



January 2019

MARKET OUTLOOK 2019

Jeremy Schwartz
Executive Vice President,
Global Head of Research

Rick Harper
Head of Fixed Income & Currency

Kevin Flanagan
Senior Fixed Income Strategist

Nitesh Shah
Director, WisdomTree Europe

Aneeka Gupta
Associate Director, WisdomTree Europe



RISING VOLATILITY IN EQUITY MARKETS

Volatility¹ is back. It was easy to forget how downside pain in equities could feel with robust growth over the last decade—and especially the two years ending January 2018. Intoxicated by robust corporate profits and a benign interest rate environment, prices of risk assets climbed unabated with only mild, short-lived pullbacks.

Headwinds for 2018 included a re-establishment of actual income and returns offered by the “risk-free” Treasury assets as the US Federal Reserve hiked rates and fears mounted over a global trade war spiraling out of control. In our view, both of these issues are well-known and increasingly priced into market valuations.

We will soon find ourselves a decade from the bear market lows of 2009, in one of the longest economic expansions since World War II. It is natural to worry about being late cycle in both the economy and the equity markets. Many are further worried about extended valuations implying poor forward returns. We are less concerned on the market generally, but there are pockets of caution—they just may not be where you’d expect.

In Q4 there was a dramatic rotation away from momentum² stocks such as technology towards more defensive, dividend and lower-volatility stocks.

When our team evaluates valuations across common factors, low-volatility stocks across the United States look the most extended. The MSCI USA Minimum Volatility Index³ has price-to-earnings (P/E) ratios⁴ that are a few points higher than the S&P 500, despite this segment of the market being concentrated in slower-growing, lower-profitability companies.⁵

Despite volatility picking up and a natural desire to lower equity exposure, there is hidden risk to this very popular and crowded factor. This low-volatility factor was the best-performing factor in 2018, outperforming the market by more than 500 basis points through mid-December.⁶ We’d be more cautious looking forward, despite the worries of rising volatility.

International markets bore the brunt of investor angst and selling in 2018. We still generally favor the US over Europe. But we also have seen more over-weight positions in Japanese small caps, which benefit from low valuations, improved corporate governance impacting shareholder returns and generally lower correlations to US markets.

Emerging Markets (EM) came under attack in 2018 from a swathe of factors. To name a few – the stronger US Dollar, the unending US-China trade saga, structural fragilities in a few EM economies such as Turkey, Venezuela and Argentina appeared to dampen sentiment. The deceleration of growth in China also weighed on sentiment towards EM assets. In our opinion, most of the negative news has been priced in for EM assets underscoring the reason why they are currently trading at steep historical valuation discounts versus Developed Markets (DM). In addition, we have witnessed a structural turnaround in many of the weaker EM economies that have yet to be reflected across EM asset prices.

On the cusp of 2019, we expect EMs valuation discount to DMs to unwind as their economic growth and profitability offer greater upside potential. According to the International Monetary Fund (IMF), EM economic growth in 2019 is expected to remain stable at 4.7% while forecasted growth in DMs is expected to slow from 2.4% to 2.1% in 2019. From an earnings perspective, while estimated EM earnings growth of 10.5% in 2019 has been lowered from projections of 15.4% in 2018, it still compares favourably against estimated US earnings growth of 9.5% for 2019, which is much lower than earnings growth of 21.2% in 2018 (as of 31 October 2018 Factset, MSCI and Standard and Poor’s). Across DM,

¹ Volatility: A measure of the dispersion of actual returns around a particular average level.

² Momentum stocks: Stocks characterized by high sensitivity to sentiment and perception of potential, with lower sensitivity to actual business operations.

³ MSCI USA Minimum Volatility Index: Aims to reflect the performance characteristics of a minimum variance strategy applied to the large- and mid-cap US equity universe.

⁴ Price-to-earnings (P/E) ratio: Share price divided by earnings per share. Lower numbers indicate an ability to access greater amounts of earnings per dollar invested.

⁵ Source: Bloomberg, as of 17 December 2018.

⁶ Source: Bloomberg, as of 17 December 2018.

leading economic indicators like the Purchasing Managers Index (PMI) has surprised on the downside, while PMIs within EM have been stable with Brazil, South Africa and Russia showing a decent improvement in December 2018, reflecting greater confidence in domestic policies. We expect the Fed to respond with a more dovish monetary stance this year as the effects of last year's fiscal stimulus fade and concerns of the expanding IMF US federal deficit take centre stage. EMs are likely to reap the benefit of the unwinding of the US Dollar strength in 2019 as the cost of servicing dollar denominated debt declines.

EMs balance of payments are healthy and financing gaps are low. Apart from China, EMs overall debt levels are lower than DM. China is in the midst of a deleveraging process as the government cracks down on the build-up of excess debt. This is evident from the decline in net new lending from shadow banking activities from 12% in 2016-17 to -9% in H1 2018. The slowdown in credit growth is closely tied to the decline in Gross Domestic Product (GDP)⁷. Nonetheless China's excess savings (47% of GDP in 2018) and healthy fiscal capacity enables the government with plenty of ammunition to stimulate the economy. China is also transitioning from an export-oriented growth economy to a consumption and services driven economy. There is growing evidence of China emerging as a hub for global technological innovation. According to research analyst CB Insights, China created one-third of new unicorns⁸ globally and is pioneering its way in artificial intelligence, sharing economy platforms and fintech. EMs are now transitioning to a greater dependence on technology. E-commerce platforms have revolutionized the way rising consumerism is being serviced. As the business cycle ages, higher spending on technology should support greater innovation and higher efficiency. According to the Conference Board, EM productivity growth rates are still much higher than Developed Markets (DM).

While fundamentals and valuations favour EM assets, we caution investors that the risks to our view are rooted in uncertainty surrounding the trade wars and upcoming elections in 2019. EM elections are spread across the year in 2019 – starting with Nigeria (February), Indonesia (April), India (May), the Philippines (May), South Africa (August), Argentina (October) and Poland (November).

US MACRO BACKDROP

As the glow from the 2018 US tax cuts fades in 2019, we expect the growth outlook to soften a bit from this year's pace. Through Q3, real GDP is averaging +3.3%, and forecasts for how economic activity finishes 2018 definitely vary. Nevertheless, it seems that a final reading for the year will likely gravitate around the +3.0% threshold, which would be the best annual performance since 2005.⁹

For 2019, consensus forecasts revolve around +2.5%.¹⁰ While this pace of growth would represent some moderation from 2018, it would still be a modest improvement from the post-financial crisis/Great Recession level of +2.2%. In other words, a recession in 2019 does not seem likely.

Growth is also expected to slow on a global basis, but economic forecasts for this broader outlook do not include any imminent downturns. For developed economies, consensus estimates look for GDP to drop 0.3 percentage points (pp) to +2.1% in 2019.¹¹ Interestingly, the European Central Bank (ECB) recently weighed in with its own projections. While its GDP estimate was revised downward by 0.1pp, the level of growth for 2019 is still pegged at +1.7%, essentially in line with the consensus.¹²

⁷ Gross domestic product (GDP): The sum total of all goods and services produced across an economy.

⁸ A unicorn is a privately held startup company valued at over \$1 billion.

⁹ Source: Bloomberg, as of 13 December 2018.

¹⁰ Source: Bloomberg, as of 13 December 2018.

¹¹ Source: Bloomberg, as of 13 December 2018.

¹² Source: European Central Bank (ECB), as of 13 December 2018.

Another key question to consider is this: Is inflation¹³ something to worry about? Through the first half of this year, inflation was essentially the stealth component. It was rising, but investors didn't appear to notice. Yes, inflation expectations rose appreciably from their mid-2017 lows to their recent peak in May. But from this high-water mark through October, break-even spreads were range bound. In other words, the bond market seemed to have discounted a rise in measures such as the Consumer Price Index (CPI)¹⁴ ahead of time, and then went to the sidelines. Since October, there has been a visible drop-off in expectations, with the lion's share of the widening in break evens being reversed. This has coincided with CPI and core CPI (excluding food and energy) coming off their 2018 peaks. But current levels for both gauges still sit somewhat comfortably above the +2.0% threshold.

For 2019, investors should pay close attention to wages. For overall inflation, this had been the missing ingredient as far as the Federal Reserve (Fed) was concerned. But in three out of the last four months, the annualized increase for average hourly earnings has come in with a "3 handle"—the first such occurrence since 2009. If wage increases remain around the current +3.1% reading, we would not expect a meaningful increase in inflation expectations next year. But a move toward the +3.5% mark would probably create some heightened anxiety.

FED WATCH

Without a doubt, the Fed outlook has changed considerably as we close out 2018.

Prior to Fed Chairman Powell's recent walk-back comments regarding where the neutral Fed Funds target¹⁷ sits, market expectations were leaning toward at least two rate hikes in 2019. However, as of this writing, Fed Funds Futures appear to be struggling to price in even one increase for next year—and then even a possible rate cut in 2020.

In our opinion, we see the Fed going back to the normal way of doing business in 2019. Policy makers likely will be data-dependent. The Federal Open Market Committee (FOMC) removed the phrase "the stance of monetary policy remains accommodative" in September. So, where Fed Funds sit as compared to what is viewed as neutral (this target varies) has already been part of the equation. A "data-dependent Fed" is how the FOMC normally operated prior to the financial crisis/Great Recession; telegraphing when each move will occur every three months was not the policy norm. Our forecasted base case revolves around two rate hikes in 2019 (March and June), and then the Fed could pause to reassess.

IS IT BETTER TO BE EARLY OR LATE TO THE DURATION¹⁸ PARTY?

The changing Fed outlook had a noticeable impact on the US Treasury market as well. After reaching a high-water mark of 3.24% in early November, the 10-Year yield fell roughly 40 basis points (bps)¹⁹ just one month later to 2.85%.²⁰ The yield curve—measured by the 2-Year versus 5-Year note—inverted for the first time since 2007.²¹

So, what side of the duration trade should investors prepare their portfolios for?

¹³ Inflation: Characterized by rising price levels.

¹⁴ Consumer Price Index (CPI): A measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food and medical care. The CPI is calculated by taking price changes for each item in the predetermined basket and averaging them; the goods are weighted according to their importance. Changes in CPI are used to assess price changes associated with the cost of living.

¹⁵ Source: Bloomberg, as of 13 December 2018.

¹⁶ Source: Bloomberg, as of 13 December 2018.

¹⁷ Fed Funds target range: The interest rate band the Federal Open Market Committee decides to implement for the Federal Funds Rate.

¹⁸ Duration: The measure of a bond's sensitivity to changes in interest rates. The weighted average accounts for the various durations of the bonds purchased as well as the proportion of the total government bond portfolio that they make up.

¹⁹ Basis point: 1/100th of 1 percent.

²⁰ Source: Bloomberg, as of 17 December 2018.

²¹ Source: Bloomberg, as of 17 December 2018.

In our opinion, the US Treasury market discounts a lot of negative news at the levels that exist as of this writing. Like the Fed, the bond market will also need to become data dependent. Admittedly, geopolitical events, such as the US-China trade dispute, could move valuations. Investors could be greeted with hard data that may not be as soft as what is currently expected. In addition, the US Treasury 10-Year Relative Strength Index²² had been pointing toward its most overbought condition in the last few years. A range-bound pattern for the 10-Year note is our base case.

Against this backdrop, and based on prior market experiences, we would position a fixed income portfolio to be late to the duration party as the risk-reward quotient doesn't seem to provide enough of an incentive to be early.

A WAIT-AND-SEE APPROACH TO FIXED INCOME ALLOCATIONS

Short-term fixed income products have garnered substantial flows in the last year. While a pausing Fed might suggest some deceleration in that pace, underlying demand for the short end of the curve should remain strong. Simply put, short-term fixed income is once again a viable investment option, following an eight-year hiatus.

With the Fed hiking rates eight times over the past two years, short rates have soared above typical levels of investment manager fees. Treasury Bill positions are no longer a net cost to performance; they can offer a strategic source of return. Combined with limited incremental yield in longer maturities²³, higher short rates change the calculus of positioning portfolios. Investors may want a higher level of conviction in taking on interest rate risk.

For example, the 10-Year Treasury note yield currently offers 50 bps over 3-Month Treasury Bills.²⁴ Given its risk profile, 10-Year yields would need to rise less than 10 bps before underperforming the shorter maturities, if Treasury Bills are flat at current levels.

The current positioning of 10-Year Treasuries relative to our expected trading range and our macro outlook suggest that rate risk is likely to detract from performance in 2019. But we do expect tactical opportunities to emerge at times throughout the year, where adding duration risk may offer value.

Beyond domestic interest rate markets, valuation in many sectors is full or nearly so.

We are neutral on investment-grade²⁵ credit and agency mortgage-backed securities²⁶. In our forecasted base case, given current valuations, we see greater pockets of value opening up in the high-yield²⁷ corporate bond market and a path to outperformance for emerging market local debt. Diversifying across alpha²⁸ sources and raising the fundamental profile of investments may be essential in delivering absolute returns in the coming year.

Credit market health has been a hot topic for both investors and the financial press this year. Rising leverage and weakening covenants amid a backdrop of rising rates, aging expansion and escalating trade tensions have heightened investors' concerns. The dominance of BBB²⁹ issues has become the focus issue for the investment-grade universe. Leveraged loans and the funds that package them have come under similar scrutiny, with structural considerations augmenting concerns about the explosion of issuance since the financial crisis. Investment-grade corporates reacted first, with yield spreads over Treasuries rising from their 11-year lows of 85 bps to recent highs of 145 bps.³⁰ Speculative-grade issues—both high yield and leveraged loans—showed greater resilience but succumbed in October when equity and energy markets began to gap lower. High-yield rates have risen 110 bps to 7.27% from their levels in early October.³¹

²² Relative Strength Index (RSI): A technical analysis measure designed to track speed and price changes in an investment vehicle. It is used to identify potentially overbought and/or oversold conditions.

²³ Maturity: The amount of time until a loan is repaid.

²⁴ Source: Bloomberg, as of 17 December 2018.

²⁵ Investment grade: A rating given to a municipal or corporate bond. It is a relatively favorable rating by either Moody's or Standard & Poor's indicating a higher chance an issuer performs interest and principal obligations as promised by the terms of the debt issuance.

²⁶ Mortgage-backed securities: Fixed income securities that are composed of multiple underlying mortgages.

²⁷ High-yield corporate bond: A type of corporate bond that offers a higher rate of interest because of its higher risk of default.

²⁸ Alpha: Can be discussed as both risk-adjusted excess return compared to a specific benchmark or absolute excess return compared to a benchmark. It is sometimes more generally referred to as excess returns.

²⁹ BBB: Standard & Poor's credit rating that implies the borrower has adequate capacity to meet financial commitments, but may be more vulnerable to adverse economic conditions. This rating represents the lowest level of investment grade.

³⁰ Source: Bloomberg, as of 13 December 2018.

³¹ Source: Bloomberg, as of 13 December 2018.

We expect corporate fundamentals to remain solid next year as the domestic economy continues to expand. We do, however, acknowledge that corporate credit fundamentals have likely peaked for this expansion. Additionally, we anticipate a greater dispersion across issuer fundamentals going forward. With a period of inexpensive financing behind us, there will be a greater focus on corporations deleveraging³² their balance sheets.

Investors may want to focus on issuers with more attractive fundamentals with a greater ability to deleverage. Combining the up-in-quality³³ approach with a tilt toward value³⁴ could best position credit portfolios for the coming year. With rate positioning remaining a headwind, we prefer high-yield securities over more rate-sensitive investment-grade corporate issues.

We advocate a neutral position for agency mortgage-backed securities (MBS) and look to take advantage of opportunities in the non-agency sector of the residential- and commercial-backed market. Risk exposure for non-agency residential MBS, commercial MBS and asset-backed securities is underpinned by cycle dynamics (housing, consumer) that are less mature than credit. Selected investments in these areas could provide incremental income and help diversify risk exposures.

Given trade tensions with China and current risk-off³⁵ sentiment, emerging market local debt would seem like an odd choice as a potential source of alpha in fixed income portfolios. But consider this: Currencies are still at depressed levels compared to the US Dollar, and attractive carry³⁶ still exists. Timing and sentiment remain critical in unlocking value from local debt investments. If our base case is realized, some of the most pressing fears regarding emerging markets are likely to dissipate. Reduced fears of soaring US rates, a more stable China and a de-escalation of trade tensions could create a better backdrop for emerging market local debt to contribute to fixed income portfolio performance.

A RECOVERY FOR GOLD IN 2019?

Gold started to rally strongly at the end of 2018, amid volatility in cyclical assets. That rally has continued into 2019 and we expect further upside as short positioning in gold futures markets are covered. Although we expect the Fed to raise rates twice this year, the central bank is close to the end of its tightening cycle and therefore gains in 10-year Treasury yields are likely to be less than at the short end, limiting downside pressure on gold. US Dollar appreciation – a source of downside pressure on gold last year – is likely to come to an end by the middle of 2019, providing gold some relief. US inflation, while likely to have peaked in mid-2018, is likely to remain above 2%, providing support for gold. We expect the main catalyst for gold price gains this year to be a recovery in sentiment towards the metal, after sentiment fell to excessively low levels in September/October 2018. There were many geopolitical and market risks that the gold market seemed to be ignoring for most of 2018. However, the market volatility at the end of the year provided a stark reminder to investors about the virtues of gold. We start the year with a shut down in US government, considerable uncertainty on the path of UK's exit from the EU with impending deadline a matter of months away and continuous flip-flopping by the Trump Administration on trade tariffs. In this environment we expect investors to remain keen to hedge using gold.

To see our newest complete Gold outlook document here www.wisdomtree.eu/gold.

³² Deleverage: Bring down levels of debt.

³³ Quality: Characterized by higher efficiency and profitability. Typical measures include earnings, return on equity, return on assets and operating profitability. This term is related to the quality factor, which associates these stock characteristics with excess returns versus the market over time.

³⁴ Value: Characterized by lower price levels relative to fundamentals, such as earnings or dividends. Prices are lower because investors are less certain of the performance of these fundamentals in the future. This term is also related to the value factor, which associates these stock characteristics with excess returns versus the market over time.

³⁵ Risk-off: Refers to changes in investment activity in response to perceived risk. When risk is perceived as high, investors tend to gravitate toward lower-risk investments.

³⁶ Carry: The amount of return that accrues from investing in fixed income or currency forward contracts.

OIL TO CONTINUE TO REBOUND

Oil prices lost a lot of ground in the final quarter of 2018 – Brent fell from over US\$85/per barrel (bbl) in October to close to US\$50/bbl. There was not a large shift in fundamentals over that time. A rise in US oil production was well anticipated. An increase in Organization for Petroleum Exporting Countries (OPEC) production came a result of members trying to compensate for a loss in Iranian production that was expected as a result of US extraterritorial sanctions on the country. It turned out the President Trump decided at the last minute to provide consumers of Iranian oil exemptions, thus leaving the oil market oversupplied. However, OPEC and its partners (known as OPEC+) have been responsive to this oversupply and decided in December to cut production by 1.2mn barrels. Actual production cuts maybe even higher as exempt OPEC countries like Venezuela, Libya and Iran are likely to see production decline as well. That should bring the oil markets back into balance. OPEC is due to publish individual country quotas once again. We believe that will strengthen compliance with the group's goals. We expect the exemptions that the US has provided to consumers of Iranian oil to be temporary. Exemptions will be reassessed every 180 days and so there will be an opportunity to reset within the first half of the year. As the glut in oil seen in late 2018 is likely to be temporary, we expect prices to recover a lot of lost ground in 2019. Brent oil is already approaching US\$60/bbl as fundamentals are being assessed. While there are signs of lower manufacturing activity globally, we don't expect demand to be cut dramatically. Indeed, if trade protectionism from the US thaws, we could see a rebound in manufacturing activity and demand for oil.

The gains in oil prices will not be permanent though. We expect US – the largest producer of crude oil – to continue to increase production. Currently, however, the ability for the US to export oil is limited by infrastructure. At the moment, there is only one location to fill Very Large Crude Containers (VLCCs) as most waters around the US Gulf Coast are too shallow. VLCCs get around this by ship-to-ship loading (loading smaller ships at the coast and filling VLCCs off-coast). This adds to cost of exports. There are at least two projects in the pipeline for direct loading of VLCCs. One is expected to complete in 2020 and the other is expected to complete in 2022. As we near these dates, global oil prices could come under pressure.

CHINA THE ONE TO WATCH FOR INDUSTRIAL METALS

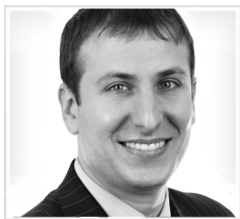
Industrial metals have struggled to hit their stride under the doubts cast on demand by on-going trade protectionism by the US. However, should protectionism reverse in 2019, we could see a relief rally. Indeed, fundamentals point to higher prices. Most industrial metals are currently in a supply deficit. We expect demand for nickel and copper to continue to grow as electrification of vehicles and infrastructure upgrades continue to support demand.

Slowing economic demand in China may place negative pressure on industrial metals. However, if China follows its historic trend of stimulating its economy through infrastructure projects to smooth bumps in economic demand, then industrial metals could be a beneficiary. But, with China's renewed focus on environmental outcomes and containing high corporate and local debts, we can't guarantee that China will revert to its old ways. Therefore, cues from policy makers in China will increasingly become important this year. Chinese policy makers will be formulating its next five-year plan this year (to start in 2020) and with the nation celebrating its 70th anniversary, we could hear more about the direction they want to take the economy over the medium-term.

HOW IS WISDOMTREE THINKING ABOUT CURRENCY RISK?

A primary risk to our view that emerging markets look poised to outperform global markets in 2019 is another year of continued US Dollar strength. Entering 2018, the consensus forecast was for a weaker US Dollar. But it rose nearly 6%, as measured by the Bloomberg Dollar Spot Index.³⁷ In 2019, many strategists are again forecasting a weaker US Dollar. Our view is somewhat nuanced in that we expect the US Dollar to initially appreciate, but then depreciate, leaving the currency flat for the year.

³⁷ Source: Bloomberg, as of 13 December 2018.



Jeremy Schwartz has served as WisdomTree’s Executive Vice President, Global Head of Research since November 2018 and leads WisdomTree’s investment strategy team in the construction of WisdomTree’s equity indexes, quantitative active strategies and multi-asset model portfolios. Mr. Schwartz joined WisdomTree in May 2005, and in 2008 became Director of Research. Prior to joining WisdomTree, he was head research assistant for Professor Jeremy Siegel and helped with the research and writing of *Stocks for the Long Run* and *The Future for Investors*. He received his B.S. in Economics from The Wharton School of the University of Pennsylvania.



Rick Harper serves as the Head of Fixed Income and Currency for WisdomTree Asset Management, where he oversees the firm’s suite of fixed income and currency exchange-traded Funds. Rick has over 22 years of investment experience in strategy and portfolio management positions at prominent investment firms. Prior to joining WisdomTree in 2007, Rick held senior-level strategist roles with RBC Dain Rauscher, Bank One Capital Markets, ETF Advisors and Nuveen Investments. At ETF Advisors, he was the Portfolio Manager and developer of some of the first fixed income exchange-traded funds. He graduated from Emory University and earned his MBA at Indiana University.



Kevin Flanagan joined WisdomTree in 2016 as Senior Fixed Income Strategist. He contributes to the asset allocation team and provides expertise on WisdomTree’s global fixed income content. Prior to joining WisdomTree, Kevin spent 30 years at Morgan Stanley, where he was most recently a Managing Director. He was responsible for tactical and strategic recommendations and created asset allocation models for fixed income securities. He was a contributor to the Morgan Stanley Wealth Management Global Investment Committee, primary author of Morgan Stanley Wealth Management’s monthly and weekly fixed income publications. Kevin has an MBA from Pace University’s Lubin Graduate School of Business, and a B.S in Finance from Fairfield University.



Nitesh Shah is Director of Research at WisdomTree. Prior to the acquisition of ETF Securities in April 2018, Nitesh was a Commodities Strategist for the company. Nitesh has 16 years of experience as an economist and strategist, covering a wide range of markets and asset classes. Before joining ETF Securities, Nitesh was an economist covering the European structured finance markets at Moody’s Investors Service and was a member of Moody’s global macroeconomics team. He started his career at HSBC Investment Bank. Nitesh holds a Bachelor of Science in Economics from the London School of Economics and a Master of Arts in International Economics and Finance from Brandeis University (USA).



Aneeka Gupta is Associate Director of Research at WisdomTree. Prior to the acquisition of ETF Securities in April 2018, Aneeka worked as an Equity & Commodities Strategist at the company. Aneeka has 13 years of experience working as a Research Analyst across a wide range of asset classes. In her current role she is responsible for conducting analysis for all in-house commodity and macro publications and assisting the sales team with client queries around products and markets. Aneeka began her career as an equity analyst at Bear Stearns International Ltd in London, and also worked as an Equity Sales Trader at Sunrise Brokers across US and Pan European Exchanges. Aneeka holds a BSc in Mathematics from the University of Delhi and a Masters in Mathematics from Oxford University and is also a CFA Charterholder.

IMPORTANT INFORMATION

Communications issued in the European Economic Area (“EEA”): This document has been issued and approved by WisdomTree Ireland Limited, which is authorised and regulated by the Central Bank of Ireland.

Communications issued in jurisdictions outside of the EEA: This document has been issued and approved by WisdomTree UK Limited, which is authorised and regulated by the United Kingdom Financial Conduct Authority.

WisdomTree Ireland Limited and WisdomTree UK Limited are each referred to as “WisdomTree” (as applicable). Our Conflicts of Interest Policy and Inventory are available on request.

For professional clients only. The information contained in this document is for your general information only and is neither an offer for sale nor a solicitation of an offer to buy securities or shares. This document should not be used as the basis for any investment decision. Investments may go up or down in value and you may lose some or all of the amount invested. Past performance is not necessarily a guide to future performance. Any decision to invest should be based on the information contained in the appropriate prospectus and after seeking independent investment, tax and legal advice.

This document is not, and under no circumstances is to be construed as, an advertisement or any other step in furtherance of a public offering of shares or securities in the United States or any province or territory thereof. Neither this document nor any copy hereof should be taken, transmitted or distributed (directly or indirectly) into the United States.

This document may contain independent market commentary prepared by WisdomTree based on publicly available information. Although WisdomTree endeavours to ensure the accuracy of the content in this document, WisdomTree does not warrant or guarantee its accuracy or correctness. Any third party data providers used to source the information in this document make no warranties or representation of any kind relating to such data. Where WisdomTree has expressed its own opinions related to product or market activity, these views may change. Neither WisdomTree, nor any affiliate, nor any of their respective officers, directors, partners, or employees accepts any liability whatsoever for any direct or consequential loss arising from any use of this document or its contents.

This document may contain forward looking statements including statements regarding current expectations or beliefs with regards to the performance of certain assets classes and/or sectors. Forward looking statements are subject to certain risks, uncertainties and assumptions. There can be no assurance that such statements will be accurate and actual results could differ materially from those anticipated in such statements. WisdomTree strongly recommends that you do not place undue reliance on these forward-looking statements.

Any historical performance included in this document may be based on back testing. Back testing is the process of evaluating an investment strategy by applying it to historical data to simulate what the performance of such strategy would have been. However, back tested performance is purely hypothetical and is provided in this document solely for informational purposes. Back tested data does not represent actual performance and should not be interpreted as an indication of actual or future performance.