GROUP OF TWENTY

G-20 SURVEILLANCE NOTE

G-20 Finance Ministers and Central Bank Governors' Meetings
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Prepared by Staff of the

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*Does not necessarily reflect the views of the IMF Executive Board.

EXECUTIVE SUMMARY

The global economy continues to grow at a solid pace—but growth has become less synchronized and the expansion is moderating in key geographic areas. Against a backdrop of escalating trade tensions, GDP growth fell short of the forecast in *Europe* and *Japan*, while the *United States* continued to expand at a relatively fast pace, reinforced by the expected expansionary turn of fiscal policy. The U.S. dollar strengthened as the Fed raised policy rates leading to portfolio outflows from emerging economies, especially those with relatively weaker fundamentals and facing political risk. In the *euro area,* the ECB has announced a path toward monetary normalization. Higher oil prices contributed to a rise in headline inflation in many countries.

The outlook remains for a gradual slowdown, especially in advanced economies. The July *World Economic Outlook Update* foresees global growth to remain at 3.9 percent in 2018-2019 before slowing toward lower medium-term rates. In advanced economies, this slowdown reflects the weakening of cyclical forces as output gaps close or turn positive and monetary policy therefore becomes less accommodative. If sustained, higher oil prices will dampen growth for oil importers. Emerging markets face headwinds from somewhat tighter financial conditions, and, in some cases, idiosyncratic challenges. In the medium term, structural factors—notably population aging, lagging total factor productivity, and overdue economic reforms—continue to hold back growth.

The balance of risks is now tilted to the downside in both the short and medium terms. Financial conditions in advanced economies remain accommodative, but could tighten suddenly following a change in risk sentiment or a reassessment of the speed of interest rate increases in the *United States*. In response, the reduction in capital inflows to emerging markets could intensify and broaden, also putting growth at risk in many advanced economies, where market valuations remain elevated and sovereign and private debt levels are high. The likelihood of escalating and sustained trade actions has risen, threatening a serious adverse impact on global growth while leaving unaddressed the underlying causes of persistent excess global imbalances. In *Europe*, tensions around Brexit persist and sovereign risks have reemerged in parts of the *euro area*. Geopolitical tensions and delays in addressing challenges of inequality and climate change could also impact the outlook.

Countries should build buffers against future risks, renew their commitments to international cooperation, and adopt policies that foster stronger and more inclusive growth.

- *Tailor macroeconomic policies to the maturing cycle*. A well-communicated, gradual monetary policy normalization should proceed where inflation is firmly approaching its target. Emerging economies should adjust to tightening global financial conditions with an appropriate mix of monetary, exchange rate, fiscal, and prudential policies. Fiscal policy should avoid pro-cyclical fiscal stimulus (e.g., in the *United States*) and ensure that public debt is on a sustainable path. Countries with both fiscal space and an excess external surplus should deploy public resources (e.g., in *Germany*) to raise potential output and catalyze private investment.
- *Support international cooperation*. An open, rules-based international trade system is vital for the efficient international allocation of production, the diffusion of technology, and, ultimately, for global growth. Cooperative approaches are essential also to address other global challenges, such as providing a sound financial regulatory architecture, international taxation, and climate change.
- *Strengthen financial resilience*. Proactive micro- and macro-prudential policies should address vulnerabilities owing to high leverage, excessive credit growth (e.g., in *China*), and stretched asset valuations in riskier markets. In some advanced and emerging economies, sound fiscal and debt management policies are essential to prevent public finances from becoming a source of financial instability.
- *Act to raise long-term growth*. By acting on undelivered reform needs, countries can attain higher incomes in the future. To make the most of the promise of new technologies, policymakers should close data gaps, facilitate technological change, smooth labor-market adjustment, and ensure that productivity gains are equally shared, while updating social safety nets and pension insurance systems.

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RECENT DEVELOPMENTS, OUTLOOK, AND RISKS

Global growth continues at a solid pace, but the broad global expansion that characterized 2017 has become more uneven. Pro-cyclical fiscal stimulus is extending momentum in the United States but the rate of expansion appears to have peaked in the euro area and Japan. Growth patterns are also diverging among emerging economies, with China's growth still robust but projections marked down in Latin America. Higher oil prices will take a toll on growth for importers, especially for some emerging economies, while pushing up headline inflation. Downside risks have increased with concerns about a further escalation of trade tensions and pressures on emerging economies. Even under the baseline, the medium-term outlook still foresees lower growth, especially for advanced economies.

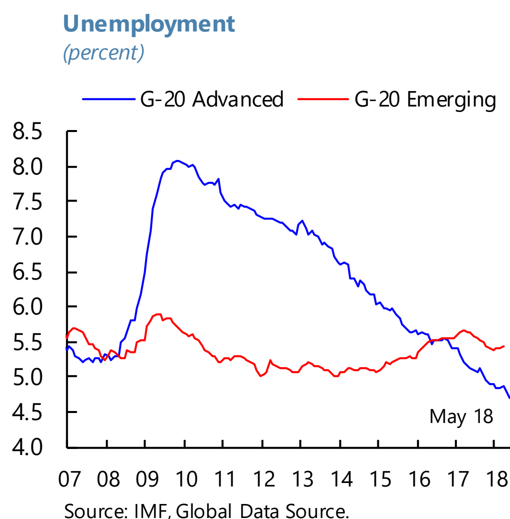
A. GROWTH CONTINUES AT A HEALTHY PACE, BUT IS LESS BROAD-BASED

1. The global expansion has become more uneven. During the first quarter of 2018, GDP growth slowed markedly and more than expected in the *euro area* and *United Kingdom*, and the economy of *Japan* contracted, with high frequency indicators pointing to a modest rebound in the second quarter. Meanwhile, in the *United States*, domestic demand continues to be buoyant, underpinned by the lowest unemployment rate in almost 20 years and a temporary fiscal expansion. Among emerging economies, growth remains robust in *China* and *India*, but has recently weakened in *Brazil* and some other Latin American economies. Rising oil prices have lifted headline inflation globally, but it remains below target in many G-20 countries outside of the *Unites States*. Core inflation has generally moved by less, but some emerging markets have experienced upward pressures from a combination of the passthrough from currency depreciation and second-round effects of higher fuel costs.

2. In many countries, growth is moderating along with the maturing cycle.

- Unemployment rates across most G-20 countries have fallen significantly, particularly in advanced economies, and are now back at or even below pre-crisis levels. Output gap measures present a similar picture, with large negative gaps persisting only in some emerging economies (such as *Argentina* and *Brazil*) and modestly negative gaps remaining in some *euro area* countries. In some large advanced economies, gaps are already positive and even widening—notably, in the *United States* and *Germany*.

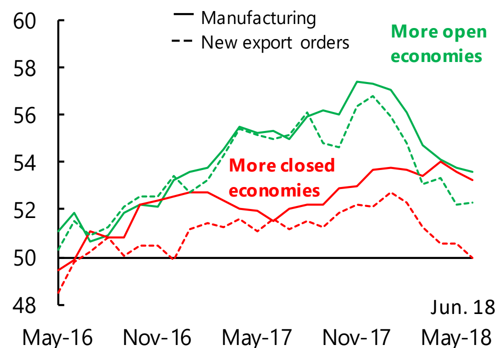
Unemployment
(percent)



Source: IMF, Global Data Source.

- At the same time, there are signs that the recent bout of particularly strong export activity in manufacturing has come to an end. A number of factors might be at play, including higher oil prices, but the spiral of targeted *United States* import tariffs and retaliatory countermeasures imposed by *Canada*, *China*, *India*, *Mexico*, and the *European Union*, along with concerns about the future of NAFTA, might have negatively affected confidence. Indeed, the drop in high-frequency survey indicators of overall manufacturing activity and its export component seems to be particularly steep in more open G-20 economies. In the case of *Germany*, for example, this coincided with a reduction in business confidence. There are also indications that equity markets have taken note—for example, equity price of European and (to a smaller degree) Asian automakers and U.S. firms with significant Chinese or international exposure fell relative to the broad market index following recent tariffs announcements (see Annex).

G-20: Purchasing manager's index 1/
(50+ = expansion; SA)

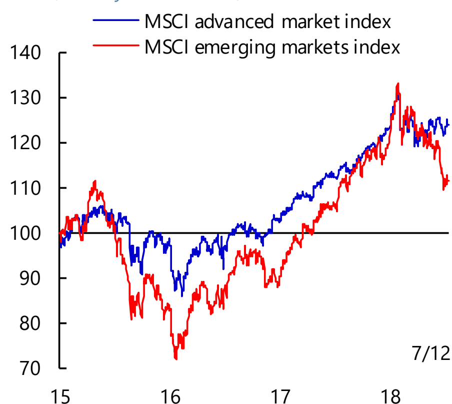


Source: Markit.
1/ More open economies with (exports + imports) > 50 percent of GDP include Turkey, Italy, France, United Kingdom, Canada, Mexico, Korea, and Germany. This group represents about 27 percent of G-20 GDP. Aggregate series exclude Argentina, Saudi Arabia, and South Africa due to data limitation.

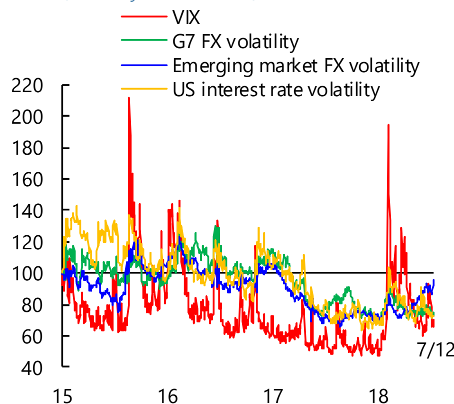
3. Financial conditions remain generally supportive, but monetary policy normalization and a stronger U.S. dollar have put pressure on some emerging economies. The U.S. Federal Reserve has raised interest rates twice since last March, and the ECB recently announced a path toward monetary normalization for the *euro area*. These policy moves, mostly anticipated by markets, did not bring any substantial tightening of financial conditions among advanced economies, though yields have risen in the *United States*. This, together with a stronger U.S. dollar, did have an impact on emerging economies, coinciding with a further reduction in capital inflows—especially in countries with weaker fundamentals—rising funding costs, and foreign exchange market pressures. Policy reactions have been varied, including a mix of exchange rate flexibility and interest rate hikes (e.g., in

Financial conditions and commodity prices

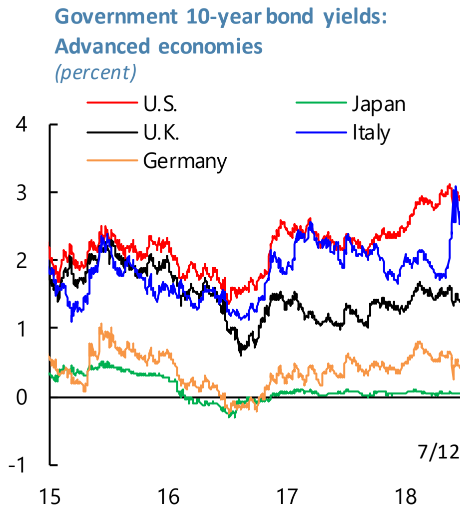
Stock market
(January 1, 2015 = 100)

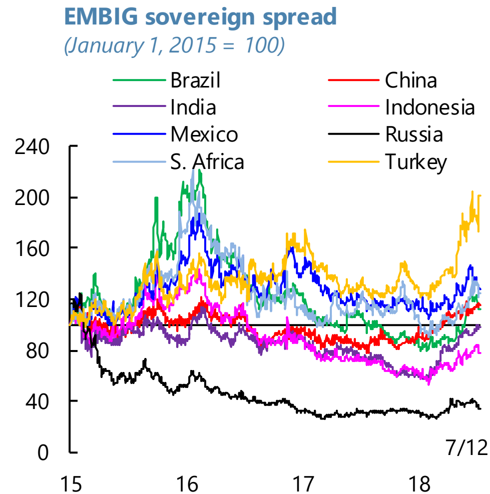


Financial market volatility
(January 1, 2015 = 100)



Source: Bloomberg, L.P.

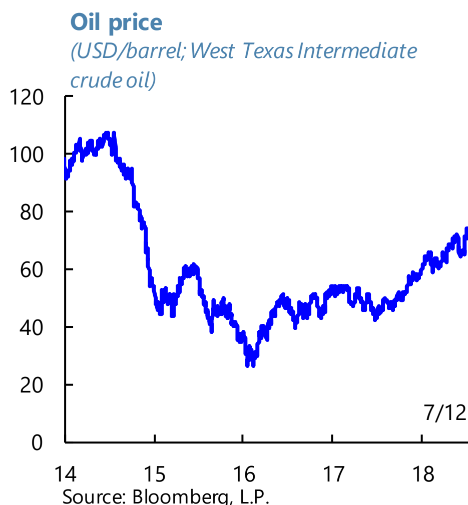




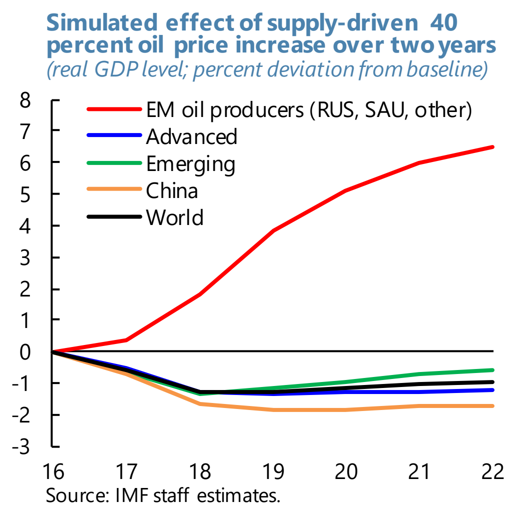
Sources: Bloomberg, L.P.; and Haver Analytics.

Argentina, Indonesia, *Mexico*, *Turkey*), the activation (e.g., in *Argentina*) of official financing, and intervention in the foreign exchange market (e.g., in *Argentina* and *Brazil*). In *Italy*, concerns about future policies led to a spike in sovereign premia, which caused a significant tightening in financial conditions, with some limited spillovers to other *euro area* countries.

4. Higher oil prices are leaving a mark. After first having recovered from the very low levels touched early in 2016, oil prices have increased by about 40 percent over the last 12 months. In part this increase reflects a stronger global economy, but reductions in supply have played the main role more recently. While providing welcome relief for some of the oil exporting countries, the higher oil price creates additional growth headwinds for importers and most emerging economies. As a benchmark, model simulations indicate that a purely supply-driven, sustained price shock of a magnitude like the oil price increase since end-2015 could lower the level of global GDP by around 1 percent over the medium term.



Source: Bloomberg, L.P.



Source: IMF staff estimates.

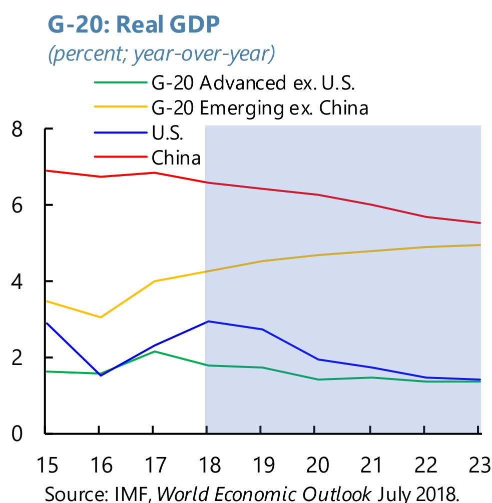
5. Against this backdrop, while annual global growth is expected to remain at around 3.9 percent in both 2018 and 2019, the outlook has been marked down in important regions. This revised baseline reflects a combination of the factors that have been driving developments since the beginning of the year and the important assumption that key risks to global growth—such as concerns about rising trade tensions and financial risks—do not materialize (see below). In particular, according to the just published July *WEO Update*:

- In the *United States*, growth forecasts remain at 2.9 and 2.7 percent for 2018 and 2019, respectively, supported by continued strong domestic demand and the temporary fiscal stimulus.
- At the same time, growth is expected to slow down in the *euro area* on the back of softer net exports (e.g., in *Germany* and *Italy*) and weaker domestic demand (e.g., in *France*). In *Italy*, tighter financial conditions and uncertainty over future policies will place a further drag on the economy. In *Japan*, growth projections have been marked down as well, but the economy is expected to strengthen over the remainder of 2018, supported by external demand and related private investment, while in 2019 growth is projected to slow owing to the planned consumption tax hike.
- In *China*, economic rebalancing toward lower and more sustainable growth is expected to continue at the previously anticipated pace. *South Africa*'s economy is expected to recover somewhat over the remainder of 2018 and into 2019, as improving confidence is gradually reflected in higher private consumption and investment. In *India* growth is still projected to accelerate following recent reforms, but more slowly than previously thought, including because of higher energy prices. The outlook has also been marked down in Latin America, with larger revisions in *Brazil*, reflecting political uncertainty stemming from upcoming elections, and in *Argentina*, owing to the effects of the drought and the projected macroeconomic adjustment. Rising trade tensions related to NAFTA underlie a smaller downward revision for *Mexico*. In *Russia*, as in other oil exporting countries, recovery will continue, supported by higher oil revenue.

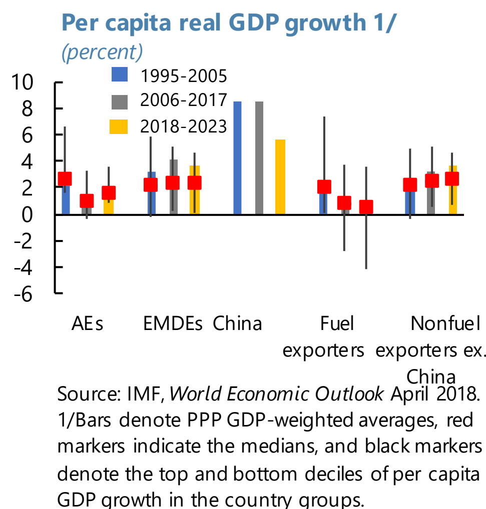
6. Over the medium-term, GDP growth will slow further, especially in advanced countries. While the *WEO Update* does not extend to years beyond 2019, the April WEO projected growth in most G-20 advanced economies to decline gradually to around 1½ percent from 2020. The *United-States* will see GDP growth decline to around 1¾ percent over the medium term, once the effects of the temporary fiscal stimulus fade. Among the key factors holding down medium-term growth in advanced economies are:

- *Population aging:* Populations in advanced economies continue to age, causing a significant slowdown in labor-force growth. The drag of an older population on GDP and per capita GDP growth will be lower if, among other things, firms can compensate for a possibly less agile workforce through more rapid adoption of new capital-intensive technologies.
- *Productivity slowdown and adjustment to technology change:* In the medium-term, total factor productivity growth rates are expected to remain well below those registered in the two decades prior to the global financial crisis reflecting, in part, continuing weak investment, which often

embodies technological advances.[1] More generally, new technologies based on digitization and artificial intelligence hold the promise of a new phase of productivity growth, but they are also bound to reshape the economy and the way we work, with the potential to increase inequality. Reaping the benefits, while ensuring that they are also equally shared, requires strong policies to facilitate change and support the requisite adjustment (see below).[2]



Source: IMF, *World Economic Outlook* July 2018.



Source: IMF, *World Economic Outlook* April 2018.
1/Bars denote PPP GDP-weighted averages, red markers indicate the medians, and black markers denote the top and bottom deciles of per capita GDP growth in the country groups.

7. Medium-term growth prospects in emerging economies appear brighter, but in many cases, their realization will require significant structural changes. In *China*, the economy is expected to move toward more sustainable growth by shifting further away from investment and toward private consumption, and from manufacturing to services. In *India*, implementing structural reforms will raise productivity and private investment, leading to a gradual rise in growth. Many oil exporting countries are expected to continue economic diversification. For example, in *Saudi Arabia*, growth is projected to pick up in the medium-term as reforms designed to support adjustment away from the oil sector take hold and boost productivity.

B. RISKS HAVE RISEN

8. The balance of risk is now tilted downward even in the short term. The shifting risk landscape reflects a combination of old and new risks, some of which have already been realized—such as more disruptive trade tensions and capital flow reversals. Escalation of these developments to more systemic levels is possible in the absence of appropriate policies and policy cooperation.

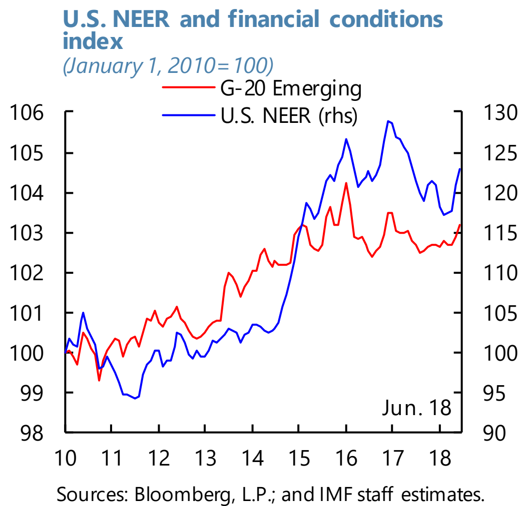
[1] Adler, Duval, Furceri, Kilic Celik, Koloskova, Popwlaski-Ribeiro, 2017, Gone with the Wind: Global Productivity, IMF Staff Discussion Note 17/04.

[2] IMF, 2018, G-20 Note on the Future of Work: Measurement and Policy Challenges.

9. Financial risks remain a key concern. These include:

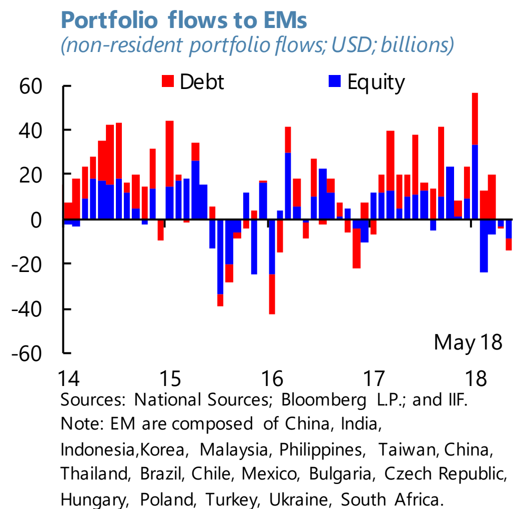
- *A surprise tightening of financial conditions followed by capital flow reversals*: Even after accounting for the early-February correction, measures of equity valuation remain elevated and leverage levels of governments, businesses, and households are now higher in many G-20 economies than before the financial crisis. Greater indebtedness has increased debt service burdens in many major economies despite the still-low level of interest rates, and off-balance sheet leverage and liquidity mismatches in investment funds have risen. This situation leaves the global economy vulnerable to a sudden tightening of financial conditions. A negative scenario could be triggered, for example, by a spike in risk sentiment and a further appreciation of the U.S. dollar, or if policy rates in the *United States* increase faster than expected—for example, owing to an overheating domestic economy powered by the pro-cyclical stance of fiscal policy. As observed above, emerging markets are particularly vulnerable to such tightening shocks, which could cause additional capital outflows and expose new vulnerabilities in relatively weaker economies, or lead to broader pressures across many emerging economies. Cyber-attacks represent an additional source of risk for the international financial system.
- *Resurrected euro area risks:* Recent upward shifts in the Italian sovereign yield curve serve as a timely reminder that market conditions can change quickly in an environment of high policy uncertainty. In the context of the *euro area*, a significant fall in sovereign bond prices in a large member country could reignite the sovereign-bank feedback loop, causing sharply tighter financial conditions and leading to a substantial reassessment of growth.

U.S. NEER and financial conditions index
(January 1, 2010=100)



Sources: Bloomberg, L.P.; and IMF staff estimates.

Portfolio flows to EMs
(non-resident portfolio flows; USD; billions)



Sources: National Sources; Bloomberg L.P.; and IIF.
Note: EM are composed of China, India, Indonesia,Korea, Malaysia, Philippines, Taiwan, China, Thailand, Brazil, Chile, Mexico, Bulgaria, Czech Republic, Hungary, Poland, Turkey, Ukraine, South Africa.

10. Further escalation in trade tensions could affect confidence and inflict significant costs on the global economy. Simulations indicate that a combination of higher import tariffs by the *United States* and retaliatory measures by its trading partners could take a toll on growth, particularly if they were to reduce confidence and thus investment (see Annex). While all countries would be significantly worse off, as the focus of retaliation, the *Unites States* is especially vulnerable because a higher share of its trade is being affected. A sustained escalation of trade actions would also risk undermining the multilateral WTO framework—which has successfully facilitated the global expansion of trade since 1995. The consequences would be dire and would disrupt global supply chains, severely

reduce the chances of further reduction in global trade barriers, and hurt consumers—especially low-income households—by raising the price of imported goods. Excessive global imbalances would also remain unaddressed.

11. Indeed, global imbalances might rise further, which could add additional fuel to trade disputes. The *United States'* excessive current account deficit is bound to increase further as the fiscal expansion adds to domestic demand at a time when the economy is already operating at or above capacity. At the same time, the excessive current account surpluses in other advanced economies are unlikely to shrink much in the short term, despite some plans for additional public investment, for example in *Germany*. Persistent external imbalances present another risk by adding to already diverging net foreign investment positions, which will demand larger adjustments in currencies, asset prices, and national spending going forward.

12. At the same time, there is no shortage of political risks. Increasing geopolitical strains in the *Middle East* and domestic tensions in *Venezuela* may lead to further oil supply disruptions and oil-price increases. Uncertainty around political transitions (e.g., in *Brazil* and *Mexico*) could further dampen the growth outlook in Latin America, while the possibility of a "hard" Brexit would contribute to headwinds to trade, investment, and growth in Europe.

13. Climate change and lack of progress on economic inclusion also present threats to growth. Natural disasters impose large costs and, especially in poorer economies, can cause political instability and mass migrations. Where inequality is high and growth is not inclusive, popular discontent may encourage policies that delay technological progress or erect economic barriers between countries, with negative aggregate repercussions.

POLICIES

With the global cycle maturing and downside risks increasing, policymakers should adjust macroeconomic policies and double down on their efforts to contain risks. With debt levels at historical highs in in many countries, there is need to re-build fiscal buffers and avoid pro-cyclical stimulus. Monetary policy should continue to normalize gradually in a way that reflects differing speeds of inflation convergence to targets. Multilateral cooperation must be put back at the center of trade policies. Proactive micro- and macroprudential policies can strengthen financial resilience. Emerging markets should make use of the full range of available macroeconomic, financial sector, and structural policies to smooth external shocks. And all countries have scope for structural reforms, while making the most of the promise of new technologies to raise productivity and income growth for all.

A. IT IS TIME TO ADJUST TO THE CYCLE AND BUILD BUFFERS

14. Central banks in the major advanced economies should continue to normalize monetary policy in line with economic developments. In the *United States*, given the very low level of unemployment and rising inflation, the Fed will need to raise policy rates at a faster pace than in other countries to achieve its dual mandate—making continuing clear communication of its intentions all the more important. In the *euro area*, the ECB should keep monetary policy accommodative well beyond the planned end of net asset purchases in December, until inflation convincingly nears the target. In *Japan*, persistently low inflation continues to warrant a clearly expansionary stance.

15. Fiscal policy should focus on building buffers while supporting long-term growth and contributing to lower excessive external imbalances. Pro-cyclical fiscal stimulus should be avoided and fiscal buffers should be built where public finances are on an unsustainable path and the external deficit is already excessive (e.g., in the *United States*), or when the fiscal position is vulnerable to a loss of market confidence (e.g., in *Italy*). In many countries, public debt is at historical highs and should be set on a downward trajectory. In *Japan* the overall fiscal framework needs further strengthening with specific indications of consolidation measures, healthcare and pension reforms, independent projections, and limited reliance on supplementary budgets. *Germany* should make use of its fiscal space to finance public investment, reduce the labor tax wedge, and provide incentives for private investment—all of which would contribute to reducing the persistent excessive current account surplus.

16. In emerging economies, macroeconomic policies can help to weather the pressure from tightening financial conditions. Fiscal policy should focus on maintaining public debt sustainability while acting as a countercyclical tool where fiscal space exists. Countries operating within inflation targeting regimes (e.g., *Brazil, India, Russia*) should generally let exchange rates adjust to absorb possible capital flow reversals unless a powerful pass-through to domestic inflation justifies policy tightening. If depreciation generates disorderly market conditions, sterilized foreign exchange intervention—well communicated as to its purpose and duration—may calm markets without the need for an unwarranted monetary policy response.

17. Building financial resilience is crucial in all countries. Both in advanced and in emerging economies, success requires active deployment of micro- and macro-prudential policies to reduce excessive risk taking and mispricing of risks, as well as making full use of the strengthened regulatory framework put in place after the financial crisis.

- *Emerging markets:* For emerging markets, addressing risks from foreign currency liquidity mismatches is especially important—for example, by enhancing disclosure of foreign currency funding risks, high-frequency reporting requirements, or targeted liquidity provision for specific banks/markets. Limits to loan-to-value and debt-service-to-income ratios can address rapid growth in leverage and credit in the household or corporate sector (e.g., in *China*, *Turkey*). In *China*, concerns about the shadow credit system call for the well-sequenced phasing out of implicit guarantees for investment vehicles.
- *Advanced economies:* In *Europe*, notwithstanding considerable progress, more is needed to fully solve the problem of non-performing assets on banks' balance sheets. The solution will entail, among other structural improvements, the modernization of insolvency and foreclosure frameworks and further development of markets for distressed debts.

B. MULTILATERAL ACTION IS VITAL FOR REDUCING RISKS

18. The global economy relies on an open, fair, and rules-based international trade system. The *United States* should work constructively with its trading partners to end the ongoing tensions and to resolve trade and investment disagreements without resorting to the unilateral imposition of tariff or non-tariff barriers. Similarly, its trading partners should avoid further escalation and work to reduce excessive current account surpluses. Where global trade rules have not kept pace with the evolution of the modern global economy—for example, in the area of services and investment, and the enforcement of intellectual property rights—all countries will benefit from a joint approach that supports and strengthens the international trading system and further reduces trade barriers. Bilateral trade balances reflect the efficient international division of labor and therefore are not a measure of gains and losses from trading relationships. Rather, the measure of a trading system's success is the extent to which it produces higher productivity and welfare for all economies, and a cooperative, multilateral approach to trade governance can both address an unbalanced playing field in trade policy and promote investment and growth globally.

19. Multilateral cooperation is also essential to push forward financial regulatory reforms and strengthen financial safety nets. Only a collaborative approach to financial stability policy can ensure that authorities across different jurisdictions follow harmonized and coherent approaches to old and new financial stability risks—for example, from investment fund activities. A joint effort is needed to speed up the reform agenda covering insurance regulation and to complete the resolution framework for nonbanks, including central counterparties. More broadly, an indiscriminate rollback of financial regulation must be avoided, for example in the areas of investment funds, liquidity management and derivative disclosure. Central bank swap lines should be retained to provide foreign exchange liquidity in periods of systemic stress and to complement other forms of external buffers within the global financial safety net, including the support provided by the IMF as well as by regional financing arrangement. Information sharing is essential to fight both international money laundering and the threat that potential cyber-attacks pose to the global financial system.

20. And new global challenges must be met, including those presented by climate change and the advance of new technologies.

- *Climate change*: Tackling the increasing economic risks due to climate change calls for multilateral action. For example, smart taxation that helps to price emissions appropriately could help ensure that countries meet their commitments under the Paris Agreement efficiently. Public investments in adaptation policies can reduce the domestic economic costs of severe weather events, while also helping to contain possible spillovers to other countries.
- *New technologies*: Many of the expected benefits and challenges brought by digitalization and other new technologies occur simultaneously across countries, creating a strong case for sharing information and best practices. In addition, there are areas where international cooperation is a must—including coordination of taxation and competition policy around multinational firms operating in the new economy.

C. RAISING MEDIUM-TERM GROWTH WILL ENTAIL NEW REFORMS

21. Lifting medium-term growth prospects is critical—and there is ample scope for additional reforms across the G-20. Possibilities include implementing structural policies that improve competitiveness and productivity, pension reforms to mitigate the economic and fiscal consequences of population aging, and measures to raise labor market participation and inclusiveness. For example:

- *Product markets*: In some countries, business regulation remain complex (e.g., in *India* and *South Africa*), and its unpredictability (e.g., in *Turkey*) weakens the investment climate. Competition-enhancing reforms are also needed (e.g., in *China, France*, *Germany*, *Italy*, *Japan*) to increase productivity and lower prices in professional services and in network industries (e.g. in *South Africa*). Inefficiencies in State-Owned Enterprises should be tackled decisively, by recognizing underlying bad assets and forcing "zombie" firms to exit (e.g., in *China*), by advancing privatizations (e.g., in *Russia, Saudi Arabia*) and through strategic equity partnerships with the private sector (e.g., in *South Africa*). Structural policies that ensure an efficient operation of market forces are especially crucial for countries seeking greater economic diversification and an increasing role of the private sector (e.g., in *Russia*, *Saudi Arabia*).
- *Trade and property rights*: The removal of barriers to international trade in the form of restrictions on foreign entry, limits on competition, and lack of regulatory transparency (e.g., in *China* and *India*) would increase productivity by promoting dynamism and attracting foreign capital and technology. In *South Africa*, expediting actions to remove uncertainty about property rights and tenure security associated with land reform would attract private investment. For all countries, enforcement of intellectual property rights while promoting competition is also important for growth.
- *Population aging***:** Pension reforms, such as raising the statutory retirement age and limiting early retirement, can remove an important distortion in labor supply decisions and help offset negative demographic trends (e.g., in *Brazil*, *China, Germany*, *Russia*, the *United States*). Population aging will also significantly raise health care costs, necessitating appropriate reforms (e.g., in *Japan*).

Many countries need to take further steps (e.g., in *Germany*, *Japan*, *Saudi Arabia, Turkey*) to improve female labor market participation, for instance by providing (e.g., in the *United States*) family friendly benefits, like paid family leave and means-tested assistance for child and dependent-care expenses.

- *Labor markets*: Changes in unemployment, apprenticeship, and vocational training polices (e.g., in *France*), labor market deregulation (e.g., in *India*), decentralization of wage bargaining (e.g., in *Italy* and *South Africa*), and policies to integrate refugees (e.g., in *Germany*) would boost employment and increase potential GDP. Reductions in the fragmentation of social programs, better means-testing in some advanced countries (e.g., in *Italy* and to complement the labor market reforms in *France*) and widening of social safety nets are key to improve inclusiveness (e.g. in *Italy*) and to accompany economic rebalancing (e.g., in *China*). Reforms to social safety nets and pension insurance systems can also help address increasing cross-country mobility and fragmented work.

22. Making the best out of the advancing new technologies will require a comprehensive and coordinated policy response. Digitalization, artificial intelligence, and the resulting wave of automation promise to raise productivity and growth, but their widespread adoption may involve costs incurred by way of labor displacement and adjustment, rising inequality, job and wage polarization, and social instability. The best way to meet these challenges varies with country circumstances, but some core principles emerge:[3]

- *Closing data gaps*: A better understanding of the changes afoot is critical. Coverage of the new digital economy in the national accounts and labor statistics is incomplete at best, which complicates the monitoring of ongoing structural changes such as the growth of new forms of work organized around digital platforms.
- *Facilitating technological advances:* To realize the potential increase in productivity, policies should balance encouraging competition and incentivizing innovation. Labor and product market reforms—along the lines described above—digital infrastructure investment, and economic integration can foster technological diffusion and the efficient reallocation of resources. Fintech can bring substantial benefits—for example, by permitting "unbanked" consumers to access financial services—but rules and standards will need to be developed to ensure the integrity of data, algorithms, and platforms.
- *Supporting adjustment and inclusion*: Active labor market policies and safety nets can protect workers while allowing change; and the tax/benefit system can help ensure that growth is broadly shared. Education is vital to meet the demand for more flexible skill sets and lifelong learning, especially for the most negatively affected workers. Where taxes need to rise to finance higher spending, their impact on growth and income distribution should be assessed.
- *Updating policy frameworks*: Social safety nets and pension insurance systems will need to adjust to increasing cross-country mobility and more fragmented work careers against the background of pre-existing trends such aging and lengthening working lives. The new technologies also bring challenges for the public finances, as they foster hard-to-tax activities while creating new spending needs.

[3] IMF, 2018, G-20 Note on the Future of Work: Measurement and Policy Challenges.

Table 1. Real GDP Growth

(percent change)

	Year over Year					
			Projections (from Jul. 2018)		Deviations (from Apr. 2017)	
	2016	2017	2018	2019	2018	2019
World	**3.2**	**3.7**	**3.9**	**3.9**	**0.0**	**0.0**
Advanced economies	1.7	2.4	2.4	2.2	-0.1	0.0
Euro area	1.8	2.4	2.2	1.9	-0.2	-0.1
Emerging market and developing countries	4.4	4.7	4.9	5.1	0.0	0.0
G-20 1/	3.2	3.9	4.0	4.0	-0.1	-0.1
Advanced G-20 2/	1.5	2.2	2.3	2.2	-0.1	0.0
Emerging G-20 3/	4.7	5.3	5.3	5.4	-0.1	-0.1
Argentina	-1.8	2.9	0.4	1.5	-1.6	-1.7
Australia	2.6	2.2	3.1	3.1	0.1	0.0
Brazil	-3.5	1.0	1.8	2.5	-0.5	0.0
Canada	1.4	3.0	2.1	2.0	0.0	0.0
China	6.7	6.9	6.6	6.4	0.0	0.0
France	1.1	2.3	1.8	1.7	-0.3	-0.3
Germany	1.9	2.5	2.2	2.1	-0.3	0.1
India 4/	7.1	6.7	7.3	7.5	-0.1	-0.3
Indonesia	5.0	5.1	5.1	5.3	-0.2	-0.2
Italy	0.9	1.5	1.2	1.0	-0.3	-0.1
Japan	1.0	1.7	1.0	0.9	-0.2	0.0
Korea	2.9	3.1	3.0	2.9	0.0	0.0
Mexico	2.9	2.0	2.3	2.7	0.0	-0.3
Russia	-0.2	1.5	1.7	1.5	0.0	0.0
Saudi Arabia	1.7	-0.9	1.9	1.9	0.2	0.0
South Africa	0.6	1.3	1.5	1.7	0.0	0.0
Spain 5/	3.3	3.1	2.8	2.2	0.0	0.0
Turkey	3.2	7.4	4.2	3.9	-0.2	-0.1
United Kingdom	1.8	1.7	1.4	1.5	-0.2	0.0
United States	1.5	2.3	2.9	2.7	0.0	0.0
European Union	2.0	2.7	2.4	2.1	-0.1	0.0

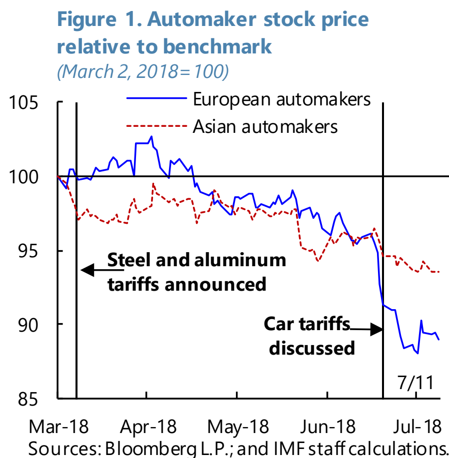
Source: IMF, *World Economic Outlook* July 2018 Update.
1/ G-20 aggregations exclude European Union.
2/ Includes Australia, Canada, France, Germany, Italy, Japan, Korea, United Kingdom, and United States.
3/ Includes Argentina, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, and Turkey.
4/ For India, data and forecasts are presented on a fiscal year basis and GDP from 2011 onward is based on GDP at market prices with FY2011/12 as a base year.
5/ Permanent invitee.

ANNEX: The Global Impact of Escalating Trade Actions

Recent data point to growing concerns that trade tensions could be leaving their mark on the global economy. Simulations focusing on the macroeconomic impact through trade and confidence effects suggest that all countries would be hurt—however, as the focus of retaliation, the United States is especially vulnerable. These results are not predictions but illustrative of the types of effects that could occur. They do not take into account the sectoral structure of global trade or global supply chains, which could add to the costs of escalating trade actions and might change the distribution of costs across countries. Overall, this highlights the benefits of a cooperative approach to resolving current tensions and improve the multilateral trading system.

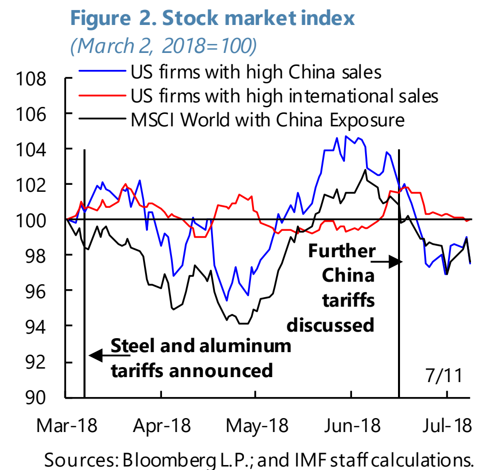
There are growing concerns that trade tensions could be leaving their mark. While global growth remains broadly robust, the rising wave of trade tensions, new tariffs, and counter-tariffs represents a significant downside risk for advanced and emerging markets alike. As discussed further below, the particular implications for any one country or region can be complex—for example, a country may see trade volumes decrease due to higher tariffs levied on some of its imports and exports but, at the same time, benefit from trade diverted in its direction as tariffs are raised elsewhere. Some of this increased uncertainty seems to be reflected in equity markets, and there are early signs of negative confidence effects in some countries.

Figure 1. Automaker stock price relative to benchmark
(March 2, 2018=100)



Sources: Bloomberg L.P.; and IMF staff calculations.

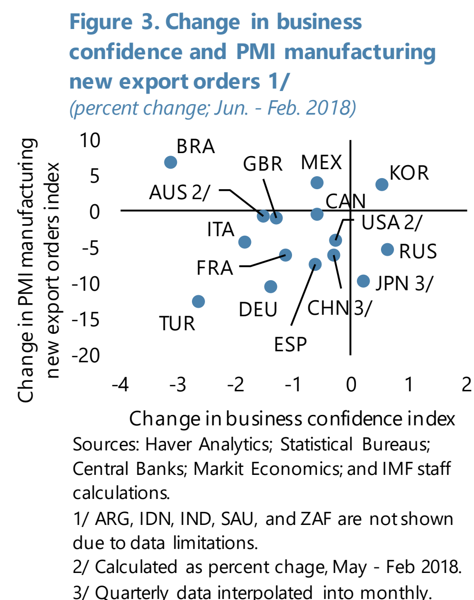
Figure 2. Stock market index
(March 2, 2018=100)



Sources: Bloomberg L.P.; and IMF staff calculations.

- For example, the equity price of European automakers and U.S. firms with significant Chinese or international exposure fell significantly relative to the broad market index following the announcement of possible tariffs on car imports and imports from China into the United States (Figures 1 and 2).

Figure 3. Change in business confidence and PMI manufacturing new export orders 1/
(percent change; Jun. - Feb. 2018)



Sources: Haver Analytics; Statistical Bureaus; Central Banks; Markit Economics; and IMF staff calculations.
1/ ARG, IDN, IND, SAU, and ZAF are not shown due to data limitations.
2/ Calculated as percent chage, May - Feb 2018.
3/ Quarterly data interpolated into monthly.

- Similarly, recent data point to a slowing of new export orders and declining business confidence especially in some car-exporting European economies, including Germany (Figure 3).

Simulation analysis suggests that an increase in trade tensions would come at a cost for the countries involved and the global economy. The calculations use the IMF's Global Integrated Monetary and Fiscal Model, a dynamic macroeconomic model covering six countries and regions—the United States, Japan, the euro area, emerging Asia (which includes China), Latin America, and the rest of the world. Four additive scenarios are analyzed:

Scenario 1 (*adopted tariffs*) incorporates already implemented (i) higher tariffs on U.S. imports of steel (25 percent) and aluminum (10 percent); (ii) a 25 percent tariff on US$50 billion worth of U.S. imports from China; and (iii) assumes retaliation from all affected regions, consisting of an increase in tariffs on an equivalent amount of U.S. exports. Here as in the following scenarios, the assumption is that tariffs are raised permanently.

Scenario 2 (*additional tariffs*) adds to scenario 1 an additional 10 percent tariff on US$200 billion worth of U.S. imports from China, with retaliation of equivalent size.[1]

Scenario 3 (*car tariffs*) adds to scenario 2 (i) a 25 percent increase in tariffs on U.S. imports of vehicles; and (ii) retaliation from all affected regions on an equivalent amount of U.S. exports.

Scenario 4 (*confidence shock*) introduces a temporary global shock to confidence on top of scenario 3 to illustrate the potential effects of rising trade tensions on the risks faced by firms both on the supply and demand side. This is modeled as an increase in risk premia that will lower investment in manufacturing. While the shock could easily be lower or higher, it is assumed that advanced economies see risk premia increase by 30 basis points—about half the increase observed during the "taper tantrum"—which triggers a reduction in the level of investment by 1 percent, all else equal. Emerging markets would face a shock that is twice as large, reflecting, among other things, differences in financial vulnerabilities. The shock's effects are assumed to peak in year two before fading over the medium term.

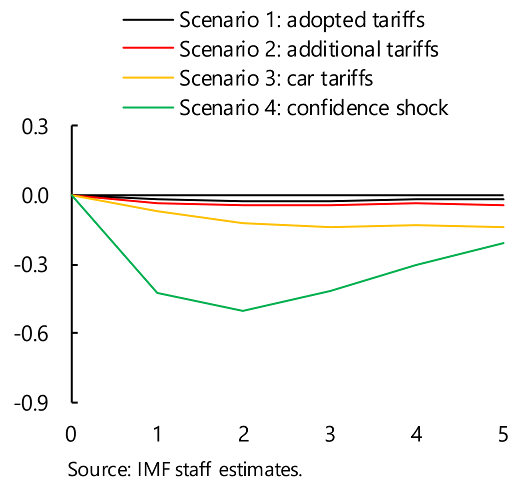
The short-term effects are particularly negative when trade tensions weaken confidence (Figure 4). In the most severe simulation (scenario 4), the level of global GDP would be lower by about 0.4 percent in the first year and about 0.5 percent in the second relative to the baseline—the impact could be lower or higher depending on level of the confidence shock that is assumed. Tariffs on their

[1] The scenario is broadly based on the July 10 announcement of an additional US$200 billion worth of imports from China. As China imports about US$130 billion in goods from the United States, and there is already a 25 percent tariff on US$50 billion in U.S. exports in scenario 1, the assumed retaliation from China takes the form of a 10 percent tariff on the remaining US$80 billion and an increase in non-tariff barriers—equivalent to a 20 percent surcharge—affecting US$60 billion in U.S. exports of services.

own have a smaller effect on global GDP, with a maximum loss of about 0.1 percent relative to the baseline (scenario 3).[2]

In general, the negative effects of tariffs are larger for the U.S. economy than for others (Figure 5). The main reason is the "hub and spoke" nature of the simulated escalation of mutually enforced tariffs: as the United States imposes tariffs on a growing share of its imports, it correspondingly suffers retaliation of the same scale. As a result, a larger share of its exports is eventually affected. In contrast, other regions continue to trade among each other without additional tariffs imposed, which allows some adjustment of trade flows away from United States.[3] After the introduction of additional tariffs on imports from China and the related retaliation (scenario 2), U.S. GDP drops by about 0.2 percent relative to the baseline in year one, before recovering to slightly more than 0.1 percent below in year five. If the trade dispute broadens to includes U.S. car imports (scenario 3), the decline in U.S. GDP would increase to 0.6 and 0.3 percent below baseline in years one and five, respectively.

Figure 4. Scenario analysis: Global GDP
(percent difference from baseline)



Source: IMF staff estimates.

The impact on other countries and regions reflects the direct impact of tariffs and trade diversion.

- Higher tariffs between the United States and China (scenario 2) directly reduce GDP in Emerging Asia, with losses of about 0.2 percent in year one. Other regions benefit instead from the substitution away from Chinese and United States goods. It is important to note that this is less a prediction than the illustration of the general-equilibrium forces at work: a more elaborate model allowing for more granular results at the sectoral level—including, for example, differences in elasticities of substitution—and taking account of the disruption of global supply chains and adjustment costs might well force losses across all regions.

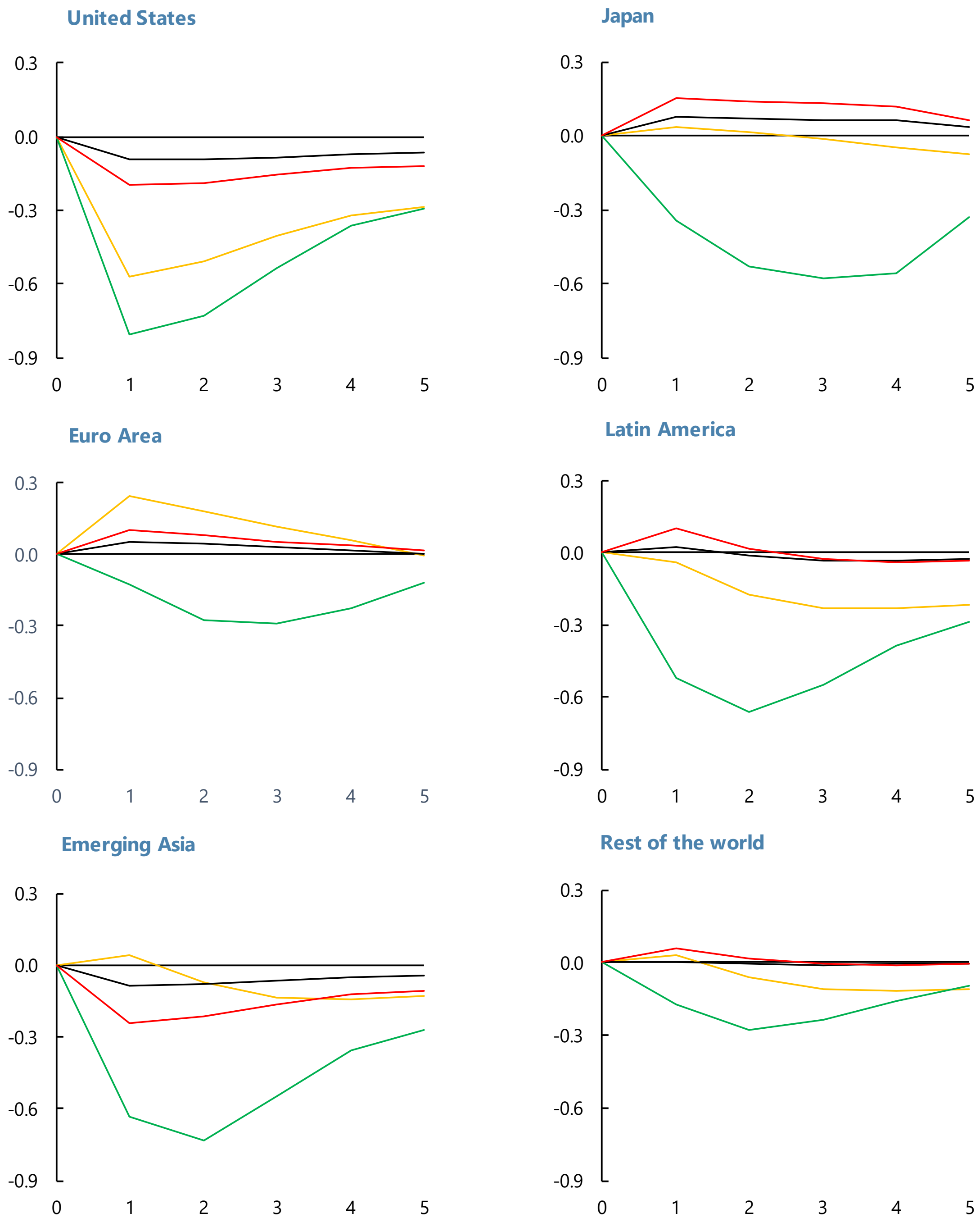
- In the car tariffs simulation (scenario 3), Japan is hit the hardest—with GDP losses up to about 0.2 percent—given the composition of its trade (29 percent of total exports to the United States are automobiles). This offsets the temporary gain from trade diversion in scenario 2, so that the combined effect from the two tariff measures is roughly zero in the short run. Latin America (13 percent of total exports to the United States in cars) and the rest of the world (11 percent) are the next most affected regions. The impact on emerging Asia is also reversed in scenario 3 relative to scenario 2 because car exports represent a very small share of their U.S. exports and because they now benefit from the trade diversion. The simulations suggest that euro area is the one region that could at least temporarily benefits from both tariff increases. Although it exports about US$30 billion in cars to the United States, these represent less than 1 percent of total exports, and

[2] The long run effects (not shown) are driven entirely by the distortions caused by higher tariffs.

[3] As an illustration, in the car tariff scenario 3, tariffs affect about 13 percent of U.S. imports. For Emerging Asia, the second-most exposed region, the exposure is about 9 percent.

so the direct effect from tariffs on cars is more than offset by the trade diversion. However, as discussed, these results do not factor in likely supply-side distortions and frictions in adjustment.

Every region would lose if the escalating trade tensions led to a negative confidence shock (scenario 4). While the precise level of the shock is very difficult to ascertain, its impact is likely to be large, even relative to the simulated direct impact of escalating trade restrictions—which, as discussed, could well underestimate the actual effect. Independent of the calibration of confidence shocks, the simulation helps to establish the channels through which higher risk premia—coming in what likely would be an environment of heightened risk aversion—would lead to further decreases in investment, consumption, and output. One factor at play is the reaction of monetary policy. While monetary policy shifts toward accommodation in the United States and other regions, the effective lower bound will limit the degree of monetary support available in Japan and the euro area. However, the United States would remain the region most affected, with a drop in GDP of about 0.8 percent in year one relative to the baseline, followed by Emerging Asia which will see GDP fall by around 0.7 percent in year two. Latin America and Japan would face peak losses of about 0.6 percent, whereas the euro area and the rest of the world would face peak losses of about 0.3 percent.



Source: IMF staff estimates.