



FRANKLIN
TEMPLETON

Q2 2022 Outlook

CENTRAL BANK WATCH

Race to the top

FRANKLIN TEMPLETON FIXED INCOME



The Franklin Templeton Fixed Income (FTFI) Central Bank Watch is a qualitative assessment of the central banks for the Group of Ten (G10) nations plus two additional countries (China and South Korea). See full methodology on page 6.

Key highlights

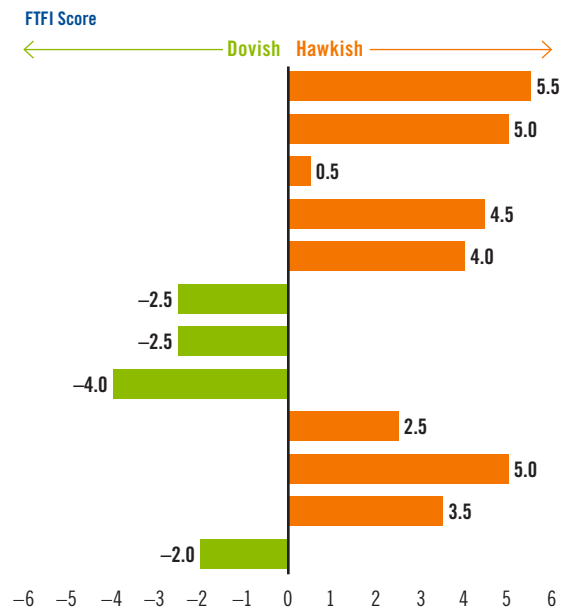
Despite heightened geopolitical risks, 11 out of the 12 central banks we cover have turned more hawkish to varying degrees, relative to the first quarter (Q1) of 2022. The People's Bank of China is the only exception, which continues to turn more accommodative as growth headwinds intensify.

Inflation has emerged as a clear macro risk, especially amid surging commodity prices and persistent supply side disruptions. The Reserve Bank of New Zealand and the US Federal Reserve are the most hawkish, in our analysis. With inflation becoming more entrenched, we expect consecutive rate hikes in all scheduled meetings for both central banks in 2022.

The Russia-Ukraine conflict has pushed global energy and commodity prices higher, raising stagflation concerns for some central banks. However, with inflationary pressures spreading beyond food and energy costs, the bar for a central bank "put" is much higher this time.

FTFI central bank dove-hawk ranking

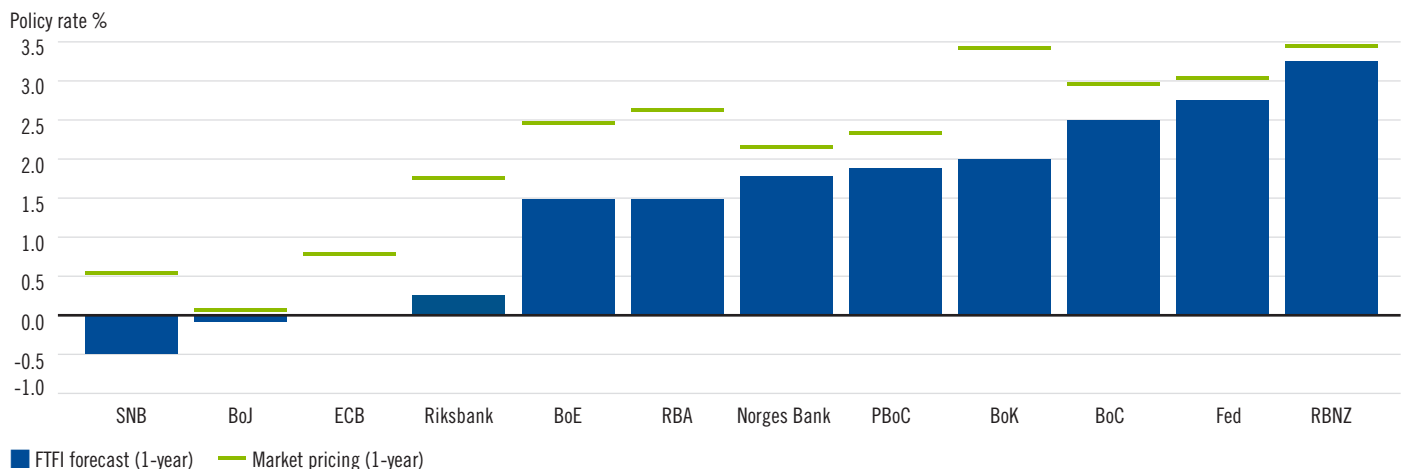
Strategies	Inflation outlook perception	QE* /liquidity management programs	Interest rate forward guidance
Federal Reserve (Fed)	2.0	1.5	2.0
Bank of Canada (BoC)	2.0	1.5	1.5
European Central Bank (ECB)	1.0	-0.5	0.0
Bank of England (BoE)	1.5	1.5	1.5
Norges Bank (NB)	2.0	NA	2.0
Sveriges Riksbank	-1.0	0.5	-2.0
Swiss National Bank (SNB)	-0.5	NA	-2.0
Bank of Japan (BoJ)	-0.5	-1.5	-2.0
Reserve Bank of Australia (RBA)	1.0	1.0	0.5
Reserve Bank of New Zealand (RBNZ)	2.0	1.0	2.0
Bank of Korea (BoK)	2.0	NA	1.5
People's Bank of China (PBoC)	0.0	-1.0	-1.0



Legend:
 -2.0: Dovish
 -1.0 to -1.5: Moderately dovish
 -0.5: Neutral with dovish tilt
 0.0: Neutral
 0.5: Neutral with hawkish tilt
 1.0 to 1.5: Moderately hawkish
 2.0: Hawkish

Notes: Ranks are based on qualitative judgement based on our interpretation of central banks' forward guidance with overall score of -6 as most dovish and +6 as most hawkish. Source: Franklin Templeton Fixed Income Research. There is no assurance that any estimate, forecast or projection will be realized. *QE = Quantitative Easing

Market implied policy rate vs. FTFI forecasts (Additional detail on rates and forecast available on page 6)



Notes: Forecasts represent Franklin Templeton Fixed Income's projected policy rate one year from now. There is no assurance that any estimate, forecast or projection will be realized. Sources: Franklin Templeton Fixed Income Research, Bloomberg.

Latest thoughts on global central bank policy

Federal Reserve (Fed)

Next expected move	May 2022
FTFI policy rate 1-yr forecast	2.75
FTFI Score	5.5

All remaining FOMC meetings now “live” for rate hikes

The 25 basis-point (bp) hike in March was a foregone conclusion. The Fed’s “dot plot” forecast revealed a more front-loaded policy-rate response as the Fed marked up its inflation projections. Recent Fed speak and wide dispersion in the dots for 2022 indicate 50 bp hikes are under serious consideration. We now expect a 50 bp hike at the May meeting. Inflation will likely surprise on the upside in a year marked by war-related disruptions to commodity prices, strained supply chains and still-strong household balance sheets. Therefore, the Fed will likely further revise up its terminal rate—the expected policy rate at the end of hiking cycle—so it isn’t perceived as “behind the curve.” Prior hiking cycles have ended with the policy rate exceeding inflation. Moreover, with the Fed prepared to raise rates into “restrictive” territory (terminal rate > long-term rate), the “Fed put” clearly faces a higher bar in this hiking cycle. We expect quantitative tightening (QT) to be announced at the May meeting, effective mid-May, with an initial monthly run-off cap at \$30–35 billion/month, which will rise to \$95 billion /month by early quarter (Q3).

Bank of Canada (BoC)

Next expected move	April 2022
FTFI policy rate 1-yr forecast	2.50
FTFI Score	5.0

A steeper path ahead for higher rates

After the BoC raised its policy rate by a quarter point on March 2, Governor Tiff Macklem noted that the pace of future increases would be “deliberate” and data dependent. Recent data indicate the economy is considerably stronger than previously anticipated. Not only did Canada’s economy grow through the January Omicron wave, but early estimates suggest growth accelerated in February. The unemployment rate is nearly at its pre-pandemic low, thus consistent with full employment, while job vacancies remain elevated. Inflation in the first two months of 2022 has already overshot the BoC’s January projection of 5.1% and will likely accelerate more as ongoing geopolitical tensions add further upward pressure on food and energy-related commodity prices. The market has priced in more rate hikes in response to the BoC’s more hawkish stance since its last meeting as well as recent comments by the BoC Deputy Governor opening the door to a steeper policy hike path, with a 50 bp hike as soon as April 13.

European Central Bank (ECB)

Next expected move	December 2022
FTFI policy rate 1-yr forecast	0.00
FTFI Score	0.5

Faster normalization amid war uncertainties

After the hawkish turn in communication during the February intra-quarter meeting, the ECB formalized its urge to remove accommodation amid a surge in inflation and high uncertainty stemming from the war. As the Pandemic Emergency Purchasing Programme, or PEPP, was ending in March, the Asset Purchase Programme will be tapered faster to €40 billion in April, €30 billion in May, €20 billion in June, and we expect it to terminate in July. Russia’s invasion of Ukraine and its spillovers on higher inflation and slower growth added the need for policy optionality by potentially waiting longer between the end of quantitative easing and the first rate move, depending on the incoming data. However, we see the chances of derailing from this normalization path very slim and conditional to a war-induced recessionary scenario. We now expect the first 25 bp hike to be delivered in December followed by a March one, with risks tilted towards an anticipated move. Moreover, Targeted Longer-Term Refinancing Operations’ favorable funding conditions (up to –1% refinancing rates for banks) will be suspended in June.

Bank of England (BoE)

Next expected move	May 2022
FTFI policy rate 1-yr forecast	1.50
FTFI Score	4.5

Growth concerns in the hiking cycle

The BoE struck a dovish tone in its March meeting. Despite hiking its policy rate, all monetary policy committee members voted for a 25 bp hike with one member dissenting for no change, taking out of the table a future 50 bp move, which seemed plausible in the February meeting. Forward guidance also softened, stating that more tightening “may be appropriate,” from “likely” before. The more prudent approach cites a two-sided risk to the medium-term growth outlook due to the inflation surge, exacerbated by the war, and its squeeze to real disposable income. Alternatively, strong wage growth in a tight labor market and inflation expectations continuing to rise at record levels remain worrisome and warrant further tightening. We expect hikes in May, reaching the 1% threshold to embark in active QT, as well as in June. While further moves this year remain possible, they will be delicately linked to growth outcomes.

Latest thoughts on global central bank policy

Norges Bank (NB)

Next expected move	June 2022
FTFI policy rate 1-yr forecast	1.75
FTFI Score	4.0

Speeding up the tightening path

Besides raising its policy rate by 25 bp, the Norges Bank added to its frontrunning hawkishness in its forward guidance by raising the terminal rate to 2.50% from 1.75% in December. This translates into hiking 25 bp every meeting this year and the following to reach the aim by Q1 2024, with risks tilted toward more frontloading in 2022, in our view. Higher-than-expected wage growth and capacity utilization above normal levels are expected to intensify pressures on underlying inflation measures. The war in Ukraine heightened the outlook's uncertainty due to weaker global growth, but higher energy prices will continue to support fiscal revenues, likely also in the medium term as the country could benefit from the European Union (EU) transition away from Russian energy dependence. Former Deputy Governor Ida Wolden Bache was formally nominated as Governor after Jens Stoltenberg (NATO Chief) relinquished the post, ensuring continuity with the projected policy path.

Sveriges Riksbank

Next expected move	1Q 2023
FTFI policy rate 1-yr forecast	0.25
FTFI Score	-2.5

Increasing pressure on one of the last doves

The very dovish stance held so far by the Riksbank is increasingly challenged by rising inflationary pressures and the quicker global tightening cycle. Core inflation massively surprised on the upside for the markets' and the central bank's expectations in the first two months on the year, reflecting broadening inflationary pressures and challenging the transitory view. The labor market looks increasingly tight, and with higher capacity constraints projected. Long-term inflation and wage growth expectations are on the rise, calling for an anticipated action compared to the bank's expectation of a first move in 2024. We now expect a hike in Q1 2023, with risks of an anticipated move in November depending on the outlook and ECB actions. The balance sheet's gradual reduction will most likely begin this summer, compared to the present forward guidance of constant holdings until year end, given the 3–3 split Executive Board vote already in the February meeting.

Swiss National Bank (SNB)

Next expected move	2Q 2023
FTFI policy rate 1-yr forecast	-0.50
FTFI Score	-2.5

A "highly valued" Swiss Franc (CHF) will allow SNB to remain most dovish

The buoyancy of the CHF has largely shielded the Swiss economy from inflation. While the SNB has doubled its 2022 inflation forecast to 2.1%, beyond 2022, inflation is expected to fall back to sub-1%—well within the SNB's comfort zone. Given the benign outlook for prices (especially vis-à-vis other developed markets), the SNB is unlikely to touch its policy rate this year. Instead, it will remain somewhat tolerant of further CHF appreciation to cushion the inflationary impact. CHF upside risks will persist given the inflation-rate differential vis-à-vis other countries and the Russia-Ukraine war. Moreover, with the ECB unlikely to move on rates until late 2022, in our analysis, there is little reason for the SNB to narrow the interest-rate gap. Even after the ECB's lift-off, the SNB will likely wait for the CHF to weaken against the euro before changing its policy stance. Overall, there would need to be a material deterioration to the inflation outlook and/or a sustained increase in global interest rates for the SNB to consider raising rates.

Bank of Japan (BoJ)

Next expected move	On hold
FTFI policy rate 1-yr forecast	-0.10
FTFI Score	-4.0

Most accommodative in G10

The BoJ is firmly in accommodative mode, defending its Yield Curve Control (YCC) mandate twice in less than two months since February 2022. While inflation is on an uptrend, it is primarily led by energy, and BoJ commentary conveys it will likely be temporary in the absence of either demand-pull inflation or solid wage growth. The flipside of its divergent monetary policy is the weakness in the yen, which will in turn add to higher imported inflation via the energy channel. We expect the core Consumer Price Index (CPI)(which excludes fresh food) to peak at 2.5% in Q3 but underlying inflationary momentum will likely be stickier than what the market consensus expects. Given this background, it is unlikely that the BoJ will tweak its monetary policy at least in 2022. The earliest we think any action could come by is in the second quarter of 2023, coinciding with a change in the BoJ Governor. This makes it one of the most dovish in our analysis, unchanged from that in rQ1 2022.

Latest thoughts on global central bank policy

Reserve Bank of Australia (RBA)

Next expected move	2Q 2022
FTFI policy rate 1-yr forecast	1.50
FTFI Score	2.5

Expect the first hike in June

Growth momentum is strong, with the latest federal budget delivering additional front-loaded spending, which was more than what markets had expected. This could add to further upside in demand even though a strong inflationary impulse could hurt consumer sentiment. Inflation continues to edge upwards, with volatile petrol prices adding to the risk. However, labor demand remains strong, with unemployment expected to edge below 4% in the coming months. The RBA, while so far clearly having stated its preference to see a tighter labor market, could act as soon as wages show a decent upswing. We expect that will happen in June, post the wages and labor data in May. We expect consequent rate hikes post the first hike to take the cash rate to 1.75% by mid-2023, slightly less hawkish than what markets are currently pricing. This is premised on the fact that the RBA would keep hiking (albeit likely gradually) over the course of 2022 and 2023, while factoring in the impact of previous hikes on the economy.

Reserve Bank of New Zealand (RBNZ)

Next expected move	2Q 2022
FTFI policy rate 1-yr forecast	3.25
FTFI Score	5.0

More aggressive hikes expected

We expect the RBNZ to hike interest rates more aggressively in the next 2–3 months, on top of already rising rates by a cumulative 75 bp since October 2021. Inflation gauges are surging, including price intentions and cost expectations. Consumer confidence is coincidentally dropping, as consumers feel the pinch of higher prices. Yet, the labor market is red hot, which means supply will likely outrun demand and stoke inflation in the months ahead. While we stick to our earlier forecast of successive rate hikes through mid-2023, we think more aggressive rate hikes will come by in Q2 2022. That is because it may take larger hikes to contain the strong inflationary impulse, which the three rate increases so far have not been able to achieve at full scale. This is one of the key risks the RBNZ flagged at its February policy meeting, and we think it will go the extra mile to not run the risk of letting inflation get out of hand.

Bank of Korea (BoK)

Next expected move	2Q 2022
FTFI policy rate 1-yr forecast	2.00
FTFI Score	3.5

Inflation to keep things tighter

We expect the BoK to continue to remain one of the most hawkish central banks in Asia, thanks to persistent inflation. CPI has remained well above the central bank's 2% target for 12 straight months, with it breaching the 3% threshold on the last six occasions (at 4.1%, March print was the highest since 2011). Ongoing geopolitical tensions and subsequent impact on supply chain bottlenecks are expected to keep inflation and inflationary expectations on the higher side in the coming months. We therefore think the BoK's focus will remain on curbing inflation for the time being, as growth remains broadly on track despite record COVID-19 infections. We now expect at least three more rate hikes through the course of 2022 (of 25 bp each), bringing the policy rate to 2.00% by year-end. This is more hawkish than we had anticipated in our previous update. We expect a longer pause thereafter.

People's Bank of China (PBoC)

Next expected move	2Q 2022
FTFI policy rate 1-yr forecast	1.80
FTFI Score	-2.0

Calls for more monetary easing grow louder as headwinds intensify

With China facing its worst COVID-19 outbreak since the pandemic began, its strict zero-COVID strategy is adding to the downward pressures from the ongoing property market slump. The threat to China from the Russia-Ukraine war arises via its impact on Europe (one-fifth of China's exports) and higher energy and commodity prices. With the National People's Congress (NPC) setting an ambitious gross domestic product growth target of 5.5% in 2022, policy easing will shift into a higher gear. While fiscal policy will do much of the heavy lifting, the PBoC will likely lower its key policy rates by a maximum of 30 bp (in addition to the 10 bp reduction in January). Consumer prices are unlikely to be a major impediment to rate cuts given weak domestic demand. However, the need to safeguard bank profitability and narrowing China-US interest rate differentials, coupled with rising capital outflows, limit the room for significant rate reductions. We believe the PBoC will continue to rely on targeted liquidity measures such as additional cuts to reserve requirement ratio (up to 100 bp) and green and small- and medium-enterprise relending.

Franklin Templeton Fixed Income (FTFI) policy rate forecasts vs. market pricing

As of April 11, 2022

Country	Inflation (latest % Y/Y)	Inflation target (%)	Real policy rate (%)*	Official rate	Current rate (% pa)	Last change	Next change (FTFI forecast)	Market implied policy rate** (%)		FTFI policy rate forecast (%)	
								1-year	2-year	1-year	2-year
United States	7.9	2	-7.40	Fed funds***	0.50	Mar 2022 (+25bp)	May 2022 (+50bp)	3.02	3.08	2.75	3.50
Canada	5.7	2 (+/-1)	-5.20	O/N rate	0.50	Mar 2022 (+25bp)	Apr 2022 (+50bp)	2.96	3.07	2.50	3.50
Euro Area	7.5	2	-8.00	Deposit rate	-0.50	Sep 2019 (-10bp)	Dec 2022 (+25bp)	0.78	1.57	0.00	0.75
United Kingdom	6.2	2	-5.45	Bank rate	0.75	Mar 2022 (+25bp)	May 2022 (+25bp)	2.48	2.54	1.50	1.75
Norway	3.7	2	-2.95	Deposit rate	0.75	Mar 2022 (+25bp)	Jun 2022 (+25bp)	2.14	2.79	1.75	2.50
Sweden	4.3	2	-4.29	Repo rate	0.00	Dec 2019 (+25bp)	1Q 2023 (+25bp)	1.76	2.66	0.25	1.25
Switzerland	2.4	< 2.0	-3.15	Policy rate	-0.75	Jan 2015 (-50bps)	2Q 2023 (+25bp)	0.51	0.88	-0.50	0.25
Japan	0.6	2	-0.70	Policy rate	-0.10	Jan 2016 (-20bp)	On hold	0.05	0.12	-0.10	-0.10
Australia	3.5	2.0-3.0	-3.40	Cash rate	0.10	Nov 2020 (-15bp)	2Q 2022 (+15bp)	2.63	3.25	1.50	2.25
New Zealand	5.9	1.0-3.0	-4.90	Cash rate	1.00	Feb 2022 (+25bp)	2Q 2022 (+25bp)	3.41	4.12	3.25	3.50
South Korea	3.7	2	-2.45	7D repo rate	1.25	Jan 2022 (+25bp)	2Q 2022 (+25bp)	3.39	3.28	2.00	2.00
China	0.9	3	1.20	7D rev repo rate	2.10	Jan 2022 (-10bp)	2Q 2022 (-10bp)	2.30	2.51	1.80	2.00

*Real policy rate= Nominal rate-Inflation (current). **Market implied rates are based on Bloomberg's MIPR rates. ***For the US, the rate considered is the upper bound of the Fed Funds corridor.

Source: Franklin Templeton Fixed Income Research, Bloomberg, each country's respective national sources.

Franklin Templeton Fixed Income (FTFI) central bank ranking methodology

Each central bank is scored on three parameters: Inflation Outlook Perception, Quantitative Easing/Liquidity Management Programs, and Interest Rate Forward Guidance. Each parameter can be scored from a range with a minimum of -2 (dovish) and a maximum of +2 (hawkish). The methodology for scoring compares the latest monetary policy statement/press statements with prior ones to see how the language and tone regarding each of these parameters may have changed over time. The scores are ultimately aggregated for each central bank, with a final FTFI score ranking each from -6 (for most dovish) to +6 (for most hawkish). We also provide our one-year ahead policy rate expectations and compare our rankings and expectations with market implied policy rates to evaluate how the difference between our expectations/rankings and market expectations/rankings.

Editorial review



Sonal Desai, Ph.D.
Chief Investment Officer,
Portfolio Manager



Nikhil Mohan
Economist, Research Analyst



Angelo Formiggini
Economist, Research Analyst



Rini Sen
Economist, Research Analyst

About Franklin Templeton Fixed Income

Franklin Templeton has been among the first to actively invest in many sectors of the fixed income markets as they have evolved—covering corporate credit, mortgage-based securities, asset backed securities and municipal bonds since the 1970s, international fixed income since the 1980s and bank loans since the early 2000s. Over 140 investment professionals globally support the portfolio managers, who oversee more than US\$160 billion in assets under management. Being part of an established investment group at Franklin Templeton gives the portfolio managers access to experts across different areas of the fixed income market, helping them to diversify opportunities and risks across multiple sectors. Our global reach through Franklin Templeton Investments provides access to additional research, trading, and risk management resources. Portfolio managers have opportunities to exchange insights with other investment groups and collaborate with an independent risk team that regularly examines risk analytics to help identify and address areas of excessive risk exposure within our portfolios.

IMPORTANT LEGAL INFORMATION

This material is intended to be of general interest only and should not be construed as individual investment advice or a recommendation or solicitation to buy, sell or hold any security or to adopt any investment strategy. It does not constitute legal or tax advice. This material may not be reproduced, distributed or published without prior written permission from Franklin Templeton.

The views expressed are those of the investment manager and the comments, opinions and analyses are rendered as at publication date and may change without notice. The underlying assumptions and these views are subject to change based on market and other conditions and may differ from other portfolio managers or of the firm as a whole. The information provided in this material is not intended as a complete analysis of every material fact regarding any country, region or market. There is no assurance that any prediction, projection or forecast on the economy, stock market, bond market or the economic trends of the markets will be realized. The value of investments and the income from them can go down as well as up and you may not get back the full amount that you invested. Past performance is not necessarily indicative nor a guarantee of future performance. **All investments involve risks, including possible loss of principal.**

Any research and analysis contained in this material has been procured by Franklin Templeton for its own purposes and may be acted upon in that connection and, as such, is provided to you incidentally. Data from third party sources may have been used in the preparation of this material and Franklin Templeton ("FT") has not independently verified, validated or audited such data. Although information has been obtained from sources that Franklin Templeton believes to be reliable, no guarantee can be given as to its accuracy and such information may be incomplete or condensed and may be subject to change at any time without notice. The mention of any individual securities should neither constitute nor be construed as a recommendation to purchase, hold or sell any securities, and the information provided regarding such individual securities (if any) is not a sufficient basis upon which to make an investment decision. FT accepts no liability whatsoever for any loss arising from use of this information and reliance upon the comments, opinions and analyses in the material is at the sole discretion of the user.

Products, services and information may not be available in all jurisdictions and are offered outside the U.S. by other FT affiliates and/or their distributors as local laws and regulation permits. Please consult your own financial professional or Franklin Templeton institutional contact for further information on availability of products and services in your jurisdiction.

Issued in the U.S. by Franklin Distributors, LLC, One Franklin Parkway, San Mateo, California 94403-1906, (800) DIAL BEN/342-5236, franklintempleton.com - Franklin Distributors, LLC, member FINRA/SIPC, is the principal distributor of Franklin Templeton U.S. registered products, which are not FDIC insured; may lose value; and are not bank guaranteed and are available only in jurisdictions where an offer or solicitation of such products is permitted under applicable laws and regulation.

Australia: Issued by Franklin Templeton Investments Australia Limited (ABN 87 006 972 247) (Australian Financial Services License Holder No. 225328), Level 19, 101 Collins Street, Melbourne, Victoria, 3000. **Austria/Germany:** Issued by Franklin Templeton International Services S.à r.l., Niederlassung Deutschland, Frankfurt, Mainzer Landstr. 16, 60325 Frankfurt/Main. Tel: 08 00/0 73 80 01 (Germany), 08 00/29 59 11 (Austria), Fax: +49(0)69/2 72 23-120, info@franklintempleton.de, info@franklintempleton.at. **Canada:** Issued by Franklin Templeton Investments Corp., 200 King Street West, Suite 1500 Toronto, ON, M5H3T4, Fax: (416) 364-1163, (800) 387-0830, www.franklintempleton.ca. **Netherlands:** Franklin Templeton International Services S.à r.l., Dutch Branch, World Trade Center Amsterdam, H-Toren, 5e verdieping, Zuidplein 36, 1077 XV Amsterdam, Netherlands. Tel: +31 (0) 20 575 2890. **United Arab Emirates:** Issued by Franklin Templeton Investments (ME) Limited, authorized and regulated by the Dubai Financial Services Authority. **Dubai office:** Franklin Templeton, The Gate, East Wing, Level 2, Dubai International Financial Centre, P.O. Box 506613, Dubai, U.A.E. Tel: +9714-4284100 Fax: +9714-4284140. **France:** Issued by Franklin Templeton International Services S.à r.l., French branch, 55 avenue Hoche, 75008 Paris France. **Hong Kong:** Issued by Franklin Templeton Investments (Asia) Limited, 17/F, Chater House, 8 Connaught Road Central, Hong Kong. **Italy:** Issued by Franklin Templeton International Services S.à r.l.—Italian Branch, Corso Italia, 1 – Milan, 20122, Italy. **Japan:** Issued by Franklin Templeton Investments Japan Limited. **Korea:** Issued by Franklin Templeton Investment Trust Management Co., Ltd., 3rd fl., CCMM Building, 12 Youido-Dong, Youngdungpo-Gu, Seoul, Korea 150-968. **Luxembourg/Benelux:** Issued by Franklin Templeton International Services S.à r.l.—Supervised by the Commission de Surveillance du Secteur Financier - 8A, rue Albert Borschette, L-1246 Luxembourg. Tel: +352-46 66 67-1 Fax: +352-46 66 76. **Malaysia:** Issued by Franklin Templeton Asset Management (Malaysia) Sdn. Bhd. & Franklin Templeton GSC Asset Management Sdn. Bhd. This document has not been reviewed by Securities Commission Malaysia. **Poland:** Issued by Templeton Asset Management (Poland) TFI S.A.; Rondo ONZ 1; 00-124. Warsaw. **Romania:** Franklin Templeton International Services S.à r.l. Luxembourg, Bucharest Branch, at 78-80 Buzesti Str, Premium Point, 8th Floor, Bucharest 1, 011017, Romania. Registered with Romania Financial Supervisory Authority under no. PJM07.1AFIASMDLUX0037/10 March 2016 and authorized and regulated in Luxembourg by Commission de Surveillance du Secteur Financier. Tel: + 40 21 200 9600. **Singapore:** Issued by Templeton Asset Management Ltd. Registration No. (UEN) 199205211E and Legg Mason Asset Management Singapore Pte. Limited, Registration Number (UEN) 200007942R. Legg Mason Asset Management Singapore Pte. Limited is an indirect wholly owned subsidiary of Franklin Resources, Inc. 7 Temasek Boulevard, #38-03 Suntec Tower One, 038987, Singapore. **Spain:** Issued by Franklin Templeton International Services S.à r.l.—Spanish Branch, Professional of the Financial Sector under the Supervision of CNMV, José Ortega y Gasset 29, Madrid, Spain. Tel: +34 91 426 3600, Fax: +34 91 577 1857. **South Africa:** Issued by Franklin Templeton Investments SA (PTY) Ltd, which is an authorised Financial Services Provider. Tel: +27 (21) 831 7400 Fax: +27 (21) 831 7422. **Switzerland:** Issued by Franklin Templeton Switzerland Ltd, Stockerstrasse 38, CH-8002 Zurich. **UK:** Issued by Franklin Templeton Investment Management Limited (FTIML), registered office: Cannon Place, 78 Cannon Street, London EC4N 6HL. Tel: +44 (0)20 7073 8500. Authorized and regulated in the United Kingdom by the Financial Conduct Authority. **Nordic regions:** Issued by Franklin Templeton International Services S.à r.l. Swedish Branch, filial, Nybrokajen 5, SE-111 48, Stockholm, Sweden. Tel: +46 (0)8 545 012 30, nordicinfo@franklintempleton.com, authorised in Luxembourg by the Commission de Surveillance du Secteur Financier to conduct certain financial activities in Denmark, Sweden, Norway, Iceland and Finland. Franklin Templeton International Services S.à r.l., Swedish Branch, filial conducts activities under supervision of Finansinspektionen in Sweden. **Offshore Americas:** In the U.S., this publication is made available only to financial intermediaries by Franklin Distributors, LLC, member FINRA/SIPC, 100 Fountain Parkway, St. Petersburg, Florida 33716. Tel: (800) 239-3894 (USA Toll-Free), (877) 389-0076 (Canada Toll-Free), and Fax: (727) 299-8736. Investments are not FDIC insured; may lose value; and are not bank guaranteed. Distribution outside the U.S. may be made by Franklin Templeton International Services, S.à r.l. (FTIS) or other sub-distributors, intermediaries, dealers or professional investors that have been engaged by FTIS to distribute shares of Franklin Templeton funds in certain jurisdictions. This is not an offer to sell or a solicitation of an offer to purchase securities in any jurisdiction where it would be illegal to do so.

Please visit www.franklinresources.com to be directed to your local Franklin Templeton website.

CFA® and Chartered Financial Analyst® are trademarks owned by CFA Institute.

