Corporate sector vulnerabilities during the Covid-19 outbreak: assessment and policy responses

by Lilas Demmou, OECD Economics Department, Guido Franco, OECD Economics Department, Sara Calligaris, OECD Directorate for Science, Technology & Innovation, and Dennis Dlugosch, OECD Economics Department

The health crisis caused by the COVID-19 outbreak has led public authorities to take unprecedented measures to contain the propagation of the virus. Administrative business shutdowns, quarantines and restrictions on mobility and social contacts have brought large parts of our economies almost to a standstill. Sales across many sectors have plummeted and are beginning to recover only slowly. Nevertheless, financial commitments with respect to suppliers, employees, lenders and investors remain, depleting liquidity buffers of firms.

The liquidity crisis may turn into a global corporate solvency crisis. With much less or no incoming revenues for an extended period of time and fewer options to deal with this shortfall, the long-term viability of firms has been impaired, and firm voluntary closure and bankruptcies may follow. In turn, a corporate solvency crisis could have serious long-term negative effects on our economies by dragging down employment, productivity, growth and well-being. Mindful of these risks, governments have adopted a range of emergency measures aimed at supporting firms' liquidity. Aside from monetary measures taken by central banks, fiscal interventions have included

direct and indirect financing of the wage bill, tax deferrals, debt moratoria and extension of state loan guarantees.

An issue note published in the latest issue of the *OECD Economic Outlook* evaluates the risk of a widespread liquidity crisis and discusses the pros and cons of different kinds of public support measures. Building on the methodology developed by Schivardi and Romano (2020) and on illustrative assumptions regarding the evolution of sales and costs during the epidemic, a simple accounting framework is used to calculate the percentage of firms that become illiquid month by month following the introduction of confinement measures. The key role of policies to avoid massive unnecessary bankruptcies is emphasised by comparing the share of firms that would turn illiquid under two scenarios: one where there is massive policy support for firms and one where there is no such support.

The risk of liquidity shortages is high for a large portion of healthy firms

The analysis relies on 2018 firm-level financial data, obtained from the latest vintage of the Orbis dataset (provided by Bureau Van Dijk), and covers a sample of almost one million firms located in 14 European countries, operating in both manufacturing and non-financial services sectors.

The economic shock from measures of physical distancing on firms' liquidity is modelled as a change in firms' operating cash flow, resulting from the decline in sales and from firms' limited ability to fully adjust their operating expenses. Next, the liquidity available to each firm is calculated as

the sum of the liquidity buffer held at the beginning of each month and the shock-adjusted cash-flow.

Measures on distancing and mobility restrictions have heterogeneous effects on different sectors. Therefore, we assume the decline in activity to be different across sectors, but identical across countries; for a set of severely hit sectors, the decline in output ranges between 50% and 100% of sales, while it is conservatively set at 15% for the other non-financial sectors. In line with the projections published in the Economic Outlook, we consider two alternative scenarios with respect to the dynamic of the recovery:

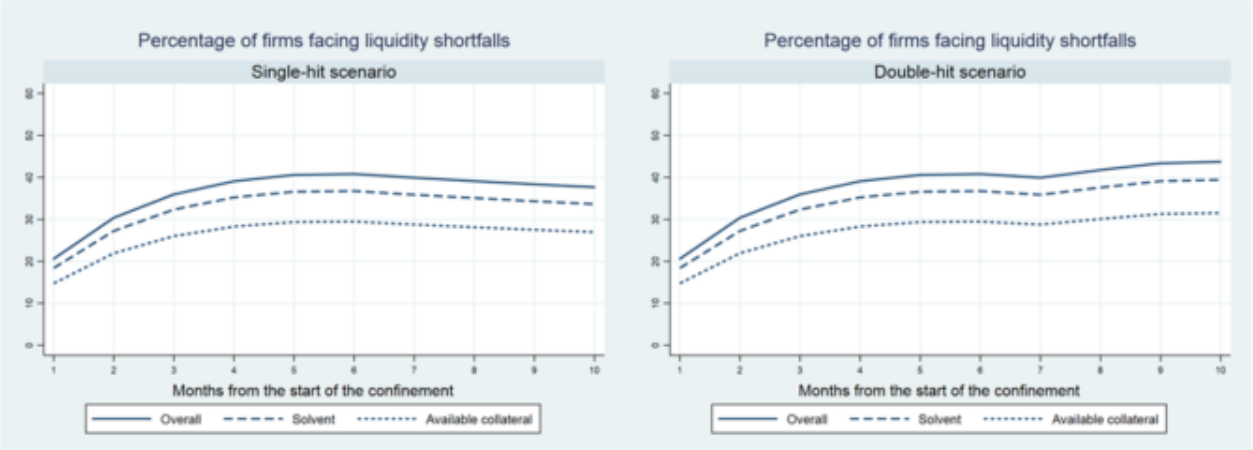
- A "single-hit" scenario, whereby a sharp drop in activity lasting two months is followed by a four-month progressive recovery, with a return to pre-crisis activity levels seven months after the start of the epidemic.
- A "double-hit" scenario, which overlaps with the single-hit scenario for the first seven months, but then assumes a second outbreak from the eight month onwards.

The solid lines in the left and right panels of Figure 1 report the main results of the exercise: in the absence of government intervention, 20% of firms in the sample would likely run out of liquidity after one month and 30% after two months. As the economy is expected to recover only slowly after the two months of collapse in activity, the percentage of firms facing liquidity shortfalls would reach 40% after six months, and starts to decline from the seventh month onwards, when the economy returns to the pre-crisis level of production ("single hit" scenario). In the case of a second episode of widespread confinement, this share would increase instead to 45% ("double-hit" scenario).

The analysis also shows that firms facing a high risk of experiencing liquidity shortages are mostly profitable and viable companies (Figure 1, dashed lines). At the same time, even though solvent, a sizeable share of these firms might face difficulties in accessing new bank financing to bridge a shortfall in liquidity, as they lack the collateral to tap into additional debt. (Figure 1, dotted lines).

The exercise is based on several assumptions, which calls for cautious interpretations. Even so, it underlines the merit of swift and decisive public intervention to safeguard companies and avoid potential bankruptcies of otherwise healthy companies. This intervention is crucial to avoid that the temporary shock implied by the COVID-19 crisis permanently scars the corporate landscape, with serious consequences for the shape of the recovery and long-run growth prospects.

Figure 1: Liquidity shortfalls without government intervention



Note: The figure shows the percentage of firms facing liquidity shortfalls in the single-hit (left panel) and the double-hit (right panel) scenarios. In particular, it reports: the overall percentage of firms turning illiquid (solid line); the percentage of firms facing liquidity shortages but still potentially solvent, i.e., if the value of their assets is larger than the value of the liabilities (dashed line); the percentage of firms facing liquidity shortages but having collateral to pledge to obtain additional bank financing, i.e., if the value of their fixed assets is larger than the value of their non-current liabilities (dotted line).

Source: OECD calculations based on Orbis® data.

Public policies to reduce liquidity shortages and curb bankruptcy risk

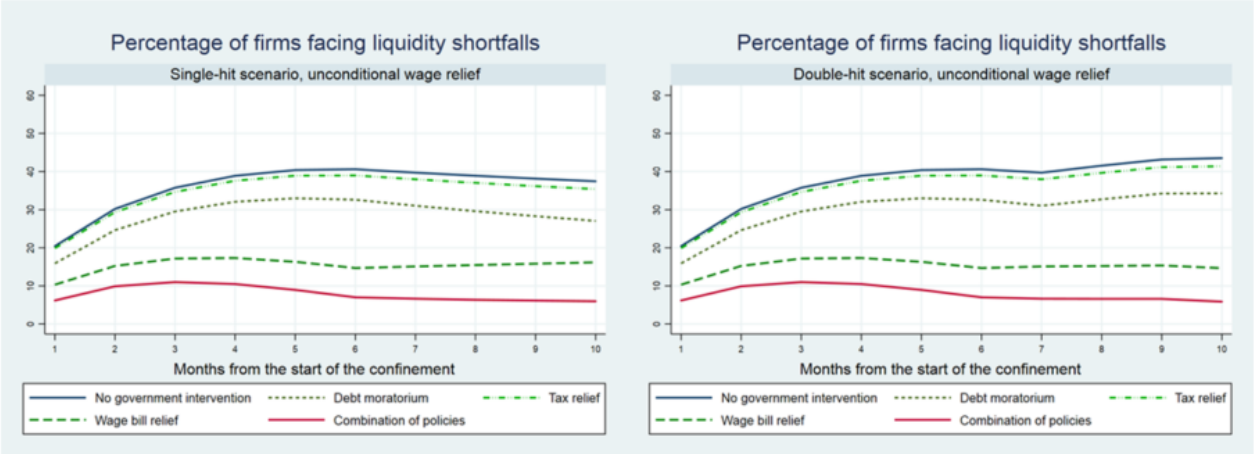
Countries have already introduced a wide range of measures to help firms to cope with the disruptions associated with COVID-19. We used our accounting model also to illustrate the expected impact of stylised policy interventions in three areas:

- *Deferral of taxes.* To support business during the epidemic, several countries have introduced tax deferrals. We model the tax deferral as the moratorium of the (hypothetical) monthly tax payments.
- *Financial support for debt repayment.* A large number of countries have also established legislative frameworks that temporarily allow firms to postpone their debt payments or alternatively, that offer State guarantees to facilitate access to short-term debt facilities. The potential impact of such policies is modelled as a moratorium on short-term debt.
- *Temporary support to wage payments.* A critical response to avoid widespread liquidity shortfalls consists of relaxing firms' financial commitments vis-à-vis their employees. Schemes such as a shortening of working time, wage subsidies, temporary lay-offs and sick leave have been introduced across countries, though in different combinations. All these measures reduce the wage bill firms have to pay. The labour support is modelled as an unconditional reduction of the wage bill by 80% in all sectors.

Figure 2 illustrates the extent to which each measure curbs the risk of a liquidity crisis compared to the no-policy

intervention situation. Tax deferral has the lowest impact on firms' liquidity positions, followed by debt moratorium policies. Subsidies to the wage bill seem to be the most powerful measure (yet potentially costly), in line with the fact that wages and salaries are often the most important component of operating expenses. Adding up the three different measures, public intervention after two months, for instance, would decrease the number of firms running out of liquidity from 30% to 10%.

Figure 2: The impact of policies



Note: The figure shows the percentage of firms facing liquidity shortfalls: in absence of policy intervention (blue solid line); in case of deferral of tax (green dash-dotted line); in case of a moratorium on short-term debt (green dotted line); in case of temporary support to wage payments, assuming an unconditional reduction of the wage bill by 80% in all sectors (green dashed line); a combination of all the previous measures (red solid line).

Source: OECD calculations based on Orbis® data.

Challenges in the design of policies

Public intervention on such a massive scale raises several challenges related to the design of policies. In particular:

- Country-specific dimensions. Country-specific institutional settings may shape the extent and the efficiency of the policy response. Given the importance

of labour market policies highlighted in the note, it is likely that countries with already well-developed labour market support schemes are able to provide a quick response with less distortive effects.

- Conditionality. In some countries, loans forbearance and wage subsidies are conditioned on the actual reduction in payroll, with the requirement to be used to cover fixed costs only or to rehire fired employees after the crisis. The design of transfers and subsidized loans to corporations should ensure that firms preserve jobs when possible and do not divert resources towards exclusively private interests (e.g., to boost CEO compensation or dividend payments).
- Short-term versus medium-term policy answer. Given the need of an urgent policy response during the so-called "phase one" of the crisis, policy has often not been particularly targeted in the short term. Going forward, short-term, cross-cutting policies might need to be better refined to ensure that public support does not contribute to resources misallocation. Moreover, policies will also need to account for the heterogeneous impact of the shock, as firms will not be on the same foot to face the crisis other than for liquidity reasons when the activity will slightly recover in the medium-term (see also Gopinath, 2020).
- New normal. The extent to which the COVID-19 crisis will disrupt the economies is still uncertain. In European countries a large set of policies, in particular in the labour market, is tailored on the principle to protect the pre-crisis allocation of resources. In other countries, like in the U.S., the adjustment largely hinges on payroll reduction via layoffs. Their relative efficiency during the recovery and beyond may be related to whether economies will structurally change coming out of the COVID-19 crisis.

Notes:
1. The detailed analysis in the Economic Outlook includes also a "prolonged confinement" scenario, which is agnostic on the length of the confinement and avoids modelling the recovery.
2. The issue note published in the Economic Outlook also provides the outcome of an alternative labour support, whose generosity is conditional on the sectoral size of the shock. This option, while of course being less costly from a fiscal perspective, is found to reduce less the risk of a liquidity crisis.

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Green swans: climate change risks, central banking and financial stability

by Luiz Awazu Pereira da Silva, Bank of International Settlements, drafted by Shashwat Koirala, OECD Economics Department

The Chief Economist Talks are part of the OECD's high-level distinguished speaker series in which global economic leaders, top thinkers and decision makers are invited to discuss their perspectives on the world economy with the OECD Chief Economist. The talks aim to foster learning and inspiration and provoke meaningful discussions. Previous speakers have included: Claudio Borio (BIS), Peter Praet (ECB), Maurice Obstfeld (IMF), Penny Goldberg (World Bank), Debora Revoltella (EIB), Hal Varian (Google), Sergei Guriev (EBRD), Stefanie Stantcheva (Harvard), Emmanuel Moulin (Ministry of Economy and Finance, France), Philipp Steinberg (Ministry of Economic Affairs and Energy, Germany), and Jean Pisani-Ferry and George Papakonstantinou (EUI). Participation in these events are by invitation only and are aimed at OECD staff and the OECD Ambassadors and delegations. They are not open to the press.

On April 23, 2020, the OECD hosted Luiz Awazu Pereira da Silva, Deputy General Manager, Bank of International Settlements, to discuss his work on the challenges posed by climate change to financial stability, drawing on his co-authored book, "The green swan: Central banking and financial

stability in the age of climate change". This blog presents key takeaways from his talk.

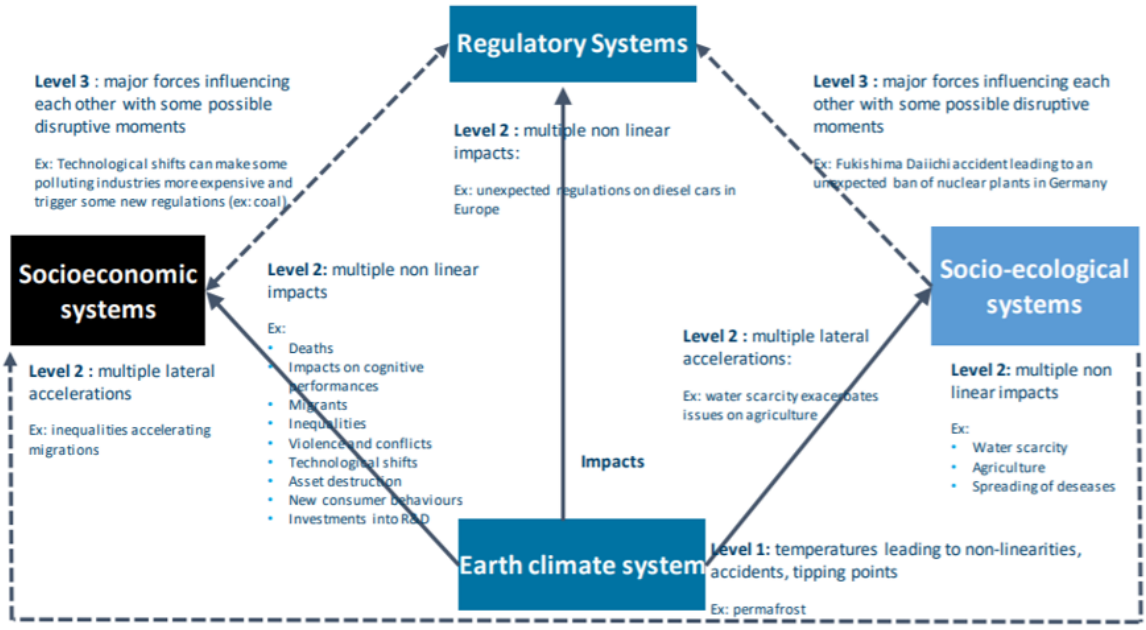
The unprecedented challenge posed by climate change is well documented. The rising concentration of greenhouse gases in the atmosphere has profound environmental impacts (e.g. rising sea levels, extreme temperature events, etc.) that threaten the delicate balance of the planet's natural systems. The human and societal consequences of the climate emergency are also massive, as environmental damages can exacerbate inequalities, food and water insecurity, and conflicts. **Accounting for climate-related risks is, thus, indispensable for building resilient socio-economic-ecological systems**.

There is an emerging recognition among central banks and financial regulators that climate-related risks are also a source of price and financial instability, and that there is a need to safeguard the financial system against these risks. This is complicated by a paradoxical tension between physical climate risks and transition risks. For example, on one hand, inaction towards the climate crisis means that climate-related accidents become more frequent and severe, threatening socio-economic systems and financial stability (i.e. physical risks). On the other hand, a rapid and aggressive decarbonisation effort can lead to sudden asset repricing (i.e. transition risks). This tension epitomises the fact that climate-related risks are transmitted through complex and inter-connected channels and have cascade effects. Treating these risks requires a departure from status quo thinking, as outlined by the following four key ideas.

First, while similar in some respects to "black swans"– highly unexpected events with severe far-reaching consequences (e.g. 2008 U.S. housing market crash) that can be best explained ex

post – climate-related risks are distinct. They are not tail-risk events; scientific evidence suggests that climate-related shocks are virtually certain to occur, though the exact timing of these events is uncertain. Since the climate crisis poses an existential threat to humanity, climate-related risks are also more catastrophic than traditional systemic financial risks. Finally, as alluded to earlier, climate-related risks are much more complex. They are propagated non-linearly with destructive feedback loops and can cascade across sectors, countries and systems (see Figure 1 for a representation of chain reactions stemming from climate-related risks). Taking inspiration from the "black swan" moniker, **climate-related events are termed "green swans"**.

Figure 1. Chain reactions stemming from climate risks



Source: (Bolton, Despres, Pereira da Silva, Samana, & Svartzman, 2020), *The green swan: Central banking and financial stability in the age of climate change*, https://www.bis.org/publ/othp31.pdf

Second, a methodological shift in macroeconomic-climate modelling is required to better understand green swan events, and how they emerge, accumulate and cascade. Backward-looking and deterministic approaches (e.g. vector autoregressive models) that extrapolate historical trends do not suffice in

capturing the complexity and radical uncertainty of climate-risks. Even current scenario-based forward-looking risks assessment mechanisms are unable to completely incorporate the broad range of chain-reactions associated with climate change. This, in tandem with the fact that these approaches lack granularity and there is uncertainty regarding approaches to climate-change mitigation, means that **the current paradigm of models cannot fully elucidate the potential macroeconomic, sectoral and firm-level repercussions of climate change.** Thus, an exploration of alternative approaches is needed, such as non-equilibrium models (instead of more sophisticated dynamic stochastic general equilibrium models), sensitivity analysis with more complex scenarios, and studies specific to countries, sectors and firms.

Third, given the intrinsic complexity of climate change, international co-ordination and co-operation is vital. While central banks play a critical role in mitigating climate-related risks, they do not possess a silver bullet to do so by themselves. Central banks and financial regulators have a role to play in identifying and managing climate-risks (e.g. integrating risks into prudential regulation), internalising externalities (e.g. incorporating environmental, social and governance considerations into their own portfolios), and enabling structural low-carbon transitions (e.g. reforming the international monetary and financial system). Nevertheless, many tools, such as green fiscal policy and carbon pricing, fall outside their purview, and uncoordinated actions from central banks would be insufficient and could potentially have unintended consequences. A systems-wide green transition necessitates buy-in and action from all stakeholders (i.e. governments, private sector, and civil society), and central banks need to contribute to coordinate on climate change by being more proactive on this front while continuing to fulfil their financial stability mandate.

Fourth, it is important to acknowledge that green swans have a tremendous negative redistributive impact, within and between countries. Not only do the physical risks stemming from climate change predominately affect lower-income countries, but also the costs of adaptation to climate-change (e.g. shift away from carbon-intensive industries) are higher for poorer households. **This means that addressing climate change requires scaled-up mechanisms for redistribution** and a redesign of societal safety nets and efforts to finance the green transition of low-income countries. Otherwise, a society-wide acceptance of actions on climate change will prove elusive.

The ecological and environmental stability of the planet is a prerequisite for price and financial stability. So, for central banks to fulfil their central mandate, they have an important role in contributing to a systems-wide climate-change effort. In a nutshell, this involves identifying and communicating the risks ahead, calling for bold actions from all stakeholders to ensure the resilience of the earth's socio-ecological systems, and helping manage the risks within the bounds of their mandate.

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Getting the most out of Fintech in Estonia

By Caroline Klein, Estonia Desk, OECD Economics Department and Olena Havrylchyk, Professor of Economics at the University of Paris 1 Panthéon Sorbonne

Pioneers of the Estonian Fintech need a fair level playing field. Estonia, at the forefront of alternative finance should seize the moment to set framework conditions right.

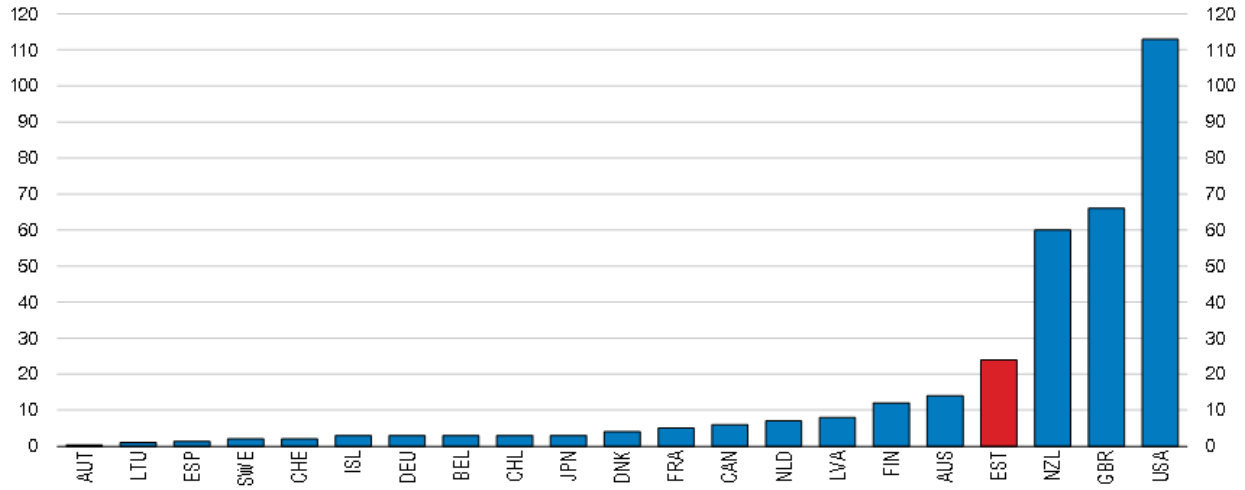
Estonia is a frontrunner in alternative finance and a host to some of the most innovative Fintech start-ups in the OECD – i.e. start-ups using technology and technology-facilitated new business models in the provision of financial services. Some Fintech companies based or born in Estonia have a world-wide reach. These include one of the largest European peer-to-peer lending platforms for unsecured consumer loans, the first worldwide secondary market for venture capital and a platform that allows individuals and small businesses to transfer money between international accounts at much lower cost than traditional banks.

For some, Fintech will revolutionize the traditional banking industry as we know it today, but for the moment, the platforms finance mostly risky projects. At one end of the platform, there are retail investors who choose whom they would like to finance. On the other end, there are SMEs and start-ups that do not go to banks, often because they cannot provide standard guarantees. The platforms generate profits from the origination and servicing fees that they charge to funders and fundraisers. The investors bear all investment risks, providing a natural 'bail-in' mechanism. Equity crowdfunding platforms can complement angel- and venture-capital, by allowing individuals to invest in start-ups and buy shares which are not listed on the regulated stock market.

For the moment the scale of finance channelled through Fintech platforms remains limited (Figure 1) and peer-to-peer lending to SMEs lags far behind consumer lending. The *2017 Economic Survey of Estonia* stresses that a sustainable development of this 'alternative finance' requires a creation of a level playing field between the traditional and the alternative sources of credit in terms of access to information, regulation, and taxation.

Figure 1. Estonia is a frontrunner in alternative finance but amounts are low

Volumes, in euros per capita, 2015



Note: Alternative finance includes peer-to-peer lending, equity crowdfunding, donation and reward crowdfunding, as well as balance sheet lending.

Source: Cambridge Centre for Alternative Finance.

To build confidence in these new financing forms, a necessary condition to their development, consumer protection of Fintech users should be reinforced. The Estonian authorities should introduce licencing and transparency requirements and require the platforms to have resolution plans in place to ensure that repayments continue to be collected in case of bankruptcy. By establishing a well-designed credit information-sharing scheme covering all borrowers (firms and individuals) it could help to move the industry forward, by facilitating the use of big data and algorithms to screen and monitor borrowers. Finally, the level playing field should be established also when it

comes to taxes. Taxation of investment via Fintech platforms should be harmonised with that of bond and equity securities, by allowing investors to deduct their losses from their income tax base.

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Four Challenges of Inclusive Growth from the OECD's chief economist

by Catherine L. Mann, Chief Economist and Head of the Economics Department, OECD

1. The challenge of measuring inclusiveness. A standard metric for measuring inequality is the Gini coefficient, which measures income distribution within an economy. But there are many other measures, such as distribution of income deciles, distribution of wealth, distributions of these by regions or by gender. These are all static measures, even if they change over time. On the other hand, the persistence of earnings across generations, e.g. income mobility, explicitly is a dynamic intergenerational measure. Which measure is best? Particularly as they deliver different rankings across countries. For example, the Canadian Gini is persistently higher than the French Gini. But, the metric of earnings persistence is much lower in Canada than than in France. Which country is more inclusive?

For more metrics, see OECD: Measures of inequality, immobility

2. Getting below the averages. Recent OECD research has found a wide gap in both productivity and wages between firms in each sector that are at the productivity frontier (in the top 5 percent, in productivity), where labour productivity has advanced some 35 percent since 2000, and the rest of firms in the economy, where labor productivity has increased less than 5 percent over the same period. The widening wage gap is reflected in the widening distribution of income across deciles where, among OECD countries, the real household disposable income of the bottom 10 percent remains some seven percent below the peak in 2007, the mean income is only on par, yet the top 10 percent has edged higher. Closing both the productivity and income gaps is a key element of inclusive growth. While the specifics of the policies to close these gaps differ by country, there are elements in the policy domains of business dynamics and competition, labour market functioning and skills, and financial market structure and performance. These policies, if deployed in packages, tend to work synergistically rather than present tradeoffs to achieve inclusive growth. For more on this topic, see the OECD: Global Forum on Productivity

3. Getting finance right. OECD research shows that specific kinds of finance can undermine inclusive growth. Specifically, excessive mortgage debt increases the likelihood of a financial crisis, with deleterious outcomes for growth, and for equity, since those at the bottom of the income distribution are more likely to be at higher risk and higher exposure to this kind of debt

and therefore to consequences of crisis. On the other hand, deeper equity markets contribute to growth; although, to the extent that equity wealth is unequally distributed, deeper equity markets favour the wealthier. OECD research also finds that otherwise identical workers, regardless of their income decile, are paid a wage premium if they work in finance. One reason is that too-big-to-fail rents are distributed partly to workers. For more on this topic, see OECD: Finance,growth, and inequality

4. Globalization, technology, 'tastes' and regional impact on manufacturing jobs. How is the interplay of these factors relevant for inclusive growth? A decomposition of manufacturing job loss finds that changes in technology and 'tastes' (that is, consumer preferences for services vs. goods) dominate the direct force of trade flows in the loss of manufacturing jobs. However, to the extent that manufacturing is regionally concentrated, the three factors together accentuate and concentrate jobs losses in those regions. Not surprisingly, countries with higher regional concentration of manufacturing jobs have tended to have experienced higher overall inequality. The policy approach to ameliorate this concentrated impact so that all can enjoy the benefits of globalization and technological change remains a critical task. For more on this topic, see OECD: Chapter 2 of the June Economic Outlook

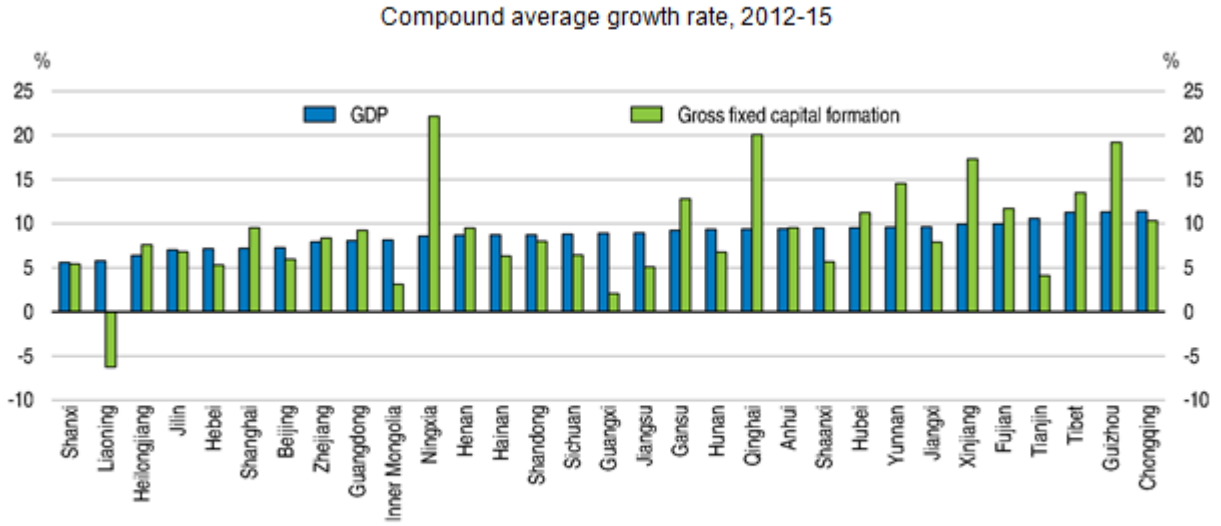
This post also appears on the C.D. Howe Institute site

Enhancing financial stability amid slowing growth in China

By Margit Molnar and Ben Westmore, China Desk, OECD Economics Department

Growth in China has been slowing gradually, but GDP per capita remains on course to almost double between 2010 and 2020. As a result, the Chinese economy will remain the major driver of global growth for the foreseeable future. Patterns across the country vary, however: in some areas slowing investment has brought down growth, while in other, mainly less-developed ones, both investment and GDP are growing at or close to double-digit rates (Figure 1).

Figure 1. The slowdown in growth and investment has been geographically uneven



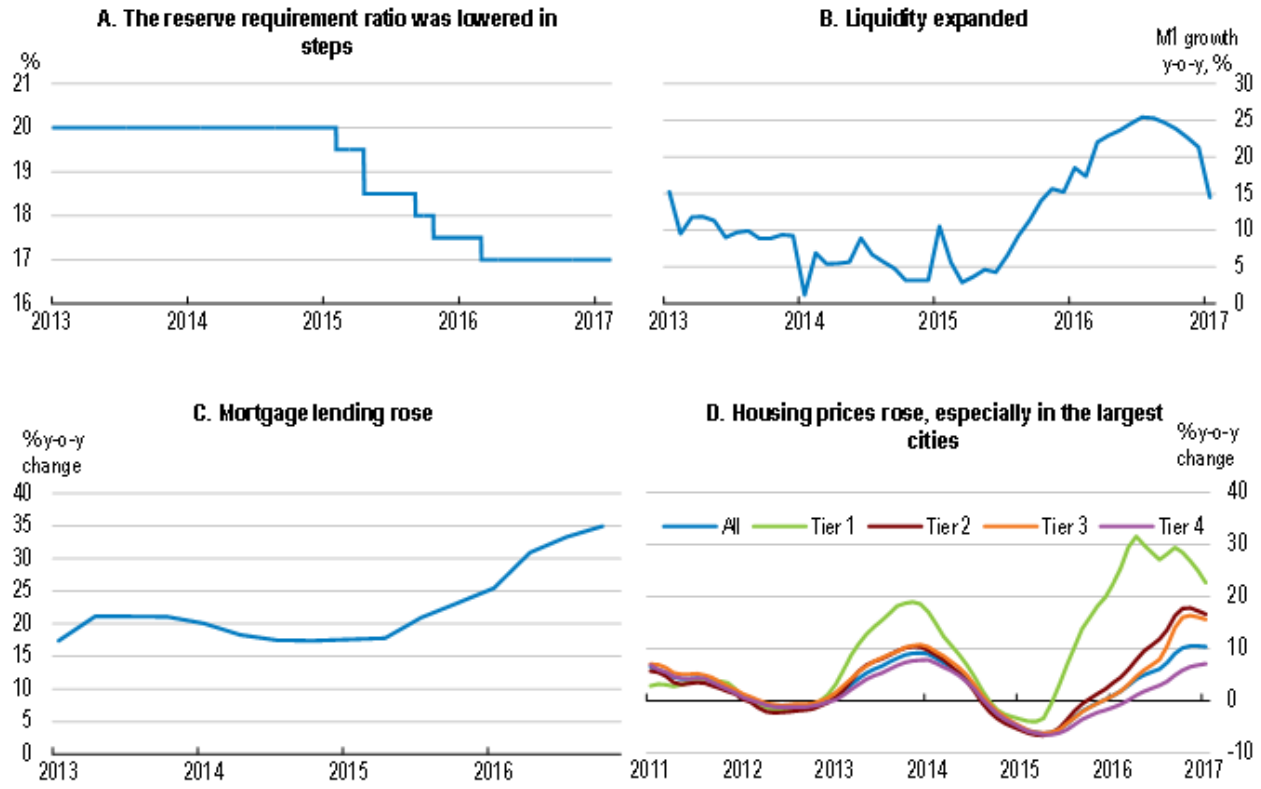
Note: Both GDP and gross fixed capital formation are in real terms. Real gross fixed capital formation is calculated from the nominal figures using province-specific fixed asset investment deflators. For Tibet, for which no deflator is available, the national average is used.

Source: OECD calculations from data by the National Bureau of Statistics.

Growth in recent years has been fuelled by fast-rising credit and has come at a cost. Financial risks are mounting on the back of an inflating housing bubble, high and rising

enterprise debt, expanding non-bank activities and enormous over-capacity in some sectors. Liquidity expanded rapidly over the past couple of years as the reserve requirement ratio was lowered gradually (Figure 2). Mortgage lending soared, fuelling housing prices, in particular in the largest cities. A burst of the housing bubble would hurt the real estate, construction and several manufacturing industries. However, household indebtedness remains moderate and prudential regulations for mortgage loans are stringent, so the financial sector could likely absorb the shock. Consumer finance has also grown rapidly, spurred by the expansion of online peer-to-peer lending platforms. Some of these new lenders are loosely regulated and do little to verify the repayment ability of borrowers. While financial institutions should be encouraged to lend only to people able to service their debt, improvements in household financial literacy are also needed.

Figure 2. High liquidity has fuelled a housing boom

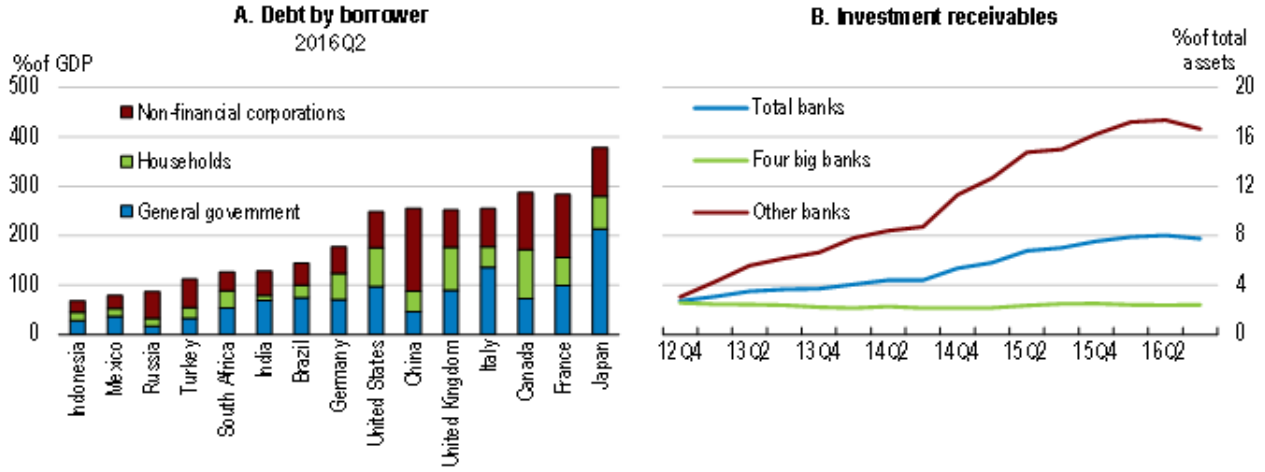


Note: The reserve requirement ratio refers to large commercial banks; housing prices are calculated from the 70 cities residential property price index. Chinese cities are commonly classified into six tiers according to their economic and administrative importance. In Panel D, "Tier 1" comprises four cities (Beijing, Shanghai, Shenzhen and Guangzhou), "Tier 2" eight, "Tier 3" 11 and "Tier 4" 47.

Source: CEIC database.

In contrast to moderate household debt, non-financial corporate debt rose from less than 100% of GDP at the end of 2008 to 170% by mid-2016 (Figure 3). This sharp pick-up was due in large part to increased leverage of SOEs. The rapid accumulation of corporate debt combined with a slowdown in economic activity and some of the practices of financial institutions have significantly heightened systemic risks. Under the macroprudential framework announced in January 2016, banks are required to disclose wealth management product exposures on their balance sheet, which will benefit systemic stability. To further contain risks, more effective monitoring and control of leveraged investment in asset markets is required.

Figure 3. Corporate debt is particularly high



Note: In Panel B, "Other banks" are 12 other A-share listed banks. Combined with the four big banks, these institutions account for around 60% of banking system assets. While investment receivables also include some government and corporate bond holdings, this line item mostly reflects the derivative products used by banks that are linked to NBFI lending such as trust beneficiary rights and directional asset management plans.

Source: Bank of International Settlements, WIND database, author calculations.

The authorities have initiated debt-to-equity swaps in heavily indebted enterprises and approved the issuance of credit default swaps that pay out if there is a default on the underlying loan. A debt-to-equity swap will be initiated for enterprises that cannot service their immediate debts but are considered to be financially sustainable in the medium to long term by the lender. Only a limited group of firms conform to both these conditions, restricting the potential scale of such measures. Indeed few swaps have gone ahead so far as banks

have been unwilling to take on the increased risk associated with becoming equity holders. The securitisation of NPLs has also been encouraged, which may be preferable to debt-to-equity swaps insofar as it reduces the exposure of banks to underperforming corporates and the NPLs are acquired by an entity with greater expertise in restructuring the company. Nevertheless, China's securitisation market is relatively shallow at present, limiting the potential scale of such transactions.

The recently published 2017 OECD Economic Survey recommends enhancing prudential regulation by requiring lenders to take into account borrowers' repayment ability when extending loans. It also advocates restricting leveraged investment in asset markets.

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Strengthening economic resilience: What lessons to draw from the post-1970s record of severe recessions and financial crises

By Alain de Serres, Filippo Gori and Mikkel Hermansen, OECD Economics Department

Major global crises such as the 2008-09 episode are mercifully rare, but severe recessions have been quite frequent among OECD countries over the past four decades. Even when they do not inflict long-lasting economic damages, they often entail significant costs in terms of foregone income and high unemployment. It is therefore important that measures be taken to minimise the risk and frequency of such episodes, but also to mitigate their impact once they occur. This raises the question of what can policy makers do to lastingly enhance resilience in the face of economic and financial risks. In looking for answers, they need to be mindful of the potential long-term growth impact of risk-mitigating measures.

More specifically, in considering measures to reduce risks, the benefits need to be balanced against the potential costs in terms of the lower average economic growth rate that some policies could entail. The objective is to reduce financial fragilities and minimise systemic risk, but without undermining entrepreneurial risk-taking, which is the essence of innovation-based economic growth. When risk-mitigating measures involve a trade-off between growth and crisis risk, the most cost-effective actions need to be identified, spanning both macro and structural policies.

Recent OECD research sheds light on possible growth-crisis trade-offs from two angles: i) looking at the extent to which pro-growth policies can make economies more vulnerable to severe recessions and ii) assessing the impact on growth of risk-mitigating (prudential) policies. These issues are explored using an empirical approach that provide insights on both the impact of various policy settings on average GDP growth on the one hand, and either financial crises (i.e. banking, currency and twin crises) or exceptionally low GDP growth rates (i.e. extreme negative tail risk), on the other (see references).

What are the main insights from this research? Considering first policies outside the financial sector, that is product

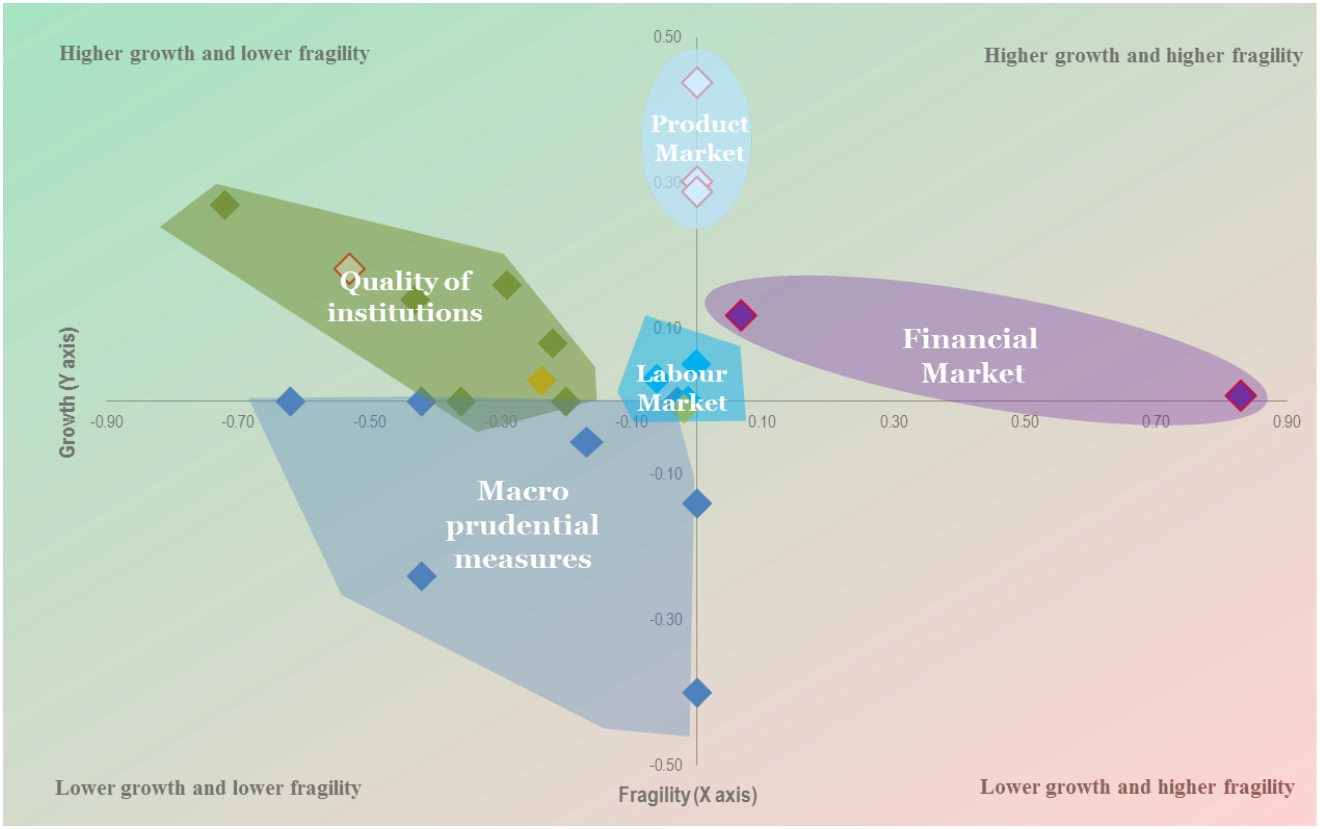
and labour market policies as well as those related to the quality of institutions, there is no evidence that policymakers would face trade-offs between enhancing growth and reducing risks of crises (see figure).

- The results indicate having in place a sound legal and judicial infrastructure – based on a high quality of institutions – is good for both growth and resilience. It may do so notably by facilitating a greater diversification of funding sources away from the banking sector and towards capital markets.
- Regarding product and labour market policies, the findings indicate that policy settings conducive to higher productivity (*g*. through stronger product market competition) and employment generally have little impact on crises risks, *i.e*. they do not reduce the likelihood of severe recessions, but do not raise it either.

More significant trade-offs between growth and crisis risks arise in the case of financial market policies:

- Financial market liberalisation often yields stronger growth, but also higher risks of banking crises and hence severe recessions. That said, in the cases where liberalisation essentially leads to the development of private credit – in particular bank credit – as opposed to equity-based financial instruments, the impact on growth diminishes.
- Greater capital flow openness raises growth, but also increases the risk of banking and currency crises. However, the results indicate that among the different types of capital flows, only debt is associated with higher crisis risk.
- The risk of crises can be mitigated through prudential policies. Indeed, greater use of prudential policies is associated with fewer occurrences of severe recessions. At the same time, the findings indicate that several of these measures may come at a cost in terms of lower

average growth.



Note: **Structural policies should be assessed on the basis of their effect on growth and economic fragility. In this chart, the effect of policies on economic fragility is plotted on the horizontal axis, the effect on growth is shown on the vertical axis. Fragility is defined as a higher likelihood of financial crises (banking, currency or twin crisis) or a higher GDP (negative) tail risk. Different risk-growth patterns emerge for each of policy area considered: pro-growth labour and product market policies improve economic performance without substantially affecting economic fragility. Better quality of institutions both increases growth and reduces economic fragility. However, macro-prudential and financial market polices entail a growth-risk trade-off: the former decrease economic risk to the detriment of a higher growth rate, the latter promote growth but also increase financial risk.**
Source**: Authors' calculation based on Caldera Sánchez and Gori (2016) and by Caldera Sánchez and Röhn (2016).**

What does this mean for policy? One of the main implications of the analysis is that taking measures in the financial sector to lower the risk of severe recessions is entirely

appropriate, but focusing too narrowly on that sector is unlikely to be sufficient and could entail substantial costs in terms of foregone GDP growth. Policymakers need to consider other potential sources of distortions that can contribute to the build-up of vulnerabilities.

OECD research also shows that among the factors creating an environment prone to severe recessions, the more prominent are rapid growth of private credit, imbalances in the housing market (as proxied by real house prices and the ratios of house prices to income and house prices to rent), and, to a lesser extent, large current account imbalances. This points to the need for looking at how domestic policy distortions – notably in the areas of housing market regulation as well as taxation – contribute to excess leverage, in particular through real estate markets and current account imbalances.

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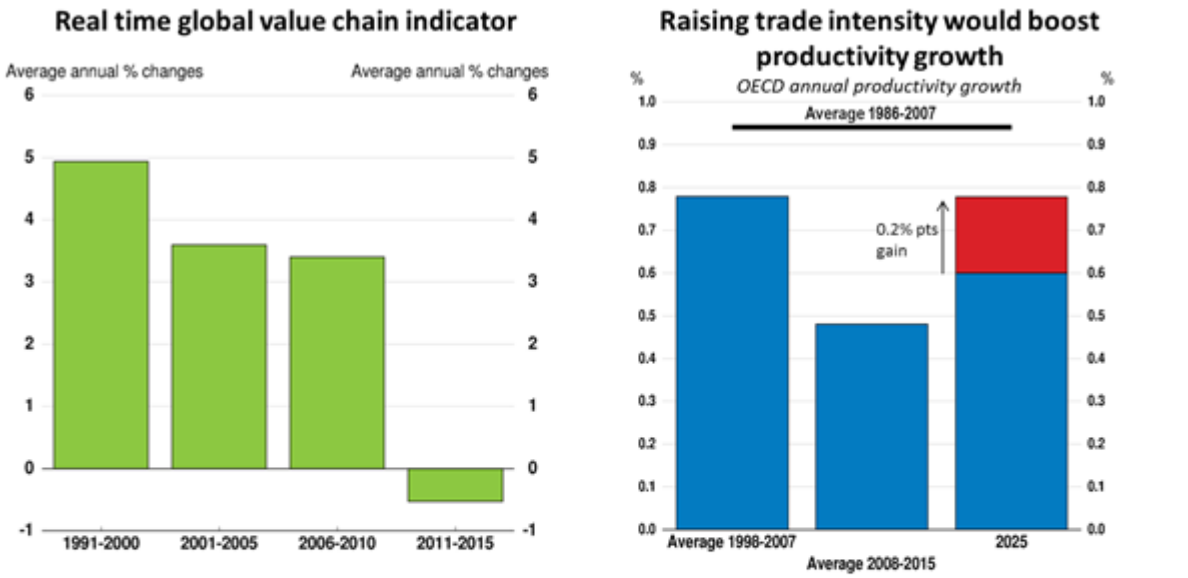
Global growth warning: weak trade, financial distortions

By Catherine L. Mann, OECD Chief Economist

The global economy remains in a low-growth trap. In our latest *Interim Economic Outlook* global GDP growth is set to remain flat around 3% in 2016 and improve modestly to 3.2% in 2017. This is slightly lower than the June *Economic Outlook* forecast due to weaker conditions in advanced economies, including the effects of Brexit, offset by a gradual improvement in major emerging market commodity producers. More significantly, this string of feeble global growth rates is well-below historical norms.

The prolonged weakness in the world economy generates a self-reinforcing low-growth trap: depressed trade, investment, productivity, and wages in the current weak global environment, in turn lead to an additional downward revision in growth expectations and even more subdued demand. Poor growth outcomes combined with high inequality and stagnant incomes are also further complicating the political environment and increasing challenges facing policymakers.

Weak global trade is a particular concern. World trade was growing exceptionally slowly after the financial crisis, and has collapsed in 2015 and 2016. This weak trade growth is both a symptom of and exacerbates the weak global environment. As I have written separately, trade matters for productivity, living standards and inclusive growth. Returning to robust trade growth requires policy action to deepen global integration, but even more importantly to share the benefits, as detailed in our new paper examining the trade slowdown and policies to boost trade.



Note: The left-hand-side structural real time global value chain indicator is adjusted for the economic cycle and changes in commodity prices. The right-hand-side presents a scenario in which the world and OECD trade intensity (exports plus imports as a share of GDP) increases by 1.3 percentage points per annum (the average from 1986-2007) from 2017. The effect of this increase on OECD total factor productivity growth is shown. For further detail see OECD Economic Policy Paper "Cardiac Arrest or Dizzy Spell: Why is World Trade So Weak and What Can Policy Do About It?".

Source: OECD Economic Outlook databases, OECD STAN Bilateral Trade database; Égert and Gal (2016); and OECD calculations.

Significant distortions in financial markets create vulnerabilities, made particularly stark against the poor performance of the real economy. Short- and long-term interest rates have fallen further in recent months to very low and – in many cases – negative levels. Around USD 14 trillion of government bonds, more than 35% of OECD government debt, is currently trading at negative yields, reflecting, among other factors, expectations for persistently low growth and expected monetary policy.

Low and negative interest rates underpin widespread and substantial increases in asset prices, both internationally and across asset classes. Equity prices remain high and have continued to increase in some economies despite weak profit developments and reduced long-term growth expectations. House prices are also rising rapidly in many economies. Credit spreads have tightened this year even as overall credit quality for corporate bonds has declined.

These financial distortions raise risks. In particular, a reassessment in financial markets of the path of interest rates could result in substantial re-pricing of assets and heightened financial volatility. As it is, sustained negative and low interest rates challenge financial institutions' business models and sustainability, demonstrated by the underperformance of bank shares relative to the overall market. Low interest rates also pose significant challenges for pension funds and asset managers, with implications for savers and retirement incomes.

Monetary policy is overburdened with associated risks. Hence, central bank policymakers need to calibrate both costs and benefits of increasing unconventional support.

On the other hand, fiscal space has been created by the low interest rates. In many advanced economies, interest rates have fallen by more than GDP growth, thereby raising the sustainable debt level. Low interest rates have reduced interest expenses. Hence, fiscal policy should take advantage of this fiscal space by increasing quality investment to boost human capital, physical infrastructure and equality. Canada, China, Japan and the US have recently announced fiscal expansion and the UK has signalled an easing in the budgetary stance. Euro area fiscal policy also should do more to support growth, such as easing the application of the EU Stability and Growth Pact and excluding net investment spending from fiscal rules.

Structural reform momentum needs to be intensified, rather than continue to slow. At the Hangzhou Summit earlier this month, G20 countries were only around half-way to their target of 2% additional G20 GDP by 2018 due to sluggish progress on implementation. Worryingly, despite concerns about weak trade, the share of trade policy commitments fell to 6% from 14% two years ago. Reforms to boost trade are a key lever to boost growth and need to be supported by complementary policies that ensure the gains from globalisation are widely shared among

citizens.

The more balanced policy mix, making greater use of fiscal, structural and trade policies, would put the global economy on a stronger and more sustainable and inclusive growth path. Improved expectations of higher future growth from more fully deployed fiscal and structural policies would help to ease the burden on monetary policy and facilitate an eventual normalisation of interest rates.

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