

Sound EMU governance and monetary policy for sustainable convergence in Europe¹

Robert Holzmann

Governor, Oesterreichische Nationalbank

Let me start with a tribute to Alexandre (Sándor) Lámfalussy – ‘the wise man of the euro’. He was a unique personality, having achieved excellence as an economist, as a (central) banker, and as a diplomat alike. He shaped the founding design of the Economic and Monetary Union (EMU), played a dominant role in the creation of the European Central Bank, and inspired the groundwork for unifying European banking regulation.

I was asked to open the discussion of a high-profile panel on “The new challenges of sustainable convergence: Within the EU” and will give my interpretation of the topic in this paper. There are indeed plenty of – old and new – challenges. To frame the general debate, we could draw inspiration from a book recently published by Magyar Nemzeti Bank with the title “Long-term sustainable economic mix”. This masterpiece describes numerous challenging megatrends, including climate change, global population growth, aging societies, the shift of global power toward the East, the rise of megacities, digitalization and robotization or social polarization.

Given the many dimensions of these megatrends and my limited competences beyond central banking, I am going to concentrate on one specific trend mentioned in that book: “The age of zero interest rates”. To be sure, I am not using the term “age” literally in this context, as the phenomenon of ultra-low rates might be confined to an episode. But I do believe that securing the soundness of monetary policy – and, thus, ultimately, the sustainability of convergence – is indeed a challenging task.

Before I address the topic of monetary policymaking, let me share some observations on the significance of convergence in Europe and then on unfinished EMU business. Economic convergence is a goal of European integration and a precondition for the political resilience of the euro and, perhaps, the EU as a

¹ This discussion paper is an extended version of a keynote speech given at the Lámfalussy Lectures Conference in Budapest on January 20, 2020. The author would like to thank Andreas Breitenfellner, Martin Schneider and Maria Teresa Valderrama (OeNB) for valuable suggestions and support.

whole. Progress in convergence has generally been impressive across the EU, even if the pace has recently slowed down – fortunately, only temporarily in the case of Central, Eastern and Southeastern Europe (CESEE). Let me also mention that, at the Oesterreichische Nationalbank, we generally avoid using the branding “Emerging Europe” introduced by the International Monetary Fund, because we think most CESEE countries have already “emerged” or rather re-emerged in the world of industrialized or advanced economies. That said, while most of them are middle-income economies, what they still have in common with emerging economies is the unpleasant feature of a typically volatile catching-up process.

Lámfalussy knew about the vulnerability of the convergence process to excessive short-time indebtedness and asset price bubbles. He warned that “soft landings have been the exception; sharp price declines the rule” (Lamfalussy, 2000, 163). He also argued that financial globalization was exposing emerging markets to unsustainable capital inflows and financial crises.

Today, most CESEE countries have finally overcome the Global Financial Crisis, and their incomes per capita are again converging toward the EU average. However, we can hardly be satisfied with the speed of convergence if we compare it with that of Emerging Asia. Whatever the reasons for this discrepancy may be – capital account liberalization, fiscal policy rules or simply lower competitiveness; the resulting disadvantages continue to be offset at least partly with substantial regional funds from the EU budget.

1 Unfinished EMU business

The comparison with successful emerging economies may explain why some CESEE countries may be worried about getting stuck in a middle-income trap when introducing the euro and giving up their independent monetary policies. With the benefit of hindsight, better preparatory work for euro introduction would have certainly spared us the worst of the euro area sovereign debt crisis. But dismantling or shrinking EMU now would be extremely costly and dangerous.

I would agree with Barry Eichengreen saying that EMU still “needs fixing”. Even Lámfalussy (2003) admitted that “The greatest weakness of EMU is the E.” (With E standing for economic policy.) The wide-ranging and deep debate on EMU-deepening options is exemplified by a seminal publication of fourteen French and German economists that tries to reconcile risk sharing with market discipline (Bénassy-Quéré, et al., 2018). I am going to concentrate on three key elements in the following: banking union, capital markets union and fiscal governance.

1.1 Completing banking union

Lámfalussy already encouraged various post-crisis reforms, particularly the creation of a banking union, comprising uniform supervision and consistent banking crisis management. However, while academics broadly support the proposed European Deposit Insurance Scheme (EDIS) as a central component of a banking union, the required political consensus among euro area countries is still lacking. The ongoing discussions reflect different views on how to prioritize risk reduction and risk sharing. As for the OeNB, we have always preferred a staggered approach where risk reduction is a prerequisite for risk sharing.

An innovative way to break the deadlock has recently been proposed by Nicolas Véron (2019a, b). As an immediate step, he lines out a package deal combining three elements, namely (a) sovereign concentration charges to limit the exposure of banks to their home country's public debt; (b) an unconditional EDIS protecting all deposits insured in euro area member states; and (c) various measures to make resolution of non-viable banks work. The latter would include strengthening the European Single Resolution Board as well as European liquidity or capital support to struggling banks. These actions would allow to put an end to national ringfencing of bank capital and liquidity within the euro area.

Véron leaves other measures such as the creation of European safe assets and harmonization of insolvency proceedings for a later stage. His strategy is ambitious but seems achievable since it works without treaty changes and without further fiscal union.

1.2 Making capital market union happen

Furthermore, over-reliance on banking in the euro area and deficient cross-border risk-sharing mechanisms call for a capital markets union (CMU). Recently the European Council adopted conclusions on deepening CMU, which feels like the n-th restart, considering the Financial Services Action Plan launched in 1999. This plan already envisioned a single market for financial services – and we continue to be far from getting there.

On this evergreen issue, I would like to urge walking the talk on integrating the capital markets of EU Member States. Conceptually, this requires a shared understanding of the objectives and technical proposals of the capital markets union. Here, the recently established high-level Forum chaired by Thomas Wieser will surely contribute. More importantly, a true political champion for CMU is badly needed to fill the gap Brexit has left.

Materially, however, making real progress also requires having “skin in the game”. In other words, we need broad market participation of the population in the sense of “democratic capitalism”. Arguably, this would require in many EU countries portfolio shifts away from renting predominance in housing and social insurance predominance in retirement income. After all, housing mortgage and capital-based retirement funds are the basis for a vibrant financial market, as we can see in some countries such as the Netherlands. Following best practices would imply major reforms in areas such as insolvency law, taxation, pensions systems and mortgage legislation.

1.3 Fiscal policy aspects in the current EMU design

A complete banking union and full-fledged capital markets union would significantly reduce the need for a fiscal union in the euro area. Comparison with other monetary unions suggests only a limited role for cross-border flows of taxpayer money in smoothing consumption over the business cycle. In the U.S., for instance, most of the effects of asymmetric shocks are addressed by capital flows, and only up to one fifth is covered by fiscal transfers (Fuceri and Zdzienicka, 2013; IMF, 2013). Consequently, a complete banking union and a full-fledged capital markets union would leave a limited role for a fiscal union – led by a European ministry of finance – to improve the resilience of the euro area. In any case, the broad political will for a true fiscal union is absent.

Instead, existing European fiscal institutions and rules should be built upon. On the one hand, this applies to the recently empowered European Stability Mechanism (ESM), which now provides much of the macroeconomic functions required. Once the amended ESM Treaty has been ratified, its extended mandate will allow for crisis prevention tools and resolution capabilities.

The ESM – with a maximum lending capacity of no less than halve a trillion euros – will then have a stronger role in preparing and monitoring future financial assistance programmes for euro area Member States that lose market access; it will provide a backstop to the Single Resolution Fund when dealing with troubled banks; it may offer precautionary credit lines (or enhanced conditions credit lines) for Member States which are hit by an adverse shock beyond their control and despite sound economic fundamentals; it will contribute to debt sustainability assessments; and it will perform macro-financial risk analysis even in non-crisis times.

On the other hand, the current rules on national fiscal policies need to be reworked and simplified while the focus may need to be extended beyond flows, to stock

considerations (Holzmann 2014, 2001). In this regard it is worth reading the recommendations of two other well-informed Hungarian economists.

Zsolt Darvas at Bruegel argues that the Stability and Growth Pact suffers from complexity, pro-cyclicality and noncompliance. Together with other authors he proposes an expenditure rule requiring that nominal expenditures do not grow faster than long-term nominal income, and that they grow at a slower pace in countries with excessive levels of debt (Beuve, et al., 2019).

Similarly motivated, George Kopits (2018) identified three options in a paper for the European Parliament: (a) a debt-stabilizing primary surplus target complemented by the existing expenditure benchmark; (b) a single operational debt rule derived from the debt reduction target; and (c) a market-based approach built on the reaffirmed no-bailout principle. The latter would replicate decentralized fiscal systems such as in Switzerland or the United States.

Personally, I find a better understanding of debt and its different implications sensible. After all, what is at stake is investors' trust in the capability of individual countries to manage their public debt. In this context, I want to add a plea for considering implicit liabilities (of social security, in particular pensions, health, and long-term care) that risk translating into repayable debt – an issue that is particularly significant under the adverse demographic trends of our days.

In any case, fiscal discipline is a necessary condition for the smooth functioning of the euro. The question is how to enforce such discipline wisely so as not to forestall growth opportunities and necessary adjustment to structural challenges such as climate change.

Given the obvious imperfections of EMU, some CESEE euro area candidates hesitate to introduce the euro, even if the Treaty obliges them to do so once they converge to the nominal Maastricht criteria. Countries weigh importing (price and financial) stability against losing adjustment mechanisms of exchange and interest rates.

Moreover, admission hinges on the sustainability of countries' nominal and real convergence and their readiness to enter the banking union before euro introduction. Since public support for such a move has become increasingly favorable across the region, there is little doubt that the euro area will continue to expand sooner or later. And even if euro introduction affects the long-term economic development it also hinges on short-term political processes, which are nowhere exclusively rational.

Whether inside or outside the euro area, EU Member States are substantially impacted by the economic conditions of the euro area, including the effects of the

Eurosystem's unconventional monetary policies. This leads me to next sharing a few unconventional views on the challenges of contemporary monetary policy.

2 Looming challenges of unconventional monetary policy

The Great Financial Crisis left central banks in most developed countries with challenging conditions. In order to avert protracted periods of low inflation and even the risk of deflation, central banks resorted to unconventional monetary policy measures that were designed to stimulate the economy despite the binding constraint of reaching the zero (or effective) lower bound.

By now, very low or even negative interest rates and quantitative easing appear to have become part of the standard monetary policy toolkit of central banks in advanced economies, notwithstanding their labelling as “unconventional” or “non-standard”. During and after the Great Financial Crisis, unconventional monetary policy measures have indeed had a positive impact on price stability and economic growth, albeit with decreasing returns – perhaps, partly due to missing support from fiscal policies and more certainly due to insufficient structural policies.

Yet, as years of unconventional policy pass, concerns arise over the emergence of non-negligible unintended side effects. For example, concerns are rising about the effect of very low or even negative nominal interest rates on saving behavior or on the profitability of financial institutions.

Concerns are also rising about the build-up of financial imbalances through higher asset prices, in particular house prices, possibly impacting wealth and income distribution in the long term. This is an issue which will be addressed afterwards, followed by some remarks on low long-term yields.

2.1 Unconventional monetary policy and productivity

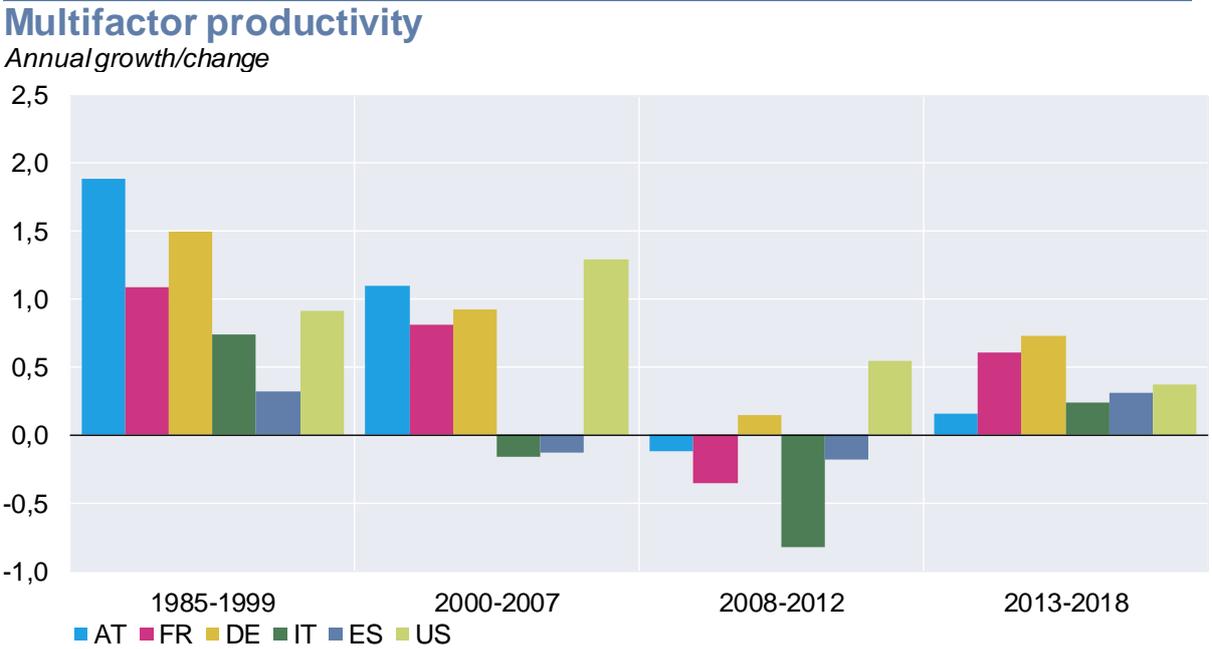
Let me start by addressing the effects that a protracted period of very low or even negative interest rates may have on productivity (White; 2012; Van den End and Hoeberichts, 2018). In my view, this is a crucial topic, because if a permanently strongly expansionary monetary policy turns out to be affecting potential growth through its effects on productivity, central banks may find it increasingly harder to fulfill their price stability mandate. Moreover, understanding the long-term effects of monetary policy on productivity is also crucial considering the long-term productivity slowdown and the subdued prospects for potential output growth.

When we analyze the relationship between monetary policy and productivity, we are inevitably confronted with the widely held view that monetary policy is

neutral in the long run; in other words, with the idea that there are no permanent real effects of monetary policy – the so-called classical dichotomy. There is, however, reason to believe in a bolder idea that a very long period of very expansionary monetary policy affects productivity through the misallocation of resources and the mispricing of risk. In fact, the idea is not so new. There is a growing body of research discussing the hypothesis that persistently low policy rates may affect productivity growth negatively, thereby harming long-term growth prospects. For example, Van den End and Hoeberichts (2018) show for a sample of OECD countries² that lower real interest rates have indeed caused a low natural rate of interest by lowering potential output growth. Based on both theoretical and empirical studies, this incipient body of research has identified several possible channels:

First, there is ample evidence that low interest rates can exacerbate financial booms, rapid credit growth and the accumulation of debt, which distorts capital allocation through the banking sector by allowing for lax lending standards and low risk margins (Bonam et al., 2018).³ The effect is lower aggregate productivity.

Chart 1



Source: OECD.

Second, given the higher preference for safe assets⁴, an expansionary monetary policy (low interest rates and excess liquidity from quantitative easing) increases

² Japan, Canada, France, UK and Germany.
³ On the Schumpeterian role of banks, see also Keuschnigg and Kogler (2018).
⁴ There are several explanations besides monetary policy for the higher preference for safe assets: higher demand from emerging economies with less developed financial markets, demand for retirement from an aging population, a general increase in risk aversion following the Great Financial Crisis and, finally, more regulation.

the scarcity of safe assets, which leads firms to cut back on risky investment. Firms respond to a lower demand for riskier assets by investing instead in safe but unproductive assets (i.e. cash flows, securitization, equity buybacks, etc.).

Third, low (or negative) interest rates also affect firm dynamics because some determinants of the entry and exit decisions of firms, as well as firm growth (e.g. profit expectations, entry and exit costs, market structure) are influenced by interest rates and access to financing. For example, low (or negative) interest rates make an increasing number of weakly productive companies and projects profitable, facilitating entry of such firms. Furthermore, investors seeking higher risks will go for the least productive firms (Albrizio et al., 2019; Cette et al., 2016). At the same time, low interest rates reduce pressure for unproductive firms to exit, which contributes to the misallocation of resources. Eventually, this may lead to the emergence of zombie firms (Adalet McGowan et al., 2017; Banerjee and Hofmann, 2018; Acharya et al., 2019). All these effects slow down aggregate productivity growth by reducing the cleansing effect of the business cycle (Bergeaud et al., 2019).

Fourth, while there is ample evidence that productivity drops amid rising market concentration, Liu et al. (2019) have shown recently that periods of low interest rates, when companies tend to be more patient, provide market leaders with a strategic advantage: they can invest more because they are less financially constrained. This strong response discourages market followers, which eventually disappear, increasing market concentration further.

For monetary policy making, these and other detrimental mechanisms are important considerations because productivity is a key determinant of growth. If monetary policy has long-term real effects, we could be faced with a reversed or circular causality between monetary policy and productivity. This would make our task of fulfilling the mandate even more difficult. Thus, this is a research area where we need to invest more – and I am sure we will.

2.2 Unconventional monetary policy and wealth and income distribution

Apart from productivity, the housing market is key when looking at side effects of expansionary monetary policy.

The effects of conventional monetary policy on the housing market are relatively well understood. Lower interest rates impact on house prices via at least four channels: (a) They make housing more affordable for buyers; (b) they make housing assets more attractive for investors; (c) they lower the discount rate for expected rental income, thus increasing the current value of housing assets; (d)

and they drive currency depreciation, which might draw international capital to the domestic housing market. There is a broad literature that provides evidence of significant effects of (conventional) monetary policy on the housing market. One of the more important findings is that the effects of lowering the interest rates are non-linear. The effect of lower interest rates increases as the interest rate goes to zero. This finding should inform assessments of the current situation with ultra-low interest rates. Another non-linearity occurs with respect to the cyclical position. In boom phases, the impact of monetary policy, inflation and bank credit on house prices is stronger than in normal periods.

House price increases have major long-run distributional effects on income and wealth. They make housing unaffordable for most young people, because the transmission of rising house prices to rents also adds to renting costs. Dustman et al. (2018) found that increases in housing costs exacerbated the rise in income inequality in Germany after housing expenditures, driven by a decline in the relative costs of homeownership versus renting, changes in the household structure and residential mobility toward larger cities. Data for Austria also show a comparatively sharper rise in housing costs for tenants than for owners since 2008. As accumulating financial wealth for future house purchases gets much harder amid ultra-low interest rates, future generations will become even more dependent on the rental market, with huge implications for the distribution of wealth.

The empirical literature has also clearly stated that house price booms that are followed by busts have negative economic and social consequences. However, the sheer size of a rise in property prices is not the most important factor in determining how severe the bust will be. Rather, what matters is whether the asset price boom is funded by credit. If so, the evidence suggests that the cost of a bust is much greater. Booms that are coupled with strong credit expansion have stronger negative effects (IMF, 2015). Past housing boom-bust cycles were often associated with periods of financial instability and crises. However, the distributional effects of crises are less clear. De Beer (2012) investigated the short-term impact of the financial crisis on earnings and income distribution in the EU. He found no uniform pattern among EU countries. In Spain, inequality increased during the crisis, while it fell in Ireland. The long-run impact of financial crises has been less studied. However, fiscal consolidation episodes after financial crises typically lead to an increase in income inequality (Heimberger, 2020).

Finally, many European housing markets are in a maturing phase of their cycles. In the Netherlands, for example, demographic developments will probably result in a surplus of dwellings from 2025 onwards. Austria may see this happen already

in the next years. The combination of excess supply with a possible reversal of the unconventional monetary policy measures has the potential to trigger the next financial crisis. Furthermore, recent (historic) evidence suggests that construction booms help identify bad credit booms (Dell`Aricia et al., 2020). Therefore, we have put a lot of effort into understanding the underlying complex mechanisms to make sure we are well prepared for things to come.

Macroprudential policy tools can help to address the build-up of risks to financial stability arising from the housing market. There is ample evidence of the efficiency of these tools in dampening mortgage growth and increasing the resilience of the financial system. Yet, this requires an adequate governance structure to allow for independent and courageous policy decisions.

2.3 Addressing the long end of the yield curve

In much of the developed world – including North America, Europe and Japan – policy decisions are based on the New Keynesian model. This model suggests that monetary policy is effective over the short to mid run in controlling inflation and/or output gaps and unemployment through interest setting on the short side of the yield curve.

Addressing low short-term nominal interest rates, however, is not enough. Since the 1980s we can observe a concomitant decline on both the short and the long side of the yield curve. But effective and sustained policy actions on the long side beyond asset purchases programs are probably outside the realm of central banks. Nevertheless, exploring and understanding the causes of the long-term decline of investment returns and suggesting respective policy action is in central banks' interest and compatible with their mandate.

The almost parallel decline since the 1980s is consistent with research results that establish the predominance of dynamic economic efficiency in OECD countries prior to the 1990s (Abel et al., 1989) but fails to do so more recently (Luo et al., 2018). In other words: real interest rates below the economic growth rate disincentivize productive investment. Yet, unless the long-term (nominal and real) rate of return is sufficiently increasing, the possibility to move the short-term rate sufficiently into positive territory is very limited.

Short- and long run real interest rates - U.S.A.



Source: FED.

There are various non-exclusive explanations for low or declining long-term rates of return on investment: Karl Marx's 'law of the tendency of the rate of profit to fall'; the absence of major wars destroying the capital stock, population aging, lower capital needs for digital investments, economic uncertainty, etc. (Piketty and Zucman, 2018; Sinn, 2017).

Whatever its origins, the detected savings glut (or investment gap) may also have to do with only modest capital flows from the mostly rich global north to the mostly poor global south. The global south is still in need of capital for financing physical and intellectual infrastructure to allow for economic growth for a rapidly rising population. Above all, this applies to Africa where the population is projected to double to 2.4 billion until 2050 and to further increase to 4.7 billion by 2100 (UN medium scenario).

While the saving surplus in the north and capital need in the south would create a perfect intertemporal exchange opportunity, the experience with capital flows is rather sobering – as discussed by the 'Lucas paradox' (Lucas, 1990). Furthermore, we do not have financial market instruments to send resources for infrastructure investment to developing countries that would satisfy investors' requests in terms of security and liquidity. The 2018 G20 'Eminent Persons Group Report' refers to the need, but elaboration seems to have stalled (G20, 2018).

The European institutions and, more general, institutions in the global north are strongly advised to deepen the analysis and to come forward with suggestions for

governance and financial instruments that would make happen large-scale capital exports to the global south.

Let me sum up: During and after the Great Financial Crisis, unconventional monetary policy measures have indeed had a positive impact on price stability and economic growth. This notwithstanding, there is reason to believe that a prolonged period of ultra-loose monetary policy has unintended negative consequences on productivity growth and asset prices, while the intended effects are slowing down. Or to put it in the words of another Hungarian economist, János Kornai (1983), “Whenever radical therapy of a main disease was started, one other main disease developed.” He concluded that “Normative theories in economics often reflect naïve optimism. Only a few economists admit that there exist insoluble dilemmas.” I wonder whether Kornai’s strong worded comparison of the 1980s between medical science and economics, may give us food for thought - in the tradition of Austrian Economics - for the next stage of economic and monetary policy making.

The new Keynesian approach suggests that monetary policy can move an economy from one expansion to another without hurting the long-term growth prospect as relative prices are not permanently impacted. In this view, downturns are created essentially by (external) shocks that can be ably handled by monetary (and fiscal) policy, requiring no wading through a draught. In contrast, an Austrian economics perspective would see economic fluctuations mostly created by endogenous events. (By the way: Minsky also stressed such a view, although in a context of financial crisis.) If this is true, sustained policy interventions risk deteriorating rather than improving the outcome. The positive economic effects of ultra-low interest rates could be diminished, or in the extreme, even outnumbered by problematic firm dynamics through distorted prices in the long term.

Perhaps such thoughts may stimulate the ongoing debate on monetary policy. Meanwhile, Sweden’s Riksbank has already raised its repo rate from negative territory back to zero, possibly transiting to a new tightening cycle. Whatever the economic environment and policy considerations in other places, we all probably agree with Sandor Lámfalussy (1994) when he stated: “In a long and broad historic perspective central banking has always been in transition.”

References:

Abel, A., G. Mankiw, L. Summers and R. Zeckhauser. 1989. Assessing Dynamic Efficiency: Theory and Evidence. *Review of Economic Studies* 56/1: 1-20.

- Acharya, V. V., Crosignani, M., Eisert, T. and C. Eufinger. 2019. *Zombie Credit and (Dis-)Inflation: Evidence from Europe*, Working Paper, New York University Stern School of Business.
- Adalet McGowan, M., Andrews, D. and V. Millot. 2017. *The Walking Dead? Zombie Firms and Productivity Performance in OECD Countries*. OECD Economics Department Working Paper No. 1372.
- Albrizio, S., Conesa, M., Dlugosch, D. and C. Timiliotis. 2019. *Unconventional monetary policy and productivity*, OECD Working Paper No. 17.
- Andrews, D. and F. Petroulakis. 2019. *Breaking the Shackles: Zombie Firms, Weak Banks and Depressed Restructuring in Europe*. ECB Working Paper No. 2240.
- Banerjee, R. and B. Hofmann. 2018. *The Rise of Zombie Firms: Causes and Consequences*. In: *BIS Quarterly Review*, September: 67-78.
- Bénassy-Quéré, A., M. Brunnermeier, H. Enderlein, E. Farhi, M. Fratzscher, C. Fuest, P.-O. Gourinchas, P. Martin, J. Pisani-Ferry, H. Rey, I. Schnabel, N. Véron, B. Weder di Mauro and J. Zettelmeyer. 2018. *Reconciling risk sharing with market discipline: A constructive approach to euro area reform*. In: *CEPR Policy Insight* 91.
- Bergeaud, A., Cetto, G. and R. Lecat. 2019. *The Circular Relationship Between Productivity Growth and Real Interest Rates*, Banque de France, Working Paper No. 734.
- Beuve, J., Z. Darvas, S. Delpuech, P. Martin and X. Ragot. 2019. *Simple rules for better fiscal policies in Europe*. ifo DICE Report 17, Summer 2019: 12-16.
- Cetto, G., Fernald, J. and B. Mojon. 2016. *The pre-Great Recession slowdown in productivity*. *European Economic Review* 88: 3–20.
- De Beer, P. 2012. *The impact of the crisis on earnings and income distribution in the EU*. ETUI Working Papers.
- Dell'Aricca, G., E. Ebrahimy, D. Igan, and D. Puy. 2020. *Discerning Good from Bad Credit Booms: The Role of Construction*. IMF Staff Discussion Note SDN-20-02, January.
- Dustmann, C., Fitzenberger, F. and M. Zimmermann. 2018. *Housing expenditures and income inequality*. ZEW Discussion Paper No. 18-048.
- Eichengreen, B. 2017. *The Euro's narrow path*. Project Syndicate, September 11. <https://www.project-syndicate.org/commentary/euro-narrow-path-france-germany-cooperation-by-barry-eichengreen-2017-09?barrier=accesspaylog>
- Furceri, D. and A. Zdzienicka. 2013. *The Euro Area Crisis: Need for a Supranational Fiscal Risk Sharing Mechanism?* IMF Working Papers.
- G20. 2018. *Making the Global Financial System Work For All*. Report of the G20 Eminent Persons Group on Global Financial Governance. October.
- Gropp, R., J. Rocholl, J. and V. Saadi. 2017. *The cleansing effect of banking crises*. Background paper for the Global Forum on Productivity.
- Holzmann, R. 2014. *The Implicit Pension Debt: Concept and Role in Pension Economics and Reform*. In Jozsef Meszaros, ed. *Pension Adequacy and Sustainability*. Budapest: Central Administration of National Social Insurance, pp. 9-35.
- Heimberger, P. 2020. *The Dynamic Effects of Fiscal Consolidation Episodes on Income Inequality: Evidence for 17 OECD Countries Over 1978-2013*. *Empirica*, 47/1, 53-81.
- Holzmann, R., R. Palacios und A. Zviniene. 2001. *On the Economics and Scope of Implicit Pension Debt: An International Perspective*, *Empirica* 28/1: 97-129.

- IMF. 2015. Discerning good from bad credit booms: the role of construction. Informal Brief to the Board. Presentation September 16, 2019.
- Keuschnigg, C. and M. Kogler. 2018. Trade and Credit Reallocation: How Banks Help Shape Comparative Advantage. CESifo Working Paper No. 7398.
- Kopits, G. 2018. How could the Stability and Growth Pact be simplified? European Parliament, Directorate-General for Internal Policies of the Union, Economic Governance Support Unit, Brussels.
- Kornai, J. 1983. The health of nations: Reflecting on the analogy between medical science and economics. *Kyklos* 36/2: 191-212.
- Lámfalussy, A. 2003. Europe's financial architect. Interview Mark Milner, *Guardian*, 16 August.
- Lámfalussy, A. 2000. *Financial Crises in Emerging Markets: An Essay on Financial Globalisation and Fragility*. Yale University Press, New Haven and London.
- Lámfalussy, A. 1994. Central banking in transition. Per Jacobsson Lecture. London.
- Liu, E., A. Mian, and A. Sufi. 2019. Low interest rates, market power, and productivity growth. NBER Working Paper No. 25505.
- Lucas, R. 1990. Why doesn't Capital Flow from Rich to Poor Countries?. *American Economic Review*, 80/2: 92-96.
- Luo, K., T. Kinugasa and K. Kajitani. 2018. Dynamic efficiency in world economy, Discussion Papers 1801, Graduate School of Economics, Kobe University.
- Magyar Nemzeti Bank. 2019. Long-term sustainable econo-mix. Budapest.
- Piketty, T. and G. Zucman. 2014. Capital is Back: Wealth-Income Ratios in Rich Countries 1870-2010, (October). *The Quarterly Journal of Economics*: 1255-1310.
- Sinn, Hans-Werner. 2017. "Was uns Marx heute noch zu sagen hat". *Politik und Zeitgeschichte* 19-20: 23-28.
- Summers, L. 2014. US economic prospects: Secular stagnation, hysteresis, and the zero-lower bound. *Business Economics* 49: 65-73.
- Syverson, C. 2011. What Determines Productivity? *Journal of Economic Literature* XLIX (June): 326-365.
- UN Population Division. 2019. *World Urbanization Prospects 2019*. <https://population.un.org>
- Van den End, J.W. and M. Hoeberichts. 2018. Low real rates as driver of secular stagnation: Empirical assessment. *Japan and the World Economy* 46: 29-40.
- Verón, N. 2019a. Banking union and capital markets union: The new European Commission's reform agenda. Presentation at Monetärer Workshop of the Bundesbank in Berlin December 7.
- Verón, N. 2019b. To the commissioner responsible for financial services. In Demertzis, M. and G. Wolff. *Braver, greener, fairer: Memos to the new EU leadership 2019 – 2024*. Breugel E-Book. http://bruegel.org/reader/braver-greener-fairer_onlinereader#memo-financial-affairs
- White, W. R. 2012. Ultra-Easy Monetary Policy and the Law of Unintended Consequences. Federal Reserve Bank of Dallas, Globalization and Monetary Policy Institute Working Paper No. 126.