people who utilise the available technology to the fullest, and fundamentally change the way we think about the world. This process is often unconscious, the individual is simply caught up in a situation, which acts as a catalyst, eventually affecting a surprisingly large number of people. Others experiment with their digital devices using them for their own purposes and discover advantages that are worth sharing with a wider audience. Thompson asserts that the artificial intelligence of machines in and of itself is far from being as superior as we might think. In the examples of human-machine collaboration presented in the book, much more effective and innovative methods are employed than by machines alone. The author also points out how much the close cooperation with machines (almost a symbiosis) improves the human intellect by fostering creativity and problem-solving skills. Moreover, as a result, we can see the world from an entirely new perspective.

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The combination of biological and non-biological intelligence previously only present in science fiction has become a reality. One of the characters in the book has owned the forerunner of the famous Google Glass for 20 years. Its inception was motivated by the simple fact that its owner had trouble following the lectures at university and taking notes at the same time. We could also mention the person who wears a so-called SenseCam system, equipped with special heat and light sensors, around his neck. This enables him to make an audio and visual recording of his days. His whole life is digitally preserved on a hardware where he can search for people and the recorded memories associated with them whenever he wants.

A less well-documented positive consequence of the phenomenon that the internet, blogs and social media platforms have gained ground is the improvement of writing skills. Writing to an audience prompts writers to properly convince the readers of their views, that is, to clearly structure their arguments. Listing pros and cons in the right proportion and in a straightforward fashion, correct spelling, the appropriate use of stylistic elements are all key to writing a good post. Furthermore, the knowledge that others might read what they are writing increases writers' performance pressure, which results in a post that is of much higher literary value.

Using the data from his extensive research, Thompson identifies correlations and innovations in the blessed-damned relationship between humans and technology. These represent a greater intellectual ability both at the level of individuals and that of society. They also have a previously unseen potential for organising and forming communities. Is it possible that an even tighter bond between humans and machines will be the next step in evolution and in the development of civilisation? The author tentatively suggests this prospect, and alludes to the torrent of technological innovations that have launched a noticeable process, which will definitely affect us.

## **Governing the World – A Book On How International Organisations were Formed**

*Péter Bauer*

*Mark Mazower:*

*Governing the World – The History of an Idea*

*Penguin Books, 2013, p. 496*

*ISBN: 978-0143123941*

The book is a political history that describes the formation and impacts of international institutions from the Napoleonic Wars to the present. The author presents the story through the political visions of various historical figures, and as the manifestation of the interests of contemporary leading powers. Mazower gradually illuminates the factors that led to the formation of the early international institutions, the ideologies characteristic of the age that influenced this process, and the leading figures who promoted these ideologies. The book is divided into two main parts that deal with the period before and after World War II, respectively.

The first part begins with the creation of the Concert of Europe, the alliance of victorious powers after the Napoleonic Wars. The main goal of the Concert was to preserve the status quo and to quell the upheavals modelled on the French revolution. The notion of internationalism, which was represented by numerous political streams, was born in reaction to this. The most notable such groups were the following: the peace movement motivated by Christian sentiments, the group advocating free trade, nationalism – that initially championed international cooperation – and communism. The thinking of internationalists was heavily influenced by the legal strand of the movement that called for the drafting of international treaties and the establishment of international institutions. Their thoughts were also shaped by natural sciences, where international cooperation was the most intense. An important milestone after World War I was the founding of the League of Nations, which was called into being to avoid wars and was the first comprehensive international organisation. Its creation was largely the work of Woodrow Wilson, the US President, and it was set up as a fundamentally political organisation despite the endeavours of the legal strand of internationalism. From a diplomatic viewpoint, the League of Nations eventually proved to be a major failure, but in other respects it was of considerable importance, especially in

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humanitarian cooperation. In its subsidiary bodies, an entire generation of experts grew up who later played critical roles in the UN.

The second part of the book basically depicts the UN's development, its international role and its relationship to great powers. Then the discussion turns to the changes in the global economic system, as well as the reasons and the political setting behind these shifts. Initially, the primary reason for creating the UN was to maintain, in peacetime, the coalition of the great powers established during World War II. The formal framework of the League of Nations was by and large preserved. The UN's bodies, for example the WHO and the FAO, however, were better funded and thus more effective than their predecessor in the League of Nations. It was also a significant difference that putting topics on the agenda could not be vetoed, which was progress compared to the League of Nations. The relationship of great powers with the UN has been shifting over the years. In the beginning, until the 1960s, the US dominated the institution which proved to be a convenient tool for implementing American foreign policy. Later, after the dissolution of the colonial system, Third World countries outweighed others in the General Assembly of the UN, and at the same time the influence of the USSR increased while the USA's influence diminished. Third World countries started to push for the development of a new international economic system, which on the one hand would have protected the economies of these countries against mightier Western ones, and on the other hand was intended to enable easier access to the markets of more developed countries. At the end of the 1970s, a new international economic system did in fact start to emerge, but it was markedly different from the original concept of the developing countries. In reaction to the slowdown in growth in developed countries, the era of neoliberal economic policy started. This meant cuts in public sector spending, the liberalisation of trade, the free flow of capital across borders, deregulation and privatisation. As a result, the IMF gained ground, since it played a crucial role in handling the exchange rate crises, sovereign debt crises and bank crises that became increasingly prevalent with free capital flows. The book states that the IMF's economic recipes have been principally detrimental, which became obvious after the mismanagement of the Asian crisis. The author also decries the institutions of the European economic integration and their operation in general. He believes the global financial crisis will end the new economic order which has been developing since the end of the 1970s and is based on the free movement of capital and the deregulation of markets. Dwelling on this point, Mazower concludes the book by writing about the failure of the concept of global governance.

## **The Smartest Kids in the World**

*Csilla Zakar*

*Amanda Ripley:*

*The Smartest Kids in the World: And How They Got That Way*

*New York: Simon & Schuster, 2014, p. 320*

*ISBN-13: 978-1451654431*

In her book, Amanda Ripley tries to find out how children studying in certain countries can be smarter than students elsewhere, and what is it like to be a child in one of the new educational superpowers of the world. The book looks under the shining surface, presents the educational cultures of some countries and sheds new light on the American educational system.

The author spent months with children, teachers, parents and people who tried to creatively find new avenues for education. That was when she asked herself why certain children learn so much, while others learn so little?

She compares the educational systems of three countries – South Korea, Finland and Poland – to the system in the United States through the experiences of three American exchange students who spent a year in those countries. She chose South Korea and Finland because they are among the world leaders in educational achievement, and Poland because it has recently improved its educational results considerably, despite facing the same challenges as the USA, including widespread child poverty.

In a number of countries, something astonishing was achieved. Practically every child was taught to employ logical, critical thinking in the field of mathematics, sciences and reading. They did not simply learn to memorise facts, but to solve problems and apply what they had learned. That is, they were prepared for living in a modern economy.

In America, mathematics defines children's future. When one disregards all the other factors, such as family background or income, those pupils that attend advanced mathematics classes have a better chance to graduate from college. They can also expect to earn better at their workplace after graduation. Why do American students underperform in mathematics? Surveys show that American third-graders

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get easier mathematical problems than, for example, their counterparts in Hong Kong. If an American student fails in a subject, it is their personal trauma. Neither students, nor parents can handle failure. In such cases, the student tries to avoid the subject in question as much as possible. In the lower grades, reading, arts and behaviour are deemed more important skills.

Poland started to reform its educational system in 1997. The basic goals were set and guidelines were established, but the details were at the schools' discretion. One quarter of teachers were sent back to school to improve their knowledge. In order to measure progress and to see that students do in fact learn, standardised exams were required at specified intervals. These were not as frequent as for American students, but were to be taken at the end of primary school, and at the beginning and end of secondary school.

Teacher training in Finland is of high quality, and teaching is considered a prestigious profession. By contrast, teacher training at American colleges is the easiest course. In the United States, almost 2.5 times more teachers are trained every year than necessary.

In Finland, teachers treat students as equals, do not show too much empathy and do not pigeonhole students. In the USA, the situation is different. Teachers need to take into account students' family background and ethnicity.

In Korea, the whole process of education is reduced to one number: if students' test results are good, their successful future is guaranteed. Getting a high score in the exam means an entry ticket to the three most prominent Korean universities, which in turn ensures a good job, a nice house and an easier life. Along with respect from everyone. However, only 2% of high school graduates can get into the top 3 institutions. That is why Korean children spend most of their time studying.

The combination of low expectations and abundant supply has lowered the esteem for teachers' profession all over the world. But the main message of the book is that all students need to acquire the skills for a strict, higher order of thinking to succeed in the modern world.

## **The Advantages of Disadvantages – Succeeding in Difficult Situations**

*Mária Bábosik*

*Malcolm Gladwell:*

*David & Goliath – Underdogs, Misfits and the Art of Battling Giants*

*USA: ALLEN LANE an imprint of Penguin Books, 2013, p. 303*

*ISBN: 978-1-846-14582-7*

“David and Goliath” is about how to take on “giants”. “Giants” can be mighty adversaries, armies, disabilities, misery or oppression. Each chapter is a separate story in which someone faces a daunting task. Should they act as usual, or trust their knowledge and instincts? Should they resist or give up?

The stories explore two ideas. The first is that one can succeed even in almost hopeless situations, since managing to withstand an overwhelming force is uplifting. The other is that we constantly misinterpret and mismanage these asymmetrical situations. Not everyone and everything is a real “giant” that we perceive as such. Their power is often also their weakness. And an asymmetrical situation can open doors, create opportunities, teach and enlighten us, and it can even facilitate the seemingly impossible. We need guidance to successfully confront our “giants”, and what could serve as a better example for that than the lessons of the battle between David and Goliath?

The book describes and analyses a number of difficulties and conflicts to show that the weak can emerge from these situations victorious and the powerful can lose. The author uses interdisciplinary analysis, including historiography, economics, sociology and political science. In his heuristic model, Gladwell sheds new light on famous and less well-known stories that mainly come from the USA and Western Europe of the 20<sup>th</sup> and 21<sup>st</sup> centuries. The author has an enjoyable, entertaining style. He is able to draw practical lessons from historical and sociological data, and to improve the strategic knowledge of appreciative readers. That is why I wholeheartedly recommend this book to anyone. I believe it is a good tool for improving personal and collective problem-solving abilities. The book could also be used as course material. Not in its entirety, but its case studies, analyses and the

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corresponding lessons learned that are directly related to the particular educational targets.

“David and Goliath” consists of an introduction analysing the David and Goliath story, and three main parts divided into nine stories that present the advantages of disadvantages (and vice versa), the theory of desirable difficulties, and the limits of power.

In the introduction, the clash between David and Goliath comes to life, and the author gives us an unconventional interpretation of the story. In Gladwell’s reading it does not depict the practically implausible victory of the apparent underdog, but describes the “drawbacks” of power and the strategy based on this, which ultimately led to David’s victory.

The first three stories highlight that one part of advantages comes from the existence of resources and the other from the lack of resources. The weak can come out on top in certain situations because the lack of something might be more advantageous than having it. However, it seems to be hard for us to learn this. Strengths are interpreted too narrowly. We consider many things helpful, when in fact they are not, while deeming others detrimental, even though they make us stronger and brighter. Why do we unconsciously believe that Goliath will win? And what does it mean when someone handles challenges in an unconventional way, just like David?

The basketball team in the first story was able to succeed because they attacked their powerful opponent where it was just as vulnerable as the weaker ones. The big class in the second story did not have worse results than smaller ones, yet it is a common endeavour to reduce class sizes. And there are some who, after getting into the best university, give up their career dreams, because compared to the others they do not consider themselves “good enough”. In a nutshell, the first part is about apparent advantages that might not always be beneficial.

The three stories in the second part are about disadvantages, that is, disabilities or difficulties that make one’s circumstances unusually inauspicious. Common sense dictates that we should flee these, but this is not always possible. Then how can we take advantage of these situations? The theory of “desired difficulties” suggests that not all obstacles are negative.

Many people are affected by dyslexia, which makes some deviant while hardening others and leading them to success. One third of successful entrepreneurs have dyslexia! In the fifth story, the author takes a look at creatives, innovators, artists, entrepreneurs and politicians, and finds that many of them lost one of their parents in early childhood. And there are even historical examples proving that strength can be drawn from traumas. During the London Blitz, for example, those not directly

affected mustered courage from the hardships, which increased their resilience. The members of the African-American civil rights movement and their leader, the Nobel Peace Prize-laureate Martin Luther King were unarmed and oppressed, and they came from a community that had been disadvantaged for centuries. During these adversities, however, they learned how to fight “giants” – and succeed. And in many parts of the world, there are stories about a “trickster hero” that illustrate this phenomenon. We are all familiar with the tales about Brer Rabbit and the fox. These teach us the art of survival and triumphing in an inhospitable environment.

The third part of the book points out the limits of power. The basic category of analysis in political science when examining power struggles and conflicts is legitimacy that justifies the acceptance of authority and power. The seventh story approaches the legitimacy problem by looking at how the first great conflict of the Irish freedom struggle was handled. Legitimacy is based on three things: first, those that are expected to respect authority need to feel that they can speak their minds and that they will be heard. Second, rules need to be predictable and known in advance. Third, authority has to be fair, and cannot favour one group over the other.

The eighth story shows that the same rules apply to maintaining law and order. In California, the sanctions for committing crimes were deemed too mild, and the “Three-strikes law” was introduced. As a result, the number of convicts doubled and crime rates dropped significantly. But has this stricter policy had the desired effect? Increased punishment does in fact deter crime up to a point, but after that it does not. After 20 years, in 2012, California eventually put an end to the biggest judicial experiment of the United States. Following a referendum, the sanctions were reduced again.

The book’s last, ninth story sums up the lessons learned from saving Jews in France under German occupation. Gladwell argues that the excessive, oppressive use of authority causes problems of legitimacy and justification. And authority without legitimacy fosters resistance instead of obedience. When the powerful eliminate an insurgent, there will always be someone else to replace that person!

The book uses the stories to present the questions of power in a unique way. It demonstrates that the sources of authority are not uniform or homogenous. In any given authority situation or conflict, the different sources of authority clash. One can defeat the other, thus overcoming the apparently glaring initial disparity. This disparity can be turned to the underdog’s advantage with another type of authority source, or with carefully conceived or spontaneous strategic decisions. This is the most important lesson from the book for us as individuals, communities and as members and actors in networks of society. If possible, we have to learn this from this book.

# The History of Neoliberalism: From Birth to Glory

*Gábor Pellényi*

*Daniel Stedman Jones:*

*Masters of the Universe: Hayek, Friedman, and the Birth of Neoliberal Politics*

*USA & UK: Princeton University Press, 2012, p. 418*

*ISBN: 978-0-691-15157-1*

Many people blame the 2008 financial crisis on neoliberal economic policy and the over-reliance on self-regulation of the markets. Although at first, in a Keynesian vein, major demand boosting measures were introduced in reaction to the crisis, after the 2009 recession passed, the old reflexes returned. A couple of years later, economic policy discourse was once again dominated by calls for cutting budget deficits and for supply-side reforms strengthening market mechanisms. Apparently, the neoliberal approach has survived the crisis.

But who are the neoliberals and how have they become so dominant in economic policy? The book by Daniel Stedman Jones answers these questions. It is the extended version of the author's PhD thesis, which he wrote for the doctoral programme in political science at the University of Pennsylvania. It is based on extensive library research. The author has also conducted more than 20 interviews with key figures from the history of neoliberalism. Personal recollections and letters make the otherwise detailed and thorough analysis an exciting read. For example, it is revealed that Friedrich von Hayek, one of the "founding fathers" of neoliberalism became close friends with his main debating partner, Keynes, and for a while Hayek was Keynes' lodger.

The book highlights the origins of neoliberalism and the circumstances that surrounded its development. Neoliberalism originates from the period between the two World Wars. Some of its roots go back to Europe: its theoretical foundations were laid mostly by Austrian social scientists (Hayek, Karl Popper and Ludwig von Mises). In the United States, the University of Chicago became the centre of neoliberalism and Milton Friedman its leading figure.

Neoliberals believed they were reinterpreting classical liberalism. The “neo” prefix was meant to suggest that they did not wish to return to the *laissez faire* economic thinking. They accepted the involvement of the state in the modern economy. They, however, wanted to impose strict limits and rules on the state, so that it did not threaten the freedom of the individual and the functioning of the markets. The emphasis on individual freedom was a reaction to the rise of totalitarian systems between the two World Wars, which were denying it.

In the Anglo-Saxon world, neoliberal concepts were primarily embraced by conservative parties. In the 1980s, the Republican Ronald Reagan and the Tory Margaret Thatcher were the two most prominent politicians espousing neoliberal ideologies.

Was the emergence of neoliberal economic policy and the conservative parties representing it a historical necessity? Or was neoliberalism a tool for the international expansion of American power, as some critics argue? As the book demonstrates, reality is not so clear-cut.

First, some elements of neoliberal economic policy (e.g. flexible exchange rate regime, anti-inflationary monetary policy) had already been applied by left-wing governments in the 1970s. For instance, in the United States, the Democratic President Carter appointed Paul Volcker chairman of the Federal Reserve. The deregulation of many industries, for example transportation, aviation and the financial system started under Carter’s presidency and a Democratic-led legislature (even beer-making was liberalised, which contributed to the subsequent boom in craft breweries). This shows that some elements of neoliberal economic policy enjoyed cross-party support.

In addition, chance played a role in the success of neoliberalism. The re-election of President Carter was hampered by the Iran hostage crisis, while Margaret Thatcher was able to secure a second term due in large part to the Falklands War.

Furthermore, neoliberalism is not an American, but rather a transatlantic phenomenon. Its roots go back to Europe, and in addition to the United States, the United Kingdom has also played a decisive role in spreading neoliberal ideas and helping them to achieve their full potential. Furthermore, due to ordoliberal traditions, German economic thinking, and thus the economic thinking in the institutions of the European Union, were imbued with neoliberal ideas.

However, neoliberalism has not, by any means, spread by chance. Both Hayek and Friedman consciously strove to popularise neoliberal ideas. Their primary goal was to persuade the opinion-forming elite (e.g. journalists, scientists, corporate managers) of their views.



But they had a hard time selling their idea. Neoliberals were initially considered eccentric, since they promoted economic policy messages completely different from the contemporary consensus. But their perseverance bore fruit in the 1970s. When the economic model of the previous two decades ran out of steam, neoliberal think tanks were ready to offer working recipes against stagflation to decision-makers. This time, since earlier economic policy measures were ineffectual, they were heard.

The book depicts the history of neoliberalism in a detailed and nuanced way. Yet, in some places it is clear where the PhD thesis ends and the chapters added later start. The first parts are written in an academic style, the reasoning is always sound, and the argumentation is balanced. In some later chapters, however, arguments are weaker and subjective assessments are more frequent.

One important lesson from the book is that an idea does not spread by mere chance, but through conscious mental work. For decades, neoliberals seemed marginal actors, but they were well-prepared for the crises in the 1970s. In contrast, critics of neoliberalism were caught off-guard by the 2008-2009 global crisis. Stedman Jones laments that there is no well-founded (left-wing) alternative enjoying widespread support that would supersede neoliberalism. In fact, in the United States, there is a bigger threat from the other side of the political spectrum: the Republican Tea Party movement takes neoliberal thoughts to the extreme, and founds its reasoning on ideological conviction instead of rational arguments.

Therefore, neoliberalism may play a major role in economic and political discourse for quite some time. And accordingly, the book will remain timely reading for those participating in these debates.

## **The Bible, If Read at the Right Time, Even Makes the Koran Easier to Understand**

*Miklós Duray*

*Norbert Varga:*

*A Biblia és a Korán politika- és gazdaságképe (Politics and Economics in the Bible and the Koran)*

*Kolozsvár – Budapest, Exit Kiadó – Marczi Közösségi Tér, 2013, p. 168*

*ISBN: 9789737803023*

There is a short story that happened in the long life of the monk which he always remembered. Once, a wise fellow monk living in the secular world visited him, who, upon seeing his poor conditions and that he had nothing else but the Bible, gave him a Bible commentary. When one year later the fellow monk returned, he asked: “Father, has my book helped you to better understand the Bible?” The old monk replied in surprise: “On the contrary. I had to use the Bible to understand your book.”

When I read the voluminous paper by Norbert Varga based on his doctoral dissertation, I felt the exact opposite of this story that presumably did indeed happen a long time ago. I did not need to re-read the Bible or the Koran to understand Varga’s conclusions, but I believe that his observations might lead us to new interpretations.

It is indisputable that the topic of Varga’s paper is justified, since today around half of the world’s population lives within the reach and under the influence, as regards their culture and values, of the three monotheistic religions, the Jewish, Christian and Muslim churches. These religions share the same intellectual roots, since their followers all accept the Old Testament of the Bible. The latter two are missionary religions, that is, they are inclusive, while Judaism has not been very inclusive in the past two thousand years. That is why it has remained the smallest religion assessing the world in relation to itself.

In ancient times, whether one was considered Jewish depended on their father’s ancestry. This was a rational ethnic policy, since mothers can be seized, while fathers hardly. However, later on, during the various tragic hardships they endured – for

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example population decline, slavery, captivity – Jews changed their attitude towards others. Initially, for centuries, inclusion was regarded as important, that is, Jews were willing to admit peoples into their group who could be made to conform to the Jewish way of life. Later, discrimination and seclusion were put to the forefront. Today, as a result of the Rabbinic tradition, the Halacha, Judaism is inherited on the mother's side, which contributes to exclusion and isolation. Even the laws of the State of Israel reflect this attitude.

Evidently, this state of imbalance is in part linked to the liberal desire, which has been around since the Enlightenment, and which is most readily acceptable for the monotheistic religion with the smallest number of followers, the separation of the church and the state. But it is also evident that there is another reason for this: in Europe, the Jewish church was not able to form close ties with the state until the 20<sup>th</sup> century. It is peculiar that in the State of Israel, which has existed by virtue of the international law since 1947, the church and the state have not been separated. And only a few Islamic countries have made this separation, while fundamentalism is gaining support there as well. Meanwhile, in traditionally Christian countries, the separation happened everywhere, in fact, the detachment of church and state is becoming ever greater. There is a huge country with European roots, the United States of America, where the church and the state have never been merged, even though the country was founded by European Christians. It is true, however, that this happened at a time, towards the end of the 18<sup>th</sup> century, when there were calls in European culture for the separation of church and state, and a movement laying the foundation for a financial, intellectual and political alliance, Freemasonry was starting to stream out of Europe, and it discovered fertile ground in the New World, which was still trying to find itself. Even the map of Washington, D.C. bears testimony to this.

It is more of a legend than fact that the three monotheistic world religions have the same roots and that each of them can be linked to the patriarch Abraham in Mesopotamia. Still, monotheism and the acceptance of the Old Testament are indisputably present in all three. Even if the cultures, values and ideas within the reach of these religions originated from the same place, when observed closely, they are as remotely related as humans and monkeys. Despite the common roots, the similarities are only superficial. All three religions have followed a different evolutionary path. In practice, the actions and behaviour of their followers and even comparable traditions are often irreconcilable. Just like their experiences of each other.

This does not mean that we have to stop looking for their common roots, and give up the approach of natural sciences for examining social and cultural similarities and differences. Varga's research that reaches back to the ancient roots of the monotheistic religions is about the organisation of society and economy (public

life). He tries to find out how the value crisis of the 20<sup>th</sup> and 21<sup>st</sup> centuries arose, and searches for a common solution for sorting out this muddle we created together.

If I did not know that Varga has studied theology, history and political science, I would blindly say that he was educated in natural sciences. His ability to navigate in both time and space suggests that. Unless, of course, we consider theology to be the mother of all sciences, in the face of those who claim this about mathematics.

The author's remark that the passing of time can be perceived as the space for action is perfectly clear. That is why it is logical and important to underline in the context of the Old Testament's spacetime that the past becomes tomorrow's reality in light of the present. We have to say that even if the teleological reading of this idea suggests predestination, because in this case, it does not encourage idleness, but action. We should do whatever we can to fulfil our contract with the Almighty about the future. Not our idleness, but our actions should determine the Lord's decision on salvation.

Freedom and free will, which are treated differently in the three monotheistic religions, need to be interpreted in this context.

For Jews, the limits of free will are defined by God's leniency, because, according to one of the principles in the Contract, He represents truth and authority. People's acts are evaluated and even classified as sins based on this. In the (alleged) spirit of the Contract and in the interest of fulfilling it one can do anything, it will not be a sin.

Muslims believe that only the omnipotent God knows eternity, and each person is responsible for their deeds. But according to the teachings of the Koran, nobody bears the burden of other people's sins, which means that even if someone commits a sin, the person inciting them might be the guilty one. This belief, which can be traced in many religions, might be summarised as follows: "My opponents are making me commit mistakes – I am sorry."

Christians relate in the most complicated and intricate way to freedom and free will. If everything happened in line with God's intentions, there would be no sin. But people become sinners out of free will. That is why absolution and conversion make sense, because people are fallible. Luther, however, contends that people do not have free will, because everything is predestined. One might even conclude that man has committed no sin apart from the original one, which is washed away by baptism. In contrast, Unitarians teach that a person's responsibility grows in direct proportion to their free will. Therefore, people have free will so that they can make responsible decisions.

These are fundamental differences between the three monotheistic religions, which are clearly detectable from their intellectual heritage. Varga's work indicates this wisely without explicitly stating it. But the mere hint and the fact that he reads between the lines are important, because he uncovers all the real or deduced traditions that influence, or even determine, our present values and behaviour.

While studying the ancient and perhaps common roots of the three monotheistic religions, Varga subtly indicates that the first great fracture in the age of the Old Testament was the Babylonian captivity. It not only influenced the behaviour of the Jews but also laid the foundation for their (we could say xenophobic) isolation from foreign peoples. Eventually, this undermined brotherly love. More than half a millennium had to pass before love appeared again, as a value and a measure, and that was the dawn of the New Testament. Perhaps the philosophical roots of the lines in the "Admonitions" by King Stephen I that differentiate between aliens and newcomers (guests) can be traced back to these two value systems.

In one of the stories about Jesus there is a lost sheep. This is considered by Christians, that is, the followers of Jesus, to be a symbolic message, although its roots might very well be material and go back to the Old Testament. It possibly originates from the age of King David, because at that time it was reckoned, as Varga points out based on the Exegesis, "that saving an animal in distress should be much more important for every Jew than the hostility of the animal's owner".

Animals, livestock not only meant riches but also supported their owner. And this is still true two thousand years later. It is not by accident that in Hungarian the word for cow (*marha*) used to signify the animal and also wealth. This is not only a matter of economic perspective, but it was (and still is for today's farmers) one of the conditions of survival. It is no coincidence that the story of the seven fat cows that appeared to the pharaoh in his dream and were eaten by seven lean ones was interpreted by Joseph (the son of Jacob) – who is also mentioned in the Koran – as seven years of abundance followed by seven years of famine. The austerity programme ordained for the seven years of abundance almost calls to mind a planned economy as well as an economic and state administration strategy, which might also be attributed to Joseph.

It often seems that people back then had a very different notion of what should be considered important, insignificant, settled or outdated, than we do today if we look back to the past.

One such event is the destruction of the Temple, which had only one economic significance: rebuilding it cost money. But its repercussions for identity and keeping the Jewish population together were much more severe. Curiously, that was not the first time the Temple was destroyed: it had already happened in the part of the

Old Testament prior to Christ's appearance, during the Babylonian captivity. But after the Jews escaped from captivity (in present-day Iraq), they rebuilt the Temple. The Jewish population recovered, but at the same time became exclusionary and closed. However, the second destruction of the Temple, in 70 AD, sealed the fate of the Jews for many centuries. The second Temple has still not been rebuilt.

The dispersion that started in about 130 BC, during the time of King Bar Kokhba, who was declared a messiah by Rabbi Akiva, defined the life of the Jews for more than two thousand years. At the onset of this horrible era for the Jews something happened that had far-reaching consequences for world history, too.

When first visiting Jerusalem as an adult, Jesus, who had been born in Bethlehem, went to the (second) Temple that was still standing at that time. The religious and economic leaders of the Jews in Jerusalem were on good terms with the Roman governor. Today, we would say that they had bargaining power and that they were primarily concerned with their own interests. This situation is well-known to us in the modern Hungarian context ever since 1920. Since then the politicians in the territories detached from Hungary have been doing a balancing act before the Czech, Slovakian, Romanian, Serbian, etc. authorities trying to represent communal and personal interests at the same time.

But let us see what Jesus did. Thirty years after being born, Jesus, a Zealot, arrived to Jerusalem and immediately locked horns with the local Jews in the Temple, of all places. Nobody would have thought that this event, at the dawn of the 2000-year long Christian history, would have an impact on world history. Back then it would have been unimaginable that the story of the New Testament which followed, or as some believe, supplanted the Old Testament would start here. The fierce competition between the two alliances continues even today.

But let us see what really happened. Nothing more and nothing less than that Jesus flew off the handle when he saw that in the Temple, the most sacred of places, money changers, merchants selling animals and all kinds of peddlers were doing business. Local Jewish leaders doubtless made handsome profits from these dealings, and the Roman governor turned a blind eye to all this.

The leaders of the Jewish community had already heard about Jesus because he came to Jerusalem as a person carrying out divine orders, that is, as a messiah. Jesus was the last thing the leaders of the battered local Jewish community needed, especially because their king – who had been declared messiah about 150 years previously – brought only misery on them. This restless man was disturbing their circles, they only wanted to do business, make connections, create positions and survive. This rings a bell. In February 1990, in the Prague parliament three Hungarian

representatives introduced a bill for establishing the Jókai University in Komárom. Those most bitterly opposed to the bill were also Hungarians. We could list their names, but what would be the use? Let us hope that in twenty years nobody will remember them. Yet, at that time they were (for some reason they became) the ones managing the political transition after the fall of the Communist regime. They wanted to secure positions for themselves in the new circumstances, similar to the ones previously held by Communists in the old regime. They were the governor's men.

It is evident that the future fate of Jesus was fundamentally determined when he drove out the peddlers from the Temple. The local Jewish leaders decided to get rid of him with the help of the Romans. They had no way of knowing that this decision would usher in a new era.

This event sealed the fate of Jesus, but created a new system of values running through earlier ways of thinking as a dividing line. The expulsion of the peddlers from the Temple marks the true dividing line between the ages of the Old and the New Testament, and between exclusionary and inclusionary thinking.

Our uncertainty whether locality and universality are mutually exclusive or they complement each other started here. Did the expulsion serve the universality of God and hurt local interests, or was the universal right of the peddlers to trade limited by the locality, the protection of the Temple? To us, it is evident that locality (the particular) and universality (the general), just like the individual and the community can only exist in harmony. In this context, one must bear in mind not to substitute universality for globality or for unity. Universality means the loose or close cooperation, the coordinated movement or harmony of individuals or groups. Globality has no limits, and within its infinite space, the cosmopolitan masses may or may not meet.

Towards the end of his study, Varga indicates that there is an ever greater uncertainty in social organisation and leadership, as well as in selection and in being selected, because the belief in predictability is evaporating. This is obviously indirectly linked to free will (or its misinterpreted forms) as a human element, which in turn is an element of social organisation.

Varga, true to the vein of his study, searches for the answer in the holy books. He states that without knowing how man is depicted in the Bible and the Koran one cannot tell which is the right, traditional management attitude. According to the Old Testament, man is the likeness of the independent God. The Koran, however, denies this and depicts man as a deputy for Allah. Both holy books make the fall into sin evident through the story of Adam. The Koran shows a way out of the

predicament because it does not consider that state irreversible. But it is Paul the Apostle who writes in his letter to the Romans about the chance for grace that was given to humanity through Jesus' crucifixion.

Varga states in terms that are clear even to our modern minds that the ancestral sin creates a living space for man where one can rebel against the values of God. In fact, this space gives rise to the sovereign man whose personality cannot only be interpreted in the spirit of the holy books, because it includes Hellenistic, as well as ancient Greek and Roman intellectual and moral traditions.

All the holy books mentioned in the study regard God to be the source of both state power and economic clout. Varga cites Buber's "Prophetic Faith" when claiming that politics is actually a dialogue between the politician and God. Leaders can never abuse their power, and members of the elite need to become servants to the people. In this case, however, God does not mean the Almighty, but the representative of fairness, public good and natural limits. Due to the interconnectedness of public and political life, this needs to hold true for the whole economy. Which means that if the economy violates this agreement, it can cause a social crisis. Let us not forget that so far all conquests (territorial, political, economic) that upset the natural social framework were sooner or later met with natural resistance. Those who rebelled and tried to protect the natural laws were persecuted. Both the New Testament and the Koran suggest that being persecuted only makes sense when it is endured for a true goal: in the service of the people, the community.

The Old Testament evaluates the living-together of different communities from a loyalty perspective. As Varga writes in reference to the Book of Isaiah: politicians need to steer clear of extreme ideas and of extreme national outbursts. But what about the free market, the economy that disregards the interests of the community? If we returned to the laws of the Old Testament, only economic activities carried out for the community were acceptable. Does the free market represent community interests? Maybe this is the most profound difference between the Old and the New Testament. And this is what a 19<sup>th</sup> century Jewish joke illustrates:

The wife of a wealthy merchant says to her husband in panic: "They say in the city that the Messiah is approaching." "This is all we needed!", sighs his husband who had been busy planning how they would get richer. The woman, seeing the consternation of her husband on hearing that a 2000-year-old event is about to be repeated, starts to console him. "Don't be alarmed. Look at what our people have gone through: subjugation, slavery, pogroms. And we survived everything. With God's help we will somehow survive the Messiah, too."

In conclusion, the last (fourth) chapter of Varga's study is basically a political credo. It might be his own, but it can be recommended to young or practising politicians



and economic policy experts. But we know history (and the present) from either the Holy Books that were mentioned or from history books, and we see a very clear picture: there are only a few examples that should be followed and those disregarding them form a much bigger group.

To sum up, Varga's excellent study is a huge effort to show that during the known history of humanity, there has always been an urge to conform to the Absolute. Fortunately, this is well documented in the case of monotheistic religions. If these documents are available, it is almost incomprehensible why we do not learn from them. We always realise in retrospect how much we deviated from the behavioural norms that can be found in the Holy Books and that please God.

Finally, I would like to express my wish – with reference to one of the remarks in the study – that public figures maintain a dialogue with at least their communities, even if they cannot/could not find a way to God.

## **The Right Way Ahead – It Will Become Part of the Curriculum...**

*Bianka Parragh*

*György Matolcsy:*

*Egyensúly és növekedés – Konszolidáció és stabilizáció Magyarországon 2010–2014 (Equilibrium and Growth – Consolidation and Stabilisation in Hungary 2010–2014) Kairosz Kiadó, Magyar Nemzeti Bank Könyvsorozata (Magyar Nemzeti Bank Book Series), 2015, p. 644  
ISBN: 979-963-662-7348*

“Equilibrium and Growth” is a work that elucidates and interprets from an economic and economic policy perspective today’s real dilemmas of economic and public thinking, and compares them to the milestones in economic history that determined the Hungarian economy’s path of development for decades. In his reasoning, the author clarifies several previously unresolved questions, and at the same time formulates new ones as regards our future. These questions often open up new dimensions in the scientific discourse. György Matolcsy started working as the Governor of the Magyar Nemzeti Bank in March 2013. He had already been a prominent figure in the national economic policy, as he had held the offices of the Minister for National Economy from 2010, and the Minister of Economy from 2000 to 2002.

“Equilibrium and Growth” is a reference book that represents a high professional standard and that creates value. It is useful and, if needed, it can provide guidance to economic policy makers, economists researching the national economy or economic policy aspects of their field, as well as to central bank professionals and politicians. The reasons that led to the less than favourable situation of the national economy and competitiveness in 2010 lie in the context of past economic thinking and economic policies. This insightful and detailed book also provides useful material to students enrolled in political science or public administration Master’s programmes.

The book starts with an overview of economic history that serves as a conceptual introduction, and consists of four main (independent) parts that form conceptual

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units. Each part is made up of six chapters. In the introduction (Breakthrough in Economic History), the author focuses on economic growth and financial stability, and presents the main stages of the of the three extensive, international crises – including the two World Wars – that led to a series of shocks and that considerably hampered growth and development in the Hungarian economy in the 20<sup>th</sup> century. The interrelationship between the steady surplus of the current account between 2010 and 2014 and the government deficit entailing equilibrium is analysed, and this analysis basically runs through the whole book. The first main part (*Chapters 1–6*) examines the negative impact of the period fraught with financial and economic recession and crises at the global and the European level, focussing on the euro area. Special attention is dedicated to the effects on Hungary, including the success and failure of the attempts at crisis management. As far as the chronology of the second main part (*Chapters 7–12*) is concerned, it scrutinises the challenges of the national economic policy that was characteristic of the period after 2010 and that employed a new crisis management strategy based on new values. The priority areas of structural reforms are also examined. The third main part (*Chapters 13–18*) analyses the first stage of stabilisation, including the trend changes in the areas of the budget, consolidation, employment, inflation, external debt and government debt. The fourth main part (*Chapters 19–24*) demonstrates and explains the core components of the lasting economic and financial stabilisation introduced prior to 2014 that were required to make future results lasting. These components are broken down into sub-areas but are treated as a whole. Convergence in the region as a result of monetary policy concentrating on both the medium and the long term, the trend change in lending that ended the credit crunch, the other trend changes in consumption and investment as well as the turnaround in growth bear testimony to the necessity, success and effectiveness of the economic policy employed by the government since 2010. This might be gradually accepted in economic discourse too. The book guides readers through the changes in economic policy in a clear and straightforward manner, providing details in chronological order. All of the components of the Hungarian national economy that ensure its efficient, competitive, successful and at the same time cost-efficient functioning are presented in an instructive way. The book's structure is modelled on academic papers, but it is a gripping, entertaining read.

As Matolcsy puts it, and in line with the book's title, the governing, unified national economic concept of Hungary that incorporates the aspects of economic policy, public finances – more specifically the monetary, fiscal, lending and real economy factors – is derived from the formula of equilibrium and growth as a basic premise. The roots, components and future goals of the central banking philosophy, engagement and practice based on new values and supporting the government's economic policy, serving the social interest and focussing on the public good while maintaining the central bank's independence are detailed.

The book can be considered the sequel to “From Vanguard to Bringing up the Rear”, which is about the events in economic history that characterised the region’s economy, and which depicts the economic policy context of the period 2002–2008 and the resulting opportunities for Hungary. “Equilibrium and Growth” confirms and verifies Matolcsy’s ideas that he set forth in 2008 – and that still hold true today – about the reasons why Hungary lagged behind the region’s countries. In 2010, it became evident that structural reforms cannot be further delayed, and that the economic policy model inspired by neoliberal ideas had failed. It was clear that change was needed. It is indisputable that the coordinated functioning of the national government’s economic policy and the central bank’s policies contributed to the competitiveness of the national economy.

From an economic perspective, “Equilibrium and Growth” discusses today’s economic challenges in a unique way. Matolcsy has always been a thought-provoking figure since the political transition 25 years ago. His remarks, just like his perseverance, are substantiated by real life and by today’s macroeconomic data.

This reference work creates value, provides guidance to future generations about the renewal of economic thinking, and its arguments are based on Hungary’s real resources. I respectfully recommend “Equilibrium and Growth” to everybody who is interested in the topic.

## **The Tricks of the Trade of Central Bank Governance – Report on the Central Banking Conference on the Governance of Central Banks**

*Tamás Rózsás*

Central Banking Publications held a four-day conference on central bank governance from 28 April to 1 May 2015 in Windsor, United Kingdom. The conference, entitled “Central Bank Governance: The Role of the Board” was one of the events in an annual series organised by Central Banking Publications, and was comprised of presentations and subsequent discussions. Focussing on the governance of central banks and the responsibilities and tasks of the board, the conference discussed the changing role and functions of central banks, the operation and structure of the board and various related practices, the supervisory tasks of central banks, as well as the opportunities for and importance of improving relations with stakeholders.

In her presentation, *Grace Koshie*, former chief general manager and secretary to the board at the Reserve Bank of India, pointed out that central banks and their activities are rapidly changing, their responsibilities are growing, and there is ever greater demand for their accountability. It is evident that the governance structures of central banks must keep up with this, which entails the need for governance that places a stronger emphasis on closer consultation with all stakeholders and the transparency of the decision-making process. *Koshie* noted that the mandate of central banks has continuously evolved, as all major economic events have left their mark on it. She presented these changes through the example of the Reserve Bank of India, and concluded her presentation by stating that just like momentous events in the past, today’s crisis has affected the governance and role of central banks, and that boards need to react to this.

*Neil Whoriskey*, head of the general secretariat in charge of both communications and planning at the Central Bank of Ireland, talked about the factors motivating central banks in the absence of the competition characteristic of the commercial sector. *Whoriskey* presented how the crisis and the growing responsibilities of central banks led to a new governance structure and at the same time helped to restore the reputation of the Central Bank of Ireland. He described the process of introducing the new structure and mentioned the better alignment of the two

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cultures – the regulatory and the central banking culture – present at the Central Bank of Ireland.

The two talks were followed by a discussion of the experiences about the changing responsibilities and growing mandate of central banks represented by the participants. The discussion was led by *John Jussup*, the former general counsel and corporate secretary of the Bank of Canada, who was also the chairman of the conference.

The first presenter on the second day, *Kenneth C. Montgomery*, first vice president and chief operating officer of the Federal Reserve Bank of Boston (FED), talked about IT governance and the role of technology. *Montgomery* predicted that one of the biggest expense items for central banks worldwide in 2015 will be technological expenses, which will continue to grow due to new IT developments on the financial markets and ever more sophisticated cyber-attacks. Since nowadays technology permeates everything from central banks' core functions to daily workflows, the former practice that IT system requirements are exclusively determined by IT professionals is untenable. *Montgomery* talked about boards' duties linked to controlling IT investment, and introduced the Fed's executive committees and bodies in charge of IT governance.

This talk was followed by a panel discussion led by *John Jussup* with *Jeremy Farr*, general counsel and corporate secretary at the Bank of Canada, and *Grace Koshie* on the education of board members. Central banks usually do not have influence over the selection, job description and professional requirements expected of external board members. That is why it is crucial to provide external board members with orientation and ongoing education concerning the central bank's role, functions, operation and administration. The members of the panel discussed the topical issues related to this in an environment that imposes ever stricter requirements on central banks.

*Atilla Arda*, a senior financial sector expert at the IMF, talked about governance frameworks and the types and structures of boards. He said that, unlike players in the commercial sector, central banks do not have a template for governance, which makes the structures of boards and committees in central banking much more varied. Based on central banks' established practices, he listed the advantages and disadvantages of the various structural arrangements as regards the efficiency of decision-making and potential conflicts of interest.

In his presentation on the functioning of the board, *Jeremy Farr* described the board's operating activities, governance structure, role and responsibilities through the example of the Bank of Canada. In addition, the speaker mentioned how the Board monitors the Governor's performance, and what activities and functions, when and by whom are reported to the members of the Board.

This was followed by another presentation by *Atila Arda* on the board's responsibilities concerning legal and compliance risks. Drawing on the results of a survey of LGRC,<sup>1</sup> he told the audience that this area is still in its infancy in most central banks. However, incorporating it into the decision-making of central banks contributes to the performance of the essential governance function.

As the first speaker of the third day, *John Jussup* talked about the board secretary's role in facilitating information flow between the central bank's senior management and board members. After this talk, *Simon Webley*, research director of the London-based Institute of Business Ethics, addressed issues related to ethical risks. *Webley* stressed the importance of laying down basic ethical values in implementing ethical standards. He added that creating an explicit ethics policy, a code of conduct and an ethics programme were also essential for this goal.

*Kenneth Sullivan*, director of Sullivan Consulting and a former senior financial expert of the IMF, spoke about the role of the board in risk management. *Sullivan* argued that the board's main task as regards risk management was developing the organisation's risk management culture.

*José Miguel García*, associate director general in charge of internal affairs at the Bank of Spain, emphasised the importance of central banks' corporate social responsibility. As prominent public institutions, central banks are not only responsible for carrying out their mandates, but also for their influence on society and their environment. Finally, *Mirela Roman*, director of the communication department at the National Bank of Romania, talked about the significance of communication, focussing on its relationship to transparency and accountability, and the limits of transparency arising from the central banking function.

The presentations were followed by a recap of participants' reflections and experiences. It emerged from the comments that central banks are facing similar challenges all over the world in the areas of growing responsibilities, stricter requirements, and the increasing demand for transparency and accountability. However, these can be addressed in various ways in different environments and historical contexts. The responsibility of central bank governance and the board is to find and choose the best solutions for the particular central bank and its environment, and to supervise the implementation of these measures.

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<sup>1</sup> Legal governance, risk management and compliance.





## INSTRUCTION FOR AUTHORS

Manuscripts should be submitted in accordance with the following rules.

- The length of the manuscripts should be limited to 40 000 characters (including spaces) but a  $\pm 50$  per cent deviation is accepted. Manuscripts should be written in Hungarian and/or English.
- Papers always begin with an abstract which should not exceed 800–1000 characters. In the abstract a brief summary is to be given in which the main hypotheses and points are highlighted.
- At the bottom of the title page a footnote is to be given. The footnote contains every necessary information related to the paper (acknowledgement, relevant information etc.). This is followed by the name of the institution and position the author works at, e-mail address in Hungarian and English.
- Journal of Economic Literature (JEL) classification numbers should be given (three at least).
- Manuscripts should be written in clear, concise and grammatically correct Hungarian and/or English. Chapters and subchapters should be bold.
- Manuscripts should contain the list of references with the first and surname of the authors (in case of non-Hungarians the initials of the first name is required), the year of publication, the exact title of the book, the publisher, the place of publication. In case of papers, the exact title of the journal, the year, the volume, and the pages should be indicated. References in the text should contain the surname and the year separated by comma. When citing, the exact page be indicated.
- Tables and figures are to be numbered continuously (chapters and subchapters should not contain restarted numbering). Every table and figure should have a title and the units of quantitative values are to be indicated. Tables and figures are to be made by MS Word and Excel in Hungarian and English. Notes and sources are to be put directly at the bottom of the tables, figures.
- Equations should be aligned to the right and should be numbered continuously in parenthesis. (Chapters and subchapters should not contain restarted numbering.)
- Manuscripts are to be sent to the Editorial Office of the FER only. Papers are peer-reviewed by two independent and anonymous reviewers.
- Manuscripts should be sent as attachment by e-mail in MS Word file. Figures and tables should be sent in MS Excel file both in Hungarian and English.
- In case of further questions related to the manuscript visit the following website: [http://english.hitelintezetiszemle.hu/szerzoknek/Authors\\_Guide\\_EN.pdf](http://english.hitelintezetiszemle.hu/szerzoknek/Authors_Guide_EN.pdf)

**Thank you!**

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