

12.31.2016

Guggenheim Funds Annual Report

Guggenheim Enhanced Equity Income Fund

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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.

(Unaudited) December 31, 2016

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, 2016.

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, 2016, the Fund provided a total return based on market price of 17.86% and a total return net of fees based on NAV of 11.87%. 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, 2016, the Fund's closing market price of \$8.00 per share represented a discount of 4.19% to its NAV of \$8.35 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 12.00% based on the Fund's closing market price of \$8.00 as of December 31, 2016. Please see Note 2(d) on page 22 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, 2016, 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,

Donald C. Cacciapaglia

President and Chief Executive Officer

Guggenheim Enhanced Equity Income Fund

January 31, 2017

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 Minerd, 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; Qi Yan, Managing Director and Portfolio Manager; and Daniel Cheeseman, Director and 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, 2016.

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. The Fund holds liquid securities, 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, write options on 100% of the equity holdings in its portfolio. The typical hedge ratio (i.e. the percentage of the Fund's equity holdings on which options are written) 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 (represents the systematic risk of a portfolio and

measures its sensitivity to a benchmark) of the portfolio resulting in a portfolio that is either over- or underexposed to broad market equities.

GPIM may engage in selling call options on indices, which could include securities that are not specifically held by the Fund. 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.

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.

Provide an update on the Guggenheim equity closed-end funds merger proposals.

Guggenheim Investments recently announced certain proposals that affect its three enhanced equity closed-end funds, including Guggenheim Enhanced Equity Income Fund (GPM). The proposals involved the reorganization of GPM from a Massachusetts business trust to a Delaware statutory trust through a process known as redomestication and the mergers of each of Guggenheim Enhanced Equity Strategy Fund (GGE), and Guggenheim Equal Weight Enhanced Equity Income Fund (GEQ), with and into GPM (together, the "Proposals").

At a Special Meeting of Shareholders held on February 13, 2017, shareholders of record of each of GGE, GPM and GEQ voted to approve the Proposals. Subject to the satisfaction of certain customary closing conditions, the redomestication of GPM and the mergers of each of GGE and GEQ with and into GPM are expected to be effective with the open of the New York Stock Exchange (NYSE) on March 20, 2017.

No changes to GPM's investment policies are being made in connection with the Proposals, however, following completion of the mergers, GPM will seek to obtain equity exposure through a combination of investment in individual equity securities and ETFs, and will continue to utilize an option writing

strategy. This enhanced equity strategy is anticipated to combine the best elements of the existing Funds' investment strategies while maintaining the same investment objective.

Please provide an overview of the economic and market environment during the 12 months ended December 31, 2016.

Behind the performance numbers for the past 12 months are a multitude of events that unfolded throughout 2016, including an increase in U.S. corporate defaults, several quarters of negative earnings growth, stubbornly low inflation across the globe, the British vote to exit the European Union, and a U.S. presidential election outcome that defied investor expectations and polling trends. That was on top of one of the worst selloffs for U.S. corporate bonds since the financial crisis in the first six weeks of the year, and one of the worst selloffs in government bonds since 2013's taper tantrum in the fourth quarter, and the Standard & Poor's 500® ("S&P 500") Index falling almost 11% early in the year. Nevertheless, or perhaps because of pre-election turmoil, between election day and the end of December, the S&P 500 rallied 4.6%, high-yield spreads tightened 83 basis points, and 10-year Treasury yields rose 57 basis points.

The market reaction to the outcome of the U.S. presidential election set the stage for the U.S. Federal Reserve (the "Fed") to raise target interest rates by 25 basis points from a range of 0.25–0.50% to 0.50–0.75% in December. More importantly, the Federal Open Market Committee ("FOMC") now projects three rate increases in 2017, up from two in September.

The upward shift appears to reflect the view that there may be less room for accommodative policy to continue in light of recent labor market data. We believe the participation rate introduces meaningful uncertainty to the pace of Fed tightening. In 2016, a rising participation rate helped keep the Fed at bay for most of the year as it stabilized the unemployment rate slightly above what the Fed considers full employment. However, the participation trend reversed in October and November, causing the unemployment rate to decline to only 4.7% by December.

Early indications that fiscal spending (and/or tax cuts) will be prioritized in the new administration suggest that the risks to real Gross Domestic Product ("GDP") growth in 2017 and 2018 are now skewed to the upside. U.S. real GDP grew by 3.5% in the third quarter, up from 1.4% in the second quarter. We expect output to rise by around 2% on average in coming quarters, a bit faster than the trend rate over the past year, as drags from past dollar strength and an inventory adjustment cycle fade.

A post-election rise in consumer confidence, along with continued income growth and healthier household balance sheets, bodes well for consumption in the coming quarters. The trend rate of job growth should slow as we near full employment. Even so, the unemployment rate should continue to fall toward 4.0% as employment growth outstrips labor force growth. A tighter labor market will begin to put more upward pressure on wage growth, which is being held back by meager productivity gains. An improving labor market, low borrowing costs, and rising household formation will continue to bolster housing, as evidenced by housing starts at cyclical highs. Key inflation measures will rise over the next year due to energy price base effects and reductions in labor market slack.

Given our view that the Fed will raise rates three, possibly four, times in 2017, the effects of monetary policy divergence will be important to watch as two major central banks, the European Central Bank

("ECB") and the Bank of Japan ("BOJ"), continue their purchase programs. In December, the ECB committed to extend its asset-purchase program through the end of 2017, albeit at a reduced monthly pace of €60 billion (from €80 billion currently) beginning in April. The ECB also changed its criteria for asset purchases, allowing the purchase of sovereign bonds with yields lower than the -0.40% deposit rate. In our view, the extension of the program to at least the end of 2017 makes it highly likely that the ECB will continue to buy assets well into 2018. The growing gap in policy rates and global yields could drive further U.S. dollar appreciation, which would weigh on oil prices and stem the recovery in the energy market. Currently, our oil model projects oil prices will remain below \$60 per barrel through the end of 2017.

How did the Fund perform for the 12 months ended December 31, 2016?

For the 12 months ended December 31, 2016, the Fund provided a total return based on market price of 17.86% and a total return net of fees based on NAV of 11.87%. 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, 2016, the Fund's closing market price of \$8.00 per share represented a discount of 4.19% to its NAV of \$8.35 per share. 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 12.0% based on the Fund's closing market price of \$8.00 as of December 31, 2016. Please see Note 2(d) on page 22 for more information on distributions for the period.

Discuss market volatility over the period.

The first half of 2016 was marked by the market selloff that began the year and ended in February, as the S&P 500 fell 10.3%. The S&P 500 quickly recovered by 15.9% only to sharply drop 5% in the two days following the June Brexit vote. But the S&P 500 rallied to new highs in August and tacked on a 4.6% jump between election day and the end of December. That was in spite of indications by the equity futures market that the major U.S. indices would open deeply negative on the day after the election. For the year, the S&P 500 Index rose 11.96%.

Amid concerns of slowing global growth and the turmoil of falling energy prices in early 2016, market implied volatility as measured by the Chicago Board Options Exchange Volatility Index ("VIX") surged as high as 30 intraday in February, steadily declined until a spike at the Brexit vote, then resumed its downward path to 11.43 in August. Volatility resumed in the fall, with a spike in September as the market reacted to rising interest rates with sector rotation into cyclical stocks, and again amid the outcome of the November U.S. presidential election. The VIX continued its way down through the rest of 2016, reaching its lowest point in two years in late December. For the year, the VIX fell about 23%.

What most influenced the Fund's performance?

The models used in the strategy attempt to collect the implied-realized premium inherent in index options. It tends to outperform when market implied volatility exceeds future realized volatility. Sustained periods of volatility are beneficial to the strategy, while a rapidly changing market rise is a headwind.

For the period, the return on the underlying portfolio holdings was a contributor to performance. The Fund benefited from the allocation to ETFs that track the S&P 500, its largest, and a solidly-performing index for the period, although indices for many risk assets (including small- and mid-cap stocks, and high yield bonds) outperformed the S&P 500 for the period. For the period as a whole, the Fund's derivative use contributed to the Fund's return.

The implied-realized volatility spread was rich in early 2016, which was a tailwind for the Fund as it was able to sell volatility near the VIX's peak for the period. Rather than at monthly points, selling options as volatility increases enables the Fund to monetize these spikes. The Fund continued to perform steadily with the market recovery and rapid decline in volatility through Memorial Day. The quick decline and rapid recovery around Brexit had a neutral effect on the Fund, but from then until the end of the period, the Fund was unable to keep pace with the S&P 500, as volatility stabilized later in the year, with fewer unexpected market shocks. Even though the Fund finished about even with the S&P 500 at year end, it had an annualized distribution rate of 12%, compared with a S&P 500 dividend yield of about 2%.

There are possible market scenarios which could push volatility sharply higher, such as further interest rate increases, the implementation of policies from a new U.S. presidential administration, and the impact of European populist movements on key elections. A persistently low volatility market from continued central bank accommodation would be expected to be positive contributing. However, a shift to a sustainable higher volatility market would also be a net positive, so long as the transition between low and high volatility is gradual.

Can you discuss the impact of leverage in the Fund?

The Fund's total return was above that of the cost of leverage. Therefore, on a simple comparison, the use of leverage contributed to shareholder returns. Leverage at the end of the period was about 31% of the Fund's total managed 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. Lower rates in Europe and Japan will continue to direct capital into the U.S., keeping pressure on rates. This should support economic growth, in particular housing activity, and reduce the near-term risk for a recession in the U.S.

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 28 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 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

Investing involves risk, including the possible loss of principal and fluctuation of value.

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 expressed for informational purposes only and are subject to change at any time, based on market and other conditions, and may not come to pass. These views may differ from views of other investment professionals at Guggenheim and should not be construed as research, investment advice or a recommendation of any kind regarding the fund or any issuer or security, do not constitute a solicitation to buy or sell any security and should not be considered specific legal, investment or tax advice. The information provided does not take into account the specific objectives, financial situation or particular needs of any specific investor.

The views expressed in this report may also include forward looking statements that involve risk and uncertainty, and there is no guarantee that any predictions will come to pass. Actual results or events may differ materially from those projected, estimated, assumed or anticipated in any such forward-looking statements. Important factors that could result in such differences, in addition to the other factors noted with such forward-looking statements, include general economic conditions such as inflation, recession and interest rates.

There can be no assurance that the Fund will achieve its investment objectives or that any investment strategies or techniques discussed herein will be effective. 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.

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.

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

| Fund | Sta | tıs | tics | ٠ |
|------|-----|-----|------|---|

| Share Price | \$8.00 |
|--------------------|-----------|
| Net Asset Value | \$8.35 |
| Discount to NAV | -4.19% |
| Net Assets (\$000) | \$159,229 |

AVERAGE ANNUAL TOTAL RETURNS FOR THE PERIOD ENDED DECEMBER 31, 2016¹

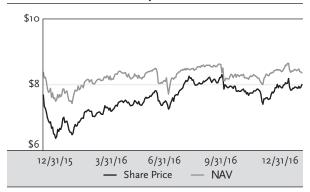
| | One Year | Three Year | Five Year | Ten Year | Since Inception (08/25/05) |
|---|-------------|---------------|--------------|-------------|----------------------------------|
| Guggenheim Enhanced Equity Income Fund | | | | | |
| NAV | 11.87% | 6.90% | 8.90% | 2.53% | 3.08% |
| Market | 17.86% | 8.63% | 11.45% | 3.32% | 3.14% |

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. All NAV returns include 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.

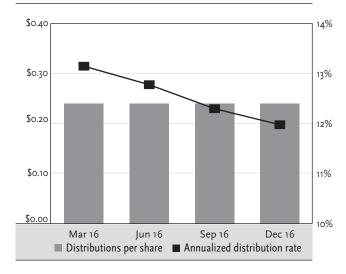
¹Performance prior to June 22, 2010, under the name Old Mutual/Claymore Long-Short Fund was achieved through an investment strategy of a long-short strategy and an opportunistic covered call writing strategy by the previous investment sub-adviser, Analytic Investors, LLC, and factors in the Fund's fees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

| Portfolio Breakdown | % of Net Assets |
|---------------------------------|-----------------|
| Exchange-Traded Funds | 142.8% |
| Options Written | -0.9% |
| Total Investments | 141.9% |
| Other Assets & Liabilities, net | -41.9% |
| Net Assets | 100.0% |





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, 2016, 49.10% of the distributions were characterized as income and 50.90% of the distributions were characterized as return of capital.

| | Shares | Value |
|---|---|----------------|
| EXCHANGE-TRADED FUNDS† – 142.8% | | |
| SPDR S&P 500 ETF Trust ^{1,2} | 455,812 | \$ 101,887,656 |
| iShares S&P 500 Growth ETF ² | 332,156 | 40,453,279 |
| iShares S&P 500 Value ETF ² | 370,268 | 37,537,770 |
| iShares Russell 2000 Index ETF ^{1,2} | 177,535 | 23,940,595 |
| PowerShares QQQ Trust Series 1 ^{1,2} | 199,850 | 23,678,228 |
| Total Exchange-Traded Funds (Cost \$228.481,563) | | 227 407 520 |
| | | 227,497,528 |
| Total Investments – 142.8% (Cost \$228,481,563) | | 227,497,528 |
| | Contracts (100 shares per Contract) | Value |
| OPTIONS WRITTEN† – (0.9)% | | |
| Call options on: | | |
| NASDAQ 100 Index Expiring January 2017 with strike price of \$4,925.00* | 97 | \$ (370,055) |
| S&P 500 Index Expiring January 2017 with strike price of \$2,250.00* | 213 | (385,530) |
| Russell 2000 Index Expiring January 2017 with strike price of \$1,360.00* | 353 | (727,180) |
| Total Call Options | | (1,482,765) |
| Total Options Written (Premiums received \$2,006,416) | | (1,482,765) |
| Other Assets & Liabilities, net – (41.9)% | | (66,785,479) |
| | | (**,****) |

- Non-income producing security.
- Value determined based on Level 1 inputs See Note 4.
- Security represents cover for outstanding options written.
- Security has been physically segregated as collateral for borrowings outstanding. As of December 31, 2016, the total market value of segregated securities was \$227,497,528. 2

SQP Standard & Poor's

Total Net Assets - 100.0%

\$ 159,229,284

The following table summarizes the inputs used to value the Fund's investments at December 31, 2016 (See Note 4 in the Notes to Financial Statements):

| Description | Level 2 Significant Level 1 Observable Quoted Prices Inputs | | servable | Level 3 gnificant bservable Inputs | Total |
|---------------------------------|--|----|----------|---|-------------------|
| Assets Exchange-Traded Funds | \$ 227,497,528 | \$ | _ | \$ _ | \$ 227,497,528 |
| Liabilities Options Written | \$ 1,482,765 | \$ | _ | \$ _ | \$ 1,482,765 |

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 year ended December 31, 2016, there were no transfers between levels.

(8,849,829)

(460,384)

8.35

159,229,284

\$

| ASSETS: | |
|--|-------------------|
| Investments, at value (cost \$228,481,563) | \$ 227,497,528 |
| Cash | 4,399,337 |
| Segregated cash due to broker | 566,111 |
| Receivables: | |
| Dividends | 602,356 |
| Other assets | 4,145 |
| Total assets | 233,069,477 |
| LIABILITIES: | |
| Borrowings | 72,000,000 |
| Options written, at value (Premiums received of \$2,006,416) | 1,482,765 |
| Interest payable on borrowings | 95,098 |
| Payable for: | |
| Investment advisory fees | 158,160 |
| Trustees' fees and expenses* | 2,571 |
| Other liabilities | 101,599 |
| Total liabilities | 73,840,193 |
| NET ASSETS | \$ 159,229,284 |
| 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 | 168,348,724 |

Accumulated net realized loss on investments

Net unrealized depreciation on investments

NET ASSETS

Net asset value

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

| | | | | | ONS | |
|--|--|--|--|--|-----|--|
| | | | | | | |

December 31, 2016

17,874,781

| | , |
|--|--------------|
| For the Year Ended December 31, 2016 | |
| INVESTMENT INCOME: | |
| Dividends | \$ 4,382,848 |
| Total investment income | 4,382,84 |
| EXPENSES: | |
| Investment advisory fees | 2,089,008 |
| Interest expense | 860,012 |
| Professional fees | 119,283 |
| Trustees' fees and expenses* | 81,26 |
| Fund accounting fees | 64,817 |
| Administration fees | 61,422 |
| Printing fees | 35,029 |
| Registration and filings | 23,790 |
| Transfer agent fees | 19,26 |
| Custodian fees | 18,96 |
| Insurance | 10,920 |
| Other expenses | 1,57 |
| Total expenses | 3,385,347 |
| Less: | |
| Expenses waived by advisor | (232,112 |
| Net expenses | 3,153,23 |
| Net investment income | 1,229,61 |
| NET REALIZED AND UNREALIZED GAIN (LOSS): | |
| Net realized gain (loss) on: | |
| Investments | 12,697,302 |
| Options written | (4,417,447 |
| Net realized gain | 8,279,85 |
| Net change in unrealized appreciation (depreciation) on: | |
| Investments | 8,640,61 |
| Options written | (275,298 |
| Net change in unrealized appreciation (depreciation) | 8,365,31 |
| Net realized and unrealized gain | 16,645,168 |
| | , , |

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

Net increase in net assets resulting from operations

| | Dece | Year Ended mber 31, 2016 | Dece | Year Ended mber 31, 2015 |
|---|------|-----------------------------|------|-----------------------------|
| INCREASE (DECREASE) IN NET ASSETS FROM OPERATIONS: | | | | |
| Net investment income | \$ | 1,229,613 | \$ | 1,179,429 |
| Net realized gain on investments | | 8,279,855 | | 9,707,322 |
| Net change in unrealized appreciation (depreciation) on investments | | 8,365,313 | | (8,144,404) |
| Net increase in net assets resulting from operations | | 17,874,781 | | 2,742,347 |
| DISTRIBUTIONS TO SHAREHOLDERS FROM: | | | | |
| Net investment income | | (8,992,978) | | (10,075,669) |
| Return of capital | | (9,321,247) | | (8,238,556) |
| Total distributions to shareholders | | (18,314,225) | | (18,314,225) |
| Net decrease in net assets | | (439,444) | | (15,571,878) |
| NET ASSETS: | | | | |
| Beginning of year | | 159,668,728 | | 175,240,606 |
| End of year | \$ | 159,229,284 | \$ | 159,668,728 |
| Distributions in excess of net investment income at end of year | \$ | _ | \$ | _ |

(8,640,611)

(12.697.302)

4,417,447

127,754,341

(131,880,096)

(333,781,073)

365.376.075

1,534,463

8,086

22.301

142.086

(842,946)

(6,315)

(6,171)

(5,385)

(1,960)

8.635

29.564.956

(18,314,225)

30,000,000

(38,000,000)

(26,314,225)

3.250,731

1,714,717

2.342 10.960

275,298

| Cash Flows | . f | O | A ativitian |
|------------|--------|-----------|-------------|
| (ash Flows | s trom | Operating | Activities: |

| Net Increase in net assets resulting | g from operations | \$ 17,874,781 |
|--------------------------------------|-------------------|------------------|

Adjustments to Reconcile Net Increase in Net Assets Resulting from Operations

| to Net Cash Provided by Operating and Investing Activities: | |
|---|--|
| · · · · · · · · · · · · · · · · · · · | |

| o Net Casil Flovided by Ope | rating and investing Activities. | |
|-----------------------------|--|--|
| Net change in unrealized | (appreciation) depreciation on investments | |

Cash Flows From Financing Activities: Distributions to common shareholders

| | / | | | | | | |
|---|---|-----|------|------|----|------|-------|
| | | Net | Cash | Used | in | Fina | ncing |
| _ | | | | | | | |

Net increase in cash

Cash at Beginning of Year Cash at End of Year

Supplemental Disclosure of Cash Flow Information:

Cash paid during the period for interest

Net realized gain on investments

Activities

\$ 4,965,448

849.052

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, 2016 | | Year | Year Ended December 31, 2015 | Ye | Year Ended December 31, 2014 | Yea | Year Ended December 31, 12013 | Yea Decen | Year Ended December 31, 2012 | |
|--|------------------------------------|---------|------|------------------------------------|----|------------------------------------|-----|----------------------------------|--------------|------------------------------------|--|
| Per Share Data: Net asset value, beginning of period | - | 8.37 | - ∽ | 9.19 | -∽ | 9.47 | - | 8.93 | - ∽ | 9.27 | |
| Income from investment operations: Net investment income (loss) ⁽⁴⁾ Net gain on investments (realized and unrealized) | | 0.06 | | 90.0 | | (0.06) | | (0.05) 1.55 | | (0.11) | |
| Total from investment operations | | 0.94 | | 0.14 | | 0.68 | | 1.50 | | 0.62 | |
| Less distributions from: Net investment income Return of capital | | (0.47) | | (0.53) | | (0.96) | | (0.69) | | (0.96) | |
| Total distributions to shareholders | | (0.96) | | (0.96) | | (0.96) | | (0.96) | | (0.96) | |
| Net asset value, end of period | ⇔ | 8.35 | ↔ | 8.37 | \$ | 9.19 | ↔ | 9.47 | ₩ | 8.93 | |
| Market value, end of period | ⇔ | 8.00 | ∽ | 7.68 | ∽ | 8.64 | ∽ | 8.85 | ∽ | 8.20 | |
| Total Return ^(b) | | | | | | | | | | | |
| Net asset value | | 11.87% | | 1.71% | | 7.36% | | 17.60% | | %09'9 | |
| Market value | | 17.86% | | 0.28% | | 8.47% | | 20.27% | | 11.52% | |
| Ratios/Supplemental Data: | | | | | | | | | | | |
| Net assets, end of period (in thousands) | \$ | 159,229 | ₩ | 159,669 | \$ | 175,241 | ↔ | 180,499 | \$ | 170,253 | |
| Ratio to average net assets of: | | | | | | | | | | | |
| Net investment income, including interest expense ^(f) | | 0.78% | | %69.0 | | %(69:0) | ٠. | (0.52)% | | (1.13)% | |
| Total expenses, including interest expense | | 2.16% | | 2.03% | | 1.83% | | 1.74% | | 1.87% | |
| Net expenses, including interest expense(c)(d) | | 2.01% | | 1.88% | | 1.69% | | 1.61% | | 1.73% | |
| Portfolio turnover rate | | 143% | | 358% | | 664% | | %019 | | 705% | |

| | Year Decemb | Year Ended December 31, 1 2016 | Year Ended December 31, 2015 | Ended er 31, 2015 | Year Decem | Year Ended Secember 31, 1 2014 | Year Ended December 31, 2013 | | Year E Decemb | Year Ended December 31, 2012 |
|---|----------------|--------------------------------------|------------------------------------|-------------------------|---------------|--------------------------------------|------------------------------------|-------|------------------|------------------------------------|
| Senior Indebtedness Total Borrowings outstanding (in thousands) Asset Coverage per \$1,000 of indebtedness ^(e) | ** | 3,212 | <i>⇔ ↔</i> | 80,000 2,996 | <i>⇔</i> ↔ | 3,062 | & & | 3,888 | * * | 52,000 3,746 |

- Based on average shares outstanding.
- Total investment return is calculated assuming an initial investment made at the net asset value 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. (a)
- Excluding interest expense, the net expense ratios for the years ended December 31 would be: (0)

| 2012 | 1.38% |
|------|-------|
| 2013 | 1.31% |
| 2014 | 1.35% |
| 2015 | 1.44% |
| 2016 | 1.46% |
| | |

- Net expense information reflects the expense ratios after expense waivers.
- Calculated by subtracting the Fund's total liabilities (not including borrowings) from the Fund's total assets and dividing by the total borrowings.
- Does not include expenses of the underlying funds in which the Fund invests. £ @ £

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 following significant accounting policies are in conformity with U.S. generally accepted accounting principles ("GAAP") and are consistently followed by the Fund. This requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates. All time references are based on Eastern Time.

(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. 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: market prices; sale 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 analysis.

(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.

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.

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.

On October 4, 2016, Rydex Fund Services, LLC ("RFS") was purchased by MUFG Investor Services and as of that date RFS ceased to be an affiliate of the Adviser. In connection with its acquisition, RFS changed its name to MUFG Investor Services (US), LLC ("MUIS"). This change has no impact on the financial statements of the Fund. MUIS acts as the Fund's administrator and accounting agent. As administrator and accounting agent, MUIS is responsible for maintaining the books and records of the Fund's securities and cash.

The Bank of New York ("BNY") acts as the Fund's custodian. As custodian, BNY is responsible for the custody of the Fund's assets.

For providing the aforementioned services, MUIS and BNY are entitled to receive a monthly fee equal to an annual percentage of the Fund's average daily managed assets subject to certain minimum monthly fees and out of pocket expenses.

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, 2016, 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 | ributed Net Investment Income | Accumulated Net Realized Loss |
|--------------------------------------|-------------------------------------|-------------------------------------|
| \$ (7,763,365) | \$ 7,763,365 | \$— |

As of December 31, 2016, 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 | Gross Tax | Gross Tax | Net Tax |
|-----------------|--------------|----------------|----------------|
| Investments for | Unrealized | Unrealized | Unrealized |
| Tax Purposes | Appreciation | Depreciation | Depreciation |
| \$ 228,517,257 | \$— | \$ (1,019,729) | \$ (1,019,729) |

The difference between book and tax basis unrealized appreciation (depreciation) is primarily attributable to the tax deferral of losses on wash sales and the "marking to market" of non-equity options.

As of December 31, 2016, 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 |
|-------------------------------------|--|--|--------------------------------|
| \$— | \$— | \$ (8,290,484) | \$ (1,019,729) |

For the years ended December 31, 2016 and 2015, the tax character of distributions paid to shareholders as reflected in the Statement of Changes in Net Assets was as follows:

| Distributions paid from: | 2016 | 2015 |
|--------------------------|------------------|------------|
| Ordinary Income | \$ 8,992,978 \$ | 10,075,669 |
| Return of capital | 9,321,247 | 8,238,556 |
| Total | \$ 18,314,225 \$ | 18,314,225 |

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, 2016, capital loss carryforwards for the Fund was as follows:

| | Capital Loss Carryovers Utilized | Capital Loss Expires in 2017 |
|----|--|------------------------------------|
| \$ | 7,763,365 | \$ 8,290,484 |

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, 2016, the cost of purchases and proceeds from sales of investments, excluding options written and short-term securities, were \$333,781,073 and \$365,376,075, 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 options written contracts during the period ended December 31, 2016.

Details of the transactions were as follows:

| | Number of Contracts | Premiun Receive | |
|--|------------------------|--------------------|-----|
| Options outstanding, beginning of year | 821 | \$ 1,714,72 | 24 |
| Options written, during the year | 38,182 | 127,754,3 | 41 |
| Options closed, during the year | (38,340) | (127,462,64 | 49) |
| Options outstanding, end of year | 663 | \$ 2,006,4 | 16 |

(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, 2016.

Statement of Assets and Liabilities Presentation of Fair Values of Derivative Instruments:

| | Asset Derivativ | res | Liability Derivat | ives |
|-----------------------|--|------------|--|-------------|
| 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 | \$1,482,765 |

The following table presents the effect of derivatives instruments on the Statement of Operations for the period ended December 31, 2016.

| | Amount of Net Realized Gain on Derivatives | Net Change in Unrealized Depreciation on Derivatives |
|-----------------------|---|---|
| Primary Risk Exposure | Options Written | Options Written |
| Equity Risk | \$ (4,417,447) | \$ (275,298) |

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, 2016, there was \$72,000,000 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, 2016, was \$75,183,060 with a related average interest rate of 1.25%. The maximum amount outstanding during the period was \$80,000,000. As of December 31, 2016, the market value of the securities segregated as collateral is \$227,497,528.

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

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, 2016 | Year Ended December 31, 2015 |
|---|---------------------------------|---------------------------------|
| Beginning shares | 19,077,318 | 19,077,318 |
| Shares issued through dividend reinvestment | _ | _ |
| Ending shares | 19,077,318 | 19,077,318 |

Note 10 - Merger Approval:

The Boards of Trustees of several Guggenheim equity closed-end funds approved the following mergers at a special joint meeting of the Boards held on August 31, 2016: the merger of each of Guggenheim Enhanced Equity Strategy Fund ("GGE") and Guggenheim Equal Weight Enhanced Equity Income Fund ("GEQ") with and into GPM and the redomestication of GPM from a Massachusetts business trust to a Delaware statutory trust.

At a Special Meeting of Shareholders held on February 13, 2017, shareholders of record of each of GGE, GPM and GEQ voted to approve the mergers and the redomestication of GPM. Subject to the satisfaction of certain customary closing conditions, the mergers are expected to be effective with the open of the New York Stock Exchange (NYSE) on March 20, 2017.

Upon completion of the mergers, GGE will merge directly with and into GPM, and shareholders of GGE will become shareholders of GPM and will receive GPM shares, the aggregate net asset value (NAV) (not the market value) of which will equal the aggregate NAV (not the market value) of the GGE Shares held immediately prior to the merger, less merger costs. Additionally, GEQ will merge directly with and into GPM, and shareholders of GEQ will become shareholders of GPM and will receive GPM shares, the aggregate NAV (not the market value) of which will equal the aggregate NAV (not the market value) of the GEQ shares held immediately prior to the merger, less merger costs.

Note 11 - 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 of Guggenheim Enhanced Equity Income Fund (the "Fund"), including the portfolio of investments, as of December 31, 2016, 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 each of the five years in the period then ended. 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, 2016, by correspondence with the custodian and brokers. 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, 2016, 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 the financial highlights for each of the five years in the period then ended in conformity with U.S. generally accepted accounting principles.

McLean, Virginia February 28, 2017 Ernst + Young LLP

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, 2016.

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 report-

Of the taxable ordinary income distributions paid during the calendar year ended December 31, 2016, the Fund had 44.51% qualify for the dividends received deduction for corporations.

Of the taxable ordinary income distributions paid during the calendar year ended December 31, 2016, the Fund had 45.10% qualify for the lower income tax rate available to individuals under the lobs 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 2016.

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 Principal Occupation(s) Time Served*** During Past Five Years | Number of Portfolios in Fund Complex Overseen | Other Directorships Held by Trustees |
|-------------------------------------|-----------------------------------|------------|--|--|---|
| Independent Trustees: | es: | | | | |
| Randall C. Barnes Trustee (1951) | Trustee | Since 2005 | Current: Private Investor (2001-present). | 86 | Current: Trustee, Purpose Investments Funds (2014-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). | | |
| Donald A. Chubb, Jr. (1946) | Trustee | Since 2014 | Current: Business broker and manager of commercial real estate, Griffith & Blair, Inc. (1997-present). | 95 | Current: Midland Care, Inc. (2011-present). |
| Jerry B. Farley (1946) | Trustee | Since 2014 | Current: President, Washbum University (1997-present). | 95 | Current: Westar Energy, Inc. (2004-present); CoreFirst Bank & Trust (2000-present). |

SUPPLEMENTAL INFORMATION (Unaudited) continued

| 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: | es continued: | | | | |
| Roman Friedrich III | Trustee and Chairman of | Since 2011 | Current: Founder and Managing Partner, Roman Friedrich & Company (1998-present). | 95 | Current: Zincore Metals, Inc. (2009-present). |
| | Review Committee | | Former: Senior Managing Director, MLV & Co. LLC (2010-2011). | | Former: Axiom Gold and Silver Corp. (2011-2012). |
| Robert B. Karn III | Trustee and Chairman of | Since 2011 | Current: Consultant (1998-present). | 95 | Current: Peabody Energy Company (2003-present): GP Natural Resource |
| | the Audit Committee | | Former. Arthur Andersen (1965-1997) and Managing Partner, Financial and Economic Consulting, St. Louis office (1987-1997). | | Partners, LLC (2002- present). |
| Ronald A. Nyberg | Trustee and Chairman of | Since 2005 | Current: Partner, Momkus McCluskey Roberts LLC (2016-present). | 100 | Current: Edward-Elmhurst Healthcare System (2012-present). |
| | the Nominating and Governance Committee | po e | Former: Partner, Nyberg & Cassioppi, LLC (2000-2016); Executive Vice President, General Counsel, and Corporate Secretary, Van Kampen Investments (1982-1999). | | - |
| Maynard F. | Trustee | Since 2014 | Current: Retired. | 95 | Current: Fort Hays State University Foundation (1999-present): Stormont- |
| (1943) | | | Former: President and CEO, Stormont-Vail HealthCare (1996-2012). | | Polandario (2013-present); Xonnone Vail Foundation (2013-present); University of Minnesota MHAAlumni Philanthropy Committee (2009-present). |
| | | | | | Former: Topeka Community Foundation (2009-2014). |

| 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: | ees continued: | | | | |
| Ronald E. Toupin. Ir. | Trustee and Chairman of | Since 2005 | Current: Portfolio Consultant (2010-present). | 26 | Former: Bennett Group of Funds (2011-2013). |
| (1958) | the Board | | 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). | | |
| Interested Trustee: | | | | | |
| Donald C. Cacciapaglia*** | President, Chief Executive | Since 2012 | Current: President and CEO, certain other funds in the Fund Complex (2012-present); Vice Chairman, Guggenheim Investments (2010-present). | 230 | Current: Clear Spring Life Insurance Company (2015-present); Guggenheim |
| (1661) | Trustee | | Former: Chairman and CEO, Channel Capital Group, Inc. (2002-2010). | | raturers Japan, Ltu. (2014-present), Guggenheim Partners Investment Management Holdings, LLC (2014- present); Delaware Life (2013-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:

Guggenheim Life and Annuity Company (2011-present); Paragon Life Insurance

Company of Indiana (2011-present).

- Messrs. Barnes, 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 —Messrs. Kam, 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, 2019. 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 Funds' Adviser and/or the parent of the Adviser.

SUPPLEMENTAL INFORMATION (Unaudited) continued

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 |
|-------------------------------------|------------------------------------|--|--|
| Officers: | | | |
| William H. Belden, III (1965) | Vice President | Since 2014 | 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 Tust Global Investments (1999-2005). |
| Joanna M. Catalucci (1966) | Chief Compliance Officer | Since 2012 | Current: Chief Compliance Officer, certain funds in the Fund Complex (2012-present); Senior Managing Director, Guggenheim Investments (2012-present). AML Officer, certain funds in the Fund Complex (2016-present). |
| | | | Former: Chief Compliance Officer and Secretary, sertain other turns in the Fund Complex (2008-2012); Senior Vice President & Chief Compliance Officer, Security Investors, LLC and certain affiliates (2010-2013); Chief Compliance Officer and Senior Vice President, Rydex Advisors, LLC and certain affiliates (2010-2011). |
| James M. Howley (1972) | Assistant Treasurer | Since 2006 | 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). |
| Keith Kemp (1960) | Assistant Treasurer | Since 2016 | Current: Treasurer and Assistant Treasurer, certain other funds in the Fund Complex (2010-present); Managing Director, Guggenheim Partners Investment Management, LLC (2015-present); Chief Financial Officer, Guggenheim Specialized Products, LLC (2016-present). |
| | | | Former: Managing Director and Director, Transparent Value, LLC (2010-2016); Director, Guggenheim Investments (2010-2015); Chief Operating Officer, Macquarie Capital Investment Management (2007-2009). |

| 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: | | | |
| 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). |
| Glenn McWhinnie (1969) | Assistant Treasurer | Since 2016 | Current: Vice President, Guggenheim Investments (2009-present). |
| | | | Former: Tax Compliance Manager, Ernst & Young LLP (1996-2009). |
| Michael P. Megaris (1984) | Assistant Secretary | Since 2014 | Current: Assistant Secretary, certain other funds in the Fund Complex (April 2014 present); Vice President, Guggenheim Investments (2012 present). |
| | | | Former: J.D., University of Kansas School of Law (2009-2012). |
| Adam J. Nelson (1979) | Assistant Treasurer | Since 2015 | Current: Vice President, Guggenheim Investments (2015-present); Assistant Treasurer, certain other funds in the Fund Complex (2015-present). |
| | | | 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). |
| Kimberly J. Scott (1974) | Assistant Treasurer | Since 2012 | 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 | lerm 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 | 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). |
| | and Treasurer | | 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 office | er is c/o Guggenheim Investments. 227 | The business address of each officer is c/o Guspenheim Investments. 227 West Monnoe Street. Chicapo. 1L 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. ネ

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, nonparticipants 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.

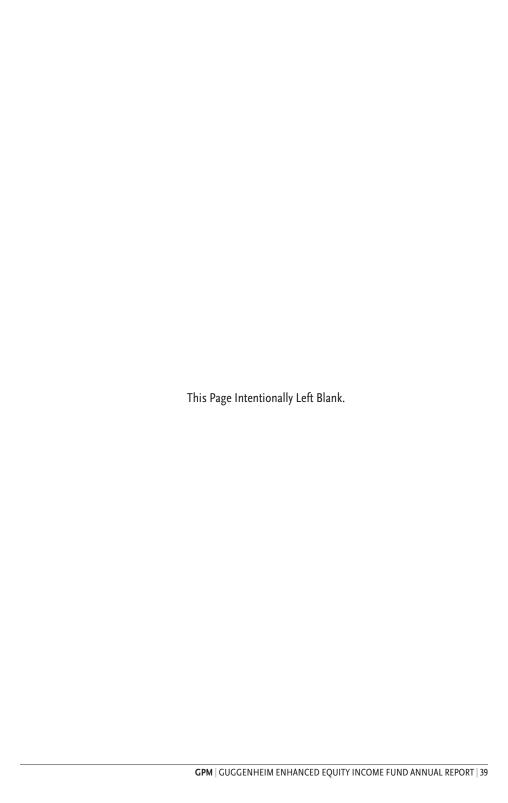
If, before the Plan Administrator has completed its Open-Market Purchases, the market price per common share exceeds the net asset value per common share, the average per common share purchase price paid by the Plan Administrator may exceed the net asset value of the common shares, resulting in the acquisition 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.

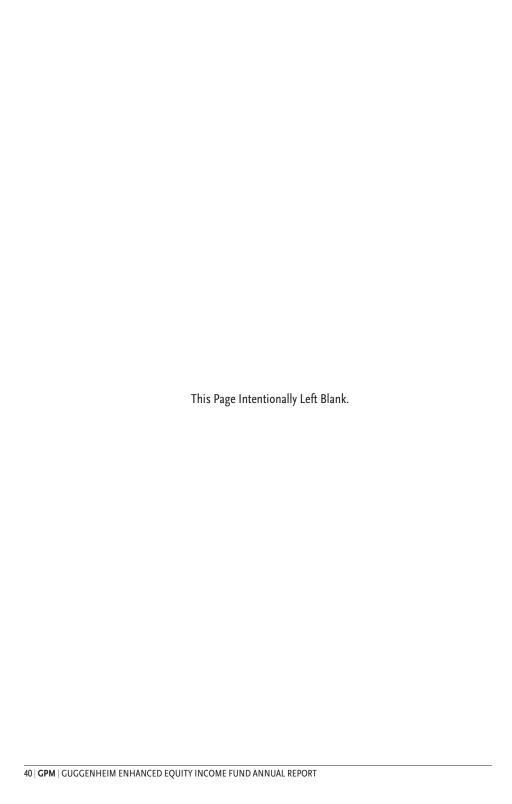
The Plan Administrator maintains all shareholders' accounts in the Plan and furnishes written confirmation of all transactions in the accounts, including information needed by shareholders for tax records. Common shares in the account of each Plan participant will be held by the Plan Administrator on 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.

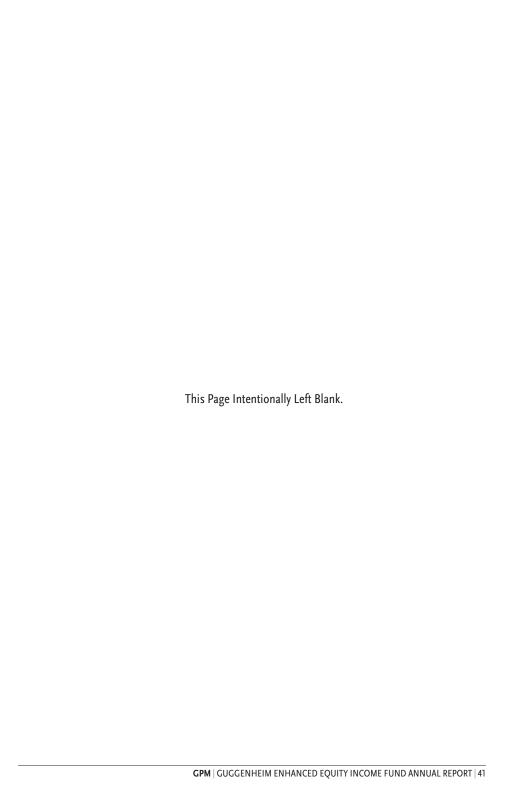
There will be no brokerage charges with respect to common shares issued directly by the Fund. However, each participant will pay a pro rata share of brokerage commission incurred in connection with Open-Market Purchases. The automatic reinvestment of Dividends will not relieve participants of any Federal, 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.







FUND INFORMATION December 31, 2016

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

MUFG Investor Services (US), 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 (02/17)