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THE NEW RATE REGIME: MANAGING INCOME AND INCOME VOLATILITY

Highlights:

- After decades of interest rate tailwinds, investors will likely face headwinds.
- Equity investors need to pay attention to factors that are harbingers of potential dividend reductions.
- Fixed-income investors need to consider interest rate risk in connection with credit, currency and inflation risks.

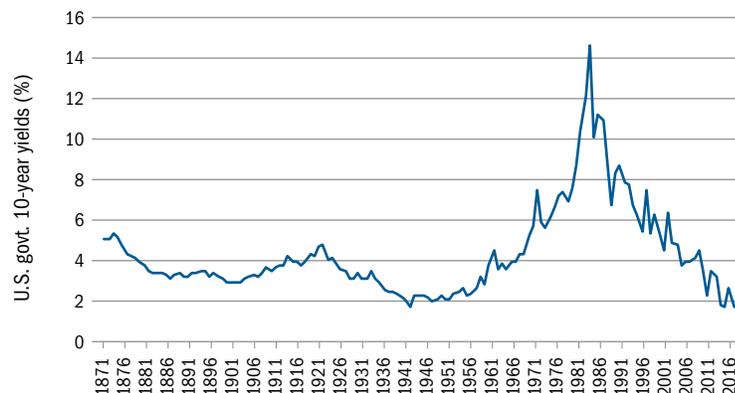
After close to four decades of declining interest rates and central bank policy rates hitting zero, the combination of quantitative easing policies, low inflation and tepid growth has driven sovereign bond rates to historic lows. The best case today is that rates remain stubbornly low, but there is also the risk that a new reliance on fiscal stimuli could create budget strains that could drive inflation and rates higher. Sourcing income and managing potential income volatility in this new rate regime presents unprecedented challenges for both fixed-income and equity investors.

- Fixed-income investors need to consider that interest rates are just one part of fixed-income investing. Credit quality, currency exposure, and inflation present new opportunities and risks.
- Equity investors who rely on dividends for income need to identify companies that are able to initiate and grow dividends. And perhaps more importantly, investors need to pay attention to factors that are harbingers of potential dividend reductions.

Unprecedented low rates

We have just been through an unprecedented experience in the U.S. Treasury bond market (see Exhibit 1). Bond yields rose from under 2% in 1941 to almost 15% in 1982 and then fell back down to under 2% in 2013. Never before had bonds seen such a range. In the late 19th and early 20th centuries, bond yields ranged from 3.1% to 5.6%. Then, bond yields rose along with inflation after World War II and surged in the 1970s, fueled by oil and OPEC, and the cost of fighting two wars — the Vietnam War and a war on social inequities in the U.S. — so called Guns and Butter. By the end of the 1970s, all seemed out of control. And while the experience in the U.S. might have been the most extreme, it was an experience shared by the rest of the developed world.

Exhibit 1: U.S. 10-year bond yields
1871–2016

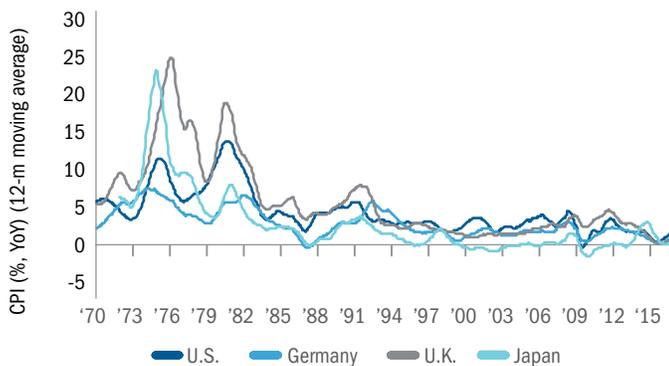


Source: U.S. Treasury, "Irrational Exuberance," Robert Shiller, March 2000, Columbia Threadneedle Investments. Data as of 12/30/16.

Regime change 1979: Paul Volcker's Saturday night massacre

1979 was a bleak year for America. A combination of grim economic news, a declining stock market and soaring inflation and interest rates led President Jimmy Carter to nominate New York Fed President Paul Volcker as Federal Reserve chairman. The Consumer Price Index (CPI) averaged 5.8% in 1970, but over a decade, inflation had steadily crept up, hitting 9% in January 1979. During Volcker's confirmation hearing in July 1979, the soon-to-be Fed chairman made his intentions clear. With inflation hitting 11%, Volcker pledged to make fighting inflation his top priority (see Exhibit 2).

Exhibit 2: Inflation 01/31/70–12/30/16



Source: OECD, data as of 12/30/16, Columbia Threadneedle Investments

During a rare press conference on the evening of Saturday, October 6, 1979, Volcker announced the results of an unscheduled Federal Open Market Committee (FOMC) meeting held earlier that day. Volcker explained the FOMC would shift its focus to managing the volume of bank reserves in the system instead of trying to manage the day-to-day level of the federal funds rate. As a result of the new focus and the restrictive targets set for the money supply, the federal funds rate reached a record high of 20% in mid-1980 (see Exhibit 3). Inflation peaked at 15% the same year. Meanwhile, the new policy pushed the economy into a severe recession where, amid high interest rates, the jobless rate continued to rise and businesses experienced liquidity problems.¹

¹ Bill Medley, Federal Reserve Bank of Kansas City, November 22, 2013.

Exhibit 3: Central banks key policy rates 01/31/70–01/31/17



Source: Bank of Japan, Bundesbank, Bloomberg, data as of 01/31/17. Columbia Threadneedle Investments. Note that data for Germany is available from 1970–1998 and ECB starts from 1998 onwards. U.S. is effective monthly average Fed Funds rate.

The gross domestic product (GDP) decline troughed in November 1982. At the same time, after hitting its peak in 1980, U.S. inflation began to decline, falling to 5% in September 1982 and then to 2.5% in July 1983. The unemployment rate hit a peak of 10.8% in late 1982 before beginning a steady decline. Volcker's "Saturday Night Massacre" began the process that successfully brought inflation under control.

A new rate regime: After the zero interest rate policy

By 1993, inflation had fallen to below 5% globally and continued to slide. The 2008 financial crisis brought comprehensive and generally coordinated stimulative policies, including quantitative easing by central banks around the globe. The focus for most of the developed world was to reignite growth rather than having to manage inflation. 2016 ended with inflation just above 1.5% in Germany and the U.K., positive but close to zero in Japan and around 2% in the United States.

The fall in bond yields produced a prolonged bull market in bonds (see Exhibit 4). From 1981 through 2016, U.S. 10-year bonds had an average annual return of 8.4%, with double-digit returns in 13 of those years and returns of over 20% in four of them.

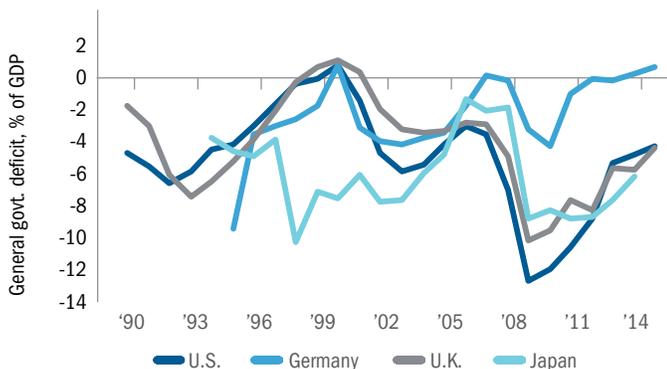
Exhibit 4: Return on 10-year bond
1970–2016



Source: OECD, data as of 12/30/16, Columbia Threadneedle Investments. Past performance is not a guarantee of future results.

Expectations now are that monetary policy has effectively reached its limits, and fiscal policy needs to be the tool to stimulate growth. But with already large budget deficits (see Exhibit 5), concerns arise that such policies could well prove ineffective in stimulating growth or have a far greater impact on inflation than on growth.

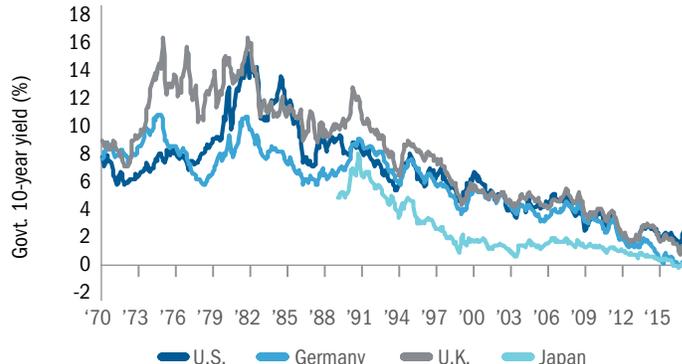
Exhibit 5: General government deficit
1990–2015



Source: OECD, data as of 12/31/15, Columbia Threadneedle Investments

At the current very low/near zero levels, it would seem the best case is interest rate stability, with the risk of higher interest rates if inflation picks up. Either way, after close to four decades of falling rates around the globe, we are likely entering a new rate regime. We are seeing evidence of this already as the 10-year yield in the U.S. has risen by 69% from 1.45% on July 31, 2016, and rates in Germany and Japan have turned positive (see Exhibit 6).

Exhibit 6: Government bond 10-year yield
01/31/70–1/31/17



Source: OECD, data as of 01/31/17, Columbia Threadneedle Investments

After having the wind at their backs for decades, fixed-income investors are facing potential headwinds. The risk today is with bond yields still low, small rate changes result in large volatility, and a modest uptick in yields would produce negative returns (see Exhibit 7). For example, a 10-year bond with a 2% yield would see that yield wiped out, and a total return of -1.1% with just a 50 basis point rise in yields (a basis point is 1/100th of a percent).

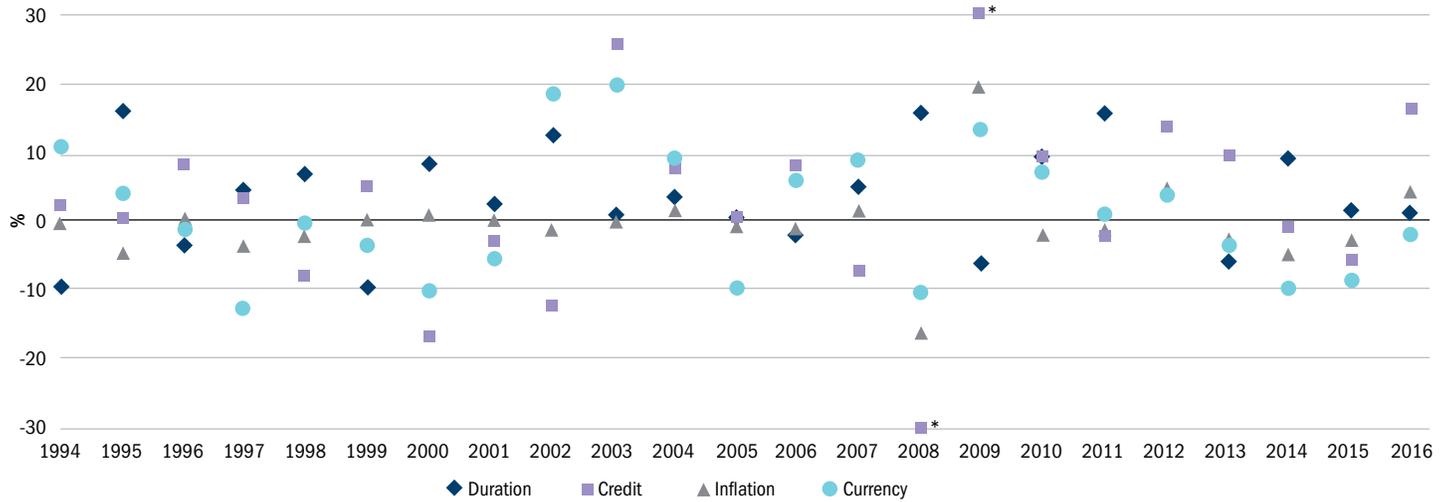
Exhibit 7: 10-year bond returns

Assuming change in yield

10-year bond starting yield (%)	One year return (%) assuming change in yield of . . .			
	+25 bp	+50 bp	+75 bp	+100 bp
1.00	-0.2	-2.3	-4.3	-6.3
1.50	0.4	-1.7	-3.7	-5.6
2.00	0.9	-1.1	-3.1	-5.0
2.50	1.4	-0.5	-2.4	-4.3
3.00	2.0	0.0	-1.8	-3.7
3.50	2.5	0.6	-1.2	-3.0
4.00	3.0	1.2	-0.6	-2.3
4.50	3.6	1.8	0.2	-1.7
5.00	4.1	2.3	0.6	-1.0

Source: Columbia Threadneedle Investments

Exhibit 8: Bond market risk factor returns by calendar year
1993–2016



* Credit factor returns were -34.84% in 2008 and 59.85% in 2009. These data points were truncated to fit on the chart.
Sources: Bloomberg Barclays Indices and Columbia Management Investment Advisers, LLC as of December 31, 2016. Updated annually.

Income strategies need to be reexamined as the U.S. is moving from a falling interest rate regime to one featuring rates gradually rising, while developed markets outside the U.S. may (at best) linger at the zero interest rate policy (ZIRP).

Bond market opportunities: Managing interest rate risk in context

Interest rates are just one part of fixed-income investing.² There are three other sources of risk and return — credit quality, currency exposure and inflation. Global bond markets are composed of multiple risk factors that perform well at different periods throughout economic cycles. **With the tail wind of falling interest rates likely past, a flexible approach should allow investors the opportunity to generate income from a variety of different sources** while focusing the portfolio’s risks on the areas that offer the most attractive relative value.

Exhibit 8 illustrates two primary points:

- Bond market risk factors are not highly correlated.
- Every year, something works. It’s not an all-or-nothing game — whether to be in or out of the bond market — but one of strategic and tactical repositioning to drive the best outcome.

That’s where it gets tricky. Accurately forecasting what factor will work at any one time is not easy. Exhibit 8 depicts historic annual returns for each of the four risk factors. For example:

- 2008 flight to quality was a good year for duration but bad for credit
- 2009 renewed risk sentiment was good for credit but bad for duration
- Inflation performs poorly in 2008 and bounces back in 2009
- 1997 currency risk, as the Asian currency crisis causes flight to safety in the U.S. dollar³

² Columbia Threadneedle Investments, Gene Tannuzzo and Gordon Bowers, III, “Harnessing Fixed-Income Returns Through the Cycle,” January 2016.

³ Columbia Strategic Income Fund, “Income in All Markets,” 2017.

Exhibit 9: Risk factors

Duration

Duration, or interest rate risk, represents the price volatility of a long-term investment as prevailing market interest rates change.

Credit

Credit risk represents the risk of default for lending to a private corporation, consumer or risky sovereign country.

Inflation

Inflation risk is driven by actual and expected changes in consumer prices.

Currency

Foreign currency risk is driven by fluctuations in exchange rates.

Source: Harnessing Fixed-Income Returns Through the Cycle, Gene Tannuzzo, Gordon Bowers III, Columbia Threadneedle Investments, 2017

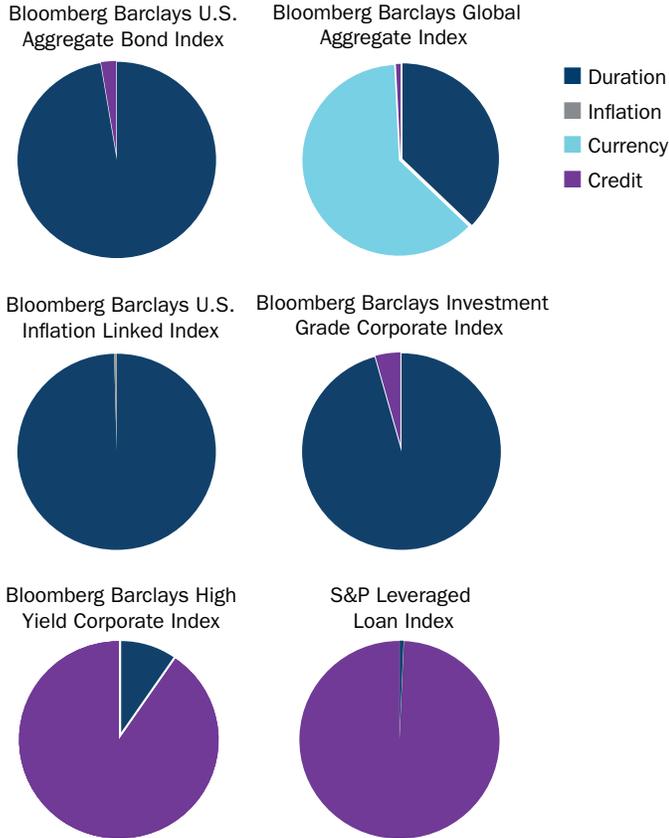
It is easy for an investor to misunderstand the risk associated with a fixed-income investment, although this can have significant portfolio strategy implications. A look at the risk composition of some common bond indices is revealing (see Exhibit 10). For most domestic, investment-grade indices, an investor should expect most of the risk to come from duration, or interest rate risk. This is not surprising when you consider that the Bloomberg Barclays U.S. Aggregate Bond Index has a large portion of its market value in government-backed debt. However, investors in Treasury inflation-protected securities (TIPS) or investment-grade corporate bonds may be surprised to learn that much of their return is still derived from duration. This is because changes in government bond yields explain a large portion of the return of these high-quality asset classes.

The story changes further down the risk spectrum. Below-investment-grade securities, like high-yield bonds and bank loans, derive most of their volatility from credit risk. This is because changes in corporate credit metrics and default probabilities account for most of the performance of these sectors. However, some investors may be surprised to learn that duration risk is low in both asset classes despite the fixed-rate nature of high-yield bonds vs. the floating-rate nature of bank loans. In international markets, currency risk drives a significant portion of the volatility profile. In fact, currency risk explains more than half of the performance volatility of the Bloomberg Barclays Global Aggregate Index.

As our colleagues Gene Tannuzzo and Gordon Bowers concluded in their paper, “Low yields and interest rate uncertainty make the current fixed-income environment challenging.” Nevertheless, most investors still need bonds in their portfolios. When allocating to fixed income, we believe that the best starting point is selecting the risk factors to which an investor wants exposure and then choosing the appropriate alpha sources. Importantly, not all bond market risks are undesirable. In particular, investors should seek opportunities presented by bond market risk factors beyond duration. **Today’s bond market offers profitable total return opportunities for investors who are able to allocate their risk budgets efficiently.**⁴

⁴ Columbia Threadneedle Investments, Gene Tannuzzo and Gordon Bowers, III, “Harnessing Fixed-Income Returns Through the Cycle,” January 2016.

Exhibit 10: Risk composition of common fixed-income indices



Sources: BlackRock Solutions 12/31/16. Subject to change.

Equity market opportunities: Sustainable dividends for income

When looking to equities for income, in this more challenging rate environment, it is important to seek companies with the ability to sustain dividend payouts. We believe companies likely to offer sustainable dividend income are those with:

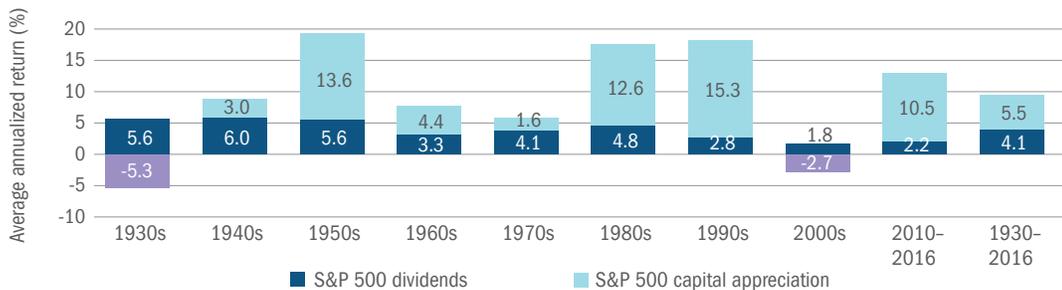
- Strong balance sheets with limited debt and ample free cash flow
- Business models that incorporate environmental, social and governance (ESG) measures, which should reduce event risk that could affect stock prices and dividend payout

Stocks with solid, relatively higher dividend yields that are growing and attributes indicating the dependability of those dividends can be combined with an ESG factor to create an income portfolio positioned for long-term success.

Dividends are an important part of total return and have historically proven to be a consistent source of returns throughout each decade (see Exhibit 11).

Exhibit 11: S&P 500 returns

by dividend and capital appreciation, 1930–2016



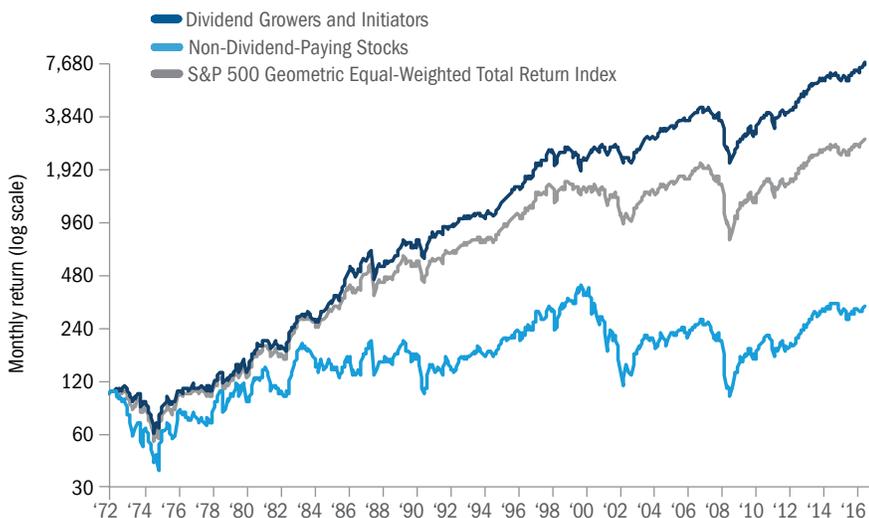
	1930s	1940s	1950s	1960s	1970s	1980s	1990s	2000s	2010-2016	1930-2016
S&P 500 total return (%)	0.3	8.9	19.2	7.7	5.7	17.4	18.1	-1.0	12.7	9.6
% of return from dividends	N/A	66.6	29.3	43.1	72.0	27.5	15.6	N/A	17.5	42.7

Source: Ned Davis Research as of December 31, 2016, updated annually. Past performance is not a guarantee of future results.

Companies that are able to initiate and grow dividends have outperformed. Dividend growers and initiators (those companies in the S&P 500 Index that have either grown their cash dividend or initiated one over the prior 12 months) have had an annual average gain of 9.9%. Non-dividend-paying stocks (those that have not paid dividends in the prior 12 months) have only had an average annual return of 2.4%, and the S&P 500 Geometric Equal-Weighted Total Return Index had an average annual return of 7.5%. (See Exhibit 12.)

Exhibit 12: S&P 500 stock returns

by dividend policy, 01/31/72–03/31/17



Source: Ned Davis Research as of March 31, 2017. Past performance is not a guarantee of future results.

Selecting dividend growers/initiators can be improved upon by avoiding companies that reduce their dividends before that action. The impact of a dividend cut is twofold: both income and total return are affected, i.e., not only is the dividend income lost, but the stock’s price also declines. Importantly, investors feel the pain before a dividend cut is announced (see Exhibit 13), which is why it is critical to look for factors that may indicate the health of a company and how likely it is they can maintain its dividend yield.

Exhibit 13: The impact of a dividend cut



Company performance	-1-year	+1-week	+1-month	+3-month	+6-month	+1-year	+2-year
Average outperformance (%)	-32.5	-0.9	-0.2	2.5	6.4	11.3	22.8
Average total return (%)	-23.2	-1.3	0.2	5.7	13.1	23.4	49.4

Source: Wolfe Research Accounting & Tax Policy Research; Company filings; Bloomberg; Standard & Poor's; FactSet; Columbia Management Investment Advisers, LLC as of 12/31/16.
Note: Universe includes Russell 3000 companies, ex-<\$250m market capital companies since 1995. Measurement date from 5 days after the cut announcement. Past performance is not a guarantee of future results.

We believe income-related metrics, such as dividend yield and dividend growth, as well as gauges of dependability and quality, such as free cash flow or net income, are predictive of dividend sustainability.

- Dividend-paying stocks outperform over time, but investors should not concentrate only in high yielding sectors. Dividend growth is an important driver of return.
- Dividend growers both outperform and provide sustainable income. We believe that free cash flow is the best indicator of the ability to grow dividends.

While over the long term dividend growers and initiators have outperformed the S&P 500 (see Exhibit 12), we believe that using the above metrics of dividend sustainability can help materially. Additionally, business models that incorporate

environmental, social and governance measures should reduce event risk, which could affect stock prices and dividend payout. (See “Why ESG?”, Columbia Threadneedle Investments, 2016.)

Strategy for a new rate regime

After close to four decades of declining interest rates, sourcing income and managing volatility in this new rate regime presents unprecedented challenges. Fixed-income investors need to consider that interest rates are just one part of fixed-income investing. There are three other sources of risk and return: credit quality, currency exposure and inflation. Equity investors who turn to dividends for income need to identify companies that are able to initiate and grow dividends and pay attention to signs of potential dividend reductions.

To find out more, call **888.800.4347** or visit **columbiathreadneedleetf.com**



Definitions: The Barclays Global Aggregate Index is an unmanaged broad-based, market-capitalization-weighted index that is designed to measure the broad global markets for U.S. and non-U.S. corporate, government, governmental agency, supranational, mortgage-backed and asset-backed fixed-income securities. The Barclays Investment-Grade Corporate Index includes dollar-denominated debt from U.S. and non-U.S. industrial, utility and financial institution issuers. Subordinated issues, securities with normal call and put provisions and sinking funds, medium-term notes (if they are publicly underwritten) and 144A securities with registration rights and global issues that are SEC-registered are included. Structured notes with embedded swaps or other special features, as well as private placements, floating-rate securities and eurobonds, are excluded from the index. The Barclays U.S. Aggregate Bond Index is a market-value-weighted index that tracks the daily price, coupon, pay-downs and total return performance of fixed-rate, publicly placed, dollar-denominated and non-convertible investment-grade debt issues with at least \$250 million par amount outstanding and with at least one year to final maturity. The Barclays U.S. Corporate High Yield Bond Index is composed of fixed-rate, publicly issued, non-investment-grade debt. The Barclays U.S. Government Inflation-linked Bond Index includes publicly issued, U.S. Treasury inflation-protected securities that have at least one year remaining to maturity on index rebalancing date, with an issue size equal to or in excess of \$500 million. The S&P 500 Index is a broad-based measure of U.S. stock market performance. The S&P 500 Geometric Equal-Weighted Total Return Index is the equal-weight version of the widely-used S&P 500 Index. The S&P/LSTA Leveraged Loan Index reflects the market-weighted performance of institutional leveraged loans based upon real-time market weightings, spreads and interest payments. It is not possible to invest directly in an index.

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CT-MK/113451 A (06/17) 71C1 1808016