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2016 AGENDA

The Month in Closed-End Funds: February 2017

PERFORMANCE

For the fourth consecutive month equity CEFs on average witnessed plus-side returns on a NAV basis and a market basis (+2.06% and +2.67%, respectively). And for the third month in a row their fixed income CEF counterparts chalked up returns in the black, rising 1.18% and 0.83%, respectively, for February. The U.S. broad-based indices posted multiple record highs during the month. While investors started the month on a cautious note, focusing on earnings reports and the Federal Reserve's policy meeting at the end of January, they cheered a better-than-expected January jobs report, strong factory orders, and President DonaldTrump's executive order to review the Dodd-Frank Act, which was enacted in the wake of the 2008 financial crisis. Although the markets remained a little choppy during the month, the Dow Jones Industrial Average posted 12 consecutive record closes at the end of the month, matching the longest record-setting winning streak ever (1987).

Investors shrugged off an increase in the January unemployment rate, which rose to 4.8%, and anemic wage growth but were pleasantly surprised by a larger-than-expected rise in new jobs creation. The Department of Labor reported the U.S. had added 227,000 jobs for January, smashing the consensus-expected 197,000.

The financial sector benefitted from Trump's proposed deregulation as proponents believed deregulation could improve the sector's profitability, especially in an environment of rising interest rates. U.S. stocks got another shot in the arm after Trump pledged to move quickly on his proposed changes to the tax code, which have the potential to push corporate profits higher. At mid-month the three major U.S. indices all posted record closes and notched their third consecutive week of positive returns, even after investors learned that for the third month in four the cost of imported goods had risen, mostly on the back of the rising oil prices that are nudging U.S. inflation higher.

The U.S. market momentum spilled over to markets abroad, helped by upbeat Chinese export data and a rise in oil prices after the International Energy Agency reported that OPEC members reached a record compliance of 90% of the recently agreed-upon output cuts. Despite learning that the Federal Open Market Committee leaders believe the economy is near to being able to withstand some monetary tightening, investors warmed to relatively strong economic news later in the month, pushing the Dow's winning streak to its twelfth consecutive record close as investors learned that durable goods orders had climbed 1.8% for January. However, at month-end investors took their feet off the pedal ahead of Trump's address to the joint session of Congress, snapping the Dow's 12-session winning streak. Even though investors learned that consumer spending had rebounded for fourth quarter 2016, that consumer confidence rose to its highest level in 15 years, and that the major equity indices posted strong monthly gains for February, they remained cautious ahead of Trump's speech.

With New York Fed President William Dudley stating that a U.S. interest rate increase has become much more compelling, it wasn't too surprising to see Treasury yields rising at the short end of the curve; maturities less

The Month in Closed-End Funds: February 2017

- For the fourth month in a row equity closed-end funds (CEFs) witnessed a plus-side return on average, rising 2.06% on a net-asset-value (NAV) basis for February,while their fixed income CEF cohorts posted a return in the black for the third month running, rising 1.18%.
- For February 17% of all CEFs traded at a premium to their NAV, with 12% of equity funds and 21% of fixed income CEFs trading in premium territory. Thomson Reuters Lipper's world income CEFs macro-group witnessed the largest narrowing of discounts for the month—113 basis points (bps) to 6.32%.
- Natural Resources CEFs (-1.03%) and Energy MLP CEFs (+0.80%) posted the lowest returns in the equity universe and weighed on the domestic equity CEFs macro-group (+1.90%).
- With investors focusing on a slide in yields during the month, Utility CEFs rose to the top of the charts (+3.44%) for the first month in eight.
- For the third consecutive month all Lipper municipal debt CEF classifications posted returns in the black, with High Yield Municipal Debt CEFs (+1.25%) posting the best return of the group.

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than three years generally saw a rise in yield. The six-month Treasury yield saw the largest rise, 5 bps to 0.69%, while the ten-year Treasury yield witnessed the largest decline, 9 basis points to 2.36%.

For February the dollar weakened against the yen (-0.57%) but strengthened again the euro (+1.66%) and the pound (+1.28%). Commodities prices rose for the month, with near-month gold prices rising 3.64% to close February at $1,252.60/ounce and front-month crude oil prices climbing 2.27% to close the month at $54.01/barrel.

For the month 96% of all CEFs posted NAV-based returns in the black, with 92% of equity CEFs and 99% of fixed income CEFs chalking up returns in the plus column. For the first month in four Lipper's mixed-asset CEFs macro-group (+2.30%) outpaced its two equity-based brethren: world equity CEFs (+2.28%) and domestic equity CEFs (+1.90%).

As a result of the strong late-month decline in yields, the Utilities CEFs classification (+3.44%) jumped to the top of the equity charts for the first month in eight. It was followed by Sector Equity CEFs (+3.21%) and Value CEFs (+2.85%). Domestic equity CEFs (+1.90%) were pulled down by Natural Resources CEFs (-1.03%, the only negative return for the CEF universe) and Energy MLP CEFs (+0.80%) after oil prices and energy stocks were hurt by the strengthening dollar and data showing an uptick in the U.S. rig count at month-end. For the remaining equity classifications returns ranged from positive 1.47% (Growth CEFs) to positive 2.66% (Core CEFs).

Four of the five top-performing individual equity CEFs were housed in Lipper's Sector Equity CEFs classification, with **Tekla Life Sciences Investors (HQL)** rising 7.59% on a NAV basis and traded at a 6.10% discount on February 28. HQL was followed by **Tekla World Healthcare Fund (THW),** rising 6.97% and traded at a 6.13% discount at month-end; **Tekla Healthcare Investors (HQH),** posting a 6.85% return and traded at a 1.57% discount on February 28; **Tekla Healthcare Opportunities Fund (THQ),** gaining 6.02% and traded at a 7.78% discount at month-end; and **Morgan Stanley India Investment Fund, Inc. (IIF,** warehoused in the Emerging Markets CEFs classification), rising 5.87% and traded at a 12.65% discount on February 28.

For the month the dispersion of performance in individual equity CEFs—ranging from minus 5.36% to positive 7.59%—was narrower than January's spread and similarly skewed to the plus side. The 20 top-performing equity CEFs posted returns at or above 4.31%, while the 20 lagging equity CEFs were at or below minus 0.16%.

For the month only 20 CEFs in the equity universe posted negative returns. Four of the five worst performing funds

CLOSED-END FUNDS LAB

TABLE 1 CURRENT-MONTH PERFORMANCE, P&D, P&D SHIFTS (% OF UNIVERSE)

	NAV RETURNS POSITIVE	PREMIUM/DISCOUNT		NOW TRADING AT	
		BETTER	WORSE	PREMIUM	DISCOUNT
Equity Funds	92	60	35	12	86
Bond Funds	99	39	59	21	79
ALL CEFs	**96**	**48**	**49**	**17**	**82**

TABLE 2 AVERAGE NAV RETURNS, SELECTED PERIODS (%)

	FEBRUARY	YTD	3-MONTH	CALENDAR-2016
Equity Funds	2.06	4.76	6.66	11.72
Bond Funds	1.18	2.27	3.87	6.66
ALL CEFs	**1.57**	**3.37**	**5.11**	**8.90**

TABLE 3 NUMBER OF IPOs, SELECTED 12-MONTH PERIODS

	FEBRUARY 2017	CALENDAR-2016
ALL CEFs	**20**	**18**

TABLE 4 AVERAGE SIZE OF IPOs, SELECTED PERIODS, $MIL

3 MONTHS THROUGH 1/31/2017	423
COMPARABLE YEAR-EARLIER 3 MONTHS	227
CALENDAR 2016 AVERAGE	348

Source: Thomson Reuters Lipper

were housed in the domestic equity CEFs macro-group, with **RENN Fund, Inc. (RCG,** warehoused in the Global CEFs classification) at the bottom of the pile, shedding 5.36% of its January-closing NAV price and traded at a 13.21% discount on February 28. **ASA Gold & Precious Metals Limited (ASA**, housed in the Sector Equity CEFs classification) posted the next poorest return in the equity universe, declining 4.65%. ASA traded at an 11.80% discount at month-end.

On concerns of an overheated market during the month and a resulting short flight to safety just before President Trump addressed the joint session of Congress, the ten-year Treasury yield bounced from 2.45% at January month-end to an intra-month closing high of 2.51% on February 15, then back to an intermonth closing low of 2.31% on February 24 before closing at 2.36% on February 28. For the third month in a row domestic taxable bond CEFs (+1.32%) posted a plus-side return on average but were bettered by world income CEFs (+2.25%), which benefitted from strong performance from Emerging Markets Debt CEFs (+2.94%) and Global Income CEFs (+1.88%). For the third consecutive month municipal bond CEFs (+0.94%) posted a return in the black on average.

Investors continued their search for yield, bidding up world income CEFs and high-yield instruments in February. The domestic fixed income CEFs macro-group was relatively slowed by Loan Participation CEFs (+0.83%) and U.S. Mortgage CEFs (+0.96%). At the top of the domestic taxable bond CEFs universe were High Yield CEFs (Leveraged) (+1.71%), High Yield CEFs (+1.59%), and General Bond CEFs (+1.49%).

For the third month running all Lipper municipal debt CEF classifications posted returns in the black. High Yield Municipal Debt CEFs (+1.25%) and New York Municipal Debt CEFs (+0.97%) posted the strongest returns in the group, while Pennsylvania Municipal Debt CEFs (+0.73%) was the relative laggard. Single-state municipal debt CEFs (+0.90%) underperformed their national municipal debt CEF counterparts (+0.97%) by just seven basis points.

The three top-performing individual CEFs in the fixed income universe were housed in Lipper's Emerging Markets Debt CEFs classification, with **Stone Harbor Emerging Markets Total Income Fund (EDI),** returning 4.53% and traded at a 1.25% premium on February 28, jumping to the top of the charts. Following EDI were **Stone Harbor Emerging Markets Income Fund (EDF),** returning 4.05% and traded at a 6.46% premium at month-end, and **Templeton Emerging Markets Income Fund (TEI),** posting a 3.56% return and traded at an 8.37% discount on February 28. Following this group were **Franklin Universal Trust (FT,** housed in the High Yield CEFs [Leveraged] classification), tacking 3.22% onto its January month-end value and traded at a 12.38% discount on February 28, and **PIMCO Corporate & Income Opportunity Fund (PTY,** housed in the General Bond CEFs classification), returning 3.21% and traded at a 10.69% premium at month-end.

For the remaining funds in the fixed income CEFs universe monthly NAV-basis performance ranged from minus 2.47% for **Eaton Vance Tax-Advantaged Bond and Option Strategies Fund (EXD,** housed in Lipper's General & Insured Municipal Debt CEFs [Leveraged] classification), traded at an 8.16% discount on February 28, to 2.93% for **PIMCO High Income Fund (PHK,** housed in Lipper's General Bond CEFs classification), traded at a 33.98% premium at month-end. The 20 top-performing fixed income CEFs posted returns at or above 2.26, while the 20 lagging CEFs were at or below 0.49%. Only four fixed income CEFs witnessed negative NAV-based performance for February.

PREMIUM AND DISCOUNT BEHAVIOR

For February the median discount of all CEFs widened 20 bps to 5.95%—better than the 12-month moving average discount (6.41%). Equity CEFs' median discount narrowed 38 bps to 8.41%, while fixed income CEFs' median discount widened 26 bps to 4.97%. World income CEFs' median discount witnessed the largest narrowing of discounts in the CEFs universe, 113 bps to 6.32%, while the municipal bond CEFs macro-classification witnessed the largest widening of discounts—91 bps to 4.39%.

For the month 48% of all funds' discounts or premiums improved, while 49% worsened. In particular, 60% of equity funds and 39% of fixed income funds saw their individual discounts narrow, premiums widen, or premiums replace discounts. The number of funds traded at premiums on February 28 (89) was 5 less than on January 31.

CEF EVENTS AND CORPORATE ACTIONS

IPOs

There were no new CEF IPOs in February.

RIGHTS, REPURCHASES, TENDER OFFERS

Virtus Total Return Fund (DCA) announced it has commenced a tender offer to acquire for cash up to 40% of the fund's outstanding shares at a price equal to 99% of its net asset value (NAV) per share as of the close of regular trading on the New York Stock Exchange (NYSE) on March 15, 2017, the date the tender offer expires. If more than 40% of the fund's outstanding shares are tendered, the fund will purchase shares from tendering shareholders on a prorate basis. In connection with the tender offer the fund temporarily suspended its open-market purchases of shares pursuant to its share repurchase program until on or about ten business days after the termination of the tender offer, as required by the Securities Exchange Act of 1934 as amended.

Western Asset Middle Market Income Fund Inc. (XWMFX) announced that the fund's board of directors has approved a tender offer to purchase for cash up to 2.5% of the fund's outstanding common shares. The tender offer will be conducted at a price equal to the fund's NAV per common share on the day on which the tender offer expires. The fund intends to commence its tender offer on or about March 7, 2017, with the expiration of the tender offer currently expected to be April 5, 2017.

MERGERS AND REORGANIZATIONS

Guggenheim Investments announced that shareholders of several equity CEFs approved the mergers of **Guggenheim Enhanced Equity Strategy Fund (GGE)** and **Guggenheim Equal Weight Enhanced Equity Income Fund (GEQ)** into **Guggenheim Enhanced Equity Income Fund (GPM).** Shareholders of GPM also approved a redomestication of GPM from a Massachusetts business trust to a Delaware statutory trust. Subject to the satisfaction of certain customary closing conditions, the mergers were expected to be effective with the open of the NYSE on March 20, 2017. The mergers, if completed, will occur based on the relative NAVs of GGE, GEQ, and GPM. The mergers are intended to provide potential benefits to common shareholders, including lower operating expenses and greater secondary market liquidity among other things.

The boards of trustees and directors of **Virtus Total Return Fund (DCA)** and **The Zweig Fund, Inc. (ZF)** announced the proposed merger of DCA into ZF, subject to approval by each fund's shareholders. The combined fund will adopt the name Virtus Total Return Fund Inc. and retain the "ZF" ticker symbol. The proposed merger is a result of each board's ongoing assessment of the respective fund and its competitive positioning in the current market environment. Shareholders of both funds will be asked to approve the proposed reorganization at special meetings scheduled for March 7, 2017.

OTHER

JPMorgan China Region Fund, Inc. (JFC) announced that the board of directors of the fund has determined to submit a proposal to liquidate the fund to a vote of all shareholders at the fund's next annual meeting of shareholders, scheduled to be held on May 11,2017. If shareholders vote to approve the proposal, proceeds will be paid to shareholders pursuant to a plan of liquidation. Shareholders should note that any proceeds attributable to the fund's investments in China A-shares may be repatriated only under certain conditions, including clearance from the People's Republic of China tax authorities and upon the approval of the Chinese State Administration of Foreign Exchange. Such proceeds will be distributed to shareholders only upon such approvals being granted, the timing of which is unclear. In the interest of expediting this process the fund has already commenced discussions with its tax advisors in relation to the repatriation process.

Firsthand Technology Value Fund, Inc. (SVVC), a publicly traded venture capital fund that invests in technology and cleantech companies, announced that Turn, a holding of the fund since 2013, has agreed to be acquired by Amobee, a subsidiary of Singtel and one of the largest mobile network operators in Singapore. Amobee announced it has signed an agreement to acquire Turn, an advertising technology company, at an enterprise value of $310 million. The acquisition of Turn will be the fund's fourth M&A exit in the past 13 months, following Gilt Groupe, Tapad, and Mattson Technology in 2016. Closing of the transaction is subject to regulatory approval as well as other standard closing conditions and is currently expected in the first half of this year. Turn is one of the fund's largest investments, representing 5.6% of the fund's net assets as of September 30, 2016. The fund's initial investment in Turn was made in December 2013, and SVVC has invested a total of approximately $15.6 million in the company. The fund's final proceeds from the sale have not yet been determined, but SVVC currently expects the fund may realize a nominal gain on the investment. More details will be made public as they become available.

Lipper Classification	Average of 1Mo Nav	Average of 1 Mo Mkt	Average of Feb P/D	Average of Jan P/D	Average of 1 Mo P/D chg	Average of YTD NAV Change	Average of YTD Mkt Change	Average of YTD P/D Change (%)
California Municipal Debt Funds	0.52%	-0.59%	-0.83%	0.31%	-1.14%	0.94%	2.16%	1.20%
Convertible Securities Funds	1.71%	3.09%	-6.24%	-7.52%	1.28%	3.73%	7.47%	3.31%
Core Funds	2.04%	2.90%	-8.51%	-10.41%	0.72%	3.34%	4.88%	1.04%
Corporate BBB-Rated Debt Funds(Leveraged)	0.92%	1.97%	-6.84%	-7.80%	0.96%	1.91%	2.95%	0.94%
Corporate Debt Funds BBB-Rated	0.73%	1.71%	-4.01%	-4.97%	0.96%	0.95%	1.24%	0.48%
Developed Market Funds	2.04%	2.88%	-11.70%	-12.41%	0.71%	6.21%	7.88%	1.37%
Emerging Markets Funds	2.66%	3.02%	-12.88%	-13.18%	0.30%	7.24%	7.78%	0.30%
Emerging Mrkts Hard Currency Debt Funds	2.47%	2.47%	-4.20%	-5.26%	-0.12%	4.17%	7.12%	2.50%
Energy MLP Funds	-0.30%	1.82%	-3.05%	-5.13%	2.08%	2.24%	7.27%	4.57%
General & Insured Muni Debt Funds (Leveraged)	0.52%	-0.48%	-2.61%	-1.58%	-1.03%	0.75%	2.16%	1.32%
General & Insured Muni Fds (Unleveraged)	0.43%	-0.38%	-2.97%	-2.17%	-0.80%	0.53%	2.05%	1.45%
General Bond Funds	1.01%	0.72%	-1.83%	-1.42%	-0.41%	2.70%	3.43%	1.65%
Global Funds	1.73%	2.13%	-8.93%	-9.22%	0.28%	4.90%	7.02%	1.70%
Global Income Funds	1.22%	1.52%	-3.51%	-3.77%	0.26%	2.51%	4.71%	2.09%
Growth Funds	1.46%	5.83%	-16.70%	-12.10%	1.10%	0.17%	-1.52%	-1.60%
High Yield Funds	0.90%	1.81%	-5.82%	-7.11%	0.82%	1.99%	4.47%	2.10%
High Yield Funds (Leveraged)	1.14%	1.24%	-5.85%	-5.94%	0.09%	2.63%	3.48%	0.79%
High Yield Municipal Debt Funds	0.81%	0.27%	-2.63%	-2.14%	-0.49%	1.14%	2.81%	1.58%
Income & Preferred Stock Funds	1.80%	1.55%	-4.17%	-3.70%	-0.42%	3.33%	4.00%	0.17%
Intermediate Municipal Debt Funds	0.49%	-0.76%	-4.20%	-2.95%	-1.25%	0.86%	0.34%	-0.60%
Loan Participation Funds	0.41%	1.24%	-1.73%	-2.17%	0.44%	0.89%	2.70%	1.20%
Natural Resources Funds	-1.80%	-0.99%	-6.41%	-7.21%	0.80%	-1.56%	1.59%	2.95%
New Jersey Municipal Debt Funds	0.49%	0.24%	-4.99%	-4.68%	-0.31%	0.28%	1.14%	0.66%
New York Municipal Debt Funds	0.59%	-1.01%	-3.71%	-1.96%	-1.75%	0.77%	1.58%	0.72%
Options Arbitrage/Opt Strategies Funds	1.73%	2.29%	-3.07%	-3.45%	0.38%	3.89%	6.72%	2.72%
Other States Municipal Debt Funds	0.50%	0.36%	-4.02%	-3.89%	-0.13%	0.56%	2.04%	1.40%
Pacific Ex Japan Funds	1.56%	1.59%	-12.68%	-12.70%	0.02%	8.75%	8.70%	-0.04%
Pennsylvania Municipal Debt Funds	0.35%	-1.25%	-7.15%	-5.58%	-1.57%	0.33%	0.14%	-0.45%
Real Estate Funds	1.38%	1.87%	-7.48%	-7.01%	-0.48%	2.01%	5.05%	1.95%
Sector Equity Funds	2.48%	2.56%	-5.91%	-5.33%	-0.59%	6.13%	8.68%	1.73%
U.S. Mortgage Funds	0.45%	1.20%	-3.27%	-4.17%	0.90%	1.37%	1.59%	0.40%
Utility Funds	2.75%	1.74%	-3.91%	-2.86%	-1.05%	4.47%	7.12%	2.35%
Value Funds	2.41%	2.10%	-9.04%	-8.40%	-0.64%	3.58%	5.93%	1.34%

Top 5 Performing CEFs

LIPPER

Fund Name	Category	Ticker Symbol	1-Month NAV Change	Rank
Tekla World Healthcare	Sector Equity Funds	XTHWX	6.2%	1
Morg Stan India Inv	Emerging Markets Funds	XIIFX	5.9%	2
Tekla Life Sciences Inv	Sector Equity Funds	XHQLX	5.7%	3
India Fund	Emerging Markets Funds	XIFNX	5.6%	4
Tekla Healthcare Opps	Sector Equity Funds	XTHQX	5.4%	5

Fund Name	Category	Ticker Symbol	Year-to-Date NAV Change	Rank
RENN Fund	Global Funds		17.8%	1
Morg Stan India Inv	Emerging Markets Funds	XIIFX	13.1%	2
Aberdeen Singapore Fund	Developed Market Funds	XSGFX	12.1%	3
Aberdeen Latin America	Emerging Markets Funds	XLAQX	11.2%	4
Tekla Healthcare Opps	Sector Equity Funds	XTHQX	11.1%	5

Fund Name	Category	Ticker Symbol	1-Month Market Change	Rank
Eagle Point Credit	Loan Participation Funds		8.5%	1
Firsthand Technology Val	Sector Equity Funds	XSVCX	8.4%	2
Tekla Healthcare Invest	Sector Equity Funds	XHQHX	7.6%	3
Kayne Anderson MLP	Energy MLP Funds	XKYNX	7.4%	4
DTF Tax-Free Income	General & Insured Muni Debt Funds (Leveraged)	XDTFX	7.0%	5

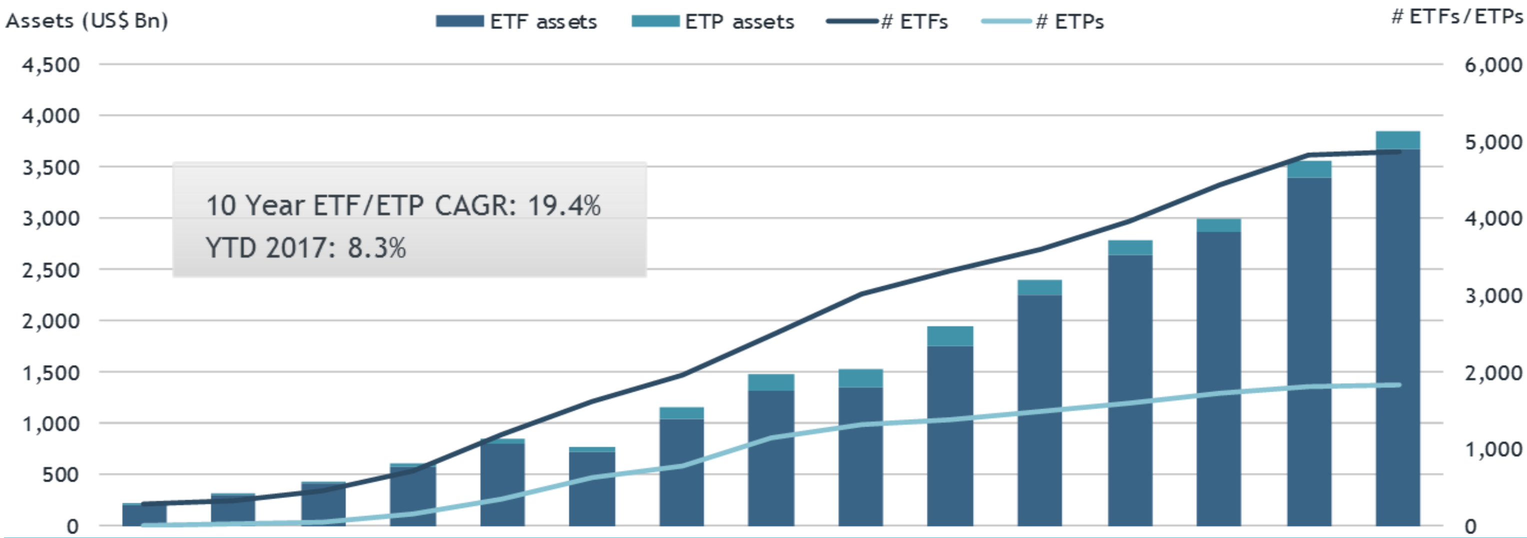
Fund Name	Category	Ticker Symbol	Year-to-Date Market Change	Rank
PIMCO Gl StksPLUS & Inc	Options Arbitrage/Opt Strategies Funds	XPGPX	23.4%	1
Goldman Sachs MLP&En Ren	Energy MLP Funds	XGERX	18.5%	2
Tekla Healthcare Invest	Sector Equity Funds	XHQHX	15.4%	3
JPMorgan China Region	Emerging Markets Funds		14.3%	4
Tekla Healthcare Opps	Sector Equity Funds	XTHQX	13.9%	5

Fund Name	Category	Ticker Symbol	1-Month P/D Change	Rank
DTF Tax-Free Income	General & Insured Muni Debt Funds (Leveraged)	XDTFX	6.4%	1
Tortoise Energy Inf Corp	Energy MLP Funds	XTYGX	5.6%	2
Westn Asst Mtge Def Opp	U.S. Mortgage Funds	XDMOX	5.4%	3
Kayne Anderson MLP	Energy MLP Funds	XKYNX	5.1%	4
Tortoise Energy Indpndce	Natural Resources Funds	XNDPX	5.1%	5

Fund Name	Category	Ticker Symbol	Year-to-Date P/D Change	Rank
PIMCO Gl StksPLUS & Inc	Options Arbitrage/Opt Strategies Funds	XPGPX	24.6%	1
Fiduciary/Clay MLP Opp	Energy MLP Funds	XFMOX	11.2%	2
DTF Tax-Free Income	General & Insured Muni Debt Funds (Leveraged)	XDTFX	9.7%	3
Kayne Anderson Enrgy TR	Energy MLP Funds	XKYEX	9.1%	4
PIMCO Strat Income	Global Income Funds	XRCSX	8.3%	5

Global ETF and ETP asset growth as at end of February 2017

At the end of February 2017, the Global ETF industry had 4,874 ETFs, with 10,143 listings, assets of US$3,680 Bn, from 263 providers on 63 exchanges. At the end of February 2017, the Global ETF/ETP industry had 6,699 ETFs/ETPs, with 12,646 listings, assets of US$3,844 Bn, from 299 providers on 65 exchanges.



Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Feb-17
# ETFs	289	335	451	725	1,184	1,614	1,962	2,470	3,019	3,324	3,591	3,963	4,426	4,812	4,874
# ETFs/ETPs	304	365	507	888	1,545	2,239	2,741	3,611	4,334	4,710	5,083	5,555	6,147	6,634	6,699
ETF assets	212	310	417	580	807	716	1,041	1,313	1,355	1,754	2,254	2,643	2,870	3,396	3,680
ETF/ETP assets	218	319	426	603	857	774	1,158	1,478	1,526	1,949	2,398	2,784	2,993	3,548	3,844

Summary for ETFs/ETPs: Global

ETFGI, the leading independent research and consultancy firm on trends in the global ETF/ETP ecosystem, reported today following on from January's strong start to the year assets invested in ETFs/ETPs listed globally reached a new record high of US$3.844 trillion at the end February 2017 surpassing the prior record of US$3.689 trillion set at the end of January 2017.

ETFs/ETPs gathered a record level of US$68.29 billion in net inflows in February, marking the 37th consecutive month or over 3 years of net inflows and a record US$130.99 billion in year to date net inflows, according to preliminary data from ETFGI's February 2017 global ETF and ETP industry insights report.

Record levels of assets under management were reached at the end of February 2017 for ETFs/ETPs listed globally at US$3.844 trillion, in the United States at US$2.758 trillion, in Europe at US$620 billion, in Asia Pacific ex Japan at US$136 billion, Japan at USD198 billion and in Canada at US$91 billion.

At the end of February 2017, the Global ETF/ETP industry had 6,699 ETFs/ETPs, with 12,646 listings, assets of US$3,844 Bn, from 298 providers listed on 65 exchanges in 53 countries.

"The US equity market performed strongly in February with the S&P 500 up 3.97% and the DJIA was up 5.17%. International equity markets continued to perform well in February with the S&P Developed Ex-U.S. BMI up 1.42% while the S&P Emerging BMI was up 3.46%.

There are significant upcoming political and economic events that investors will be watching in Europe in the next two months: the first round of the French election, a Dutch general election, the beginning of the U.K.'s "Brexit" negotiations and, officials from the EU and the IMF are once again locked in negotiations over the Greek bailout," according to Deborah Fuhr, managing partner and co-founder of ETFGI.

In February 2017, ETFs/ETPs gathered a record level net inflows of US$68.29 Bn. Equity ETFs/ETPs gathered US$44.59 Bn a record level of net inflows for February, followed by fixed income ETFs/ETPs with US$14.38 Bn, and commodity ETFs/ETPs with US$6.01 Bn.

YTD through end of February 2017, ETFs/ETPs have gathered US$130.99 Bn a record amount of YTD net inflows. Equity ETFs/ETPs gathered the largest and a record level of YTD net inflows with US$90.62 Bn, followed by fixed income ETFs/ETPs with a record level of YTD US$27.51 Bn, and commodity ETFs/ETPs with a record level of YTD US$7.57 Bn.

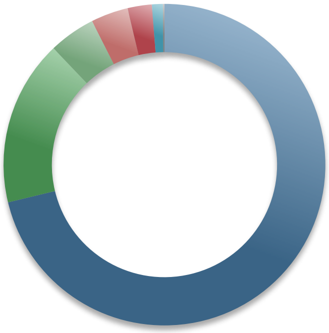
iShares gathered the largest net ETF/ETP inflows in February with US$18.85 Bn, followed by Vanguard with US$13.23 Bn and SPDR ETFs with US$10.12 Bn net inflows. YTD, iShares gathered the largest net ETF/ETP inflows YTD with US$38.04 Bn, followed by Vanguard with US$29.17 Bn and SPDR ETFs with US$12.42 Bn net inflows.

Source: ETFGI data sourced from ETF/ETP sponsors, exchanges, regulatory filings, Thomson Reuters/Lipper, Bloomberg, publicly available sources, and data generated by our in-house team.
Note: "ETFs" are typically open-end index funds that provide daily portfolio transparency, are listed and traded on exchanges like stocks on a secondary basis as well as utilising a unique creation and redemption process for primary transactions. "ETPs" refers to other products that have similarities to ETFs in the way they trade and settle but they do not use a mutual fund structure. The use of other structures including grantor trusts, partnerships, notes and depositary receipts by ETPs can create different tax and regulatory implications for investors when compared to ETFs which are funds.

Global ETF/ETP Assets Summary

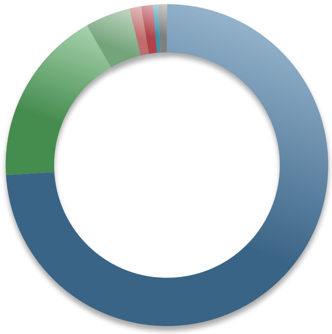
etfgi.com

ETF/ETP assets by region listed



Region	# ETFs/ ETPs	Assets (US$ Bn)	% total
US	1,995	$2,758.4	71.8%
Europe	2,233	$619.7	16.1%
Japan	180	$198.0	5.2%
Asia Pacific (ex-Japan)	986	$136.5	3.6%
Canada	474	$90.6	2.4%
Middle East and Africa	785	$35.3	0.9%
Latin America	46	$5.1	0.1%
Total	**6,699**	**$3,843.7**	**100.0%**

ETF/ETP assets by asset class



Asset class	# ETFs/ ETPs	Assets (US$ Bn)	% total
Equity	3,668	$2,926.2	76.1%
Fixed Income	956	$626.7	16.3%
Commodities	696	$157.8	4.1%
Active	327	$47.5	1.2%
Leveraged	392	$39.2	1.0%
Leveraged Inverse	189	$16.5	0.4%
Others	471	$29.8	0.8%
Total	**6,699**	**$3,843.7**	**100.0%**

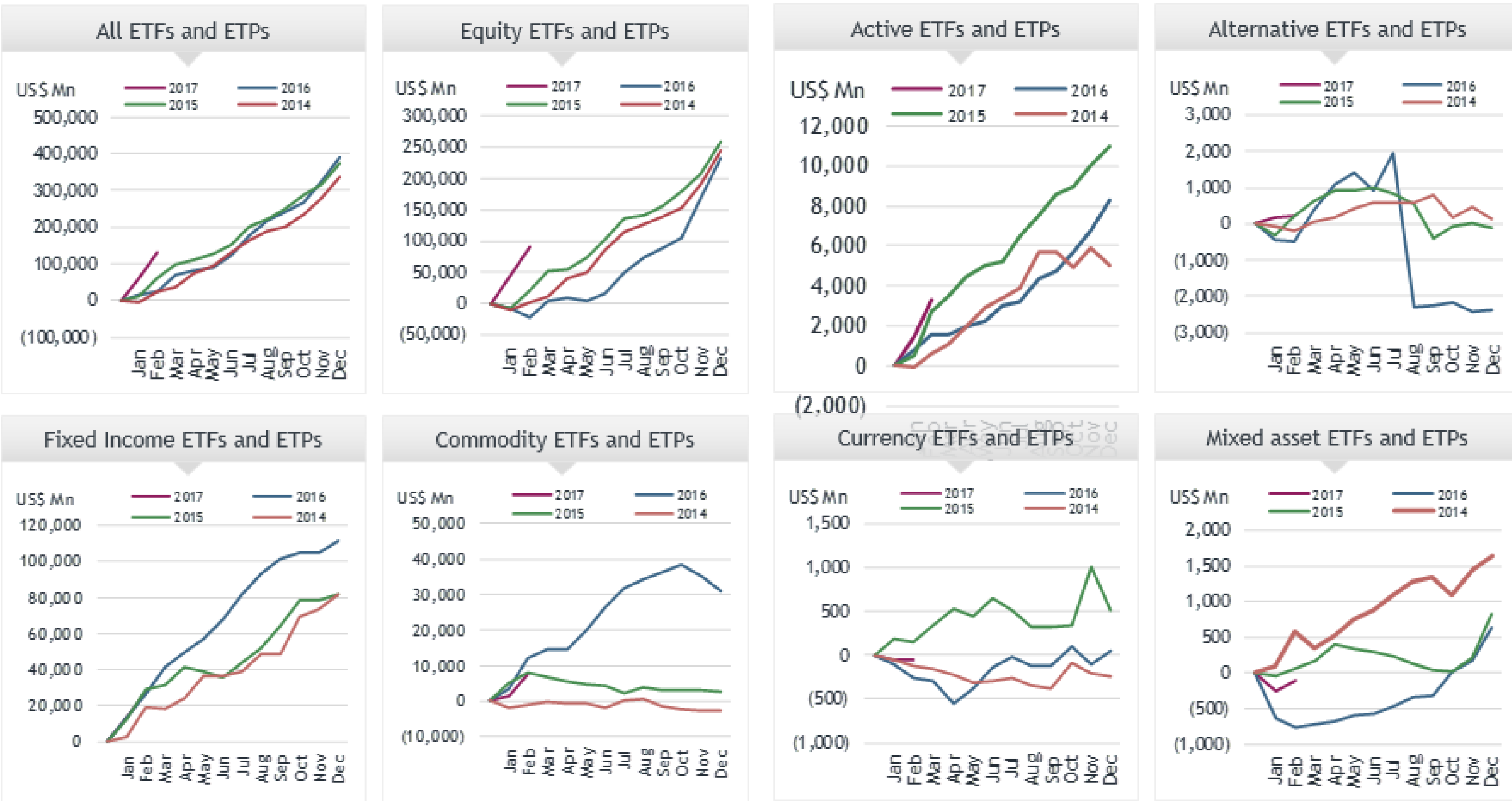
ETF/ETP assets by product structure

Asset class	# ETFs/ ETPs	Assets (US$ Bn)	% total
ETF	4,874	$3,679.8	95.7%
ETP	1,825	$163.8	4.3%
Total	**6,699**	**$3,843.7**	**100.0%**

Source: ETFGI data sourced from ETF/ETP sponsors, exchanges, regulatory filings, Thomson Reuters/Lipper, Bloomberg, publicly available sources, and data generated by our in-house team.

Source: ETFGI data sourced from ETF/ETP sponsors, exchanges, regulatory filings, Thomson Reuters/Lipper, Bloomberg, publicly available sources, and data generated by our in-house team. Note: This report is based on the most recent data available at the time of publication. Asset and flow data may change slightly as additional month-end data becomes available.

YTD 2017 vs 2016, 2015, 2014 ETF and ETP net new assets by asset class: Global



ETFs and ETPs listed globally gathered net inflows of $68,292 Mn in February. Year to date, net inflows stand at $130,994 Mn. At this point last year there were net inflows of $24,557 Mn.

Equity ETFs/ETPs saw net inflows of $44,592 Mn in February, bringing year to date net inflows to $90,621 Mn, which is greater than the net outflows of $21,419 Mn over the same period last year.

Fixed income ETFs and ETPs experienced net inflows of $14,381 Mn in February, growing year to date net inflows to $27,514 Mn, which is greater than the same period last year which saw net inflows of $26,779 Mn.

Commodity ETFs/ETPs accumulated net inflows of $6,011 Mn in February. Year to date, net inflows are at $7,571 Mn, compared to net inflows of $12,208 Mn over the same period last year.

Actively managed products saw net inflows of $1,849 Mn in February, bringing year to date net inflows to $3,330 Mn, which is greater than the net inflows of $1,515 Mn over the same period last year.

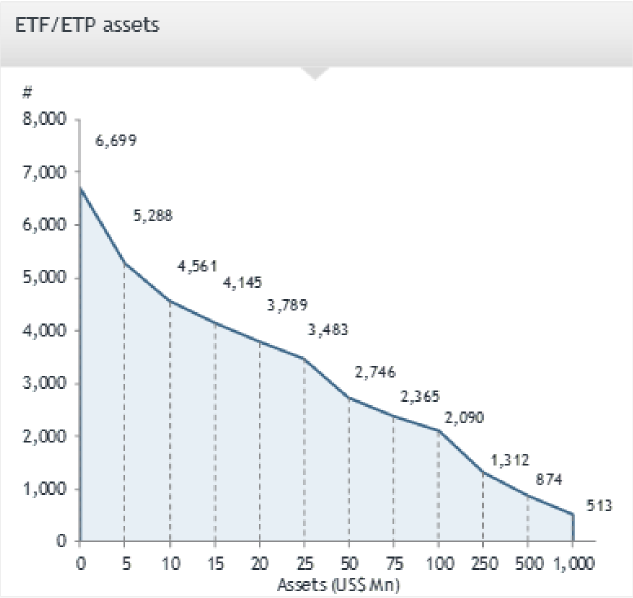
Products tracking alternative indices experienced net inflows of $56 Mn in February, growing year to date net inflows to $235 Mn, which is greater than the same period last year which saw net outflows of $490 Mn.

Currency products accumulated net inflows of $7 Mn in February. Year to date, net outflows are at $56 Mn, compared to net outflows of $262 Mn over the same period last year.

Products holding more than one asset class saw net inflows of $152 Mn in February, bringing year to date net outflows to $101 Mn, which is greater than the net outflows of $763 Mn over the same period last year.

Source: ETFGI data sourced from ETF/ETP sponsors, exchanges, regulatory filings, Thomson Reuters/Lipper, Bloomberg, publicly available sources, and data generated by our in-house team.
Note: This report is based on the most recent data available at the time of publication. Asset and flow data may change slightly as additional month-end data becomes available.

Distribution of ETFs/ETPs by size



Assets greater than (US$ Mn)	# ETFs/ ETPs	% total	Total assets (US$ Bn)	% total
0	6,699	100.0%	3,837	100.0%
5	5,288	78.9%	3,834	99.9%
10	4,561	68.1%	3,829	99.8%
15	4,145	61.9%	3,824	99.7%
20	3,789	56.6%	3,818	99.5%
25	3,483	52.0%	3,811	99.3%
50	2,746	41.0%	3,784	98.6%
75	2,365	35.3%	3,761	98.0%
100	2,090	31.2%	3,737	97.4%
250	1,312	19.6%	3,613	94.2%
500	874	13.0%	3,458	90.1%
1,000	513	7.7%	3,200	83.4%

513 ETFs/ETPs have greater than US$1 Bn in assets, while 2,090 have greater than US$100 Mn in assets and 2,746 have greater than US$50 Mn in assets. The 513 ETFs/ETPs with greater than US$1 Bn in assets hold a combined total of US$3,200 Bn, or 83.4%, of Global ETF/ETP assets.

ETF/ETP underlying benchmarks: developed equity

Top 20 by assets

Name	Assets (US$ Mn) Feb-17	NNA (US$ Mn) Feb-17	NNA (US$ Mn) YTD 2017
S&P 500 Index	473,518	4,611	7,459
Nikkei 225 Index	91,296	2,061	5,592
TOPIX Index	82,914	3,860	8,972
MSCI EAFE Index	77,851	1,011	1,986
CRSP US Total Market Index	75,642	1,102	2,127
S&P Mid Cap 400 Index	61,685	1,828	4,006
NASDAQ 100 Index	50,827	341	(362)
Russell 2000 Index	40,792	(1,542)	(2,539)
Russell 1000 Value Index	38,064	611	647
MSCI US REIT Index	35,254	615	1,563
Russell 1000 Growth Index	34,809	400	(1,060)
MSCI Japan Index	30,748	193	698
S&P US 600 Small Cap Index	30,730	919	3,026
CRSP US Large Cap Value Index	29,899	891	1,682
MSCI World Index	28,063	396	1,011
S&P Financial Select Sector Index	25,467	1,309	1,407
CRSP US Large Cap Growth Index	24,608	420	(281)
NASDAQ Dividend Achievers Select Index	23,717	29	(48)
DAX Index	19,388	(96)	(144)
MSCI EAFE IMI Index USD	18,682	389	2,138

Top 20 by monthly net inflows

Name	Assets (US$ Mn) Feb-17	NNA (US$ Mn) Feb-17	NNA (US$ Mn) YTD 2017
S&P 500 Index	473,518	4,611	7,459
TOPIX Index	82,914	3,860	8,972
Nikkei 225 Index	91,296	2,061	5,592
S&P Mid Cap 400 Index	61,685	1,828	4,006
S&P Health Care Select Sector Index	16,265	1,526	1,347
S&P Financial Select Sector Index	25,467	1,309	1,407
CRSP US Total Market Index	75,642	1,102	2,127
MSCI EAFE Index	77,851	1,011	1,986
S&P US 600 Small Cap Index	30,730	919	3,026
CRSP US Large Cap Value Index	29,899	891	1,682
MSCI US REIT Index	35,254	615	1,563
Russell 1000 Value Index	38,064	611	647
JPX-Nikkei Index 400	6,453	595	935
MSCI EMU index	14,621	562	1,261
S&P Technology Select Sector Index	16,831	491	1,159
S&P 1500 Index	7,521	462	831
Alerian MLP Infrastructure Index	13,421	434	824
CRSP US Large Cap Growth Index	24,608	420	(281)
CRSP US Small Cap Index	17,689	415	825
Russell 1000 Growth Index	34,809	400	(1,060)

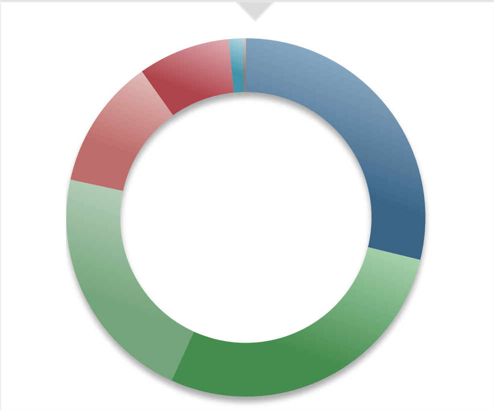
Source: ETFGI data sourced from ETF/ETP sponsors, exchanges, regulatory filings, Thomson Reuters/Lipper, Bloomberg, publicly available sources, and data generated by our in-house team.

Year to Date ETF / ETP Product Launches

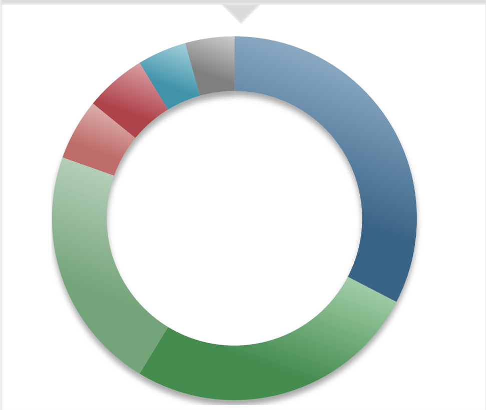
etfgi.com

2017 ETF/ETP product launches

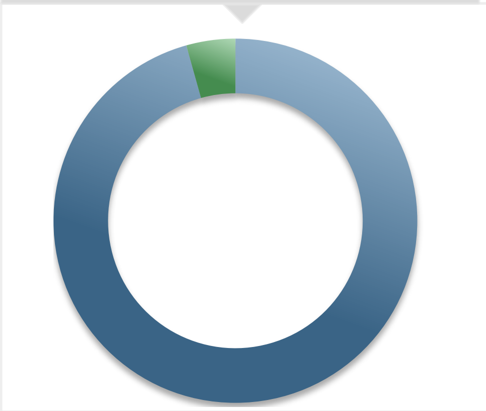
ETFs/ETPs by region listed



ETFs/ETPs by asset class



ETFs/ETPs by product structure



Region	# ETFs/ETPs	% total
US	30	32.6%
Canada	26	28.3%
Europe	18	19.6%
Asia Pacific (ex-Japan)	16	17.4%
Middle East and Africa	1	1.1%
Japan	1	1.1%
Total	**760**	**100.0%**

Asset class	# ETFs/ETPs	% total
Active	30	32.6%
Fixed income	24	26.1%
Equity	20	21.7%
Mixed	5	5.4%
Leveraged Inverse	5	5.4%
Leveraged	4	4.3%
Others	4	4.3%
Total	**92**	**100.0%**

Structure	# ETFs/ETPs	% total
ETF	88	95.7%
ETP	4	4.3%
Total	**92**	**100.0%**

Source: ETFGI, Bloomberg, ETF/ETP providers.

Please visit www. Etfgi.com and contact deborah.fuhr@etfgi.com if you would like to subscribe to ETFGI's full monthly Global ETF and ETP industry insights reports containing over 300 pages of charts and analysis, ETFGI's Institutional Users of ETFs and ETPs report or a custom analysis.

FitchRatings

Rating Actions

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- **Fitch Withdraws 2 Nuveen Funds' VRDP Shares' S-T Ratings – January 26**
- **Fitch Rates Duff & Phelps Select Energy MLP Fund Preferred – February 8**
- **Fitch Rates Aberdeen Asia-Pacific Income Fund Notes 'AAA' – February 8**
- **Fitch Affirms 'AAA' Preferred Stock Rating of 4 PIMCO Corporate Closed-End Funds – February 16**
- **Fitch Affirms Legg Mason BW Global Income Opportunities Fund's Ratings – February 16**
- **Fitch Affirms Two Franklin Closed End Funds at 'AAA' – February 16**
- **Fitch Affirms Ratings of Preferred Shares Issued by 2 Eaton Vance CEFs – February 16**
- **Fitch Rates Preferred Shares of Nuveen Closed-End Fund - March 1**
- **Fitch Affirms Preferred Shares Issued by 30 Nuveen Closed-End Funds – March 16**

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Joe Cramer of CNBC: *Why ETFs may be too risky*

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Bob Pisani of CNBC: *Money is gushing into the market — and one part of it in particular*

March 1, 2017
Brian Wesbury of First Trust: *Trump Speaks, Stocks Soar*

Diversifying Alpha with Strategy ETFs

January 2017

Authored by:
Ryan O. Issakainen, CFA
Senior Vice President
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Summary of 2016 ETF Flows and Trends[1]

» Total US-listed ETF Assets stood at $2.6 trillion at the end of 2016, a 19.6% increase from the end of 2015. Total estimated net flows for the year were a record $287 billion, outpacing flows in 2015 by $42 billion.

» Total Assets increased by more than 25% in four ETF categories, including Commodities ETFs (+31.7%), Municipal Bond ETFs (+29.7%), US Equity ETFs (+26.5%), and Taxable Bond ETFs (+25.9%).

» US Equity ETFs and Taxable Bond ETFs dominated estimated net asset flows in 2016, bringing in $140 billion and $86 billion, respectively. No ETF category had estimated net outflows in 2016.

Table 1

US Category Group	Total US-Listed ETF Assets (12/31/16)	Total Assets: Year-over-year % increase	2016 Estimated Net Asset Flows	Q4 2016 Estimated Net Asset Flows	Previous Quarter Estimated Net Asset Flows (Q3 2016)
Allocation	$9,868,464,933	15.1%	$1,013,934,750	$965,690,934	$630,648,946
Alternative	$43,112,630,485	-1.8%	$3,286,855,221	($2,823,777,912)	$2,075,339,223
Commodities	$60,823,149,955	31.7%	$10,411,296,549	($7,351,712,270)	$1,497,278,635
International Equity	$457,130,312,234	3.4%	$10,935,712,662	$15,112,621,448	$4,864,292,395
Municipal Bond	$23,767,700,031	29.7%	$6,330,669,794	$1,338,763,108	$1,782,606,832
Sector Equity	$346,447,954,373	15.8%	$29,715,030,157	$22,101,271,205	$9,290,945,224
Taxable Bond	$422,796,713,212	25.9%	$85,538,592,247	$12,874,401,594	$27,299,337,049
US Equity	$1,191,116,728,617	26.5%	$140,119,390,271	$84,628,383,031	$45,621,978,224
Total	**$2,555,063,653,840**	**19.6%**	**$287,351,481,651**	**$126,845,641,138**	**$93,062,426,528**

Source: Morningstar, as of 12/31/16. Includes all US-listed exchange-traded funds, exchange-traded notes and other exchange-traded products.

A Snapshot of Q4 2016 ETF Flows and Trends

» Estimated net inflows for US listed ETFs totaled $127 billion in Q4 2016, the largest quarter on record.

» The strongest category for estimated net asset flows was US Equity ETFs, with $84.6 billion in estimated net inflows, also setting a new high water mark. Sector Equity ETFs also posted a strong showing with $22.1 billion in estimated net inflows.

» Estimated net inflows into Taxable Bond ETFs totaled $12.8 billion in Q4, marking the weakest quarter in 2016.

» Commodities ETFs and Alternatives ETFs faced estimated net outflows in Q4, totaling $7.4 billion, and $2.8 billion, respectively.

Passively Managed Large-cap US Equity ETFs have Outperformed

Over the past decade, many investors have given up on actively managed mutual funds, particularly in asset classes generally considered most “efficient”, such as large-cap US stocks. This behavior has coincided with a long stretch of underperformance by actively managed large-cap US equity mutual funds, less than a third of which (31%) outperformed broad S&P benchmark indices during the 10-year period ending on 12/31/16.[2] Interestingly, during the same period, nearly two-thirds (65%) of passively managed large-cap US equity ETFs outperformed broad S&P benchmark indices.[3]

The fact that passively managed ETFs have tended to outperform—not only their actively managed counterparts, but also broad S&P benchmarks—may come as a surprise to some. It is, however, important to recognize that passively managed index funds track many different indices, guided by distinct strategies that determine portfolio holdings. Many of these strategies are designed to seek outperformance versus broad benchmarks, and apparently, several have been successful in doing so over the past decade.

Complementary Large-cap Strategies

Among the top 10 performing large-cap US equity ETFs over the past 10 years are two First Trust ETFs, which employ distinct—and we believe complementary—strategies: the First Trust Value Line® Dividend Index Fund (FVD) and the First Trust US Equity Opportunities ETF (FPX). On the one hand, FVD is a large-cap value ETF that tracks an index which selects stocks that have been screened for financial strength, low volatility, and an above average dividend yield. On the other hand, FPX is a large-cap growth ETF that tracks an index which selects stocks that have recently gone public, by means of either an initial public offering (IPO) or spin-off. While both ETFs have outperformed the S&P 500 Index over the past decade, they have done so by employing dissimilar strategies, which have tended to underperform in different market environments, making the two ETFs an especially interesting pair.

Table 2: 10-year Risk and Return Statistics (as of 12/31/16)

	Average Annual Returns	Standard Deviation	Beta	Upside Capture Ratio	Downside Capture Ratio	Alpha
FVD	8.19%	13.29%	0.82	86.50%	75.14%	2.20%
FPX	10.31%	18.55%	1.12	119.96%	109.02%	2.81%
S&P 500 Index	6.95%	15.28%	1.00	100.00%	100.00%	0.00%

Source: Morningstar. Past performance is not a guarantee of future results.

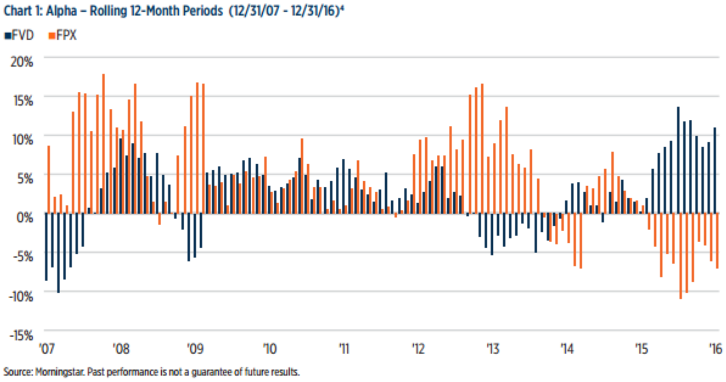
Diversifying Risk

There are several statistics that help illustrate the complementary performance of FVD and FPX over the past decade. For example, consider their respective market risk (or beta) and volatility (or standard deviation). While FPX had a higher beta and more volatile returns than the S&P 500 Index, FVD had a lower beta and less volatile returns than the S&P 500 Index. An investment advisor seeking to allocate a level of risk similar to that of the S&P 500 Index could have done so by blending an allocation between these two ETFs.

Another way to evaluate risk and return is to consider upside and downside capture ratios. The former measures returns relative to a benchmark during months when benchmark returns were positive, while the latter measures returns relative to a benchmark during months when benchmark returns were negative. Here again, we see a complementary pattern of returns as FPX captured nearly 120% of the S&P 500 Index’s upside, compared to just 86.5% for FVD; however, FVD greatly outperformed during months in which the S&P 500 Index was negative, capturing just 75.1% of the downside, compared to 109% for FPX.

Diversifying Alpha

As indicated in Table 2 above, both FVD and FPX successfully produced better risk-adjusted returns (or positive alpha) than the S&P 500 Index over the past 10 years. In our opinion, this is particularly interesting when one considers the timing in which positive alpha was captured during rolling 12-month intervals (see Chart 1 below). In several 12-month periods, both ETFs produced positive alpha: FVD did so 73.4% of the time, and FPX did so 79.8% of the time. However, periods in which neither fund generated positive alpha were quite rare, occurring less than 4% of the time. Once again, we believe this bolsters the case for considering FVD and FPX as complementary holdings.



Minimal Portfolio Overlap

Finally, FVD and FPX have tended to have minimal portfolio overlap, since FVD's underlying index tends to select more seasoned stocks, while FPX's underlying index selects recently issued stocks. As of 12/31/16, the ETFs shared just one common holding. Moreover, the ETFs' underlying sector allocations tend to vary with one another. As of 12/31/16, the ETFs share an overweight or underweight bias relative to the S&P 500 Index in just 3 of 11 Global Industry Classification Standard (GICS) sectors.

While actively managed large-cap US equity mutual funds have struggled to consistently outperform benchmark indices over the past decade, a surprisingly high percentage of passively managed large-cap US equity index ETFs have been successful in doing so. However, even the most successful of these ETFs have faced multiple periods of short-term underperformance. For this reason, we believe that identifying complementary ETFs, which have provided both long-term outperformance, while also tending to underperform in different market environments—such as FVD and FPX—can be very useful for investors seeking to generate more consistent alpha.

1Based on Morningstar data, as of 12/31/16. Includes all exchange-traded funds, exchange-traded notes, and other exchange-traded products.
2Including actively-managed open-end funds classified by Morningstar as LargeCap Blend, Large-Cap Growth, or Large-Cap Value, with inception dates before 12/31/06. 26.5% (66/249) of US Large Cap Blend funds outperformed S&P 500 Index, 17.0% (52/306) of US Large-cap Growth funds outperformed S&P 500 Growth Index, and 54.9% (128/233) of US Large Cap Value funds compared to S&P 500 Value Index. This data does not include 664 mutual funds that either were liquidated or were merged into other funds during this period. If one were to assume that all 664 funds would have underperformed over the past 10 years (an unrealistic assumption in our opinion), the percentage of outperforming mutual funds would drop to just 17% (246/1452). According to Morningstar data.
3Including passively-managed ETFs classified by Morningstar as Large-Cap Blend, Large-Cap Growth, or Large-Cap Value, with inception dates before 12/31/06. 62% (13/21) of US Large Cap Blend ETFs outperformed S&P 500 Index, 50% (6/12) of US Large-cap Growth ETFs outperformed S&P 500 Growth Index, and 76% (16/21) of US Large Cap Value ETFs compared to S&P 500 Value Index. This data does not include 9 ETFs that either were liquidated or were merged into other funds during this period. If one were to assume that all 9 ETFs would have underperformed over the past 10 years (an unrealistic assumption, in our opinion), the percentage of outperforming ETFs would drop to 56%. According to Morningstar data.
4Alpha calculated in rolling 12-month periods, stepped forward 1-month, from 12/31/07-12/31/16.

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Solar remains a bright spot for silver demand

February 2017

Authored by:
Maxwell Gold
Director – Investment Strategy
ETF Securities

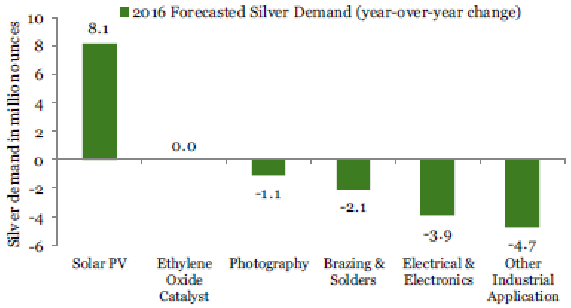
Summary

- Silver demand for solar panels is a growing segment of its industrial demand with record levels expected in 2018.
- Economies of scale and falling costs may make economics a key driver for growing US solar market beyond policy.
- International solar usage may spur growth amid climate controls and growing energy needs in India and China.

Global silver demand for solar set to rise

Silver's unique reflective and conductive properties make it a key component in capturing and generating electricity through sunlight. The fastest growing industrial segment for silver has been its use in photovoltaic (PV) panels for solar energy. This has resulting in demand for solar PV usage becoming a key component for the silver market (see Exhibit 1).

Exhibit 1: Silver demand for global solar PV remains a key growth segment of its industrial demand.



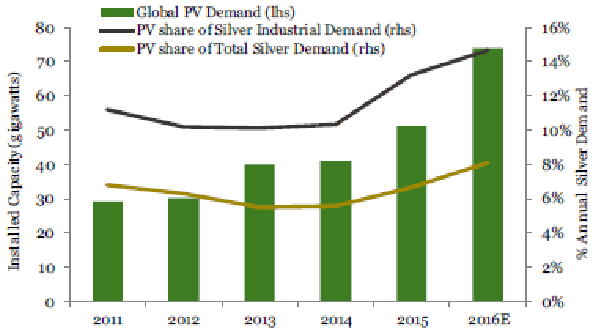
Source: GFMS Thomson Reuters, ETF Securities. Chart data as of 11/16/16

Global solar PV annual installed capacity is expected to steadily rise reaching 112 gigawatts by 2021, with a cumulative increase in PV electricity capacity of 506 gigawatts over the next 5 years (2016-2021) according to GTM Research. This should boost silver demand which uses about 2/3 ounce of metal per PV panel (see Exhibit 2).

According to a recent study CRU Consulting estimates strong growth in silver PV demand over the next 5 years with an annual average of 114 million ounces. Peak consumption of 148 million ounces is forecasted in 2018 - about twice that of 2015 demand.

In response to silver's 2011 price rally, a trend of thrifting has emerged among PV panel manufacturers. This trend of substituting the precious metal for less costly alternatives like copper, however, appears to have stabilized. Additionally, a lower amount of silver in each panel is likely to be offset by the anticipated rise in volume.

Exhibit 2: Silver demand rises with global PV capacity.



Source: GFMS Thomson Reuters, GTM Research, ETF Securities. Chart data as of 11/16/16

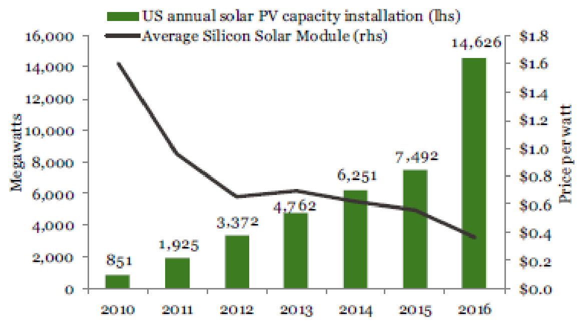
New technologies aimed at replacing silver-reliant silicon PV panels for other materials is a risk but silver's unique properties and process stability will likely keep it preferred among manufacturers.

Economics trump policy for US solar energy industry?

With the Trump administration's America First Energy Plan lacking any mention of renewable energy, many are questioning the outlook for US solar energy and the impact for silver demand. Policy and tax incentives remain important catalysts, but falling costs from improving technology coupled with rising economies of scale will likely grow as a determining factor as well.

In 2016, US solar PV capacity rose 95% to a record 14,626 megawatts as average panel costs continued to fall from $0.56 to $0.36/watt. This, along with technology and battery advancements, has helped improve solar's economic viability (see Exhibit 3).

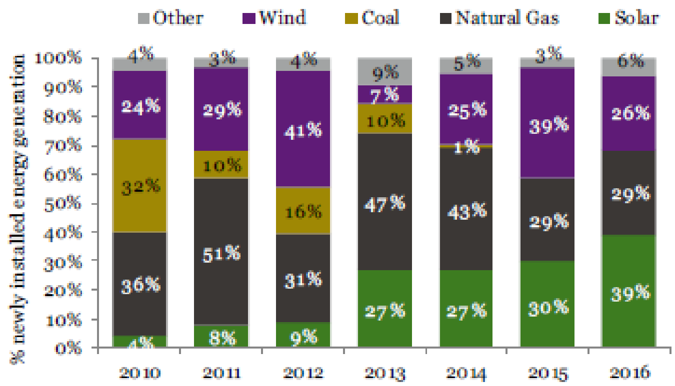
Exhibit 3: US solar PV capacity hits record as costs fall.



Source: GTM Research, SEIA, Bloomberg, ETF Securities. Chart data from 12/31/10 to 12/31/16

New electricity being built and installed in US continued its shift last year to three major sources: solar, natural gas, and wind (see Exhibit 4). According to the US Energy Information Administration, the levelized cost of energy (LCOE) - a primary cost metric for the utility industry- has seen a 40% cost reduction in solar. The LCOE for solar PV fell from \$130/megawatt (MWh) in 2014 to \$74/MWh in 2016 making headway against coal (\$95/MWh), natural gas (\$56/MWh), and wind (\$59/MWh). A major component of solar's competitiveness, however, has been the Investment Tax Credit (ITC), which if taken into account lowers solar PV's 2016 LCOE to \$58/MWh in line with other fuels.

Exhibit 4: New electricity generation in the US continues to shift to solar along with natural gas and wind.



Source: GTM Research, SEIA, ETF Securities. Chart data from 01/01/10 to 12/31/16

Part of last year's record surge in US PV capacity was due to the anticipated halt of the solar ITC at year-end. The ITC, however, was extended through 2019 at the 30% level with step down rates until 2021 before expiring. While Trump's tax reform plan is still unclear, changes to the ITC are unlikely a battle worth fighting for the administration as they are due to unwind beginning in 2019.

Additionally, a major focus of the Trump administration has been jobs of which the US solar industry created an estimated 51,000 in 2016. According to a report by the Solar Foundation, they also estimate the US solar industry currently employs 260,000 workers – a bulk of which related to residential installations. Further, potential near term adjustments to the current ITC may spur immediate demand to take advantages of these benefits before the window closes as we saw in 2016.

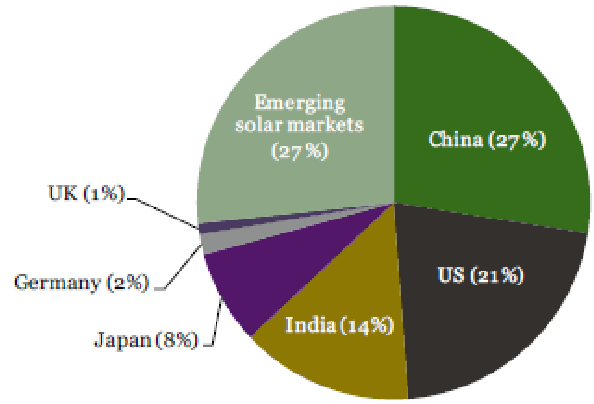
Solar's growth anchored outside US

Looking beyond the US, solar's prospects remain bright. Following the 2015 Paris Accords, the international community has made headway in reducing emissions to which solar PV remains a key component along with other renewable energy sources.

China, the leader in solar energy, continues to grow its clean energy initiatives by expanding its solar PV capacity. According to its National Energy Administration, China doubled its PV capacity in 2016 to over 77 gigawatts. India has also looked to solar to meet the rising energy demand from a growing and modernizing population. In a recent union budget speech by the Minister of Finance, the government plans to move forward with solar park programs generating a potential capacity of 40 gigawatts under both phases.

Other countries led by Mexico, France, Australia, Brazil, and the Philippines are also anticipated to ramp up solar energy capacity in the next five years. These emerging solar markets are expected to equate China's total solar energy capacity increase (see Exhibit 5).

Exhibit 5: Expected cumulative global PV installations by country (2016-2021).

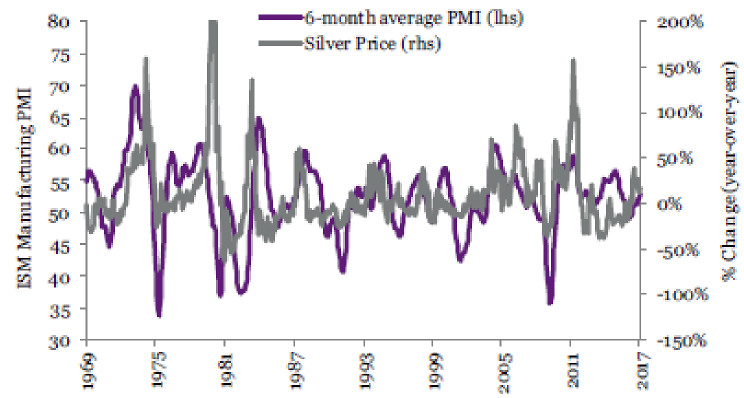


Source: GTM Research, ETF Securities. Chart data as of 11/16/16.

Precious Metals Outlook: Silver

As outlined in our October report, Gold and silver: similar but different, silver's drivers in addition to gold are producer price inflation, changes in silver supply, and industrial production (see Exhibit 6). A combination of higher inflation, a weakening US dollar (in first half of year) and improving manufacturing growth is likely to see silver prices trade in the \$20-22/ounce range in 2017.

Exhibit 6: Silver closely tracks industrial production



Source: Bloomberg, ETF Securities. Chart data from 01/01/69 to 01/31/17

Global Manufacturing PMI at 52.7 (above the long-term average of 51.4 and sitting at a 34-month high) indicates manufacturing activity will continue to pick up this year. We believe global PMI manufacturing will continue to improve, although the pace of growth will slow as we approach a 6-year high of 55 at the year-end.

After reaching a decade high in December 2016, we expect COMEX silver inventory to fall 17% by the end of 2017 back to the levels seen at the beginning of 2016 as mining capital expenditure has continued to slide. Additionally, we factor an 18-month lag to this input into our model reflecting the time it takes forgone investment to bite into supply. As mining capital expenditure and investment continues to decline this should further weigh on silver supply which has been in a supply deficit for the past 11 years.

Click here for complete reading

Convertible Securities Demonstrate Continued Resilience to Rising Rates

February 27, 2017

With investors increasingly concerned about rising interest rates, we thought it would be a good opportunity to revisit one of our favorite convertible security charts. Regular readers may recognize the chart below, which compares the performance of U.S. convertibles with stocks and bonds during periods when the yield of the 10-year Treasury rose 100 basis points. We've updated it to include the most recent period of rising rates through 2016. Convertible securities again outperformed the broad bond market, thanks to their increased equity sensitivity and moderate duration (typically, the duration of the convertible market index is lower than that of the broad bond markets).

We believe the remainder of 2017 is setting up to be a good year for convertible securities, which provide the opportunity for equity market upside participation with potential downside protection. As we have discussed in our recent outlook, we expect an increase in market volatility due to U.S. policy uncertainty, as well as central bank policies, populist sentiment and established geopolitical tensions. Still, economic data is improving overall, both in the U.S. and globally, which can provide a sustained tailwind for equities, and by extension, convertibles. Global issuance has also gotten off to a good start, with $6.2 billion coming to market in January, led by the U.S. at $3.3 billion. We believe economic growth should provide a healthy backdrop for issuance from here. Also, some of the proposed policies of the new U.S. administration could bolster issuance if enacted. For example, if interest deductibility is eliminated as part of tax code changes, companies would likely prefer issuing convertibles versus straight debt, due to the lower coupons typically offered by convertibles. Additionally, infrastructure spending could increase demand for capital.

Returns in Rising Interest Rate Environments

	OCT '93- NOV '94	JAN '96- JUN '96	OCT '98- JAN '00	NOV '01- APR '02	JUN '03- JUN '04	JUN '05- JUN '06	DEC '08- JUN '09	OCT '10- FEB '11	JUL '12- DEC '13	JUL '16- DEC '16
Yield Increase (bps)*	286	150	263	122	176	134	187	134	157	123
Bloomberg Barclays U.S. Govt/Credit	-5.15%	-4.08%	-3.38%	-3.09%	-3.64%	-1.49%	-2.08%	-3.94%	-2.14%	-4.88%
BofA ML All U.S. Convertibles	-2.28	11.97	68.85	2.29	11.49	9.46	24.68	11.63	35.49	7.58
S&P 500	2.22	11.42	46.59	3.07	14.66	6.71	9.41	14.89	42.09	8.65

Past performance is no guarantee of future results. *10-year Treasury yield. Rising rate environment periods from troughs to peak from October 1993 to December 2016. Performance shown is cumulative. Source: Morningstar.

Click here for complete reading

5 Things to Know about Convertible Securities in 2017

March 9, 2017

Increased corporate earnings, improvements in a wide variety of economic data, and the anticipation of a set of pro-growth policy measures in the coming months all suggest good times ahead for convertible securities.

Convertible market issuance is about capital market access; capital market access is closely tied with economic growth. As better economic prospects spur increased interest in risk assets, we'd expect a continued upswing in convertible issuance.

The convertible market has a heavy representation of issuers with smaller market caps, larger domestic focus, lower dividend yields, and higher tax rates and contains fewer "safety trade" names. We like convertibles as an asset class in this environment, given their historical outperformance over straight bonds when both interest rates and equities are projected to climb.

For financial advisors looking for a resource (or refresher) on how convertibles work, we've just re-released our updated 32-page Convertible Securities: Structures, Valuation, Market Environment and Asset Allocation guide.

Convertible securities have the ability to participate in any continued market upside while also providing a measure of downside protection in the event of an equities pullback.

The guide is written by Calamos Founder, Chairman and Global Chief Investment Officer John P. Calamos, Sr., with contributions from Eli Pars, CFA, Calamos Co-CIO, Head of Alternative Strategies and Co-Head of Convertible Strategies and Senior Co-Portfolio Manager.

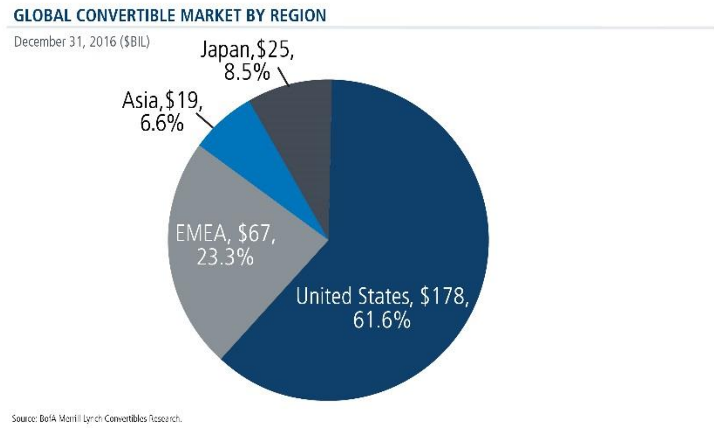
Calamos' origins are as an institutional convertible bond manager. John Calamos is often quoted as an authority on risk-managed investment strategies, markets and the economy, and has authored two books on convertible securities.

What follows are five insights from the guide. Download the full guide for more.

1. The U.S., Europe and the Emerging Markets

The convertible market was valued by BofA Merrill Lynch at $289.5 billion (USD) at December 31, 2016. While the U.S. dominates the market, convertibles have become a global asset class, supported by encouraging issuance trends worldwide.

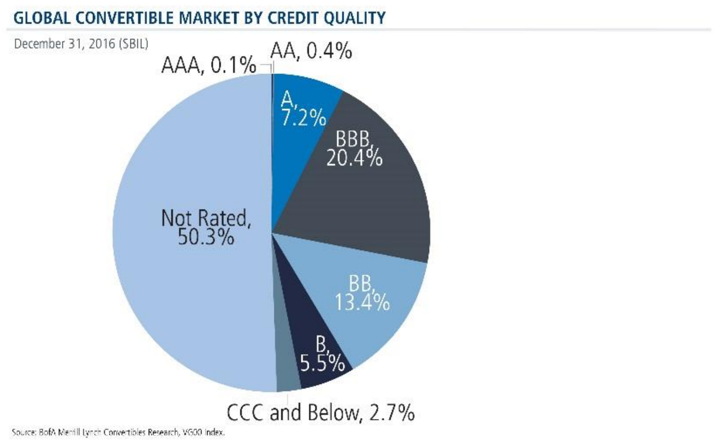
We believe that the green shoots of European economic recovery can serve as a catalyst for issuance, as companies repair their balance sheets and invest for growth. The size of the emerging market convertible market remains relatively small. However, we expect opportunities to grow over time as (1) EM economies continue to prosper, (2) their capital markets mature and (3) EM companies rely less on bank financing.



2. The Opportunity in Non-rated Issues

Non-rated issues make up about one-half of the global convertible market. Often, companies forego having their securities rated at the outset, avoiding a lengthy and expensive process. This can provide a significant opportunity for an experienced asset manager.

Interestingly, there has not been a wide disparity among the default rates of investment grade, non-investment grade and non-rated convertible issues.



3. Issuance, Interest Rates and Performance

There's a connection between interest rates and convertible securities issuance.

While economic growth is the most important factor driving issuance, rising interest rates can provide a catalyst. Because convertible securities provide the opportunity for upside equity participation, they can be offered with lower coupons than non-convertible debt.

Click here for complete reading

Reflation Catalysts: Unlocking Value in Real Assets

February 2017

Highlights

• **Finding value:** After a challenging period for real assets, we see significant relative value compared with the broad stock market at a time when shifting market conditions are presenting a number of potential performance catalysts.

• **The macro backdrop has changed:** We expect the market inflection that began in 2016 to continue amid increased government spending, a strengthening economy, the rise of protectionist trade policies and the rebalancing of commodity markets—all of which point to an increased risk of inflation surprise.

• **Investment implications:** Due in part to inflation-linked cash flows and asset values, real assets have historically excelled in periods of surprise inflation, whereas stocks and bonds have tended to underperform.

• **A multi-strategy approach:** Investors looking to allocate to real assets should consider a portfolio that invests across multiple asset classes, which can help smooth the risks of standalone categories—offering the potential for more consistent returns.

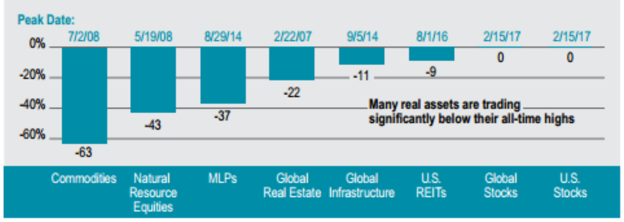
• **How much should investors allocate?** Interest in real assets is growing amid the need to diversify sources of returns and hedge inflation risk. The top three U.S. university endowments have allocated an average of 22% to real assets.(2)

We believe the market environment is turning strongly in favor of real assets amid a strengthening business cycle, rising wages and a more pro-business mindset by policymakers. After a long period of low inflation and falling interest rates, during which many real assets significantly underperformed, we believe a reversal of these trends could have important implications for asset allocations.

Listed real assets have historically generated attractive returns, averaging 7.7% annually since 1991 compared with 6.7% for global stocks.(1) But the years following the financial crisis have been challenging for real assets amid a bear market in commodities and a surprising lack of inflation, resulting in an average annual return of 1.0% between 2010 and 2015 versus 7.1% for stocks.

As a result, just as stocks touch record highs, many real assets are trading significantly below their historical peaks (Exhibit 1). But the tide has turned over the past year amid an inflection toward a reflationary environment. We expect the new market regime to offer multiple catalysts for unlocking value, strengthening the case for allocating to real assets.

Exhibit 1: Current Index Price vs. Peak



At February 15, 2017. Source: Morningstar.

Data quoted represents past performance, which is no guarantee of future results. The information presented above does not reflect the performance of any fund or account managed or serviced by Cohen & Steers, and there is no guarantee that investors will experience the type of performance reflected above. See page 10 for index associations and definitions and additional disclosures.

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The Macro Backdrop Has Changed

In a year of upheaval, several key trends reversed in 2016, marking an end to years of slow growth, a decade without inflation and a 35-year downward trend in interest rates.

1. Fiscal Austerity □ Fiscal Expansion

Reduced government spending has been a sizeable drag on the global economy in this cycle. For example, from 2011 to 2015, U.S. gross domestic product (GDP) growth would have averaged a full percentage point higher if not for the impact of fiscal tightening.(1) But many policymakers, responding to signs of growing voter anger, are now shifting to a more active mindset to drive growth. Government spending has already turned neutral in many advanced economies and could accelerate if U.S. fiscal policies are successfully implemented.

2. Low Growth □ Accelerated Growth

After years of trending lower, the global economy is seeing the fastest acceleration since the post-financial-crisis rebound in 2010, on track to achieve 3.6% growth in 2017 according to our estimates.(2) In the U.S., companies are ramping up production to replenish depleted inventories, and stronger government spending is rippling through the real economy. The uptrend that began in mid-2016 has accelerated amid hopes for business-friendly leadership in Washington, which have unleashed animal spirits among corporate decision makers (Exhibit 2). We believe this momentum could translate relatively quickly into higher growth rates, even though the impact of new fiscal stimulus and tax policies may not be felt until 2018.

However, this is not just a U.S. story. Four of the world's five major regions are showing acceleration in leading economic indicators, signaling a trend of broad improvement.(3) Growth in Europe is improving amid rising confidence, strong consumption and increased fiscal spending. Japan also appears to be seeing.

benefits from aggressive fiscal and monetary stimulus

Emerging markets could feel some pressure from a resumption of the slowdown in China and a stronger U.S. dollar. (Emerging economies typically borrow in dollars but earn revenues in local currencies, so a stronger dollar increases debt service costs.) However, we believe the positive trends in developed economies should more than offset these headwinds.

3. Globalization → Protectionism

The post-World War II globalization trend appears to be coming to an end amid growing resistance to free-trade agreements and rising calls to protect local industries and manufacturing jobs.

Exhibit 2: NFIB Index of Small Business Optimism

At January 31, 2017. Source: National Federation of Independent Business.

The National Federation of Independent Business Index of Small Business Optimism surveys economic sentiment among small business owners in the U.S. See page 10 for additional disclosures.

While higher tariffs and tighter immigration controls could benefit low-income workers, they also generally lead to higher labor costs, higher prices on imported goods and a less productive economy. This represents the darker side of inflation, in our view—higher prices driven by restrictions on economic supply rather than stronger demand.

4. QE/ZIRP → Rate Normalization

Stronger growth and tightening labor markets have prompted many central banks to shift away from quantitative easing (QE) and zero interest rate policies (ZIRP), signaling a potential bottom in the interest rate cycle. The reversal has been accelerated by the spike in growth and inflation expectations following the U.S. elections, clearing the path for rising interest rates and likely marking an end to the 35-year downward trend in Treasury yields. After the sharp rise in Treasury yields in late 2016, we see less room for significant increases, with our outlook calling for the 10-year yield to reach 3% by yearend 2017.(4)

Although the low point in interest rates is likely behind us, we believe the road to normalcy will be a process of fits and starts as the market transitions from a well-defined regime and as policies and economic conditions evolve. Furthermore, central bank officials in the U.S. and elsewhere have hinted that after years of below-target inflation, they could allow their economies to run hot for a period—what Federal Reserve Chair Janet Yellen termed "running a high-pressure economy."

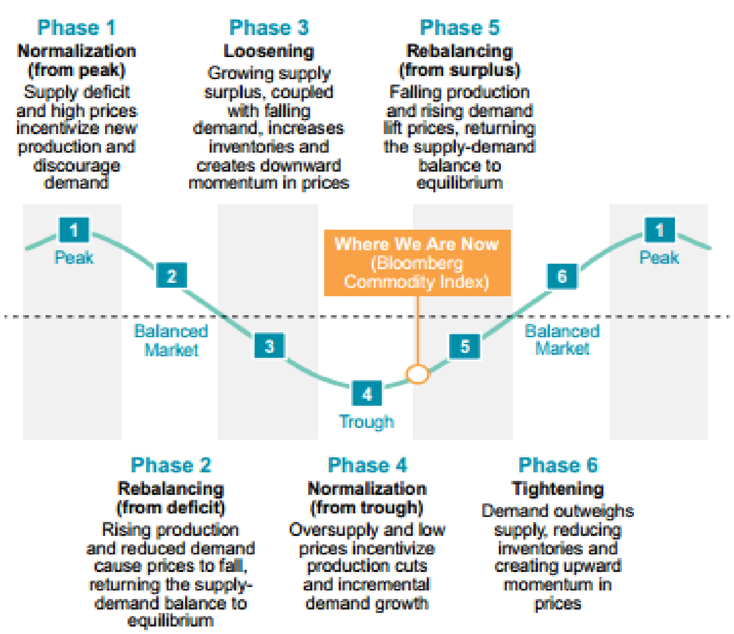
5. Commodity Drag → Commodity Lift

After a five-year bear market, commodity prices turned a corner in 2016. The prolonged weakness in commodities has left a majority of the market still trading below production costs. Over time, this has forced many producers to cut capital spending, cancel projects and reduce output, gradually stabilizing the supply/demand imbalance across the commodity complex. As global growth has accelerated, demand has begun to improve, hastening the move toward a balanced market.

The Cohen & Steers commodities team estimates that most commodities have already troughed and are moving into the rebalancing phase of the fundamental cycle (Exhibit 3). If the current cycle follows the typical path, we expect to see higher prices for years to come as the market transitions from current oversupply to equilibrium and eventually to an undersupplied market.

The recovery in commodity prices is providing a lift to the overall economy due to improved oil-related capital spending and a healthier environment for energy and materials companies. Yet prices are still low enough that they are not a burden on consumers and businesses, who are paying a third less for food and half of what they spent on energy (such as gasoline and heating oil) compared with 2011, allowing for increased spending in other areas.(1)

Exhibit 3: Fundamental Commodity Cycle



At February 15, 2017. Source: Cohen & Steers.

See page 10 for index definitions and additional disclosures.

(1) At February 15, 2017. Source: Thomson Reuters Datastream, Cohen & Steers.

[Click here to visit Cohen & Steers Closed-End Funds Knowledge Center]

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Broad universe, bright potential

February 2017

From Asia to Latin America, global emerging markets (GEM) comprise a broad universe and can offer good quality companies across sectors. A young workforce and growing middle-class population underpins its vast growth potential. Some countries, such as India and Indonesia, are stepping up their efforts on structural reforms, which bodes well for long-term growth. A wide choice of owner-operator businesses makes emerging markets particularly compelling.

Growth is moderating but long-term prospects remain strong

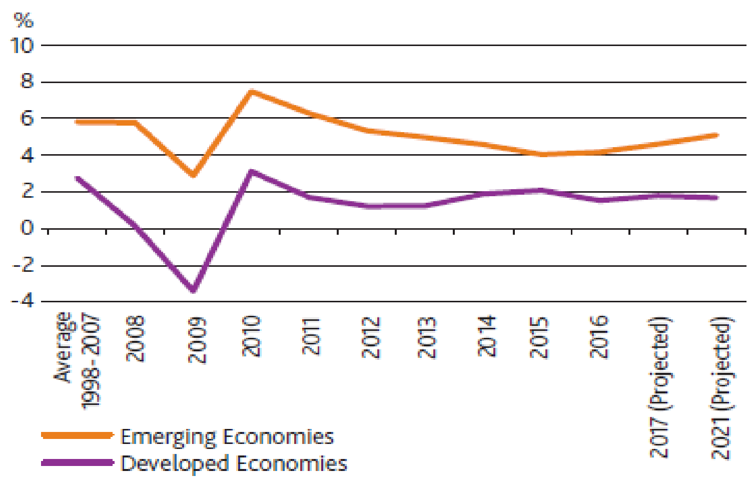
Projected GDP growth in 2021	
Emerging markets	Developed markets
5.1%	1.7%

While growth has slowed down in recent years, emerging economies are still growing faster than their developed counterparts. Between now and 2030*, they will still contribute more than 65% of global growth.

In 2021, they are projected to grow at 5.1%, ahead of the developed countries' 1.7% growth.

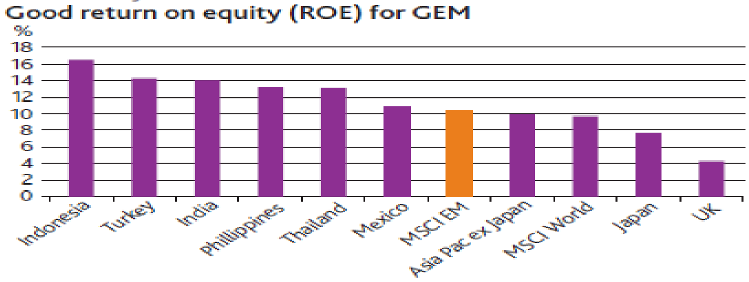
*Source: Euromonitor International, September 2015. For illustrative purposes only Forecasts are offered as opinion are not guaranteed and actual events or results may differ materially.

Emerging economies outgrow developed countries



Source: International Monetary Fund, October 2016. For illustrative purposes only. Forecasts are offered as opinion are not guaranteed and actual events or results may differ materially.

Good return on equity (ROE) for GEM

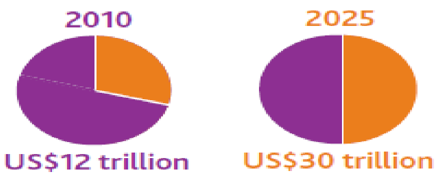


Sources: Bloomberg, MSCI, January 2017. For illustrative purposes only

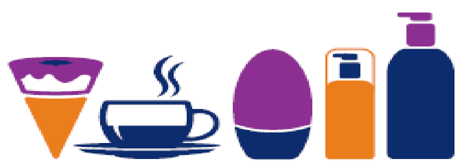
Huge domestic markets, where consumer is king

In 2010, annual consumption in emerging markets was US$12 trillion — less than a third of the world's total consumption.

By 2025, however, emerging market consumption is expected to grow to **US$30 trillion**, or nearly half the global total.



Source: McKinsey Global Institute, October 2013.



India's retail market is expected to grow to **US$1.3 trillion** by 2020.*

The increase in personal spending could benefit consumer companies such as large and growing nutrition, cosmetics, and other fast-moving consumer products.

*Source: AT Kearney, June 2015.

Backed by a population of 1.3 billion people and rapidly changing eating habits, China's fast-food industry is poised for growth.

This benefits fast-food chains, particularly some of the largest operating in China with multiple venues and outlet growth.

Forecasts are offered as opinion are not guaranteed and actual events or results may differ materially.
For illustrative purposes only.

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- Principal Real Estate Income Fund Declares Monthly Distributions of $0.145 Per Share – January 27
- RiverNorth/DoubleLine Strategic Opportunity Fund, Inc. Declares Monthly Distribution of $0.11 per Share – February 6
- RiverNorth Opportunities Fund, Inc. Declares Monthly Distributions of $0.14 Per Share – January 27
- Tortoise Capital Advisors Announces Distribution Amounts and Dates for Closed-End Funds (TYG, NTG, TTP, NDP, TPZ) – February 10
- Stone Harbor Emerging Markets Total Income Fund Declares Monthly Distributions of $0.1511 Per Share – January 25
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