WEALTH MANAGEMENT

Morgan Stanley

GLOBAL INVESTMENT COMMITTEE / COMMENTARY

JULY 2017

On the Markets

Midyear Outlook

MICHAEL WILSON

Chief Investment Officer
Morgan Stanley Wealth Management
Morgan Stanley & Co.

Chief US Equity Strategist
Morgan Stanley & Co.

TABLE OF CONTENTS

2	**Climbing the Last Wall of Worry** Growth is picking up but inflation is not. That should allow tor further gains.
4	**Toward a Self-Sustaining Growth** We expect global growth to remain strong because it's on surer footing.
5	**Aging Gracefully** The US economic cycle is in its ninth year, but longevity need not be a concern.
6	**Stay Bullish on Global Equities** The MSCI All Country World Index could be on its way to an all-time high.
7	**Rewarding Capital Spending** Investors are starting to favor companies that invest in themselves.
8	**A Better Second Half for Banks** Financial stocks have been laggards this year, but that could change.
9	**Short Takes** The Misery Index informs our view on stocks; how rates affect coupon income; and the Fed loses its leadership.
10	**Yields Not Likely to Go Much Higher** We discuss the midyear outlook for government, corporate and muni bonds.
12	**10 Reasons to Doubt Legislative Optimism on Tax Reform** Among them: No credible bipartisan path and health care complications.
14	**Q&A: Catching a Thematic Wave** Catherine Wood wants to be an early investor on big technology-driven themes.

Painting a Picture

Painting is an extraordinary form of expression and hard to appreciate until you watch someone do it. For me, it was watching Bob Ross' *Joy of Painting* on television. I was absolutely amazed at his ability to take a blank canvas and create an incredibly detailed landscape, with every brushstroke bringing clarity to the picture he saw in his head. For those of you that don't know what I'm talking about, go online and check out one of these episodes. Bob, who was an extraordinary talent, died in 1995.

Unfortunately, investors can't paint their own economic landscape—wouldn't that be nice! However, we can learn from Bob's technique of trying to see the whole picture before it is fully painted and realize that it's never static. The past year has brought significant changes to the investment landscape: recovery from a severe economic slowdown in 2015, evolving central bank policy, populist political movements all over the world and technological change that both amazes and disrupts, to name a few.

Our view continues to be that the US economy is in a classic late-cycle expansion while other parts of the world are catching up. Now, the Federal Reserve's extraordinary monetary policy is quietly being tightened. While pockets of excess have developed in the real economy during this expansion—oil fracking, commercial and multifamily real estate development and auto sales—we haven't yet seen the unbridled exuberance we typically get at the end of the cycle, some of which may be due to the hangover from the prior decade's excesses. Nevertheless, we must acknowledge the evolving landscape and adjust accordingly.

In the past month, the Fed raised the federal funds rate for the third time in six months and the European Central Bank signaled a greater willingness to reduce its Quantitative Easing program. Meanwhile, US banks successfully passed their stress tests and will be able to return more capital to shareholders, and oil prices are trying to establish a bottom. Longer-term interest rates have stopped going down. We think all this syncs nicely with our late-cycle expansion thesis. We are evolving, too, which is why we recently reduced our exposure to expensive high yield bonds while increasing our allocations to asset classes—specifically, master limited partnerships and small- and mid-capitalization equities—that have lagged this year but should do better as the cycle matures, skepticism fades and exuberance finally arrives. ■

Climbing the Last Wall of Worry

ANDREW SHEETS

Chief Global Cross-Asset Strategist
Morgan Stanley & Co.

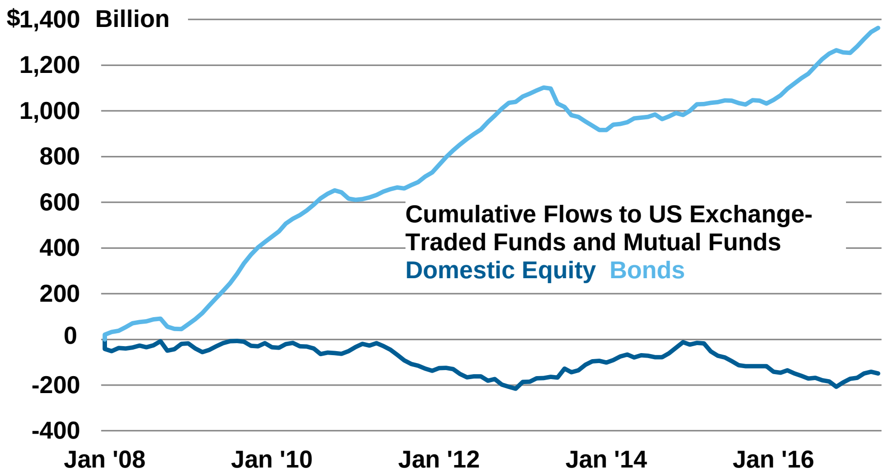
For the past six months, improving growth and contained inflation have helped to push asset prices higher, and we think this trend can persist through the end of 2017. Our economists see more growth and less inflation than the consensus. This potent combination should allow the withdrawal of central bank liquidity to remain gradual through the end of the year, which we think will turn rising levels of confidence into action as companies raise capital expenditures and investors push more funds into equities, raising overall levels of risk. Both would be typical late-cycle behavior, consistent with the readings on our cycle indicators.

This view is not without risks, but bull markets always climb a wall of worry. Many assets are historically expensive. The rate of growth improvement may slow, with global purchasing managers indexes (PMIs), economic surprises and headline inflation all peaking. Plus, low volatility across asset classes hints strongly that a benign outlook is already the market's expectation. Let's walk through our outlook and the risks.

GROWTH RATES MATTER. An essential debate centers on: What matters more, the level of GDP growth or its rate of change? Economic bears argue that growth might be fine, but its rate of change is set to worsen—something that has signaled good selling opportunities during the past six years. Bulls (and ourselves) will argue that the level of growth will be more important.

We didn't always think this way. At the beginning of 2017, we thought performance would stall after the first quarter as several supportive factors reversed. That reversal is happening, with global inflation, PMIs and economic surprises all likely to moderate going forward. Still, we no longer expect such a detrimental effect.

Since the Financial Crisis, Flows to Fixed Income Funds Have Far Outpaced Those Going to Equities



Source: MS & Co. Research, Haver Analytics, ICI as of April 30, 2017

Why?

GLOBAL RECOVERY. A key reason is the breadth of global growth. Our economists forecast the first global synchronous recovery since 2010 (see page 4). That's a key change from the past seven years, when weakness in at least one major region offset strength elsewhere and created a fragility that made markets more sensitive to shifts in growth at the margin. If the breadth of growth is better and nominal GDP is higher, we think that sensitivity is reduced and markets will better weather a weakening in the rate of change.

Growth is picking up, but inflation is not. We forecast headline inflation will fall over the next three quarters in the US and Euro Zone, as an easing in commodity inflation offsets modest increases in core inflation. Our forecast for range-bound commodity prices would seem to fit this narrative broadly. We see Brent oil prices in the mid/upper $50-per-barrel neighborhood at both the year's end and in the second quarter of 2018.

We think that this combination allows for a gradual and predictable withdrawal of G4 monetary policy, which remains relatively accommodative through the end of 2017, with a narrow path of likely outcomes for the Federal Reserve, European Central Bank and the Bank of Japan.

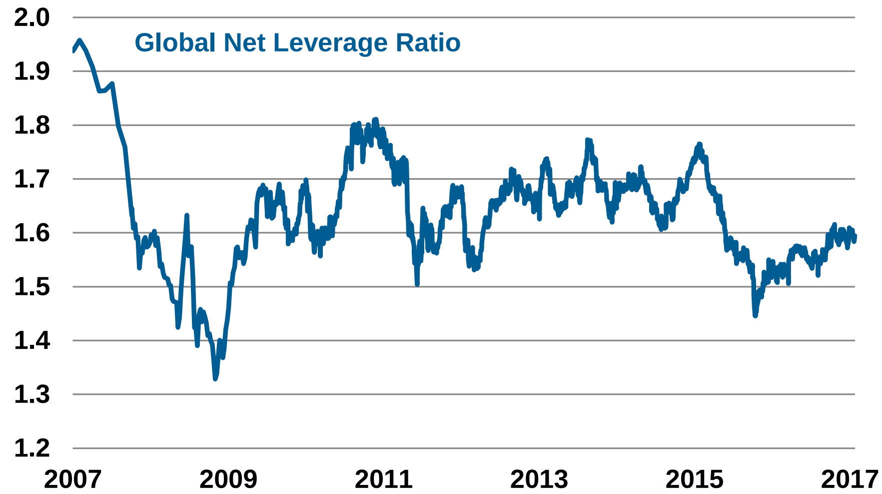
GREATER CONFIDENCE. If we're right, growth shows its broadest improvement in seven years, at the same time real rates remain near all-time lows. We think that this would mean high levels of confidence that translate into higher investment. This would be both a corporate and market story. For companies, capital expenditures and mergers and acquisitions (M&A) have undershot in this recovery—but confidence has been climbing while the cost of capital remains unusually low. How long will CEOs be able to resist the siren song of cheap funding, low volatility and good macro data? We expect both capex and M&A to move higher.

It could be similar for markets. The 2007-to-2009 financial crisis was the worst in 80 years, and it caused considerable damage to risk appetite. One example: Since 2008, US fixed income funds have seen more than $1.3 trillion in net inflows while nearly $150 billion flowed out of US domestic equity funds (see chart, page 2). Hedge funds' net leverage doesn't appear extreme, either, as compared with the past seven years (see chart). Similar to businesses, we think there remains scope for investor greed to increase, as the fear of missing out becomes more powerful. It would be typical late-cycle behavior.

Low volatility is an important part of this story. At current or modestly higher levels, it should catalyze more risk-seeking, late-cycle behavior. If it rises sharply, investors and companies will likely go back into their shells. So, what would drive volatility higher? There are several factors that we think are more likely to be 2018 issues: Central bank policy stops being easy and predictable; spreads stop being well behaved; earnings fail to improve; and correlations between stocks or between asset classes rise along with volatility.

TOUGHER VALUATIONS. While better growth and easy policy are supportive factors, valuations are not, with measures across most assets rich on a historical range. Our assumption is that they won't pose a problem just yet, as valuation is a poor predictor of short-term performance; valuations often overshoot late in the cycle, and valuations aren't excessive in several areas such asset non-US equities and emerging market fixed income. Our valuation indicators suggest there is further to go in the current run before much weaker performance kicks in. There also are several things that we like that remain cheap—that is below 20-year valuation averages—among them, the euro and Japanese equities.

Hedge-Fund Net Leverage Shows No Signs of Excess



Source: Morgan Stanley Prime Brokerage as of May 23, 2017

What does this mean for our strategists' 12-month forecasts? A better nominal GDP environment leaves us with above-consensus earnings-per-share growth estimates for 2017 in the US, Japan and Europe. At the same time, moderating inflation and transparent, still-accommodative policy should keep yield increases modest and manageable for risk assets. We see this late-cycle environment as relatively worse for corporate credit, given rich valuations and the expectations of more corporate aggression, and relatively better for emerging markets fixed income, given improving fundamentals and less extreme valuations. In securitized investments, we expect a material underperformance of commercial versus residential real estate.

LOOKING AT 2018. Next year's outlook could be more problematic. We expect a material shift in policy accommodation, with the Federal Reserve shrinking its balance sheet and hiking four times, the European Central Bank tapering and the Bank of Japan exiting yield curve control. Due in part to these changes, net issuance in bond markets (after central bank purchases) is likely to increase materially, creating headwinds to the fixed income market. So why doesn't the market respond to this now? We think it remains too far away, and investors have been repeatedly punished for trying to preempt longer-dated risk events.

If our assumptions are correct, valuations will be richer, and investors will be carrying more exposure as we step into next year. The challenges of 2018 are a reason why we are constructive now. After all, make hay while the sun shines. ■

Transitioning to Self-Sustaining Growth

CHETAN AHYA

Co-Head of Global Economics and Chief Asia Economist
Morgan Stanley Asia Limited

Supported by both the developed markets (DM) and emerging markets (EM), global growth has accelerated since 2016's third quarter and is now at its strongest level in five quarters (annualized). We expect global growth to remain strong over the forecast horizon (see table) and the global expansion to be on a surer footing, driven by multiple engines. In our view, the next phase of the global expansion cycle will be characterized by the following five key features:

Above-trend growth. For the past three years, annualized global GDP growth has been below par; the average for the period has been 3.1%, well below the 3.5% long-term average. Going forward, we expect global growth to accelerate back to slightly above trend, reaching 3.6% in 2017 and 3.7% in 2018 (versus the consensus respective 3.5% and 3.6%). Consequently, nominal GDP growth in local-currency purchasing power parity (PPP) will also accelerate, to 6.6% in 2017 from 5.3% in 2016, and stay strong at 6.4% in 2018.

Synchronous recovery. A synchronous recovery in both developed and emerging markets— the first such recovery since 2010—has been underway since 2016, and we project this to continue over the course of 2017. Within the developed markets, the Euro Zone and Japan—which have been lagging their DM peers so far—should see growth accelerate in 2017 to the fastest pace in the past two and four years, respectively. While growth in the Euro Zone and Japan should moderate in 2018, it will stay above the average annual pace observed since 2000, in our view.

The emerging markets ex China (EMXC), which account for 40% of global GDP in PPP and 24% in nominal US dollars, should contribute the most to the acceleration in global GDP growth, more than offsetting a gradual, policy-induced slowdown in China. EMXC growth should accelerate visibly to an annual average of 4.2% in 2017/2018 from 3.2% in 2016. Within the EMXC economies, we expect both commodity exporters and importers to gain pace. The global recovery is already broad based, but we expect it to broaden out further—with more economies recovering.

Higher core inflation in developed markets. While headline inflation should remain stable, we expect DM core inflation to pick up gradually as growth remains above trend and output gaps narrow further. Core services inflation will be the key driver; core goods inflation will rise as well, with moderating disinflationary pressures from the emerging markets and, in particular, China.

Investment acceleration ahead. The next phase of the global expansion should be driven by a meaningful pickup in investment growth. During the past two quarters, private sector investment growth has already accelerated across the DM and EM economies. Stronger aggregate demand and rising pricing power, alongside better earnings growth, should lift the corporate sector's return expectations. Combined with higher capacity utilization, this should drive a further acceleration in the growth of capital spending. This recovery, which had been largely absent thus far from this upcycle, will likely also boost productivity growth. ■

Morgan Stanley & Co. Midyear Global GDP Forecast

	2016	2017E			2018E		
	Actual	Bear	Base	Bull	Bear	Base	Bull
Global	**3.1%**	**3.1%**	**3.6%**	**4.1%**	**2.5%**	**3.7%**	**4.5%**
Developed Markets	**1.6**	**1.5**	**2.0**	**2.4**	**0.3**	**1.8**	**2.7**
US	**1.6**	1.7	2.2	2.7	0.3	2.2	3.1
Euro Zone	**1.7**	1.7	1.9	2.1	0.3	1.6	2.7
Japan	**1.0**	1.2	1.6	2.0	0.5	1.1	1.5
UK	**1.8**	0.9	1.7	2.2	-0.3	1.1	1.8
Emerging Markets	**4.2**	**4.1**	**4.7**	**5.3**	**4.0**	**5.0**	**5.8**
China	**6.7**	6.3	6.6	6.9	5.8	6.4	6.9
India	**7.9**	7.1	7.6	8.1	7.0	8.0	8.8
Brazil	**-3.6**	-0.2	0.5	1.2	1.5	2.5	3.5
Russia	**-0.2**	0.9	1.5	2.1	0.8	1.8	2.7

Source: MS & Co. Research as of June 4, 2017

US Economic Cycle Aging Gracefully

ELLEN ZENTNER
Chief US Economist
Morgan Stanley & Co.

We are now in the ninth year of the third-longest economic expansion since World War II. Longevity alone need not cause undo concern—the length of expansions has been trending higher over time and key sectors of the economy, including housing, are far from over-heating. What's more, our cross-asset strategists' indicators point to continued expansion across developed markets.

While the expansion appears to be aging gracefully, we are not without worry. After all, economics is the "dismal science." Despite the rosier picture we paint herein, we still place a 25% probability on a recession in the US within the next 12 months. As we enter 2018, downside risks to the outlook emerge.

Still, it's nice to be upgrading forecasts—and it hasn't happened often, if at all, since the financial crisis. Financial conditions have been more supportive of growth, while a rebound in global economic activity and a deregulatory backdrop in the US have led to a strong rebound in investment. In fact, our new 2017 forecast for business fixed investment is 5.5%, or nearly double the previous estimate (see table). These factors helped drive our new 2017 GDP forecast of 2.2%, up from 1.9% late last year.

In line with our policy strategists' views, we have moved tax reform to the first half of 2018 from this year's second half. We are not counting on any stimulus from an infrastructure plan because there has been little clarity from the Trump administration on this front. The net result is a neutral stance on 2018 GDP growth, as easier financial conditions and better net trade offset a smaller fiscal boost. We are holding 2018 growth at to 1.9%.

MS & Co. Midyear US Economic Outlook

		New Forecast		Previous	
4Q/4Q % Change)	2016	2017	2018	2017	2018
Real GDP	**2.0%**	**2.2%**	**1.9%**	**1.9%**	**1.9%**
Final Sales	2.0	2.3	2.0	2.0	2.0
Final Domestic Demand	2.1	2.3	2.2	2.3	2.4
PCE	3.1	2.0	2.3	2.4	2.6
Business Fixed Investment	-0.1	5.5	3.7	2.8	3.0
Residential Fixed Investment	1.1	5.8	3.5	5.3	3.6
Exports	1.5	2.5	3.8	2.4	2.9
Imports	2.6	2.6	5.3	4.4	5.6
Government	0.2	0.3	0.5	0.9	1.3
Consumer Price Index	**1.8**	**1.8**	**2.0**	**2.3**	**2.3**
Core PCEPI*	**1.7**	**1.6**	**2.0**	**1.9**	**1.9**
Unemployment Rate**	**4.7**	**4.2**	**4.1**	**4.6**	**4.4**

*Personal Consumption Expenditure Price Index
**Projections are for the average in the fourth quarter of the year indicated.
Source: MS & Co. Research as of June 4, 2017

Employment. We expect the unemployment rate to fall to an average 4.2% in the fourth quarter, but remain around 4.1% in 2018 as monthly job gains slow to some 100,000. The low jobless rate supports further wage gains, where we expect the annual pace to rise to around 3.0% in 2018. Personal income tax cuts add to wage gains to turn flagging growth in real disposable personal income higher in 2018, as well as consumer spending.

Inflation. Our new forecast for head-line CPI inflation this year is a bit lower, at 1.8% versus the previous 2.3%. This largely reflects a one-off level shift in the year-on-year path on the back of method-logical changes that affected wireless service prices. By the end of 2018, we will have nearly caught up to our previous forecast, a 2.0% annual rate, as we lap the base effect after March 2018. Underlying trend inflation is supported by a less aggressive path for the trade-weighted US dollar, as well as a higher path for China's noncommodity producer prices. The net result leads us to forecast core goods prices climbing over the course of 2017 and moving into positive territory in the second half of 2018. On the domestic side, the late-cycle pressures push up core prices excluding medical and rents, while a slowdown in rents applies downward pressure. The result is a near-term flattening in core services before climbing higher later this year. On these factors, core personal consumption expenditure averages 1.6% annualized in 2017's fourth quarter and then catches up with our prior estimate, ending 2018 at 2.0%.

Monetary policy. We expect the Federal Reserve to announce in September that it will begin to phase out reinvestments of both mortgage-backed and US Treasury securities in October. In December, we expect the Fed to hike rates for the third time this year. Finally, we continue to expect policymakers will deliver four additional hikes in 2018, bringing the year-end midpoint of the target range to 2.375%. ■

Stay Bullish on Global Equities

MIKE WILSON
Chief US Equity Strategist
Morgan Stanley & Co.

JONATHAN GARNER
Chief Asia & Emerging Markets Strategist
Morgan Stanley Asia Ltd.

GRAHAM SECKER
Equity Strategist
Morgan Stanley & Co. International plc+

We think the bull market in global equities will roll on a while longer, taking the MSCI All Country World Index to all-time highs. Earnings growth will likely remain strong, but moderating from the mid-teens in 2017 to the high single digits in 2018. Valuations on standard metrics are reasonable; the market trailing price/book value ratio (P/B) is at the 53rd percentile versus the last 30 years. The base-case outlook for rates and corporate credit yields is supportive, but a rapid back-up in yields would be a key risk as some cash-flow metrics are stretched.

For 2017, our earnings-per-share (EPS) forecasts are broadly in line with consensus for the S&P 500, the MSCI Emerging Markets Index and the MSCI Europe Index, but above consensus for Topix by 5%. This is related to a forecast for significant weakening of the yen versus the euro.

HIGHER MULTIPLES. For the US, we assume that the price/earnings ratio (P/E) can climb to 19 times forward earnings one year from now from the current 17.7, driven by a reduction in the equity risk premium versus 10-year US Treasury yields. For Europe, we assume that the multiple is broadly unchanged from where consensus prices the market, currently at 15.3. For Topix, we assume the multiple tracks higher by a little less than 1.0 to 15.0, closer to the peak of the Abenomics era as investors recognize the validity of our thesis on wage reflation and the sustainability of the corporate governance improvement in Japan. For the emerging markets, we mark the multiple higher by 0.5 to 12.0 based on the greater index weighting for the higher-growth information technology (IT) sector.

The context for our earnings forecast is Morgan Stanley & Co.'s global GDP growth forecast (see page 4). At the global level, bottom-up consensus earnings revisions are rising steadily, reversing the pattern of downgrades seen at the midyear point in each of the past three years. In fact, earnings revisions for 2018 are up about 2% since January. The consensus forecast for earnings growth is 14.5% in 2017 and 10.8% in 2018. In our experience, markets and stocks tend not to go down for long or by much when estimate revisions are this positive.

VALUATION MATTERS. To be sure, global equities are not cheap. Based on 18 valuation metrics we follow, they're at the 82nd percentile of the historical range since January 1988. However, there is a skew to the valuation. On metrics such as the next 12 months' forward P/E, trailing P/E, dividend yield and historical P/B, both for the market and the median stock, valuations are close to or even below the long-run average. Stocks are most expensive on the basis of price/sales, enterprise value to sales and enterprise value to earnings before interest, taxes, depreciation and amortization. In fact, for the median stock, we are at the 100th percentile on all three metrics. This is a testament mainly to the rapid increases in corporate debt.

IT and financials are our preferred sectors globally. IT has stronger earnings growth and return on equity than the market, underpinned by technological innovation, consolidation and trends in consumer demand. We don't think the sector is expensive for what it is delivering. For financials, the thesis is a recovery in global economic growth and reduced regulatory pressure as the financial crisis finally recedes in the rear-view mirror. The sector is the standout cheapest sector on forward P/E. ■

MS & Co. 12-Month Forward Stock Market Forecasts

Index	Current Price	New Price Target (% change from current levels)			Old Target Price (% change from current levels)		
		Bull	Base	Bear	Bull	Base	Bear
S&P 500	2,420	3,000 24%	2,700 12%	2,100 -13%	3,000 24%	2,700 12%	2,100 -13%
MSCI Europe	1,673	2,083 25%	1,725 3%	1,268 -24%	2,050 23%	1,650 -1%	1,100 -34%
TOPIX	1,624	2,080 28%	1,730 7%	1,100 -32%	2,110 30%	1,770 9%	960 -41%
MSCI Emerging Markets	1,014	1,300 28%	1,050 4%	660 -35%	1,115 10%	960 -5%	590 -42%

Note: MSCI Europe and TOPIX are local-currency indexes, S&P 500 and MSCI EM in US-dollars.
Source: MSCI, RIMES, Bloomberg, MS & Co. Research forecasts as of June 29, 2017

Will Investors Reward Capital Spending?

ZACHARY APOIAN

Head of Market Strategy and Portfolio Analytics
Morgan Stanley Wealth Management

JOSEPH PICKHARDT

Cross-Asset Strategist
Morgan Stanley Wealth Management

One of the primary causes of weak economic growth this cycle has been the unusually low level of capital investment by US businesses. Historically, such investment has fostered innovation—a powerful driver of enhanced efficiencies and earnings growth. The recent drag on capital spending has stifled productivity growth and crimped long-term earnings-growth expectations. Instead, companies have largely utilized low interest rates to optimize their capital structures and return capital to shareholders. This has led some to decry a perceived "short-termism." Others note that excess capacity and low demand has resulted in a lack of good investment opportunities.

However, recent improvements in global growth and business optimism, coupled with multiyear highs in company surveys of plans for capital expenditures, suggest we may be nearing a turning point. If so, which companies stand to benefit?

RETURN VERSUS INVESTMENT. Thus far this cycle, the market has preferred companies with capex-sensitive business models to return capital to investors via share buybacks and dividends rather than increase capital expenditures. This is evidenced by the nearly 2% annualized outperformance from January 2010 to May 2017 of the capex-intensive subindustries that have returned capital to shareholders rather than make capital investments. On the other hand, companies emphasizing research and development (R&D), mainly in the high-growth health care and technology sectors, have had more investment opportunities and have been rewarded for pursuing them.

Since 2016, however, it appears that the priorities of companies have begun to shift away from capital return in the form of buybacks and dividends. As a percent of sales, buybacks and dividends have shrunk by nearly 50 basis points, while investment in capex and R&D has grown by 85 basis points—a sharp divergence from the trends earlier this cycle. Furthermore, the earnings outlook today is brighter than it has been in years, suggesting greater potential for corporate maneuverability on the back of the significant cost-cutting of 2014 through early 2016. Accordingly, multiple survey measures of capital-expenditure plans have reached elevated levels. We believe this constellation of factors has aligned such that a resurgence of corporate investment is likely on the horizon.

BENEFICIARIES OF THE NEW ENVIRONMENT. Our analysis suggests that an environment with more investment opportunities may not equally benefit all companies (see table). We have found that the strongest-performing subindustries in such environments have been those with rising long-term growth expectations and increased investment spending, suggesting these investment opportunities have high potential and achievability. Furthermore, in periods in which aggregate buybacks and dividends are shrinking in lieu of other opportunities or demands on a firm's capital, subindustries that return less capital have typically outperformed.

Accordingly, we recommend subindustries that focus on investment-driven innovation and less on aggressive return of capital to investors. We further refine our recommendation by considering whether long-term growth expectations have been improving and whether they appear attractive according to our quantitative factor-based *Tactical Equity Framework*. Notably, the subindustries that meet these characteristics also have high exposure to visible and highly anticipated innovation themes with large and growing potential markets, including cloud computing, autonomous cars, the experience-driven economy and the growing millennial cohort. ■

Subindustries That Could Benefit From Increased Investment Spending

Subindustry	Capex as a Percent of Sales	R&D as a Percent of Sales	Price/ Forward Earnings	Expected Long-Term Growth	Overall Rank (1=Top, 10=Bottom)
Technology Hardware Storage and Peripherals	5.0%	5.0%	14.4	10.0%	1
Home Entertainment Software	2.0	17.3	27.1	16.5	1
IT Consulting and Other Services	3.7	4.7	13.0	2.7	2
Auto Parts and Equipment	4.5	2.5	11.3	9.7	2
Leisure Products	4.2	3.9	17.6	13.1	3
Electronic Components	8.4	6.4	20.5	9.0	3
Household Products	4.6	2.4	22.1	6.5	4
Integrated Telecommunication Svcs.	14.6	0.5	12.8	7.9	4

Source: Morgan Stanley Wealth Management GIC, FactSet as of June 8, 2017

Financials Could Have a Stronger Second Half

DANIEL SKELLY

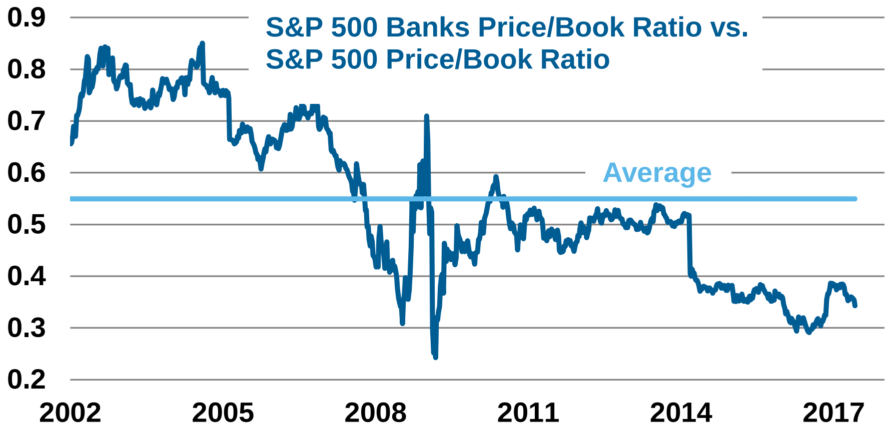
Senior Equity Strategist
Morgan Stanley Wealth Management

This year's stock market leaders and laggards have pretty much performed along with their fundamentals. As US economic surprises slowed, growth stocks—led by tech and health care—rebounded sharply from their postelection sell-off, offering the potential for growth. In this same period, economies in Europe and the emerging markets strengthened, boosting global cyclicals. Lagging have been energy, which suffered an oil glut, and retail stores, which lost ground to e-commerce. The weaker dollar has helped global staples and consumer products, and lower interest rates bolstered utilities. For the second half, we see potential in the lagging financial sector, where valuations—particularly of banks—are compelling as investors have yet to grasp the improving fundamentals (see chart).

Slower lending and flatter curve. Of course, there are reasons for financials' muted year-to-date returns. Notably, commercial and industry loan growth has slowed to 3%. Also, the yield curve has flattened on slower economic and inflation data, and the Fed has continued to raise the federal funds rate. However, many larger banks profit from rising short rates, and Betsy Graseck, Morgan Stanley & Co.'s large-cap bank analyst, sees loan growth improving on the back of tax reform, fiscal stimulus and regulatory easing.

Capex boost. A lending revival could occur in the second half as policy clarity improves and business investment and capital spending head higher. Similarly, MS & Co. Chief US Equity Strategist Mike Wilson argues that GDP growth is likely to accelerate as inventory building and personal consumption combines with continued strong business spending. The Alphawise Indicator of Realtime Activity (ARIA), MS & Co.'s proprietary index, supports this view, jumping 1.8% in May—the largest move in the index's history. Rising corporate and consumer investment would most likely coincide with a better lending environment.

Relative to the S&P 500, Bank Stocks Appear Cheap



Source: Bloomberg as of June 2, 2017

Furthermore, rebounding growth and rising equity markets may spur more initial public offerings and mergers, which also could benefit the large investment banks.

Rising dividends and buybacks. We see not just more lending but rising dividends and buybacks supporting the total-return outlook for many financial stocks. Following nearly a decade-long effort to repair balance sheets and adhere to tighter regulatory requirements, the capitalization of big banks and various other financial companies is greatly improved. Regulatory pressure should subside, in our view, making capital return a key catalyst for higher stock prices amid a continued low interest rate environment and aging global demographics. Following last month's bank stress test, dividend increases were better than expected.

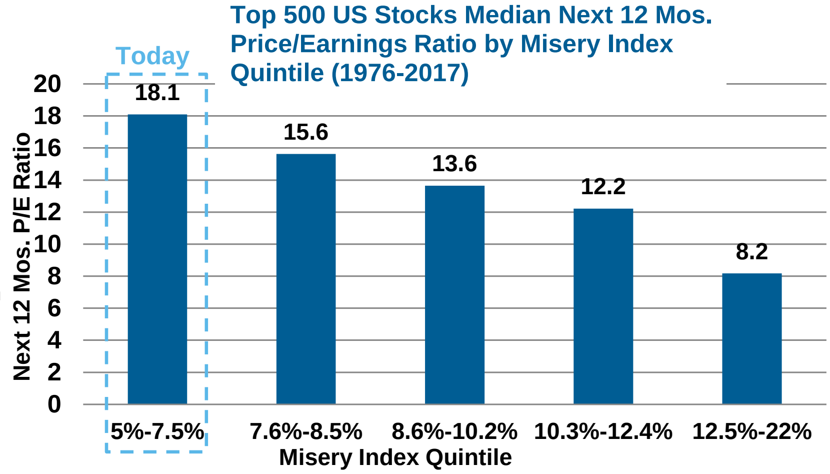
Reflation redux. To the extent financial stocks are viewed as a play on rising inflation, we see some upside here as well. Lisa Shalett, head of Wealth Management Investment Resources, now favors US banks, as rising capital spending and global trade can drive rates higher concurrent with a synchronous global recovery. Indeed, the past month's rebound in financial stocks may be signalling a divergence between equity market expectations and bond market skepticism around higher rates from the Fed. Consistent with that view, MS & Co. Interest Rates Strategist Matt Hornbach sees 2.50% as a year-end target for the 10-year US Treasury, which could help support sentiment on bank stocks.

Top ideas. Across the various parts of the financial sector, we prefer large-cap banks because of rising dividends, faster loan growth and stronger capital market activity. We also favor select asset managers—particularly alternative leaders and multiasset managers who are gaining outsized flows and may benefit from consolidation. Finally, we see select opportunities in property and casualty insurance, especially idiosyncratic turnaround and merger situations. ■

Depressed Misery Index Should Hearten US Equities

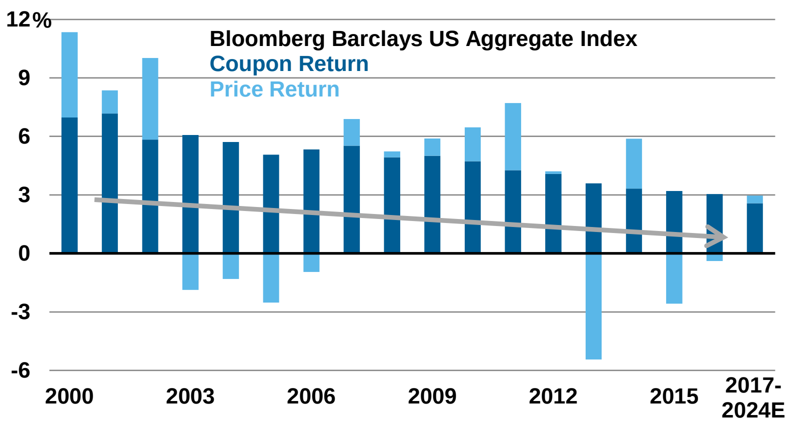
As economic indicators go, the "Misery Index" is refreshingly simple. Created in the 1960s by economist Arthur Okun, an advisor to President Lyndon Johnson, it's the sum of the unemployment rate and the year-over-year change in the Consumer Price Index. A higher index suggests tough conditions for consumers; a lower number indicates economic well-being. The index is now at 6.2%, which is in the bottom quintile of the index's 50-year history (see chart).

This is bullish for the stock market. In the past, when the index was between 5.0% and 7.5%, as it is now, the median next 12 months' price/earnings ratio (P/E) for the top-500 US stocks has been 18.1. Since the median forward P/E is now 17, this suggests the market multiple for stocks has room to move up. What's more, our economists expect both unemployment and inflation to remain low for the next year, which should keep the Misery Index in check and help prop the stock market.—*Mike Wilson*



Source: Bloomberg, MS & Co. Research as of May 31, 2017

For Investors in US Bonds, Is 3% the New 5% Coupon?

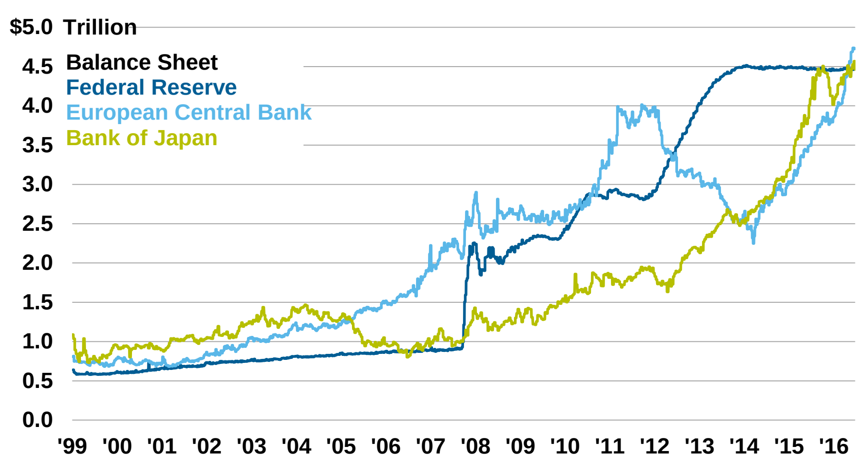


Source: FactSet as of May 31, 2017

Historically, coupon income has generated the bulk of total returns for the Bloomberg Barclays US Aggregate Bond Index (see chart). Now, after a 35-year bull market in bonds, the income returns have greatly compressed as companies, government agencies and consumers have continuously refinanced their debt to lock in ever-lower borrowing rates. This activity will have a dramatic impact on fixed income total returns going forward. In fact, the Morgan Stanley Wealth Management Global Investment Committee's Capital Market Assumptions projects an average coupon return of 2.6% over the next seven-years, the lowest on record. As a result, investors should reset their expectations for the fixed income portion of their portfolios. The days of 5% investment grade coupons are well behind us—3% is the new normal.—*Lynn Bernabei*

With Fed Backing Off, European and Japanese Central Banks Take Charge

During the past two months, the balance sheets of the European Central Bank (ECB) and Bank of Japan (BOJ) have expanded and are now on par with the Federal Reserve (see chart). While the Fed is expected to start trimming its balance sheet in the fall, the ECB and BOJ plan to keep purchasing assets to stimulate credit growth and support real economic activity. This shift implies that the leadership for global monetary policy will rest increasingly in the hands of European and Japanese policymakers. Thus far, their ongoing stimulus has offset the Fed's tightening and has allowed global financial conditions to remain highly accommodative. With global growth still below its longer-term potential, that means central banks may have latitude to maintain monetary stimulus without stoking serious inflationary pressures.—*Steve Edwards*



Source: Bloomberg as of June 26, 2017

Bond Yields Not Likely To Move Much Higher

MATTHEW HORNBACH
Global Head of Interest Rate Strategy
Morgan Stanley & Co.

GORDIAN KEMEN
Global Head of Emerging Markets Fixed Income Strategy
Morgan Stanley & Co.

ADAM RICHMOND
Head of US Credit Strategy
Morgan Stanley & Co.

MICHAEL D. ZEZAS, CFA
Municipal Bond Strategist
Morgan Stanley & Co.

The next 12 months should see continued synchronicity in global GDP growth, and our economists see the expansion on more stable ground given that the recovery is being driven by private sector demand. Nevertheless, we think that only one developed core bond market, Germany, will see yields move higher.

Despite the rosier base-case outlook for global growth, the bull/bear skew from our economists still suggests that downside risks to nominal GDP growth remain predominant in 2018. Given that core nominal yields in the developed markets have spent the first half of this year higher than the middle two quarters of 2016, we don't see much more additional upside in most markets. Downside risks should keep investors looking to buy most government bonds on any dip.

Here's our assessment for various sectors of the bond market.

US. We expect 10-year Treasury yields to remain at or below 2.5% over our forecast horizon even as the Federal Reserve begins balance sheet normalization and hikes rates twice more in 2017 (see table). As our economists expect four more hikes in 2018, the yield curve should continue flattening. Still, the further the Fed ventures into its tightening cycle, the more we expect investors to price in the next easing cycle—especially as core inflation in the US remains subdued.

Euro Zone. We see gently rising yields as our economists forecast the European Central Bank (ECB) to move slowly toward unwinding its extraordinary policy measures. Because our economists only expect inflation to recover slowly—and given the Fed's inability to raise rates at a normal pace—we expect the market to price in a very gradual rate-hiking cycle. We therefore forecast 10-year German Bunds remaining below 1.00% during the next year. A key risk to our forecast is that we assume German funding markets remain tight due to the scarcity induced by Quantitative Easing. If this premium were to fade, it could easily push 10-year Bund yields 20 basis points higher.

UK. We expect gilts to richen modestly as the Monetary Policy Committee (MPC) remains on hold over our forecast horizon. We see the five-year bonds outperforming and the 30-year unusually rich versus the 10-year but, with pension-fund demand strong, we see little reason for this to change in the next year. The risks to our outlook appear evenly balanced, as renewed political risks and a Brexit-related economic slowdown may cause the MPC to ease. Still if the economy remains resilient and a tight labor market causes domestically driven inflation to pick up, policymakers could raise rates.

Japan. We expect Japanese government bond (JGB) yields to be range-bound until the third quarter, with the 10-year yield ranging between 0% and 0.1%. Japanese investors are now underweight duration in both JGBs and foreign bonds, and are taking a wait-and-see stance in anticipation of higher global rates. If prices weaken and the yield nears 1%, we expect to see dip-buying demand from Japanese life insurers.

Emerging Markets. We are bullish on local rates, currencies and sovereign credit. We have a preference for local debt over sovereign debt. Our total-return projections until year-end 2017 are 5.5% in local markets (in US-dollar terms, of which 1.9% is expected to come from currency appreciation) and 3.7% in sovereign credit. We prefer high real yield in local markets and/or countries with fundamental upside, as well as high-yielding, idiosyncratic stories in sovereign credit. In local markets, we see the best

MS & Co. Government Bond Yield Forecasts

	3Q '17	4Q '17	1Q '18	2Q '18
Developed Markets				
US	2.50%	2.45%	2.45%	2.40%
Germany	0.50	0.60	0.70	0.80
Japan	0.05	0.08	0.20	0.20
UK	1.10	1.00	1.00	0.95
Emerging Markets				
China	3.77	3.89	3.87	3.85
India	6.67	6.75	6.80	6.85
Brazil	11.25	11.00	10.75	11.00
Russia	7.60	7.50	7.40	7.40

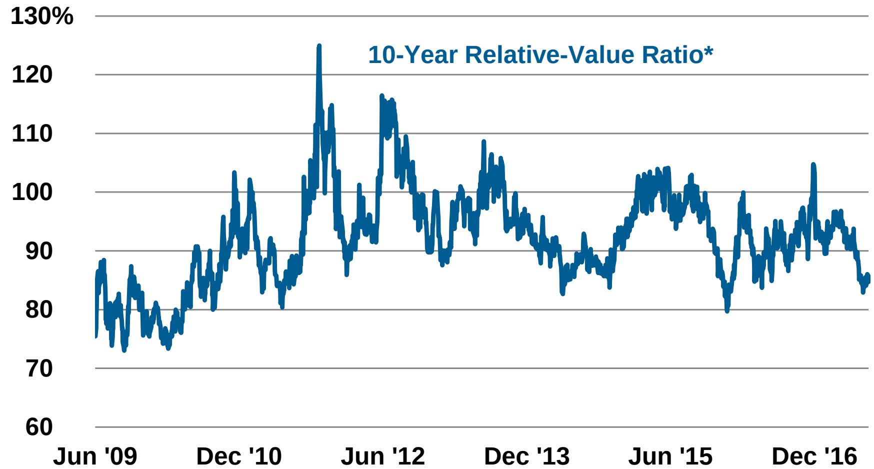
Source: MS & Co. Research as of June 4, 2017 opportunities in Mexico, Poland and Indonesia. In sovereign credit, carry is king, with Ukraine and Argentina as our top picks.

Credit. We maintain a cautious stance. While global growth is more coordinated, corporate earnings have turned the corner. However, beneath the veneer of low volatility, some of our key fundamental and technical concerns remain unchanged.

Credit is pricing an uneventful central bank unwind. So, what if it's messy**?** Performance of credit markets in recent years is in good part due to the unprecedented monetary stimulus from global central banks, in our view. US credit has benefitted from low rates while, in European credit, the effect of ECB policies has been both direct and indirect. The debate around the timing of stimulus withdrawal and pace of tightening/tapering continues, but what *is* a given is that monetary policy will tighten or become less easy globally—sooner rather than later. In our view, the margin for error is low.

What's more, there's little upside to play. Credit markets tend not to outperform in late-cycle environments. Spreads per turn of leverage are at or close to record lows across all regions, and absolute spread levels are not far their tightest points of the prior cycle, after adjusting for duration and quality drifts. So, even if we use the 1996/1997 or 2005/2006 playbook (late, but not end of cycle), the upside is limited. This asymmetry in risk/reward warrants caution.

Muni Bond Relative-Value Ratio Returns to More Normal Level



*Yield on 10-year AAA-rated municipal bonds relative to yield on 10-year US Treasury bond
Source: MMD as of June 28, 2017

Municipals. The summer is an opportunity to exercise caution in munis. Valuations reflect too much optimism. The 10-year relative-value ratio is at 86%, down from more than 100% late last year (see chart). Credit spreads are at multiyear tights. The market-implied expected tax benefit of munis is also rising, suggesting confidence in the persistence of munis' current tax status and clear value to muni ownership, only to investors who expect their tax benefit to be a shield from a 26% tax bracket or higher over the life of the bond. (We've previously noted the "fair value" to account for tax-reform risk as 20% to 25%, given risks of lower tax rates and a potential capping of the muni exemption at the 25% bracket.)

Events in the fall could challenge these valuations. The Fed is expected to begin its balance sheet wind-down, an unprecedented event that puts muni valuations at risk. The channels of those risks are wider corporate spreads weakening munis' relative value and higher rate volatility undermining muni fund flows, as they have historically. The fall could also see the key details of tax reform solidify, given our expectation that tax reform may pass in early 2018. If changes are not properly priced ahead of time, muni valuations would be at risk from a potential capping of the coupon exemption eroding individual-investor demand and/or a substantial lowering of the corporate tax rate, thus eroding the bank and insurance company demand that is critical for longer-maturity bonds. ■

10 Reasons to Doubt Legislative Optimism on Tax Reform

MICHAEL D. ZEZAS, CFA

Strategist
Morgan Stanley & Co.

If press reports and the comments of leading Republicans on legislative progress were a reliable indicator, we should be expecting a concrete tax-reform plan as soon as this summer. Yet we remain skeptical. Here we tease out 10 reasons, some old and some new, that we think affirm our conclusions.

1. No credible bipartisan path.

The common ground between Republicans and Democrats appears to be more at the level of rhetoric than policy detail. Furthermore, Democrats face considerable pressure not to work with a president unpopular with their base.

Let's consider the ideological divide over what the parties consider a "middle-class-focused" tax cut. Democrats might see the distributional effect of tax reform benefiting high-income individuals too much relative to the middle class. Republicans could plausibly claim that across-the-board personal-tax-rate cuts benefit all. Republicans could also argue that cuts are focused on the middle class if they were paired with an increase in the standard deduction, which is used by more than 80% of filers with income under $75,000, and/or elimination of deductions, which are most commonly enjoyed by higher-income individuals. Yet Democrats could argue that, in dollar terms, the benefit that accrues to higher income brackets from a tax cut dwarfs that of the middle and lower brackets.

2. Health care complications.

It's clear Republicans intend to see the process of repealing and replacing the Affordable Care Act (ACA) through to its end, successful or not. Practically speaking, as the lack of bipartisanship creates the need to push legislation through the reconciliation process, this means tax reform cannot meaningfully begin its complicated legislative process until health care reform either succeeds or fails. In the near term, that means the Senate must deliberate on issues divisive within the Republican Party, such as: defunding Planned Parenthood, means-testing health care credits and repealing ACA taxes. Even if a Senate bill passes, the House will have to accept the Senate bill as is or the two bodies will need to work out differences in a conference committee.

3. The budget and debt ceiling.

Republicans need to pass the fiscal-year 2018 budget resolution with reconciliation instructions in order to pass tax reform using reconciliation. This may be more difficult than it sounds. Defense hawks want to increase funding for defense. Some House Republicans want to include budget cuts that align closely with President Trump's budget, while electorally vulnerable or moderate Republicans may not want to cut popular programs. They could use a "shell" budget in order to pass the reconciliation instructions like they did with the fiscal-year 2017 budget, but the right-wing Freedom Caucus is already balking at that idea. This is not to say that they won't ultimately come to an agreement, but negotiating the budget resolution could take up valuable time.

The debt ceiling is another impediment, potentially linked to the budget process. While President Trump and US Treasury Secretary Steven Mnuchin have both called for a "clean" increase in the debt ceiling, House conservatives—and even some in the Trump administration—want to link the debt ceiling to budget concessions. Resolving these disagreements could distract from the broader policy agenda.

4. The Byrd Rule.

Reconciliation can be used for legislation that changes spending, revenues and the debt limit. The "Byrd Rule" prevents any "extraneous" provisions from being included, and it treats most policy changes that do not have an effect on spending or revenues as extraneous. More important, it does not allow for changes that raise the deficit in any year after the period covered by the reconciliation instructions unless other provisions offset those costs. In short, the Byrd Rule is a hurdle to passing tax cuts that increase the deficit, and the main reason why leadership wants a revenue-neutral bill.

5. Conservative think tanks.

Conservative think tanks have recently weighed in such that lawmakers are prodded to follow the more complicated reconciliation path, while being at odds with House Republican leadership on key issues like the border tax.

6. Statutory PAYGO.

A potential speed bump in achieving fiscal stimulus through deficit-expanding tax cuts is the Statutory Pay-As-You-Go

(PAYGO) Act, which created a budget mechanism to ensure that all legislation passed in a given year is budget neutral. If the Office of Management and Budget (OMB) determines that there is a projected debit in the budget year, the president issues a sequestration order to OMB for across-the-board cuts in nonexempt mandatory spending programs in an amount equal to the debit. Republicans would likely anticipate that this risks putting them in a disadvantageous position in the future. They may have to enact budget austerity, directly contradicting their notion that tax cuts would pay for themselves. We concede that there are ways to get around PAYGO, but they are far from easy for a party that prides itself on fiscal discipline.

7. State and local tax deductions.

The potential to repeal the state and local tax deduction, as well as proposals to limit itemized deductions, are not purely a red state/blue state issue. Rather, repealing itemized deductions affects high-income-earning places in relatively similar ways. It's conceivable that a tax plan sharply limiting itemized deductions could divide the Republican Party between wealthier districts (where they're valuable) and poorer districts (which mainly use the standard deduction).

8. The Freedom Caucus could flex its muscles.

Recently, Rep. Mark Meadows, the chair of the Freedom Caucus, pushed for Congress to stay in session in August to work on the tax bill (a call that is likely to be unpopular) and suggested that the caucus craft its own plan. Meadows and other members have said they believe that tax cuts do not need to be fully paid for and have suggested that some of the tax cuts could be temporary or paid for through cuts to welfare in order to meet reconciliation rules. Most significantly, they believe that leadership should drop the border adjustment tax.

The caucus is also making demands about the fiscal-year 2018 budget resolution. Members may push for some of the spending cuts included in President Trump's budget proposal and have suggested exchanging welfare cuts for higher top-line spending.

9. The border tax.

House Republican leaders like Paul Ryan and Kevin Brady continue to push for the idea of taxing imports at the border. In contrast, the Freedom Caucus and several key senators have expressed displeasure with the proposal, ranging from reticence to outright opposition, hence another potential wedge issue that takes time to resolve.

10. Russia.

We don't speculate on the outcome of the various official investigations into Russian interference in the US election, yet we think it's appropriate to point out that the political ramifications of those probes can slow the legislative process, as they affect the president's popularity and, therefore, the incentive for congressional Republicans to accede to his policy demands. Less incentive to cooperate means more time must be spent seeking compromise within the caucus, and makes that compromise more difficult to achieve. Furthermore, there's the potential for intraparty tension to rise from issues tangential to the investigation. ■

Catching a Thematic Wave

With many on Wall Street focused on a company's next quarter, a swing of a few cents per share in earnings can turn a darling into a pariah. In contrast, Catherine Wood looks far beyond the next quarter, or the next year—to a full market cycle and beyond. As founder, chief executive officer and chief investment officer of ARK Investment Management, Wood and her team seek companies that are catching a thematic wave. "Silicon Valley, Silicon Alley or Silicon Beach will innovate," she explains. "We focus on disruptive innovation." Wood recently spoke with Morgan Stanley Wealth Management's Tara Kalwarski. The following is an edited version of their conversation.

TARA KALWARSKI (TK): What is your approach to thematic investing?

CATHERINE WOOD (CW): One of our taglines is, "investing at the pace of innovation," and we mean that. The world is changing at an accelerated rate. You have to go back to the late 1800s to find as many innovation platforms evolving at the same time as there are now. Within 20 years, you got a tractor, a telephone, and electricity. That's mind blowing, right?

The world is changing even faster now. My firm focuses on five technology platforms. Our themes are not technology themes, per se; rather, they're enabled by technology, characterized by cost declines and cut across economic sectors:

(1) DNA sequencing, which we think is going to completely change health care as we know it. Human genomic sequencing alone is projected to grow at a 200%+ annual rate during the next five years.

(2) Robotics and automation, which generates fear in a lot of people, especially as it involves artificial intelligence (AI) and potential job displacement. By 2035, automation is projected to replace 47% of American jobs and to generate $12 trillion in additional GDP.

(3) Energy storage, or battery technology, where costs have declined in battery-pack systems and in the battery cells themselves. The cost for battery-pack systems in electric vehicles will likely drop by 40% by 2020.

(4) Next-generation internet, which involves AI, deep learning, machine learning, the internet of things, and the sharing economy. If autonomous taxis replace 60% of US vehicles, 740 million parking spaces worth $13 trillion will become available for other uses.

(5) Blockchain technology and cryptocurrencies, or cryptoassets. The intermediary payments role that cryptocurrencies are attempting to displace is meaningful—roughly $400 billion in market value.

TK: How does one analyze these trends in order to identify opportunities?

CW: In the late 1970s, I was working at a firm that was talking about Hong Kong 1997—when sovereignty over Hong Kong would be transferred from the UK to the People's Republic of China—and I thought, "How wonderful to be looking into the future like that." As the traditional investing world became more benchmark sensitive and index oriented, thematic investors were more focused on the opposite, looking at disruptive innovation platforms that, enabled by technology, would change the world—and change the indexes over time. Thematic investors want to find those stocks before they become big parts of benchmark indexes.

Our analysts have multidisciplinary backgrounds and analytical approaches, with responsibilities segmented by themes. Our research is from the top down; our first objective is to size the opportunity and figure out which companies are going to become a part of that ecosystem, without being biased by an index.

From the bottom-up, stock-research point of view, we have eight proprietary metrics. One is management and culture: A company focused on disruptive innovation needs a specific type—leaders with vision and very strong wills, and employees who believe in the vision. Another is barriers to entry. How high are they? Another we call valuation, or hurdle rate. Our time horizon is not next quarter or next year—it's the next five years. As we model the outlook for companies, we have to believe that the minimum hurdle rate of return for a company's stock is 15% a year on average over a five-year period for it to enter a portfolio.

TK: There's a human element to your criteria, but the themes are technology driven. How do you balance the qualitative versus the quantitative?

CW: Our intensive analysis around technology is in our top-down modeling. Silicon Valley dreams the dream; we're going to dimension it and figure out where we believe the unit economics lie. When a disruption or innovation is technologically enabled, it is typically associated with a declining cost curve. That triggers price elasticity of demand. Declining costs lead to declining prices, rising unit growth and then usually substantial growth. For example, the 40% to 50% cost decline in DNA sequencing per year has led to 200% growth in the number of whole human genomes sequenced per year.

We're more quantitative in trying to assess opportunities and where the innovation is on the learning curve. When a trend hits 10-to-teens percent in market share, we focus on that metric, because it's usually the sweet spot—the inflection point where growth takes off with huge productivity gains and wealth creation and complete transformations of industries.

TK: How do you source new ideas?

CW: One reason I started ARK is I yearned for new sources of information I couldn't get in a traditional research firm. We do traditional research—earnings calls, analyst days, trade shows, sell-side conferences and so forth. But we also push our research online and into social media. We crowdsource. We get our community voting. We invite thought leaders onto our intranet. We do surveys on Twitter—our blockchain/cryptoasset analyst built his network on Twitter. The overall amount of analyzed data on Twitter is set to grow 14 times over the next five years—a 70% compound annual growth rate.

Every week our director of research, “theme developers”—typically professors, venture capitalists, private equity investors or entrepreneurs—and I go into our research ecosystem. “Theme developers” is taken from software developers in the open-source ecosystem where developers do not ask to be paid but are trying to advance the ecosystem. We do the same. If someone wants to sign an agreement with us, they can sit in on our modeling and brainstorming sessions and communicate with the research director, our analysts, me and other theme developers on the labs section of our intranet. We exchange knowledge, and they help with modeling.

TK: Does the private market restrict the number of firms that fit your criteria?

CW: Because there's been so much crowding into private markets, especially as traditional asset managers moved into the pre-IPO space, the space has become very efficient and a little overdone; it doesn't surprise us to see companies going public and then settling down to earth. Then we can pick our spots.

Because our world is increasingly moving toward either benchmark sensitivity or outright passive investing, we see more and more inefficiencies cropping up in the public marketplace. We’re looking for early-stage growth companies, regardless of market cap.

TK: What themes are catching the most investor attention these days?

CW: Autonomous vehicles, artificial intelligence; people are trying to figure out where these trends are going to go. I think people will be shocked at how fast the transition to electric vehicles happens, given our research.

People are expecting a little bit too much from artificial intelligence right now, even though there are leaps being made. You have to do a lot of training before artificial intelligence is effective.

What’s interesting is that the themes behave differently, so you may have autonomous vehicles catching on. Why didn't they do it the year before? It was the same story then; it's just more people started talking about autonomous vehicles, artificial intelligence, virtual reality, augmented reality, etc. So, stock by stock, you'll see “ah ha” moments. We want to be there when it happens.

Also, what happens during bad times and risk-averse times in the market and from a business point of view is that, with nervousness, executives begin to say, “We've got to change the way we're doing things. We've got to cut costs, increase productivity, find new products and services.” These disruptive innovation companies are the way they're going to do that. So whenever we go through a crash, however uncomfortable it is, I believe that fundamentals for innovative companies are going to get better.

TK: Have some themes been undeservedly hit in terms of market value?

CW: We think the genomic revolution theme keeps getting whacked. It was destroyed last year amid election-year politics and the health care debate this year. Even though our names are going to be influenced by that, they're going to be much more influenced by innovation. The Trump budget wants to cut the National Institutes of Health, which gets people really upset—but the companies representing this theme are curing cancer, and we're seeing private money pour into these potential cures. So the dynamic is changing completely.

TK: What industries will suffer as a result of disruptive innovation?

CW: We think traditional auto companies will go the way of minicomputers. Energy companies are going to be hit hard, because electric vehicles are four-times more energy-efficient than traditional internal-combustion vehicles. We think retail will continue to rearrange itself; the cost structure of bricks and mortar is completely out of line with reality.

In health care, we think traditional pharma is in big trouble if the companies don't move into the age of molecular biology. Now, many have been forced by patent cliffs to do so—and they have had to lay off a lot of chemists and hire molecular biologists. Going forward, we think they have to use companion diagnostics throughout their research and development process. If they don't do that, they're in trouble. There are a lot of risks to any company doing things the traditional way and feeling comfortable.

TK: Are you more excited by the companies moving the ball forward in terms of these themes, or the companies that are users of any given theme?

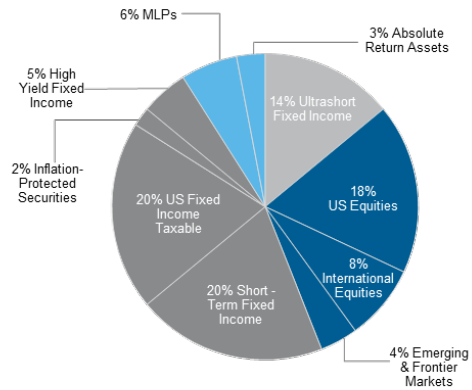
CW: Both. The most highly regulated and bureaucratic industries, and industries that have not changed with technology are going to be big beneficiaries of blockchain, if they adopt it. Financial services, health care, government, education and utilities could be among the most impacted sectors. ■

Catherine Wood is not an employee of Morgan Stanley Wealth Management. Opinions expressed by her are solely her own and may not necessarily reflect those of Morgan Stanley Wealth Management or its affiliates.

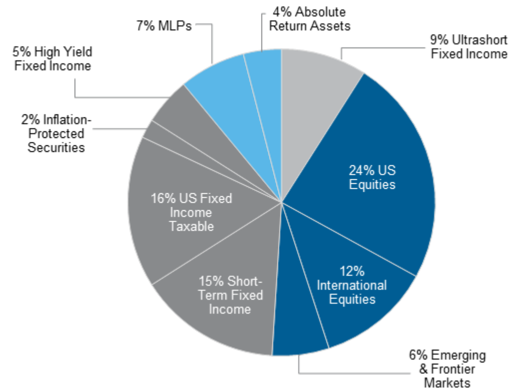
Global Investment Committee Tactical Asset Allocation

The Global Investment Committee provides guidance on asset allocation decisions through its various models. The five models below are recommended for investors with up to $25 million in investable assets. They are based on an increasing scale of risk (expected volatility) and expected return.

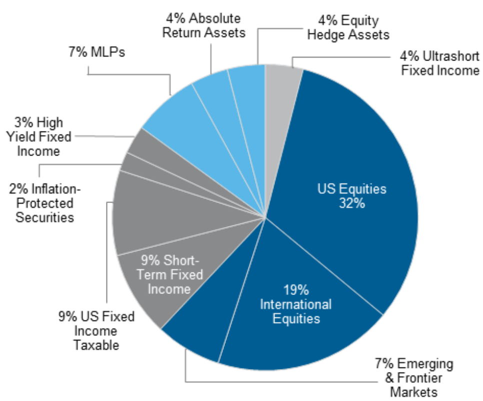
Capital Preservation



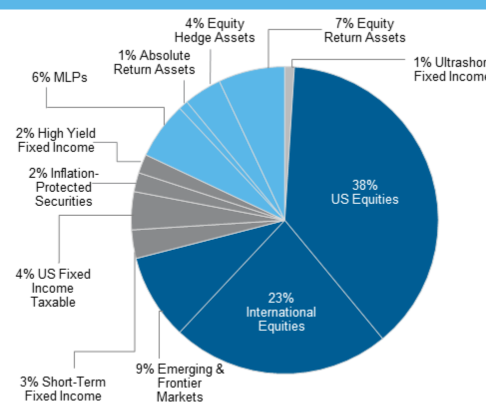
Income



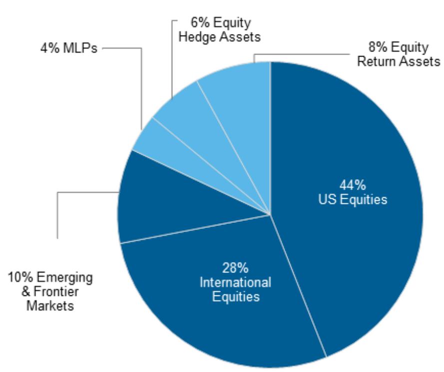
Balanced Growth



Market Growth



Opportunistic Growth



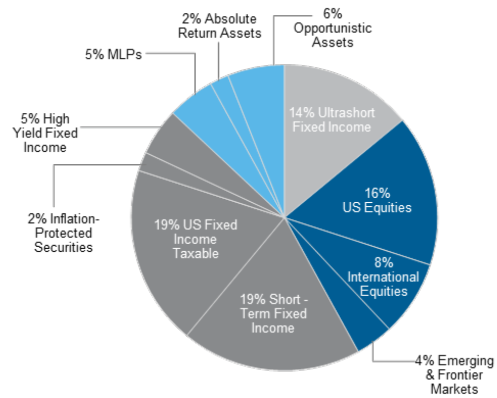
Key

- **Ultrashort Fixed Income**
- **Fixed Income & Preferreds**
- **Equities**
- **Alternatives**

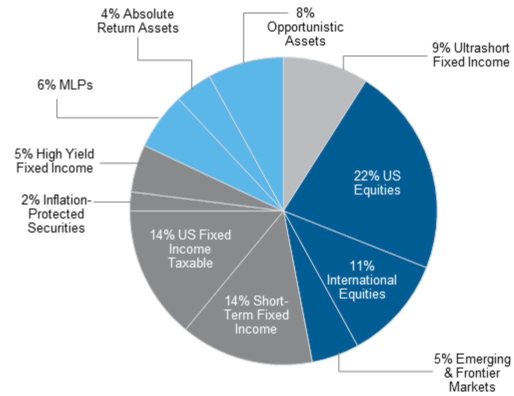
Source: Morgan Stanley Wealth Management GIC as of June 30, 2017

The Global Investment Committee provides guidance on asset allocation decisions through its various models. The five models below are recommended for investors with over $25 million in investable assets. They are based on an increasing scale of risk (expected volatility) and expected return.

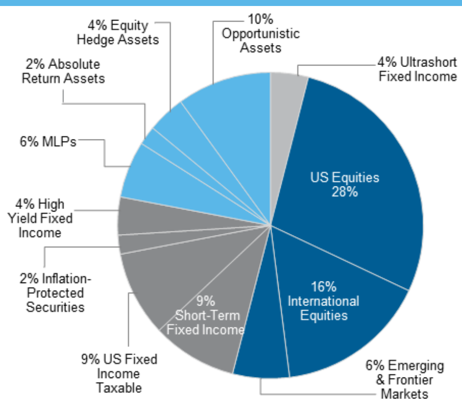
Capital Preservation



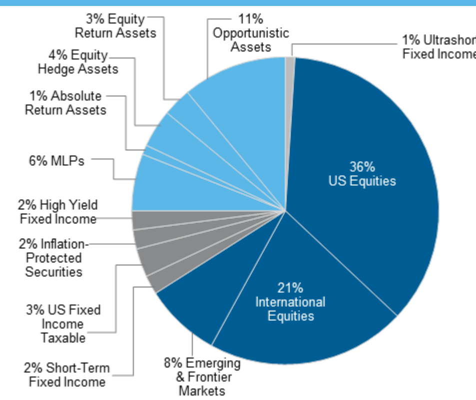
Income



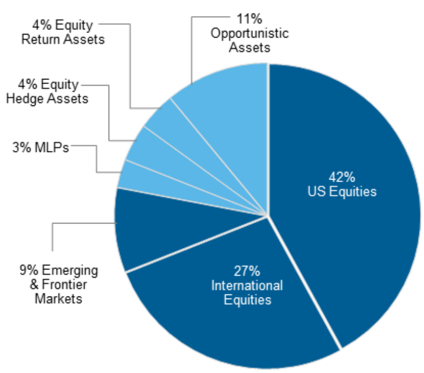
Balanced Growth



Market Growth



Opportunistic Growth



Key

- **Ultrashort Fixed Income**
- **Fixed Income & Preferreds**
- **Equities**
- **Alternatives**

Source: Morgan Stanley Wealth Management GIC as of June 30, 2017

Tactical Asset Allocation Reasoning

Global Equities	Relative Weight Within Equities	
US	Overweight	While US equities have done exceptionally well since the global financial crisis, they are now in the latter stages of a cyclical bull market. This bull market was challenged during the past year by fears of political events and instability. While the Trump/Republican progrowth agenda has been slower to develop than hoped, it has also left us in a bit of a Goldilocks environment in which growth and interest rates are neither too hot nor too cold. This is supportive of our call for higher valuations and 2,700 on the S&P 500.
International Equities (Developed Markets)	Overweight	We maintain a positive bias for Japanese and European equity markets. The populist movements around the world are likely to drive more fiscal policy action in both regions, which is needed to make the extraordinary monetary policy offered more effective. Both are still at record levels of cheapness but we prefer Japan at the moment given the over-exuberance on Europe. We recommend hedging currency risk for 50% of Japanese positions but not Europe.
Emerging Markets	Overweight	Emerging market (EM) equities have been the best region over the past 12 months and for the year to date. With the US dollar appearing to have made a cyclical top, global growth and earnings accelerating, and financial conditions remaining loose, we think EM equities will continue to keep up with global equity markets but are unlikely to lead as strongly in the first half of the year.
Global Fixed Income	**Relative Weight Within Fixed Income**	
US Investment Grade	Underweight	We have recommended shorter-duration* (maturities) since March 2013 given the extremely low yields and potential capital losses associated with rising interest rates from such low levels. While interest rates have remained exceptionally low, there is more near-term upward pressure on US economic data to reverse and begin surprising to the upside as the European Central Banks tapers its bond purchases. Within investment grade, we prefer BBB-rated corporates and A-rated municipals to US Treasuries.
International Investment Grade	Underweight	Yields are even lower outside the US, leaving very little value in international fixed income, particularly as the global economy begins to recover more broadly. While interest rates are likely to stay low, the offsetting diversification benefits do not warrant much, if any, position, in our view.
Inflation-Protected Securities	Overweight	With deflationary fears having become extreme in 2015 and early 2016, these securities still offer relative value in the context of our forecasted acceleration in global growth, and expectations for oil prices and the US dollar's year-over-year rate of change to revert back toward 0%. That view played out in 2016 but has not yet run its course.
High Yield	Equal weight	High yield has performed exceptionally well since early 2016 with the stabilization in oil prices and retrenchment by the weaker players. We recently downgraded high yield to equal weight from overweight on the back of this performance, record-low credit spreads and interest rates and early signs of credit deterioration in commercial real estate and auto financing.
Alternative Investments	**Relative Weight Within Alternative Investments**	
REITs	Underweight	Real estate investment trusts (REITs) have underperformed global equities since mid-2016 when interest rates bottomed. We think it is still too early to reconsider our underweight zero allocation given the further rise in rates we expect and deteriorating fundamentals for the industry. Non-US REITs should be favored relative to domestic REITs.
Master Limited Partnerships/Energy Infrastructure*	Overweight	Master limited partnerships (MLPs) rebounded sharply from a devastating 2015 but, with oil's slide, have performed poorly in 2017. As long as oil remains above $40 per barrel, they should provide a reliable and attractive yield and they look exceptionally cheap relative to high yield. A Trump presidency should also be supportive for fracking activity and pipeline construction, both of which should lead to an acceleration in dividend growth.
Hedged Strategies (Hedge Funds and Managed Futures)	Equal Weight	This asset category can provide uncorrelated exposure to traditional risk-asset markets. It tends to outperform when traditional asset categories are challenged by growth scares and/or interest rate volatility spikes. As volatility becomes more persistent in 2017, these strategies should do better than in recent years.

Source: Morgan Stanley Wealth Management GIC as of June 30, 2017

For more about the risks to Master Limited Partnerships (MLPs) and Duration, please see the Risk Considerations section beginning on page 19 of this report.

Index Definitions

For index, indicator and survey definitions referenced in this report please visit the following:
http://www.morganstanleyfa.com/public/projectfiles/id.pdf

Risk Considerations

Alternative Investments

The sole purpose of this material is to inform, and it in no way is intended to be an offer or solicitation to purchase or sell any security, other investment or service, or to attract any funds or deposits. Investments mentioned may not be suitable for all clients. Any product discussed herein may be purchased only after a client has carefully reviewed the offering memorandum and executed the subscription documents. Morgan Stanley Wealth Management has not considered the actual or desired investment objectives, goals, strategies, guidelines, or factual circumstances of any investor in any fund(s). Before making any investment, each investor should carefully consider the risks associated with the investment, as discussed in the applicable offering memorandum, and make a determination based upon their own particular circumstances, that the investment is consistent with their investment objectives and risk tolerance.

Alternative investments often are speculative and include a high degree of risk. Investors could lose all or a substantial amount of their investment. Alternative investments are suitable only for eligible, long-term investors who are willing to forgo liquidity and put capital at risk for an indefinite period of time. They may be highly illiquid and can engage in leverage and other speculative practices that may increase the volatility and risk of loss. Alternative Investments typically have higher fees than traditional investments. Investors should carefully review and consider potential risks before investing.

Certain information contained herein may constitute forward-looking statements. Due to various risks and uncertainties, actual events, results or the performance of a fund may differ materially from those reflected or contemplated in such forward-looking statements. Clients should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing.

Alternative investments involve complex tax structures, tax inefficient investing, and delays in distributing important tax information. Individual funds have specific risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice.

Interests in alternative investment products are offered pursuant to the terms of the applicable offering memorandum, are distributed by Morgan Stanley Smith Barney LLC and certain of its affiliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley or any of its affiliates, (3) are not guaranteed by Morgan Stanley and its affiliates, and (4) involve investment risks, including possible loss of principal. Morgan Stanley Smith Barney LLC is a registered broker-dealer, not a bank.

Hypothetical Performance

General: Hypothetical performance should not be considered a guarantee of future performance or a guarantee of achieving overall financial objectives. Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets.

Hypothetical performance results have inherent limitations. The performance shown here is simulated performance based on benchmark indices, not investment results from an actual portfolio or actual trading. There can be large differences between hypothetical and actual performance results achieved by a particular asset allocation.

Despite the limitations of hypothetical performance, these hypothetical performance results may allow clients and Financial Advisors to obtain a sense of the risk / return trade-off of different asset allocation constructs.

Investing in the market entails the risk of market volatility. The value of all types of securities may increase or decrease over varying time periods.

This analysis does not purport to recommend or implement an investment strategy. Financial forecasts, rates of return, risk, inflation, and other assumptions may be used as the basis for illustrations in this analysis. They should not be considered a guarantee of future performance or a guarantee of achieving overall financial objectives. No analysis has the ability to accurately predict the future, eliminate risk or guarantee investment results. As investment returns, inflation, taxes, and other economic conditions vary from the assumptions used in this analysis, your actual results will vary (perhaps significantly) from those presented in this analysis.

The assumed return rates in this analysis are not reflective of any specific investment and do not include any fees or expenses that may be incurred by investing in specific products. The actual returns of a specific investment may be more or less than the returns used in this analysis. The return assumptions are based on hypothetical rates of return of securities indices, which serve as proxies for the asset classes. Moreover, different forecasts may choose different indices as a proxy for the same asset class, thus influencing the return of the asset class.

MLPs

Master Limited Partnerships (MLPs) are limited partnerships or limited liability companies that are taxed as partnerships and whose interests (limited partnership units or limited liability company units) are traded on securities exchanges like shares of common stock. Currently, most MLPs operate in the energy, natural resources or real estate sectors. Investments in MLP interests are subject to the risks generally applicable to companies in the energy and natural resources sectors, including commodity pricing risk, supply and demand risk, depletion risk and exploration risk.

Individual MLPs are publicly traded partnerships that have unique risks related to their structure. These include, but are not limited to, their reliance on the capital markets to fund growth, adverse ruling on the current tax treatment of distributions (typically mostly tax deferred), and commodity volume risk.

The potential tax benefits from investing in MLPs depend on their being treated as partnerships for federal income tax purposes and, if the MLP is deemed to be a corporation, then its income would be subject to federal taxation at the entity level, reducing the amount of cash available for distribution to the fund which could result in a reduction of the fund’s value.

MLPs carry interest rate risk and may underperform in a rising interest rate environment. MLP funds accrue deferred income taxes for future tax liabilities associated with the portion of MLP distributions considered to be a tax-deferred return of capital and for any net operating gains as well as capital appreciation of its investments; this deferred tax liability is reflected in the daily NAV; and, as a result, the MLP fund’s after-tax performance could differ significantly from the underlying assets even if the pre-tax performance is closely tracked.

Duration

Duration, the most commonly used measure of bond risk, quantifies the effect of changes in interest rates on the price of a bond or bond portfolio. The longer the duration, the more sensitive the bond or portfolio would be to changes in interest rates. Generally, if interest rates rise, bond prices fall and vice versa. Longer-term bonds carry a longer or higher duration than shorter-term bonds; as such, they would be affected by changing interest rates for a greater period of time if interest rates were to increase. Consequently, the price of a long-term bond would drop significantly as compared to the price of a short-term bond.

International investing entails greater risk, as well as greater potential rewards compared to U.S. investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economies.

Managed futures investments are speculative, involve a high degree of risk, use significant leverage, have limited liquidity and/or may be generally illiquid, may incur substantial charges, may subject investors to conflicts of interest, and are usually suitable only for the risk capital portion of an investor’s portfolio. Before investing in any partnership and in order to make an informed decision, investors should read the applicable prospectus and/or offering documents carefully for additional information, including charges, expenses, and risks. Managed futures investments are not intended to replace equities or fixed income securities but rather may act as a complement to these asset categories in a diversified portfolio.

Investing in commodities entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention.

Physical precious metals are non-regulated products. Precious metals are speculative investments, which may experience short-term and long term price volatility. The value of precious metals investments may fluctuate and may appreciate or decline, depending on market conditions. If sold in a declining market, the price you receive may be less than your original investment. Unlike bonds and stocks, precious metals do not make interest or dividend payments. Therefore, precious metals may not be suitable for investors who require current income. Precious metals are commodities that should be safely stored, which may impose additional costs on the investor. The Securities Investor Protection Corporation (“SIPC”) provides certain protection for customers’ cash and securities in the event of a brokerage firm’s bankruptcy, other financial difficulties, or if customers’ assets are missing. SIPC insurance does not apply to precious metals or other commodities.

Bonds are subject to interest rate risk. When interest rates rise, bond prices fall; generally the longer a bond's maturity, the more sensitive it is to this risk. Bonds may also be subject to call risk, which is the risk that the issuer will redeem the debt at its option, fully or partially, before the scheduled maturity date. The market value of debt instruments may fluctuate, and proceeds from sales prior to maturity may be more or less than the amount originally invested or the maturity value due to changes in market conditions or changes in the credit quality of the issuer. Bonds are subject to the credit risk of the issuer. This is the risk that the issuer might be unable to make interest and/or principal payments on a timely basis. Bonds are also subject to reinvestment risk, which is the risk that principal and/or interest payments from a given investment may be reinvested at a lower interest rate.

Bonds rated below investment grade may have speculative characteristics and present significant risks beyond those of other securities, including greater credit risk and price volatility in the secondary market. Investors should be careful to consider these risks alongside their individual circumstances, objectives and risk tolerance before investing in high-yield bonds. High yield bonds should comprise only a limited portion of a balanced portfolio.

Interest on municipal bonds is generally exempt from federal income tax; however, some bonds may be subject to the alternative minimum tax (AMT). Typically, state tax-exemption applies if securities are issued within one's state of residence and, if applicable, local tax-exemption applies if securities are issued within one's city of residence.

Treasury Inflation Protection Securities' (TIPS) coupon payments and underlying principal are automatically increased to compensate for inflation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TIPS tend to offer a low return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform versus conventional U.S. Treasuries in times of low inflation.

Ultrashort-term fixed income asset class is comprised of fixed income securities with high quality, very short maturities. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk.

The majority of $25 and $1000 par **preferred securities** are "callable" meaning that the issuer may retire the securities at specific prices and dates prior to maturity. Interest/dividend payments on certain preferred issues may be deferred by the issuer for periods of up to 5 to 10 years, depending on the particular issue. The investor would still have income tax liability even though payments would not have been received. Price quoted is per $25 or $1,000 share, unless otherwise specified. Current yield is calculated by multiplying the coupon by par value divided by the market price.

The initial interest rate on a **floating-rate security** may be lower than that of a fixed-rate security of the same maturity because investors expect to receive additional income due to future increases in the floating security's underlying reference rate. The reference rate could be an index or an interest rate. However, there can be no assurance that the reference rate will increase. Some floating-rate securities may be subject to call risk.

The market value of **convertible bonds** and the underlying common stock(s) will fluctuate and after purchase may be worth more or less than original cost. If sold prior to maturity, investors may receive more or less than their original purchase price or maturity value, depending on market conditions. Callable bonds may be redeemed by the issuer prior to maturity. Additional call features may exist that could affect yield.

Some $25 or $1000 par **preferred securities** are QDI (Qualified Dividend Income) eligible. Information on QDI eligibility is obtained from third party sources. The dividend income on QDI eligible preferreds qualifies for a reduced tax rate. Many traditional 'dividend paying' perpetual preferred securities (traditional preferreds with no maturity date) are QDI eligible. In order to qualify for the preferential tax treatment all qualifying preferred securities must be held by investors for a minimum period – 91 days during a 180 day window period, beginning 90 days before the ex-dividend date.

Principal is returned on a monthly basis over the life of a **mortgage-backed security.** Principal prepayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and Lottery Bonds. Yields and average lives are estimated based on prepayment assumptions and are subject to change based on actual prepayment of the mortgages in the underlying pools. The level of predictability of an MBS/CMO's average life, and its market price, depends on the type of MBS/CMO class purchased and interest rate movements. In general, as interest rates fall, prepayment speeds are likely to increase, thus shortening the MBS/CMO's average life and likely causing its market price to rise. Conversely, as interest rates rise, prepayment speeds are likely to decrease, thus lengthening average life and likely causing the MBS/CMO's market price to fall. Some MBS/CMOs may have "original issue discount" (OID). OID occurs if the MBS/CMO's original issue price is below its stated redemption price at maturity, and results in "imputed interest" that must be reported annually for tax purposes, resulting in a tax liability even though interest was not received. Investors are urged to consult their tax advisors for more information.

Investing in currency involves additional special risks such as credit, interest rate fluctuations, derivative investment risk, and domestic and foreign inflation rates, which can be volatile and may be less liquid than other securities and more sensitive to the effect of varied economic conditions. In addition, international investing entails greater risk, as well as greater potential rewards compared to U.S. investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economies.

Investing in foreign and emerging markets entails greater risks than those normally associated with domestic markets, such as political, currency, economic and market risks. These risks are magnified in **frontier markets.**

Rebalancing does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy. Investors should consult with their tax advisor before implementing such a strategy.

Equity securities may fluctuate in response to news on companies, industries, market conditions and general economic environment.

Besides the general risk of holding securities that may decline in value, **closed-end funds** may have additional risks related to declining market prices relative to net asset values (NAVs), active manager underperformance, and potential leverage. Some funds also invest in foreign securities, which may involve currency risk.

Companies paying **dividends** can reduce or cut payouts at any time.

Value investing does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected.

Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations.

Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets.

The **indices** are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment.

The **indices selected by Morgan Stanley Wealth Management** to measure performance are representative of broad asset classes. Morgan Stanley Smith Barney LLC retains the right to change representative indices at any time.

REITs investing risks are similar to those associated with direct investments in real estate: property value fluctuations, lack of liquidity, limited diversification and sensitivity to economic factors such as interest rate changes and market recessions.

Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies.

Yields are subject to change with economic conditions. Yield is only one factor that should be considered when making an investment decision.

Credit ratings are subject to change.

Certain securities referred to in this material may not have been registered under the U.S. Securities Act of 1933, as amended, and, if not, may not be offered or sold absent an exemption therefrom. Recipients are required to comply with any legal or contractual restrictions on their purchase, holding, sale, exercise of rights or performance of obligations under any securities/instruments transaction.

Disclosures

Morgan Stanley Wealth Management is the trade name of Morgan Stanley Smith Barney LLC, a registered broker-dealer in the United States. This material has been prepared for informational purposes only and is not an offer to buy or sell or a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Past performance is not necessarily a guide to future performance.

The author(s) (if any authors are noted) principally responsible for the preparation of this material receive compensation based upon various factors, including quality and accuracy of their work, firm revenues (including trading and capital markets revenues), client feedback and competitive factors. Morgan Stanley Wealth Management is involved in many businesses that may relate to companies, securities or instruments mentioned in this material.

This material has been prepared for informational purposes only and is not an offer to buy or sell or a solicitation of any offer to buy or sell any security/instrument, or to participate in any trading strategy. Any such offer would be made only after a prospective investor had completed its own independent investigation of the securities, instruments or transactions, and received all information it required to make its own investment decision, including, where applicable, a review of any offering circular or memorandum describing such security or instrument. That information would contain material information not contained herein and to which prospective participants are referred. This material is based on public information as of the specified date, and may be stale thereafter. We have no obligation to tell you when information herein may change. We make no representation or warranty with respect to the accuracy or completeness of this material. Morgan Stanley Wealth Management has no obligation to provide updated information on the securities/instruments mentioned herein.

The securities/instruments discussed in this material may not be suitable for all investors. The appropriateness of a particular investment or strategy will depend on an investor's individual circumstances and objectives. Morgan Stanley Wealth Management recommends that investors independently evaluate specific investments and strategies, and encourages investors to seek the advice of a financial advisor. The value of and income from investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies and other issuers or other factors. Estimates of future performance are based on assumptions that may not be realized. Actual events may differ from those assumed and changes to any assumptions may have a material impact on any projections or estimates. Other events not taken into account may occur and may significantly affect the projections or estimates. Certain assumptions may have been made for modeling purposes only to simplify the presentation and/or calculation of any projections or estimates, and Morgan Stanley Wealth Management does not represent that any such assumptions will reflect actual future events. Accordingly, there can be no assurance that estimated returns or projections will be realized or that actual returns or performance results will not materially differ from those estimated herein.

This material should not be viewed as advice or recommendations with respect to asset allocation or any particular investment. This information is not intended to, and should not, form a primary basis for any investment decisions that you may make. Morgan Stanley Wealth Management is not acting as a fiduciary under either the Employee Retirement Income Security Act of 1974, as amended or under section 4975 of the Internal Revenue Code of 1986 as amended in providing this material.

Morgan Stanley Smith Barney LLC, its affiliates and Morgan Stanley Financial Advisors do not provide legal or tax advice. Each client should always consult his/her personal tax and/or legal advisor for information concerning his/her individual situation and to learn about any potential tax or other implications that may result from acting on a particular recommendation.

This material is primarily authored by, and reflects the opinions of, Morgan Stanley Smith Barney LLC (Member SIPC), as well as identified guest authors. Articles contributed by employees of Morgan Stanley & Co. LLC (Member SIPC) or one of its affiliates are used under license from Morgan Stanley.

This material is disseminated in Australia to "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813).

Morgan Stanley Wealth Management is not incorporated under the People's Republic of China ("PRC") law and the material in relation to this report is conducted outside the PRC. This report will be distributed only upon request of a specific recipient. This report does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors must have the relevant qualifications to invest in such securities and must be responsible for obtaining all relevant approvals, licenses, verifications and or registrations from PRC's relevant governmental authorities.

If your financial adviser is based in Australia, Switzerland or the United Kingdom, then please be aware that this report is being distributed by the Morgan Stanley entity where your financial adviser is located, as follows: Australia: Morgan Stanley Wealth Management Australia Pty Ltd (ABN 19 009 145 555, AFSL No. 240813); Switzerland: Morgan Stanley (Switzerland) AG regulated by the Swiss Financial Market Supervisory Authority; or United Kingdom: Morgan Stanley Private Wealth Management Ltd, authorized and regulated by the Financial Conduct Authority, approves for the purposes of section 21 of the Financial Services and Markets Act 2000 this material for distribution in the United Kingdom.

Morgan Stanley Wealth Management is not acting as a municipal advisor to any municipal entity or obligated person within the meaning of Section 15B of the Securities Exchange Act (the “Municipal Advisor Rule”) and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of the Municipal Advisor Rule.

This material is disseminated in the United States of America by Morgan Stanley Wealth Management.

Third-party data providers make no warranties or representations of any kind relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages of any kind relating to such data.