21 April 2020

2020 External Vulnerability and Resilience rankings for 63 countries: Covid-19 Crisis update

Amid the 2020 global pandemic, Georgia, Turkey and Argentina are the "risky-3" in Scope's biennial update of its external vulnerability and resilience framework, whereas Taiwan, China and Switzerland are the 2020 "sturdy-3" of the most well positioned economies against external shocks from a sample of 63 economies.

Fraught global trading and "risk-off" market conditions exacerbated by the coronavirus outbreak and oil price declines of 2020 expose vulnerabilities that many economies face due to balance of payment pressures. This year, Lebanon defaulted on a USD 1.2bn Eurobond, Argentina and Ecuador's debts re-entered selective default, and Zambia is on the brink. There are concerns about a wider emerging market crisis. Meanwhile, with Brent prices at below USD 30 a barrel, this level is significantly under prices all oil exporters require for balanced budgets. With severe stressing factors in play, external vulnerabilities are key to monitor in assessing countries' debt repayment capacities.

In this report, Scope provides an update of its external vulnerability and resilience two-axis coordinate grid, introduced in 2018, which assesses countries on a) *vulnerabilities* to balance of payment crisis and b) degrees of *resilience* in the advent of such crises.

Figure 1: Top 5 weakest and strongest countries, external risk framework

Top 5 strongest

Overall Rank[1]	Total Score	Country	Vulnerability Score	Vul. Rank[1]	ΔRk[2]	Resilience Score	Res. Rank[1]	ΔRk[2]
1	17.0	Taiwan	7.8	5	5	9.2	3	2
2	16.7	China	7.1	12	7	9.6	1	2
3	15.7	Switzerland	8.5	2	-1	7.2	20	1
4	15.6	Thailand	7.3	9	-3	8.3	8	-1
5	15.5	Malta	6.6	20	2	8.9	5	-1

Top 5 weakest

Overall Rank[1]	Total Score	Country	Vulnerability Score	Vul. Rank[1]	ΔRk[2]	Resilience Score	Res. Rank[1]	ΔRk[2]
63	4.3	Georgia	3.1	63	0	1.1	63	0
62	8.3	Turkey	4.4	52	10	3.8	58	-8
61	8.4	Argentina	4.3	58	-6	4.1	56	-3
60	8.5	Ukraine	4.8	48	13	3.7	59	1
59	9.0	Colombia	4.1	60	-1	4.9	51	-6

[1]Of 63 countries. Full scores and rankings for 63 countries in Annex I. [2]Change in axis rank since 2018 update.

Scope's 2020 external vulnerability and resilience rankings indicate a fresh "**risky-3**" of Georgia (rated BB/Negative), Turkey (BB-/Negative) and Argentina (unrated) – three economies that not only have vulnerability to the onset of balance of payment issues but also show significant weakness in abilities to withstand crises. Argentina slides into this year's risky-3, edging out Ukraine, which was in the original 2018 risky-3 roster. Ukraine, Colombia, Indonesia, Egypt and Pakistan (all unrated) are highly at-risk economies just outside the riskiest 3. In addition, Scope observes a 2020 "**sturdy-3**" of Taiwan (unrated), China (A+/Negative), and Switzerland (AAA/Stable) – economies that are the most robust to external shocks. Taiwan replaces Japan (A+/Stable) in this year's sturdy-3.

Scores for **major Western economies** vary: the United States (AA/Stable) receives strong marks on external resilience, supported by dollar primacy (4th most resilient of 63), and Italy (BBB+/Stable) and Germany (AAA/Stable) continue to display external sector strengths – supported by current account surpluses. France (AA/Stable) has average scores but Spain (A-/Stable) continues to score weakly on both framework axes. The UK (AA/Negative) displays deficits especially on external vulnerabilities.

Inside the EU, Scope finds that Cyprus (BBB-/Stable), Croatia (BBB-/Stable) and Romania (BBB-/Negative) are the three EU member states facing the greatest external sector risks. On the other end, Malta (A+/Stable), Luxembourg (AAA/Stable) and Denmark (AAA/Stable) are the EU sturdy-3.

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Scope's external vulnerability and resilience framework

The Covid-19 crisis' impact on external risk

Scope's sovereign credit rating assessments are based on five analytical pillars, of which "external economic risk" represents one of these five dimensions, with a 15% weight in the overall sovereign rating review process. However, the significance of external sector risks may be disproportionately important in 2020 as global trade flows weaken to multi-decadal lows and capital outflows escalate amid a global sudden stop due to the Covid-19 crisis. Emerging economies exchange rates have been hit hard, making their foreign-currency-denominated debt more difficult to repay, while foreign and local currency borrowing rates have increased as investors become more sceptical about the most vulnerable issuers. International reserves decline as the crisis wears on and sources of FX revenues and capital inflows dry, threatening countries' capacities to source and repay external loans. With these risks to remain significant over the course of 2020, a lens on economies especially vulnerable to sudden deterioration in external trading and financial conditions is warranted.

Scope's external vulnerability and resilience coordinate grid

In this spirit, this report presents a biennial update on Scope's external vulnerability and resilience two-axis evaluation framework that assays countries on: i) their respective external *vulnerabilities* to the onset of balance of payment crises and ii) the extent of their *resilience* in the event of a balance of payment crisis.

Figure 2: External vulnerability and resilience framework (design)

	Variable	Axis weight
External vulnerability	Current account balance + net foreign direct investments, % of GDP	25%
	Net portfolio flows and other investment flows, % of GDP	25%
	Five-year standard deviation of monthly changes in nominal effective exchange rate	25%
	Net international investment position, % of GDP	25%
External resilience	Resilience against currency crises (reserve currency status and reserve coverage)	25%
	Share of general government debt held by non-residents	25%
	Foreign-currency-denominated general government debt, % of government revenue	25%
	Foreign-currency-denominated loans, % of GDP	25%

Source: Scope Ratings GmbH. Scope uses a minimum-maximum algorithm to determine a score under each of the eight above factors, with the score ranging from 0 (lowest) to 10 (highest) for each. Factor scores are then combined equally weighted to reach axes-level scores for each country under vulnerability and resilience. Details of this framework (introduced in 2018) and the individual variables can be found in Annex IV.

While external vulnerability assessments and rankings have traditionally centred on emerging markets, Scope notes that external risks are not unique to developing countries, but rather shared across nations, as evidenced over the European sovereign debt crisis when risks from large current account deficits, increasing Target 2 liabilities and external competitiveness gaps were exposed across peripheral Europe – instigating capital outflows and increases in bond yields. As such, this report is based on assessing a global set of economies – including advanced and emerging.

External vulnerability and resilience framework: global results

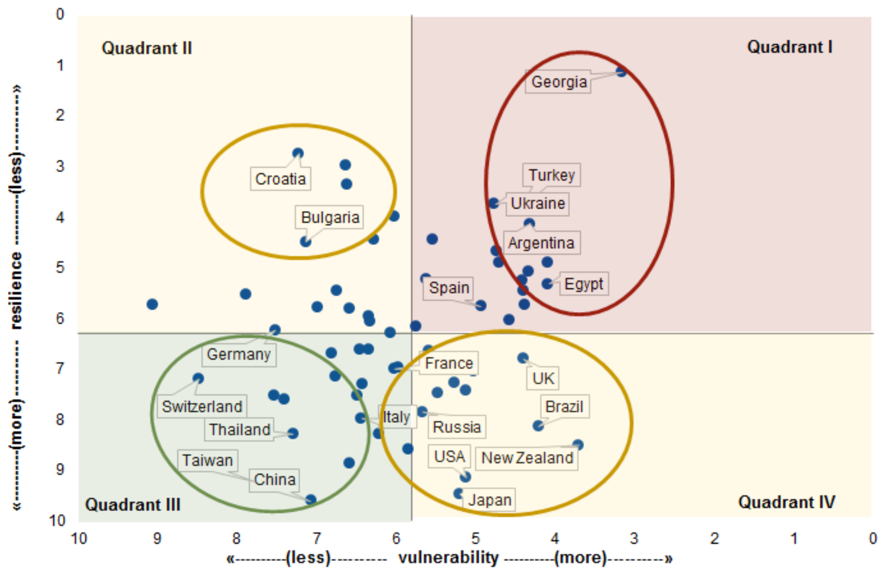
External vulnerability and resilience grid divided into four quadrants

Figure 3 (next page) displays the external vulnerability and resilience framework results for 63 countries[1]. The graph is divided into four quadrants: *Quadrant I.* countries that are vulnerable and not resilient to external shocks; *II.* countries that are not vulnerable to external shocks but also not resilient; *III.* those that not vulnerable to and resilient in the advent of a crisis; and *IV.* countries that are vulnerable but resilient. The dividing lines

[1] Scope's sovereign rating approach is based on a quantitative model and a qualitative overlay. The quantitative model – Scope's Core Variable Scorecard – is based on a relative scoring system based on 63 countries. Of these 63 countries, Scope issues public ratings for 36 sovereign borrowers.

between quadrants reflect the median country scores on the vulnerability and resilience axes. Individual country scores and rankings are summarised in Annexes I and II, underlying data is summarised in Annex III, and the summary of component variables is located in Annex IV.

Figure 3: External vulnerability and resilience grid



Source: Scope Ratings GmbH

In considering *overall* country rankings on the basis of a two-axis framework, we take into account the sum-score of the two axis-level scores.

Scope's 2020 risky-3

Scope's two-axis framework identifies a 2020 "risky-3" of:

1) Georgia
2) Turkey
3) Argentina

These are economies in Quadrant I of **Figure 3** that not only show vulnerability to the onset of balance of payment crises but also exhibit prevailing weaknesses in abilities to cope with crisis. Other countries amongst the most at risk in Quadrant I include Ukraine, Colombia, Indonesia, Egypt and Pakistan.

The 2020 sturdy-3

In addition, Scope observes a 2020 "sturdy-3" of economies in:

1) Taiwan
2) China
3) Switzerland

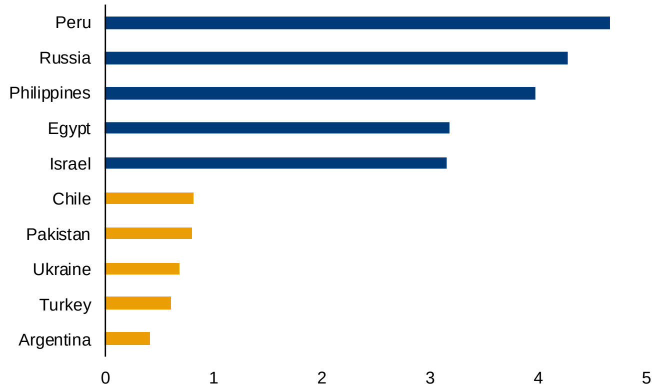
These are countries in Quadrant III of **Figure 3** that are not only less vulnerable to the onset of balance of payment crises but are also well positioned to deal with a crisis were one to take place. Thailand, Malta and Singapore are further economies amongst the least at risk.

Quadrant IV portrays countries that are vulnerable to but resilient in crises

Furthermore, Quadrant IV portrays a set of countries that are vulnerable to crisis but highly resilient in one, notably incorporating the US, the UK and Japan – reserve currency countries able to bridge global external shocks and paper over prevailing external vulnerabilities through currencies' safe haven statuses. Russia (BBB/Stable), with much enhanced FX reserve coverage (**Figure 4**), cushioning vulnerabilities from sharp drops in

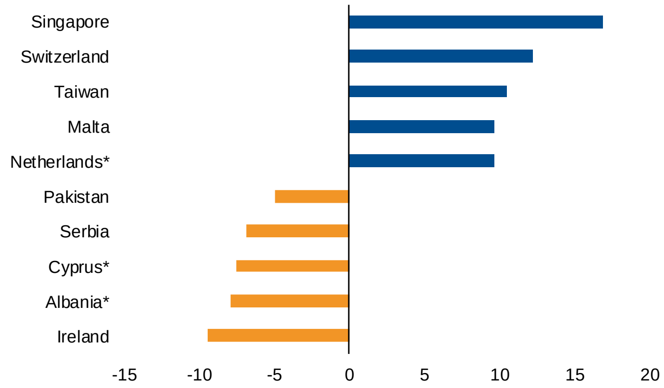
Brent crude prices in 2020 to under USD 30 a barrel, alongside Brazil and New Zealand (both unrated) are also Quadrant IV countries.

Figure 4: Top 5 highest and lowest levels of reserves relative to short-term external debt*, 2019



Source: IMF, Bank of Israel, Scope Ratings GmbH, *short-term external debt plus long-term external debt due in one year or less

Figure 5: Top 5 strongest and weakest current account balances, % of GDP, 2019



Source: National central banks and statistical offices, Haver Analytics, Scope Ratings GmbH, *as of Q3 2019

Scores for major Western countries vary

Scores for major Western countries vary. As noted, the United States is in Quadrant IV of **Figure 3** as the 20th most vulnerable (of 63 nations) to external crises – in view of a significant current account deficit of 2.3% of GDP in 2019 (moreover the world's largest current account deficit in nominal dollar terms), however anchored by the fourth highest resilience score in the 63 country-set, related to dollar primacy and limited foreign currency debt. Germany ranks strongly overall as the 7th *least* vulnerable economy – boosted by a 2019 current account surplus of 7.8% of GDP alongside a strong net international investment asset position – but Germany has only middling scores on resilience owing in part to high non-resident holdings of German government bonds. France is mid-table as the 33rd most vulnerable economy but 23rd most resilient. Italy is only the 41st most vulnerable, weakened though by capital outflows of recent years, but receives a very strong resilience mark (11th most resilient), helped by not only the euro reserve currency but also a high share of Italy's government debt held domestically (almost 70% as of Q2 2019). Spain is a Quadrant I economy and receives a weak overall score – as the 17th most vulnerable economy, weakened by net international investment liabilities of 78% of GDP as of Q3 2019, alongside receiving the 24th poorest mark on external resilience due to high non-resident holdings of government debt and significant foreign-currency-denominated lending in the Spanish banking system.

Among Scandinavian economies – Sweden, Norway and Denmark (all rated AAA/Stable) receive strong scores, with healthy current accounts and robust net international investment positions (NIIPs), as well as developed-market, safe-haven currencies.

The UK ranks as the 9th most vulnerable economy (a modest improvement from 8th most vulnerable in the 2018 report), but nonetheless weighed upon by a wide current account deficit (of 3.8% of GDP in 2019), and sterling volatility in recent years related to Brexit uncertainties. While the UK's resilience mark is bolstered by sterling's reserve currency status (4.6% of all global allocated reserves were held in sterling in Q4 2019), the UK ranks overall as only the 25th most resilient country, weakened by high foreign-currency lending in the City of London.

Scope's Risky-3 in more detail

We next discuss the 2020 risky-3 of Georgia, Turkey and Argentina, as well as Ukraine (as the fourth weakest country in the 2020 rankings) in greater detail.

Georgia scores poorly, displaying high vulnerability alongside low external resilience

As was the case in the 2018 update, the weakest country in the 2020 report is **Georgia** (BB/Negative). Georgia displays high external vulnerability and low resilience to balance of payment crises. The economy has displayed elevated current account deficits, reflecting high investment needs of a developing economy with inadequate domestic savings, a narrow export base, and a dependence on goods imports. The current account deficit has, however, declined from -6.8% of GDP in 2018 to -5.1% in 2019 and has been, moreover, predominantly financed over the last decade by more reliable foreign direct investment (FDI) flows. Nevertheless, Georgia's small, open economy depends on external financing, as reflected in a large, negative NIIP, amounting to USD 23.8bn or -135% of GDP as of Q4 2019 – a core driver of the weak vulnerability score, alongside the Georgian lari's volatility in recent years.

External public sector debt, amounting to around 80% of total public debt (with total public debt of 41.4% of GDP in 2019), is denominated in foreign currency (mostly in US dollars or euros), leaving the government balance sheet vulnerable to significant exchange rate fluctuations. Moreover, 58% of government debt does represent concessional multilateral loans, and an ongoing IMF Extended Fund Facility programme institutes a buffer against balance of payment disturbances over the programme duration to April 2021.

While foreign currency transactions inside the Georgian banking sector have declined through the proactive actions taken by authorities in recent years, the *level* of FX lending and deposits nonetheless remains very elevated at 55% of all loans and 62% of all deposits (mostly in US dollars and euros). FX reserves stood at USD 3.2bn as of March 2020, down slightly compared with USD 3.3bn in March 2019. While reserves' coverage level of short-term external debt had previously improved, it remains below an IMF adequacy threshold of 100%.

Turkey performs weakly as Scope's lowest rated sovereign issuer

Turkey (BB-/Negative) remains a member of the risky-3 in this year's list. The Turkish lira is 27% weaker compared with recent August 2019 peaks vs the dollar (trading near 7 against the dollar), which represents a dilemma given 52% of central government debt denominated in foreign currency (meaning FX devaluation automatically feeds through to impairment of public debt serviceability) alongside a significant private sector net FX debt position, which, while cut from February 2018 peaks of USD 223bn, totalled nonetheless USD 175bn as of January 2020. In addition, non-residents hold 39% of Turkey's government debt.

In data through March, past improvements in Turkey's trade balance had sharply reversed since 2019 – with much wider recent monthly trade deficits. Official reserves declined to USD 89bn as of 10 April, compared with a 2013 peak of USD 135bn, while – netting out Turkey's short-term FX borrowings – official net international reserves had declined to USD 26.3bn as of 10 April, from USD 41.1bn at end-2019. Weakened FX reserves mean Turkey is less resilient should capital outflows escalate – and will be an area requiring constant monitoring going forward. Turkey has rejected suggestions of turning to the IMF for support over this crisis.

External sector risks in Turkey are also exacerbated by mismanagement of the economy, in part due to ongoing consolidation of power in the hands of President Recep Tayyip Erdoğan. The policy one-week repo rate has been reduced to 9.75% (from 24% as recently as July 2019) – partly under suspected political influence, resulting in a *negative* real policy rate in view of March inflation of 11.9% YoY. Accommodative monetary policy had brought lira lending to the domestic economy to elevated levels of +19.1% YoY as of

March. Such prevailing macro-economic imbalances sap foreign investor confidence especially in moments of weakness in global sentiment, making Turkey more susceptible to capital outflows that drain reserve stocks, weaken the currency and inhibit the economy. Turkey (BB-/Negative) is the lowest rated issuer in Scope's rated sovereign universe.

Argentina rounds out Scope's risky-3 and has re-entered selective default

Argentina rounds out Scope's 2020 risky-3, performing weakly on both assessment axes. Argentina's public debt increased to nearly 90% of GDP at end-2019, from 56% in 2017, with around 53% of public debt denominated in US dollars. Amid a deep recession in 2020 – exacerbated by nationwide lockdowns since 20 March to impede a coronavirus outbreak in Argentina – President Alberto Fernández announced on 5 April that the government will suspend payments on foreign-currency securities issued in the domestic market for potentially the remainder of 2020 to save remaining resources to support the economy – sliding the government back into selective default – while restructuring talks continue on the side-lines over USD 69bn in foreign-law debt.

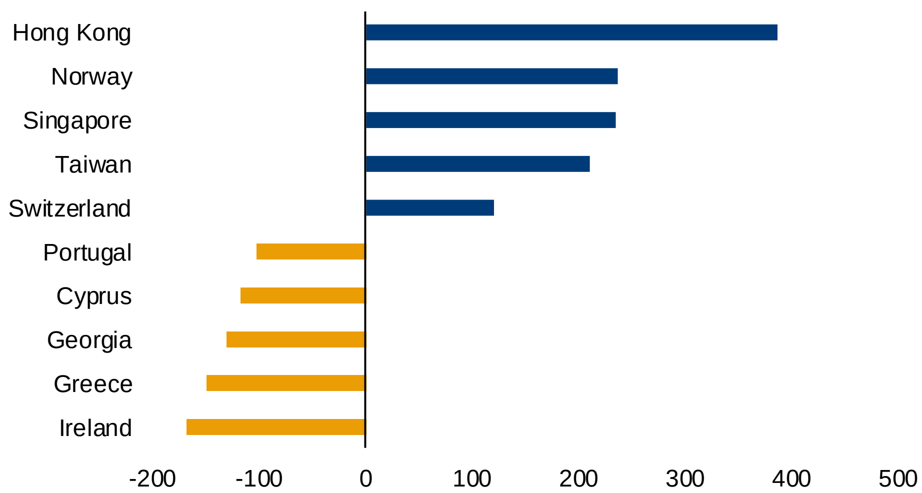
Since July 2019 peaks, the Argentine peso has depreciated around 37% against the US dollar and international reserves have dropped by USD 24bn to USD 43.6bn as of March 2020.

Argentina's private sector is exposed to currency fluctuations in view of elevated foreign-currency-denominated loans outstanding, accounting for 23% of total bank loans.

Low reserve adequacy, risk of capital flight, FX exposures and geopolitical risk remain weaknesses in Ukraine's case

Moving just off this year's risky-3 is **Ukraine**, displayed in **Figure 3**'s Quadrant I. Ukraine needs to repay around USD 10.7bn in dollar debt over 2020-21, which is significant relative to FX reserves of only USD 23.6bn as of March 2020 (FX reserves have nonetheless increased compared with March 2019 levels of USD 19.6bn). Inadequate FX reserve coverage represents a core danger to Ukraine's resilience in external crises. Against this backdrop, a continued commitment to reform and cooperation with international financial institutions are keys to maintaining external debt sustainability. The IMF and Ukrainian authorities reached agreement on a new three-year Extended Fund Facility programme of USD 5.5bn in December, which will replace the 14-month Stand-By Arrangement of USD 3.9bn approved in December 2018.

Figure 6: Top 5 highest and lowest NIIPs, % of GDP, Q3 2019 or latest available data



Source: Eurostat, national central banks and statistical offices, Haver Analytics, Scope Ratings GmbH

Scope's Sturdy-3 in more detail

The sturdy-3 represents three economies with the lowest levels of external risk: Taiwan (unrated), China (A+/Negative) and Switzerland (AAA/Stable) – each displaying limited external vulnerability and greater resilience in the event of an external shock.

Taiwan is the most robust economy to external risks in this year's rankings

Taiwan is this year's most robust economy to external sector risks. Taiwan's low vulnerability is helped by a very large current account surplus of 10.6% of GDP in 2019. In addition, low volatility of the Taiwan new dollar and a large net international asset position (**Figure 6**) support vulnerability marks. On resilience, Taiwan's scores are secured by a robust 2.7x reserve coverage of short-term external debt, low non-resident holdings of government debt, a lack of FX debt in overall government debt and low foreign currency loans in the domestic banking system (with FX loans totalling only 5% of GDP). Taiwan has been one of the most successful countries to date with respect to government mitigation actions in response to the Covid-19 crisis, including aggressive containment, quarantine, and monitoring measures that started early on (in December 2019), creating a response framework for emulation elsewhere in the world. Supported by this, the Taiwan dollar has been stable through this crisis.

China's large reserves, growing reserve currency, and largely closed capital account make it the most *resilient* economy in this year's report

China maintains its placement within the sturdy-3 in 2020 with the second strongest overall score in this year's rankings. This includes status as the *most resilient* economy in the 63-country sample to external stress factors (up from 3rd most resilient in the 2018 report) alongside 12th least vulnerable of 63 economies (up from 19th). China's foreign currency reserve stock of USD 3.06trn – by some distance the world's largest nominal reserve stock – represents 26% of *all* global FX reserves, presenting the People's Bank of China an abundant resource to preserve macro-economic stability and stem balance-of-payment issues. This is even though FX reserve levels declined sharply in March amid global economic stress and remain well off 2014 peaks of USD 3.99trn. Strong reserve adequacy bolsters China's external resilience, a key credit strength considered in China's A+/Negative sovereign ratings.

The increased use of the renminbi in the global economy enhances China's significant external strength. The internationalisation of the renminbi has in the past seen its inclusion in the IMF's Special Drawing Rights basket of currencies (of five currencies) since October 2016 and the establishment of a new renminbi-denominated Shanghai oil futures market in March 2018. Presently, the share of yuan claims in total global FX reserves stands at 2.0% as of Q4 2019, double the 1.1% as of Q2 2017.

The supervision of China's financial system remains in a transition stage and the capital account remains largely closed (although gradually opening up), with investors in China's onshore bond market still predominantly being domestic institutions. Foreign currency denominated government debt amounts to only 2.4% of general government revenues (although foreign currency borrowing is increasing). While China's comparatively closed, mostly renminbi-premised financial system shields the government from global financial volatility, increased opening to foreign investors and rising demand for foreign currency borrowing from domestic institutions might lower this resilience in the future.

China's net international investment position peaked in 2007 (at 33.4% of GDP) and has dropped to a still robust +15% of GDP as of Q4 2019. The current account balance has dropped from a peak surplus of 9.9% of GDP in 2007 to 1.0% in 2019, weighed upon moreover by trade conflicts with the United States, higher tariffs on Chinese goods and tariff impacts on export volumes. While reductions in China's current account support global rebalancing and reduce global risks, a nearly balanced Chinese current account represents a major change in the global economy as China posted the world's largest nominal current account surplus as recently as in 2015.

However, slower economic growth this year due to the Covid-19 pandemic – which we estimate at about 4% in China with significant downside risk (China grows, for example, only 2% under one alternative scenario) – may nonetheless endanger ambitious goals of purchases of an extra USD 200bn of US goods over the next two years as part of the phase-one trade compromise with the United States and has contributed to weakening the yuan, which now trades above 7 to the dollar. Such events could risk that an unpredictable US government might re-visit the trade truce – which, if so, could test China's external resilience. Higher capital outflows since H2-2018 are another relevant risk area to track.

Switzerland's large current account surpluses and high NIIP maintain its place in this year's sturdy-3

Switzerland maintains its role within Scope's sturdy-3 in 2020 (though falling from the #1 overall rank), ranking as the second least vulnerable economy of 63 countries (down one spot from first in 2018) and the 20th most resilient (up one rank). Since 1981, Switzerland has persistently generated large current account surpluses, which have averaged almost 10% of GDP since 2015, underpinned by the high competitiveness of its exporting sector alongside a large portion of fairly price-insensitive export products, such as in pharmaceuticals. This has helped shape a prodigious net international asset position of 116.2% of GDP at end-2019. Switzerland's economic resilience to international shocks, including to the 2020 corona crisis (even as cases and mortalities in Switzerland have increased significantly), is supported by the franc's reserve-currency status and highly liquid capital markets that provide unabated access to liquidity in times of international financial market volatility.

Switzerland's high national savings, totalling 33% of GDP, support a predominantly resident holding of the country's government debt, at over 85% ownership of the total. Foreign exposures (claims) of Swiss banks fell steadily after the global financial crisis to USD 1.08trn in Q3 2019 (from USD 2.66trn in Q2 2007). However, a sizeable share of loans denominated in foreign currency (around 40% of total loans) weakens Switzerland's resilience score.

Most and least at-risk countries in the EU-27

Figure 7: 2020 EU risky-3 and sturdy-3

Top 3 strongest

Overall Rank[1]	Total Score	Country	Vulnerability Score	Vul. Rank[1]	ΔRk[2]	Resilience Score	Res. Rank[1]	ΔRk[2]
1	15.5	Malta	6.6	10	1	8.9	1	0
2	14.8	Luxembourg	9.1	1	5	5.7	21	-3
3	14.6	Denmark	7.8	2	0	6.8	9	1

Top 3 weakest

Overall Rank[1]	Total Score	Country	Vulnerability Score	Vul. Rank[1]	ΔRk[2]	Resilience Score	Res. Rank[1]	ΔRk[2]
27	9.6	Cyprus	4.7	26	-13	4.9	24	-1
26	10.0	Croatia	7.2	4	1	2.7	27	0
25	10.0	Romania	6.0	19	0	4.0	26	-1

[1]Of the 27 EU member states. [2]Change in axis rank since 2018 update adjusting the 2018 results to exclude the UK from EU rankings (to have a like-for-like comparison).

Germany and Demark among the least exposed to external risk in the EU

In the EU, among the least vulnerable countries to external shocks include an **EU sturdy-3** of:

1) Malta
2) Luxembourg
3) Denmark

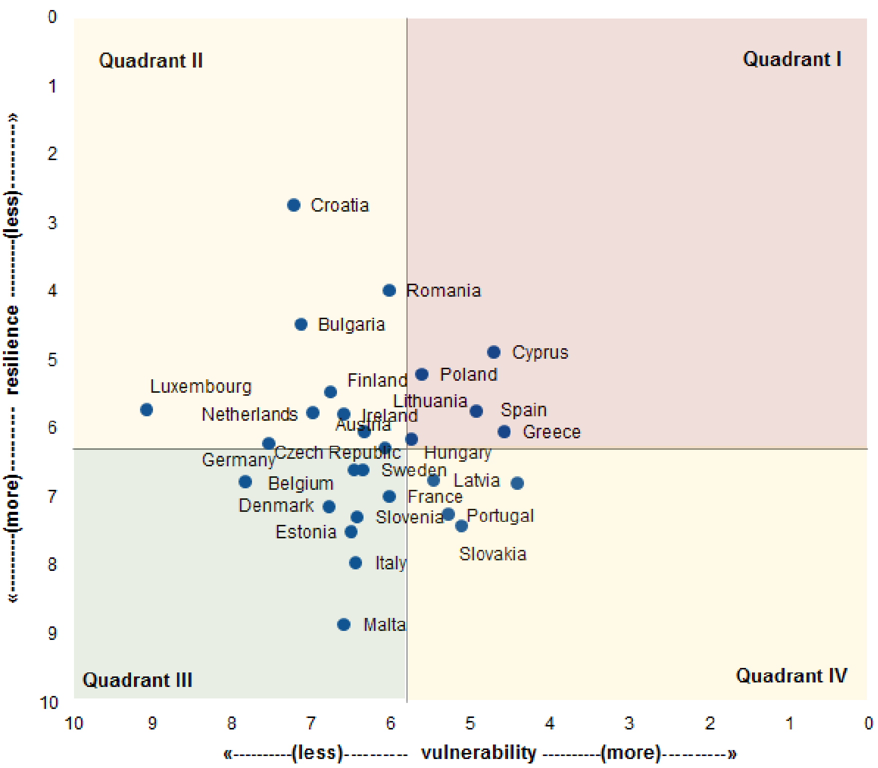
In addition, Italy, Estonia, Belgium and Germany score well. For Malta, Luxembourg, Denmark and Germany, large positive net external financial assets (with an average NIIP of +66% of GDP in 2019), sustained current account surpluses that averaged 7.5% of GDP in 2019, as well as strong safe haven currencies (in the euro and the Danish krone), liquid capital markets and moderate levels of public debt underpin external positions.

On the other hand, the three most at risk member states of the EU (**Figure 7, previous page)** are:

1) Cyprus
2) Croatia
3) Romania

Cyprus (BBB-/Stable) is displayed in Quadrant I in **Figure 8**; Croatia (BBB-/Stable) and Romania (BBB-/Negative) in Quadrant II. Hungary drops off the EU risky-3 roster in this year's report, with Cyprus taking its place. Greece (BB/Positive), Spain (A-/Stable) and Poland (A+/Stable) represent three other EU countries with comparatively high vulnerabilities to external shocks.

Figure 8: External vulnerability (10=least vulnerable, 0=most vulnerable) and resilience (10=most resilient, 0=least resilient) grid, <u>only EU economies</u>



Source: Scope Ratings GmbH

The EU Risky-3 in detail

Cyprus, Croatia and Romania the most exposed to external risk in the EU

Cyprus leads the EU risky-3. Cyprus's current account deficit widened to 6.7% of GDP in 2019, from 4.4% of GDP in 2018. The economy's external position is characterised by high deficits in its trade in goods (21.5% of GDP in 2019), offset by very high surpluses in services trade (21.3% of GDP), the latter due to Cyprus's standing in tourism services and as a financial services hub. Nonetheless, current account deficits have resulted in one of the largest negative NIIP levels among EU economies at -116%, alongside very high gross external debt levels of 936% of GDP in Q4 2019, which, nonetheless, still represent deleveraging against a 2015 peak at 1,263% of GDP. In addition, well above 70% of government debt is held by non-residents (**Figure 9, next page**).

We, however, note that special purpose entities (SPEs) in Cyprus considerably distort the economy's external position while having limited links to real economic activity: excluding SPEs, the NIIP and gross external debt were more modest at -34.3% of GDP and 262% of GDP respectively as of Q3 2019, even if nonetheless still worse than the euro area average. Importantly, Cyprus benefits from euro area membership, unlike in the cases of peers in the 2020 EU risky-3: Croatia and Romania, giving Cyprus access to credit strengths in crisis moments such as reduced FX volatility and capped borrowing rates deriving from the common reserve currency.

Croatia less vulnerable to balance of payment issues but also less resilient in case of a crisis

Croatia stands out as a Quadrant II economy in **Figures 2** and **8**, a characteristic shared, for instance, by Bulgaria (BBB+/Stable). Croatia and Bulgaria are economies with lesser balance of payment vulnerabilities but also *less resilient* than most nations were a balance of payment crisis to nonetheless occur. As such, while risks for a balance of payment crisis might be lower than in most countries with both economies holding current account surpluses alongside successful, long-standing fixed or managed floating exchange rate regimes against the euro, resilience in a currency crisis, however unlikely, would be more subject to question, with both economies highly euroised – meaning any break in Croatian kuna or Bulgarian lev exchange rates against the euro could threaten financial stability.

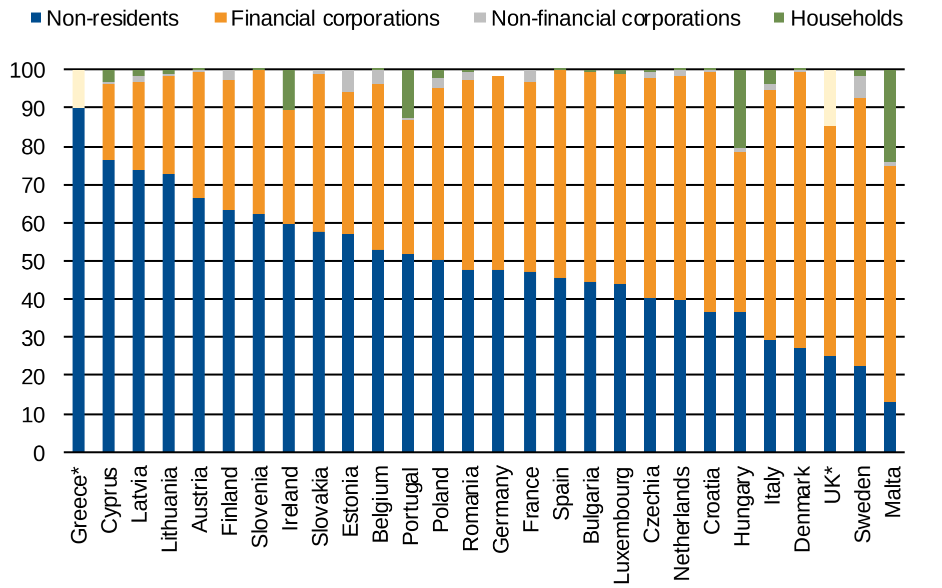
Croatia is the 4th *least* vulnerable economy in the EU (and 10th least vulnerable overall in the 63-country set) but is the EU economy with the weakest scores on external resilience (and 2nd least resilient overall of 63). Croatia's current account surpluses have averaged over 2% of GDP over the past two years, driven by large surpluses in services trade, while goods trade has been in deficit. Current account surpluses have helped to curtail Croatia's negative NIIP to -50.8% of GDP as of Q4 2019, from -65.6% in Q3 2017.

Any unforeseen depreciation in the kuna would adversely impact government and private sector balance sheets by raising the value of foreign-currency debt in local currency terms, with 51% of private sector loans and almost 70% of government debt denominated in foreign currency. Croatia's (as well as Bulgaria's) resilience to short-term external shocks will be materially enhanced after the countries join the EU's Exchange Rate Mechanism II (ERM II) and, eventually, adopt the euro, a process which both countries are making important progress towards.

Romania's widening current account deficit, risk of FX depreciation and FX exposures underscore external risks

Romania remains in the 2020 EU risky-3 as an economy in Quadrant II of **Figure 8**. Romania's current account deficit widened modestly to 4.7% of GDP in 2019, from 4.4% in 2018. The current account is expected to remain below -5% of GDP over the 2020-21 period. A high share of foreign-currency-denominated public debt (amounting to 18% of 2019 GDP) and widening fiscal deficits constitute significant risks to Romania's debt sustainability. The country's negative NIIP was relatively unchanged at -43.5% of GDP in 2019. Romania's external sector competitiveness remains a weakness due to high inflation, which is only partly compensated for by depreciation in the Romanian leu.

Figure 9: General government gross debt by sector of holder, 2018, %



Source: Eurostat, IMF, Scope Ratings GmbH; *partially missing data

2020 External Vulnerability and Resilience rankings for 63 countries: Covid-19 Crisis update

Annex I: 2020 external risk framework country scores and rankings, with axis-level scores/ranks

Rank (2020)	Country	Vulnerability Score	Vul. Rank	ΔRank[1]	Resilience Score	Res. Rank	ΔRank[1]	Total Score
1	Taiwan	7.8	5	5	9.2	3	2	17.0
2	China	7.1	12	7	9.6	1	2	16.7
3	Switzerland	8.5	2	-1	7.2	20	1	15.7
4	Thailand	7.3	9	-3	8.3	8	-1	15.6
5	Malta	6.6	20	2	8.9	5	-1	15.5
6	Singapore	7.5	6	1	7.5	14	0	15.1
7	Israel	7.4	8	0	7.6	13	2	15.0
8	Luxembourg	9.1	1	12	5.7	42	1	14.8
9	Japan	5.2	43	-10	9.5	2	-1	14.7
10	Denmark	7.8	4	-1	6.8	26	3	14.6
11	South Korea	6.2	29	6	8.3	9	2	14.5
12	India	5.8	34	-8	8.6	6	2	14.4
13	Italy	6.4	23	6	8.0	11	2	14.4
14	U.S.A.	5.1	44	-3	9.2	4	-2	14.3
15	Estonia	6.5	21	13	7.5	15	3	14.0
16	Belgium	6.8	15	9	7.1	21	-4	13.9
17	Germany	7.5	7	7	6.2	33	-2	13.7
18	Slovenia	6.4	24	8	7.3	18	7	13.7
19	Russia	5.7	36	18	7.9	12	0	13.5
20	Hong Kong	6.8	14	-2	6.7	28	-8	13.5
21	Vietnam	7.9	3	1	5.5	43	-9	13.4
22	Czech Republic	6.5	22	-17	6.6	31	11	13.1
23	France	6.0	31	0	7.0	23	7	13.0
24	Sweden	6.3	25	-7	6.6	30	-24	13.0
25	Norway	5.5	40	-25	7.5	16	0	13.0
26	Malaysia	6.0	33	-13	7.0	24	0	12.9
27	Netherlands	7.0	13	-11	5.8	39	9	12.8
28	Portugal	5.3	42	-4	7.3	19	4	12.5
29	Slovakia	5.1	45	-3	7.4	17	2	12.5
30	Ireland	6.6	20	4	5.8	38	-5	12.4
31	Lithuania	6.3	27	10	6.1	35	20	12.4
32	Austria	6.1	30	-2	6.3	32	4	12.3
33	Brazil	4.2	59	-1	8.1	10	0	12.3
34	Philippines	6.3	26	-1	6.0	37	3	12.3
35	Canada	5.6	38	5	6.6	29	-2	12.2
36	Latvia	5.5	41	3	6.8	27	11	12.2
37	Finland	6.7	16	1	5.5	44	-18	12.2
38	New Zealand	3.7	62	-11	8.5	7	2	12.2
39	Australia	5.0	46	1	7.0	22	0	12.1
40	Hungary	5.7	35	15	6.2	34	13	11.9
41	Bulgaria	7.1	11	-2	4.5	53	4	11.6
42	U.K.	4.4	55	1	6.8	25	3	11.2
43	Poland	5.6	37	2	5.2	48	1	10.8
44	Venezuela	6.3	28	2	4.4	54	4	10.7
45	Spain	4.9	47	-1	5.8	40	4	10.7
46	Greece	4.6	51	2	6.0	36	-1	10.6
47	South Africa	4.4	56	-1	5.7	41	-4	10.1
48	Romania	6.0	32	4	4.0	57	-1	10.0
49	Peru	5.5	39	-17	4.4	55	-9	10.0
50	Albania	6.6	18	-2	3.4	60	-1	10.0
51	Croatia	7.2	10	1	2.7	62	0	10.0
52	Mexico	4.4	54	6	5.4	45	-13	9.8
53	Chile	4.4	53	-5	5.3	47	-8	9.7
54	Serbia	6.6	17	28	3.0	61	0	9.6
55	Cyprus	4.7	50	-23	4.9	50	4	9.6
56	Pakistan	4.3	57	-8	5.1	49	-8	9.4
57	Egypt	4.1	61	-4	5.3	46	6	9.4
58	Indonesia	4.7	49	-9	4.7	52	-1	9.4
59	Colombia	4.1	60	-1	4.9	51	-6	9.0
60	Ukraine	4.8	48	13	3.7	59	1	8.5
61	Argentina	4.3	58	-6	4.1	56	-3	8.4
62	Turkey	4.4	52	10	3.8	58	-8	8.3
63	Georgia	3.1	63	0	1.1	63	0	4.3

[1] Change in rank since 2018 Update. Source: Scope Ratings GmbH.

Annex II: Country external vulnerability score (sorted by rank) and resilience score (sorted by rank)

Rank	Rank change vis-à-vis 2018 (+ better; - worse)	Country	Vulnerability score (10=least vulnerable, 0=most vulnerable)				Vulnerability score
			Current account + net foreign direct investments, % of GDP, 2018Q4-2019Q3 or the latest four quarters	Net portfolio and other investment flows, % of GDP, 2017Q4-2019Q3 weighted average	Standard deviation of 5-year monthly changes in nominal effective exchange rate	Net international investment position, % of GDP, 2019Q3 or the latest data	
			25%	25%	25%	25%	
1	+12	Luxembourg	10.0	10.0	6.3	10.0	9.1
2	-1	Switzerland	7.7	9.7	6.5	10.0	8.5
3	+1	Vietnam	10.0	6.4	8.2	7.0	7.9
4	-1	Denmark	6.8	4.4	10.0	10.0	7.8
5	+5	Taiwan	10.0	2.1	9.0	10.0	7.8
6	+1	Singapore	10.0	0.1	10.0	10.0	7.5
7	+7	Germany	10.0	3.8	6.3	10.0	7.5
8	0	Israel	9.9	5.1	4.8	9.8	7.4
9	-3	Thailand	7.8	6.5	7.1	7.8	7.3
10	+1	Croatia	5.5	7.7	10.0	5.7	7.2
11	-2	Bulgaria	8.0	4.1	9.8	6.5	7.1
12	+7	China	4.4	7.4	7.8	8.7	7.1
13	-11	Netherlands	9.6	2.1	6.3	10.0	7.0
14	-2	Hong Kong	9.6	0.1	7.5	10.0	6.8
15	+9	Belgium	0.8	10.0	6.3	10.0	6.8
16	+1	Finland	2.8	10.0	6.3	7.9	6.7
17	+28	Serbia	5.5	7.2	10.0	3.8	6.6
18	-2	Albania	2.8	8.6	9.5	5.6	6.6
19	+4	Ireland	10.0	10.0	6.3	0.1	6.6
20	+1	Malta	10.0	0.1	6.3	10.0	6.6
21	+13	Estonia	9.1	3.5	6.3	7.1	6.5
22	-17	Czech Republic	4.8	6.5	7.5	7.1	6.5
23	+6	Italy	5.6	6.1	6.3	7.8	6.4
24	+8	Slovenia	9.7	2.7	6.3	7.0	6.4
25	-7	Sweden	3.5	7.6	5.3	8.9	6.3
26	-1	Philippines	3.0	8.2	6.7	7.5	6.3
27	+10	Lithuania	7.5	4.9	6.3	6.7	6.3
28	+2	Venezuela	10.0	4.3	7.3	3.5	6.3
29	+6	South Korea	5.0	6.1	4.2	9.4	6.2
30	-2	Austria	2.9	6.7	6.3	8.4	6.1
31	0	France	2.3	8.7	6.3	6.8	6.0
32	+4	Romania	1.1	7.5	9.5	5.9	6.0
33	-13	Malaysia	6.8	5.9	3.3	7.9	6.0
34	-8	India	2.9	8.1	5.1	7.2	5.8
35	+15	Hungary	3.1	7.3	6.8	5.8	5.7
36	+18	Russia	7.9	5.6	0.1	9.0	5.7
37	+2	Poland	4.7	5.7	6.4	5.6	5.6
38	+5	Canada	0.5	9.4	2.8	9.6	5.6
39	-17	Peru	3.7	5.3	6.9	6.2	5.5
40	-25	Norway	4.0	6.2	1.7	10.0	5.5
41	+3	Latvia	5.4	4.3	6.3	5.9	5.5
42	-4	Portugal	5.2	6.4	6.3	3.2	5.3
43	-10	Japan	2.5	7.4	0.8	10.0	5.2
44	-3	U.S.A.	1.5	7.9	5.5	5.6	5.1
45	-3	Slovakia	1.0	8.2	6.3	4.9	5.1
46	+1	Australia	6.7	5.7	2.0	5.7	5.0
47	-1	Spain	3.5	5.6	6.3	4.4	4.9
48	+13	Ukraine	2.3	9.4	0.1	7.2	4.8
49	-9	Indonesia	2.0	8.4	1.9	6.6	4.7
50	-23	Cyprus	10.0	0.1	6.3	2.5	4.7
51	+2	Greece	2.7	8.3	6.3	1.0	4.6
52	+10	Turkey	5.6	6.3	0.1	5.8	4.4
53	-5	Chile	1.0	9.2	0.4	7.0	4.4
54	+6	Mexico	4.4	7.5	0.1	5.6	4.4
55	+1	U.K.	0.8	9.9	0.1	6.8	4.4
56	-1	South Africa	0.1	8.8	0.1	8.5	4.4
57	-8	Pakistan	0.3	9.7	1.2	6.2	4.3
58	-6	Argentina	2.7	5.3	0.1	9.2	4.3
59	-1	Brazil	3.7	6.7	0.1	6.4	4.2
60	-1	Colombia	1.7	9.0	0.1	5.6	4.1
61	-4	Egypt	2.7	8.2	0.1	5.3	4.1
62	-11	New Zealand	2.7	6.5	0.2	5.4	3.7
63	0	Georgia	2.2	8.4	0.1	1.9	3.1

Source: Scope Ratings GmbH

2020 External Vulnerability and Resilience rankings for 63 countries: Covid-19 Crisis update

			Resilience score (10=most resilient, 0=least resilient)				
Rank	Rank change vis-à-vis 2018 (+ better; - worse)	Country	Resilience against currency crisis	Share of non-resident holding in general government debt, 2019Q2 or the latest data	General government foreign-currency-denominated debt, % of revenues, 2019	Foreign-currency-denominated loans, % of GDP, 2019Q3, or the latest data	Resilience score
			25%	25%	25%	25%	
1	2	China	10.0	10.0	9.6	8.9	9.6
2	-1	Japan	10.0	8.7	10.0	9.2	9.5
3	2	Taiwan	8.2	10.0	10.0	8.8	9.2
4	-2	U.S.A.	10.0	6.6	10.0	10.0	9.2
5	-1	Malta	7.5	8.8	10.0	9.2	8.9
6	2	India	6.9	9.7	8.8	8.8	8.6
7	2	New Zealand	10.0	5.2	10.0	8.8	8.5
8	-1	Thailand	7.6	8.3	9.8	7.5	8.3
9	2	South Korea	7.8	8.8	9.0	7.5	8.3
10	0	Brazil	8.0	9.0	7.6	8.0	8.1
11	2	Italy	7.5	6.9	9.6	7.9	8.0
12	0	Russia	9.0	7.5	7.7	7.2	7.9
13	2	Israel	8.1	8.7	5.5	8.1	7.6
14	0	Singapore	10.0	10.0	10.0	0.1	7.5
15	3	Estonia	7.5	2.6	10.0	9.9	7.5
16	0	Norway	10.0	5.7	5.7	8.5	7.5
17	2	Slovakia	7.5	3.4	9.0	9.7	7.4
18	7	Slovenia	7.5	3.6	8.5	9.6	7.3
19	4	Portugal	7.5	4.2	8.1	9.2	7.3
20	1	Switzerland	10.0	8.7	10.0	0.1	7.2
21	-4	Belgium	7.5	3.6	9.8	7.7	7.1
22	0	Australia	10.0	4.9	10.0	3.3	7.0
23	7	France	7.5	4.7	9.5	6.4	7.0
24	0	Malaysia	3.7	7.7	7.9	8.5	7.0
25	3	U.K.	10.0	7.2	9.9	0.1	6.8
26	3	Denmark	10.0	7.1	10.0	0.1	6.8
27	11	Latvia	7.5	2.0	9.3	8.3	6.8
28	-8	Hong Kong	10.0	7.8	8.8	0.1	6.7
29	-2	Canada	10.0	7.5	8.9	0.1	6.6
30	-24	Sweden	10.0	7.8	8.5	0.1	6.6
31	11	Czech Republic	5.2	5.5	8.5	7.2	6.6
32	4	Austria	7.5	2.8	9.7	5.2	6.3
33	-2	Germany	7.5	4.1	7.3	6.0	6.2
34	13	Hungary	5.7	6.3	4.8	7.9	6.2
35	20	Lithuania	7.5	1.3	5.5	9.9	6.1
36	-1	Greece	7.5	0.1	8.6	7.9	6.0
37	3	Philippines	8.1	7.0	0.1	8.6	6.0
38	-5	Ireland	7.5	3.7	9.6	2.4	5.8
39	9	Netherlands	7.5	5.5	10.0	0.1	5.8
40	4	Spain	7.5	5.5	9.9	0.1	5.8
41	-4	South Africa	5.3	6.1	3.3	8.3	5.7
42	1	Luxembourg	7.5	5.3	10.0	0.1	5.7
43	-9	Vietnam	4.5	4.9	4.7	8.0	5.5
44	-18	Finland	7.5	3.0	8.4	2.9	5.5
45	-13	Mexico	7.2	4.6	0.6	9.3	5.4
46	6	Egypt	7.5	7.1	0.1	6.5	5.3
47	-8	Chile	4.2	6.9	4.1	5.8	5.3
48	1	Poland	5.3	5.6	3.4	6.7	5.2
49	-8	Pakistan	3.5	7.0	0.1	9.7	5.1
50	4	Cyprus	7.5	2.0	8.6	1.4	4.9
51	-6	Colombia	5.2	4.9	0.1	9.4	4.9
52	-1	Indonesia	6.2	3.5	0.1	8.8	4.7
53	4	Bulgaria	4.4	5.2	2.6	5.7	4.5
54	4	Venezuela	1.7	6.4	0.1	9.5	4.4
55	-9	Peru	7.2	3.1	0.1	7.3	4.4
56	-3	Argentina	2.5	4.9	0.1	9.1	4.1
57	-1	Romania	3.5	4.3	0.1	8.0	4.0
58	-8	Turkey	4.8	5.9	0.1	4.5	3.8
59	1	Ukraine	2.6	4.9	0.1	7.4	3.7
60	-1	Albania	2.1	5.3	0.1	5.9	3.4
61	0	Serbia	3.8	3.8	0.1	4.2	3.0
62	0	Croatia	3.1	6.4	0.1	1.4	2.7
63	0	Georgia	1.3	1.1	0.1	2.0	1.1

Source: Scope Ratings GmbH

Annex III: Vulnerability/resilience grid by components, hard figures (sorted by world region)

		Current account + net foreign direct investments, % of GDP, 2018Q4-2019Q3 or the latest four quarters	Net portfolio and other investment flows, % of GDP, 2017Q4-2019Q3 weighted average	Standard deviation of 5-year monthly changes in nominal effective exchange rate	Net international investment position, % of GDP, 2019Q3 or the latest data *	Log of BIS OTC currency turnover, 2019 daily averages, in USD mn **	Reserves / short-term external debt, 2019 or the latest data	Share of non-resident holding in general government debt, 2019Q2 or the latest data	General government foreign-currency-denominated debt, % of revenues, 2019	Foreign-currency-denominated loans, % of GDP, 2019Q3 or the latest data ***
North America	U.S.A.	-1.9	0.8	1.2	-51.7	6.8	-	32.7	0.0	0.0
	Canada	-3.0	3.1	1.5	35.5	5.5	-	24.6	6.5	66.7
	Mexico	1.5	0.3	3.1	-50.8	5.1	1.9	50.1	57.6	3.0
Euro area	Germany	7.9	-5.2	1.1	69.1	6.3	-	54.7	16.6	17.6
	France	-0.9	2.0	1.1	-25.1	6.3	-	49.7	3.3	16.0
	Italy	2.9	-1.8	1.1	-4.7	6.3	-	30.5	2.5	9.1
	Netherlands	7.4	-7.8	1.1	92.0	6.3	-	42.2	0.2	54.2
	Belgium	-2.6	4.0	1.1	43.2	6.3	-	59.0	1.3	10.2
	Spain	0.5	-2.6	1.1	-77.6	6.3	-	42.5	0.5	91.1
	Portugal	2.4	-1.4	1.1	-101.8	6.3	-	53.7	11.4	3.6
	Ireland	15.4	19.9	1.1	-168.6	6.3	-	58.5	2.2	33.3
	Austria	-0.2	-0.9	1.1	8.0	6.3	-	66.4	2.1	21.0
	Finland	-0.3	5.3	1.1	-1.6	6.3	-	64.3	9.7	31.1
	Greece	-0.5	1.5	1.1	-149.2	6.3	-	90.1	8.3	9.0
	Slovakia	-2.4	1.4	1.1	-65.7	6.3	-	60.8	6.0	1.1
	Slovenia	7.6	-6.9	1.1	-21.2	6.3	-	59.0	9.3	1.8
	Estonia	6.8	-5.7	1.1	-18.7	6.3	-	67.7	0.0	0.3
	Latvia	2.7	-4.6	1.1	-44.7	6.3	-	73.8	4.2	7.4
	Lithuania	5.0	-3.7	1.1	-27.6	6.3	-	79.4	27.7	0.2
	Luxembourg	19.4	77.7	1.1	88.7	6.3	-	44.4	0.0	395.5
	Cyprus	40.8	-31.0	1.1	-117.8	6.3	-	73.5	8.4	37.5
	Malta	82.4	-80.9	1.1	63.7	6.3	-	14.0	0.0	3.3
Non-euro EU	Denmark	4.3	-4.3	0.6	80.2	4.6	0.3	28.7	0.2	65.0
	Sweden	0.5	0.4	1.2	20.2	5.1	0.2	22.2	9.0	43.3
	Czech Republic	1.9	-1.3	0.9	-19.7	4.4	1.3	42.2	9.4	12.3
	Hungary	-0.1	0.0	1.0	-46.8	4.4	1.6	36.0	32.2	9.2
	Poland	1.9	-2.5	1.1	-50.8	4.6	1.1	42.0	40.7	14.6
	Romania	-2.3	0.3	0.6	-43.8	3.8	0.9	53.1	82.8	8.7
	Bulgaria	5.6	-4.7	0.6	-31.2	3.3	1.9	45.1	45.4	18.7
	Croatia	2.7	0.6	0.5	-49.7	2.8	1.5	34.5	122.4	37.7
Non-EU Europe	U.K.	-2.7	3.8	1.9	-24.7	5.9	-	27.3	0.7	170.6
	Switzerland	5.3	3.5	1.0	120.5	5.5	-	14.4	0.0	124.9
	Norway	1.0	-1.7	1.7	238.0	5.1	0.3	40.6	26.4	6.6
	Russia	5.5	-2.6	4.5	22.9	4.9	4.3	25.4	14.1	12.1
	Turkey	2.9	-1.6	3.8	-47.3	4.9	0.6	39.4	69.9	24.0
	Ukraine	-1.0	3.1	2.6	-15.6	3.4	0.7	48.3	109.0	11.4
	Serbia	2.7	-0.1	0.5	-88.7	2.9	1.9	58.0	66.9	25.4
	Albania	-0.3	1.8	0.6	-51.9	2.4	1.4	44.0	132.2	17.9
	Georgia	-1.1	1.7	2.5	-130.8	2.4	0.8	81.0	110.6	35.0
Latin America	Argentina	-0.5	-3.1	5.0	26.1	3.6	0.4	48.1	238.5	4.1
	Brazil	0.7	-1.0	3.2	-34.8	4.8	2.5	12.1	14.8	8.6
	Chile	-2.4	2.8	1.9	-20.1	4.3	0.8	30.5	36.0	18.5
	Colombia	-1.6	2.5	2.9	-50.4	4.1	1.6	48.0	71.5	2.8
	Peru	0.7	-3.1	1.0	-37.1	3.7	4.7	63.7	60.8	11.6
	Venezuela**	10.2	-4.5	0.9	-96.7	3.3	0.2	34.4	1628.6	2.1
Pacific Rim	Japan	-0.7	0.1	1.8	66.3	6.0	-	14.0	0.0	3.6
	Australia	4.1	-2.4	1.6	-49.4	5.6	-	48.1	0.1	29.4
	New Zealand	-0.4	-1.3	1.9	-55.8	5.1	0.2	45.5	0.0	5.1
Asia	China	1.4	0.1	0.9	15.4	5.5	2.1	3.4	2.4	5.0
	Taiwan	9.7	-7.8	0.7	210.5	4.8	2.7	3.0	0.0	5.2
	Hong Kong	7.4	-10.8	0.9	388.3	5.4	0.4	21.9	7.4	141.5
	South Korea	2.2	-1.8	1.3	31.2	5.1	2.2	13.5	6.1	10.9
	Indonesia	-1.3	1.7	1.7	-29.7	4.4	1.9	59.8	82.8	5.2
	Thailand	5.3	-1.2	1.0	-3.7	4.5	2.7	18.2	1.0	11.1
	Malaysia	4.2	-2.1	1.5	-0.9	3.9	0.8	22.8	13.1	6.4
	Singapore	34.5	-30.1	0.5	236.1	5.1	0.2	0.0	0.0	104.4
	Philippines	-0.2	1.3	1.0	-9.7	4.3	4.0	29.2	77.9	6.1
	India	-0.3	1.2	1.2	-15.7	5.1	1.7	5.2	7.1	5.3
	Pakistan	-3.2	3.5	1.8	-38.5	3.9	0.8	29.1	88.7	1.5
	Vietnam	9.0	-1.4	0.8	-21.9	3.7	1.6	48.0	32.3	8.9
Africa & Middle East	South Africa	-3.4	2.3	3.2	10.9	4.9	0.9	37.6	41.2	7.3
	Egypt	-0.5	1.3	5.9	-56.5	3.9	3.2	28.4	173.5	15.3
	Israel	7.8	-3.3	1.3	38.8	4.3	3.2	14.6	27.7	8.3

Source: IMF, Eurostat, BIS, Bloomberg, JP Morgan, national central banks, national statistical offices, ministries of finance, Haver Analytics, Scope Ratings GmbH; *for Venezuela and Vietnam, the data is equal to (total reserves - total external debt) as a % of GDP; **for countries not covered by BIS, data is calculated by multiplying their GDP share in the world by the BIS OTC turnover for residual currencies; ***for Belgium and Japan, data equals foreign-currency-denominated deposits, % GDP.

Annex IV: Indicator definitions and rationale

Indicator	Definition	Rationale	Source
Current account + net foreign direct investments, % of GDP, 2018Q4-2019Q3 or the latest four quarters	Current account balance is the sum of net exports of goods and services, net primary income, and net secondary income. Foreign direct investments are the sum of equity capital, reinvestment of earnings, other capital as shown in the balance of payments.	Large current account deficits signal a risk of unsustainable economic policies and excess domestic demand, deficits in external competitiveness, and/or the risk of further depletion of net foreign-exchange reserves. Foreign direct investment offers a comparatively stable cushion of possible inflows, less prone to sharp reversal in moments of stress, to finance current account deficits and could offset some risks to reserves.	IMF IFS, national central banks and national statistical offices
Net portfolio and other investment flows, % of GDP, 2018Q1-2019Q3 weighted average	Portfolio and other investments include transactions in equity securities, debt securities and other debt instruments.	Sustained net inflows of portfolio and other debt investment flows over a multi-year period signal a stable supplement to domestic savings. Conversely, sustained capital outflows over a multi-year period indicate a deficit of confidence with domestic and/or international investors and risk of future sudden stops in capital flows precipitating currency and/or debt crises.	IMF IFS, national central banks and national statistical offices
Standard deviation of 5-year monthly changes in nominal effective exchange rate	The nominal effective exchange rate of a currency is a weighted average of nominal bilateral rates between that currency and a basket of the foreign currencies of trading partners.	Significant fluctuations in exchange rates signify a risk of future sharp devaluations or appreciations and associated disruptions to economic and financial stability, whereas lower currency volatility tends to nurture investor confidence and promote inward investment.	JP Morgan, national central banks
Net international investment position, % of GDP, 2019Q3 or the latest data	Net international investment position is the difference between an economy's external financial assets and liabilities.	Large net external liabilities make the economy more exposed to developments in international financial markets and can lead to liquidity crises. Large net external asset positions can indicate open, competitive economies, whereas large net debtor positions can be a marker of underlying vulnerability.	Eurostat, national central banks and national statistical offices
Resilience against currency crisis	Two-step scoring: i) if the FX is a developed market or reserve currency (measured by either the log of its 2019 Bank for International Settlements (BIS) OTC turnover exceeding that of at least one SDR currency or the country having a nominal GDP per capita of >USD 42,000 in 2018), then a maximum score of 10*; and if not (and the country does not possess a reserve currency), then ii) the score is based 50% on the log of its 2019 BIS OTC turnover and 50% on international reserves ÷ short-term external debt.	Reserve currency countries enjoy meaningful protection from global risk routs, and can frequently see currency appreciation and capital inflows during such times. Non-reserve-currency countries must frequently defend themselves in the event of external shocks, with countries that have large arsenals of FX reserves better shielded against such incidents than those without.	BIS, IMF, national central banks and national statistical offices
Share of non-resident holding in general government debt, 2019Q2 or the latest data	Gross debt includes liabilities that require future payment of interest and/or principal by the debtor to the creditor. This includes debt liabilities in the form of special drawing rights, currency, and deposits, debt securities, loans, insurance, pension, and standardized guarantee programs, and other accounts payable. A unit is non-resident if its centre of economic interest is not in the economic territory of a country.	A high share of government debt held by foreigners could reduce resilience as foreign investors may head for exits once signs of crisis or instability arise.	IMF, national ministry of finances and central banks
General government foreign-currency-denominated debt, % of revenues, 2019	Total revenue is all the income a government receives. There are four main sources of revenue for the government: taxes and other compulsory transfers imposed by government units, property income derived from the ownership of assets, sales of goods and services, and voluntary transfers received from other units.	A large stock of foreign-currency debt exposes a government to sudden deteriorations in repayment capacity should the currency de-value and debt service in local currency terms rises in severity relative to revenues.	Bloomberg, IMF
Foreign-currency-denominated loans, % of GDP, 2019Q3 or the latest data	Loans include interbank and non-interbank loans to the central bank, the general government, other financial corporations, other domestic sectors and non-residents	A highly dollarised or euroised financial system potentially makes an economy less resilient to a currency shock via borrowers suddenly seeing repayment capacities weakened on foreign-currency debt, which must be repaid via local-currency-denominated financial resources. In addition, a high level of foreign currency lending reduces the effectiveness of monetary policy, limiting the ability of the central bank to control money supply.	IMF IFS, national central banks and national statistical offices

*The exception is for euro area countries, which receive a fixed score of 7.5 on the resilience against currency crises variable, owing to a lack of currency adjustment flexibility in the event of balance of payment issues (from being in a currency union). This is despite having a strong reserve currency in the euro.

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