

December 31, 2015

GPM | ANNUAL REPORT

Guggenheim Enhanced Equity Income Fund

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EQUITY INCOME FUND

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- Daily, weekly and monthly data on share prices, distributions and more
- Portfolio overviews and performance analyses
- Announcements, press releases and special notices
- Fund and adviser contact information

Guggenheim Partners Investment Management, LLC and Guggenheim Funds Investment Advisors, LLC are constantly updating and expanding shareholder information services on the Fund's website in an ongoing effort to provide you with the most current information about how your Fund's assets are managed and the results of our efforts. It is just one more small way we are working to keep you better informed about your investment in the Fund.

DEAR SHAREHOLDER:

We thank you for your investment in the Guggenheim Enhanced Equity Income Fund (the “Fund”). This report covers the Fund’s performance for the 12-month period ended December 31, 2015.

The Fund’s primary investment objective is to seek a high level of current income and gains with a secondary objective of long-term capital appreciation.

For the 12 months ended December 31, 2015, the Fund provided a total return based on market price of 0.28% and a total return net of fees based on NAV of 1.71%. All Fund returns cited—whether based on net asset value (“NAV”) or market price—assume the reinvestment of all distributions. Past performance does not guarantee future results. The NAV return includes the deduction of management fees, operating expenses, and all other Fund expenses.

On December 31, 2015, the Fund’s closing market price of \$7.68 per share represented a discount of 8.24% to its NAV of \$8.37 per share. The market price of the Fund’s shares fluctuates from time to time, and it may be higher or lower than the Fund’s NAV.

In each quarter of the period, the Fund paid a distribution of \$0.24 per share, continuing a practice in effect since June 2009. The most recent distribution represents an annualized distribution rate of 12.5% based on the Fund’s closing market price of \$7.68 as of December 31, 2015. Please see Note 2(d) on page 21 for more information on distributions for the period.

Guggenheim Funds Investment Advisors, LLC (“GFIA” or the “Adviser”) serves as the investment adviser to the Fund. Guggenheim Partners Investment Management, LLC (“GPIM” or the “Sub-Adviser”) serves as the Fund’s investment sub-adviser and is responsible for the management of the Fund’s portfolio of investments. Both the Adviser and the Sub-Adviser are affiliates of Guggenheim Partners, LLC (“Guggenheim”), a global diversified financial services firm.

GPIM seeks to achieve the Fund’s investment objective by obtaining broadly diversified exposure to the equity markets and utilizing a covered call strategy developed by GPIM. The Fund may seek to obtain exposure to equity markets through investments in exchange-traded funds (“ETFs”) or other investment funds that track equity market indices, through investments in individual equity securities, and/or through derivative instruments that replicate the economic characteristics of exposure to equity securities or markets. The Fund utilizes leverage to seek to deliver a portfolio targeting similar risk exposure as the Standard & Poor’s 500® Index (the “S&P 500”) while presenting the potential benefit of greater income and a focus on capital appreciation.

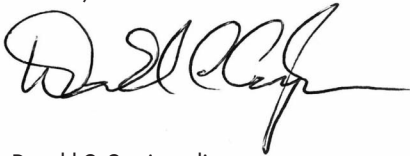
We encourage shareholders to consider the opportunity to reinvest their distributions from the Fund through the Dividend Reinvestment Plan (“DRIP”), which is described in detail on page 37 of this report. When shares trade at a discount to NAV, the DRIP takes advantage of the discount by reinvesting the quarterly dividend distribution in common shares of the Fund purchased in the market at a price less than NAV. Conversely, when the market price of the Fund’s common shares is at a premium above NAV, the DRIP reinvests participants’ dividends in newly-issued common shares at the greater of NAV per

share or 95% of the market price per share. The DRIP provides a cost-effective means to accumulate additional shares and enjoy the potential benefits of compounding returns over time.

To learn more about the Fund's performance and investment strategy for the 12 months ended December 31, 2015, we encourage you to read the Questions & Answers section of the report, which begins on page 5.

We appreciate your investment and look forward to serving your investment needs in the future. For the most up-to-date information on your investment, please visit the Fund's website at guggenheiminvestments.com/gpm.

Sincerely,

A handwritten signature in black ink, appearing to read "Donald C. Cacciapaglia". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Donald C. Cacciapaglia
President and Chief Executive Officer
Guggenheim Enhanced Equity Income Fund
January 31, 2016

The Guggenheim Enhanced Equity Income Fund (the “Fund”) is managed by a team of seasoned professionals at Guggenheim Partners Investment Management, LLC (“GPIM” or the “Sub-Adviser”). This team includes B. Scott Miner, Chairman of Investments and Global Chief Investment Officer; Anne Bookwalter Walsh, CFA, JD, Assistant Chief Investment Officer and Senior Managing Director; Farhan Sharaff, Assistant Chief Investment Officer, Equities; Jayson Flowers, Senior Managing Director and Head of Equity and Derivative Strategies; and Daniel Cheeseman, Portfolio Manager. In the following interview, the investment team discusses the market environment and the Fund’s performance for the 12-month period ended December 31, 2015.

Please describe the Fund’s investment objective and explain how GPIM’s investment strategy seeks to achieve it.

The Fund’s primary investment objective is to seek a high level of current income and gains with a secondary objective of long-term capital appreciation. Under normal market conditions, the Fund invests at least 80% of its net assets, plus the amount of any borrowings for investment purposes, in equity securities. GPIM seeks to achieve the Fund’s investment objective by obtaining broadly diversified exposure to the equity markets and utilizing a covered call strategy developed by GPIM. The Fund may seek to obtain exposure to equity markets through investments in exchange-traded funds (“ETFs”) or other investment funds that track equity market indices, through investments in individual equity securities, and/or through derivative instruments that replicate the economic characteristics of exposure to equity securities or markets.

The Fund utilizes leverage to seek to deliver a portfolio targeting similar risk exposure as the Standard & Poor’s 500® Index (the “S&P 500”) while presenting the potential benefit of greater income and a focus on capital appreciation. Although the use of financial leverage by the Fund may create an opportunity for increased return for the common shares, it also results in additional risks and can magnify the effect of any losses. There can be no assurance that a leveraging strategy will be successful during any period during which it is employed.

Currently GPIM seeks to obtain exposure to equity markets by investing primarily in ETFs. ETFs are selected for broadly based market exposure and broad sector exposures. Only highly liquid securities are held, since liquidity is essential for a strategy that seeks to benefit from market volatility.

The Fund has the ability to write call options on the ETFs or on indices that the ETFs may track, which will typically be at- or out-of-the-money. GPIM’s strategy typically targets one-month options, although options of any strike price or maturity may be used. The Fund may, but does not have to, cover 100% of the equity holdings in its portfolio. The typical hedge ratio for the fund is 67%, which is designed to produce a portfolio that, inclusive of leverage, has a beta of one to broad market indices. The hedge ratio, however, may be adjusted depending on the investment team’s view of the market and GPIM’s macroeconomic views. Changing the hedge ratio will impact the beta of the portfolio resulting in a portfolio that is either over- or underexposed to broad market equities.

An option on an index is considered covered if the Fund also holds shares of a passively managed ETF that fully replicates the respective index and has a value at least equal to the notional value of the option written. Any call options sold without an equivalent ETF underlying are collateralized with segregated assets.

GPIM may engage in selling call options on indices, which could include securities that are not specifically held by the Fund. In connection with the Fund's ability to write call options, the Fund earmarks or segregates cash or liquid securities or otherwise covers such transactions.

To a lesser extent, the Fund may also write call options on securities, including ETFs, that are not held by the Fund, or on indices other than the indices tracked by the ETFs held by the Fund. As such transactions would involve uncovered option writing, they may be subject to more risks compared to the Fund's covered call option strategies involving writing options on securities, including ETFs, held by the Fund or indices tracked by the ETFs held by the Fund. When the Fund writes uncovered call options it will earmark or segregate cash or liquid securities in accordance with applicable interpretations of the staff of the Securities and Exchange Commission (SEC).

The Fund seeks to achieve its primary investment objective of seeking a high level of current income through premiums received from selling options and dividends paid on securities owned by the Fund.

Although the Fund will receive premiums from the options written, by writing a covered call option, the Fund forgoes any potential increase in value of the underlying securities above the strike price specified in an option contract through the expiration date of the option.

To the extent GPIM's strategy seeks to achieve broad equity exposure through a portfolio of common stocks, the Fund would expect to hold a diversified portfolio of stocks. To the extent GPIM's equity exposure strategy is implemented through investment in broad-based equity ETFs or other investment funds or derivative instruments that replicate the economic characteristics of exposure to equity securities markets, the Fund's portfolio is expected to comprise fewer holdings.

Please provide an overview of the economic and market environment during the 12 months ended December 31, 2015.

As of December 16, 2015, the meeting of the Federal Open Market Committee of the U.S. Federal Reserve (the Fed) resulted in the Fed raising its target Federal Funds Rate by 25 basis points, its first hike in seven years. This decision to tighten monetary policy was in recognition that growth in the U.S. economy is sufficient to meet expectations in the current recovery. Historically, the period when the Fed begins to tighten leads to an initial sell-off in the bond market, as investors brace themselves for the ill-effects of restrictive monetary policy on the economy. Then, as investors realize the Fed is raising rates because the economy is strong, the fear of defaults diminishes and credit spreads tighten again.

The good news is that, while the U.S. economy may not be fast moving, it certainly has a lot of torque. This is creating strong tailwinds as we move into 2016. MasterCard Advisors' data on holiday spending indicates that sales were up nearly 8% year over year. All told, the risk to fourth-quarter gross domestic product (GDP) is probably to the upside, even as most tracking estimates have been trimmed to around

1%. In addition, the El Niño weather pattern is moving into its most impactful period. Our research indicates that a strong El Niño can add 1% or more to GDP in the first quarter of the year.

A factor after the end of the period was market volatility, spurred by concerns over the price of oil and increasing anxiety over global growth. It was marked by turmoil across asset classes, with heavy drawdowns in a variety of indexes and geographies in the first half of January. The sell-off was brutal and unexpected, but initially there was not a corresponding spike in the key measure of equity market volatility, the CBOE Volatility Index (“VIX”). However, the sell-off occurred in what is historically a seasonally strong time for equities and the VIX did start to rise in January.

In China, the likely catalyst for the volatile start to the equity market in 2016 was the pending expiration of an insider selling ban. The ban was extended in response to the sell-off, but as expiring restrictions enable market participants to finally escape unwanted positions, a sell-off is inevitable. China’s problems extend beyond political interference in the markets and despite attempts by policy-makers to quiet the turmoil, we expect to see more volatility. Chinese policymakers have also been struggling to protect the renminbi. Allowing it to depreciate in the short run could be negative for markets—particularly Chinese risk assets, and by extension, U.S. risk assets, as well as falling dollar prices for commodities, given China is a main consumer of commodities. In the long run, a depreciation would be positive for the Chinese manufacturing sector and European producers, who have significant exports to China.

Meanwhile, the persistent weakness in oil continues to exert its negative influence on all markets, especially corporate credit. Oil prices likely have further to fall: not until it reaches approximately \$25 per barrel will we begin to see oil production shuttered, which should then set the stage to stabilize the energy sector.

The next few months are likely to be extremely volatile as markets continue to digest the sell-off that began 2016. However, monetary conditions remain highly supportive for global economic growth, despite the Federal Reserve’s recent actions. The index of leading economic indicators, comprised of 10 components whose changes typically precede changes in the U.S. economy, remains in positive territory and shows no warning signs of recession. Additionally, if market turmoil continues, and lower oil prices dampen headline inflation, the Fed may delay further rate increases.

How did the Fund perform for the 12 months ended December 31, 2015?

For the 12 months ended December 31, 2015, the Fund provided a total return based on market price of 0.28% and a total return net of fees based on NAV of 1.71%. All Fund returns cited—whether based on net asset value (“NAV”) or market price—assume the reinvestment of all distributions. Past performance does not guarantee future results. The NAV return includes the deduction of management fees, operating expenses, and all other Fund expenses.

On December 31, 2015, the Fund’s closing market price of \$7.68 per share represented a discount of 8.24% to its NAV of \$8.37 per share. On December 31, 2014, the Fund’s closing market price of \$8.64 per share represented a discount of 5.98% to its NAV of \$9.19 per share. The market price of the Fund’s shares fluctuates from time to time, and it may be higher or lower than the Fund’s NAV.

In each quarter of the period, the Fund paid a distribution of \$0.24 per share, continuing a practice in effect since June 2009. The most recent distribution represents an annualized distribution rate of 12.5% based on the Fund's closing market price of \$7.68 as of December 31, 2015. Please see Note 2(d) on page 21 for more information on distributions for the period.

What decisions had the greatest effect on the Fund's performance?

Many parts of the U.S. equity market were flat to lower over the period. Security selection for the Fund was positive for performance. The Fund, when netted against its call exposure, has a core exposure to the S&P 500, whose performance was better than many U.S. equity indexes but still flat for the year (1.38% with dividends). The Fund also had exposure to another equity index that was strong for the period--the NASDAQ 100 Index, which returned 9.75%, and to the small-cap Russell 2000 Index, which returned -4.41%.

The Fund also benefitted from increasingly writing at-the-money calls for most of the year, which increased the income received in light of the broad market trading sideways.

The main interruption to the pattern of range-bound trading was the August sell-off, driven by concern over the first Fed rate hike in several years, a devaluation of the Chinese yuan, and concerns about global growth. The CBOE Volatility Index ("VIX"), the main measure of implied volatility, closed as high as 41 in that period, its highest point since the 2011 European Sovereign Debt Crisis.

In addition to the flat market and low absolute levels of implied volatility, the Fund also had to contend with below-average volatility premiums (the difference between implied and realized volatility). A low spread between implied and realized volatility can be challenging for a call-write fund as the premiums received do not compensate the fund for the upside risk it takes.

Implied volatility for 2015 was generally above realized (2.1pts). However this was below the long-term average of 4.3pts, which was a headwind for the Fund for much of the year. The sudden drawdown of the market in August saw the premium soar (implied volatility fell below realized volatility by as much as 18.6pts), but then quickly disappear, as the volatility returned to levels that have prevailed for much of the past few years.

Can you discuss the impact of leverage in the Fund?

Leverage was neutral to performance for the period, as the broad equity market was flat and premium income was diminished in an unattractive environment for volatility.

Leverage at the end of the period was about 33% of the Fund's total assets. Our approach to leverage is dynamic, and we tend to have a higher level of leverage when we are more constructive on equity market returns in accordance with our macroeconomic outlook and when we believe volatility is most attractive. Our economic outlook remains positive, as the U.S. expansion continues. Given strong employment growth and continued wage growth, along with a stimulative fiscal policy now in place, the U.S. economy is likely to thrive in 2016.

There is no guarantee that the Fund's leverage strategy will be successful, and the Fund's use of leverage may cause the Fund's NAV and market price of common shares to be more volatile. Please see "Borrowings" under Note 8 on page 27 for more information on the Fund's credit facility agreement.

Index Definitions

Indices are unmanaged, reflect no expenses and it is not possible to invest directly in an index.

The CBOE Volatility Index, often referred to as the VIX (its ticker symbol), the fear index or the fear gauge, is a measure of the implied volatility of S&P 500 Index options. It represents a measure of the market's expectation of stock market volatility over the next 30 day period. Quoted in percentage points, the VIX represents the expected daily movement in the S&P 500 Index over the next 30-day period, which is then annualized.

The Russell 2000 Index measures the performance of the small-cap value segment of the U.S. equity universe.

NASDAQ-100® Index includes 100 of the largest domestic and international non-financial securities listed on The Nasdaq Stock Market based on market capitalization. The Index reflects companies across major industry groups including computer hardware and software, telecommunications, retail/wholesale trade and biotechnology. It does not contain securities of financial companies including investment companies.

The S&P 500 Index is an unmanaged, capitalization-weighted index of 500 stocks. The index is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.

Risks and Other Considerations

The views expressed in this report reflect those of the portfolio managers only through the report period as stated on the cover. These views are subject to change at any time, based on market and other conditions and should not be construed as a recommendation of any kind. The material may also include forward looking statements that involve risk and uncertainty, and there is no guarantee that any predictions will come to pass.

There can be no assurance that the Fund will achieve its investment objectives. The value of the Fund will fluctuate with the value of the underlying securities. Historically, closed-end funds often trade at a discount to their net asset value. Risk is inherent in all investing, including the loss of your entire principal. Therefore, before investing you should consider the risks carefully.

Please see guggenheiminvestments.com/gpm for a detailed discussion about Fund risks and considerations.

Fund Statistics

Share Price	\$7.68
Net Asset Value	\$8.37
Discount to NAV	-8.24%
Net Assets (\$000)	\$159,669

**AVERAGE ANNUAL TOTAL RETURNS
FOR THE PERIOD ENDED DECEMBER 31, 2015¹**

	One Year	Three Year	Five Year	Ten Year	Since Inception (08/25/05)
Guggenheim Enhanced Equity Income Fund					
NAV	1.71%	8.69%	7.89%	2.30%	2.27%
Market	0.28%	9.36%	7.32%	3.65%	1.82%

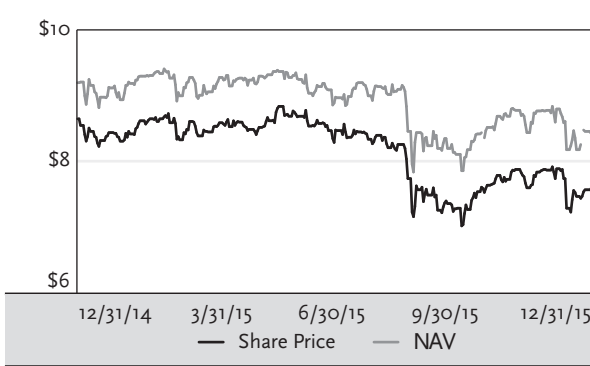
Performance data quoted represents past performance, which is no guarantee of future results and current performance may be lower or higher than the figures shown. The NAV return includes the deduction of management fees, operating expenses, and all other Fund expenses. The deduction of taxes that a shareholder would pay on Fund distributions or the redemption of Fund shares is not reflected in the total returns. For the most recent month-end performance figures, please visit guggenheiminvestments.com/gpm. The investment return and principal value of an investment will fluctuate with changes in market conditions and other factors so that an investor's shares, when redeemed, may be worth more or less than their original cost.

¹Performance prior to June 22, 2010, under the name Old Mutual/Claymore Long-Short Fund was achieved through an investment strategy of a long-short strategy and an opportunistic covered call writing strategy by the previous investment sub-adviser, Analytic Investors, LLC, and factors in the Fund's fees and expenses.

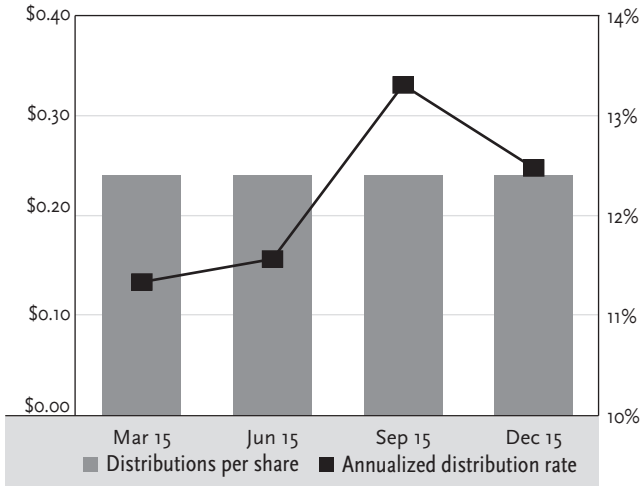
Portfolio Breakdown

	% of Net Assets
Exchange-Traded Funds	148.9%
Short Term Investments	1.0%
Options Written	-0.6%
Total Investments	149.3%
Other Assets & Liabilities, net	-49.3%
Net Assets	100.0%

Share Price & NAV History



Distributions to Shareholders & Annualized Distribution Rate



Portfolio breakdown is subject to change daily. For more information, please visit guggenheiminvestments.com/gpm. The above summaries are provided for informational purposes only and should not be viewed as recommendations. Past performance does not guarantee future results. All or a portion of the above distributions may be characterized as a return of capital. For the year ended December 31, 2015, 55.02% of the distributions were characterized as income and 44.98% of the distributions were characterized as return of capital.

	Shares	Value
EXCHANGE-TRADED FUNDS† - 148.9%		
SPDR S&P 500 ETF Trust ^{1,2}	519,883	\$ 105,998,944
iShares S&P 500 Growth ETF ²	371,975	43,074,705
iShares S&P 500 Value ETF ²	418,522	37,051,753
PowerShares QQQ Trust Series 1 ^{1,2}	230,831	25,820,756
iShares Russell 2000 Index ETF ^{1,2}	229,460	25,816,545
Total Exchange-Traded Funds (Cost \$247,387,349)		237,762,703
SHORT TERM INVESTMENTS‡ – 1.0%		
Dreyfus Treasury Prime Cash Management Institutional Shares, 0.00% ³	1,534,463	1,534,463
Total Short Term Investments (Cost \$1,534,463)		1,534,463
Total Investments – 149.9% (Cost \$248,921,812)		\$ 239,297,166

	Contracts (100 shares per Contract)	Value
OPTIONS WRITTEN‡ – (0.6)%		
Call options on:		
NASDAQ 100 Index Expiring January 2016 with strike price of \$4,670.00*	112	\$ (301,840)
S&P 500 Index Expiring January 2016 with strike price of \$2,070.00*	254	(302,260)
Russell 2000 Index Expiring January 2016 with strike price of \$1,155.00*	455	(311,675)
Total Call Options		(915,775)
Total Options Written (Premiums received \$1,714,724)		(915,775)
Other Assets & Liabilities, net – (49.3)%		(78,712,663)
Total Net Assets - 100.0%		\$ 159,668,728

* Non-income producing security.

† Value determined based on Level 1 inputs — See Note 4.

1 Security represents cover for outstanding options written.

2 Security has been physically segregated as collateral for borrowings outstanding. As of December 31, 2015, the total market value of segregated securities was \$237,762,703.

3 Rate indicated is the 7-day yield as of December 31, 2015.

S&P Standard & Poor's

See notes to financial statements.

PORTFOLIO OF INVESTMENTS continued

December 31, 2015

The following table summarizes inputs used to value the Fund's net assets at December 31, 2015 (See Note 4 in the Notes to Financial Statements):

Description	Level 1 Quoted Prices	Level 2 Significant Observable Inputs	Level 3 Significant Unobservable Inputs	Total
Assets				
Exchange-Traded Funds	\$ 237,762,703	\$ —	\$ —	\$ 237,762,703
Short Term Investments	1,534,463	—	—	1,534,463
Total Assets	\$ 239,297,166	\$ —	\$ —	\$ 239,297,166
Liabilities				
Options Written	\$ 915,775	\$ —	\$ —	\$ 915,775
Total Liabilities	\$ 915,775	\$ —	\$ —	\$ 915,775

Transfers between investment levels may occur as the markets fluctuate and/or the availability of data used in an investment's valuation changes. Transfers between valuation levels, if any, are in comparison to the valuation levels at the end of the previous fiscal year, and are effective using the fair value as of the end of the current fiscal period.

For the period ended December 31, 2015, there were no transfers between levels.

See notes to financial statements.

STATEMENT OF ASSETS AND LIABILITIES

December 31, 2015

ASSETS:

Investments, at value (cost \$248,921,812)	\$ 239,297,166
Cash	1,714,717
Receivables:	
Dividends	624,657
Investments sold	142,086
Other assets	6,487
Total assets	241,785,113

LIABILITIES:

Borrowings	80,000,000
Options written, at value (Premiums received of \$1,714,724)	915,775
Interest payable on borrowings	84,138
Payable for:	
Investments purchased	842,946
Investment advisory fees	164,475
Fund accounting fees	6,171
Administration fees	5,385
Trustees' fees and expenses*	4,531
Other liabilities	92,964
Total liabilities	82,116,385

NET ASSETS	\$ 159,668,728
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NET ASSETS CONSIST OF:

Common shares, \$0.01 par value per share; unlimited number of shares authorized, 19,077,318 shares issued and outstanding	\$ 190,773
Additional paid-in capital	185,433,336
Accumulated net realized loss on investments	(17,129,684)
Net unrealized depreciation on investments	(8,825,697)
NET ASSETS	\$ 159,668,728
Net asset value	\$ 8.37

* Relates to Trustees not deemed "interested persons" within the meaning of Section 2(a)(19) of the 1940 Act.

See notes to financial statements.

STATEMENT OF OPERATIONS

December 31, 2015

For the Year Ended December 31, 2015

INVESTMENT INCOME:

Dividends	\$	4,366,274
Total investment income		4,366,274

EXPENSES:

Investment advisory fees		2,266,363
Interest expense		743,038
Professional fees		93,139
Trustees' fees and expenses*		86,848
Fund accounting fees		68,034
Administration fees		65,365
Printing fees		41,911
Registration and filings		23,725
Transfer agent fees		19,152
Insurance		18,661
Custodian fees		12,103
Other expenses		324
Total expenses		3,438,663

Less:		
Expenses waived by advisor		(251,818)
Net expenses		3,186,845
Net investment income		1,179,429

NET REALIZED AND UNREALIZED GAIN (LOSS):

Net realized gain (loss) on:		
Investments		10,190,337
Options written		(483,015)
Net realized gain		9,707,322
Net change in unrealized appreciation (depreciation) on:		
Investments		(8,252,449)
Options written		108,045
Net change in unrealized appreciation (depreciation)		(8,144,404)
Net realized and unrealized gain		1,562,918
Net increase in net assets resulting from operations	\$	2,742,347

* Relates to Trustees not deemed "interested persons" within the meaning of Section 2(a)(19) of the 1940 Act.

See notes to financial statements.

STATEMENTS OF CHANGES IN NET ASSETS

December 31, 2015

	Year Ended December 31, 2015	Year Ended December 31, 2014
INCREASE (DECREASE) IN NET ASSETS FROM OPERATIONS:		
Net investment income (loss)	\$ 1,179,429	\$ (1,237,990)
Net realized gain on investments	9,707,322	19,866,273
Net change in unrealized appreciation (depreciation) on investments	(8,144,404)	(5,798,131)
Net increase in net assets resulting from operations	2,742,347	12,830,152
DISTRIBUTIONS TO SHAREHOLDERS FROM:		
Net investment income	(10,075,669)	(18,303,361)
Return of capital	(8,238,556)	—
Total distributions to shareholders	\$ (18,314,225)	\$ (18,303,361)
SHAREHOLDER TRANSACTIONS:		
Net proceeds from common shares issued through dividend reinvestment	—	214,344
Net increase in net assets resulting from shareholder transactions	—	214,344
Net decrease in net assets	(15,571,878)	(5,258,865)
NET ASSETS:		
Beginning of year	175,240,606	180,499,471
End of year	\$ 159,668,728	\$ 175,240,606
Undistributed net investment income at end of year	\$ —	\$ —

See notes to financial statements.

STATEMENT OF CASH FLOWS

December 31, 2015

For the Year Ended December 31, 2015

Cash Flows from Operating Activities:

Net increase in net assets resulting from operations	\$ 2,742,347
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Adjustments to Reconcile Net Increase in Net Assets Resulting from Operations to Net Cash Provided by Operating and Investing Activities:

Net change in unrealized depreciation on investments	8,252,449
Net change in unrealized appreciation on options written	(108,045)
Net realized gain on investments	(10,190,337)
Net realized loss on options written	483,015
Premiums received on options written	88,915,608
Cost of closed options written	(89,418,843)
Purchase of long-term investments	(900,550,226)
Proceeds from sale of long-term investments	924,558,330
Net purchase of short-term investments	(673,705)
Corporate actions and other payments	72,565
Decrease in dividends receivable	253,447
Increase in investments sold receivable	(142,086)
Decrease in other assets	9,485
Decrease in interest payable on borrowings	4,223
Increase in investments purchased payable	842,946
Decrease in investment advisory fees payable	(14,642)
Decrease in fund accounting fees payable	(144)
Decrease in administration fees payable	(367)
Increase in trustees' fees and expenses payable	988
Decrease in other liabilities	(8,066)
Net Cash Provided by Operating and Investing Activities	\$ 25,028,942

Cash Flows From Financing Activities:

Distributions to common shareholders	(18,314,225)
Proceeds from borrowings	21,000,000
Payments made on borrowings	(26,000,000)
Net Cash Used in Financing Activities	(23,314,225)

Net change in cash	1,714,717
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Cash at Beginning of Period

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Cash at End of Period**\$ 1,714,717****Supplemental Disclosure of Cash Flow Information:**

Cash paid during the period for interest	\$ 738,815
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See notes to financial statements.

This table is presented to show selected data for a share outstanding throughout each period and to assist shareholders in evaluating a Fund's performance for the periods presented.

	Year Ended December 31, 2015	Year Ended December 31, 2014	Year Ended December 31, 2013	Year Ended December 31, 2012	Year Ended December 31, 2011
Per Share Data:					
Net asset value, beginning of period	\$ 9.19	\$ 9.47	\$ 8.93	\$ 9.27	\$ 9.64
Income from investment operations:					
Net investment income (loss) ^(a)	0.06	(0.06)	(0.05)	(0.11)	0.01
Net gain on investments (realized and unrealized)	0.08	0.74	1.55	0.73	0.58
Total from investment operations	0.14	0.68	1.50	0.62	0.59
Less distributions from:					
Net investment income	(0.53)	(0.96)	(0.69)	(0.96)	(0.96)
Return of capital	(0.43)	—	(0.27)	—	—
Total distributions to shareholders	(0.96)	(0.96)	(0.96)	(0.96)	(0.96)
Net asset value, end of period	\$ 8.37	\$ 9.19	\$ 9.47	\$ 8.93	\$ 9.27
Market value, end of period	\$ 7.68	\$ 8.64	\$ 8.85	\$ 8.20	\$ 8.16
Total Return^(b)					
Net asset value	1.71%	7.36%	17.60%	6.60%	6.78%
Market value	0.28%	8.47%	20.27%	11.52%	-2.42%
Ratios/Supplemental Data:					
Net assets, end of period (in thousands)	\$ 159,669	\$ 175,241	\$ 180,499	\$ 170,253	\$ 176,668
Ratio to average net assets of:					
Total expenses, including interest expense	2.03%	1.83%	1.74%	1.87%	1.79%
Net expenses, including interest expense ^{(c)(d)}	1.88%	1.69%	1.61%	1.73%	1.66%
Net investment income, including interest expense	0.69%	(0.69)%	(0.52)%	(1.13)%	0.12%
Portfolio turnover rate	358%	664%	610%	705%	405%

See notes to financial statements.

	Year Ended December 31, 2015	Year Ended December 31, 2014	Year Ended December 31, 2013	Year Ended December 31, 2012	Year Ended December 31, 2011
Senior Indebtedness					
Total Borrowings outstanding (in thousands)	\$ 80,000	\$ 85,000	\$ 62,500	\$ 62,000	\$ 42,000
Asset Coverage per \$1,000 of indebtedness ^(e)	\$ 2,996	\$ 3,062	\$ 3,888	\$ 3,746	\$ 5,206

(a) Based on average shares outstanding.

(b) Total investment return is calculated assuming an initial investment made at the beginning of the period, reinvestment of all dividends and distribution at net asset value during the period, and redemption on the last day of the period. Transaction fees are not reflected in the calculation of total investment return.

(c) Excluding interest expense, the net operating expense ratios for the years ended December 31 would be:

	2015	2014	2013	2012	2011
	1.44%	1.35%	1.31%	1.38%	1.38%

(d) Net expense information reflects the expense ratios after expense waivers.

(e) Calculated by subtracting the Fund's total liabilities (not including borrowings) from the Fund's total assets and dividing by the total borrowings.

See notes to financial statements.

Note 1 – Organization:

Guggenheim Enhanced Equity Income Fund (the “Fund”) was organized as a Massachusetts business trust on December 3, 2004. The Fund is registered as a diversified, closed-end management investment company under the Investment Company Act of 1940, as amended (the “1940 Act”).

The Fund’s primary investment objective is to seek to provide a high level of current income and current gains, with a secondary objective of long-term capital appreciation. The Fund seeks to achieve its investment objective by obtaining broadly diversified exposure to the equity markets and utilizing a covered call strategy which will follow a proprietary dynamic rules-based methodology. The Fund seeks to earn income and gains both from dividends paid by the securities owned by the Fund and cash premiums received from selling options.

Note 2 – Accounting Policies:

The Fund operates as an investment company and accordingly follows the investment company accounting and reporting guidance of the Financial Accounting Standards Board (“FASB”) Accounting Standards Codification Topic 946 Financial Services – Investment Companies.

The preparation of the financial statements in accordance with U.S. generally accepted accounting principles (“GAAP”) requires management to make estimates and assumptions that affect the reported amounts and disclosures in the financial statements. Actual results could differ from these estimates.

The following is a summary of the significant accounting policies followed by the Fund.

(a) Valuation of Investments

The Board of Trustees of the Fund (the “Board”) has adopted policies and procedures for the valuation of the Fund’s investments (the “Valuation Procedures”). Pursuant to the Valuation Procedures, the Board has delegated to a valuation committee, consisting of representatives from Guggenheim’s investment management, fund administration, legal and compliance departments (the “Valuation Committee”), the day-to-day responsibility for implementing the Valuation Procedures, including, under most circumstances, the responsibility for determining the fair value of the Fund’s securities or other assets.

Valuations of the Fund’s securities are supplied primarily by pricing services appointed pursuant to the processes set forth in the Valuation Procedures. The Valuation Committee convenes monthly, or more frequently as needed and will review the valuation of all assets which have been fair valued for reasonableness. The Fund’s officers, through the Valuation Committee and consistent with the monitoring and review responsibilities set forth in the Valuation Procedures, regularly review procedures used by, and valuations provided by, the pricing services.

Equity securities listed on an exchange (New York Stock Exchange (“NYSE”) or American Stock Exchange) are valued at the last quoted sales price as of the close of business on the NYSE, usually 4:00 p.m. Eastern time on the valuation date. Equity securities listed on the NASDAQ market system are valued at the NASDAQ Official Closing Price on the valuation date, which may not necessarily represent the last sale price. If there has been no sale on such exchange or NASDAQ on such day, the security is valued at the mean of the most recent bid and ask prices on such day.

Open-end investment companies (“Mutual Funds”) are valued at their NAV as of the close of business on the valuation date. Exchange Traded Funds (“ETFs”) and closed-end investment companies are valued at the last quoted sales price.

Exchange-traded options are valued at the mean between the bid and ask prices on the principal exchange on which they are traded.

Short-term debt securities with a maturity of 60 days or less at acquisition and repurchase agreements are valued at amortized cost, provided such amount approximates market value.

Investments for which market quotations are not readily available are fair valued as determined in good faith by Guggenheim Funds Investment Advisors, LLC (“GFIA” or the “Adviser”), subject to review and approval by the Valuation Committee, pursuant to methods established or ratified by the Board. Valuations in accordance with these methods are intended to reflect each security’s (or asset’s) “fair value.” Each such determination is based on a consideration of all relevant factors, which are likely to vary from one pricing context to another. Examples of such factors may include, but are not limited to: (i) the type of security, (ii) the initial cost of the security, (iii) the existence of any contractual restrictions on the security’s disposition, (iv) the price and extent of public trading in similar securities of the issuer or of comparable companies, (v) quotations or evaluated prices from broker-dealers and/or pricing services, (vi) information obtained from the issuer, analysts, and/or the appropriate stock exchange (for exchange traded securities), (vii) an analysis of the company’s financial statements, and (viii) an evaluation of the forces that influence the issuer and the market(s) in which the security is purchased and sold (e.g. the existence of pending merger activity, public offerings or tender offers that might affect the value of the security).

(b) Investment Transactions and Investment Income

Investment transactions are accounted for on the trade date. Realized gains and losses on investments are determined on the identified cost basis. Dividend income is recorded net of applicable withholding taxes on the ex-dividend date. Interest income, including amortization of premiums and accretion of discounts, is accrued daily.

(c) Options

When an option is written, the premium received is recorded as an asset with an equal liability and is subsequently marked to market to reflect the current market value of the option written. These liabilities are reflected as options written in the Statement of Assets and Liabilities. Premiums received from writing options which expire unexercised are recorded on the expiration date as a realized gain. The difference between the premium received and the amount paid on effecting a closing purchase transaction, including brokerage commissions, is also treated as a realized gain, or if the premium is less than the amount paid for the closing purchase transactions, as a realized loss. If an option is exercised, the premium is added to the cost of the underlying security purchase or proceeds from the sale of the underlying security in determining whether there has been a realized gain or loss.

(d) Distributions to Shareholders

The Fund declares and pays quarterly distributions to shareholders. Any net realized long-term gains are distributed annually. Distributions to shareholders are recorded on the ex-dividend date. The

amount and timing of distributions are determined in accordance with federal income tax regulations, which may differ from GAAP.

The Fund pays a quarterly distribution in a fixed amount and will continue to do so until such amount is modified by the Board. If sufficient net investment income is not available, the distribution will be supplemented by short/long-term capital gains and, to the extent necessary, return of capital.

(e) Indemnifications

Under the Fund's organizational documents, its Trustees and Officers are indemnified against certain liabilities arising out of the performance of their duties to the Fund. In addition, throughout the normal course of business, the Fund enters into contracts that contain a variety of representations and warranties which provide general indemnifications. The Fund's maximum exposure under these arrangements is unknown, as this would involve future claims that may be made against the Fund and/or its affiliates that have not yet occurred. However, based on experience, the Fund expects the risk of loss to be remote.

Note 3 – Investment Advisory Agreement, Sub-Advisory Agreement and Other Agreements:

Pursuant to an Investment Advisory Agreement (the "Advisory Agreement") between the Fund and Adviser, the Adviser furnishes offices, necessary facilities and equipment, provides administrative services, oversees the activities of Guggenheim Partners Investment Management, LLC ("GPIM" or the "Sub-Adviser"), provides personnel including certain officers required for the Fund's administrative management and compensates the officers and trustees of the Fund who are affiliates of the Adviser. Both GFIA and GPIM are indirect subsidiaries of Guggenheim Partners, LLC ("Guggenheim"), a global diversified financial services firm.

Pursuant to a Sub-Advisory Agreement (the "Sub-Advisory Agreement") among the Fund, the Adviser and the Sub-Adviser, GPIM, under supervision of the Board and the Adviser, provides a continuous investment program for the Fund's portfolio; provides investment research, makes and executes recommendations for the purchase and sale of securities; and provides certain facilities and personnel.

Under the Advisory Agreement, GFIA is entitled to receive an investment advisory fee at an annual rate equal to 1.00% of the average daily value of the Fund's total managed assets. Under the terms of a fee waiver agreement, GFIA and the Fund have contractually agreed to a permanent ten (10) basis point reduction in the advisory fee, such that the Fund pays to the Adviser an investment advisory fee at an annual rate equal to 0.90% of the average daily value of the Fund's total managed assets. Also under the terms of a fee waiver agreement, and for so long as the investment sub-adviser of the Fund is an affiliate of GFIA, GFIA has agreed to waive an additional ten (10) basis points of its advisory fee such that the Fund pays to GFIA an investment advisory fee at an annual rate equal to 0.80% of the average daily value of the Fund's total managed assets. Pursuant to the Sub-Advisory Agreement, the Advisor pays to GPIM a sub-advisory fee equal to 0.40% of the average daily value of the Fund's total managed assets.

Certain officers and trustees of the Fund may also be officers, directors and/or employees of the Adviser or GPIM. The Fund does not compensate its officers or trustees who are officers, directors and/or employees of the aforementioned firms.

Rydex Fund Services, LLC (“RFS”), an affiliate of the Adviser and the Sub-Adviser, provides fund administration services to the Fund. As compensation for these services, RFS receives a fund administration fee payable monthly at the annual rate set forth below as a percentage of the average daily managed assets of the Fund:

Managed Assets	Rate
First \$200,000,000	0.0275%
Next \$300,000,000	0.0200%
Next \$500,000,000	0.0150%
Over \$1,000,000,000	0.0100%

RFS acts as the Fund’s accounting agent. As accounting agent, RFS is responsible for maintaining the books and records of the Fund’s securities and cash. RFS receives a fund accounting fee payable monthly at the annual rate set forth below as a percentage of the average daily managed assets of the Fund.

Managed Assets	Rate
First \$200,000,000	0.0300%
Next \$300,000,000	0.0150%
Next \$500,000,000	0.0100%
Over \$1,000,000,000	0.0075%
Minimum annual charge	\$50,000
Certain out-of-pocket charges	Varies

For purposes of calculating the fees payable under the foregoing agreements, average daily managed assets means the average daily value of the Fund’s total assets minus the sum of its accrued liabilities. Total assets means all of the Fund’s assets and is not limited to its investment securities. Accrued liabilities means all of the Fund’s liabilities other than borrowings for investment purposes.

The Bank of New York Mellon (“BNY”) acts as the Fund’s custodian. As custodian, BNY is responsible for the custody of the Fund’s assets.

Note 4 – Fair Value Measurement:

In accordance with GAAP, fair value is defined as the price that the Fund would receive to sell an investment or pay to transfer a liability in an orderly transaction with an independent buyer in the principal market, or in the absence of a principal market, the most advantageous market for the investment or liability. GAAP establishes a three-tier fair value hierarchy based on the types of inputs used to value assets and liabilities and requires corresponding disclosure. The hierarchy and the corresponding inputs are summarized below:

Level 1 — quoted prices in active markets for identical assets or liabilities.

Level 2 — significant other observable inputs (for example quoted prices for securities that are similar based on characteristics such as interest rates, prepayment speeds, credit risk, etc.).

Level 3— significant unobservable inputs based on the best information available under the circumstances, to the extent observable inputs are not available, which may include assumptions.

The types of inputs available depend on a variety of factors, such as the type of security and the characteristics of the markets in which it trades, if any. Fair valuation determinations that rely on fewer or no observable inputs require greater judgment. Accordingly, fair value determinations for Level 3 securities require the greatest amount of judgment.

Independent pricing services are used to value a majority of the Fund's investments. When values are not available from a pricing service, they will be determined under the valuation policies that have been reviewed and approved by the Board. In any event, values are determined using a variety of sources and techniques, including: market prices; broker quotes; and models which derive prices based on inputs such as prices of securities with comparable maturities and characteristics or based on inputs such as anticipated cash flows or collateral, spread over Treasuries, and other information and analysis.

The inputs or methodologies used for valuing securities are not necessarily an indication of the risk associated with investing in those securities. The suitability of the techniques and sources employed to determine fair valuation are regularly monitored and subject to change.

Note 5 – Federal Income Taxes:

The Fund intends to comply with the requirements of Subchapter M of the Internal Revenue Code of 1986, as amended, applicable to regulated investment companies. Accordingly, no provision for U.S. federal income taxes is required. In addition, by distributing substantially all of its ordinary income and long-term capital gains, if any, during each calendar year, the Fund intends not to be subject to U.S. federal excise tax.

At December 31, 2015, the following reclassifications were made to the capital accounts of the Fund to reflect permanent book/tax differences and income gains available for distributions under income tax regulations, which are primarily due to taxable over-distributions. Net realized loss and net assets were not affected by the changes.

	Additional Paid-In Capital	Undistributed Net Investment Income	Accumulated Net Realized Loss
	\$ (8,896,240)	\$ 8,896,240	\$ —

As of December 31, 2015, the cost of securities for Federal income tax purposes, the aggregate gross unrealized gain for all securities for which there was an excess of value over tax cost and the aggregate gross unrealized loss for all securities for which there was an excess of tax cost over value, were as follows:

Cost of Investments for Tax Purposes	Gross Tax Unrealized Appreciation	Gross Tax Unrealized Depreciation	Net Tax Unrealized Depreciation
\$ 249,198,699	\$ 421,894	\$ (10,323,427)	\$ (9,901,533)

The difference between book and tax basis unrealized appreciation (depreciation) is primarily attributable to the tax deferral of losses on wash sales.

As of December 31, 2015, the tax components of accumulated earnings (excluding paid-in capital) on a tax basis were as follows:

	Undistributed Ordinary Income	Undistributed Long-Term Capital Gains	Accumulated Capital and Other Losses	Net Unrealized Depreciation
	\$ —	\$ —	\$ (16,053,849)	\$ (9,901,532)

For the years ended December 31, 2015 and 2014, the tax character of distributions paid to shareholders as reflected in the Statement of Changes in Net Assets was as follows:

Distributions paid from:	2015	2014
Ordinary Income	\$ 10,075,669	\$ 18,303,361
Return of capital	8,238,556	—
Total	\$ 18,314,225	\$ 18,303,361

Note: For federal income tax purposes, short-term capital gain distributions are treated as ordinary income distributions.

For Federal income tax purposes, capital loss carryforwards represent realized losses of the Fund that may be carried forward and applied against future capital gains. Under the RIC Modernization Act of 2010, the Fund is permitted to carry forward capital losses incurred in taxable years beginning after December 22, 2010 for an unlimited period and such capital loss carryforwards will retain their character as either short-term or long-term capital losses. As of December 31, 2015, capital loss carryforwards for the Fund was as follows:

	Capital Loss Carryovers Utilized	Capital Loss Expires in 2017
	\$ 8,896,240	\$ 16,053,849

For all open tax years and all major jurisdictions, management of the Fund has concluded that there are no significant uncertain tax positions that would require recognition in the financial statements. Uncertain tax positions are tax positions taken or expected to be taken in the course of preparing the Fund's tax returns that would not meet a more-likely-than-not threshold of being sustained by the applicable tax authority and would be recorded as a tax expense in the current year. Open tax years are those that are open for examination by taxing authorities (i.e. generally the last four tax year ends and the interim tax period since then).

Note 6 – Investments in Securities:

For the period ended December 31, 2015, the cost of purchases and proceeds from sales of investments, excluding written options and short-term securities, were \$900,550,226 and \$924,558,330, respectively.

Note 7 – Derivatives:

Derivatives are instruments whose values depend on, or are derived from, in whole or in part, the value of one or more other assets, such as securities, currencies, commodities or indices. Derivative instruments may be used to increase investment flexibility (including to maintain cash reserves while maintaining exposure to certain other assets), for risk management (hedging) purposes, to facilitate trading, to reduce transaction costs and to pursue higher investment returns. Derivative instruments may also be used to mitigate certain investment risks, such as foreign currency exchange rate risk, interest rate risk and credit risk. GAAP requires disclosures to enable investors to better understand how and why a Fund uses derivative instruments, how these derivative instruments are accounted for and their effects on the Fund's financial position and results of operations.

The Fund may utilize derivatives for the following purposes:

Hedge – an investment made in order to seek to reduce the risk of adverse price movements in a security, by taking an offsetting position to protect against broad market moves.

Higher Investment Returns – the use of an instrument to seek to obtain increased investment returns.

(a) Options Written

The Fund employs an option strategy in an attempt to generate income and gains from option premiums received from selling options. The Fund intends to pursue its options strategy utilizing a proprietary dynamic rules-based methodology. The Fund may purchase or sell (write) options on securities and securities indices which are listed on a national securities exchange or in the OTC market as a means of achieving additional return or of hedging the value of the Fund's portfolio.

An option on a security is a contract that gives the holder of the option, in return for a premium, the right to buy from (in the case of a call) or sell to (in the case of a put) the writer of the option the security underlying the option at a specified exercise or "strike" price. The writer of an option on a security has an obligation upon exercise of the option to deliver the underlying security upon payment of the exercise price (in the case of a call) or to pay the exercise price upon delivery of the underlying security (in the case of a put).

There are several risks associated with transactions in options on securities. As the writer of a covered call option, the Fund forgoes, during the option's life, the opportunity to profit from increases in the market value of the security covering the call option above the sum of the premium and the strike price of the call but has retained the risk of loss should the price of the underlying security decline. A writer of a put option is exposed to the risk of loss if fair value of the underlying securities declines, but profits only to the extent of the premium received if the underlying security increases in value. The writer of an option has no control over the time when it may be required to fill its obligation as writer of the option. Once an option writer has received an exercise notice, it cannot effect a closing purchase transaction in order to terminate its obligation under the option and must deliver the underlying security at the exercise price.

The Fund entered into written option contracts during the period ended December 31, 2015.

Details of the transactions were as follows:

	Number of Contracts	Premiums Received
Options outstanding, beginning of year	19,481	\$ 1,987,738
Options written, during the year	117,192	88,915,608
Options expired, during the year	(19,481)	(1,987,738)
Options closed, during the year	(114,947)	(86,948,091)
Options assigned, during the year	(1,424)	(252,793)
Options outstanding, end of year	821	\$ 1,714,724

(b) Summary of Derivatives Information

The following table presents the types of derivatives in the Fund by location as presented on the Statement of Assets and Liabilities as of December 31, 2015.

Statement of Assets and Liabilities Presentation of Fair Values of Derivative Instruments:				
Asset Derivatives			Liability Derivatives	
Primary Risk Exposure	Statement of Assets and Liabilities Location	Fair Value	Statement of Assets and Liabilities Location	Fair Value
Equity Risk	N/A	\$-	Options written, at value	\$915,775

The following table presents the effect of derivatives instruments on the Statement of Operations for the period ended December 31, 2015.

Effect of Derivative Instruments on the Statement of Operations			
Primary Risk Exposure	Amount of Net Realized Loss on Derivatives	Net Change in Unrealized Appreciation on Derivatives	
	Options Written	Options Written	
Equity Risk	\$ (483,015)	\$ 108,045	

Note 8 – Borrowings:

The Fund has entered into a \$90,000,000 committed credit facility agreement with an approved lender whereby the lender has agreed to provide secured financing to the Fund and the Fund will provide the pledged collateral to the lender. Interest on the amount borrowed is based on the 1-month LIBOR plus 0.75%. As of December 31, 2015, there was \$80,000,000 outstanding in connection with the Fund's credit facility. The average daily amount of the borrowings on the credit facility during the period ended December 31, 2015, was \$81,972,603 with a related average interest rate of 0.95%. The maximum amount outstanding during the period was \$86,000,000. As of December 31, 2015, the market value of the securities segregated as collateral in connection with borrowings is \$237,762,703.

The credit facility agreement governing the loan facility includes usual and customary covenants. These covenants impose on the Fund asset coverage requirements, collateral requirements, investment strategy requirements, and certain financial obligations. These covenants place limits or restrictions on the Fund's ability to (i) enter into additional indebtedness with a party other than the counterparty, (ii) change its fundamental investment policy, or (iii) pledge to any other party, other

than to the counterparty, securities owned or held by the Fund over which the counterparty has a lien. In addition, the Fund is required to deliver financial information to the counterparty within established deadlines, maintain an asset coverage ratio (as defined in Section 18(g) of the 1940 Act) greater than 300%, comply with the rules of the stock exchange on which its shares are listed, and maintain its classification as a “closed-end management investment company” as defined in the 1940 Act.

There is no guarantee that the Fund’s leverage strategy will be successful. The Fund’s use of leverage may cause the Fund’s NAV and market price of common shares to be more volatile and can magnify the effect of any losses.

Note 9 – **Capital:**

Common Shares

The Fund has an unlimited amount of common shares, \$0.01 par value, authorized and 19,077,318 shares issued and outstanding. Transactions in common shares were as follows:

	Year Ended December 31, 2015	Year Ended December 31, 2014
Beginning shares	19,077,318	19,054,684
Shares issued through dividend reinvestment	–	22,634
Ending shares	19,077,318	19,077,318

Note 10 – **Subsequent Event:**

The Fund evaluated subsequent events through the date the financial statements were available for issue and determined there were no additional material events that would require adjustment to or disclosure in the Fund’s financial statements.

**The Board of Trustees and Shareholders
of Guggenheim Enhanced Equity Income Fund**

We have audited the accompanying statement of assets and liabilities, including the portfolio of investments, of Guggenheim Enhanced Equity Income Fund (the "Fund") as of December 31, 2015, and the related statements of operations and cash flows for the year then ended, the statements of changes in net assets for each of the two years in the period then ended, and the financial highlights for the years or periods indicated therein. These financial statements and financial highlights are the responsibility of the Fund's management. Our responsibility is to express an opinion on these financial statements and financial highlights based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements and financial highlights are free of material misstatement. We were not engaged to perform an audit of the Fund's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Fund's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements and financial highlights, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our procedures included confirmation of securities owned as of December 31, 2015, by correspondence with the custodian and brokers or by other appropriate auditing procedures where replies from brokers were not received. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements and financial highlights referred to above present fairly, in all material respects, the financial position of Guggenheim Enhanced Equity Income Fund at December 31, 2015, the results of its operations and its cash flows for the year then ended, the changes in its net assets for each of the two years in the period then ended, and its financial highlights for the years or period indicated therein, in conformity with U.S. generally accepted accounting principles.

Ernst & Young LLP

McLean, Virginia
February 26, 2016

SUPPLEMENTAL INFORMATION (Unaudited)**Expense Ratio Information**

The expense ratios shown on the Financial Highlights page of this report do not reflect fees and expenses incurred indirectly by the Fund as a result of its investments in shares of other investment companies. If these fees were included in the expense ratio, the expense ratio would increase by 0.22% for the period ended December 31, 2015.

Federal Income Tax Information

This information is being provided as required by the Internal Revenue Code (IRC). Amounts shown may differ from those elsewhere in the report because of differences in tax and financial reporting practice.

Of the taxable ordinary income distributions paid during the calendar year ended December 31, 2015, the Fund had 38.63% qualify for the dividends received deduction for corporations.

Of the taxable ordinary income distributions paid during the calendar year ended December 31, 2015, the Fund had 38.45% qualify for the lower income tax rate available to individuals under the Jobs and Growth Tax Relief Reconciliation Act of 2003.

Please refer to your IRS Form 1099 DIV or substitute 1099 DIV as to the federal tax status of the distributions received by you in the calendar year 2015.

Trustees

The Trustees of the Guggenheim Enhanced Equity Income Fund and their principal business occupations during the past five years:

Name, Address* and Year of Birth	Position(s) Held with Trust	Term of Office and Length of Time Served**	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex Overseen	Other Directorships Held by Trustees
Independent Trustees:					
Randall C. Barnes (1951)	Trustee	Since 2005	Current: Private Investor (2001-present).		
			Former: Senior Vice President and Treasurer, PepsiCo, Inc. (1993-1997); President, Pizza Hut International (1991-1993); Senior Vice President, Strategic Planning and New Business Development, PepsiCo, Inc. (1987-1990).	105	Current: Trustee, Purpose Investments Funds (2014-present).
Donald A. Chubb, Jr. (1946)	Trustee	Since 2014	Current: Business broker and manager of commercial real estate, Griffith & Blair, Inc. (1997-present).	101	Current: Midland Care, Inc. (2011-present).

Name, Address* and Year of Birth	Position(s) Held with Trust	Term of Office and Length of Time Served**	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex Overseen	Other Directorships Held by Trustees
Independent Trustees continued:					
Jerry B. Farley (1946)	Trustee	Since 2014	Current: President, Washburn University (1997-present).	101	Current: Westar Energy, Inc. (2004-present); CoreFirst Bank & Trust (2009-present).
Roman Friedrich III (1946)	Trustee and Chairman of the Contracts Review Committee	Since 2011	Current: Founder and Managing Partner, Roman Friedrich & Company (1998-present). Former: Senior Managing Director, MLV & Co. LLC (2010-2011).	101	Current: Zincore Metals, Inc. (2009-present). Former: Axiom Gold and Silver Corp. (2011-2012).
Robert B. Karr III (1942)	Trustee and Chairman of the Audit Committee	Since 2011	Current: Consultant (1998-present). Former: Arthur Andersen (1965-1997) and Managing Partner, Financial and Economic Consulting, St. Louis office (1987-1997).	101	Current: Peabody Energy Company (2003-present); CP Natural Resource Partners, LLC (2002-present).
Ronald A. Nyberg (1953)	Trustee and Chairman of the Nominating and Governance Committee	Since 2005	Current: Partner, Nyberg & Cassioppi, LLC (2000-present). Former: Executive Vice President, General Counsel, and Corporate Secretary, Van Kampen Investments (1982-1999).	107	Current: Edward-Elmhurst Healthcare System (2012-present).

Name, Address* and Year of Birth	Position(s) Held with Trust	Term of Office and Length of Time Served**	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex Overseen	Other Directorships Held by Trustees
Independent Trustees continued:					
Maynard F. Oliverius (1943)	Trustee	Since 2014	Current: Retired. Former: President and CEO, Stormont-Vail HealthCare (1996-2012).	101	Current: Fort Hays State University Foundation (1999-present); Stormont-Vail Foundation (2013-present); University of Minnesota MHA Alumni Philanthropy Committee (2009-present). Former: Topeka Community Foundation (2009-2014).
Ronald E. Toupin, Jr. (1938)	Trustee and Chairman of the Board	Since 2005	Current: Portfolio Consultant (2010-present). Former: Vice President, Manager and Portfolio Manager, Nuveen Asset Management (1998-1999); Vice President, Nuveen Investment Advisory Corp. (1992-1999); Vice President and Manager, Nuveen Unit Investment Trusts (1991-1999); and Assistant Vice President and Portfolio Manager, Nuveen Unit Investment Trusts (1988-1999), each of John Nuveen & Co., Inc. (1982-1999).	104	Former: Bennett Group of Funds (2011-2013).

Name, Address* and Year of Birth	Position(s) Held with Trust	Term of Office and Length of Time Served**	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex Overseen	Other Directorships Held by Trustees
Interested Trustee:					
Donald C. Cacciapaglia*** (1951)	President, Chief Executive Officer and Trustee	Since 2012	Current: President and CEO, certain other funds in the Fund Complex (2012-present); Vice Chairman, Guggenheim Investments (2010-present). Former: Chairman and CEO, Channel Capital Group, Inc. (2002-2010).	236	Current: Clear Spring Life Insurance Company (2015-present); Guggenheim Partners Japan, Ltd. (2014-present); Delaware Life (2013-present); Guggenheim Life and Annuity Company (2011-present); Paragon Life Insurance Company of Indiana (2011-present).

* The business address of each Trustee is c/o Guggenheim Investments, 227 West Monroe Street, Chicago, IL 60606.

** This is the period for which the Trustee began serving the Fund. After a Trustee's initial term, each Trustee is expected to serve a three-year term concurrent with the class of Trustees for which he serves:
—Messrs. Karn, Oliverius and Toupin, are Class III Trustees. The Class III Trustees are expected to stand for re-election at the Fund's annual meeting of shareholders for the fiscal year ending December 31, 2016.
—Messrs. Bames, Cacciapaglia and Chubb are Class I Trustees. The Class I Trustees are expected to stand for re-election at the Fund's annual meeting of shareholders for the fiscal year ending December 31, 2017.

—Messrs. Farley, Friedrich and Nyberg, are Class II Trustees. The Class II Trustees are expected to stand for re-election at the Fund's annual meeting of shareholders for the fiscal year ending December 31, 2018.

*** This Trustee is deemed to be an "interested person" of the Fund under the 1940 Act by reason of his position with the Fund's Adviser and/or the parent of the Adviser.

Officers

The Officers of the Guggenheim Enhanced Equity Income Fund, who are not Trustees, and their principal occupations during the past five years:

Name, Address* and Year of Birth	Position(s) held with the Trust	Term of Office and Length of Time Served**	Principal Occupations During Past Five Years
Joseph M. Arruda (1966)	Assistant Treasurer	Since 2014	Current: Assistant Treasurer, certain other funds in the Fund Complex (2006-present); Vice President, Security Investors, LLC (2010-present); CFO and Manager, Guggenheim Specialized Products, LLC (2009-present).
William H. Belden, III (1965)	Vice President	Since 2014	Former: Vice President, Security Global Investors, LLC (2010-2011); Vice President, Rydex Advisors, LLC (2010); Vice President, Rydex Advisors II, LLC (2010).
Joanna M. Catalucci (1966)	Chief Compliance Officer	Since 2012	Current: Vice President, certain other funds in the Fund Complex (2006-present); Managing Director, Guggenheim Funds Investment Advisors, LLC (2005-present). Former: Vice President of Management, Northern Trust Global Investments (1999-2005).
James M. Howley (1972)	Assistant Treasurer	Since 2006	Current: Chief Compliance Officer, certain funds in the Fund Complex (2012-present); Senior Managing Director, Guggenheim Investments (2012-present). Former: Chief Compliance Officer and Secretary, certain other funds in the Fund Complex (2008-2012); Senior Vice President & Chief Compliance Officer, Security Investors, LLC and certain affiliates (2010-2012); Chief Compliance Officer and Senior Vice President, Rydex Advisors, LLC and certain affiliates (2010-2011). Current: Director, Guggenheim Investments (2004-present); Assistant Treasurer, certain other funds in the Fund Complex (2006-present). Former: Manager of Mutual Fund Administration, Van Kampen Investments, Inc. (1996-2004).

Name, Address* and Year of Birth	Position(s) held with the Trust	Term of Office and Length of Time Served**	Principal Occupations During Past Five Years
Officers continued:			
Amy J. Lee (1961)	Chief Legal Officer	Since 2013	Current: Chief Legal Officer; certain other funds in the Fund Complex (2013-present); Senior Managing Director, Guggenheim Investments (2012-present). Former: Vice President, Associate General Counsel and Assistant Secretary, Security Benefit Life Insurance Company and Security Benefit Corporation (2004-2012).
Mark E. Mathiasen (1978)	Secretary	Since 2007	Current: Secretary, certain other funds in the Fund Complex (2007-present); Managing Director, Guggenheim Investments (2007-present).
Michael P. Megaris (1984)	Assistant Secretary	Since 2014	Current: Assistant Secretary, certain other funds in the Fund Complex (2014-present); Senior Associate, Guggenheim Investments (2012-present).
Adam Nelson (1979)	Assistant Treasurer	Since 2015	Former: J.D., University of Kansas School of Law (2009-2012). Current: Vice President, Guggenheim Investments (2015-present); Assistant Treasurer, certain other funds in the Fund Complex (2015-present).
Kimberly J. Scott (1974)	Assistant Treasurer	Since 2012	Former: Assistant Vice President and Fund Administration Director, State Street Corporation (2013-2015); Fund Administration Assistant Director, State Street (2011-2013); Fund Administration Manager, State Street (2009-2011). Current: Vice President, Guggenheim Investments (2012-present); Assistant Treasurer, certain other funds in the Fund Complex (2012-present).
Former: Financial Reporting Manager, Invesco, Ltd. (2010-2011); Vice President/Assistant Treasurer of Mutual Fund Administration, Van Kampen Investments, Inc./Morgan Stanley Investment Management (2009-2010); Manager of Mutual Fund Administration, Van Kampen Investments, Inc./Morgan Stanley Investment Management (2005-2009).			

Name, Address* and Year of Birth	Position(s) held with the Trust	Term of Office and Length of Time Served**	Principal Occupations During Past Five Years
Officers continued:			
Bryan Stone (1979)	Vice President	Since 2014	Current: Vice President, certain other funds in the Fund Complex (2014-present); Director, Guggenheim Investments (2013-present). Former: Senior Vice President, Neuberger Berman Group LLC (2009-2013); Vice President, Morgan Stanley (2002-2009).
John L. Sullivan (1955)	Chief Financial Officer, Chief Accounting Officer and Treasurer	Since 2010	Current: CFO, Chief Accounting Officer and Treasurer, certain other funds in the Fund Complex (2010-present); Senior Managing Director, Guggenheim Investments (2010-present). Former: Managing Director and CCO, each of the funds in the Van Kampen Investments fund complex (2004-2010); Managing Director and Head of Fund Accounting and Administration, Morgan Stanley Investment Management (2002-2004); CFO and Treasurer, Van Kampen Funds (1996-2004).

* The business address of each officer is c/o Guggenheim Investments, 227 West Monroe Street, Chicago, IL 60606.

** Each officer serves an indefinite term, until his or her successor is duly elected and qualified. The date reflects the commencement date upon which the officer held any officer position with the Fund.

Unless the registered owner of common shares elects to receive cash by contacting Computershare Trust Company N.A. (the "Plan Administrator"), all dividends declared on common shares of the Fund will be automatically reinvested by the Plan Administrator for shareholders in the Fund's Dividend Reinvestment Plan (the "Plan"), in additional common shares of the Fund. Participation in the Plan is completely voluntary and may be terminated or resumed at any time without penalty by notice if received and processed by the Plan Administrator prior to the dividend record date; otherwise such termination or resumption will be effective with respect to any subsequently declared dividend or other distribution. Some brokers may automatically elect to receive cash on your behalf and may re-invest that cash in additional common shares of the Fund for you. If you wish for all dividends declared on your common shares of the Fund to be automatically reinvested pursuant to the Plan, please contact your broker.

The Plan Administrator will open an account for each common shareholder under the Plan in the same name in which such common shareholder's common shares are registered. Whenever the Fund declares a dividend or other distribution (together, a "Dividend") payable in cash, non-participants in the Plan will receive cash and participants in the Plan will receive the equivalent in common shares. The common shares will be acquired by the Plan Administrator for the participants' accounts, depending upon the circumstances described below, either (i) through receipt of additional unissued but authorized common shares from the Fund ("Newly Issued Common Shares") or (ii) by purchase of outstanding common shares on the open market ("Open-Market Purchases") on the New York Stock Exchange or elsewhere. If, on the payment date for any Dividend, the closing market price plus estimated brokerage commission per common share is equal to or greater than the net asset value per common share, the Plan Administrator will invest the Dividend amount in Newly Issued Common Shares on behalf of the participants. The number of Newly Issued Common Shares to be credited to each participant's account will be determined by dividing the dollar amount of the Dividend by the net asset value per common share on the payment date; provided that, if the net asset value is less than or equal to 95% of the closing market value on the payment date, the dollar amount of the Dividend will be divided by 95% of the closing market price per common share on the payment date. If, on the payment date for any Dividend, the net asset value per common share is greater than the closing market value plus estimated brokerage commission, the Plan Administrator will invest the Dividend amount in common shares acquired on behalf of the participants in Open-Market Purchases.

If, before the Plan Administrator has completed its Open-Market Purchases, the market price per common share exceeds the net asset value per common share, the average per common share purchase price paid by the Plan Administrator may exceed the net asset value of the common shares, resulting in the acquisition of fewer common shares than if the Dividend had been paid in Newly Issued Common Shares on the Dividend payment date. Because of the foregoing difficulty with respect to Open-Market Purchases, the Plan provides that if the Plan Administrator is unable to invest the full Dividend amount in Open-Market Purchases during the purchase period or if the market discount shifts to a market premium during the purchase period, the Plan Administrator may cease making Open-Market Purchases and may invest the uninvested portion of the Dividend amount in Newly Issued Common Shares at net asset value per common share at the close of business on the Last Purchase Date; provided that, if the net asset value is less than or equal to 95% of the then current market price per common share, the dollar amount of the Dividend will be divided by 95% of the market price on the payment date.

The Plan Administrator maintains all shareholders' accounts in the Plan and furnishes written confirmation of all transactions in the accounts, including information needed by shareholders for tax records. Common shares in the account of each Plan participant will be held by the Plan Administrator on behalf of the Plan participant, and each shareholder proxy will include those shares purchased or received pursuant to the Plan. The Plan Administrator will forward all proxy solicitation materials to participants and vote proxies for shares held under the Plan in accordance with the instruction of the participants.

There will be no brokerage charges with respect to common shares issued directly by the Fund. However, each participant will pay a pro rata share of brokerage commission incurred in connection with Open-Market Purchases. The automatic reinvestment of Dividends will not relieve participants of any Federal, state or local income tax that may be payable (or required to be withheld) on such Dividends.

The Fund reserves the right to amend or terminate the Plan. There is no direct service charge to participants with regard to purchases in the Plan; however, the Fund reserves the right to amend the Plan to include a service charge payable by the participants.

All correspondence or questions concerning the Plan should be directed to the Plan Administrator, Computershare Trust Company N.A., P.O. Box 30170, College Station, TX 77842-3170; Attention Shareholder Services Department, Phone Number: (866) 488-3559 or online at www.computershare.com/investor.

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Board of Trustees

Randall C. Barnes

Donald C. Cacciapaglia*

Donald A. Chubb, Jr.

Jerry B. Farley

Roman Friedrich III

Robert B. Karn III

Ronald A. Nyberg

Maynard F. Oliverius

Ronald E. Toupin, Jr.,
Chairman

* Trustee is an “interested person” (as defined in section 2(a)(19) of the 1940 Act) (“Interested Trustee”) of the Trust because of his position as the President and CEO of the Investment Adviser and the Investment Sub-Adviser.

Principal Executive Officers

Donald C. Cacciapaglia

President and Chief Executive Officer

Joanna M. Catalucci

Chief Compliance Officer

Amy J. Lee

Chief Legal Officer

Mark E. Mathiasen

Secretary

John L. Sullivan

Chief Financial Officer,

Chief Accounting Officer

and Treasurer

Investment Adviser

Guggenheim Funds Investment

Advisors, LLC

Chicago, IL

Investment Sub-Adviser

Guggenheim Partners Investment

Management, LLC

Santa Monica, CA

Accounting Agent and Administrator

Rydex Fund Services, LLC

Rockville, MD

Custodian

The Bank of New York Mellon

New York, NY

Legal Counsel

Skadden, Arps, Slate, Meagher

& Flom LLP

New York, NY

Independent Registered Public

Accounting Firm

Ernst & Young LLP

McLean, VA

Privacy Principles of Guggenheim Enhanced Equity Income Fund for Shareholders

The Fund is committed to maintaining the privacy of its shareholders and to safeguarding its non-public personal information. The following information is provided to help you understand what personal information the Fund collects, how we protect that information and why, in certain cases, we may share information with select other parties.

Generally, the Fund does not receive any non-public personal information relating to its shareholders, although certain non-public personal information of its shareholders may become available to the Fund. The Fund does not disclose any non-public personal information about its shareholders or former shareholders to anyone, except as permitted by law or as is necessary in order to service shareholder accounts (for example, to a transfer agent or third party administrator).

The Fund restricts access to non-public personal information about the shareholders to Guggenheim Funds Investment Advisors, LLC employees with a legitimate business need for the information. The Fund maintains physical, electronic and procedural safeguards designed to protect the non-public personal information of its shareholders.

Questions concerning your shares of Guggenheim Enhanced Equity Income Fund?

- If your shares are held in a Brokerage Account, contact your Broker.
- If you have physical possession of your shares in certificate form, contact the Fund's Transfer Agent: *Computershare Trust Company N.A., P.O. Box 30170 College Station, TX 77842-3170; (866) 488-3559 or online at www.computershare.com/investor*

This report is sent to shareholders of Guggenheim Enhanced Equity Income Fund for their information. It is not a Prospectus, circular or representation intended for use in the purchase or sale of shares of the Fund or of any securities mentioned in this report.

A description of the Fund's proxy voting policies and procedures related to portfolio securities is available without charge, upon request, by calling the Fund at (866) 882-0688.

Information regarding how the Fund voted proxies for portfolio securities, if applicable, during the most recent 12-month period ended December 31, is also available, without charge and upon request by calling (866) 882-0688, by visiting the Fund's website at guggenheiminvestments.com/gpm or by accessing the Fund's Form N-PX on the U.S. Securities and Exchange Commission's (SEC) website at www.sec.gov.

The Fund files its complete schedule of portfolio holdings with the SEC for the first and third quarters of each fiscal year on Form N-Q. The Fund's Form N-Q is available on the SEC website at www.sec.gov or by visiting the Fund's website at guggenheiminvestments.com/gpm. The Fund's Form N-Q may also be viewed and copied at the SEC's Public Reference Room in Washington, DC; information on the operation of the Public Reference Room may be obtained by calling (800) SEC-0330 or at www.sec.gov.

Notice to Shareholders

Notice is hereby given in accordance with Section 23(c) of the Investment Company Act of 1940, as amended, that the Fund from time to time may purchase shares of its common stock in the open market.

ABOUT THE FUND MANAGERS

Guggenheim Partners Investment Management, LLC

Guggenheim Partners Investment Management, LLC (“GPIM”) is an indirect subsidiary of Guggenheim Partners, LLC, a diversified financial services firm. The firm provides capital markets services, portfolio and risk management expertise, wealth management, and investment advisory services. Clients of Guggenheim Partners, LLC subsidiaries are an elite mix of individuals, family offices, endowments, foundations, insurance companies and other institutions.

Investment Philosophy

GPIM’s investment philosophy is predicated upon the belief that thorough research and independent thought are rewarded with performance that has the potential to outperform benchmark indexes with both lower volatility and lower correlation of returns over time as compared to such benchmark indexes.

Investment Process

GPIM’s investment process is a collaborative effort between various groups including the Portfolio Construction Group, which utilize proprietary portfolio construction and risk modeling tools to determine allocation of assets among a variety of sectors, and its Sector Specialists, who are responsible for security selection within these sectors and for implementing securities transactions, including the structuring of certain securities directly with the issuers or with investment banks and dealers involved in the origination of such securities.

Guggenheim Funds Distributors, LLC
227 West Monroe Street
Chicago, IL 60606
Member FINRA/SIPC
(02/16)

NOT FDIC-INSURED | NOT BANK-GUARANTEED | MAY LOSE VALUE

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