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The fiscal response to the Covid-19 crisis in advanced

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and emerging market economies

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## The fiscal response to the Covid-19 crisis in advanced and emerging market economies

Key takeaways

- The fiscal policy response to the Covid-19 crisis has been swift and strong, in tandem with monetary policy. Advanced economies (AEs) have deployed a much larger fiscal response than emerging market economies (EMEs).
- The lower incidence of the pandemic in EMEs does not fully explain the difference. A narrower fiscal policy space in EMEs, further reduced by the tightening of their financing conditions induced by the pandemic shock, has constrained their fiscal response.
- The size and composition of the fiscal response also depend on other factors such as the level of income and the strength of the social safety nets and automatic stabilisers.

#### Introduction

The policy reaction to the Covid-19 has brought together prompt responses from governments, central banks and supervisory authorities. Fiscal policy has played a central role given the nature of the shock, a public health emergency with unprecedented real effects. Governments have intensified their fiscal policy actions and have adopted stringent containment measures as the pandemic has spread around the globe (Graph 1, left panel). In advanced economies (AEs), fiscal actions peaked in late March, while emerging market economies (EMEs) have responded later. A new round of fiscal stimulus, more focused on supporting economic recovery, is expected as lockdowns relax and activity progressively resumes.

The response is different in terms of size and composition among countries, although the types of measures are broadly similar. The main divide can be found between AEs and EMEs, but also within both groups. This note explores the determinants of the differential fiscal response.

#### Composition and size of the fiscal packages

The goal of the fiscal policy actions is to buffer the short-term impact of the shock. Governments have taken a wide array of measures to support individuals and firms. Central banks and financial regulators have complemented these actions with policies that have eased financial conditions and enabled the continued flow of credit to the real economy.<sup>1</sup> The combined policy reaction does not only aim to calm the financial turmoil but also to prevent temporary disruptions from inflicting permanent damage to the economy.

<sup>&</sup>lt;sup>1</sup> See Cavallino and De Fiore (2020) and Arslan et al. (2020) for central bank responses in AEs and EMEs, respectively, and Drehmann et al. (2020) for the role of prudential policies.

The aggregate fiscal packages include both budgetary and non-budgetary measures – a standard classification – as well as subcategories thereof.<sup>2</sup> The response channelled through the budget has a direct negative impact on fiscal balances. Budgetary measures include spending on health care, transfers to firms and households, wage and unemployment subsidies and tax cuts or deferrals. The non-budgetary part consists of funding and credit guarantees, which do not have an immediate impact on the fiscal balance.<sup>3</sup> Funding includes loans by governments – or their financial agencies and state banks – to firms, with a focus on small and medium-sized enterprises (SMEs), and other financial support, including equity injections to strategic firms, such as airlines. Government credit guarantees, including fiscal backing for central bank programmes, are intended to maintain the flow of credit to the economy in a high uncertainty environment (see Baudino (2020)).



Timeline and size of the response to the pandemic

<sup>1</sup> 7-days moving average. Fiscal measures refer to type of measure per day per country <sup>2</sup> New cases per million people <sup>3</sup> A composite index of the strictness of lockdown policies, including school and business closures and mobility restrictions, scaled between 0 (least stringent) and 100 (most stringent). <sup>4</sup> AEs: AU, CA, DE, FR, GB, IT, JP and US; EMEs: AR, BR, CN, ID, IN, KR, MX, RU, SA, TR and ZA. <sup>5</sup> The bar graphs refer to 2020.

The size of the budgetary measures, or "fiscal stimulus", reached 4.6% of GDP for the G-20 countries (Graph 1, centre panel) by mid-May. The magnitudes of funding support and credit guarantees are also substantial, 1.7% and 3.4% of GDP, respectively. Compared with the GFC, the size of the fiscal stimulus is

Sources: IMF Fiscal Monitor November 2009 and 2010, April 2020 and update May 2020; Yale COVID-19 Financial Response Tracker; Oxford Stringency Index; BIS calculations.

<sup>&</sup>lt;sup>2</sup> While some of the measures are not additive, their aggregation in categories and the size of the total package provides a suitable metric for the fiscal response to the extent that markets and governments care also about the aggregate amount. The data, categories and size of the pledged measures are taken from the IMF Fiscal Monitor (2020a) and an update (IMF (2020b)), with cut-off date 13 May. Tax deferrals are not included in the computation of budgetary measures.

<sup>&</sup>lt;sup>3</sup> Credit guarantees are contingent liabilities. They would only have an impact on the public debt if and when they are called in. The fiscal impact of funding measures depends on their design and whether they imply additional borrowing. They could represent an increase in gross public debt, or instead an increase in contingent liabilities, eg when loans are channelled through public corporations.

higher, but the size of non-budgetary measures is smaller, mainly due to the different nature of the two crises.

The size of the fiscal support is much higher in AEs than EMEs. Budgetary measures in AEs have reached 8.3% of GDP – 6.6 percentage points (pp) higher than in the aftermath of the GFC, while for EMEs they represent just 2.0% of GDP, even less than in the GFC. The gap for the funding facilities is narrower: 4% of AEs' GDP versus 1.3% in EMEs. The contrast is starkest for credit guarantees: 6.6% of GDP in AEs and only 0.4% in EMEs.

There is also a large variability among countries in the size and composition of fiscal packages (Graph 1, right panel). While Australia and the United States are deploying the largest fiscal stimulus, more than 10% of their GDP so far, the size of budgetary measures is less than 3% of GDP in Italy, France and all EMEs, except South Africa. There seems to be some substitutability between budgetary and nonbudgetary measures, and within non-budgetary measures. Some countries have provided large amounts of credit guarantees (France and Great Britain, over 10% of GDP, Italy and Germany over 20%), while others, like Japan, Korea, Brazil and India have opted for funding facilities. Overall, credit guarantees have been used by all AEs, but in EMEs they are small, if used at all.

#### Determinants of the fiscal responses

#### Pandemic incidence and containment measures

Why are fiscal packages smaller in EMEs than in AEs? A first possible reason is the higher prevalence of the pandemic in the latter group. The coronavirus has affected AEs earlier and more strongly so far than EMEs, except for a few Asian EMEs. Although the incidence has risen sharply in some EMEs recently, by



Fiscal response and relation with pandemic incidence and financing conditions<sup>1</sup>

<sup>1</sup> Total package includes both budgetary (ie fiscal stimulus) and non-budgetary (eg funding and guarantees) measured as of 13 May 2020. AEs include AU, CA, DE, DK, ES, FI, FR, GB, IT, JP, NO, SE and US. EMEs include AL, AR, BG, BR, CL, CN, EG, ID, IN, KR, KZ, MU, MX, PL, RU, SA, SG, TN, TR and ZA. The line denotes the regression over the whole sample. A solid line denotes a significant linear relationship and a dashed line denotes an insignificant linear relationship. <sup>2</sup> Local currency bonds. As of the beginning of 2020. AR is excluded <sup>3</sup> Since beginning of 2020. AR is excluded.

Sources: IMF WEO and Fiscal Monitor; Johns Hopkins University; Bloomberg; Datastream; Markit; national data; BIS calculations.

mid-May the number of confirmed cases as a percentage of the population was three times higher in AEs than in EMEs on average (2361 and 735 cases per million inhabitants, respectively).<sup>4</sup>

A higher prevalence of the pandemic is expected to have more adverse effects on the economy and, hence, trigger a stronger policy response. Indeed, the size of fiscal packages has been significantly larger in countries with a higher incidence of the pandemic (Graph 2, left-hand panel). The result applies to both AEs and EMEs. However, the left panel in Graph 1 shows, the stringency of the containment measures has been very similar in AEs and EMEs. Therefore, the economic impact of the virus could be deeper – and the required fiscal response stronger – in EMEs than what the lower reported prevalence would imply. The stringency index does not display a significant positive correlation with the size of the fiscal packages or the budgetary measures in EMEs. These observations suggest that the more tepid fiscal response in EMEs is not fully explained by the lower incidence of the pandemic.

#### Fiscal policy room

The room for fiscal policy is another important factor. International investors are more sensitive to EMEs' fiscal fundamentals and less tolerant to their debt levels (Reinhart et al (2003)). Higher financing costs and hampered access to external financing in times of financial stress constrain their fiscal response. The current turmoil is no exception.

Financing costs, measured by ten-year local currency government bond yields at the beginning of 2020, were much higher in EMEs (on average 5.7%, excluding Argentina) than in AEs (0.7%). Graph 2, centre panels, shows that fiscal packages have been significantly smaller in countries that entered the crisis with higher bond yields and lower sovereign debt ratings.<sup>5</sup>

Furthermore, fiscal policy in EMEs tends to be procyclical, that is, economic downturns coincide with fiscal contractions. Crucially, the procyclicality is determined by the evolution of financing conditions (see Alberola et al (2016)). The coronavirus shock has induced a sharp capital retrenchment from EMEs and a tightening of their financing conditions (Hördahl and Shim (2020)). Tougher financing conditions are reflected in the increase of CDS spreads and they are negatively and significantly correlated with the size of the fiscal packages (Graph 2, right panel). In addition, public finances in some EMEs are largely dependent on commodity export revenues. The dramatic fall in oil demand and prices further limits the fiscal space in oil producing countries: Saudi Arabia, Mexico or Russia have deployed relatively small fiscal packages as a response to the crisis (Graph 1, right panel).

#### Monetary policy

Monetary policy can complement fiscal policy in the fight against the pandemic. EMEs had more room to cut policy rates than AEs and they have been able to take advantage of it. At the start of 2020, policy rates in EMEs were higher (on average 4.9%, excluding Argentina) than in AEs (0.4%). Even though higher policy rates could indicate higher yields required by investors to compensate a higher risk perception, EMEs have managed to loosen monetary policy. They have cut policy rates by around 114 basis points (excluding Argentina) compared with 40 basis points in AEs.

Monetary policy accommodation also supports fiscal policy by reducing the financing costs of the sovereign. This can be the case even with policy rates close to zero through the implementation of unconventional monetary policies, in particular large-scale purchases of government bonds. With high central bank credibility, this form of quantitative easing (QE) can increase fiscal space by reducing interest rates along the yield curve. AEs have actively used asset purchases as a response to the pandemic. As a

<sup>&</sup>lt;sup>4</sup> The confirmed number of cases depends on the number of tests, the reporting coverage and communication protocols. Therefore, confirmed cases are far less than actual cases across the board. The degree of underreporting is probably higher in less developed economies and this could explain part of the large difference in incidence between AEs and EMEs.

<sup>&</sup>lt;sup>5</sup> The result is robust for long-term rates when controlling for the incidence of the pandemic. Both the size of the fiscal package and of the fiscal stimulus is also significantly smaller for EMEs with lower ratings.

result, long-term rates are below their pre-crisis levels in most countries. Some EMEs are venturing into QE, too, but they are being cautious as they tread uncharted waters. Their asset purchase programmes are intended to support the functioning of the market rather than lowering government funding costs (see Arslan et al. (2020)).

#### Structural factors

In addition to policy space, structural factors of an economy can determine the size and composition of fiscal packages.

Economies with a higher level of development could, in principle, react more forcefully to the shock because their economic and public institutions allow them to mobilise the required resources quickly. However, richer economies also tend to enjoy stronger economic and institutional mechanisms to effectively buffer unexpected shocks. Deeper financial markets and broader social safety nets would call for a more limited discretionary fiscal response. Graph 3 (left-hand panel) shows the relation between fiscal packages and GDP per capita. For EMEs, the higher the living standards the larger fiscal packages, whereas the relationship flips sign for AEs.



<sup>1</sup> Total package includes both budgetary (ie fiscal stimulus) and non-budgetary (eg funding and guarantees) measures as of 13 May 2020. AEs include AU, CA, DE, DK, ES, FI, FR, GB, IT, JP, NO, SE and US. EMEs include AL, AR, BG, BR, CL, CN, EG, ID, IN, KR, KZ, MU, MX, PL, RU, SA, SG, TN, TR and ZA. The red and blue lines denote the regression over the sample of EMEs and AEs respectively. A solid line denotes a significant linear relationship and a dashed line denotes an insignificant linear relationship. <sup>2</sup> The social safety net is the sum of government spending on public unemployment, family benefits, labour markets, pension and other social benefits to households as defined by the OECD.

Source: IMF Fiscal Monitor April 2020; OECD Economic Outlook November 2019; World Bank World Development Indicators; BIS; BIS calculations.

Institutional safeguards go some way to explain this result. Social safety nets are larger in AEs (Graph 3, centre and right panels) and they are usually associated with larger automatic stabilisers, which play a key role in absorbing economic shocks. For AEs with stronger social safety nets, the size of budgetary measures is significantly lower, but this is not the case in EMEs (Graph 3, centre panel). In addition, with larger social buffers that provide protection to households, pensioners and the unemployed, countries are able to focus their fiscal response relatively more on non-budgetary measures to ensure businesses' survival and recovery. The right panel in Graph 3 shows a significant correlation for AEs between social

safety nets and non-budgetary measures.<sup>6</sup> The relation holds and is significant as well when automatic stabilisers are used as an alternative metric for a smaller sample of 12 OECD countries (OECD, 2019).

#### Conclusions

The fiscal policy reaction to the coronavirus emergency has been quick and powerful at the global level. However, EME responses have been much more limited. The size of EMEs' budgetary measures represents only one fifth of that of their AE counterparts in per GDP terms, and the divergence in the use of nonbudgetary measures is even larger.

The smaller incidence of the pandemic and the belated response in some EMEs can only justify a part of this large gap; more important factors are at play. Probably, the most relevant is the limited fiscal space of EMEs, which has been further constrained by the tightening of their financing conditions due to the pandemic shock.

Finally, it should be noted that this analysis is a snapshot of the current situation. Fiscal measures are expected to expand and adapt to the evolution of the pandemic crisis and to support the recovery phase as the containment measures are lifted. The expectation is that EMEs will be able to respond with less firepower in the recovery phase, too.

#### References

Alberola, E, I Kataryniuk, A Melguizo and R Orozco (2016): "Fiscal policy and the cycle in Latin America: The role of financing conditions and fiscal rules", BIS Working paper no 568.

Arslan, Y, M Drehmann and B Hofmann (2020): "Central bank bond purchases in emerging market economies", BIS Bulletin no 20.

Baudino, P (2020): "Public guarantees for bank lending in response to the Covid-19 pandemic", FSI Briefs no 5.

Cavallino, P and F De Fiore (2020): "Central bank response to Covid-19 in advanced economies", BIS Bulletin no 21.

Drehmann, M, M Farag, N Tarashev and K Tsatsaronis (2020): "Buffering Covid-19 losses - the role of prudential policy", BIS Bulletin no 9.

Hale, T, S Webster, A Petherick, T Phillips and B Kira (2020): "Oxford COVID-19 government response tracker", Blavatnik School of Government.

Hördahl, P and I Shim (2020): "EME bond portfolio flows and long-term interest rates during the Covid-19 pandemic", BIS Bulletin, no 18.

IMF (2011): Fiscal monitor, November.

IMF (2020a): Fiscal monitor, April.

IMF (2020b): "Tracking the \$9 trillion global fiscal support to fight Covid-19", IMF Blog, 20 May.

OECD (2019): "OECD economic outlook", volume 2019, issue 2.

Reinhart, C., K S Rogoff and M A Savastano, (2003): "Debt intolerance," Brookings Papers on Economic Activity, Economic Studies Program, The Brookings Institution, vol. 34(1), pages 1-74.

<sup>&</sup>lt;sup>6</sup> The relation remains significant when measuring budgetary and non-budgetary measures as a share of the total fiscal package. Overall, the link between social safety nets and the size and composition of the fiscal packages remains robust after controlling for pandemic incidence and economic and public finance variables.

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