

Emerging markets face higher public finance risks as interest rates rise than advanced economies

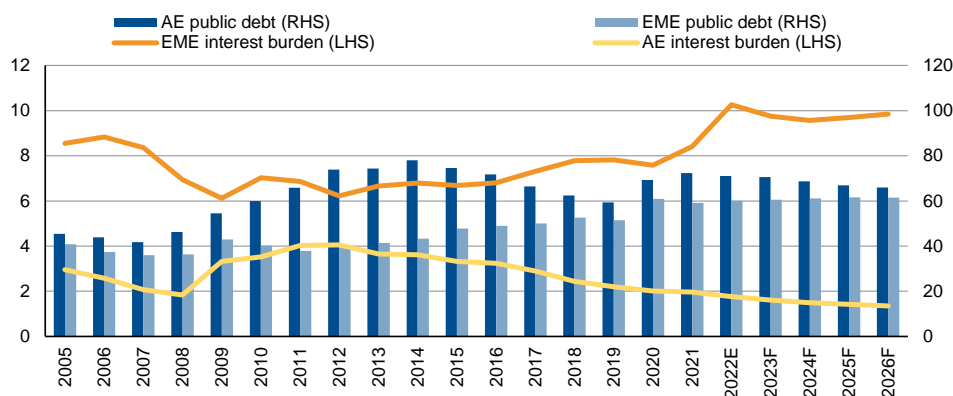


We expect higher fiscal risks over the coming years once post-Covid economic rebound effects fade and central banks normalise monetary policies. Advanced economies (AEs) will face much lower budgetary and refinancing risk on average compared to emerging market economies (EMEs), with more supportive market conditions, stronger debt affordability, safer debt profiles and more favourable debt dynamics mitigating the risks linked with their high debt stocks. Central banks as interest rate setters and key holders of government debt will be influential for sovereign creditworthiness over the coming years.

Into the medium term, a sovereign's debt sustainability will critically depend on its cost of servicing debt, not its debt level. Still, long-term sustainability considerations associated with high debt stock affect financing costs through risk premiums, highlighting the interplay between stock and flow indicators. Debt is forecast to reach record highs in the next decade (Figure 1), and the interest burdens of EMEs are more vulnerable to a sharp debt increase than those of AEs while population ageing puts long-term pressure on their budgets.

Measuring 'public finance risk' requires a multidimensional analysis as well as an element of judgement. Therefore, our complementary yet simple method to assess short- to long-term fiscal risks rests on 10 indicators focused on three areas: i) financial markets; ii) debt structures; and iii) debt dynamics and sustainability pressures. We conduct our analysis based on a sample of 26 AEs and 22 EMEs (see Annex for overview of the country sample and main indicators).

Figure 1. Interest and debt burdens of AEs vs EMEs, medians
% of government revenue (LHS); of GDP (RHS)



Note: Refers to 26 advanced economies and 22 emerging market economies.
Source: IMF, Scope Ratings GmbH

Key take-aways:

- **Financial market indicators:** Compared to EMEs, the lower perceived risk and highly accommodative monetary policies of AEs have translated into much lower funding costs.
- **Debt profiles:** For AEs, the investor bases and average maturities of sovereign debt have improved substantially in recent years due to monetary policy. For EMEs, the picture is mixed: investor bases are riskier; debt maturities are longer.
- **Debt dynamics and long-term liabilities:** Declining interest burdens and high revenue intake in AEs help offset the risks linked to high debt. Still, long-term healthcare and pension liabilities and limited space to increase tax revenues will add pressure on AE public finances this decade. EMEs benefit from better demographics but suffer from rising interest costs and limited revenue mobilisation.

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Financial market indicators

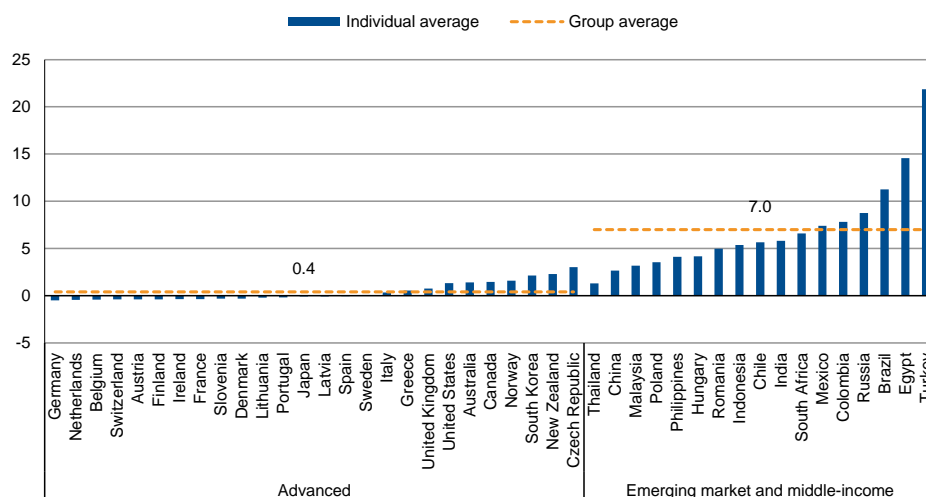
Here we assess: i) a sovereign's ability to access market funding at reasonable rates, measured by the five-year government bond yield¹; and ii) a sovereign's credit risk as perceived by the market, measured by the CDS spread.

1. Long-term government bond yield

Rationale and latest developments

In general, lower (higher) interest rates translate into lower (higher) fiscal pressures. Higher long-term government bond yields may carry more risk and could increase substantially during an economic downturn, and thus measure the sovereign's ability to tap capital markets at reasonable borrowing rates.

Figure 2. Five-year government bond yields, three-month averages
%



Note: Three-month averages over the period of November 2021 to January 2022
Source: Macrobond, National Central Banks and Ministries of Finance, Scope Ratings GmbH

AEs have significantly lower yields than EMs...

For AEs, we observe very low bond yields, with more than half of the sample benefitting from negative yields on average over the observed period (**Figure 2**). The bond yields of EMs are markedly higher than in the AE group, by about 6pp on average. The yields of every EME in our sample except for China (A+/Stable) and Thailand are well above the highest in the AE sample (at 3.0% for Czech Republic, AA/Stable). Debt for some EMs is particularly elevated, restricting their access to international capital markets, with Turkey (B-/Negative), Egypt and Brazil registering average medium-term government bond yields of above 10%.

...driven in part by accommodative central bank policies

Lower policy rates on average in AEs than in EMs account for a portion of the difference in funding costs between the two groups. Long-term funding costs in AEs have also benefitted greatly from the considerable monetary stimulus provided by their respective central banks. This has enabled the implementation of large-scale asset purchase programmes in recent years, pushing down long-term yields on government debt. Monetary policies have been typically more constrained in EMs. In response to the Covid-19 crisis, some EMs implemented asset purchase programmes focused on local currency bonds, but these were at a significantly smaller scale (1%-6% of GDP) than those of AEs (around 14% of GDP on average)². In Europe, even if additional net purchases conclude this year,

¹ Long-term government bond yields refer to the five-year government bond or its closest proxy.

² World Bank (2021), *Asset purchases in emerging markets: Unconventional policies, unconventional times*.

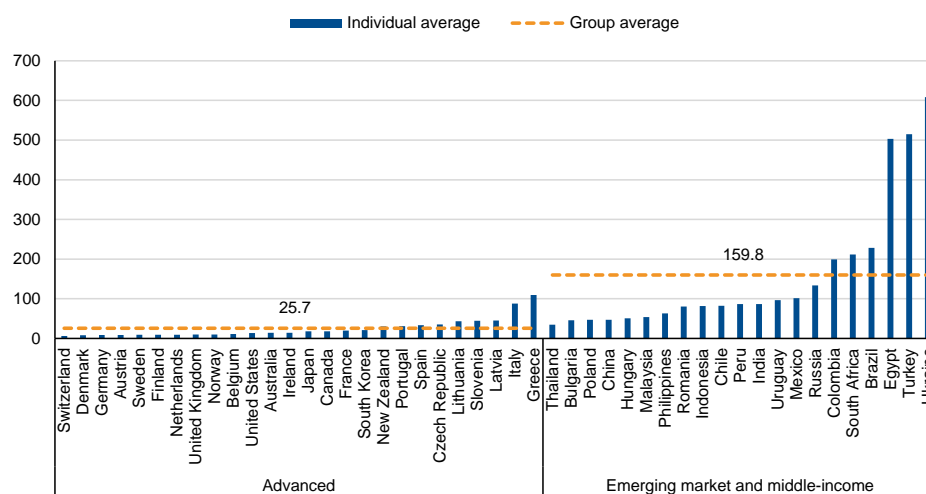
extended reinvestment periods will ensure central banks remain a comforting market presence in years to come.

2. CDS spreads

Rationale and latest developments

A lower (higher) CDS spread provides perceptions of lower (higher) default risk. Lower spreads indicate strong liquidity and lower market sensitivity to sudden shocks and/or policy announcements. A lower (higher) spread implies lower (higher) fiscal risks.

Figure 3. Five-year CDS spreads, three-month averages
bps



Note: Three-month averages over the period between November 2021 and January 2022. Argentina (1,945bps) was excluded from the sample due to singularly illiquid CDS market conditions. Source: Bloomberg, Scope Ratings GmbH

There is a large gap in CDS spreads between the two sampled groups, with the average spread for EMEs more than 200bps above the AE average. Italy (100bps) and Greece (128bps) stand out for spreads that were well above their AE peer average, in large part due to their recent debt crises (**Figure 3**).

CDS spreads very elevated for Ukraine, Turkey, Argentina and Egypt

Among EMEs, the Covid-19 pandemic led to a sharp rise in CDS spreads due to the more constrained policy responses and the expectation of longer-lasting economic scarring. Argentina has very high CDS spreads after defaulting on its debt in 2020. Turkey (B/Negative) and Egypt also have high spreads, reflecting in part a weak external position that makes them more vulnerable to short-term external shocks and debt sustainability risks. Finally, Ukraine's (CCC/Developing) spreads have soared above 6,000 since Russia's invasion at the end of February.

Analytical limits

Bond yields and CDS spreads are both susceptible to sharp market movements driven by long term factors. With almost all countries benefitting from historic low interest environment, the yield indicator alone may be insufficient for assessing fiscal risks. Similarly, the limited liquidity of CDSs in certain countries may lead to excessively high spreads as well as stark movements in response to shocks or policy announcements. The Russia-Ukraine crisis is a case in point, with significant swings in these indicators for both countries since the start of the military conflict.

Debt structure

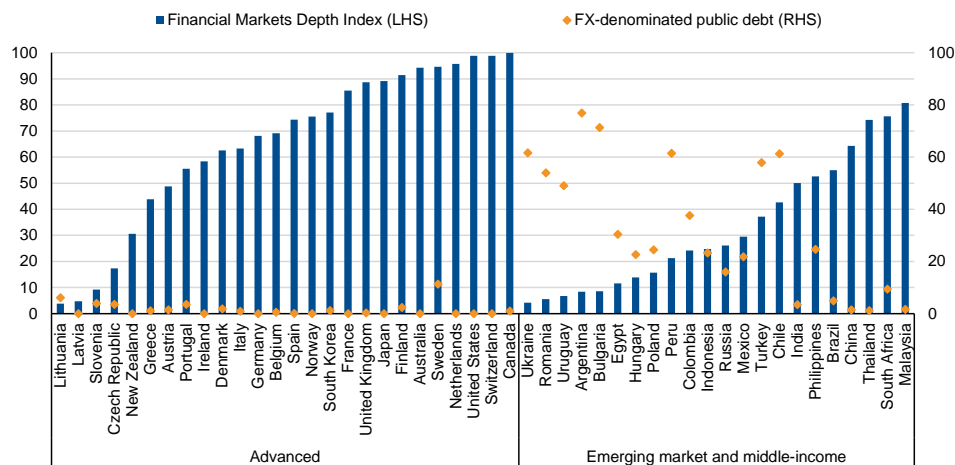
Here we assess a sovereign's: i) debt stock currency denomination, ii) short-term need to obtain (market) financing, i.e., gross financing needs; iii) investor base; and iv) average maturity of public debt.

3. Share of foreign currency denominated debt

Rationale and latest developments

An elevated share of foreign-denominated public debt exposes a sovereign to movements in foreign exchange markets, as a depreciation of the national currency renders debt repayment more costly.

Figure 4. Financial markets depth index & share of foreign-denominated public debt index score (LHS), % of total (RHS)



Source: Bloomberg, IMF, Scope Ratings GmbH

AEs have a very low share of FX debt, contrary to EMs...

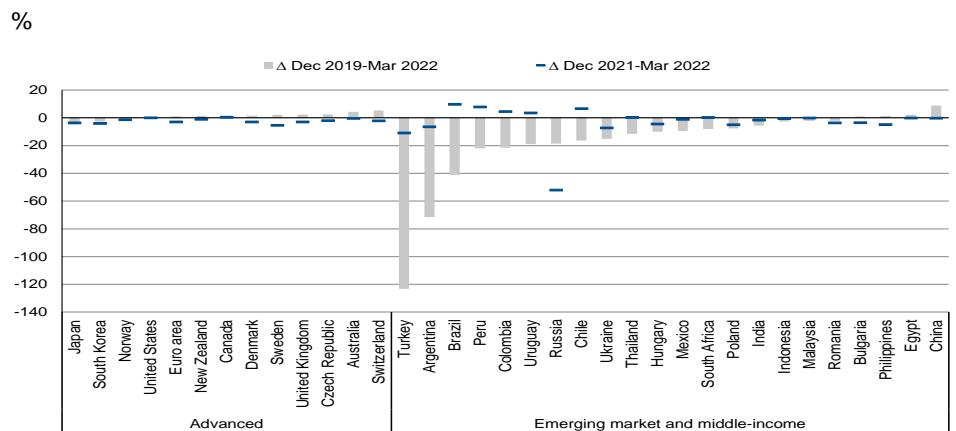
AEs within our sample benefit from a very low share of foreign-denominated public debt, at 1.5% on average in our sample, reflecting broad adoption of their national currencies by investors (**Figure 4**). This largely shields these sovereigns from movements in currency markets. Conversely, EMs within our sample are much more exposed to currency risk, with a third of foreign denominated liabilities on average. The exposure is particularly acute for Bulgaria and Argentina, with more than two thirds of their debt stocks denominated in foreign currencies.

...as they benefit from deeper domestic markets

A key differentiating factor between the subsample relates to the gap in financial markets depth, a factor we estimate using the IMF's Financial Markets Depth Index (FMDI)³. Deeper domestic financial markets should allow governments to fund a large share of their financing needs in their own currency, as is the case for most AEs in our sample. Despite very low FMDI scores, Lithuania, Latvia and Slovenia to issue debt in their own currency as euro area members. EMs with the deepest capital markets – including Malaysia, South Africa and Thailand – also count among the sovereigns with the highest share of domestically denominated public debt in their subsample.

³ IMF (2016), *Introducing a New Broad-based Index of Financial Development*

Figure 5. Change in currency valuation against the USD



Source: IMF, Scope Ratings GmbH

AEs have more stable currencies than EMEs

Additionally, while most AEs currencies are broadly stable, EMEs are typically more prone to experience large swings in currency valuations (**Figure 5**). Within our sample, this was the case in the recent period for Turkey, Argentina and Brazil, which suffered from large depreciations against the US dollar in the period from December 2019 to today (by 55%, 42% and 29%, respectively). This development was singularly unfavorable for Argentina and Turkey, whose debt is mostly foreign denominated.

Analytical limits

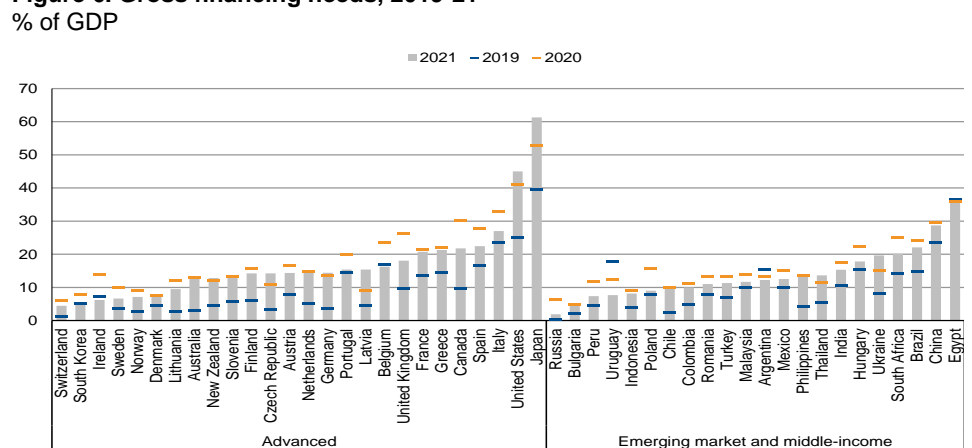
A limitation of this approach is that it does not account for the hedging strategies that governments can adopt to offset their exposure to currency risk, e.g., through derivative financial instruments.

4. Public gross financing needs

Rationale and latest developments

Mismatches between gross financing needs (GFNs) and financing sources may lead to liquidity pressures during a downturn. The larger (smaller) the GFN, the more (less) a sovereign relies on capital markets and/or other lenders to cover upcoming obligations⁴.

Figure 6. Gross financing needs, 2019-21



Source: IMF, Scope Ratings GmbH

Elevated GFNs for Japan, US, Italy and Spain...

⁴ Gabriele, C. et al. (2017), *Debt Stocks Meet Gross Financing Needs: A Flow Perspective into Sustainability*, ESM Working Paper.

While the two sampled groups on average had similar GFNs in 2019 (around 10% of GDP), the average increase in GFNs differed during 2020: by 90% for AEs and only 52% for EMEs (**Figure 6**). The gap further widened in 2021 after EMEs reduced GFNs faster than AEs. This divergence reflects the more forceful fiscal stimulus to the Covid-19 crisis among AEs.

...but also Egypt, China and Brazil

Some sovereigns' GFNs exceed the IMF's suggested threshold of 20% of GDP⁵, increasing their refinancing risk in the coming years. Among the AEs, these include Japan (A/Stable, 61%), the USA (AA/Stable, 45%), Italy (BBB+/Stable, 27%), Spain (A-/Stable, 22%), Canada (22%), Greece (BB+/Stable, 21%) and France (AA/Stable, 21%), mostly on account of their high debt and associated elevated rollover needs. EMEs above this threshold include South Africa (20%), Brazil (22%), China (29%) and Egypt (37%), which have less funding flexibility and more constrained market access than major AEs.

Analytical limits

The main limitation is that this indicator does not account for the degree and flexibility with which sovereigns can tap capital markets. A country with a reserve currency, deep capital markets and excellent market access, such as the US and Japan, can sustain higher GFNs compared with sovereigns whose access is limited or at risk, all else remaining equal.

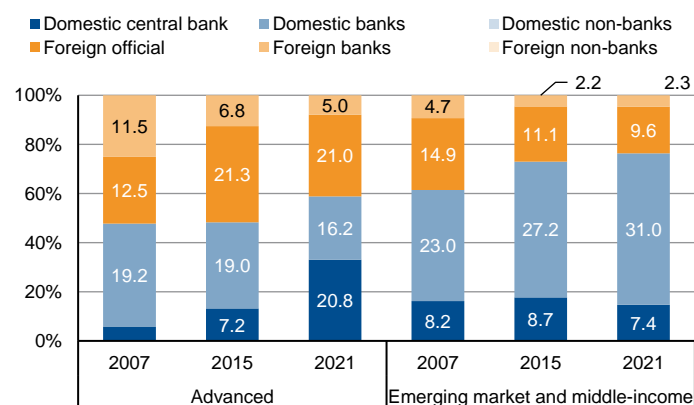
5. Investor base

Rationale and latest developments

A sovereign's investor base has important consequences for its fiscal sustainability, specifically, in terms of borrowing costs, refinancing risks and market access, the sovereign-banking nexus and international financial spill-over risks.

Figure 7. Investor base

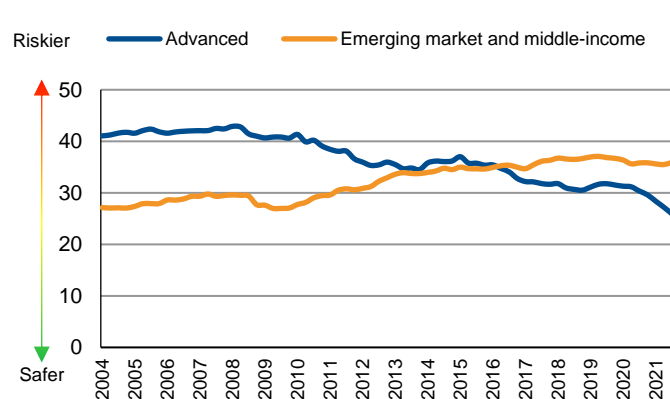
% of total



Source: IMF, Scope Ratings GmbH

Figure 8. Scope's investor base risk index

0 = low risk; 100 = highest risk



Source: IMF, Scope Ratings GmbH

Based on IMF data, we looked at investor bases over six categories: domestic central banks, domestic banks, domestic non-banks, the foreign official sector, foreign banks and foreign non-banks⁶.

Domestic and foreign official debt holders safer than foreign banks and non-banks

We assessed the degree of risk related to a sovereign's debt-holding structure using the investor base risk index, which measures the sensitivity of an investor base to a rise in yields, as computed in a previous [Scope publication](#)⁷. We assume that in a future crisis, domestic and foreign official debt holders would again resort to stabilising measures by

⁵ IMF (2013), [Staff Guidance Note for Public Debt Sustainability Analysis in Market-Access Countries](#).

⁶ Non-banks include insurance companies, pension and investment funds, as well as households and non-financial corporations. The foreign official sector includes foreign central banks and other foreign official creditors (multilateral and bilateral loans).

⁷ See Scope (2019), [Sovereign debt holders: shifts in the investor base have refinancing risk implications](#)

AEs share of 'sticky' investors increased due to central banks while it decreased for EMEs

holding or buying bonds when yields rise, even given the already much larger sovereign debt stocks than in the past. Conversely, we assume that foreign banks and foreign non-banks would again reduce their holdings should yields rise unexpectedly.

The investor base risk has been diverging markedly between the two sampled groups since 2004, with the average risk score declining steadily for AEs but increasing for EMEs (**Figure 8**). This largely reflects the larger share of domestic central banks in AE investor bases following the large-scale quantitative easing implemented since 2008. Conversely, for EMEs the share of more stable debt holders, such as the official sector and domestic non-banks, decreased relative to that of less 'sticky' sources, especially foreign non-banks.

Additionally, the sovereign-bank nexus appears stronger among EMEs, with domestic banks holding 29% of public debt on average in our sample against 17% for AEs. While domestic banks are stickier debt holders and less prone to flight during shocks, a greater inter-connectedness between a sovereign and its banking system makes sovereign debt crises more likely and threatens domestic financial stability.

Turkey, Thailand, Russia, Egypt and China are among EMEs whose domestic banking systems hold the highest share of public debt, at more than 40% of the debt stock, while the Czech Republic is the only AE above this level. The sovereign-bank nexus in China is particularly strong, with more than 85% of public debt held by domestic banks.

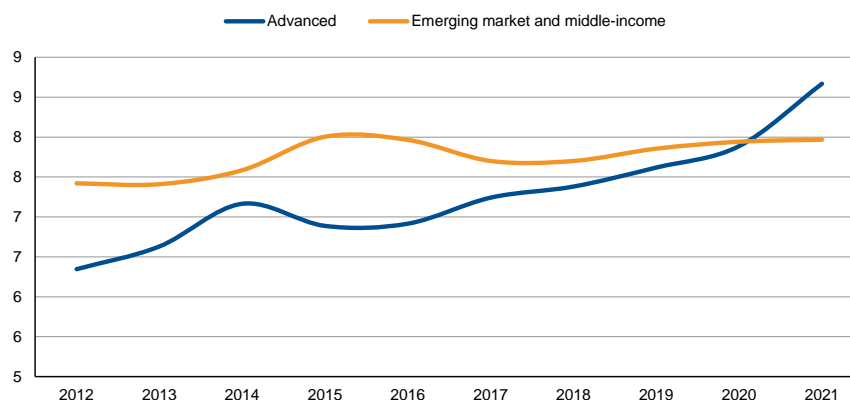
Analytical limits

We built our investor base risk index using estimates of the sensibility of each investor type as observed during the crisis episode between Q2 2008 and Q2 2012. Therefore, it relies on the assumption that the six investor types would respond similarly to a crisis today.

6. Debt maturity

The average maturity of a sovereign's debt indicates the sensitivity of its average cost of debt to changes in interest rates. This measure also captures refinancing risks. A longer (shorter) average debt maturity prolongs (reduces) the time over which higher interest rates can feed into the average cost of debt and is therefore associated with lower (higher) refinancing risks.

Figure 9. Average debt maturity
Years



Source: IMF, Bloomberg, Scope Ratings GmbH

Debt maturities lengthened in most countries over past years

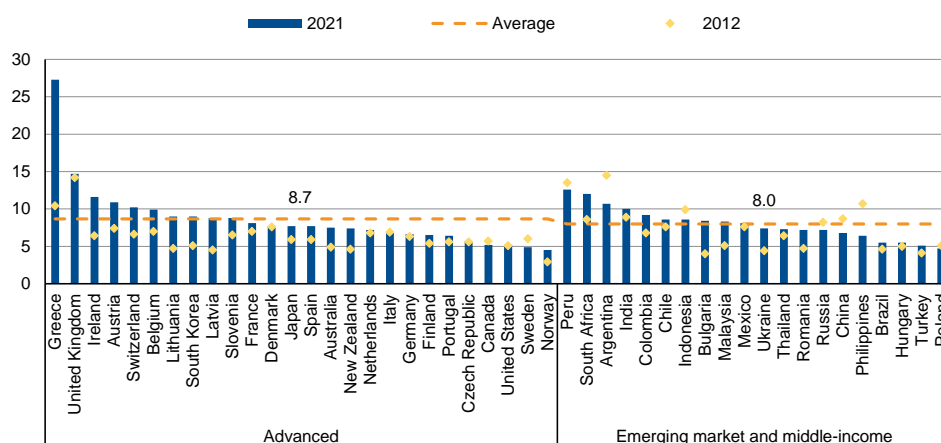
While the country grouping averages for AEs and EMEs are similar, the average maturity of public debt increased for AEs over the observed period while remaining stagnant for EMEs (**Figure 9**). Several AEs have taken advantage of the low interest rates to extend debt maturities, led by Lithuania (+4.3 years), Latvia (+4.3) and Ireland (+5.2, **Figure 10**).

Greece an important outlier

Greece's average debt maturity increased materially to above 25 years following its 2012 debt restructuring.

The average conceals diverging results for EME sovereigns, with countries such as Egypt and Chile having vastly lengthened their debt maturities, while others such as the Philippines and Argentina holding much shorter maturities today than in 2012.

Figure 10. Average debt maturity, 2012-21
Years



Source: IMF, Bloomberg, Scope Ratings GmbH

Sovereigns with short average debt maturities are more likely to see a rapid rise in their average cost of debt when interest rate rise. Such countries include Poland (A+/Stable), Norway (AAA/Stable), Sweden (AAA/Stable) and Turkey. On the other hand, sovereigns with long debt maturities, including Greece, the United Kingdom (AA/Stable), Peru and South Africa, tend to benefit from a more gradual feedthrough of rising interest rates into their average cost of debt.

Debt dynamics and long-term sustainability considerations

Here we assess: i) the interest rate-growth differential; ii) changes in interest burdens in view of rising debt stocks; iii) *de facto* fiscal space, that is, the years of government revenue it would take to repay public debt; and iv) the net present value of a sovereign's pension and healthcare liabilities.

7. Interest rate – growth differential

Rationale and latest developments

Lower interest rates expand the boundaries of a government's debt sustainability. When the nominal growth rate can offset the nominal interest rates' impact on the debt ratio for a given primary balance, debt dynamics will be favourable and support fiscal space.

Sovereigns with a positive interest rate-growth differential have less fiscal space to absorb higher interest rates. However, given the expectation this year of a growth rebound, higher inflation and gradually increasing interest rates, the interest-rate growth differential is negative for nearly all sovereigns in our sample (**Figure 11**). The differential is positive for two emerging market sovereigns only, Mexico and South Africa, indicating their slightly more limited fiscal space going forward.

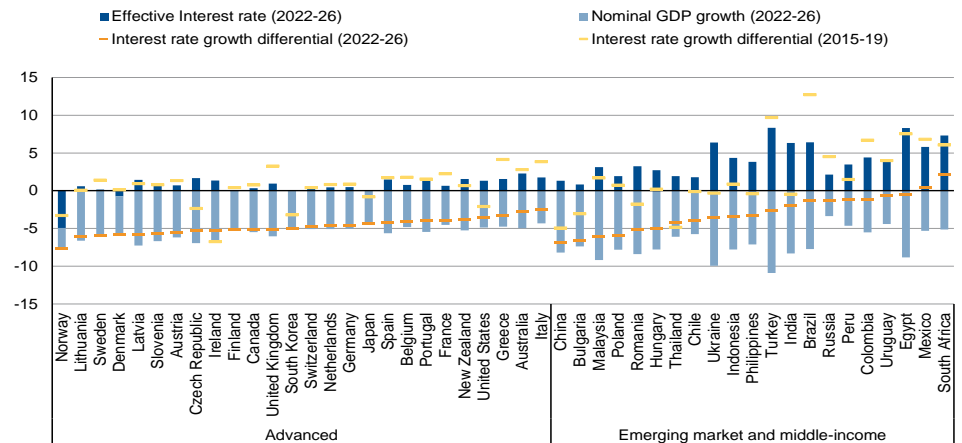
On average, the differential was about 1.8pps wider for AEs than EMEs within our sample. Nearly every country in our sample, with the exception of Thailand and Ireland, is expected to see its interest rate-growth differential improve over the forecast period compared to the

Higher nominal growth will result in negative interest rate-growth differential for most countries

2015-19 period. This should enhance fiscal space and support the stabilization of national public debt.

Figure 11. Interest rate – growth differentials, 2022-26F

pps



Source: IMF, Scope Ratings GmbH

Analytical limits

This variable does not consider the primary balance. If markets are short-sighted, the analysis may also not account for the effects of population ageing. When interest rates are persistently below the growth rate, governments can run higher (structural) deficits. This approach also ignores the risk and impact of macro-economic shocks.

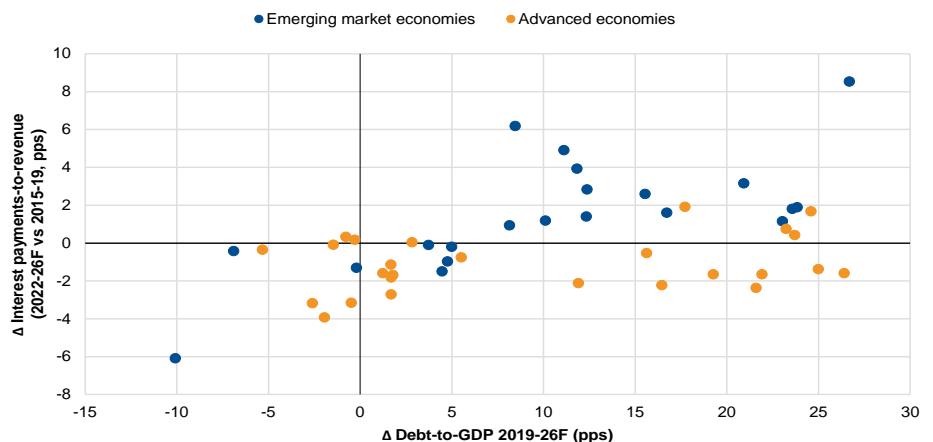
8. Interest payments vs debt burden

Rationale and latest developments

Focusing on the debt-to-GDP ratio compares a stock with a flow variable, while interest payments relative to fiscal revenue appropriately measures the relevant flow variables to inform medium-term debt sustainability challenges.

Figure 12. Change in public debt and interest payments

pps



Source: IMF, Scope Ratings GmbH

Debt-to-GDP ratios have increased sharply with the fiscal response to the pandemic and are expected to remain substantially higher than pre-crisis levels for most countries.

AEs interest payments decline despite higher debt – the opposite is true for most EMEs

However, there is a clear difference between AEs and EMEs regarding the impact on interest payment burdens (Figure 12).

For most AEs sampled, interest payments will decline or remain stable over the forecast period compared to pre-crisis levels, supported by rising revenue and still favourable funding rates. By contrast, interest payments will increase for more EMEs.

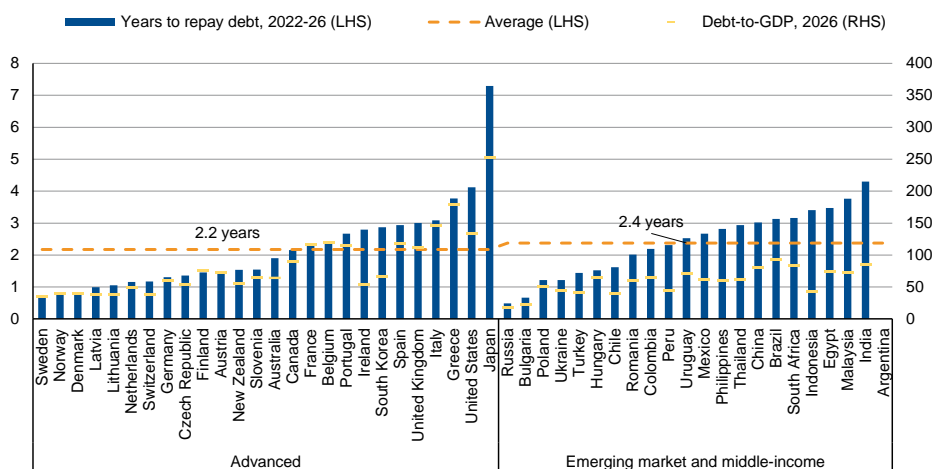
Within the EME sample, however, there are large differences. Some are expected to face markedly sharp increases in interest payments, including South Africa (+8.5pps), Turkey (+6.2pps) and India (+4.9pps). Conversely, Egypt stands to benefit from a 6.1pps decrease in its interest payments relative to its revenues, though the ratio should remain the highest in our sample with an average of 33% over 2021-26.

9. Years to repay public debt

Rationale and assessment

The concept of *de facto* fiscal space⁸ refers to the inverse of the tax years needed to repay public debt. This is the ratio of outstanding public debt to realised government revenue, averaged across several years to smoothen out for business cycle fluctuations. Low public debt relative to the tax base implies greater fiscal capacity to fund stimulus via the existing tax capacity.

Figure 13. Years to repay debt, 2022-26



Source: IMF, Scope Ratings GmbH

High debt and high tax revenues for AEs such as Italy and Greece; US and China relatively lower tax revenues

We examine the years of government revenue it would take to repay public debt using IMF projections for 2022-26 (Figure 13). On this basis, Japan (7.3 years), the USA (4.1), Greece (3.8) and Italy (3.1) stand out, reflecting their elevated public debt levels. For the USA (4.1) and China (3.0), a combination of high public debt and relatively modest tax revenues (around 30% of GDP) drives the high number of years. However, this probably overstates the fiscal risks of these two countries as their low tax shares also indicate further taxing space, even if these levels are politically difficult to raise significantly. This contrasts with some of the countries with already elevated levels of tax revenues to GDP, including France (51%), Belgium (50%) and, to a lesser extent, the UK (37%).

⁸ Aizenman, J. & Y. Jinjarak (2010), *De facto fiscal space and fiscal stimulus: definition and assessment*.

EMEs usually have lower debt and revenues, but still potential to raise revenue

Scandinavian countries as well as Central and Eastern European countries such as Latvia, Lithuania, Russia and Bulgaria benefit from significant fiscal space according to this metric, as they would need less than a year of tax revenues to repay debt.

Overall, despite the similar averages between the two sampled groups, the aggregates point to opposing realities. AEs hold higher debt stocks on average but have higher fiscal revenues. Conversely, EMEs on average are less indebted but generate lower revenues relative to GDP, reflecting constrained revenue mobilisation due to less sophisticated fiscal systems and more informal economies. Still, we consider highly indebted AEs with already high revenues relative to GDP to be the most at risk in the entire sample.

Analytical limits

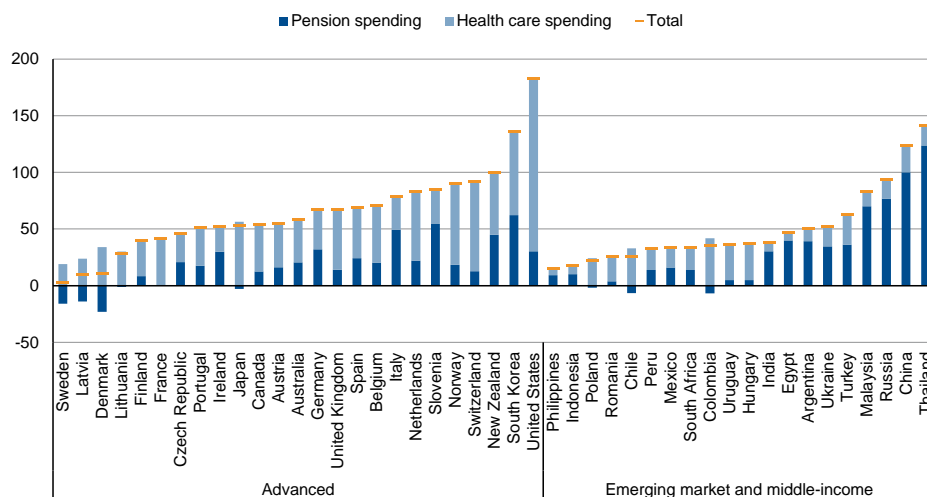
This indicator does not account for many factors that determine fiscal space, including growth, interest rate levels, and the medium-term impact of population ageing on pension and healthcare spending. As mentioned above, it may also overstate (understate) risks if tax revenue as a share of GDP is low (high), because this may imply the presence of more (even less) space for raising tax collections.

10. Net present value of future pension and healthcare liabilities

Rationale and assessment

Here we look at the IMF's projected pension and healthcare liabilities for sovereigns over the 2021-50 horizon as a measure of long-term fiscal pressures (**Figure 14**). Specifically, these relate to the net present value (NPV) of estimated pension and healthcare liabilities, assuming growth, inflation and interest rates remain equal.

Figure 14. NPVs of pension and healthcare liabilities, 2020-50
pps



Source: IMF, Scope Ratings GmbH

US healthcare liabilities stand out

AEs in our sample are facing large additional pension and healthcare spending over the forecast horizon, driven by their ageing societies. The USA stands out for its very high healthcare liabilities, at more than 150% of GDP, reflecting its costly private sector-oriented healthcare system.

Russia, China and Thailand have elevated pension liabilities

The sampled EMEs have more modest pension and healthcare liabilities, with NPVs at 50.5% of GDP on average (about 15pps below those of AEs) given EMEs' generally more favourable demographics. However, some EMEs stand out for their high pension spending, including Russia (77% of GDP), China (100%) and Thailand (124%), owing to their adverse demographic trends and more contained healthcare spending.

Analytical limits

The main limitation is that the NPV estimates of pension and healthcare liabilities may use different discount rates and internal rates of return on contributions to pension systems financed according to the pay-as-you-go principle. For simplicity, we relied on the IMF's Fiscal Monitor, which estimates NPVs based on a discount rate of 1% a year in excess of GDP growth for 2020-50. We note that rising inflation and interest rates should lead to a revision in the discount rate assumption that that used by the IMF in its latest NPV calculations. We also note that social security reforms can cause these commitments to change. Still, this calculation shows the challenges some countries with elevated social welfare costs face in the medium to long run.

Limitations

These indicators are helpful in measuring countries' relative fiscal space and capacity to cope with fiscal risks over the medium term, for example, with rising interest rates. Still, whether a sovereign borrower loses market access and can therefore no longer service its debt depends on several factors including risk-free interest rates, potential output growth, fiscal track records, economic development, market sentiment and macro-economic shocks – and in the case of Russia, the dangers of waging war and incurring draconian international sanctions.

In addition, we note that our analysis does not consider the benefits derived from global reserve currencies. The USA, Japan and euro area countries benefit from the wide use of their currencies in the international monetary and financial system. This allows them to run sustained fiscal deficits with limited debt sustainability concerns. Public finance risks, while present for these countries, are therefore lower than that implied by this analysis.

Our analysis also does not consider aspects related to fiscal rules. While well-designed fiscal rules instil market confidence and thus promote public debt sustainability, they may also constrain fiscal policy flexibility and lead to excessive fiscal austerity during recessions. Countries may have enough fiscal space to implement the fiscal stimulus required to support their economies, but a looser fiscal policy stance may at times conflict with existing fiscal rules or political priorities. The forthcoming revision of the EU's Stability and Growth Pact will have major implications for the fiscal stance and flexibility of EU member states as well as their growth outlooks.

Finally, governments can lower public finance risks⁹ in many ways such as i) implementing structural reforms that raise a country's growth potential and consequently its tax base; ii) raising additional revenues through taxes or strengthening tax collection; iii) cutting lower-priority expenditure; iv) tapping concessional or grant based support; and finally, v) using their power of seigniorage (that is, having the central bank print money and lend it to the government in order to take advantage of the differential between the value of money and the cost of producing it). All of which is a reminder that public finance risks are dynamic and warrant constant monitoring and reassessment.

Reserve currency status reduces fiscal risks

Fiscal rules can constrain policy space

Several avenues for reducing public finance risks

⁹ International Monetary Fund (2005), [Understanding Fiscal Space](#).

Annex: Overview of Scope's main indicators

Country	Short-term financial market factors		Debt profile indicators					Debt dynamics and long-term sustainability indicators				
	Long-term government bond yield	CDS spreads	Foreign currency denominated public debt	Financial markets depth index	Public gross financing needs	Sovereign investor base risk index	Debt maturity	Interest rate – growth differential	Change in debt-to-GDP	Change in interest payments-to-revenue	Years to repay public debt	NPV of future pension and healthcare liabilities
	11/21-01/22 average, %	11/21-01/22 average, bps	2021, % of total	2019	2021, % of GDP	2021 Q3	2021, years	2022-26, pps	2022-26 vs 2015-19, pps	2022-26 vs 2015-19, pps	Years	2020–50, % of GDP
Australia	1.4	14.0	0.0	94.3	12.6	22.2	7.5	-2.7	17.7	1.9	1.9	58.7
Austria	-0.4	8.9	1.4	48.8	14.3	43.4	10.9	-5.5	1.7	-1.8	1.5	54.6
Belgium	-0.4	11.3	0.5	69.1	16.3	44.8	9.9	-4.1	21.6	-2.4	2.4	70.5
Canada	1.5	18.1	1.0	100.0	21.8	20.2	5.2	-5.1	2.8	0.0	2.2	54.2
Czech Republic	3.0	35.1	3.5	17.3	14.3	35.3	5.7	-5.3	23.7	0.4	1.4	46.2
Denmark	-0.3	7.8	1.8	62.6	7.9	9.9	7.7	-5.9	5.5	-0.8	0.8	11.0
Finland	-0.4	9.2	2.3	91.5	14.2	30.9	6.5	-5.1	15.6	-0.5	1.5	39.7
France	-0.4	20.0	0.0	85.5	20.7	35.0	8.1	-3.9	19.3	-1.7	2.3	41.8
Germany	-0.5	8.7	0.0	68.2	14.4	20.3	6.6	-4.6	1.7	-1.1	1.3	67.4
Greece	0.6	109.2	1.1	43.8	21.3	12.9	27.29	-3.2	-5.3	-0.3	3.8	-
Ireland	-0.4	14.4	0.0	58.4	6.2	39.4	11.6	-5.2	-2.6	-3.2	2.8	52.1
Italy	0.3	88.1	0.9	63.3	27.0	32.5	6.9	-2.6	11.9	-2.1	3.1	78.8
Japan	-0.1	17.8	0.0	89.1	61.3	16.7	7.7	-4.4	16.5	-2.2	7.3	53.7
Latvia	-0.1	45.3	0.0	4.7	15.4	28.1	8.8	-5.8	1.2	-1.6	1.0	10.0
Lithuania	-0.2	43.4	6.1	3.8	9.5	30.2	9	-6.1	1.7	-2.7	1.1	28.9
Netherlands	-0.4	9.3	0.0	95.8	14.4	8.7	7.2	-4.6	1.8	-1.7	1.2	83.1
New Zealand	2.3	30.6	0.0	30.6	12.8	21.9	7.4	-3.7	23.2	0.7	1.5	99.6
Norway	1.6	10.0	0.0	75.5	7.1	28.4	4.5	-7.6	-0.8	0.3	0.8	89.8
Portugal	-0.2	30.9	3.5	55.5	15.4	26.0	6.4	-4.0	-2.0	-3.9	2.7	51.8
Slovenia	-0.3	44.4	3.9	9.2	13.5	40.9	8.8	-5.7	-0.5	-3.2	1.5	84.9
South Korea	2.1	20.8	1.2	77.1	5.4	17.1	9	-4.9	24.6	1.7	2.9	136.1
Spain	-0.1	33.1	0.1	74.3	22.4	38.5	7.7	-4.2	21.9	-1.7	2.9	69.3
Sweden	0.1	8.9	11.3	94.6	6.7	13.9	4.9	-6.0	-0.3	0.2	0.7	3.0
Switzerland	-0.4	6.0	0.0	98.8	4.4	13.8	10.2	-4.8	-1.5	-0.1	1.2	92.0
United Kingdom	0.7	10.0	0.2	88.7	18.0	26.4	14.7	-5.1	26.4	-1.6	3.0	67.6
United States	1.3	13.4	0.0	98.8	45.0	17.0	5.2	-3.6	25.0	-1.4	4.1	182.6

Source: Bloomberg, IMF, National Central Banks and Ministries of Finance

Emerging markets face higher public finance risks as interest rates rise than advanced economies

Country	Short-term financial market factors		Debt profile indicators					Debt dynamics and long-term sustainability indicators				
	Long-term government bond yield	CDS spreads	Foreign currency denominated public debt	Financial markets depth index	Public gross financing needs	Sovereign investor base risk index	Debt maturity	Interest rate – growth differential	Change in debt-to-GDP	Change in interest payments-to-revenue	Years to repay public debt	NPV of future pension and healthcare liabilities
	11/21-01/22 average, %	11/21-01/22 average, bps	2021, % of total	2019	2021, % of GDP	2021 Q3	2021, years	2022-26, pps	2022-26 vs 2015-19, pps	2022-26 vs 2015-19, pps	Years	2020–50, % of GDP
Argentina	-	1945.0	76.9	8.4	12.2	33.4	10.7	-	-	-	-	50.8
Brazil	11.2	228.1	4.9	55.0	22.1	18.6	5.5	-1.3	4.8	-1.0	3.1	-
Bulgaria	-	45.6	71.3	8.6	4.8	44.2	8.4	-6.6	5.0	-0.2	0.7	-
Chile	5.7	82.4	61.3	42.7	9.9	55.9	8.6	-4.0	12.3	1.4	1.6	26.3
China	2.7	47.1	1.4	64.3	28.7	27.3	6.8	-6.9	23.0	1.2	3.0	124.0
Colombia	7.8	199.4	37.6	24.2	10.0	40.0	9.2	-1.1	12.4	2.8	2.2	35.1
Egypt	14.6	503.0	30.4	11.6	36.9	31.5	3.3	-0.5	-10.1	-6.1	3.5	46.6
Hungary	4.2	50.4	22.6	13.9	17.8	35.9	5.5	-5.1	-0.2	-1.3	1.5	37.4
India	5.8	86.7	3.4	50.1	15.4	11.9	10	-2.0	11.1	4.9	4.3	38.6
Indonesia	5.4	81.8	23.3	24.7	8.1	38.9	8.6	-3.4	11.8	3.9	3.4	17.5
Malaysia	3.2	53.6	1.6	80.7	11.7	34.9	8.3	-6.1	15.5	2.6	3.8	83.1
Mexico	7.4	101.7	21.8	29.5	12.5	34.3	8.1	0.5	8.1	0.9	2.7	33.5
Peru	-	86.6	61.5	21.2	7.4	57.3	12.6	-1.2	16.7	1.6	2.3	33.2
Philippines	4.1	63.0	24.6	52.6	13.2	23.3	6.4	-3.3	23.8	1.9	2.8	15.3
Poland	3.5	47.1	24.5	15.7	9.0	30.3	4.7	-5.9	4.5	-1.5	1.2	22.3
Romania	5.0	80.5	54.0	5.5	11.0	50.8	7.2	-5.2	23.6	1.8	2.0	25.6
Russia	8.8	133.7	16.0	26.1	1.9	34.1	7.2	-1.2	3.7	-0.1	0.5	94.2
South Africa	6.6	211.3	9.4	75.6	20.2	38.7	12	2.2	26.7	8.5	3.2	33.6
Thailand	1.3	34.8	1.2	74.3	13.7	25.8	7.3	-4.2	20.9	3.2	2.9	141.5
Turkey	21.9	515.0	57.9	37.2	11.3	36.0	5.1	-2.6	8.5	6.2	1.4	62.5
Ukraine	-	608.2	61.7	4.2	19.7	38.2	7.4	-3.6	-6.9	-0.4	1.2	52.1
Uruguay	-	96.3	49.0	6.7	7.7	48.6	12.4	-0.6	10.1	1.2	2.5	36.3

Source: Bloomberg, IMF, National Central Banks and Ministries of Finance



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