Guggenheim Enhanced Equity Income Fund (f/k/a Old Mutual/Claymore Long-Short Fund)
Form N-CSR
March 06, 2015

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM N-CSR

CERTIFIED SHAREHOLDER REPORT OF REGISTERED MANAGEMENT INVESTMENT COMPANIES

Investment Company Act file number 811-21681

Guggenheim Enhanced Equity Income Fund
(Exact name of registrant as specified in charter)

227 W. Monroe Street., Chicago, IL 60606
(Address of principal executive offices) (Zip code)

Amy J. Lee
227 W. Monroe Street., Chicago, IL 60606
(Name and address of agent for service)

Registrant's telephone number, including area code: (312) 827-0100

Date of fiscal year end: December 31

Date of reporting period: January 1, 2014 to December 31, 2014

Item 1. Reports to Stockholders.

The registrant's annual report transmitted to shareholders pursuant to Rule 30e-1 under the Investment Company Act of 1940, as amended (the "Investment Company Act") is as follows:

GUGGENHEIMINVESTMENTS.COM/GPM

... YOUR LINK TO THE LATEST, MOST UP-TO-DATE INFORMATION ABOUT GUGGENHEIM ENHANCED EQUITY INCOME FUND

The shareholder report you are reading right now is just the beginning of the story. Online at guggenheiminvestments.com/gpm, you will find:

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

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

DEAR SHAREHOLDER

We thank you for your investment in the Guggenheim Enhanced Equity Income Fund (the "Fund"). This report covers the Fund's performance for the 12-month period ended December 31, 2014.

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, 2014, the Fund provided a total return based on market price of 8.47% and a total return net of fees based on NAV of 7.36%. 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. NAV performance data reflects fees and expenses of the Fund.

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

In each quarter of 2014, the Fund paid a distribution of $0.24, continuing a practice in effect since June 2009. The most recent distribution represents an annualized distribution rate of 11.11% based on the Fund's closing market price of $8.64 as of December 31, 2014.

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. Each of the Adviser and the Sub-Adviser is an affiliate 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, currently through a portfolio of exchange-traded funds ("ETFs"), and utilizing a covered call strategy which follows GPIM's proprietary dynamic rules-based methodology pursuant to which the Fund sells (writes) covered call options on all or a portion of the securities held in the Fund's portfolio. The Fund seeks to generate income and gains through underlying equity security performance, dividends paid on securities owned by the Fund, and cash premiums received from selling (writing) covered call options.

In connection with the implementation of its strategy, the Fund uses leverage through a credit facility provided by a large multi-national financial institution. 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.

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 24 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, 2014, 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, 2015

QUESTIONS & ANSWERS December 31, 2014

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; Farhan Sharaff, Assistant Chief Investment Officer, Equities; Jayson Flowers, Senior Managing Director and Head of Equity and Derivative Strategies; Daniel Cheeseman, Portfolio Manager; and Perry Hollowell, Portfolio Manager. Jamal Pesaran, Portfolio Manager, resigned from the firm effective before the period ended. In the following interview, the investment team discusses the market environment and the Fund's performance for the 12-month period ended December 31, 2014.

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

The Fund's 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 pursuant to which the Fund sells (writes) covered call options on all or a portion of the securities held in the Fund's portfolio. 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. To the extent GPIM's equity exposure strategy is implemented through investment in broad-based equity exchange-traded funds or other investment funds or instruments, the Fund's portfolio may comprise fewer holdings.

The Fund seeks to generate income and gains through underlying equity security performance, dividends paid on securities owned by the Fund, and cash premiums received from selling (writing) covered call options. The Fund has the ability to write call options on the ETFs or on indices that the ETFs track. Call options written by the Fund 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 utilized. The Fund may, but does not have to, write options on 100% of the equity holdings in the portfolio (commonly referred to as the "hedge ratio"). The hedge ratio may be adjusted depending on the investment team's view of the market.

A call option on an index written by the Fund 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.

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 hold a diversified portfolio of stocks.

As part of GPIM's strategy, the Fund utilizes financial leverage. The goal of financial leverage is to enhance shareholder value, consistent with the Fund's investment objective, and to seek to provide superior risk-adjusted returns. The Fund may utilize financial leverage up to the limits imposed by the Investment Company Act of 1940, as amended (the "1940 Act"). The Fund's use of financial leverage is intended to be flexible in nature and is monitored on an ongoing basis by Guggenheim Funds Investment Advisers, LLC ("GFIA") and GPIM and adjusted, as appropriate, by GPIM.

The Fund currently employs financial leverage through a credit facility with a large multi-national financial institution.

Although financial leverage may create an opportunity for increased return for shareholders, it also results in additional risks and can magnify the effect of any losses. There is no assurance that the strategy will be successful. Financial leverage may cause greater changes in the Fund's net asset value and returns than if leverage had not been used.

Please provide an overview of the economic and market environment during the 12 months ended December 31, 2014.

The U.S. economy continued to grow throughout the 12 months ended December 31, 2014, despite some seasonal volatility in September and October that caused spreads in leveraged credit to widen and upward momentum in U.S. stocks to deteriorate. By the end of October, the spread widening had reversed and equities regained their footing, with some key indices shooting to new highs. Markets similarly overcame a weather-related winter soft patch in the first quarter of 2014. The benchmark U.S. 10 year Treasury rate declined from 3.03% to 2.17% over the period, a positive stimulant to continued economic expansion.

U.S. growth appears to have decoupled from the rest of the world. The third quarter's 5% U.S. gross domestic product (GDP) growth—the fastest pace in 11 years—signals that the U.S. economy is doing very well. Deeming growth sustainable, the U.S. Federal Reserve (the "Fed") formally ended its quantitative easing ("QE") program in October, and all eyes are now on economic data—primarily inflation and employment figures—that would prompt the Fed to raise rates in 2015. Slowing global growth has translated into expectations of weaker demand for oil in an already oversupplied market, which contributed to oil's 49% decline in the second half of the year, with West Texas Intermediate ending the year at a five-year low of $53 a barrel.

The bright side to declining energy prices is that it leaves more money for consumers to spend on other goods. Data are already confirming this, as American consumer confidence reached new post-recession highs, and fourth quarter retail spending posted solid gains. Overall, this should be positive for consumer-related companies with primarily domestic operations.

The U.S. added 246,000 jobs per month on average in 2014. Employment levels are transitioning from the recovery phase to the expansion phase, which typically coincides with accelerating economic activity. The downward trend in labor force participation has begun to flatten and, as fewer people leave the workforce, the rapid decline in the nation's unemployment rate could begin to slow. Until unemployment falls below the natural rate of unemployment, it's unlikely that the U.S. economy will experience the kind of meaningful wage pressure that would spur action by the Fed. An improving labor market, subdued mortgage rates, and tight housing inventory all point to a rebound in the housing market.

The battle against deflation in Europe forced the European Central Bank ("ECB") to announce its own form of QE via purchases of asset-backed securities ("ABS") and covered bonds. The consensus appears to be that in its current form, the program is insufficient to avert a slowdown. The next step for the ECB may be to buy sovereign bonds, which the ECB will decide on in the coming months. The only notable positive for Europe over the past year has been the devaluation of the euro, which fell by 13% against the U.S. dollar between May and December. A weaker euro makes exports more competitive, but still may not be enough to boost inflation in the region.

While markets were already anxious over Europe's struggles and the potential impact of a stronger dollar on U.S. company earnings, Japan relapsed into recession. This drove the Bank of Japan to announce it would expand its asset purchase program in 2015. China also faces slowing growth as financing costs remain high for smaller companies, forcing the People's Bank of China (PBOC) to cut benchmark interest rates for the first time since July 2012.

From an investment standpoint, U.S. assets continue to look attractive. With global central banks easing or engaging in their form of QE, global yields remain anchored and are driving investors into U.S. markets. But we are wary of the potential for a setback in U.S. equities as certain factors, such as oil prices and currency fluctuations, drive markets to aggressively discount valuations for some sectors more than others.

How did the Fund perform for the 12 months ended December 31, 2014?

For the 12 months ended December 31, 2014, the Fund provided a total return based on market price of 8.47% and a total return net of fees based on NAV of 7.36%. 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. NAV performance data reflects fees and expenses of the Fund.

On December 31, 2014, the Fund's closing market price of $8.64 per share represented a discount of 5.98% to its NAV of $9.19 per share. The discount narrowed slightly over 2014, as the closing price of the Fund's shares on December 31, 2013, was $8.85, which represented a 6.55% discount to the NAV of $9.47 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 2014, the Fund paid a distribution of $0.24, continuing a practice in effect since June 2009. The most recent distribution represents an annualized distribution rate of 11.11% based on the Fund's closing market price of $8.64 as of December 31, 2014. The distribution rate of the Fund exceeded the dividend rate of the S&P 500 Index, which is approximately 2%.

Compared with the Fund's 12-month market price return of 8.47%, the S&P 500 Index returned 13.69% and the CBOE S&P 500 BuyWrite Index ("BXM") returned 5.64%.

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

The rise in U.S. equities drove the Fund higher with the underlying market move a positive.

Security selection for the Fund was negative, with the Fund allocating an average of 60% to the S&P 500 Index over the year, with the balance in other broad domestic market equity indices. The S&P 500 Index, which returned

13.69% for 2014, outpaced the Dow Jones Industrial Average, up 10.04%, and the small-cap index, the Russell 2000 Index, which was 4.89% higher.

The Fund's derivative use was neutral for the period, which in the context of a rising market with low implied volatilities was a positive. Calls sold on indices other than the S&P 500 offset losses on calls written against the higher-rising S&P 500 Index.

The Fund had to contend with the combination of a steadily rising market with very low realized volatility. This led the level of equity implied volatility to drift dramatically lower over the period, with the CBOE Volatility Index ("VIX") averaging 14.1 (despite a spike in October over concerns about weakness in global economic growth and Ebola) and hitting a low of 10.34 in June 2014—its lowest level in seven years. Selling call options in such an environment is challenging for the strategy because low levels of implied volatility lead to low option premiums.

The low volatility environment was partly a result of central bank quantitative easing that led to equity multiple expansion, even with the Fed concluding in October its program of asset purchases. Yields on Treasury securities drifted lower for the year, with the U.S. Government 10-year rate falling from near 3% at the start of 2014 to 2.17% by the end of the year. It would appear that the attractiveness of U.S. yields relative to Europe and Asia outweighed the taper impact. A reduction in rates with a corresponding decline in rate volatility caused by excess liquidity held down equity volatility.

A notable challenge for the strategy during the year, as indicated, was the weakness in allocations outside the S&P 500 Index, notably to small cap equities. As challenging in the context of a covered call portfolio was the sharp snapback in these indices at the end of the year with the derivatives capping upsides as rallies occurred.

Can you discuss the impact of leverage in the Fund?

Leverage was also a positive contributor to performance for the period, as it typically is when the market is rising steadily.

Our approach to leverage is dynamic, and we tend to increase leverage when we are more constructive on equity market returns in accordance with our macroeconomic outlook and decrease leverage when we believe equity returns are less attractive. This dynamic approach means that, when equity returns are low, the Fund limits the potential for leverage to hurt the portfolio if the market has a significant drop. However, the lower leverage may mean the Fund misses some of the positive impact leverage can deliver if the underlying market continues to move higher.

The Fund employs financial leverage through the use of a bank line of credit. As of December 31, 2014, the Fund's leverage was 33% of the Fund's total assets, compared with 25% a year earlier. 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.

Index Definitions

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

The CBOE (Chicago Board Options Exchange) S&P 500 BuyWrite Index (BXM) is a benchmark index designed to show the hypothetical performance of a portfolio that purchases all the constituents of the S&P 500 Index and then sells at-the-money (meaning same as purchase price) calls of one-month duration against those positions.

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 Dow Jones Industrial AverageSM is a price-weighted average of 30 significant stocks traded on the New York Stock Exchange and the NASDAQ.

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

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

Risks and Other Considerations

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

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

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

FUND SUMMARY (Unaudited) December 31, 2014

Fund Statistics	
Share Price	$8.64
Net Asset Value	$9.19
Discount to NAV	(5.98%)
Net Assets ($000)	$175,241

AVERAGE ANNUAL TOTAL RETURNS FOR THE PERIOD ENDED DECEMBER 31, 2014[1]

	One Year	Three Year	Five Year	Since Inception (08/25/05)
Guggenheim Enhanced Equity Income Fund				
NAV	7.36%	10.41%	10.37%	2.33%
Market	8.47%	13.30%	11.64%	1.99%

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. NAV performance data reflects fees and expenses of the Fund. 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.

1 Performance 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
Common Stock	148.4%
Short-Term Investments	0.5%
Options Written	-0.7%
Total Investments	148.2%
Other Assets & Liabilities, net	-48.2%
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, 2014, 100% of the distributions were characterized as income.

PORTFOLIO OF INVESTMENTS December 31, 2014

	Shares	Value
EXCHANGE-TRADED FUNDS† – 148.4%		
SPDR S&P 500 ETF Trust1	632,900	$ 130,060,950
SPDR Dow Jones Industrial Average ETF Trust1	294,000	52,296,720
Powershares QQQ Trust Series 11	500,400	51,666,300
Technology Select Sector SPDR Fund1	313,100	12,946,685
Consumer Discretionary Select Sector SPDR Fund1	92,300	6,659,445
Industrial Select Sector SPDR Fund1	115,400	6,528,178
Total Exchange-Traded Funds		
(Cost $261,530,475)		260,158,278
Short-Term Investments† – 0.5%		
Dreyfus Treasury Prime Cash Management Institutional Shares	860,758	860,758
Total Short-Term Investments		
(Cost $860,758)		860,758
Total Investments – 148.9%		
(Cost $262,391,233)		261,019,036

	Contracts	Value
OPTIONS WRITTEN*,† – (0.7)%		
Call options on:		
Technology Select Sector SPDR Fund Expiring January 2015		
with strike price of $43.00	3,131	$ (14,090)
Industrial Select Sector SPDR Fund Expiring January 2015		
with strike price of $58.00	1,154	(21,926)
Consumer Discretionary Select Sector SPDR Fund Expiring		
January 2015 with strike price of $71.00	923	(160,140)
SPDR Dow Jones Industrial Average ETF Trust Expiring		
January 2015 with strike price of $181.00	2,940	(188,160)
SPDR S&P 500 ETF Trust Expiring January 2015 with		
strike price of $210.00	6,329	(367,082)
Powershares QQQ Trust Series 1 Expiring January 2015		