Tight monetary policy is not the answer to weak productivity growth

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The widespread and persistent productivity slowdown witnessed since the Global Crisis had already begun in advanced and low-income countries prior to the crisis. This column argues that the crisis amplified the slowdown by creating 'productivity hysteresis', and that monetary policy played an ambiguous role. Policymakers must now address the legacies of the crisis through innovation, education policies, and structural reforms.

The current cyclical upswing should not obscure the widespread and persistent productivity slowdown we have seen across advanced, emerging, and low-income countries alike since the Global Crisis. Despite all the talk and hopes of a productivity revival driven by ongoing technological breakthroughs, between the 2000–2007 and 2011–2016 periods, total factor productivity (TFP) growth dropped from 1 to 0.3% in advanced economies and from 2.8 to 1.3% in emerging and developing economies.[1] These numbers leave out the 2008–10 crisis period, during which productivity naturally plummeted. For advanced and low-income countries, the sharp deceleration in TFP occurred on the back of a slowdown that had already started prior to the crisis.

If sustained, low productivity growth would have profound, adverse implications for progress in global living standards, the sustainability of private and public debts, and the space for macroeconomic policies to respond to future shocks. In conditions of high income inequality, low growth also undermines social cohesion, with adverse political repercussions.

At least some of the post-crisis productivity slowdown seems to be rooted in the crisis itself, but we still fail to grasp fully what precise features of the crisis and its aftermath are most relevant. Was it the financial shock itself? The exceptional financial and monetary policy measures that followed? Both? Other factors? And does the answer to this question imply different policy prescriptions, including for monetary policies?

With these questions in mind, this column addresses three key issues:

1. What are the main drivers of the productivity slowdown in advanced economies?

2. Has monetary policy played a role in the productivity slowdown?

3. What are the implications, if any, for the conduct of monetary and other policies going forward?

The discussion is restricted to advanced economies because the prospects for emerging market and low-income countries are diverse and for some, weakness in commodity export prices plays a dominant role. To preview the conclusions, we see three key messages:

- While the productivity slowdown is largely a secular phenomenon, the financial crisis amplified it by creating 'productivity hysteresis' though long-lived adverse effects on

credit conditions, aggregate demand, economic uncertainty, and investment. The good news is that these crisis-related headwinds may now be gradually dissipating, including in Europe where they had been most powerful. The bad news is that the underlying structural headwinds remain, making it challenging to return to even the modest productivity growth rates of the pre-crisis period.

- Monetary policies have probably had unintended side effects on the recent productivity growth experience, but the magnitude and sign of these are unclear – in fact, these unintended consequences may well add up to a positive overall effect. This ambiguity reflects the multiple, often conflicting channels through which such policies may impact productivity.
- Even *if* certain features of monetary policies, such as very low interest rates maintained for long periods, turn out to have exerted a drag on productivity growth, this finding would not be enough on its own to show that central banks should alter the courses of their monetary policies. Such negative side effects must be weighed against the other, beneficial effects of an accommodative monetary stance in a prolonged downturn. The arguments involved bear similarities to the terms of the debate over whether financial stability risks from ultra-accommodative monetary policies provide a sufficient case for earlier normalisation. If financial factors are pulling down productivity growth, the best approach is to address those financial factors directly – in the case of Europe, through measures to strengthen banking systems and facilitate corporate restructuring – rather than to normalise monetary policy prematurely.

What are the main drivers of the productivity slowdown?

The productivity slowdown is undoubtedly, and mainly, a secular phenomenon that predated the crisis. The bulk of the literature has understandably focused upon this fact. Basically, beyond old and new discussions about productivity growth (mis)measurement, there has been a growing debate about whether innovation, technological diffusion, or both have fallen, and if so, what might underlie their deterioration.

At the same time, the abruptness and magnitude of the productivity slowdown after the crisis cautions against blaming low productivity growth solely on such slow-moving forces, and calls for complementary, crisis-related explanations.

Our recent work at the IMF shows that, as in previous deep recessions, the aftermath of the Global Crisis has displayed productivity hysteresis for at least three interrelated reasons (Adler et al. 2017):

- Weak corporate balance sheets, combined with persistently tight credit conditions for a large fraction of firms, have undermined TFP growth, partly by constraining investment in intangible assets by distressed firms (Duval et al. 2017, Dell'Ariccia et al. 2017).
- Despite extraordinary policy stimulus, aggregate demand remained sluggish for close to a decade, inhibiting investment. This in turn can weaken the pace of technological change by discouraging investment in new equipment, and can trigger an adverse feedback loop under which weak demand and weak supply feed each other.

- Elevated economic and policy uncertainty plus higher risk aversion in the wake of the crisis may have further attenuated TFP growth, partly by tilting investment away from higher-risk, higher-return projects.

Note that all three crisis legacies have been less severe in the US than in Europe, where the clean-up of bank and corporate balance sheets has been slower, slack more persistent, and policy uncertainty more elevated, partly reflecting doubts raised about the future of the Eurozone during the sovereign debt crisis. Thus, it is no coincidence that the post-crisis productivity slowdown has been sharper in Europe than in the US, where it pre-dates – and was in fact not aggravated by – the crisis (Fernald et al. 2017).

In some advanced countries, particularly in some parts of Europe, the Global Crisis might have also led weak banks to gamble for a recovery by 'evergreening' loans to weak firms and delaying the recognition of loan losses and the need to raise capital. Together, these forces may have fostered the emergence of so-called 'zombie firms' – firms with persistently weak profitability or even losses – reminiscent of Japan's experience in the 1990s (Caballero et al. 2008). There has indeed been evidence of a rising share of zombie firms, with adverse effects on the allocation of capital and investment and productivity growth of non-zombie firms, between the late 2000s and the mid-2010s (Adalet McGowan et al. 2017).

Has accommodative monetary policy played a role?

What has been the role of monetary policies throughout the post-crisis period? The aggressive monetary policy response to the crisis arguably supported productivity by easing credit conditions and softening the blow to investment, mitigating hysteresis. Monetary accommodation using conventional and unconventional tools facilitated access to credit by viable but vulnerable firms, helping them to finance their working capital or to make productivity-enhancing investments in intangibles. And more broadly, monetary ease alleviated an even larger drop in aggregate demand and investment that might have further hurt capital-embodied technological progress.

There may, however, be other, offsetting channels. One open question is whether the sustained accommodative monetary policy stance, where policy rates have been very low for almost a decade, has weakened productivity growth through other mechanisms, not least by increasing the misallocation of capital across firms or industries. In theory, a decline in the interest rate renders more projects profitable and incentivises *all* firms to invest more. But in the presence of financial market imperfections, only the non-credit-constrained firms will be able to respond to lower borrowing costs and increase their capital stocks to the desired levels, while the credit-constrained ones will be able to do so only gradually as they accumulate sufficient internal funds. This asymmetry can result in too much capital being allocated to the former and too little to the latter, leading to a rising dispersion in the marginal product of capital across firms (Midrigan and Xu 2014). Such rising dispersion was indeed observed in many southern European countries already prior to the crisis, consistent with the sharp decline of interest rates they experienced after the inception of the Economic and Monetary Union, and the greater pervasiveness of credit constraints facing firms in these economies (Gopinath et al. 2017). A related concern, for

the post-crisis period, is that easy monetary conditions may have amplified the zombie firm phenomenon by making it easier for weak banks to evergreen loans and for weak firms to borrow their way into staying alive, with potential implications not only for aggregate productivity but also for financial stability.

Moreover, elevated asset prices, notably of housing, may draw resources into sectors like construction where TFP growth is slow. While this channel may have been at work in some Eurozone members during the pre-crisis credit boom (Giavazzi and Spaventa 2011), its more general applicability is less clear.

While this area is an important and unsettled one for research, at least two observations cast doubt on the proposition that a monetary policy-driven rise in capital misallocation has been a major drag on productivity growth for advanced economies as a group:

- First, there does not appear to be a widespread rise in capital misallocation across advanced economies.[2] In many northern European countries, for example, simple measures of capital misallocation based on the dispersion in marginal products of capital across firms typically show no noticeable increase since the crisis, and a rather mixed picture prior to the crisis (Gopinath et al. 2017, Gamberoni et al. 2016). Likewise, there does not seem to be a broad-based rise in the share of capital sunk in zombie firms. This cross-country heterogeneity in capital misallocation trends is not suggestive of an important common driver like ECB monetary policy. Instead, country-specific causes interacting with the cycle and policies are more likely – for example, insufficient consolidation of bank balance sheets combined with weak bank and corporate insolvency regimes may enable misallocation to linger for longer under easier credit conditions. And even in Southern Europe, it may well be that the share of zombie firms is now receding thanks to the economic recovery – we cannot know for sure for lack of comprehensive firm-level data covering the most recent years. But the recovery, in turn, surely owes much to continued monetary accommodation.
- Second, partly related to the last point, the potential productivity gains from resolving zombie firms and fully reallocating their resources to non-zombie firms may not be that large, at least in comparison to the cumulative productivity loss we have seen since the crisis. For example, a very careful recent OECD study puts the potential one-off TFP level gain at about 0.6%, applying a broad definition of zombie firms for the year 2013 – in the immediate aftermath of the peak of the Eurozone Crisis – and assuming a costless reallocation of resources (Adalet McGowan et al. 2017). This study does not factor in all the relevant channels through which zombie firms might weaken aggregate productivity.[3] Still, to put numbers in perspective, 0.6% is about one year of the TFP losses that advanced economies have been incurring each year since 2010 relative to the pre-crisis trend. And of course, it remains to be seen what share of this potential gain could be reaped through monetary policy action alone.

What are the implications for monetary and other policies going forward?

This brings us to the issue of whether the possible side effects of ultra-accommodative monetary policy on productivity argue for an earlier normalisation than would be the case otherwise. Based on the current state of our knowledge, we believe the answer is no for three reasons:

- The optimal policy response to any misallocation driven by market and policy failures is to directly address the underlying failures. Regarding zombie lending to zombie firms in parts of Europe, for example, this approach would mean more robust banking sector supervision with enhanced loan loss provisioning; an improved bank resolution regime to enable a speedier and less disruptive consolidation of weak banks; deeper and more developed distressed debt markets; and the reform of insolvency regimes to help facilitate corporate restructuring (Aiyar et al. 2015). Further progress on these fronts beyond what has already been achieved would encourage fresh corporate investment and improve the allocation of capital, funnelling it away from low-productivity firms and into the hands of young and vibrant companies. In Japan, for example, capital injections into banks in the late 1990s were 'too little too late,' and it was not until banks were forced to recognise losses that the zombie firm problem started receding.
- Even if such instruments cannot be fully deployed or remain imperfect, it is unclear whether (a complementary) monetary tightening would pass a cost-benefit test. Such tightening would need to be rather significant to force the restructuring or exit of weak firms. As we have argued, the implied productivity gains would be unclear, and typically small – including for the Eurozone as a whole. The costs, instead, are clear and large – they would include sizable output and job losses, delayed prospects of bringing inflation back to target and, therefore, weaker central bank credibility. A simple back-of-the-envelope calculation by Bank of England Chief Economist Andy Haldane sums it up well. He estimates that had the Bank's policy rate been maintained at 4.25% rather than 0.25%, productivity levels might have been 1 to 2% higher by 2014- leaving aside possible sources of losses such as from weaker investment in both tangible and intangible capital – but there would have been 1.5 million fewer jobs, representing about 5% of total UK employment (Haldane 2017).
- Finally, even if one were to conclude that monetary policy should take account of productivity side-effects, it is quite unclear how one might operationalise such an approach in quantitative terms. That uncertainty would raise the risk of significant volatility in inflation expectations.

There is a parallel between this discussion and the debate over whether financial stability risks from ultra-accommodative monetary policy warrant 'leaning against the wind.' Here again, based on our current knowledge, the case for leaning against the wind seems weak in most circumstances, for familiar reasons. There are better targeted policy tools to address financial stability risks (both micro and macroprudential policies) and the degree of tightening required would likely be significant, with uncertain gains in terms of a reduced likelihood of a future crisis, but an immediate cost of large output and job losses (IMF 2015).

The current cyclical upswing presents an ideal opportunity for policymakers to consider how best to support future prosperity. There is a wide range of actions policymakers in advanced economies should be taking to help revive productivity growth – from addressing the remaining legacies of the crisis through innovation and education policies to structural reforms. Premature monetary policy normalisation is not among them.

Authors' note: The questions this column discusses are the subject of a conference co-organised with the BIS and the OECD on 10 and 11 January 2018. The views expressed here are those of the authors and should not be attributed to other conference participants, the International Monetary Fund, its management, or its executive board.

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Endnotes

[1] Calculations using Penn World Table version 9.0. Other sources yield qualitatively similar patterns.

[2] This observation need not imply, of course, that the level of capital misallocation was small to start with. Indeed, a voluminous literature has documented long-standing capital misallocation in many economies and explored its structural drivers, including, for example, market imperfections and policy distortions (for a review, see e.g. Restuccia and Rogerson 2017).

[3] One possibly significant omitted channel is the hard-to-measure adverse impact of the pervasiveness of zombie firms on the entry of young innovative firms and the associated pressure on incumbent firms to restructure and innovate.