J.P.Morgan

COMMODITY INVESTMENTS

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JPMorgan Structured Products

# Optimax Market-Neutral
Strategy Guide

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# OVERVIEW

The Optimax Market-Neutral Index (the "Optimax Market-Neutral Index" or the "Index") is a JPMorgan commodity strategy that seeks to generate consistent returns through a selection of commodity-linked component sub-indices (the "Constituents") based on modern portfolio theory and momentum theory. Each Constituent is a sub-index of the Standard & Poor's GSCI™ Excess Return Commodity Index (the "S&P GSCI™"), with each such sub-index itself comprised of exchange-traded commodity futures contracts.

Key features of the Index include:

- synthetic investment in up to 18 of the 24 sub-indices constituting the S&P GSCI™;[1]
- dynamic long-short exposure to commodities through a synthetic portfolio that is rebalanced monthly pursuant to a non-discretionary, rules-based methodology;
- algorithmic portfolio construction intended to address the cyclical nature of commodities markets; and
- levels published on Bloomberg under the ticker CMDTOMER.

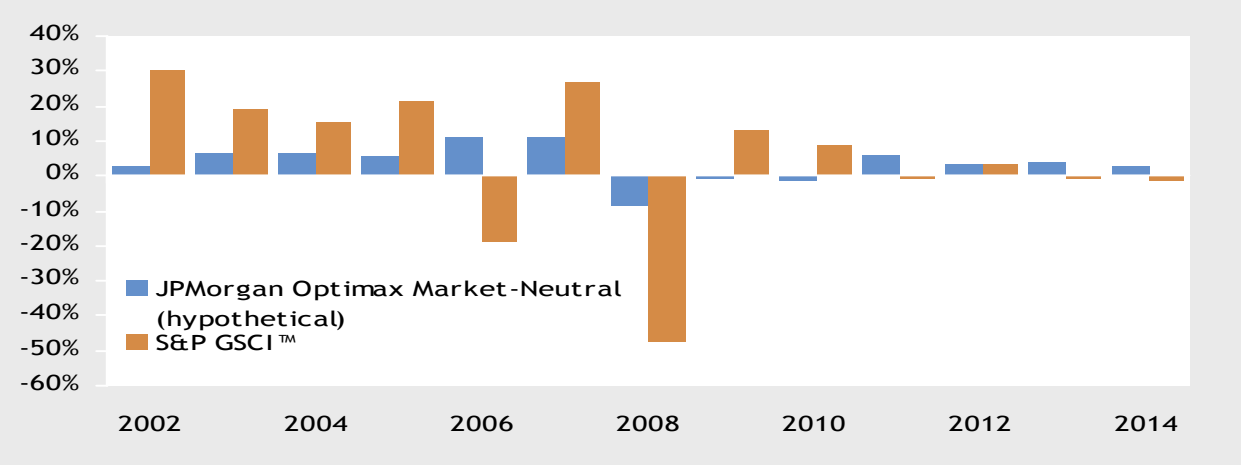
The following graph sets forth the performance of the Index based on the hypothetical back-tested weekly closing values of the Index from December 31, 2004 through May 5, 2008 and the historical performance of the Index from May 6, 2008 (the date of the inception of the Index) through December 31, 2014. The Optimax Market-Neutral Index had an annualized excess return of 2.88% over this period (aggregating the back-tested and historical data), outperforming the S&P GSCITM and the Bloomberg Commodity Index

[1] The Optimax Market-Neutral Index is not representative of a pure commodities allocation and is not designed to replicate or track commodities markets, the S&P GSCI™ or any or all of the sub-indices of the S&P GSCI™. The Index seeks to replicate a synthetic portfolio that references certain S&P GSCI™ sub-indices, but its performance will not reflect the underlying performance of the commodities markets as a whole. See "Risk Factors— The Optimax Market-Neutral Index is not representative of a pure commodities allocation and is not designed to replicate or track commodities markets, the S&P GSCI™ or any or all of the sub-indices of the S&P GSCI™."

[2] The Index has been calculated on a "live" basis since May 6, 2008. However, the rules that govern the Index were not formalized until June 27, 2008 (such rules, the "Index Rules"). For the period from and including May 6, 2008 to, but excluding, June 27, 2008, the Index was calculated using formulas that were substantially similar to the formulas set forth in the Index Rules.

[3] For the Index, the excess return measures the return from a hypothetical investment in the relevant commodity futures contracts underlying the Constituents, taking into account any discounts or premiums received by "rolling" the hypothetical positions in the Constituents on each monthly rebalancing. See "Risk Factors— Higher or lower future prices of the commodity futures contracts underlying the Constituents, relative to their current prices, may affect the value of the Index."

## Hypothetical Performance of Optimax December 31, 2004 – December 31, 2014




## Summary of Hypothetical Optimax Returns: December 31, 2004– December 31, 2014

| Strategy | Optimax Market-Neutral (hypothetical) | S&P GSCI™ |
|---|---|---|
| Annualized Return | 2.9% | -6.2% |
| Annualized Volatility | 5.5% | 24.1% |
| Sharpe Ratio | 0.52 | -0.26 |

Source: JPMorgan. The hypothetical and historical performance of the Index is net of the replication adjustment factor of 0.96% per annum.

Because the Index did not exist before May 6, 2008, all retrospective levels provided above are simulated and must be considered illustrative only. The simulated data was constructed using certain procedures that may vary from the procedures used to calculate the Index on a going forward basis, and on the basis of certain assumptions that may not hold during future periods. Although these procedures and assumptions are considered reasonable or necessary, the variations used in producing simulated historical data from those used to calculate the Index going forward could produce variations in returns of indeterminate direction and amount. Past hypothetical performance results are neither an indicative of nor a guarantee of future returns. Actual results will vary, potentially materially, from the hypothetical historical performance provided herein.

"Annualized Return" is the annualized rate of return based on the period from December 31, 2004 to December 31, 2014.

"Annualized Volatility" means the standard deviation of the Index's daily arithmetic returns for a one year period based on the period from December 31, 2004 to December 31, 2014.

"Sharpe Ratio" is a fraction, the numerator of which is the Annualized Return and the denominator of which is Annualized Volatility. Sharpe Ratios are used to measures a strategy's degree of risk (as measured by its annualized volatility) against its potential reward (as measured by its annualized return).

"S&P GSCI™" refers to S&P Goldman Sachs Excess Return Commodity Index™.

## STRATEGY DESCRIPTION

The Index employs a commodities allocation strategy that is based on modern portfolio theory and momentum theory. Each month, the Optimax Calculation Agent will rebalance the Index to take synthetic long and short positions in the Constituents based on mathematical rules that account for the following variables:

- the returns of each Constituent over the preceding twelve months, which are used to determine the estimated return of each Constituent in the following month (after accounting for any effects of seasonality);
- the covariance between the Constituents, which is a measure of the degree to which two Constituents change relative to each other;
- the volatility of the Constituents over the preceding three months and the preceding twelve months; and
- constraints applicable to the weights of the Constituents of the Index.

The Optimax Market-Neutral Index utilizes algorithms to determine the various long and short positions that it will take in the Constituents. However, the weights for each Constituent will also be adjusted to comply with certain allocation constraints and volatility targets. For example, the Index is rebalanced monthly in a manner that resets the sum of the weights of each Constituent to zero and applies a sector diversification constraint. For more information on the constraints on the Index, see "*What are the Constraints on the Index?*"

After accounting for these variables, the volatility targets and the allocation constraints, the Index will generally take long synthetic positions in the Constituents with positive estimated future returns and short synthetic positions in the Constituents with negative estimated future returns (although in certain circumstances, the Index might take short synthetic positions in Constituents with positive estimated future returns or long synthetic positions in Constituents with negative estimated future returns). The Optimax Calculation Agent will publish the index values for the Index on Bloomberg, subject to the occurrence of a market disruption event or in the case of the occurrence of certain limitations or suspensions of the trading of options or futures contracts on commodities related to the Constituents. You can find the current index value for the Index on Bloomberg at: ticker: CMDTOMER.

*What is momentum theory?*

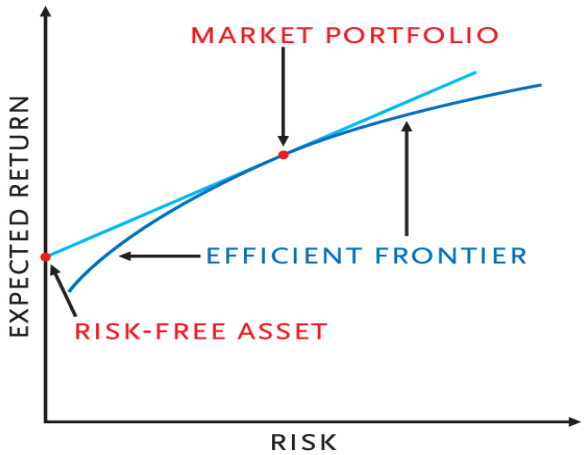
The Index aims to profit from the momentum theory applied to commodities. Momentum is the tendency for commodity futures contracts that have exhibited positive returns in the recent past to continue to exhibit positive returns and for commodity futures contracts that have exhibited negative returns in the recent past to continue to exhibit negative returns. There is no guarantee that commodity futures contracts with positive past returns will continue to have positive returns in the future or that commodity futures contracts with negative past returns will continue to have negative returns in the future.

The Index takes both long and short positions in the Constituents with the aim of generating positive returns at the Index level, while satisfying allocation and volatility constraints set forth in the Index Rules.

*What is modern portfolio theory?*

The modern portfolio theory is a theory of asset allocation that illustrates how a rational investor, investing in a universe of different assets (each with its own "expected return" and "risk"), can create a theoretical portfolio with the highest expected return for any given level of risk. By analyzing the relationships between the assets contained within the portfolio and looking at the overall risk-return profile of that portfolio, an investor can obtain an "efficient" portfolio (*i.e.*, a portfolio with the highest expected return for a given level of risk). The application of modern portfolio theory in portfolio construction can theoretically allow for higher returns and/or lower risk than would be possible by designing a portfolio solely by selecting specific assets on the basis of their individual risks and returns.

For example, assume a portfolio consisting of a single "risk-free" asset that provides a certain "risk-free" return. If one were to add risky assets to that portfolio, the expected return will increase (along with the risk), as illustrated in the diagram below. By adjusting the weightings of the portfolio assets, one can construct a number of different portfolios with varying expected returns for any given risk level. The "efficient frontier" shown in the diagram demonstrates the highest level of expected return that can be obtained for a given level of risk.




There is no guarantee that the application of the modern portfolio theory will maximize future returns or decrease the risks involved in an investment linked to the Index. In addition, modern portfolio theory does not account for skew, which is the asymmetry of distributions, and kurtosis, which is the thickness of so-called "fat tails," each of which might affect the risk and return of a given portfolio. Modern portfolio theory also assumes that the riskiness of an asset in the future can be measured by its historical volatility.

*How does the Index incorporate modern portfolio theory and momentum theory?*

The Optimax Market-Neutral Index is rebalanced every month on the 17th Dealing Day of each month, unless a market disruption event has occurred and is continuing. The rebalancing is designed to maximize the estimated return for the synthetic portfolio over the next month without exceeding a given risk threshold (determined by reference to the historical volatility of that hypothetical portfolio). On the observation date for the monthly rebalancing for the Index, which is the sixteenth Dealing Day of each month, the weighting algorithm implements a series of successive steps detailed below.

First, the algorithm determines the predictive weights for each Constituent based on its momentum over the prior twelve month period. In the case of certain Constituents considered "seasonal" (specifically the S&P GSCI™ sub-indices comprised of commodity futures contracts for corn, soybeans, wheat, coffee, sugar, gas oil, heating oil, gasoline and natural gas), certain months may be given added or lesser weight, depending on whether they are deemed more or less "seasonally" relevant to the performance of such Constituent in the coming month. In addition, the algorithm will determine the covariance for each pair of Constituents by reference to the daily returns of such Constituents over a period of approximately three months preceding the relevant rebalancing observation date.

Subject to the constraints that apply to the Index that are described in more detail in "*What are the Constraints on the Index?*" below, the algorithm then determines the efficient weight for each Constituent to arrive at the synthetic portfolio that theoretically offers the highest expected return for a given assumed level of risk. Such efficient weights are determined through an iterative process in which the weight of one Constituent is increased and one Constituent is decreased by the same amount in order to determine whether the expected return of the notional portfolio can be increased without violating the short-term volatility target or other constraints applicable to the Index. The covariance of each pair of Constituents is one of the primary inputs into this calculation.

The algorithm will begin modifying the weights of each Constituent in a manner that provides the greatest marginal benefit to the portfolios expected return, and will continue with such modifications until the expected return of the portfolio cannot be increased further without violating the applicable short-term volatility constraint or another applicable constraint. Once the algorithm has determined the efficient weights, such weights will be reduced, if and only to the extent necessary, in order to comply with the applicable long-term volatility target. Finally, the algorithm will round the weight of each Constituent.

For the Index, a "Dealing Day" means each day (other than a Saturday or a Sunday) (i) on which commercial banks in both New York and London are open generally for business (including for dealings in foreign exchange and foreign currency deposits), and (ii) which is a Scheduled Trading Day for all the Constituents. In respect of each Constituent, a "Scheduled Trading Day" means a day on which the level of such Constituent is scheduled to be published and the principal exchange for futures and options contracts on such Constituent is scheduled to be open for trading for its regular trading session.

The replication adjustment factor, a fee assessed at an annual rate of 0.96% of the aggregate values of its Constituents, is notionally deducted in arrears on an actual/360 basis from the level of the Index on each day on which the value of the Index is published.

**There is no guarantee that modern portfolio theory combined with momentum investing will generate positive returns for the Index or that other theories applied to the same list of Constituents would not produce a better result at the index level.**

*What are the constraints on the Index?*

As discussed above in "*Strategy Description,*" the specific constraints applicable for the Index are applied only upon the monthly rebalancing of the Index, and thus the weights of the Constituents are likely to shift, during the periods between monthly rebalancings, to values that would not be permissible under the constraints applicable to the Index on the rebalancing date. As discussed above in "Strategy Description," the covariance between the Constituents is also used to determine the weights for the Constituents.

The following table sets forth the applicable constraints, a brief description of the constraint and the numerical value applied to that constraint for the Index:

| Type of Constraint | Description | Applicable Value |
|---|---|---|
| Asset Weight | The Asset Weight Constraint seeks to ensure that the weight for each Constituent lies between the Minimum Asset Weight and the Maximum Asset Weight. | Minimum Asset Weight = -10%<br><br>Maximum Asset Weight = 10% |
| Sector Weight | The Sector Weight Constraint seeks to ensure that the sum of the weights for the Constituents in each sector lies between the Minimum Sector Weight and the Maximum Sector Weight. | Minimum Sector Weight = -20%<br><br>Maximum Sector Weight = 20% |
| Net Weight | The Net Weight Constraint seeks to ensure that the sum of the weights for all Constituents summed together are equal to zero. | Net Weight equals zero. |
| Gross Weight | The Gross Weight Constraint seeks to ensure that the sum of the absolute values of the weights for all Constituents summed together is no greater than the Gross Cap. | Gross Cap = 100% |
| Short Term Volatility | The Short Term Volatility Constraint seeks to ensure that the short term historical volatility (as measured over the prior 63 Dealing Days) of the portfolio of the Constituents is no greater than the Volatility Target. | Volatility Target =5% |
| Long Term Volatility | The Long Term Volatility Constraint seeks to ensure that the long term historical volatility (as measured over the prior 252 Dealing Days) of the portfolio of the Constituents is no greater than the Volatility Target. | Volatility Target =5% |

## CONSTITUENTS

The Constituents in the Optimax Market-Neutral Index are eighteen (18) out of the twenty four (24) sub-indices composing the S&P GSCI™, as set forth in the table below. The S&P GSCI™ is a composite index that is broadly diversified across the spectrum of commodities, composed of single commodity sub-indices (each a "Sub-Index" and together "Sub-Indices"), representing an unleveraged, long-only investment in commodity futures. Each Sub-Index measures the performance of taking a long position in the nearest-dated futures contract for the relevant commodity and "rolling" the position into the second-nearest-dated futures contract (that is, closing out the position in the nearest-dated futures contract and opening a position in the second-nearest-dated futures contract). Thus, the returns of each Sub-Index are related both to the changes in the spot price of the relevant commodity (the "price return") and to the difference in price between the nearest-dated and second-nearest-dated futures contract on dates when the positions are rolled for the relevant commodity (the "roll return" and together with the price return, the "excess return").

The table below lists the Constituents of the Index, as well as the sector of each Constituent:

| Constituent | Sector | Bloomberg® ticker |
|---|---|---|
| WTI Crude Oil | Energy | SPGCCLP |
| Gasoline (RBOB) | Energy | SPGCHUP |
| Natural gas | Energy | SPGCNGP |
| Gas oil | Energy | SPGCGOP |
| Heating oil | Energy | SPGCHOP |
| Gold | Precious Metals | SPGCGCP |
| Silver | Precious Metals | SPGCSIP |
| Corn | Agriculture | SPGCCNP |
| Wheat | Agriculture | SPGCWHP |
| Coffee | Agriculture | SPGCKCP |
| Sugar | Agriculture | SPGCSBP |
| Lead | Industrial Metals | SPGCILP |
| Zinc | Industrial Metals | SPGCIZP |
| Nickel | Industrial Metals | SPGCIKP |
| Aluminum | Industrial Metals | SPGCIAP |
| Copper | Industrial Metals | SPGCICP |

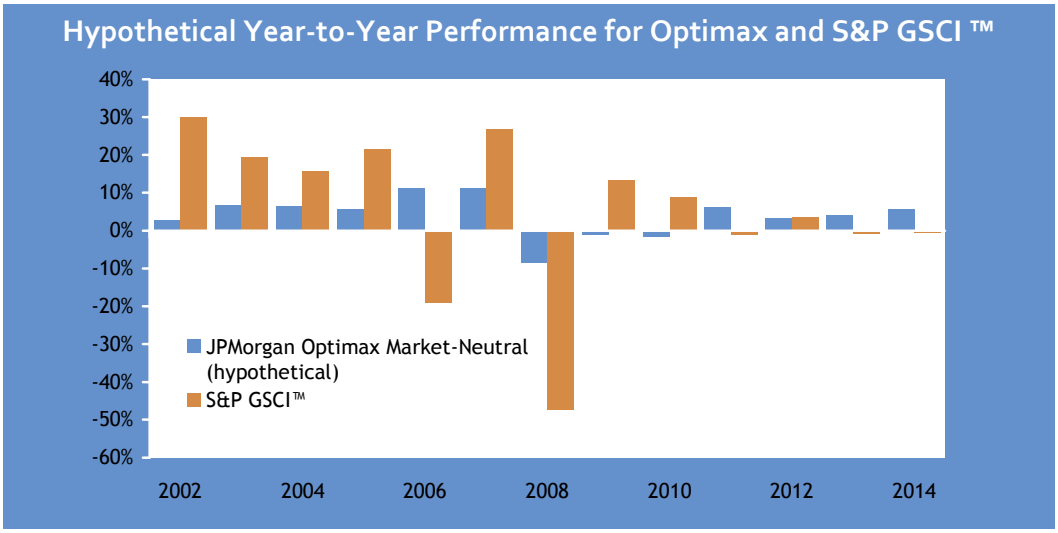
As of the date of this strategy guide, the Sub-Indices excluded from being Constituents in the Index were red wheat, cotton, cocoa, live cattle, feeder cattle, and lean hogs. As of December 31, 2014, the excluded Sub-Indices constituted 11.66% of the dollar weight in the S&P GSCI™.

## HYPOTHETICAL RETURNS

The following graph sets forth the hypothetical back-tested year-to-year performance for Optimax Market-Neutral Index, as compared to the S&P GSCI™ based on the hypothetical back-tested daily closing levels from January 2002 through December 2013. The Optimax Market-Neutral Index was established on May 6, 2008.

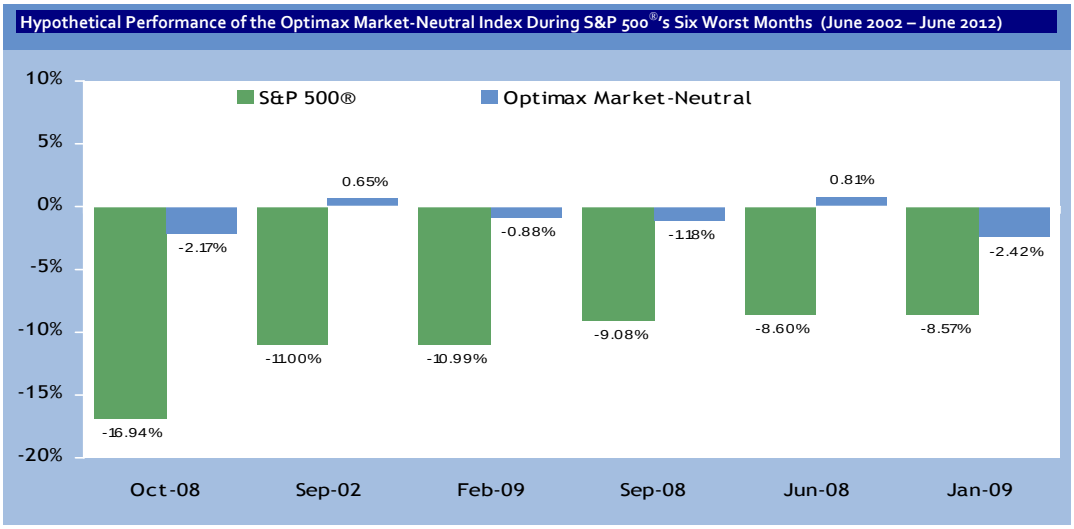
The hypothetical back-tested and historical values of the Optimax Market-Neutral Index should not be taken as an indication of future performance, and no assurance can be given as to the value of the Index on any future date. The data for the hypothetical back-tested performance of the Index set forth in the following graph was calculated on materially the same basis on which the performance of the Index is now calculated, but the number of S&P GSCI™ constituents, and thus the universe of potential constituents for the Index, has changed over time. There are currently 24 S&P GSCI™ components, of which 18 are Constituents of the Index.

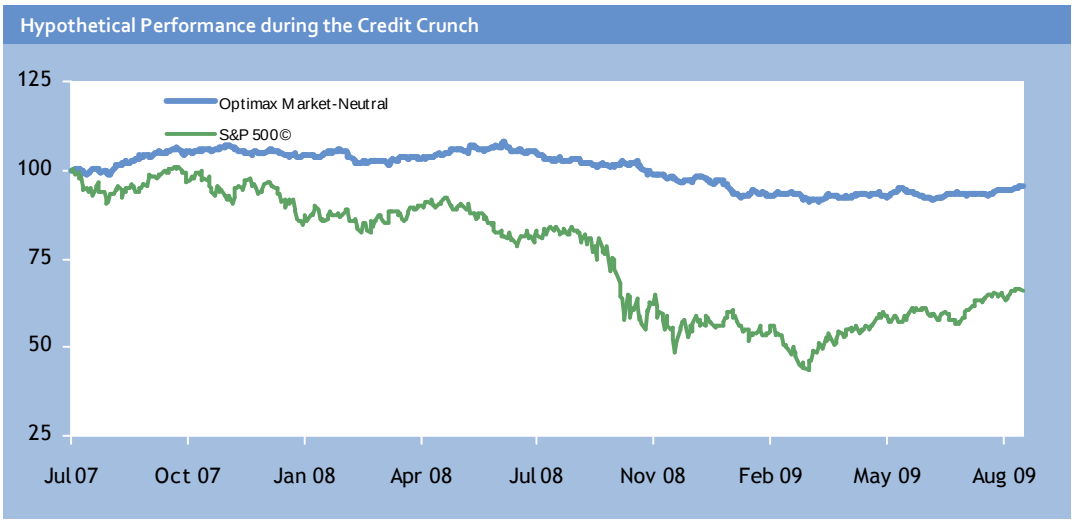
Hypothetical daily performance data for the Index is net of a replication adjustment factor of 0.96% per annum.



## DIVERSIFICATION

The Optimax Market-Neutral Index can provide diversification benefits to a portfolio that does not include commodities exposure, although these diversification benefits will differ from those that would be provided by obtaining exposure to the S&P GSCI™. For instance, as illustrated in the graph below, the Optimax Market-Neutral Index would have hypothetically had positive returns in two of the S&P 500® Index's six worst-performing months since January 1991.




*Source: JPMorgan. Hypothetical and historical performance of the Index is net of strategy fees of 0.96% per annum. Please see "Important Information" at the front of this publication for discussion of certain limitations relating to historical back-testing. Past performance is not a guide to future results.*

## RISK FACTORS RELATING TO THE INDEX

*The Optimax Market-Neutral Index is not representative of a pure commodities allocation and is not designed to replicate or track commodities markets, the S&P GSCI™ or any or all of the sub-indices of the S&P GSCI™.*

The Optimax Market-Neutral Index seeks to replicate a synthetic portfolio that references certain S&P GSCI™ sub-indices, but its performance will not reflect the underlying performance of the commodities markets as a whole. The Index is designed to create the largest expected return, within the volatility constraints applicable to the Index, through synthetic investment in long and short positions. The S&P GSCI™, in contrast, seeks to allocate weights based on the relative importance of component commodities within the overall economy and assumes relatively constant exposure to specific commodity positions. The Index is not designed to replicate or track commodities markets, the S&P GSCI™ or any or all of the sub-indices of the S&P GSCI™. For any given period, the commodities markets, the S&P GSCI™ or any or all of the sub-indices of the S&P GSCI™ may have positive or significantly positive performance, in absolute terms or relative to the S&P GSCI™ or any of its sub-indices. An increase in the value of commodities will not necessarily result in an increase in the values of the Index.

*The Optimax Market-Neutral Index lacks operating history and may perform in unanticipated ways.*

The Optimax Market-Neutral Index was established on May 6, 2008 and therefore lacks historical performance. In addition, the Index Rules were not formalized until June 27, 2008 and were amended on December 2, 2008. For the period from and including May 6, 2008 to, but excluding, June 27, 2008, the Index was calculated using formulas that were substantially similar to the formulas set forth in the Index Rules. The amendments to the Index Rules adopted on December 2, 2008 had no impact on the calculation of the level of the Optimax Market-Neutral Index. The Optimax Calculation Agent has also retrospectively calculated the closing levels of the Optimax Market-Neutral Index prior to May 6, 2008 based on historical data. However, because the Optimax Market-Neutral Index did not exist before such date, all such retrospective closing levels are simulated and must be considered hypothetical and illustrative only. The simulated data was constructed using certain procedures that vary from the procedures used to calculate the Optimax Market-Neutral Index on a going forward basis, and on the basis of certain assumptions that may not hold during future periods. Although these procedures and assumptions are considered reasonable or necessary, the variations used in producing simulated historical data from those used to calculate the Optimax Market-Neutral Index going forward could produce variations in returns of indeterminate direction and magnitude.

*The performance of Constituents in the Optimax Market-Neutral Index may offset each other.*

The Optimax Market-Neutral Index consists of 18 different Constituents, each of which will be assigned a weight based on the rebalancing algorithm. The algorithm under which the weights for the Constituents are established and rebalanced allows various Constituents to be weighted positively or negatively (*i.e.*, a short position could be established for one or more Constituents) or accorded zero weight. For any period of time, gains attributable to long or short positions in particular Constituents could be reduced, offset or more than offset by losses attributable to the performance of other Constituents. Similarly, losses attributable to long or short positions in particular Constituents could be reduced, offset or more than offset by gains attributable to the performance of other Constituents.

The weightings of the Constituents for any monthly period will be based on, among other things, the assumptions that covariance between pairs of Constituents for a prior period will continue for a future period and that past performance can be used as an indicator for future performance. The correlations

between pairs of Constituents may change substantially and rapidly, and these changes could exacerbate losses or gains if weightings assume loss-making positions or gain-producing positions, respectively, in several Constituents at any one time. Additionally, past performance is not necessarily indicative of future performance, and a reversal in momentum may result in a loss in the price of the Constituent and a decline in the level of the Index. The Optimax Market-Neutral Index is not designed to respond to rapid changes in correlation (or changes in correlation of limited duration) or momentum (or changes in momentum of limited duration). By design, the Optimax Market-Neutral Index responds gradually to trends that persist over a course of time.

*If a negative weighting is assigned to a Constituent, signifying a short position relative to such Constituent, there is unlimited loss exposure to such Constituent and such exposure may result in a significant drop in the level of the Index.*

The Index employs a technique generally known as a "long-short" strategy. This means the Index may include a number of notional long positions and a number of notional short positions. Short positions in any investment carry the risk of unlimited loss exposure. If a negative weighting is assigned to a Constituent, a positive return on such Constituent will have a negative impact on the closing level of the Index. If a negatively weighted Constituent posts significant positive returns, it may have a large negative impact on the closing level of the Index. Since the Constituent weightings are scheduled to be rebalanced only once per month, there is a risk that a loss-causing negative weighting will remain in place for a significant period of time. In addition, due to the short positions, the level of the Index could potentially fall to zero without the value of any of the Constituents falling to zero.

*There are risks associated with the use of a momentum strategy.*

The Index is constructed, in part, using a mathematical model intended to implement what is generally known as a momentum strategy, which generally seeks to capitalize on trends in the prices of assets. As such, the Index assigns weights to the Constituents in part based on the performance of the Constituents during the immediately preceding twelve months. However, there is no guarantee that trends existing in the preceding twelve months will continue in the future. In non-trending, sideways markets, momentum investment strategies are subject to "whipsaws." A whipsaw occurs when the market reverses and does the opposite of what is indicated by the trend indicator, resulting in a trading loss during the particular period. Consequently, the Index may perform poorly in non-trending, "choppy" markets characterized by short-term volatility.

*The mathematical model used to rebalance the Index does not consider the skew or kurtosis of the possible returns.*

On each monthly rebalancing date, the Index is rebalanced according to a mathematical model designed to maximize its expected return over the coming months, subject to the volatility targets and other constraints applicable to the Index. However, this model only takes into account the expected return of the Index following the rebalancing, and does not consider the specific distribution of possible returns resulting from any rebalancing. Because it does not account for the "skew" of the distribution of possible returns (the extent to which the distributions of possible returns is asymmetric around the mean) and the level of kurtosis in the distribution of possible returns (the size of the "tails"), the rebalancing model may result in the Index having many possible returns that are substantially above or substantially below the expected return. Moreover, the Index may have higher probabilities of very high returns or very low returns than would be the case if the expected possible returns of the Index were normally distributed around the mean (the expected return).

*Commodity prices may change unpredictably, affecting the level of the Index in unforeseeable ways.*

Trading in commodity futures contracts underlying the Constituents is speculative and can be extremely volatile. Market prices of the commodities on which such futures contracts are based may fluctuate rapidly based on numerous factors, including: changes in supply and demand relationships; weather; agriculture; trade; fiscal, monetary and exchange control programs; domestic and foreign political and economic events and policies; legal, regulatory and administrative rules (and proposed and actual changes to such rules) applicable to trading in commodity futures contracts; disease; technological developments and changes in interest rates. These factors may affect the level of the Constituents and, therefore, the level of the Index in varying and unpredictable ways.

*The Index may not be successful, may not outperform any alternative strategy that might be employed with respect to the Constituents and may exceed its volatility targets.*

The Index follows a proprietary strategy that operates on the basis on pre-determined rules. No assurance can be given that the investment strategy on which the Index is based will be successful or that the Index will outperform any alternative strategy that might be employed with respect to the Constituents. Furthermore, since the volatility targets applied on the rebalancing dates only serve to limit historical volatility of any specific weighting of Constituents, no assurance can be given that the volatility of the Index will remain below its volatility target of 5%. The actual realized volatility of the Index may be greater than 5%.

*Higher or lower future prices of the commodity futures contracts underlying the Constituents, relative to their current prices, may affect the value of the Index.*

The Constituents, which are 18 of the 24 sub-indices constituting the S&P GSCI™, are themselves composed of futures contracts on physical commodities. Unlike equities, which typically entitle the holder to a continuing stake in a corporation, commodity futures contracts normally specify a certain date for delivery of the underlying physical commodity. As the exchange-traded futures contracts that compose the Constituents approach expiration, they are replaced by contracts that have a later expiration. Thus, for example, a contract purchased and held in August may specify an October expiration. As time passes, the contract expiring in October is replaced by a contract for delivery in November. This process is referred to as "rolling."

If the market for these contracts is (putting aside other considerations) in "backwardation," where the prices are lower in the distant delivery months than in the nearer delivery months, the sale of the October contract would take place at a price that is higher than the price of the November contract, thereby creating a positive "roll yield." The presence of backwardation could adversely affect the value of the Constituents with a short weighting at the time and thus the level of the Index. While many of the contracts included in the Constituents have historically exhibited consistent periods of backwardation, backwardation will most likely not exist at all times. The presence of "contango" in the commodity markets, where the prices are higher in the distant delivery months than in the nearer delivery months, could result in negative "roll yields," which could adversely affect the value of the Constituents with a long weighting at that time and thus the level of the Index.

*Some of the Constituents of the Index will be subject to pronounced risks of pricing volatility.*

As a general matter, the risk of volatile pricing or low liquidity around the maturity date of a commodity futures contract is greater than in the case of other futures contracts because (among other factors) a number of market participants take physical delivery of the underlying commodities. Many commodities, like those in the energy and industrial metals sectors, have liquid futures contracts that expire every month. Therefore, these contracts are rolled forward every month. Contracts based on certain other commodities, most notably agricultural products, tend to have only a few contract months

each year that trade with substantial liquidity. Thus, these commodities, with related futures contracts that expire infrequently, roll forward less frequently than every month, and can have further pronounced pricing volatility during extended periods of low liquidity. With respect to Constituents in the energy sector, it should be noted that due to the significant level of its continuous consumption, limited reserves, and oil cartel controls, energy commodities are subject to rapid price increases in the event of perceived or actual shortages.

*The sum of the weights for the Constituents of the Optimax Market-Neutral Index may not be equal to zero at all times.*

The Optimax Market-Neutral Index is referred to as "Market-Neutral" because the sum of the weights of all Constituents immediately after rebalancing is zero. However, because the dollar weights of the Constituents may fluctuate in between rebalancing dates, the net weight of the portfolio of Constituents that comprise the Optimax Market-Neutral Index may not always sum to zero and the Optimax Market-Neutral Index may have net long or short exposure in between rebalancing dates.

*Suspension or disruptions of market trading in the commodity and related futures markets may affect the level of one or more of the Constituents and thus may adversely affect the level of the Index.*

The commodity markets are subject to temporary distortions or other disruptions due to various factors, including the lack of liquidity in the markets, the participation of speculators and government regulation and intervention. In addition, U.S. futures exchanges and some foreign exchanges have regulations that limit the amount of fluctuation in futures contract prices that may occur during a single business day. These limits are generally referred to as "daily price fluctuation limits" and the maximum or minimum price of a contract on any given day as a result of these limits is referred to as a "limit price." Once the limit price has been reached in a particular contract, no trades may be made at a price higher than the maximum price or lower than the minimum price. Limit prices may have the effect of precluding trading in a particular contract or forcing the liquidation of contracts at disadvantageous times or prices. These circumstances could affect the level of the Constituents, which in turn may adversely affect the level of the Index.

*The commodity futures contracts underlying the Constituents of the Index are subject to legal and regulatory regimes and changes to such regimes may have an adverse effect on the level of the Index.*

The commodity futures contracts that underlie the Constituents of the Index are subject to legal and regulatory regimes in the United States and, in some cases, in other countries that may change in ways that could negatively affect the level of the Index. For example, the United States House of Representatives and the United States Senate have considered legislation intended to decrease speculation and increase transparency in the commodities markets. If enacted such legislation may, among other things, require the United States Commodity Futures Trading Commission (the "CFTC") to adopt rules establishing position limits on positions in commodity futures contracts (or eliminating or modifying exemptions from already-existing position limits), impose higher margins on traders in commodity futures contracts or compel additional disclosure requirements on traders. Changes to the legal or regulatory regimes applicable to the commodity futures contracts that underlie the Constituents of the Index may result in the Optimax Calculation Agent exercising its discretionary right under the Index Rules to remove and/or replace Constituents of the Index, which may, in turn, have a negative effect on the level of the Index. The removal or replacement of Constituents described above could affect the diversification amongst the Constituents or the volatility of the Index notwithstanding the normal diversification and volatility constraints imposed on the Index by the Index Rules. In addition, changes to the legal or regulatory regimes applicable to the commodity futures contracts that underlie the Constituents of the Index may also result in modifications to the Index Rules, which may, in turn, have a negative effect on the level of the Index.

*The reported level of the Index will include the deduction of a hypothetical replication adjustment factor.*

One way in which the Index differs from a typical index is that its daily reported level includes a deduction of a hypothetical replication adjustment factor, a fee assessed at an annual rate of 0.96% of the aggregate values of its Constituents. This hypothetical fee is deducted daily and calculated based on an actual/360 accrual basis. As a result of the deduction of this amount, the value of an investment linked to the level of the Index will trail the value of a hypothetical identically constituted synthetic portfolio from which no such amount is deducted.

*The Constituents of the Index are "excess return" indices.*

In general, returns from investing in futures contracts are derived from three sources: (1) changes in the price of such futures contracts (known as the "price return"), (2) profit or loss realized when rolling from a futures contract with one expiry date to another futures contract with a different, generally later, expiry date (known as the "roll return") and (3) interest earned on the cash (or other) collateral deposited in connection with the purchase of such a futures contract (known as the "collateral return"). The Constituents of the Index generate "excess returns," meaning the sum of the price return and the roll return with respect to the futures contracts underlying the Constituents. As a result, an investment in an instrument linked to the Index will not generate the same returns that would be obtained from investing directly in the futures contracts underlying the Constituents because the collateral return is not used in calculating an "excess return" index.

*Certain calculations and determinations will be made in the sole discretion of the Optimax Calculation Agent.*

JPMorgan and its affiliates play a variety of roles in connection with the Optimax Market-Neutral Index, and J.P. Morgan Securities Ltd., one of its affiliates, will act as the Optimax Calculation Agent. The Optimax Calculation Agent has responsibility for calculating and publishing the closing levels of the Index. It is entitled to exercise discretion in relation to Index, including but not limited to, the determination of the values to be used in the event of market disruptions that affect its ability to calculate and publish the closing levels of the Index, its ability to substitute or exclude Constituents and the interpretation of the rules for valuing the Index. Although the Optimax Calculation Agent will make all determinations and take all action in relation to the Index acting in good faith, it should be noted that such discretion could have an impact, positive or negative, on the levels of the Index. The Optimax Calculation Agent is under no obligation to consider your interests in taking any actions that might affect the Index.