On the trade-off between growth and stability: The role of financial markets

Alexander Popov and Frank Smets

In the two decades leading to the Great Recession, academics had mostly converged on Joseph Schumpeter’s view that well-developed financial systems play a crucial role in stimulating economic growth. A host of academic papers had concluded that deeper domestic financial markets improve economic efficiency, lead to a better allocation of productive capital, and increase long-term economic growth. In fact, the body of empirical evidence linking causally and positively the depth of financial markets to growth was growing so rapidly that in 2003, in a discussion of a survey on the subject, one author was prompted to conclude that “[…] In 1993 many people doubted that there was a relation between finance and growth; now very few do.”

Others were cautioning against excessive optimism, arguing that more dynamic financial industries and more integrated financial markets are associated with more frequent financial shocks and higher macroeconomic risk. For example, the perception has been strong for quite a while that foreign capital increases volatility both in the financial markets and in the real economy. Needless to say, the financial crisis of 2007-2009 and the global collapse in economic activity it caused reinforced this view.

Are these two views compatible? In this note, we will argue that the answer is yes; that there is a trade-off between growth and risk and that vibrant financial markets may tend to exacerbate this trade-off. In this context, the goal of financial regulation and macro-prudential policies must be to reduce systemic risk without eliminating the financial sector’s contribution to long-term economic growth. This requires an understanding of which features of the financial system are conducive to economic growth and which ones increase its fragility and the probability of a costly financial crisis.

Financial markets and economic growth
Early evidence on the effect of finance on growth suggested that a country which in 1960 increased the size of its financial sector (measured as the ratio of liquid liabilities to GDP) from the mean of the slowest growing to the mean of the fastest growing quartile of countries would have increased its average growth rate between 1960 and 1990 by almost 1 percent per year.\textsuperscript{6} Financial market liberalization – in particular, equity market liberalization - has also been found to raise long term growth by about 1% per year.\textsuperscript{7}

Where does this effect come from? In general, financial markets provide valuable services, like channelling resources from people with money and no ideas to people with ideas and no money, screening out unproductive projects, and actively monitoring and providing value-enhancing services to productive projects. As a result, deep and efficient financial markets improve economic performance both through raising the level of growth\textsuperscript{8} and through a more efficient allocation of productive capital\textsuperscript{9}, ultimately generating benefits for the society as a whole. Importantly, evidence from emerging markets suggests that for these effects to be realised, a country needs to have a reasonably large financial sector, otherwise the contribution of finance to economic growth can be limited.\textsuperscript{10} The positive effects of financial openness also accumulate only when the domestic financial system is relatively developed.

That larger financial markets are associated with higher economic efficiency is not a feature of emerging markets only, however.\textsuperscript{11} Consider the long-standing point in academic and policy discussion on the differences in average GDP growth between the U.S. and continental Europe in the 1990s. It has been suggested that deeper financial markets across the Atlantic are to a large extent responsible for the higher labour productivity growth and the higher rate of new business creation in the U.S.

The divide is especially visible when it comes to the financing of innovative ideas and the commercialization of science. The much larger US venture capital industry has been credited over the years with assisting the emergence of whole new industries and of such innovative corporate giants like Microsoft, Cisco, and Google (to name just a few). Strikingly, out of the 500 largest companies in the world, there are 26 U.S. ones
which have been born after 1975, compared with only 3 European ones. Empirical research has found that the involvement of venture capitalists with micro projects does result in more innovation through higher survival rates of highly innovative but highly risky projects. For example, while the ratio of venture capital to industrial R&D averaged less than 3% between 1983 and 1992, venture capital accounted for 8% of industrial innovation over that period. More recent investigations with data up to 2008 have broadly confirmed this result. It has also been argued that a substantial portion of the variation in patenting rates across European countries can be explained by differences in the size and efficiency of their venture capital industries.

Financial markets and macroeconomic risk

In order to be able to claim that finance has a Pareto-improving effect, one also needs to know its effect on the variability of the growth process. Academics used to worry much less about the contribution of finance to macroeconomic volatility, because it is commonly believed that the welfare benefits of removing all of the business cycle volatility are small, and so, by extension, the welfare costs of higher volatility are negligible. Past studies that found evidence of a positive contribution of finance to aggregate volatility usually included the caveat that the negative effect on welfare from higher volatility is most probably fully outweighed by its contribution to growth.

The problem with this reasoning is that a measure of macroeconomic volatility does a poor job in capturing the incidence of large, abrupt, and rare crises. For example, the economies of Argentina and Panama have been similar in terms of aggregate output growth volatility in the past two decades. However, unlike Panama, Argentina experienced one large crisis during this period, resulting in a 71% output loss over four years (computed as the cumulative difference between actual and trend real GDP and expressed as a percentage of trend real GDP). Such an economic disaster can have major implications for welfare. Some academics have recently estimated within a class of models that replicate how asset markets price consumption uncertainty that individuals would be willing to pay very high premia (of the order of 20 percent of GDP each year) in exchange for eliminating all chances for large macroeconomic contractions.
Therefore, it is essential to assess the contribution of finance not just to business cycle volatility, but also to the probability of rare economic catastrophes. Is there such a contribution? An influential study by Kaminsky and Reinhart (1999) provided early evidence to that end by demonstrating that crises are usually preceded by rapid growth in financial aggregates. Various studies using similar tools from the “Early Warning Systems” toolkit have documented that the recent financial crisis was also preceded by out-of-trend growth in various financial aggregates.\textsuperscript{20} Popov (2011) recently estimated the effect of finance on growth and on the probability of rare disasters in a unified empirical framework. The resulting evidence suggests that financial openness, broadly speaking, increases simultaneously level growth as well as the left-skewness of the distribution of output growth.\textsuperscript{21} This implies that both the finance-and-growth literature and the literature that has found a positive effect of finance on crises may be right – growth may on average have picked up thanks to deep and integrated financial markets, but the probability of large economic downturns has increased too.

The recent crisis also serves as a stark reminder of the contribution of the banking sector to systemic risk. While banks provide an important support to a country’s economy by transforming savings into productive investment, the maturity transformation each individual bank performs makes it inherently fragile, the (often opaque) interconnectedness of individual banks makes the whole banking sector prone to runs and panic, and the too-big-to-fail issue tends to exacerbate banks’ moral hazard. In that vein, it is useful to compare the liquidity spirals, asset fire sales, interbank market freezes, and general deleveraging that we witnessed in 2007-08 with the much more orderly burst of the dot-com bubble. One simple reason for this difference is that the credit boom of the 2000s was driven by debt finance, while the dot-com bubble was mostly driven by an expansion in equity ownership, and equity is not held in levered portfolios.

\textit{What to do? The role of financial regulation and macroprudential policies}

The welfare implications of the combined phenomena of higher growth and risk are still to be understood. Schumpeter’s view was that cycles are efficient: Because
productive ideas do not arrive at a constant rate, economic growth tends to be associated with a boom phase, followed by a recession that ensures that unproductive projects are cleansed from the economy. In contrast, Minsky – and also Kindleberger – contended that finance tends to cause an inefficient boom-bust cycle: Good times give rise to speculative investor euphoria and excessive debt and leverage which ultimately leads to a costly financial crisis.22

In view of these arguments, the policy-maker’s objective becomes one of distinguishing “good” from “bad” booms, and of reducing the contribution of financial markets to tail risk without eliminating their contribution to growth. Ideally, the macro-prudential tools employed would be such as to allow policy makers to forcefully “lean against the wind” during costly booms driven by excessive debt and characterized by no fundamental contribution to long-term growth (more like the mid-2000s) while reacting more cautiously during low-cost booms driven by equity finance and characterized by a wave of new technologies (more like the dot-com bubble). Similarly, the regulatory response should be targeted to the sources of market failures and externalities in the financial sector and preserve its positive contribution to growth.

1 The views expressed are our own and not necessarily those of the ECB.
5 This trade-off is of all times. See, for example, Trichet’s account of the Banque de France’s gold lending to the Bank of England in the 1820s when London was going through various booms and busts but was also in the throes of an industrial revolution. See Davies, H., and D. Green, 2010, Banking on the future: The fall and rise of central banking, Princeton University Press: Princeton, NJ, pp. 281-282.
18 Laeven, L., and F. Valencia, 2010, Resolution of banking crises: The good, the bad, and the ugly. IMF working paper 10/146
20 See, for example, Alessi and Detken, 2009. Real time early warning indicators for costly asset price boom/bust cycles - a role for global liquidity. ECB Working Paper Series 1039