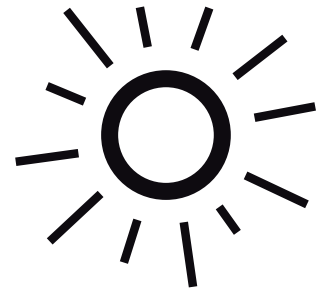
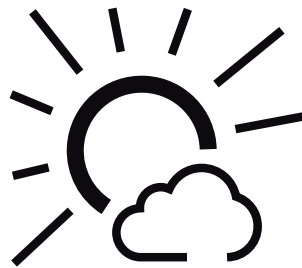


For UBS marketing purposes

Signaling market behavior?

UBS Manage™ Advanced [Systematic Allocation]



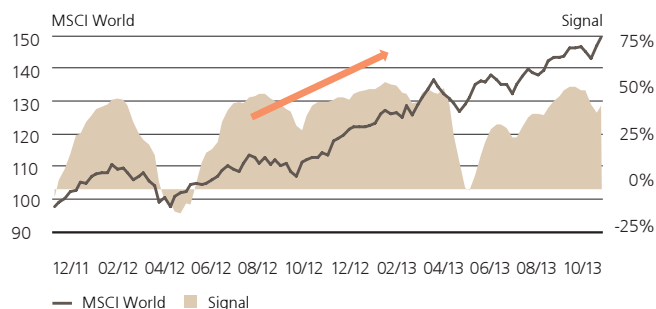
UBS Manage™ Advanced [Systematic Allocation] is rule-based and is designed to limit drawdowns by reducing equity exposure in negative market environments, while increasing equity exposure as the economy improves and markets recover. During clear economic and equity market trends, the solution should outperform. However, the approach is not as effective or accurate when equity markets exhibit weak trends.

Behavior in different market conditions

Clear market trends

- The UBS WM CIO World Equity Market Indicator will give a strong signal – indicating positive or negative performance of global equity markets – provided markets and the business cycle exhibit momentum – positive or negative.
- Positive trend (2013): the solution was mostly in high equity allocation mode given strongly trending equity markets and a positive macro backdrop. The USD Dynamic version (20% to 80% equity allocation) returned 17.0% over the year versus 15.6% for the static portfolio (constant 60% equity allocation).
- Negative trend (2015): the solution was in low equity allocation mode before the equity market went into drawdown as the model picked-up deteriorating equity momentum and weakness in the high yield sector. The USD Dynamic version returned 2.4% over the year versus -0.4% for the static portfolio.

Signal and market performance period
January 2012 – December 2013

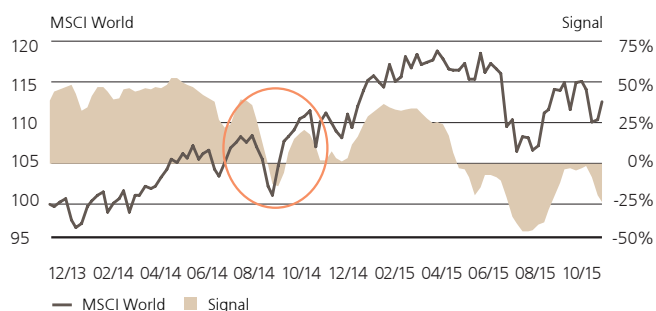


Source: UBS WM CIO, for illustrative purposes only.

Sideways-moving markets

- In periods where equity markets move sideways and the macro economy does not show significant strength or weakness, the model will not be as effective compared to clearly trending period.
- 2014: the solution was mostly in high equity allocation mode, but was late in capturing the sharp rebound in October. The USD Dynamic version returned 4.8% over the year versus 6.9% for the static portfolio.

Signal and market performance period
January 2014 – December 2015

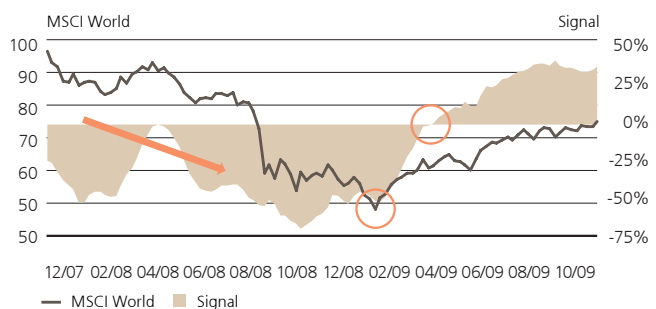


Source: UBS WM CIO, for illustrative purposes only.

Financial crisis 2008 – 2009

- 2008: the UBS WM CIO World Equity Market Indicator signaled a low equity allocation mode at the beginning of the year. Consequently, the drawdown was significantly reduced. The USD Dynamic version returned -10.1% over the year versus -30.7% for the static portfolio.
- 2009: the model reduced drawdowns and volatility significantly early in 2009 but was late in capturing the rebound in March: the USD Dynamic version returned 23.9% versus 26.5% for the static portfolio.

Signal and market performance period
January 2008 – December 2009

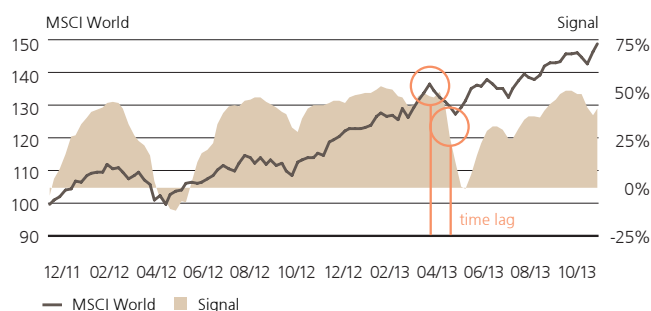


Source: UBS WM CIO, for illustrative purposes only.

Model reaction time

- Identifying a fundamental change in market and economic trends usually requires a certain amount of data points. This means that the model will typically take some time to identify the change.
- The time lag between the market rolling over and the model switching from high to medium was on average between five to six weeks, in a historical back-test from 1990. In this period, the solution tended to outperform the static portfolio.
- From the same back-test, the time lag of the signal switching from low to medium was between seven and eight weeks.

Signal and market performance period, time lag January 2012 – December 2013

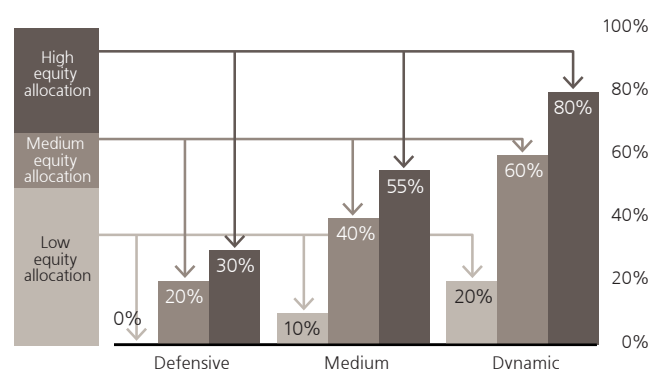


Period: January 2012 – December 2013. Source: UBS WM CIO, for illustrative purposes only.

Systematic Allocation approach and model

- Risk-controlled portfolio management
- UBS manages the allocation to equities with the UBS WM CIO World Equity Market Indicator, which evaluates the current equity market movements and the dynamics of the business cycle.
- The UBS WM CIO World Equity Market Indicator is rule-based and determines the split between equities and bonds.
- The solution is available in three strategies: Defensive, Medium, Dynamic. The equity allocation bands are shown on the right.

Investment Process

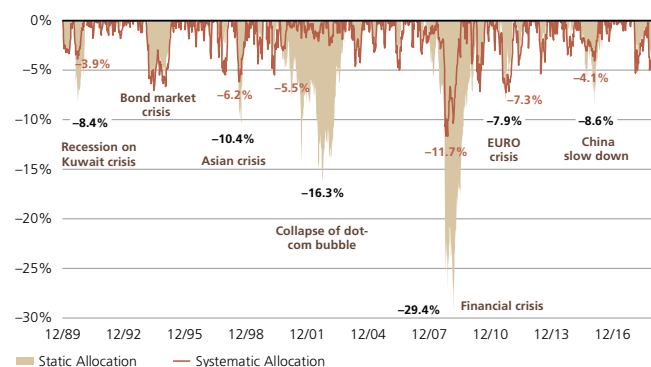


Source: UBS WM CIO. For illustrative purposes only. The above asset allocations are indicative only and can be changed by UBS at any time.

Reducing drawdowns

- The portfolio management approach is designed to limit drawdowns, i.e. peak-to-trough declines.
- The figure on the right illustrates this by comparing the drawdowns of the static portfolio (constant 40% equity allocation) with the systematic solution (10% to 55% equity allocation).
- The static portfolio has historically suffered sporadic drawdowns approaching 30%, while the systematic solution produced more evenly distributed drawdowns.

USD Medium version



Source: UBS WM CIO; Period: 29.12.1989 – 31.12.2018, weekly data. Systematic Allocation Portfolio: Equity allocation according CIO World Equity Market Indicator ranging from 10% to 55% equities. Static Portfolio: Medium (40%) equity allocation unchanged over time. Trading costs are included. For illustrative purposes only. Past performance is no indication for future returns.

World Equity Market Indicator

The UBS WM CIO World Equity Market Indicator is comprised of Momentum of Business Cycle (60%) and the Momentum of World Equity Market (40%).

60% Momentum

of economic cycle



Monthly

Global earnings trends:

Current earnings situation

Weekly

Economic indicators:

Indicators for future earnings

Weekly

Indicators for business risks:

Investor expectations

Assessment of earnings performance and other economic factors relevant to the equity markets

Overall signal

for equity market investments



Maximum equity exposure for very positive signal



Small equity exposure for positive signal



Underweight in equities for negative signal

40% Momentum

of equity markets



Daily

Short-/medium-term trend:

Current trend

Daily

Long-term trend:

Bull/bear market

Daily

Indicators for market risks:

Short-term volatility

Assessment of momentum for different equity markets

For illustration only. Sources: UBS WM CIO, UBS WM CIO World Equity Market Model

The Momentum of Business Cycle module delivers an assessment of the business cycle and especially of the earnings dynamics, which is crucial for equity market performance. A positive signal indicates strong earnings growth, a positive development of macroeconomic indicators and

declining market risk. The Momentum of World Equity Market signal provides a deep and comprehensive description of current market movements. A strong positive signal indicates a strong upward trend and low risk for most world equity markets.

Risk information

- The model might not always capture a clear signal (e.g. a situation in which some model inputs stop describing or being relevant for market behavior). It might therefore be less effective in selecting the fitting equity allocation and thus generate less performance than another investment strategy.
- May underperform each portfolio's static (or neutral risk) allocation, broad equity or fixed income markets, or conventional multi-asset blended benchmarks.
- UBS Manage Advanced [Systematic Allocation] does not guarantee downside protection.

Glossary

Asset Allocation

Composition of a portfolio by currency and asset class.

Asset Class

Any collection of assets that reacts in a unique way to the fundamental drivers of the economy. Most important asset classes are equity, fixed income, money market investment, and real estate.

Diversification

A strategy of spreading an investment over different assets to reduce portfolio risk.

Drawdown

The peak-to-trough decline during a specific record period of an investment or fund. It is usually quoted as the percentage between the peak and the trough.

Static Portfolio

A portfolio which is not changing the asset allocation.

Risk

Exposure to damage or financial loss, e.g. a fall in the price of a security, or insolvency on the part of a debtor. Financial market theory measures the risk of an investment or portfolio by the degree of expected return fluctuations.

Model

Systematic Allocation Portfolio relies on the proprietary UBS WM CIO World Equity Market model to define its underlying equity allocation. This model is an integral part of the UBS WM CIO Tactical Asset Allocation investment process, in which we combine quantitative and qualitative inputs to derive our six-month investment views. It uses macroeconomic variables and financial market data as inputs, combined with proprietary filtering techniques. We have used this model in a live environment since mid-2011, and it leverages the 15+ years of investment experience of its developers.

Portfolio

Selection of securities held by a bank in a safekeeping account for administration or investment management on behalf of a client, or held and managed by the investor him/herself.

UBS WM CIO World Equity Market Indicator

It is a sophisticated proprietary indicator processing and combining information from a wide variety of financial and economic statistics.

Volatility

Measure of the fluctuations in the rate of return of a security within a specific period. Usually stated as an annualized standard deviation.

Simulated Performance:

Historic risk/return simulations are based on the theoretical performance of the standard benchmarks or indices underlying the portfolios over the specific time horizon. The historical performance shown does not reflect your actual performance but, rather, was calculated by the retroactive application of historic index results to the asset allocation(s) analyzed. Because the asset allocations were structured with the benefit of knowing how each asset class performed during the period shown, the hypothetical returns may be higher than the returns of a portfolio that would have been recommended during the time period shown. In addition, backtested performance does not reflect the impact that past economic and market factors might have had on investment decision-making. The results shown reflect realized and unrealized gains and losses and the reinvestment of income, but do not include the impact of transaction costs, taxes and inflation. If these were included, the results shown would be lower. Please note that the historic backtest analysis assumes that the asset allocation was rebalanced at the beginning of each month back to the initial asset allocation. This rebalancing frequency does not necessarily reflect how an actual portfolio would have been managed. There is no guarantee that these backtested results could, or would, have been achieved had this asset allocation been used during the years presented. The results shown reflect realized and unrealized gains and losses and the reinvestment of in-

come, but do not include the impact of management fees, transaction costs, taxes and inflation. If these were included, the results shown would be lower.

These hypothetical, past performance results are not an indicator of how this strategy will perform in the future.

Actual results will differ and may be better or worse than those shown. Market and economic conditions will change over time and these and other future developments will impact the future risks and returns of different asset classes. In addition, as noted above, these results are based solely on the historical performance of certain broad-based indices, which are identified and described in this presentation. Client accounts to be managed employing this asset allocation strategy will not be invested in all securities comprising any index or in the same proportions as those securities are represented in the index and a client's holdings within any asset class will be significantly less diversified than the corresponding index.

For any further explanations that you may require, please refer to our UBS Dictionary of Banking at www.ubs.com/glossary or to your UBS client advisor.

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