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Global Macro Views

The Global Macro Forum

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The coronavirus pandemic poses a generational challenge. In contrast to prior outbreaks, there are more resources to tackle the problem, both in terms of health care infrastructure to cope with its incidence and an ability to suspend economic activity to slow its spread. The latter involves keeping people away—as workers from their occupations and as spenders from the marketplace. As a result, the V-shaped path of the infection—it gets worse before it gets better—inflicts an even sharper V-shaped scar on the global economy.

There are two points to note about this process.

First, the dislocations fall unevenly, and cruelly, on those with lower incomes who generally do not have the ability to work remotely nor the resources to tide themselves over while not working. This holds across strata of a single economy and across advanced and emerging market economies.

Second, we are in the process of taking apart the most complicated piece of machinery in the world—the global economy—and should not expect that the pieces can be put back together either quickly or seamlessly. Some shuttered businesses will not reopen. Some furloughed workers will exit the labor force permanently. Balance sheet damage will limit the future options of households, firms and governments. Also, lines have been crossed between the missions of the fiscal and monetary authorities, lessons not likely to be soon forgotten.

True, some of the official actions, including four rounds of stimulus legislation in the US and an array of programs from the Federal Reserve (Fed), work to limit the economic destruction. As countercyclical policies go, US action has been relatively timely and targeted. The jury will be out for some time as to whether it will be temporary. Apart from Japan, US action has also been more aggressive in scale and scope than in most other major economies. Notable on this list is China, which has not stepped up its policy stimulus in this global downturn nearly to the extent it did in 2008 and 2009.

These are reasons, on net, to believe that the upward leg of the “V” for economic activity is shallower and will not claw back all the ground lost in the downward one. Moreover, the contraction in global demand has severely tested the business models of the energy sector in two ways. For one, when energy demand was robust, the coalition of oil producers known as OPEC+ happily promoted token cuts to maintain oil prices in a range of \$50 to \$70 per barrel. The global cratering of activity required real and shared pain among OPEC+ members to cut production sufficiently to defend prices. They did not, and oil prices were pushed over a precipice.

For a time, the drop was epic. Because oil is a storable commodity, in typical circumstances traders smooth the downward leg to a V shape in prices in the expectation of the upward one. These are not typical circumstances, and in late April traders worried that the US would run out of sufficient oil storage. Possession of oil was no longer attractive when there were no barrels to put it in, and near-term futures prices fell like that of fresh fish late on market day.

Those few trading days were a headline-grabbing aberration. We think oil prices will trade in a range of \$20 to \$40 per barrel until world economic activity is assuredly on the upswing. This range is considerably lower than the price at the start of 2020, which will hit commodity-producing economies, many that are already reeling from the pandemic, hard. As a result, the recession is likely to be shared more broadly than at any time since the 1930s.

In our outlook, global real GDP growth slows 4.5 percent in 2020, to -1.9 percent. Despite its unfortunate position of being atop the leader board of COVID-19 cases and deaths, and being very dependent on services that fare poorly under social distancing, we see real US GDP falling “only” 3 percent this year. This is built on both the extent of US policy stimulus and the relative unimportance of trade to our overall economy.

A ball dropped from a great height bounces forcefully—but does not reach the same altitude. Frictions matter in physics and economics. Crises are so costly that even the 3.8 percent real GDP growth of 2021 leaves the level lower than in prior forecasts. We believe a similar dynamic will play out in the US.

At home and abroad, the opening of significant output gaps leaves inflation quiescent, for now. However, we expect stimulus to linger longer than strictly necessary and supply chains to be reoriented closer to home, but be less efficient. This places upside risk to inflation over the medium term, once we get there.

World

	2018	2019	2020	BoR	2021	BoR
Real GDP	3.2%	2.6%	-1.9%	—	3.8%	—
Inflation	2.9%	2.7%	2.1%	—	2.3%	—

Source: Firm analysis as of April 6, 2020. 2020 and 2021 are forecasts. BoR (Balance of Risks): Indicates bias relative to our forecasts as new information becomes available. "▼" represents a negative view and "—" indicates a neutral view.

Developed Markets

United States

	2018	2019	2020	BoR	2021	BoR
Real GDP	2.9%	2.3%	-3.0%	—	4.0%	—
Inflation	2.3%	1.8%	1.0%	—	2.1%	—

Source: Firm analysis as of April 6, 2020. 2020 and 2021 are forecasts. BoR (Balance of Risks): Indicates bias relative to our forecasts as new information becomes available. "▼" represents a negative view and "—" indicates a neutral view.

Euro Area

	2018	2019	2020	BoR	2021	BoR
Real GDP	1.8%	1.1%	-6.3%	▼	3.3%	▼
Inflation	1.8%	1.2%	0.5%	—	1.2%	—

Source: Firm analysis as of April 6, 2020. 2020 and 2021 are forecasts. BoR (Balance of Risks): Indicates bias relative to our forecasts as new information becomes available. "▼" represents a negative view and "—" indicates a neutral view.

United Kingdom

	2018	2019	2020	BoR	2021	BoR
Real GDP	1.3%	1.2%	-6.0%	—	4.0%	—
Inflation	2.7%	1.9%	1.0%	—	1.5%	—

Source: Firm analysis as of April 6, 2020. 2020 and 2021 are forecasts. BoR (Balance of Risks): Indicates bias relative to our forecasts as new information becomes available. "▼" represents a negative view and "—" indicates a neutral view.

Western Europe

While economic momentum surged in January 2020 following the late-2019 trade deal between the US and China, it was quickly halted by the rapid onset of COVID-19 in Northern Italy in February 2020 and then wider Europe by March 2020. As a result, we have aggressively reduced our growth forecasts for 2020.

Growth forecasts in the Euro area have been reduced more than in the US and China, as the economy has been hit by both strict lockdown measures and the global economic contraction. Germany’s very open economy, highly exposed to trade with China and supply-chain disruptions, is now expected to show a deep contraction in 2020. In Italy, we are forecasting an even more significant contraction in 2020 given the impact of quarantine/containment measures and lost service-sector output (e.g. travel and leisure). We now expect contractions across the big four Euro area economies in 2020. Although projected 2021 growth has been revised higher (on mostly base effects), not all of the growth can be recaptured in 2021. We still expect some permanent loss in activity (concentrated in services).

As a result of this darker outlook for the European economy, there has been significant monetary policy accommodation from the European Central bank (ECB)—and significantly more quickly than during the Global Financial Crisis. The ECB has engaged in two significant monetary easing packages. While it has kept rates on hold—given their negative levels, they are felt to be somewhat redundant at this juncture—it has engaged in EUR 870 billion in additional quantitative easing, which is likely to last at least for the duration of 2020, and has seen many self-imposed limits lifted. The ECB has also provided significant liquidity facilities as well as easing the regulatory requirements upon banks. Somewhat predictably, the European Commission has been slower in providing a coordinated fiscal response – and thus countries have largely engaged in their own fiscal stimulus (usually around 2 percent of GDP and growing).

Japan

	2018	2019	2020	BoR	2021	BoR
Real GDP	0.3%	0.8%	-3.0%	—	0.2%	—
Inflation	1.2%	0.8%	-0.2%	—	0.1%	—

Source: Firm analysis as of April 6, 2020. 2020 and 2021 are forecasts. BoR (Balance of Risks): Indicates bias relative to our forecasts as new information becomes available. “▼” represents a negative view and “—” indicates a neutral view.

Japan encountered a steeper-than-anticipated downturn at the end of last year, with activity slowing by more than 6% on an annualized basis in the fourth quarter (seasonally-adjusted). This was due to a bigger-than-expected adverse impact from the consumption tax hike last October, and typhoons and flooding in the fall of last year, which also hurt the economy.

Weak macro momentum will be further damaged by the COVID-19 pandemic, which hurts Japan through two key channels. One is the steep drop in Chinese demand, which imposes a drag on Japan’s goods exports and production. Second is the spread of the disease within Japan itself, where authorities have belatedly begun instituting quarantine efforts. This delay has resulted in widespread shutdowns of schools and offices as well as sizable parts of the public transportation network and the tourism sector across large swathes of the country.

Due to these factors, we are lowering our growth forecast for 2020 and 2021 by 0.5 percent and 0.1 percent respectively, to just 0.1 percent and 0.6 percent on a yearly basis. The slowdown in activity will also dent Japanese inflation. We now believe Japanese inflation will remain below 1 percent through the end of 2021.

To be sure, the authorities are scrambling to put together a health and fiscal-policy response. But as things stand, the fiscal packages being discussed in the legislature seem to be a case of “too little, too late” to make much of a difference for the macro outlook until late in the second quarter at the earliest. As such, the strengthening of the yen to 100/US dollar, or below that level, will put more pressure on corporate profits and lower import prices, thereby hampering the authorities’ long-running effort to reflate the economy.

In view of the Federal Reserve’s (Fed) rate cut, the bottom line is that unless the Japanese authorities’ quarantine measures are immediately effective, the Bank of Japan will likely be forced to cut its interest rate on excess reserves (IOER) from -0.1 percent rate to -0.2 percent by its April meeting. In order to backstop the smaller regional banks most adversely impacted by deeper, negative rates, we believe the authorities will have to employ quasi-fiscal measures such as macro-prudential or other reform methods, to stem a further widening of financial gaps at deeply negative real rates.

Australia & New Zealand

Australia

	2018	2019	2020	BoR	2021	BoR
Real GDP	2.8%	1.6%	-4.1%	—	3.2%	—
Inflation	2.0%	1.5%	0.4%	—	1.1%	—

Source: Firm analysis as of April 6, 2020. 2020 and 2021 are forecasts. BoR (Balance of Risks): Indicates bias relative to our forecasts as new information becomes available. “▼” represents a negative view and “—” indicates a neutral view.

At its March meeting, the Reserve Bank of Australia (RBA) fired the opening salvo of policy-rate easing in order to support the economy amidst the coronavirus outbreak. A firm easing bias was placed in the statement. This takes the policy rate to the RBA’s stated effective lower bound, at which point unconventional monetary policy will be considered. The RBA is undergoing a rethink of its unconventional tools, with quantitative easing its preferred option rather than negative interest rates. Some form of yield curve control may also be implemented. The central government is expected to announce fiscal easing in a coordinated stimulus response alongside the RBA. For now, it appears that new spending is targeted in industries most affected by the pandemic, such as tourism and education. The level and persistence of disruption from the pandemic to the global and Australian economy is highly uncertain. We have slashed our growth forecast for Australia to -4.1% in 2020, with weakness concentrated in the first half of the year. Risks are tilted to the downside in the event that the pandemic persists longer than expected and the negative supply shock leads to a negative demand shock.

In New Zealand, we expect the Reserve Bank of New Zealand to ease its policy rate from 1.0% to near zero. Like Australia, New Zealand’s external sector is locked in the orbit of China. Developments within the Chinese economy will be key.

Emerging Markets

China

	2018	2019	2020	BoR	2021	BoR
Real GDP	6.6%	6.1%	3.0%	—	6.2%	—
Inflation	2.5%	2.9%	2.3%	—	1.9%	—

Source: Firm analysis as of April 6, 2020. 2020 and 2021 are forecasts. BoR (Balance of Risks): Indicates bias relative to our forecasts as new information becomes available. “▼” represents a negative view and “—” indicates a neutral view.

The afterglow from the US-China trade truce has been completely eclipsed by the COVID-19 pandemic, centered in the province of Hubei. Even though the number of new cases has begun to wane and recovery ratios are on the rise, a full normalization, which accords with a substantial resumption of activity and capacity utilization, could stretch out into May.

What has become clear is that China’s quarantine efforts have been draconian, and took a much larger bite out of activity in the first two months of the year than was widely expected. As such, we are lowering our full-year GDP growth forecast to 3 percent for 2020, from a previous expectation of a milder slowdown of 5.8 percent (year-over-year), compared to 6.1 percent in 2019. China’s quarantine measures affected not only industry, but also services and consumption, far more adversely than we previously anticipated. This became evident from the abject collapse in the services PMI to just 28.9 in February and manufacturing PMI to 35.7. Both were above 50 in January. The weak trend in activity continues to be corroborated by daily activity trackers (as measured by big-data indicators on country-wide traffic congestion, pollution, coal consumption and property transactions) where the run rate of activity is still 30 to 40 percent below normal, though improved from the 50 percent drop from a few weeks prior.

A full recovery will take longer than expected for several reasons. First, while the incidence of new, confirmed cases is declining sharply, there needs to be a far greater pickup in recovery rates before calling an end to the pandemic in China. Second, the rising and high speed of the disease outside China will keep local authorities cautious. Third, reopening businesses is ultimately the decision of provincial-level authorities. Keeping this in mind, while the central government’s directive and state-media’s exhortation to restart activity is apparent, no provincial government authority will want to run the risk of becoming the next Hubei province. Finally, a worldwide slowdown in global growth driven by the spread of the pandemic will also have an adverse feedback-loop effect on China’s external demand.

Recent rate cuts by the Fed creates policy space, but the People’s Bank of China (PBOC) has yet to utilize it. There is an ongoing debate within China about the pros and cons of a benchmark deposit rate cut versus further cuts in the banks’ loan prime rate (LPR) and its source of funding, the medium-term lending facility (MLF) rate offered by the PBOC. This is an important debate because central bank facilities and inter-bank borrowings account for only 30 percent of the banking system’s liabilities, but these are also the centerpiece of China’s long-term interest rate reforms. Some authorities are loath to reduce the ‘benchmark’ deposit rate, which would quickly lower the funding cost of as much as 70 percent of the banking system liabilities and speed up China’s growth recovery, but would also be tantamount to a setback for long-term financial reform.

Against this backdrop, the Chinese authorities will likely prioritize micro-level, targeted regulatory and fiscal support. This does not mean that they will abjure the reduction of benchmark deposit rates altogether. Their likely emphasis, for now, is ensuring that credit flows remain smooth across badly affected sectors and that the inclusivity

of cost-free access to testing and hospitalization remains ample. Only if the authorities' GDP growth target seems threatened on a multi-year basis will a broader, undifferentiated easing come in to view.

While China's commitments to the US-China trade agreement have taken a back seat in the current environment, the official rhetoric remains committed to the deal though there is less clarity on the precise detail and timing of increased Chinese purchases.

South Korea

	2018	2019	2020	BoR	2021	BoR
Real GDP	2.7%	1.9%	0.5%	—	3.0%	—
Inflation	1.7%	0.5%	0.9%	—	1.4%	—

Source: Firm analysis as of April 6, 2020. 2020 and 2021 are forecasts. BoR (Balance of Risks): Indicates bias relative to our forecasts as new information becomes available. "▼" represents a negative view and "—" indicates a neutral view.

The Korean economy remained in the doldrums through much of 2019 due to weak semiconductor prices, easing electronics exports, a slowing housing market, and a poorly implemented minimum wage hike that resulted in a labor-hiring shock. Despite these headwinds, the small uptick in external demand at the end of the year, led by the thaw in US-China trade rhetoric and a public-sector hiring program, somewhat reduced trade and labor market pressures. But these green shoots were nipped as Korea was hit hard by the COVID-19 pandemic. The authorities instituted draconian shutdowns of the city of Daegu and country-wide sterilization efforts. Nevertheless, exports and the services sector, led by tourism and transportation, will inevitably take a large hit. To be sure, the authorities are mounting a large fiscal stimulus package and the size of Korea's fiscal deficit is expected to reach an all-time high of 4% of GDP this year, exceeding the deficit (as a percentage of GDP) that occurred after the Global Financial Crisis. We also expect the Bank of Korea (BOK) to cut rates at least once more, by 25 basis points, to take its policy rate to an all-time low of 1 percent. We believe this cut is likely to raise Korea's output back to trend. As such, we are lowering our GDP growth forecast by 0.8 percent, to 0.5 percent year-over-year. Inflation will also remain restrained to less than 1 percent, well below the BOK's 2 percent goal.

India

	2018	2019	2020	BoR	2021	BoR
Real GDP	7.4%	5.1%	3.5%	—	7.0%	—
Inflation	4.2%	3.3%	4.0%	—	3.5%	—

Source: Firm analysis as of April 6, 2020. 2020 and 2021 are forecasts. BoR (Balance of Risks): Indicates bias relative to our forecasts as new information becomes available. "▼" represents a negative view and "—" indicates a neutral view.

The downturn in India's GDP growth slowed at the end of 2019 due to stabilizing exports and industrial production as global trade ticked up, and from the effects of monetary policy easing. Fiscal policy, however, remains constrained. Any impulse from the recently-passed 2020 budget is heavily dependent on funding from successfully implementing an ambitious disinvestment program (sales of stakes in state-owned assets). However, the macro outlook has darkened for three key reasons. First, the slump in Chinese activity will crimp India's access to intermediate goods (imported from China) and slow its production capability. Second, the COVID-19 pandemic

is lowering activity worldwide, which will weigh on India’s goods exports and tourism inflow. Third, the banking system remains moribund and the absence of more far-reaching reforms will keep credit conditions tight and constrain India’s near-term growth prospects. In view of this worsening macro backdrop, the onus will remain on the Reserve Bank to do more of the heavy lifting to try and support growth. As such, we expect further rate cuts, as well as more liquidity easing, once food price inflation pressures abate in coming months.

Latin America

Brazil

	2018	2019	2020	BoR	2021	BoR
Real GDP	1.3%	1.0%	-3.3%	▼	2.9%	—
Inflation	3.7%	3.7%	3.2%	▼	3.3%	—

Source: Firm analysis as of April 6, 2020. 2020 and 2021 are forecasts. BoR (Balance of Risks): Indicates bias relative to our forecasts as new information becomes available. “▼” represents a negative view and “—” indicates a neutral view.

In Brazil, there is high uncertainty on how the COVID-19 outbreak could affect the country. The negative effects have not yet been felt in the real economy. However, leading indicators are starting to show that the economy may contract this year. The trade balance in the first three months of the year does not yet show material impact on Brazilian exports. Lower Chinese growth is likely to hit Brazilian exports as China imports 28 percent of them, especially soybeans, oil and iron ore.

We expect that negative effects from the virus will be felt in the second quarter, and estimate a 5.5 percent contraction quarter-over-quarter after a marginal drop of 0.5 percent in the first quarter. We expect a slow recovery in the second half of the year led by a rebound in domestic demand (1.5 percent, year-over-year). We have cut our 2020 GDP growth estimate to -3.3 percent from 1.7 percent due to a contraction in gross fixed capital formation of 8.0 percent year-over-year and -3.5 percent in household consumption. On the supply side, we estimate a contraction of 3.6 percent year-over-year (YoY) in services and 3.0 percent YoY in industrial production with a marginal decline of 0.2 percent YoY in primary activities.

President Bolsonaro’s administration and Congress have delayed the negotiation of structural reforms, as the health emergency has become a top priority in the last few weeks. Some reforms, like the administrative reform of the public sector, will have to wait until after the regional elections in October. We think the tax and central bank reforms have a good chance to pass this year.

The Brazilian economy grew 0.5 percent quarter-over-quarter (QoQ) in the fourth quarter, slightly below the 0.6 percent of the previous quarter. On a year-over-year basis, the economy grew 1.7 percent in the fourth quarter, up from 1.2 percent in the prior quarter due mainly to an expansion in private consumption (0.5 percent, QoQ), government consumption (0.4 percent QoQ), and net exports (2.5 percent QoQ). However, investment showed weakness after two quarters of solid performances, dropping 3.1 percent QoQ quarter, the worst performance since 2016. GDP expanded 1.1 percent in 2019, the third year with an expansion above 1 percent.

The investment rate is near 15.4 percent, slightly above the level of 2018, but below the long-term average and below other emerging market peers. We think that structural reforms will support higher investment rates in the medium term.

Inflation rebounded in the fourth quarter to 3.7 percent from 3.2 percent in the previous quarter, due mainly to an acceleration in food prices. We expect inflation to drop below 3 percent and to remain below the target for 2020. Spare capacity in the labor market will push inflation down. We lowered our average inflation projection for 2020 to 2.9 percent from 3.5 percent, below the central bank’s target of 4 percent. The disinflationary effect of the negative output gap is very likely to dominate over inflationary pressures coming from currency depreciation. The Central Bank of Brazil cut the SELIC policy rate by 75 basis points to 3.75 percent this year due to below-potential growth. We expect a final cut of 25 basis points in May to 3.5 percent.

Mexico

	2018	2019	2020	BoR	2021	BoR
Real GDP	2.0%	-0.1%	-6.2%	▼	2.0%	▼
Inflation	4.9%	3.6%	3.3%	▼	3.6%	▼

Source: Firm analysis as of April 6, 2020. 2020 and 2021 are forecasts. BoR (Balance of Risks): Indicates bias relative to our forecasts as new information becomes available. “▼” represents a negative view and “—” indicates a neutral view.

We cut our 2020 GDP growth to -6.2 percent from 0.6 percent as the Mexican economy will likely face diverse negative shocks. On one side, the recession in the US economy will likely hit manufacturing exports and all services related with that sector. We expect an adverse wealth effect from US households to affect spending on durable goods coming from Mexico, such as cars and consumer electronics. Many Mexican exports still depend on intermediate goods from China that may be affected by supply disruptions. China’s share of total Mexican imports is around 18 percent. Also, reduced foreign and domestic travel, lower remittances, and greater risk aversion by consumers will likely contract domestic demand. Low oil prices will likely contract industrial production and will reduce government revenues. Constant policy shifts will likely continue to hinder private investment.

Economic activity fell 0.5 percent QoQ in the fourth quarter due to a slowdown in private and public consumption, and a contraction in private investment. GDP contracted 0.1 percent in 2019 and dropped sequentially in all four quarters (-0.5 percent, -0.4 percent, -0.3 percent and -0.5 percent, respectively), the first time that the Mexican economy has done so. We expect at least two more quarters of deep contraction and a mild rebound in the third quarter of 2020. We estimate a GDP contraction of 6.2 percent in 2020 followed by a slow recovery of 2.0 percent in 2021.

Lower food and fuel prices caused headline inflation to end 2019 at 2.9 percent, below the 3 percent target, but core prices remained steady at 3.6 percent despite the negative output gap. Inflation accelerated in the first two months of 2020 as food prices rebounded. We expect average inflation in 2020 to drop to 3.3 percent from 3.6 percent in 2019 due to economic contraction. The Central Bank of Mexico cut interest rates by 25 basis points in February to 7.0 percent and 50 basis points in an emergency meeting in March to 6.5 percent. We expect the central bank to keep a pace of 50 basis points rate cuts in each of the next three meetings to reach 5.0 percent at the end of 2020. We cannot rule out rate cuts in unscheduled meetings if economic activity deteriorates faster than expected.

Russia, Turkey, South Africa, CEEMEA

Russia

	2018	2019	2020	BoR	2021	BoR
Real GDP	1.7%	1.2%	-0.5%	▼	2.0%	▼
Inflation	3.5%	4.2%	4.5%	—	3.5%	—

Source: Firm analysis as of April 6, 2020. 2020 and 2021 are forecasts. BoR (Balance of Risks): Indicates bias relative to our forecasts as new information becomes available. "▼" represents a negative view and "—" indicates a neutral view.

Turkey

	2018	2019	2020	BoR	2021	BoR
Real GDP	3.0%	0.5%	2.0%	▼	4.0%	▼
Inflation	17.0%	15.0%	13.0%	—	11.0%	—

Source: Firm analysis as of April 6, 2020. 2020 and 2021 are forecasts. BoR (Balance of Risks): Indicates bias relative to our forecasts as new information becomes available. "▼" represents a negative view and "—" indicates a neutral view.

South Africa

	2018	2019	2020	BoR	2021	BoR
Real GDP	1.0%	0.4%	-2.0%	▼	1.0%	▼
Inflation	4.7%	4.1%	4.5%	—	3.5%	—

Source: Firm analysis as of April 6, 2020. 2020 and 2021 are forecasts. BoR (Balance of Risks): Indicates bias relative to our forecasts as new information becomes available. "▼" represents a negative view and "—" indicates a neutral view.

Poland

	2018	2019	2020	BoR	2021	BoR
Real GDP	4.5%	4.2%	0.0%	▼	3.0%	▼
Inflation	1.8%	2.2%	1.5%	—	2.0%	—

Source: Firm analysis as of April 6, 2020. 2020 and 2021 are forecasts. BoR (Balance of Risks): Indicates bias relative to our forecasts as new information becomes available. "▼" represents a negative view and "—" indicates a neutral view.

Given downgrades to the global growth outlook, we have significantly reduced our growth forecasts for the major Central & Eastern European, Middle Eastern, and African (CEEMEA) economies. Currently, no major economy in the region is reporting a particularly high number of COVID-19 cases, although many have engaged in significant lockdowns on economic activity. In response, there has been significant fiscal and monetary stimulus.

The Global Macro Forum



Vincent Reinhart

Managing Director, Chief Economist & Macro Strategist

Vincent is Mellon's Chief Economist and Macro Strategist. In this role, he is responsible for developing views on the global economy and making relative value recommendations across global bond markets, currencies and sectors.

Previously, Vincent served as the Chief US Economist and a managing director at Morgan Stanley. For the prior four years, he was a resident scholar at the American Enterprise Institute (AEI). Vincent also worked in several roles at the Federal Reserve over 24 years, including Director of the Division of Monetary Affairs and Secretary and Economist of the Federal Open Market Committee (FOMC). His responsibilities at the Federal Reserve included directing research and analysis of monetary policy strategies and the conduct of policy through open market operations, discount window lending and reserve requirements. Prior to these roles, he was the principal liaison with the domestic desk at the Federal Reserve Bank of New York and was responsible for preparing a document outlining policy alternatives for each FOMC meeting. He was Deputy Director in the Division of International Finance and Associate Economist of the FOMC and spent five years at the Federal Reserve Bank of New York in both the domestic and international research departments.

His academic publications primarily concern the conduct of policy and issues related to the monetary transmission mechanism as well as an analysis of alternative auction techniques and Treasury debt management. After an undergraduate training at Fordham University, he received graduate degrees in economics at Columbia University.



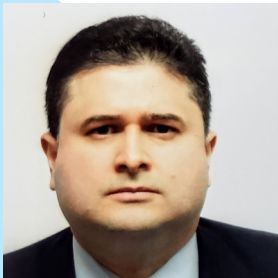
Rowena Geraghty

Sovereign Analyst

Rowena is a sovereign analyst at Mellon Investments (UK) Limited, an affiliated entity, and an associated person of the firm.

Rowena contributes to the bond and currency strategy for the Global and Emerging Market portfolios through her fundamental credit and market analysis. She is responsible for research and analysis of economies across EMEA. Rowena joined the firm in 2013. Previously, she worked at Fitch ratings agency and the financial regulator, the Financial Services Authority (a predecessor organization to the UK's current regulator, the Financial Conduct Authority).

Rowena has a BSc and MSc in Economics from the University of London. Rowena has been in the investment industry since 2010.



Alejandro Martinez Cruz
Emerging Market Economist

Alejandro is an emerging market economist with a particular focus on Latin American countries. He provides macro views, insights and trade recommendations based on his analysis of economic, statistical and socioeconomic data, which inform the investment decisions of the Emerging Market Debt team.

Prior to joining the firm, Alejandro held several senior roles at HSBC, including a Mexico rates and foreign exchange analyst, senior LatAm strategist and the Head of Latin American Fixed Income Research. In the latter role he led fixed income research efforts for Argentina, Brazil, Chile, Colombia, Mexico, Peru, Ecuador, Dominican Republic and Costa Rica. Previously, he was an economist for Citigroup, and a currency and local rates market analyst at the Bank of Mexico. Alejandro has been in the investment industry since 1998.

Alejandro earned a degree in economics from Instituto Tecnológico y de Estudios Superiores de Monterrey and a masters in economics from the University of Rochester.



Aninda Sankar Mitra
Vice President, Senior Sovereign Analyst

Aninda is senior sovereign analyst of BNY Mellon Investment Management Singapore Pte. Ltd and provides non-discretionary research or discretionary investment management services to the firm as a subadvisor. He is responsible for Asia ex-Japan sovereign debt research. Aninda joined in March 2014 from Fitch Ratings Credit Wire Service where he served as senior director Asia Pacific. Aninda was previously Head of Southeast Asia Economics at ANZ Bank and Senior Sovereign Analyst at Moody's in Singapore and New York.

Aninda holds a MA Economics from University of North Carolina and a BS Economics (Magna Cum Laude) from Bridgewater College. Aninda has over 22 years of experience as a sovereign analyst and economist focused on Asia.



Nicholas Tocchio
Sovereign Analyst

Nick is a sovereign analyst contributing to interest rate and currency strategy for global portfolios. He is responsible for fundamental credit and market analysis for Australia, Canada and New Zealand. Nick joined the firm in 2013 and holds a BA in Economics from Hamilton College. He has been in the investment industry since 2013.

Disclosure

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