Private Bank

Outlook 2017 highlights

Outlook 2017

Contents

Overview
3 Late-cycle stimulus
4 The populist challenge and portfolios

Portfolio perspectives
5 Our favored markets
6 Asia
7 Europe
8 Latin America
9 North America

Positioning for higher rates
10 Positioning for higher rates

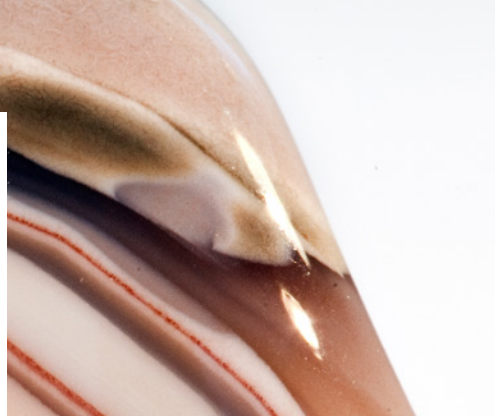
The liquidity trade-off
12 The liquidity trade-off

Allocating to infrastructure
14 Allocating to infrastructure

Transforming commerce
16 The robotics revolution

Editor
Dominic Picarda

Creative direction
Vittoria Fontana



Late-cycle stimulus

Steven Wieting, Global Chief Investment Strategist

US policies under the Trump administration could have a significant impact on growth and markets globally, creating both risks and opportunities for investors.

The global economic recovery is almost eight years old, making it one of the longest expansions on record, albeit the weakest in terms of growth. Monetary easing has played a major role in extending the cycle to date, but a shift towards fiscal easing may now accelerate the growth rate. The election of Donald Trump has created greater uncertainty over the outlook but some of his proposed policies could positively impact US and world growth. Fiscal stimulus measures are likely to include tax cuts, perhaps by mid-2017. Increased infrastructure spending could follow, although Republicans in Congress seem likelier to support tax cuts. We estimate that Trump's fiscal plans could boost real economic growth in the US by more than a full percentage point by late 2017.

What might Trump's policies mean for the markets, both in the US and worldwide? To offset some of the inflationary effects of the likely fiscal stimulus, we expect the Federal Reserve to continue to raise interest rates. Markets have already started to price in the inflationary risk, as evidenced by the sharp increase in long-term US Treasury yields. Fiscal stimulus – along with his push for lower taxes – could drive the US dollar higher heading into 2018.

Alongside rising Treasury yields, a stronger dollar could have a particular impact upon those emerging economies with higher external borrowings and less healthy current accounts. Emerging economies with significant exports to the US could suffer lower growth if trade agreements are altered or tariffs are imposed. We prefer emerging equity markets with relatively less reliance on US trade and that are seeing sustained improvement in their own fundamentals.

What about the long-term outlook? Adaptive Valuation Strategies (AVS) is Citi Private Bank's distinctive approach to strategic asset allocation and to estimating future returns. It uses current valuations to estimate annualized returns over the next ten years. These strategic return estimates are shown in **figure 1.**

Figure 1. Strategic return estimates

Asset class	SRE(%)
Global Developed Equity	6.3
Global Emerging Equity	10.8
Global Developed Investment Grade Fixed Income	2.1
Global High Yield	5.3
Global Emerging Fixed Income	2.6
Cash	1.9
Hedge Funds	5.6
Private Equity	12.2
Real Estate	10.7
Commodities	1.9

Source: CPB Asset Allocation Team, preliminary estimates as of 30 Nov 2016. Returns estimated in US dollars; all estimates are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Strategic Return Estimates are no guarantee of future performance. For further information, please consult Adaptive Valuation Strategies 2017, due for publication in Feb 2017.

Read **Late-cycle stimulus** in full at
http://privatebank.citibank.com/outlook/portfolio-perspectives.html

The populist challenge and portfolios

Steven Wieting, Global Chief Investment Strategist

The social anger that contributed to Trump's election looks set to persist in the US and beyond.

Populist politics shook the world in 2016. The election of Donald Trump as 45th US President and the UK's decision to withdraw from the European Union could have far-reaching consequences for international economic and political relations for years to come. And they are unlikely to remain isolated events.

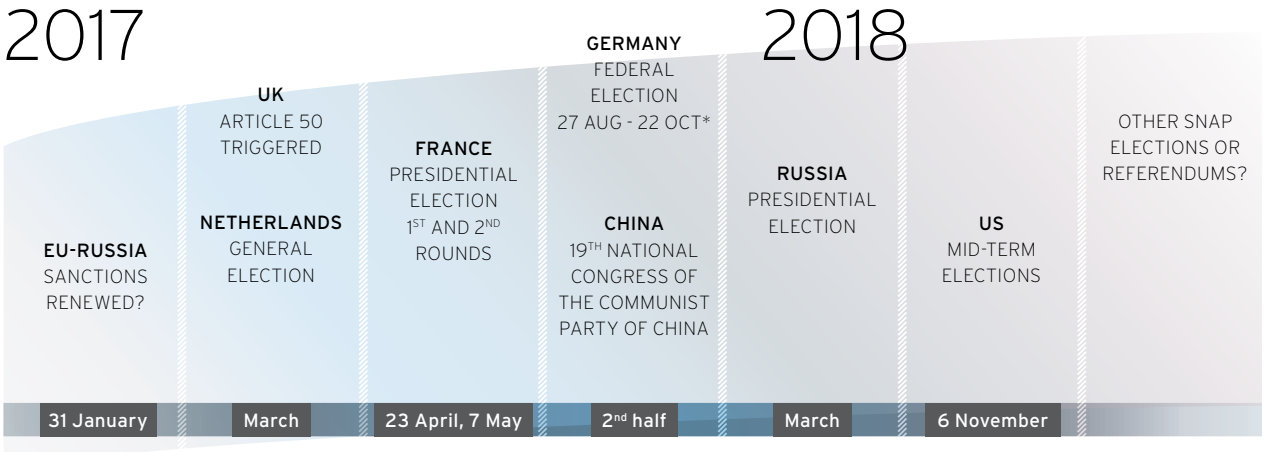
If enacted, populist anti-globalization measures such as immigration restrictions and protectionism could lead to lower growth, higher wage costs and lesser shareholder returns.

In blaming trade and immigration for eliminating jobs and crimping wages, we believe that populist politicians and their voters are overlooking a much more influential factor. We estimate that advances in technology have eliminated far more jobs than international trade has in recent decades and earlier periods as well.

We think that the populist political storm could well extend into 2017 and beyond. We are therefore watching the political calendar closely - **figure 2.** Populist tendencies in the Dutch, French and German elections will increase political risk in the European Union and could well impact regional financial assets.

How might investors respond to the growing challenge posed by populist politics? A carefully considered selection of assets from a variety of asset classes and geographies might help spread the risks from further political shocks that may impact particular industries or firms.

Figure 2. The political calendar



Source: Citi Private Bank, as of 21 Nov 2016. *Precise date yet to be fixed.

Read **The populist challenge and portfolios** in full at http://privatebank.citibank.com/outlook/portfolio-perspectives.html

Asia
Europe
Latin America
North America

Portfolio perspectives

Our favored markets

AT A GLANCE

Despite having underweighted equities last year, we identify several markets and sectors that still look attractive. In fixed income, where we have we reduced our underweight, we also see various investment opportunities globally.

EQUITY

Markets:
US
Japan
India
Colombia, Peru, Chile

North American energy, financials, industrials, healthcare

Asian information technology, healthcare and infrastructure

European and UK energy, healthcare and information technology

Latin American energy, materials, metals & mining, consumer discretionary and financials

FIXED INCOME

US investment grade (IG) and high yield (HY) bonds, especially energy-related issuers

US and European HY senior bank loans

Rupee-denominated **Indian** sovereign bonds

Selective **Brazilian**, **Colombian**, **Argentinian** debt, mainly hard currency and some local currency

US-dollar **Indian** IG corporate bonds, mostly in oil & gas

Defensive, quasi-sovereign issuers in **Indonesian** fixed income

Eurozone HY corporate bonds

North American telecoms, energy

US preferred stocks issued by large banks

Treasury Inflation Protected Securities (TIPS)

THEMATIC IDEAS

Selective infrastructure investments

Private equity investments targeting bank disintermediation, distressed energy

E-commerce related real estate investments

Equities in robotics makers and beneficiaries

Asia

Ken Peng, Investment Strategist - Asia
Kris Xippolitos, Global Head of Fixed Income Strategy

With higher external risks and a possible shift from monetary to fiscal policy, we prefer markets with ample fiscal space, robust domestic growth and credit availability.

The policies of the next US administration may have unusually large influence over Asia's prospects in 2017 and beyond. The rise of protectionism could not only curb regional economic growth, but also see current accounts deteriorate along with debt-servicing ability.

Japan looks likelier to implement fiscal stimulus than most countries, with the Bank of Japan seemingly ready to finance such policies.

Equities

The potential shift away from monetary policy towards fiscal policy, and from deflation to inflation, are both major trend changes that are likely to cause equity investors to rebalance from defensive to value equities.

Japan looks likelier to implement fiscal stimulus than most countries, with the Bank of Japan seemingly ready to finance such policies. This and the weaker yen could help Japanese equities outperform the region.

For growth potential, India ranks highest owing to its economic reforms and relatively insulated economy.

Fixed income

In fixed income, we prefer to focus on markets that have relatively lower reliance on US trade and external funding, but which are also seeing sustained improvement of their fundamentals. India and China are expected to be most resilient, while Indonesia may present good value, but also higher risk. Indian intermediate-term local currency yields of almost 6.5% still appear attractive, in our view. We also favor dollar-denominated IG Indian corporates, mostly in the oil & gas sector. Defensive, quasi-sovereign Indonesian issuers offer yield pick-up over sovereign debt, meanwhile.

Currencies

A further strengthening of the US dollar in 2017 would likely be a headwind for Asian currencies and assets. On a 6-12 month view, Citi Research forecasts the yuan to weaken from 6.92 to 7.15. The Korean won and Taiwanese dollar are the most sensitive to US dollar and yuan influences, with both seen weakening. Most resilient to dollar and yuan moves is the Indian rupee. The trend in the Japanese yen in 2017 may be towards further decline.

Read our **Asia** preview in full at
http://privatebank.citibank.com/outlook/portfolio-perspectives.html

Europe

Jeffrey Sacks, Investment Strategist - Europe
Kris Xippolitos, Global Head of Fixed Income Strategy

With ongoing concerns over economic growth and political uncertainty, we continue to advocate a selective approach.

Sustaining economic growth and coping with a challenging political environment are likely to be dominant themes for European markets in 2017. The dominant issue for the UK in 2017 will likely be the implementation of 'Brexit', its withdrawal from the EU. Citi Research forecasts Euro Area GDP growth will remain near 1.6% in 2016 and 1.5% in 2017, while UK growth is seen easing from 2.0% to 1.4%. Risks to these forecasts include trade protectionism and the erosion of confidence as political tensions mount within both the European Union and the Eurozone.

Populist political parties are gaining ground in many European countries and this might affect both economic confidence and asset prices.

The European Central Bank continues to explore ways of making its quantitative easing program more effective and sustainable, having recently reduced monthly purchase size from €80 billion to €60 billion, while extending it for nine months till December 2017. It has also been urging Eurozone governments to pursue fiscal expansion.

Populist political parties are gaining ground in many European countries and this might affect both economic confidence and asset prices. France's presidential election in April-May 2017 could produce the most shockwaves if nationalist candidate Marine Le Pen does particularly well.

Equities

As a whole, the region's equity markets look inexpensive. While we are underweight European equities compared to other regions, Germany looks attractively valued, trading on a multiple of 12.5 times prospective 2017 earnings. In the UK, we continue to favor the larger multinational-dominated FTSE 100 index over the more domestically-focused FTSE 250 index.

Fixed income

In the Eurozone (EZ), we remain underweight the low-yielding government debt of both core and peripheral countries such as Germany and Spain respectively. We maintain our preference for corporate bonds. But even Euro-denominated investment grade (IG) corporates bear ultra-low yields, with roughly three-quarters of the IG market yielding less than 1%. More attractive possibilities exist in Euro-denominated high yield (HY) corporate bonds and senior loans, although performance will likely moderate after a 6% gain in 2016.

Currencies

Any further upward pressure on the US dollar in 2017 is likely to accentuate existing weakness in the Euro and the British pound. We expect the former to move to below parity with the US dollar on a 6- to 12-month view.

Read our **Europe** preview in full at
http://privatebank.citibank.com/outlook/portfolio-perspectives.html

Latin America

Jorge Amato, Investment Strategist - Latin America
Kris Xippolitos, Global Head of Fixed Income Strategy

With the regional growth outlook improving, and despite US policy uncertainty, we remain positive on Latin American equities and fixed income.

Latin American economies likely bottomed out in the first quarter of 2016. Across the region, Citi economists forecast 1.7% growth in 2017, compared to contraction of 0.8% in 2016. Despite the risks from higher US Treasury yields, continued US dollar strength, and potential changes to international trade agreements, relatively easy monetary conditions in most developed markets (DM) should continue to keep DM bond yields low.

> Improving and manageable current account deficits should favor Chile and Peru and help them withstand the effects of a stronger US dollar.

Equities

We shifted our tactical asset allocation to Latin American equities to overweight in mid-2016. Improving economic growth as well as a re-rating of earnings expectations and valuations continues to underpin our positive outlook for these markets.

Colombia and Chile are the most attractive regional markets from a valuation perspective. Peruvian equities – particularly mining – might also look attractive if the US launches a particularly aggressive infrastructure spending program.

Fixed income

Brazilian local and external debt markets could continue to rally in 2017. In US dollar-denominated debt, we find the most value in corporates, particularly in the energy and financial sectors. In Argentina, where fundamentals have stabilized, we favor selective US dollar-denominated quasi-sovereign bonds, where intermediate maturity yields range between 5% and 9%. With its close correlation to oil prices, Colombia is another favored market of ours.

Currencies

US fiscal easing and tougher trade policies could impact regional currencies in 2017, with the Mexican peso most exposed to deteriorating trade channels. Improving and manageable current account deficits should favor Chile and Peru and help them withstand the effects of a stronger US dollar.

Read our **Latin America** preview in full at
http://privatebank.citibank.com/outlook/portfolio-perspectives.html

North America

Chris Dhanraj, Investment Strategist - North America
Kris Xippolitos, Global Head of Fixed Income Strategy

Rising policy risk is likely to coincide with greater volatility across equities and fixed income.

The election of Donald Trump as US President has left the outlook considerably more uncertain, with increasing volatility as investors adjust to the potential policies of a political outsider. However, his growth-friendly proposals – such as increased infrastructure spending, deregulation, and both corporate and personal income tax reform – have also boosted sentiment.

> Energy is one of the cheapest sectors within the S&P 500 and it may benefit from a continued recovery in crude oil.

Equities

We remain neutral on US and Canadian equities entering 2017. North American equity valuations are still fairly high. Financials, especially regional ones, might benefit from both prospective deregulation and from rising rates. Healthcare should remain a focus, although we would await further clarity before seeking opportunistic exposure. Energy is one of the cheapest sectors within the S&P 500 and it may benefit from a continued recovery in crude oil.

Fixed income

In US credit, investment grade (IG) corporate bond performance will largely hinge on the direction of Treasury yields. We find most value in telecoms and energy, which we think will benefit from improving fundamentals, stable or rising oil prices, and relatively attractive valuations. While not as cheap as earlier in 2016, HY valuations still offer value. Stable oil prices and a persistent 'reach for yield' by investors should enable further outperformance.

Currencies

Increasingly hawkish Fed policy and the possibility of a tax holiday to encourage US multinational companies to repatriate earnings held overseas, could contribute to further upward pressure on the US dollar next year. We expect the Canadian dollar to experience another year of higher volatility against the US dollar.

Read our preview of **North America** at
http://privatebank.citibank.com/outlook/portfolio-perspectives.html

Positioning for higher rates

Steven Wieting, Global Chief Investment Strategist
Kris Xippolitos, Global Head of Fixed Income Strategy

Despite the risk to fixed income if interest rates continue to rise, we still see investment opportunities in certain assets.

Whether or not growth is achieved by fiscal easing, interest rates could well rise further. If so, substantial fixed income losses would follow. To position for higher rates, we suggest taking risks such as credit risk and broadening geographic horizons.

High yield bonds and variable-rate loans

We believe that US HY bonds continue to look attractive. As an asset class, it has lower price sensitivity to movements in interest-rates. US energy-related issuers may offer interesting opportunities. A less volatile high-yielding alternative is HY senior bank loans in the US and Europe.

US preferred stocks

Preferred stocks, with both equity and fixed income characteristics, typically have priority over common equity in the event of the issuer entering liquidation. We favor structures issued by large US banks, featuring fixed-to-floating rate coupons.

Emerging market fixed income

Emerging market assets – and especially Latin American fixed income – are currently among our highest-conviction overweight holdings. We find value in US dollar-denominated Brazilian corporates, Argentinian quasi-sovereign debt, and short-term Brazilian-real denominated sovereign yields.

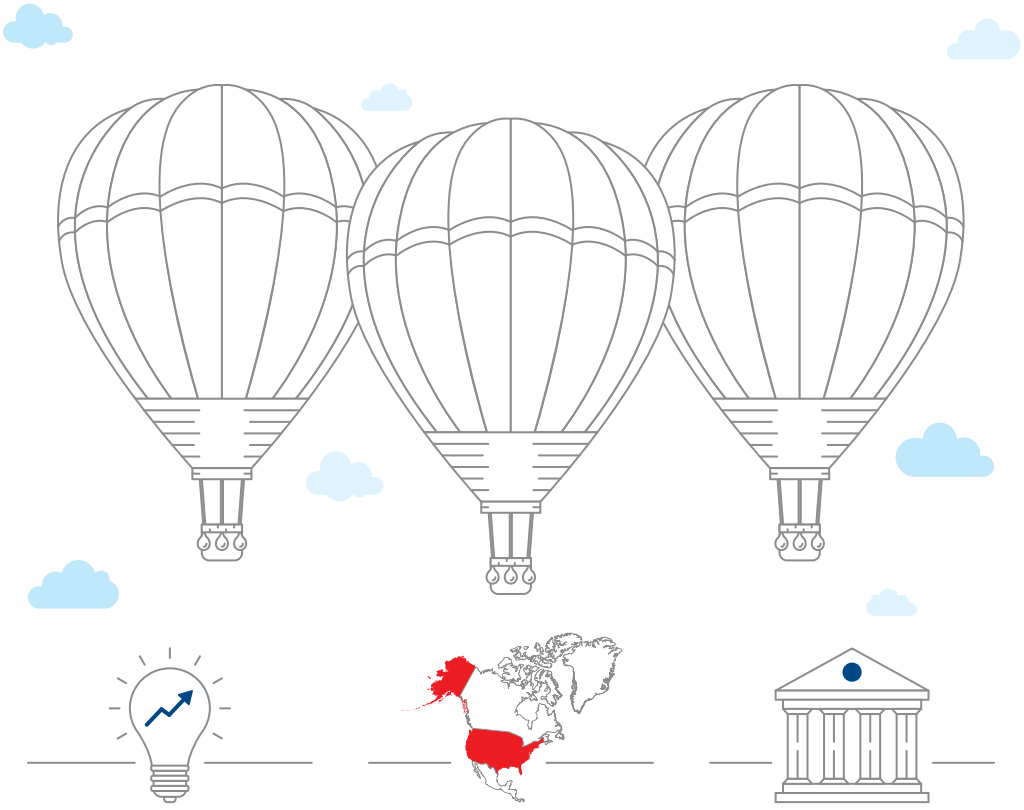
Lower-risk opportunities

In the US, longer duration Treasury Inflation Protected Securities (TIPS) provide real yields of 0.5% to 1.0% and an additional rate equal to the overall increase in the Consumer Price Index (CPI).

Read **Positioning for higher rates** in full at at
http://privatebank.citibank.com/ivc/docs/outlook-positioning-for-higher-rates.pdf

POSITIONING FOR HIGHER RATES

A continued rise in interest rates would pose a risk to fixed income assets. But we still see opportunities to earn higher yields by taking currency, credit and other risks, while also extending geographic horizons.



High yield (HY) energy bonds

Energy sector default rates remain high, but oil's recovery has boosted HY energy bonds.

If crude oil prices continue to rise towards US$60/barrel...

HY energy bonds could recover further.

Risks: credit risk / default risk

US preferred stocks

Large US banks' preferred stocks have the potential to yield 6.5% or more.

Preferred stocks have priority over common equity if issuer enters liquidation.

Fixed-to-floating securities are less vulnerable to rising interest rates.

Risks: credit risk

Brazilian-real denominated sovereign bonds

Cash yields of almost 13% on short-term local currency issues.[i]

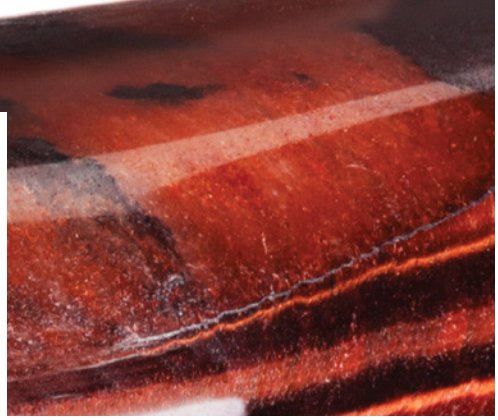
Declining inflation has raised the chances of interest rate cuts.

Risks: currency risk, credit risk

i Source: The Yield Book, as of 12 Dec 2016.

All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Past performance is no guarantee of future events. Real results may vary.

Disclosure: Strategies and investments mentioned in this document may not be suitable for all investors. Products, strategies and services discussed herein may have elegibility requirements that must be met prior to investing. Each investor should carefully view the risks associated with the investment and make a determination based upon the investor's own particular circumstances, that the investment is consistent with the investor's objectives.



The liquidity trade-off

David Bailin, Global Head of Managed Investments
Steven Wieting, Global Chief Investment Strategist

Despite high, late-cycle valuations, we still see compelling reasons for selective investments in private equity and real estate.

The possibility of tax reforms, reduced regulation, and greater credit availability under Trump would all be constructive for business. So, we still see compelling reasons for investors willing to sacrifice some liquidity to add selective private equity and real estate investments. To take advantage of the opportunities we identify, investors need to be comfortable with an average of seven years of illiquidity.

In lieu of the banks

Currently, we see an opportunity in collateralized asset lending to commercial real estate and medium-sized corporates. Private equity manager investments in this sort of lending can take the form of whole loans or retained interests in transactions originated and underwritten directly by asset managers or banks.

The energy recession

While the oil sector remains depressed – with energy prices far below their 2014 peak level of US$50 a barrel - we see the long-term outlook for oil as positive. We believe a potential opportunity lies in private equity managers providing capital for business growth to financially healthy energy companies that cannot access capital markets.

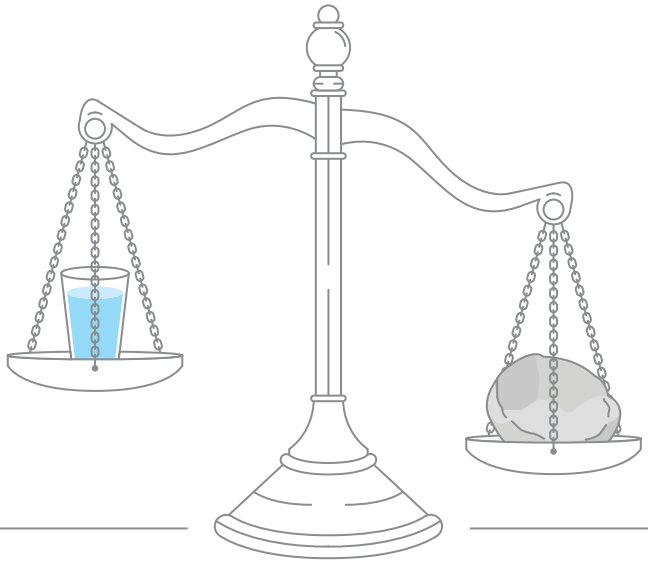
E-commerce real estate

The internet has transformed many areas of real estate investment and management but nowhere as rapidly as in logistics and industrial buildings. We favor investing in prime logistics real estate in select European and Asian markets.

Read **The liquidity trade-off** in full at
http://privatebank.citibank.com/outlook/the-liquidity-tradeoff.html

THE LIQUIDITY TRADE-OFF

Sacrificing liquidity for several years can help to target higher returns.

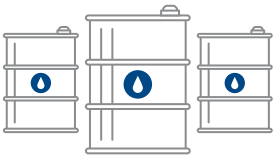


In lieu of the banks

Weaker European banks in particular are having to cut back their lending.

The private lending industry has nearly tripled to US$523 billion since 2006.[i]

We favor private equity investments that lend to commercial real estate and medium-sized corporates.



The energy recession

Annual oil demand could grow 1.2% a year through 2021.[ii]

Many upstream and midstream oil companies cannot access funding via the public markets.

We favor investing in private equity that lends to financially-healthy energy firms to finance growth.

E-commerce real estate

E-commerce firms are growing fast in many countries at the expense of traditional retailers.

They are taking up much more space to accommodate their supply chains: warehouses etc.

E-commerce is currently 20% of all new logistics leasing, up from less than 5% five years ago.[iii]

We see a potential opportunity in investing in prime logistics real estate in selected European and Asian markets.

Sources
i The International Monetary Fund Global Financial Stability Report, Oct 2016
ii Medium-Term Oil Market Report 2016, International Energy Agency, 2016
iii The Global E-Commerce Revolution, Prologis, Sept 2016

Allocating to Infrastructure

Steven Wieting, Global Chief Investment Strategist

Government investment in infrastructure may not only enhance economic growth but also has the potential to benefit financial portfolios.

Restoring, upgrading and building new infrastructure offers a major opportunity for the global economy. In the short term, such additional spending could boost growth. In the longer term, better transportation, faster telecommunications, and improved utilities could raise the economy's productivity and potential output. Investors should be open to the potential for adding exposure to infrastructure themes.

The S&P Global Infrastructure Index tracks the performance of 75 liquid and tradable energy, transportation and utility equities from around the world. Between December 2001 and November 2016, it produced an annualized total return of 9.7%, compared to 5.7% for the MSCI World Index.

Investment possibilities

Holding a selection of individual infrastructure equities is one of the most straightforward possibilities for investing in infrastructure. Citi Research has also come up with 49 top picks globally spanning various key sub-sectors of transportation, telecoms, energy, water and engineering. Investors might seek exposure to the entire basket of top picks or to a selection based on their individual objectives.

Another direct way of investing in infrastructure in the US is through municipal revenue bonds, which make up a sizable segment of the muni market. Broad-based exposure can also be achieved via an infrastructure fund. Passive trackers – such as those linked to an infrastructure index – are among the available options. In the more uncertain market conditions we expect, accessing listed infrastructure via a specialist active manager may enable better exposure to potentially more attractive sub-themes and companies.

It is also possible to create capital markets strategies based on particular infrastructure equity or debt securities – or index thereof, such as Citi's US Infrastructure index[1] – in order to help meet an individual investor's specific needs. Depending on an investor's risk and return objectives, these strategies may be suitable for seeking greater participation in the price movements of the underlying securities or enhanced yield, perhaps with some element of capital preservation. We would expect to see more numerous offerings of infrastructure-related private equity.

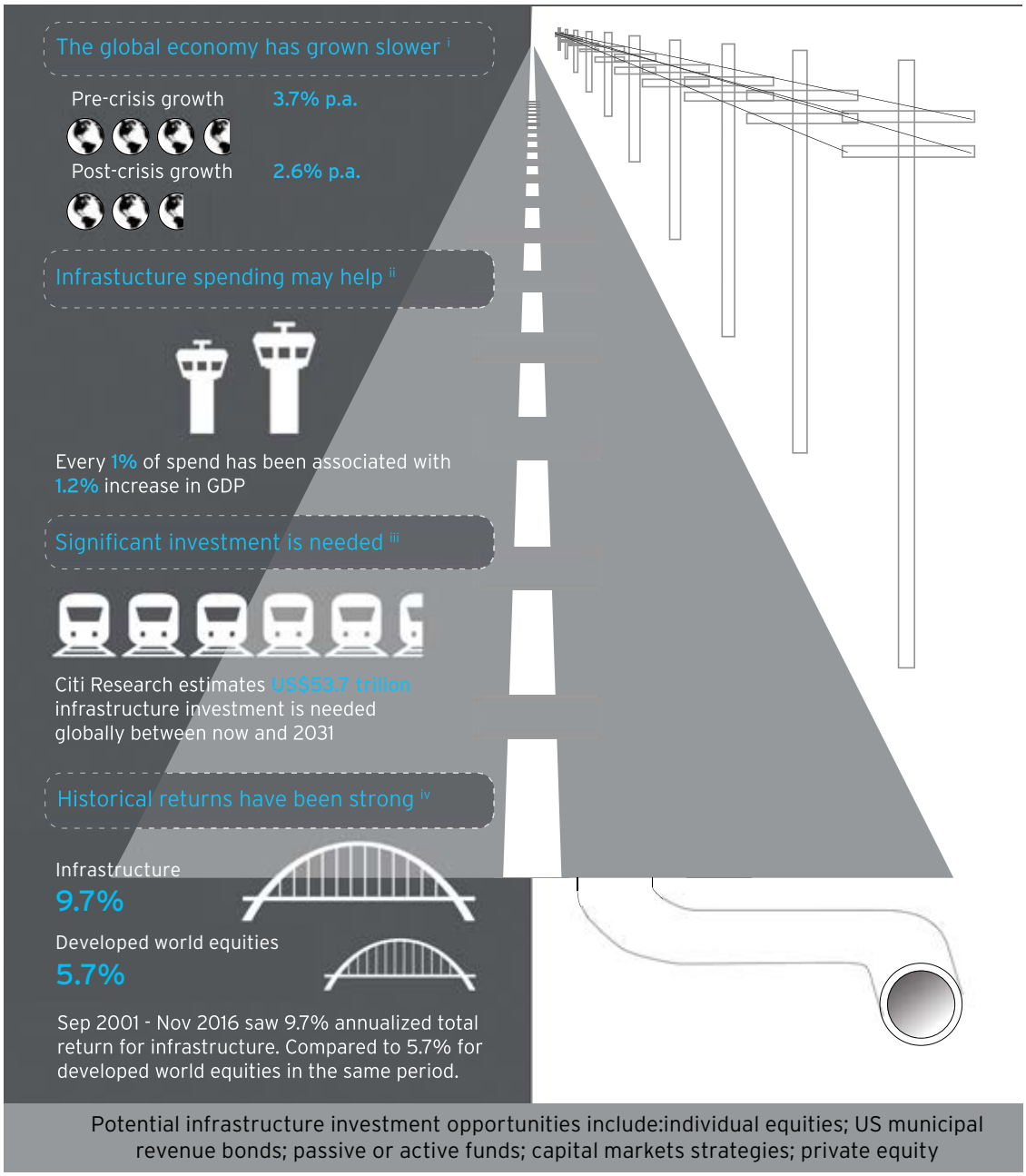
[1] The Citi US Infrastructure Index is a composite of equities across sectors that are sensitive to infrastructure spending, chosen by Citi Research analysts.

Products and strategies may not be suitable for all investors. Products and strategies discussed herein may have eligibility requirements that must be met prior to investing. Each investor should carefully view the risks associated with the investment and make a determination based upon the investor's own particular circumstances, that the investment is consistent with the investor's objective. Products and strategies described herein involve risk and may not perform as described.

Read **Allocating to infrastructure** in full at http://privatebank.citibank.com/outlook/allocating-to-infrastructure.html

IS INFRASTRUCTURE SPENDING THE CURE?

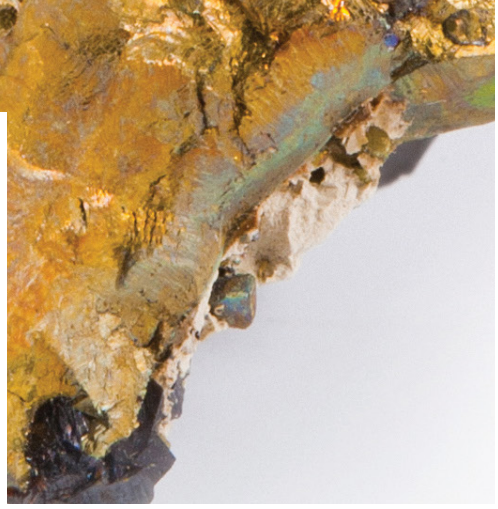
Restoring, upgrading and building new infrastructure offers an opportunity for the global economy. Likewise, investing in infrastructure can potentially benefit portfolios.



Potential infrastructure investment opportunities include:individual equities; US municipal revenue bonds; passive or active funds; capital markets strategies; private equity

Sources:
i Infrastructure for Growth, Citi Global Perspectives & Solutions, October 2016
ii Covering various countries over last 15 years and more. Infrastructure for Growth, Citi GPS, October 2016
iii Infrastructure for Growth, Citi Global Perspectives & Solutions, October 2016. Total returns of S&P Global Infrastructure Index and MSCI World Index.
iv Bloomberg, as of 01 Dec 2016

Strategies and investments mentioned in this document may not be suitable for all investors. Products, strategies and services discussed herein may have elegibility requirements that must be met prior to investing. Each investor should carefully view the risks associated with the investment and make a determination based upon the investor's own particular circumstances, that the investment is consistent with the investor's objectives.



Transforming commerce: the robotics revolution

Steven Wieting, Global Chief Investment Strategist
Phil Watson, Head of the Global Investment Lab

The robotics revolution could have a significant impact on investment portfolios. Investors should prepare well in advance.

Robotic technologies today are playing vital roles across many industries and increasingly in our everyday lives. Over the coming years, artificially intelligent machines will carry out ever more of the complex functions that we rely on humans to do today. This could provide a much-needed boost to productivity and economic growth.

The robotics revolution also represents a potentially significant opportunity for investors.

This includes investing both in companies that design and build robotic technologies and in many other businesses that could embrace robotics to enhance the production and delivery of their own goods and services.

As more and more industries adopt robotics, the value of investments in many areas could be impacted both for better and for worse. The time to prepare portfolios is now. One simple possibility is to invest in securities or investment structures relating to companies directly involved in robotics or that might be beneficiaries of robotic automation. Alternatively, investors may seek to extract value from investments that could benefit from the potential disruption in industries negatively affected by the robotics revolution.

Through managed investments, investors may also be able to obtain tailored exposure to robotics. It is also possible to construct bespoke, discretionarily managed portfolios that focus on particular robotics sub-themes. Specific technology based exchange-traded funds with exposure to robotics are another option. Opportunities are also accessible via private equity, which are typically illiquid and where manager selection, as well as the manager's ability to source quality investments is critical.

Read **Transforming commerce: the robotics revolution** in full at http://privatebank.citibank.com/ivc/docs/outlook-robotics-revolution.pdf

THE ROBOTICS REVOLUTION

Few technologies have the potential to transform our everyday lives as much as robotics.

Industrial robotics growth potential

Global stock industrial robots:[i]

2015: 1,631,600

2019: 2,589,000

Global sales forecast:

290k units in 2016

Rising to **413k** units in 2019

Robot growth by region:

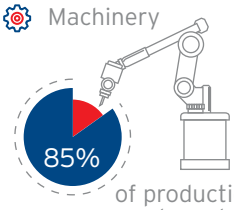
5% Americas

8% Europe

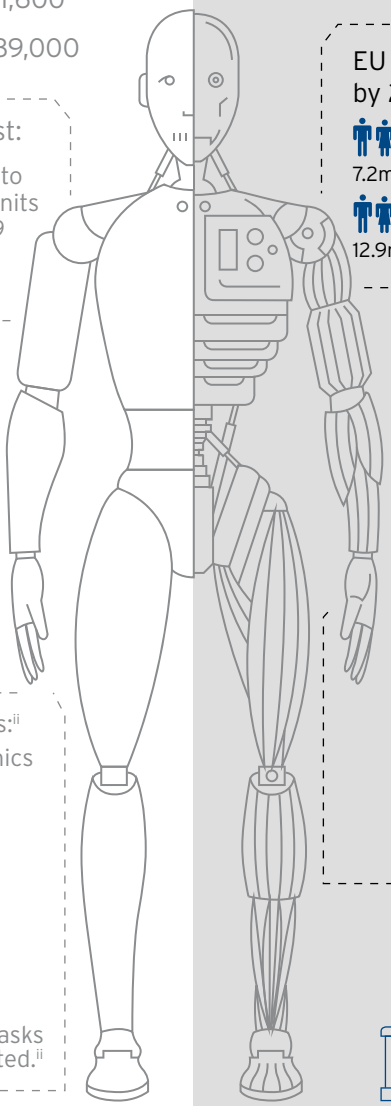
18% Asia & Australia

Leading robotics adopters:[ii]

- Computers & electronics
- Electrical equipment
- Transportation
- Machinery



85% of production tasks can be automated.[ii]



Healthcare case study

Healthcare is a prime candidate for ongoing automation.

EU workforce shortage by 2020:[iii]

7.2m in 2016

12.9m by 2035

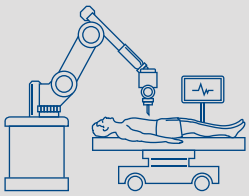
Workforce shortage in the EU could be 1m by 2020, including:[iii]

590k Nurses

230k Physicians

Automatable tasks:

- Collecting, preparing, and administering medication
- Analyzing samples
- Even surgery



Sources:

i World Robotics 2016 Industrial Robots, International Federation of Robotics

ii Industries and Economies Leading the Robotics Revolution, Boston Consulting Group, Sept 2015. Harold L. Sirkin, Micheal Zinser and Justin Rose.

iii World Health Organization, A Universal Truth: No Health Without a Workforce (2015)

Glossary

Asset class definitions

Cash is represented by US 3-month Government Bond TR, measuring the US dollar-denominated active 3-Month, fixed-rate, nominal debt issues by the US Treasury.

Commodities asset class contains the index composites — GSCI Precious Metals Index, GSCI Energy Index, GSCI Industrial Metals Index, and GSCI Agricultural Index — measuring investment performance in different markets, namely precious metals (e.g., gold, silver), energy commodity (e.g., oil, coal), industrial metals (e.g., copper, iron ore), and agricultural commodity (i.e., soy, coffee) respectively. Reuters/Jeffries CRB Spot Price Index, the TR/CC CRB Excess Return Index, an arithmetic average of commodity futures prices with monthly rebalancing, is used for supplemental historical data.

Global Developed Market Corporate Fixed Income is composed of Bloomberg Barclays indices capturing investment debt from seven different local currency markets. The composite includes investment grade rated corporate bonds from the developed-market issuers.

Global Developed Market Equity is composed of MSCI indices capturing large-, mid- and small-cap representation across 23 individual developed-market countries, as weighted by the market capitalization of these countries. The composite covers approximately 95% of the free float-adjusted market capitalization in each country.

Global Developed Investment Grade Fixed Income is composed of Bloomberg Barclays indices capturing investment-grade debt from twenty different local currency markets. The composite includes fixed-rate treasury, government-related, and investment grade rated corporate and securitized bonds from the developed-market issuers. Local market indices for US, UK and Japan are used for supplemental historical data.

Global Developed Market Large-Cap Equity. The asset class is composed of MSCI indices capturing large cap representation across nine individual developed-market countries, as weighted by the market capitalization of these countries. The composite covers approximately 95% of the free float-adjusted market capitalization in each country.

Global Emerging Market Equity is composed of MSCI indices capturing large and mid-cap representation across 20 individual emerging-market countries. The composite covers approximately 85% of the free float-adjusted market capitalization in each country. For the purposes of supplemental long-term historical data, local-market country indices are used, wherever applicable.

Global Emerging Fixed Income is composed of Bloomberg Barclays indices measuring performance of fixed-rate local currency emerging markets government debt for 19 different markets across Latin America, EMEA and Asia regions. iBoxx ABF China Govt. Bond, the Markit iBoxx ABF Index comprising local currency debt from China, is used for supplemental historical data.

Global Equity is represented by the MSCI ACWI Index, capturing all sources of equity returns in 23 developed and 23 emerging markets.

Global Fixed Income is represented by the Bloomberg Barclays Multiverse Index, with returns hedged into US dollars.

Global High Yield Fixed Income is composed of Bloomberg Barclays indices measuring the non-investment grade, fixed-rate corporate bonds denominated in US dollars, British pounds and Euros. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below, excluding emerging market debt. Ibbotson High Yield Index, a broad high yield index including bonds across the maturity spectrum, within the BB-B rated credit quality spectrum, included in the below-investment-grade universe, is used for supplemental historical data.

Hedge Funds is composed of investment managers employing different investment styles as characterized by different sub categories – HFRI Equity Long/Short: Positions both long and short in primarily equity and equity derivative securities; HFRI Credit: Positions in corporate fixed income securities; HFRI Event Driven: Positions in companies currently or prospectively involved in wide variety of corporate transactions; HFRI Relative Value: Positions based on a valuation discrepancy between multiple securities; HFRI Multi Strategy: Positions based on realization of a spread between related yield instruments; HFRI Macro: Positions based on movements in underlying economic variables and their impact on different markets; Barclays Trader CTA Index: The composite performance of established programs (Commodity Trading Advisors) with more than four years of performance history.

Private Equity characteristics are driven by those for Developed Market Small Cap Equities, adjusted for illiquidity, sector concentration, and greater leverage.

Real Estate contains index contains all Equity REITs (US REITs and publicly-traded real estate companies) not designated as Timber REITs or Infrastructure REITs: NAREIT US REIT Index, NAREIT Canada REIT Index, NAREIT UK REIT Index, NAREIT Switzerland REIT Index, NAREIT Euro-zone REIT Index, NAREIT Japan REIT Index, NAREIT Hong Kong REIT Index, NAREIT Singapore REIT Index, NAREIT Australia REIT Index

Index definitions

European equities are represented by the MSCI Europe index, which captures large- and mid-cap representation across 15 Developed Markets (DM) countries in Europe. It covers approximately 85% of the free float-adjusted market capitalization across the European Developed Markets equity universe.

Gold is represented by the commodity futures price for gold.

Japan equities are represented by the MSCI Japan index, which is designed to measure the performance of the large- and mid-cap segments of the Japanese market. It covers approximately 85% of the free float-adjusted market capitalization in Japan.

The MSCI World Index represents the performance of more than 1,600 large- and mid-cap stocks across 23 developed markets countries. The index covers approximately 85% of the free float-adjusted market capitalization in each country.

Oil is represented by the West Texas Intermediate Crude Oil price.

The Standard & Poor's 500 Index is a capitalization-weighted index that includes a representative sample of 500 leading companies in leading industries of the US economy. Although the S&P 500 focuses on the large cap segment of the market, with over 80% coverage of US equities, it is also an ideal proxy for the total market.

Other terminology

Adaptive Valuations Strategies is Citi Private Bank's own strategic asset allocation methodology. It determines the suitable long-term mix of assets for each client's investment portfolio.

Correlation is a statistical measure of how two assets or asset classes move in relation to one another. Correlation is measured on a scale of 1 to -1. A correlation of 1 implies perfect positive correlation, meaning that two assets or asset classes move in the same direction all of the time. A correlation of -1 implies perfect negative correlation, such that two assets or asset classes move in the opposite direction to each other all the time. A correlation of 0 implies zero correlation, such that there is no relationship between the movements in the two over time.

The price-earnings ratio (P/E) measures a company's or an index of companies' current share price relative to its earnings per share. A low P/E can indicate a lowly-valued company or index, while a high P/E can indicate high valuation.

Strategic asset allocation is the process of creating a long-term investment plan by assembling an appropriate mix of equities, fixed income, cash and other investments. It can potentially enhance portfolio returns and help manage risk.

Strategic Return Estimates are Citi Private Bank's forecast of returns for specific asset classes over a 10-year time horizon. The forecast for each specific asset class is made using a proprietary methodology that is appropriate for that asset class. Equity asset classes are forecast using a proprietary methodology based on the calculation of valuation levels with the assumption these valuation levels revert to their long-term trends over time. Fixed Income asset classes are forecast using a proprietary methodology based on current yield levels. Other asset classes have other specific forecasting methodologies. Please note that hedge funds, private equity, real estate, structured products and managed futures are generally illiquid investments and are subject to restrictions on transferability and resale. Each SRE is gross of actual client fees and expenses. Components of the methodology used to create the SREs include the rate of return for various asset classes based on indices. Termination and replacement of investments may subject investors to new or different charges. Past performance is not indicative of future results. Future rates of return cannot be predicted with certainty. Investments that pay higher rates of return are often subject to higher risk and greater potential loss in an extreme scenario. The actual rate of return on investments can vary widely over time, especially for long-term investments. This includes the potential loss of principal on your investment. It is not possible to invest directly in an index.

Tactical asset allocation looks to adjust the strategic asset allocation of a client's investment portfolio to incorporate shorter-term market insights.

Disclosures

In any instance where distribution of this communication ("Communication") is subject to the rules of the US Commodity Futures Trading Commission ("CFTC"), this communication constitutes an invitation to consider entering into a derivatives transaction under US CFTC Regulations §§ 1.71 and 23.605, where applicable, but is not a binding offer to buy/sell any financial instrument.

This Communication is prepared by Citi Private Bank ("CPB"), a business of Citigroup Inc. ("Citigroup"), which provides its clients access to a broad array of products and services available through Citigroup, its bank and non-bank affiliates worldwide (collectively, "Citi"). Not all products and services are provided by all affiliates, or are available at all locations.

This Communication is provided for information and discussion purposes only, at the recipient's request. The recipient should notify CPB immediately should it at any time wish to cease being provided with such information. Unless otherwise indicated, any reference to a research report or research recommendation is not intended to represent the whole report and is not in itself considered a recommendation or research report.

This Communication is provided for information and discussion purposes only, at the recipient's request. The recipient should notify CPB immediately should it at any time wish to cease being provided with such information. Unless otherwise indicated, (i) it does not constitute an offer or recommendation to purchase or sell any security, financial instrument or other product or service, or to attract any funding or deposits, and (ii) it does not constitute a solicitation if it is not subject to the rules of the CFTC (but see discussion above regarding communication subject to CFTC rules) and (iii) it is not intended as an official confirmation of any transaction.

Unless otherwise expressly indicated, this Communication does not take into account the investment objectives, risk profile or financial situation of any particular person and as such, investments mentioned in this document may not be suitable for all investors. Citi is not acting as an investment or other advisor, fiduciary or agent. The information contained herein is not intended to be an exhaustive discussion of the strategies or concepts mentioned herein or tax or legal advice. Recipients of this Communication should obtain advice based on their own individual circumstances from their own tax, financial, legal and other advisors about the risks and merits of any transaction before making an investment decision, and only make such decisions on the basis of their own objectives, experience, risk profile and resources.

The information contained in this Communication is based on generally available information and, although obtained from sources believed by Citi to be reliable, its accuracy and completeness cannot be assured, and such information may be incomplete or condensed. Any assumptions or information contained in this Communication constitute a judgment only as of the date of this document or on any specified dates and is subject to change without notice. Insofar as this Communication may contain historical and forward looking information, **past performance is neither a guarantee nor an indication of future results,** and future results may not meet expectations due to a variety of economic, market and other factors. Further, any projections of potential risk or return are illustrative and should not be taken as limitations of the maximum possible loss or gain. Any prices, values or estimates provided in this Communication (other than those that are identified as being historical) are indicative only, may change without notice and do not represent firm quotes as to either price or size, nor reflect the value Citi may assign a security in its inventory. Forward looking information does not indicate a level at which Citi is prepared to do a trade and may not account for all relevant assumptions and future conditions. Actual conditions may vary substantially from estimates which could have a negative impact on the value of an instrument.

Views, opinions and estimates expressed herein may differ from the opinions expressed by other Citi businesses or affiliates, and are not intended to be a forecast of future events, a guarantee of future results, or investment advice, and are subject to change without notice based on market and other conditions. Citi is under no duty to update this document and accepts no liability for any loss (whether direct, indirect or consequential) that may arise from any use of the information contained in or derived from this Communication.

Investments in financial instruments or other products carry significant risk, including the possible loss of the principal amount invested. Financial instruments or other products denominated in a foreign currency are subject to exchange rate fluctuations, which may have an adverse effect on the price or value of an investment in such products. This Communication does not purport to identify all risks or material considerations which may be associated with entering into any transaction.

The views expressed in this document by the Global Investment Committee do not constitute research, investment advice or trade recommendations, and are not tailored to meet the individual investment circumstances or objectives of any investor. Recipients of this document should not rely on the views expressed or the information included in this document as the primary basis for any investment decision. Investors are urged to consult with their financial advisors before buying or selling securities.

Bonds are affected by a number of risks, including fluctuations in interest rates, credit risk and prepayment risk. In general, as prevailing interest rates rise, fixed income securities prices will fall. Bonds face credit risk if a decline in an issuer's credit rating, or creditworthiness, causes a bond's price to decline. High yield bonds are subject to additional risks such as increased risk of default and greater volatility because of the lower credit quality of the issues. Finally, bonds can be subject to prepayment risk. When interest rates fall, an issuer may choose to borrow money at a lower interest rate, while paying off its previously issued bonds. As a consequence, underlying bonds will lose the interest payments from the investment and will be forced to reinvest in a market where prevailing interest rates are lower than when the initial investment was made.

An investment in alternative investments (Private Equity and Real Estate) can be highly illiquid, is speculative and not suitable for all investors. Investing in alternative investments (Private Equity and Real Estate) is for experienced and sophisticated investors who are willing to bear the high economic risks associated with such an investment. Investors should carefully review and consider potential risks before investing. Certain of these risks may include:

- loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices;
- lack of liquidity in that there may be no secondary market for the fund and none is expected to develop;
- volatility of returns;
- restrictions on transferring interests in the Fund;
- potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized;
- absence of information regarding valuations and pricing;
- complex tax structures and delays in tax reporting;
- less regulation and higher fees than mutual funds; and
- manager risk. Individual funds will have specific risks related to their investment programs that will vary from fund to fund.

International investing may not be for everyone. There may be additional risk associated with international investing, including foreign, economic, political, monetary and/or legal factors, changing currency exchange rates, foreign taxes, and differences in financial and accounting standards. There is the possibility that adverse political events, financial problems, or natural disasters in a country or region will cause investments in that country or region to lose value. The risks of investing in emerging or developing markets can be substantially greater than the risks of investing in developed markets.

An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

Structured products can be highly illiquid and are not suitable for all investors. Additional information can be found in the disclosure documents of the issuer for each respective structured product described herein. Investing in structured products is intended only for experienced and sophisticated investors who are willing and able to bear the high economic risks of such an investment. Investors should carefully review and consider potential risks before investing.

OTC derivative transactions involve risk and are not suitable for all investors. Investment products are not insured, carry no bank or government guarantee and may lose value. Before entering into these transactions, you should: (i) ensure that you have obtained and considered relevant information from independent reliable sources concerning the financial, economic and political conditions of the relevant markets; (ii) determine that you have the necessary knowledge, sophistication and experience in financial, business and investment matters to be able to evaluate the risks involved, and that you are financially able to bear such risks; and (iii) determine, having considered the foregoing points, that capital markets transactions are suitable and appropriate for your financial, tax, business and investment objectives.

This material may mention options regulated by the US Securities and Exchange Commission. Before buying or selling options you should obtain and review the current version of the Options Clearing Corporation booklet, Characteristics and Risks of Standardized Options. A copy of the booklet can be obtained upon request from Citigroup Global Markets Inc., 390 Greenwich Street, 3rd Floor, New York, NY 10013 or by clicking the following link,

http://www.theocc.com/components/docs/riskstoc.pdf or
http://www.theocc.com/components/docs/about/publications/november_2012_supplement.pdf

If you buy options, the maximum loss is the premium. If you sell put options, the risk is the entire notional below the strike. If you sell call options, the risk is unlimited. The actual profit or loss from any trade will depend on the price at which the trades are executed. The prices used herein are historical and may not be available when you order is entered. Commissions and other transaction costs are not considered in these examples. Option trades in general and these trades in particular may not be appropriate for every investor. Unless noted otherwise, the source of all graphs and tables in this report is Citi. Because of the importance of tax considerations to all option transactions, the investor considering options should consult with his/her tax advisor as to how their tax situation is affected by the outcome of contemplated options transactions.

None of the financial instruments or other products mentioned in this Communication (unless expressly stated otherwise) is (i) insured by the Federal Deposit Insurance Corporation or any other governmental authority, or (ii) deposits or other obligations of, or guaranteed by, Citi or any other insured depository institution.

Citi often acts as an issuer of financial instruments and other products, acts as a market maker and trades as principal in many different financial instruments and other products, and can be expected to perform or seek to perform investment banking and other services for the issuer of such financial instruments or other products. The author of this Communication may have discussed the information contained therein with others within or outside Citi, and the author and/ or such other Citi personnel may have already acted on the basis of this information (including by trading for Citi's proprietary accounts or communicating the information contained herein to other customers of Citi). Citi, Citi's personnel (including those with whom the author may have consulted in the preparation of this communication), and other customers of Citi may be long or short the financial instruments or other products referred to in this Communication, may have acquired such positions at prices and market conditions that are no longer available, and may have interests different from or adverse to your interests.

IRS Circular 230 Disclosure: Citi and its employees are not in the business of providing, and do not provide, tax or legal advice to any taxpayer outside Citi. Any statement in this Communication regarding tax matters is not intended or written to be used, and cannot be used or relied upon, by any taxpayer for the purpose of avoiding tax penalties. Any such taxpayer should seek advice based on the taxpayer's particular circumstances from an independent tax advisor.

Neither Citi nor any of its affiliates can accept responsibility for the tax treatment of any investment product, whether or not the investment is purchased by a trust or company administered by an affiliate of Citi. Citi assumes that, before making any commitment to invest, the investor and (where applicable, its beneficial owners) have taken whatever tax, legal or other advice the investor/beneficial owners consider necessary and have arranged to account for any tax lawfully due on the income or gains arising from any investment product provided by Citi.

This Communication is for the sole and exclusive use of the intended recipients, and may contain information proprietary to Citi which may not be reproduced or circulated in whole or in part without Citi's prior consent. The manner of circulation and distribution may be restricted by law or regulation in certain countries. Persons who come into possession of this document are required to inform themselves of, and to observe such restrictions. Citi accepts no liability whatsoever for the actions of third parties in this respect. Any unauthorized use, duplication, or disclosure of this document is prohibited by law and may result in prosecution.

In Hong Kong, this document is issued by CPB operating through Citibank, N.A., Hong Kong branch, which is regulated by the Hong Kong Monetary Authority. Any questions in connection with the contents in this document should be directed to registered or licensed representatives of the aforementioned entity.

In Singapore, this document is issued by CPB operating through Citibank, N.A., Singapore branch, which is regulated by the Monetary Authority of Singapore. Any questions in connection with the contents in this document should be directed to registered or licensed representatives of the aforementioned entity.