Stable forecasts of moderate growth and inflation

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IN BRIEF

- This year's edition of our Long-Term Capital Market Assumptions (LTCMAs) makes few significant changes to the forecasts for GDP growth and inflation that underlie each asset class outlook.
- Our unchanged developed market (DM) growth projections lie below long-term historical averages, largely because of demographic forces. Among the four major DM economies, we think the U.S. will deliver the fastest pace of economic growth.
- Emerging market (EM) economies will continue to outgrow their DM counterparts, with India and China leading the way. We expect the gradual deceleration in Chinese growth underway during the past five years will persist over our forecast horizon.
- Fairly stable inflation will prevail at the global level. U.S. inflation will likely spend more time below target than above it; we slightly downgrade our U.S. CPI forecast.

In this 2019 edition of our Long-Term Capital Market Assumptions, we are not significantly changing the macroeconomic forecasts that underlie each asset class outlook. Indeed, our developed market economy growth projections have not moved compared with last year (**Exhibit 1**). For these countries, we continue to expect modest growth by historical standards, mostly because of weaker demographics. In some cases, however, our DM forecasts imply acceleration relative to average performance over the past decade. Continuing a trend that began in 2018, we see more upside risk to our DM projections than was generally the case in earlier years. By contrast, a handful of our emerging market economy growth numbers have fallen. These adjustments bring down the EM growth aggregate by 0.25 percentage points, but we continue to expect EM economies to expand considerably faster than their DM counterparts during the next 15 years, given still-ample space for gradual convergence toward DM income levels. Our 1.50% forecast for DM growth and our 4.25% EM figure combine to imply 2.50% global real GDP growth during our forecast horizon, the same as in 2018.

Our long-term inflation forecasts have shifted a bit more this year, although the aggregate levels are unchanged, with DM inflation averaging about 1.75% and EM inflation at 3.50%. In most cases, over the long run inflation seems likely to run fairly close to central bank targets. We recognize, however, that the distribution of inflation outcomes in many countries has changed during the past decade or so, with more low-side readings and fewer high outcomes. Put another way, inflation has shown a greater tendency to linger at low levels in post-recession environments, without overshooting strongly when the economic cycle is more advanced. While outright deflation remains a rare outcome, the risk to our base case inflation forecasts likely tilts to the downside.

GDP GROWTH: LONG-TERM DRIVERS

In setting our growth projections, we attempt to define a long-term trend or potential rate of expansion for each economy. In doing so, we focus on slow-moving drivers of capacity growth, which fall into three categories:

- **Labor input**, the growth rate of the labor force and the rate of improvement in human capital, along with any expected change in average hours worked.
- **Capital stock growth rate**, a reflection of investment spending.
- **Total factor productivity (TFP)**, which owes primarily to technological change, at least in DM economies.

We take a similar approach for emerging markets, with one nuance: Here, we think about TFP growth as reflecting varying speeds of convergence toward the global technological frontier rather than the movement of that line itself.

Our 2019 assumptions anticipate slow real GDP growth globally; global growth assumptions are little changed from last year at the aggregate level, with most developed-market projections stable

EXHIBIT 1: MACROECONOMIC ASSUMPTIONS (%)

	2019 assumptions		2018 assumptions		Change (percentage points)	
	Real GDP	Inflation	Real GDP	Inflation	Real GDP	Inflation
DEVELOPED MARKETS	**1.50**	**1.75**	**1.50**	**1.75**	**0.00**	**0.00**
U.S.	1.75	2.00	1.75	2.25	0.00	-0.25
Eurozone	1.50	1.50	1.50	1.50	0.00	0.00
UK	1.25	2.00	1.25	2.00	0.00	0.00
Japan	0.50	1.00	0.50	1.00	0.00	0.00
Australia	2.00	2.50	2.00	2.25	0.00	0.25
Canada	1.50	1.75	1.50	1.75	0.00	0.00
Sweden	1.75	1.75	1.75	1.75	0.00	0.00
Switzerland	1.25	0.50	1.25	0.75	0.00	-0.25
EMERGING MARKETS	**4.25**	**3.50**	**4.50**	**3.50**	**-0.25**	**0.00**
China	5.00	2.75	5.00	2.75	0.00	0.00
India	7.00	5.00	7.00	5.00	0.00	0.00
Brazil	3.00	4.75	3.00	5.00	0.00	-0.25
Russia	1.25	5.50	1.50	5.50	-0.25	0.00
GLOBAL	**2.50**	**2.25**	**2.50**	**2.50**	**0.00**	**-0.25**

Source: J.P. Morgan Asset Management; estimates as of September 30, 2018.
* Emerging markets aggregate derived from nine-country sample.

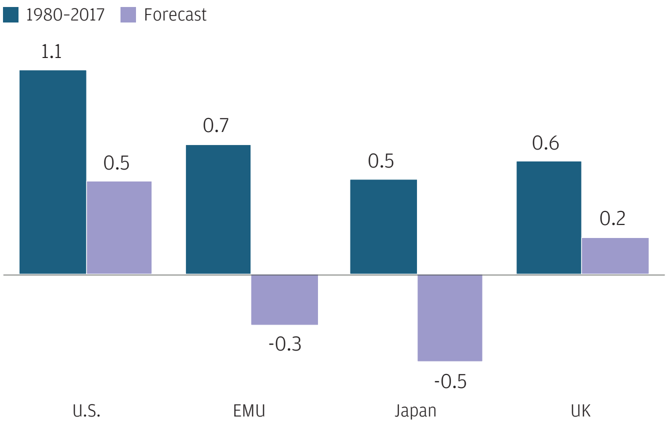
DM GROWTH: LABOR FORCES ACCOUNT FOR DIFFERENCES

Our unchanged DM growth projections lie below long-term historical averages, largely because of demographic forces. With population growth slower than it has been in the past and age structures (the distribution of a population's ages) now tilted toward older people, labor forces are increasing more sluggishly than before (**Exhibit 2**). On the high side, we expect 0.7% annual average labor supply growth in Australia; at the other end of the spectrum, Japan's labor force will likely shrink by 0.5% annually. At a 0.5% rate, the U.S. should benefit from relatively favorable labor supply trends, although even that figure falls well short of the 1.3% annual average labor force growth sustained as recently as the 1990s.

To estimate labor supply growth, we begin with the U.S. Census Bureau population projections for each country and then make assumptions about how participation in the labor force will evolve. Possible swings in immigration flows notwithstanding, there is little uncertainty about the population figures themselves over this time frame. After all, every person who will be of working age during our forecast horizon (the next 15 years) has already been born. More doubt attaches to labor force participation. We run a variety of scenarios for each economy, separating the age 15–64 population from those 65 and older (who are less likely to be involved in the labor force but whose participation has been rising in many countries).

Labor forces are increasing more sluggishly

EXHIBIT 2: DM LABOR FORCE GROWTH HISTORY AND FORECAST (% P.A.)



Source: Haver Analytics, J.P. Morgan Asset Management; data as of September 30, 2018.

Recent trends justify some optimism about participation in both cohorts, and we see modest upside risk to our forecasts. Even the most optimistic scenarios, though, would translate into only about a 0.25 percentage point (ppt) boost to expected GDP growth, relative to our baseline figures.

One question concerns possible effects of the more flexible working arrangements of the "gig economy," which conceivably could boost labor supply by allowing contributions from people who were previously sidelined. For now, we do not adjust our projections for two reasons. First, recent studies have shown that such jobs still represent a small minority of total employment. Second, the part-time nature of much of this work means that a decline in average hours worked could serve as a partial offset to any boost in the number of persons employed. In coming years, though, our forecasts will likely need to grapple further with the effects of these flexible arrangements and what they may mean for labor supply and other aspects of potential growth.

Our forecasts for TFP growth have edged higher this year vs. 2018. To be sure, evidence from the past year or so, especially outside of the U.S., does not yet suggest any acceleration from the generally weak TFP growth experienced since the financial crisis. That said, with seemingly rapid technological advances occurring in many fields, an eventual pickup in measured TFP growth, at least back toward historical norms, seems increasingly plausible. Our forecasts expect TFP to add 0.7ppt to GDP growth in the U.S., which we think of as a vanguard country in this respect; the boost is slightly less in other DM economies.

Combined with our assumptions about capital stock evolution, these labor supply and TFP expectations generate a 1.75% rate of average U.S. real GDP growth, in line with our estimates of the past two years. We continue to see the U.S. leading the way among the four major DM economies, with the euro area in second place at 1.50%. Although it suffers from significantly weaker demographics, the euro area is expected to benefit from three key factors: the ongoing take-up of the spare capacity created, especially in the labor market, by two recessions since 2009; rising workforce participation as labor market reforms pursued in several countries during the past decade take hold; and greater improvement in human capital as educational standards rise in economies such as Italy and Spain. We think UK growth will average 1.25%, with a penalty associated with the country's departure from the European Union and the associated deterioration in its foreign trade arrangements. Admittedly, uncertainty around this forecast remains high, as the exact nature of the UK's exit has not yet become clear. Japan, with its rapidly declining workforce, brings up the rear at 0.50%. The Japanese labor force has surged in the past few years, boosting growth, but with the country's labor force participation already quite high, we do not expect this trend to persist through our forecast horizon.

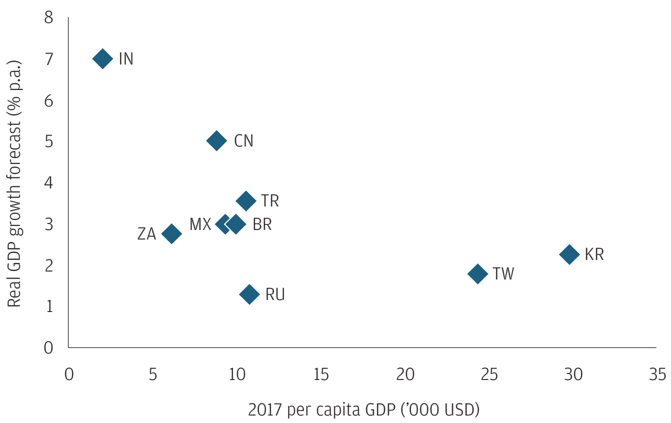
EM GROWTH: CONVERGENCE TO CONTINUE

As in prior years, we expect EM economies to outgrow their DM counterparts during our forecast period, with India and China – where per capita GDP remains fairly low compared with DM levels – leading the way (**Exhibit 3**). In parts of the EM universe, this outperformance reflects more favorable demographics, but population growth has already slowed sharply in other EM countries. Indeed, labor forces are expected to shrink during our forecast horizon in Korea, Taiwan and Russia, and to grow at a pace similar to the U.S. in China, Brazil and Turkey.

Larger EM-DM differences appear in other aspects of growth: in TFP, where EM economies can potentially converge toward the global frontier by adopting existing technology and best practice industrial organization techniques; in human capital, where educational standards are rising more rapidly than in already highly educated DM societies; and in investment, as many EM economies possess capital stock-to-GDP ratios below DM levels.

EM economies will continue to outperform their DM counterparts, although labor force growth is slowing in some countries

EXHIBIT 3: EM PER CAPITA GDP AND GROWTH FORECAST



Source: Haver Analytics, J.P. Morgan Asset Management; data as of September 30, 2018.

Our growth projections have not changed for three of the largest EM economies: China, India and Brazil. We expect the gradual deceleration in Chinese growth underway during the past five years to continue bringing growth to a 5.00% average for our forecast horizon. To be sure, the prime-age Chinese population will shrink over this period, but continued urbanization should provide an offset. Moreover, China has established a favorable track record of convergence via technology adoption and international trade specialization. Current tensions on the trade and technology-transfer fronts thus represent downside risk to our forecast. As has been the case in recent years, India leads the way in our growth forecasts, at 7.00%, helped by favorable demographics, improving human capital and its low starting point in per capita GDP, leaving corresponding room for catch-up. Our Brazil projection remains at 3.00%, supported by a weak cyclical starting point that has generated significant spare capacity but held back by uncertainty about the policy framework likely to prevail in coming years. We have cut our Russia forecast to 1.25%, extending a trend underway in recent years. Not only does Russia face an unfavorable demographic outlook with a declining workforce, but its commodity-centric economic structure, closed political system and vulnerability to international sanctions are likely to restrict TFP growth persistently.

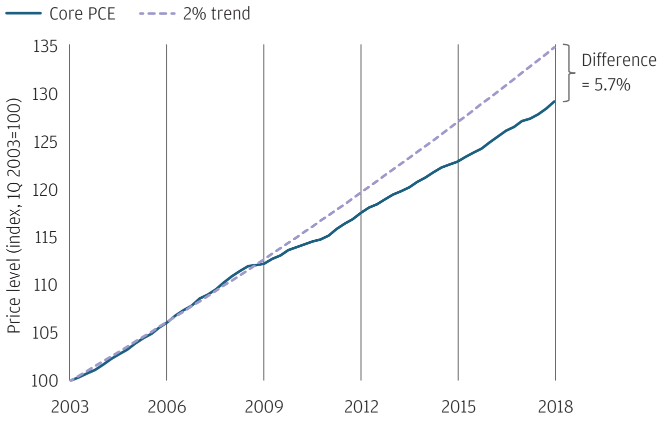
INFLATION: INCREASINGLY ASYMMETRIC AROUND TARGET

While we maintain a fairly stable outlook for inflation at the global level, we have made some country-level modifications to account for trends in the distribution of inflation outcomes. When making long-term inflation forecasts, we combine a view of the equilibrium rate of inflation – often governed by central bank targets – with specific features of the inflation process at the country level. As such, our projections represent a joint assessment of both the end point and the expected future path of price growth.

Among developed market forecasts, we scrutinize most closely our outlook for U.S. inflation. On the one hand, we believe that the Federal Reserve has maintained credibility in its 2% target for the personal consumption deflator (about 2.25% for CPI growth) and, indeed, the gravitational pull of its target has contributed to core CPI rising through 2% this year. On the other hand, we have just come to the end of a very long period in which inflation undershot its target, accompanied by a fattening of the inflation distribution's left tail. As policymakers' priorities for the coming years become clear, we arrive at the sobering conclusion that U.S. inflation is likely to spend more time below target than above it in the next 10 to 15 years (**Exhibit 4**). Binding constraints for inflation's path include what we perceive to be limited tolerance by policymakers for an inflation overshoot, and the high probability that policy interest rates return to the zero lower bound in the next recession, constraining the ability of monetary policy to boost demand and prices. Both of these constraints imply more undershooting of the target than overshooting over the next cycle. Balancing these considerations, we downgrade the U.S. CPI forecast by 25 basis points (bps), to 2%.

U.S. inflation will likely undershoot the Fed's target for much of the next cycle

EXHIBIT 4: U.S. CORE INFLATION VS. TREND



Source: Haver Analytics, J.P. Morgan Asset Management; data as of May 31, 2018.

In the other G4 economies, our projections are unchanged relative to last year. In the euro area, low inflation is a headwind insofar as expectations may have drifted downward, but we are comfortable with 1.5% as a reasonable discount to the European Central Bank's 2% inflation ceiling. In the UK, trailing inflation is near the Bank of England's target and the historical distribution is diffuse and roughly symmetric, keeping us at 2%. Finally, recent decades of history are not especially relevant in forecasting inflation in Japan, as they reflect a period when inflation expectations were anchored in negative territory. A gradual upward drift toward the Bank of Japan's 2% target – with a dynamic similar to the improvement observed over the past five years – is consistent with a 1% average realization over our forecast horizon.

Emerging markets present several general differences in the nature of their inflation dynamics relative to developed markets. First, inflation volatility is higher across the board, reflecting a somewhat weaker monetary policy anchoring, as well as the stronger influence of food prices and exchange rate volatility on domestic prices. These observations are related to the fact that EM inflation distributions tend to have fatter right tails, as blowouts in food and FX occasionally push inflation dramatically higher.

We make two kinds of revisions to our EM inflation forecasts. The first addresses the set of economies displaying more classical EM inflation characteristics. Mexico and Turkey, for example, have both been running inflation persistently above target, and currency volatility is adding significant skewness to inflation outcomes. Taking these developments into account, in Mexico's case we increased our forecast by 25bps to 3.5%, while noting that higher inflation drivers will be mitigated to some extent by expected peso appreciation over time. In Turkey, our forecast climbed 50bps to 7.5%, reflecting underlying erosion in central bank credibility. Brazil's estimate fell 25bps in light of an unusually low starting point as well as a likely headwind from currency appreciation and the imminent reduction in the central bank's target.

The second group of revisions relates to economies where inflation dynamics have begun to trend in the direction of their DM counterparts. In China and Korea (where, to be sure, the underlying drivers of inflation are distinct from developed markets'), inflation outcomes have moved lower, as have measures of inflation volatility and skewness. We believe that in addition to their lower starting points, these distributional changes are indicative of inflation dynamics that are becoming more inertial, supporting a downgrade of our Korean inflation projection by 25bps.

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