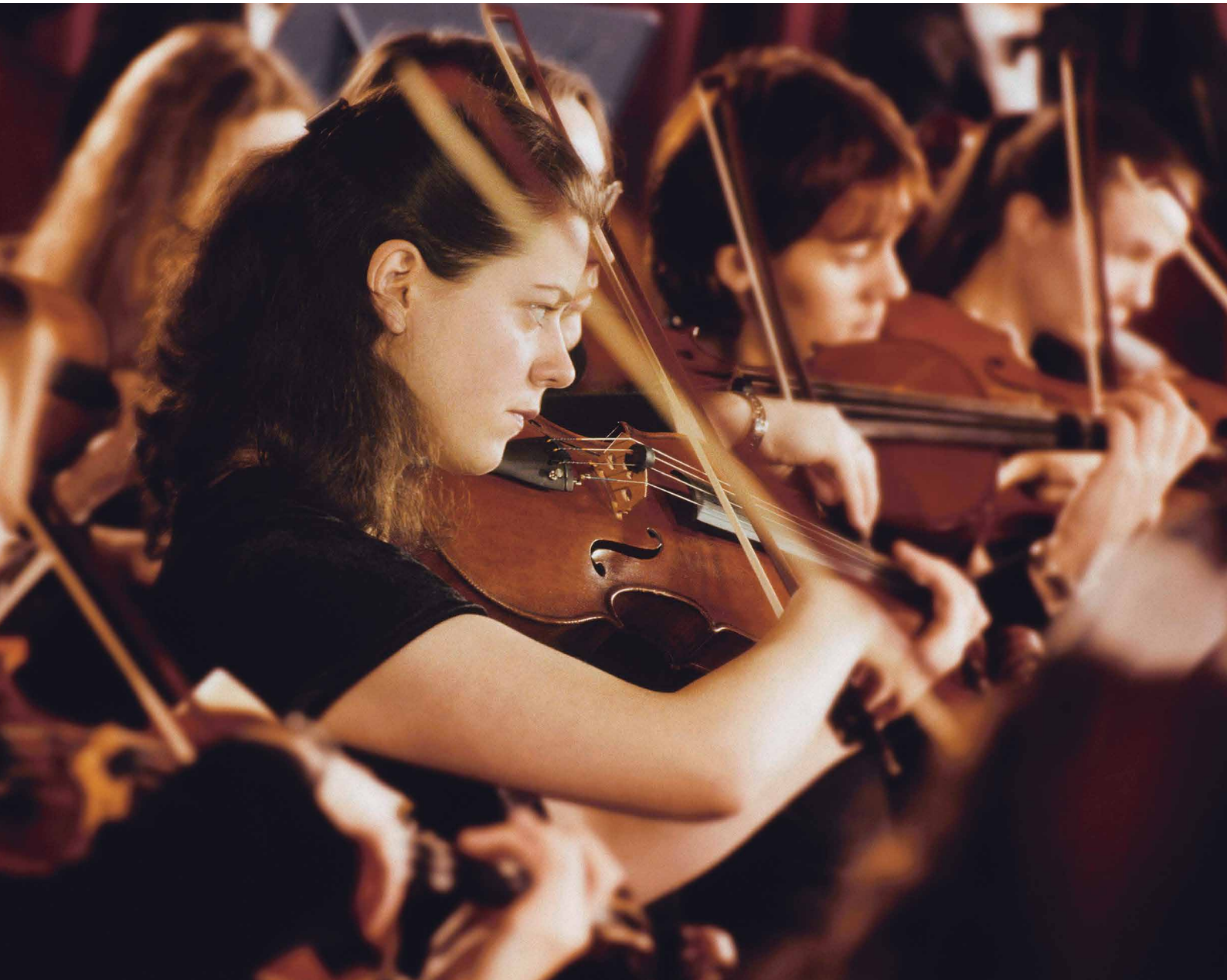


# Finely-tuned performance: *Music to any investor's ears*



A close-up, low-angle shot of a person's hands gripping a barbell with weights. The hands are positioned on the left side of the frame, with fingers wrapped around the bar. The barbell is oriented vertically, with several weights visible at the bottom. The background is dark, with warm, bokeh lighting in shades of orange and yellow, suggesting a gym or fitness setting. The overall mood is focused and intense.

*A strong  
performance.*

# UBS Open End PERLES on UBS Multi Asset Portfolio

As a return-oriented investor, you seek constant investment success in any market conditions. UBS Multi Asset Portfolio (UBS-MAP) offers you an opportunity to keep up with the ever-changing rhythm of the market.

UBS Multi Asset Portfolio (UBS-MAP) meets the complexity of financial markets and the resulting uncertainties with an intelligent, multi-layered investment process. UBS-MAP continuously aligns itself with the current market situation through several innovative control processes. Depending on the market situation, fixed rules and clear guidelines initiate automatic shifts between asset classes and finely orchestrated tempo changes. This makes UBS-MAP more than just a well-diversified portfolio that invests in equities, commodities, bonds and cash.

While UBS-MAP continuously conducts your investment and adapts itself to market conditions, you may sit back, relax and look forward to the result of a harmonious overall portfolio.

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# *Step by step* to a balanced Multi Asset Portfolio

The UBS Multi Asset Portfolio Concept (UBS-MAP) carefully composes and orchestrates your portfolio, at any time, in any market conditions. It constantly keeps track of the dynamics of the financial market via multiple feedback loops and so can continually calibrate the weightings of the relevant asset classes. This way, your UBS Multi Asset Portfolio can remain competitive in every phase of the economic cycle. A self-regulating process of four clearly defined steps can help you achieve an adequate return on your investment.

UBS-MAP is composed of four asset classes: Equities, commodities and bonds form the active portfolio, cash is the reserve asset. In four well-coordinated steps, the asset classes are weighted to achieve a harmonic balance between the market-neutral cash portion and the active portfolio. Clearly defined control processes determine the weightings within the portfolio and the respective exposures. Each step is designed to optimize the risk/reward ratio of UBS-MAP as much as possible.

**Orchestrating high-end technology in today's markets in four steps**



For illustrative purpose only.

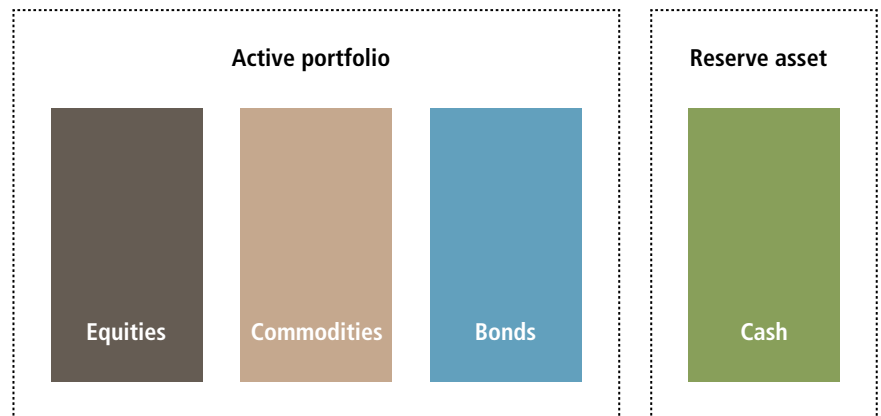
Please always read in conjunction with the glossary and the disclaimer provided at the end of the document.



# Step 1: Composing a well- balanced portfolio

The UBS Multi Asset Portfolio Concept (UBS-MAP) carefully follows the approach of classical portfolio diversification: UBS-MAP is composed of the four asset classes of equities, commodities, bonds and cash. Each asset class has its own qualities. Taken together, they help to create a portfolio that aims to preserve value in any market cycle.

The portfolio components equities, commodities and bonds form the active portfolio and are selected to target profits in the UBS-MAP Portfolio. Cash as the reserve asset is there for times of severe market stress with the aim of protecting your investment. Since these asset classes have different risk/reward profiles, the following allocation steps aim to minimize the risk of loss and keep the prospects for profits as high as possible.



For illustrative purpose only.

Please always read in conjunction with the glossary and the disclaimer provided at the end of the document.



You can find more detailed information on the Active Portfolio in the section «Components of the UBS Multi Asset Portfolio» on pages 18/19 of this brochure.

## Active Portfolio

The active portfolio encompasses the asset classes of equities, commodities and bonds:

### – Equities

Shares generally serve well in participating in economic upturns. Since equities allow attractive returns during such periods, they should be a core consideration in a long-term portfolio strategy.

The equity portion of the active portfolio is represented by blue chips from the U.S. and the Euro area. For this purpose, the funds allocated to equities can generally be divided equally between the S&P 500® TR Index (USD) and the Euro STOXX 50® TR Index (EUR). "TR" stands for Total Return and means that any dividends paid out by the companies in the index are re-invested.

### – Commodities

Commodities show their merits particularly in market periods of rising inflation. During these periods, the global economy is usually in full swing and raw materials are urgently needed.

The commodity portion of the active portfolio is basically represented by the UBS Bloomberg CMCI Composite TR Index, a commodity index developed in co-operation with Bloomberg. This index aims to track the real performance of commodity prices via futures contracts as closely as possible. Besides the broad-based diversification across 27 commodities futures, the UBS Bloomberg CMCI Composite TR Index

uses up to five constant maturities reflecting the entire pricing picture in order to reduce the possible influence of negative roll returns. Finally, daily rolling ensures that the average time-to-maturity of the futures contracts is kept permanently constant.

### – Bonds

Government bonds are a relatively low-risk asset class with good predictable returns. They are especially attractive during periods of economic downturns when the general market level of interest rates drops.

The bond portion of the active portfolio is split between four bond components in equal proportions. On the one hand, the UBS 5Y US Treasury TR Index and the UBS 10Y US Treasury TR Strategy track the performance of an investment in 5-year or 10-year US government bonds (US Treasuries) in U.S. Dollars. On the other hand, the UBS 5Y Euro Bond TR Index and the UBS 10Y Euro Bond TR Strategy reflect the performance of 5-year and 10-year Euro bonds in Euros.

## Reserve asset

Cash investments are not subject to market risk. Therefore, cash plays a special role in the UBS-MAP Portfolio – the role of a market-neutral reserve asset. During times of significant market stress, UBS-MAP allocates funds to the reserve asset to protect the portfolio value.

## The limited benefits of diversification in the real world

The first step is to ensure an appropriate degree of diversification. Diversification, according to the Nobel-price winning Modern Portfolio Theory developed by Harry Markowitz, can contribute positively to the risk/reward ratio of a portfolio. This benefit is the higher, the less the individual portfolio components move in unison with one another – or as experts would say, the lower the correlation between the portfolio's members is.

However, real world experience has shown that correlations may increase unexpectedly in periods of market stress. Therefore UBS-MAP incorporates three more steps to take into account the dynamics of financial markets.





## Step 2: Controlling the risks

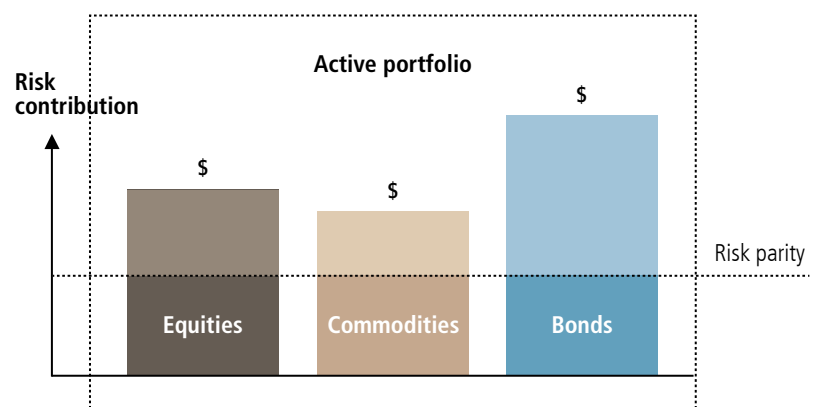
Risk control plays a leading part in UBS-MAP. Therefore, the second step of the UBS-MAP process aims to reach a risk-parity weighting between the three asset classes making up the active portfolio. Each separate asset class is weighted at the time of rebalancing so that each asset class contributes the same amount (parity) to the overall risk.

This means that if the performance of one asset class in the active portfolio (compared to the others) is more volatile (risky), this asset class will automatically receive a lower weighting in the portfolio. However, if the performance of an asset class becomes smoother in comparison to the other asset classes, it receives a correspondingly higher weighting.

In contrast, traditional diversification is based on a value-related approach so that diversification is implemented by allocating a fixed amount of investable funds across asset classes.

A diversified portfolio in this sense could therefore be made up of 60 percent of bonds, 30 percent of equities and 10 percent of commodities. A fixed value-weighted portfolio like this may look well-diversified, but is likely to be poorly diversified in terms of portfolio risks, especially in times of severe market stress. The risk-parity concept, on the other hand, aims for a balance where every asset class brings the same amount (parity) of risk to the portfolio.

Financial markets can experience a range of sentiments from euphoria to depression. In periods where a positive sentiment is experienced, the risk profile of an asset class is often shaped differently than in phases dominated by a negative mood. UBS-MAP recognizes this. As a consequence, the risk-weighting process can differentiate by using the characteristic profile of the volatility of each asset class within the currently prevailing market sentiment.



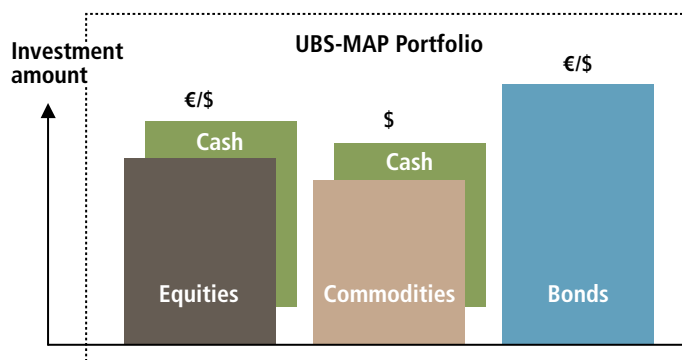
Despite allocating different investment amounts to the three asset classes, their contribution to the overall riskiness of the portfolio is the same (risk parity). For illustrative purpose only.

# Step 3: Listening to the pulse of the markets

As you may know from experience, equities and commodities may provide high price gains, but losses cannot be excluded. To reduce the risk of large losses, the UBS Multi Asset Portfolio Concept applies a tactical overlay within the asset classes of equities and commodities as a third step in the investment process.

In the case of extreme market sentiments, UBS-MAP divests these two asset classes, with the amount allocated to each of them flowing into a market-neutral and therefore safe cash position.

- Equities can be a real asset in your portfolio. But sometimes it may be better to stay away from the stock market. UBS-MAP tries to identify the likelihood of growing risks of loss by assessing the market sentiment using the UBS DERI, an indicator that has so far stood the test of time\* (see information box). If the UBS DERI shows more and more warning signs of an increased risk of price decline on the stock markets, UBS-MAP converts the equity position into a market-neutral cash position. This process is executed according to a defined set of rules in order to keep your assets safe for a later, possibly better entry into the stock markets. On the other hand, if the UBS DERI shows favorable sentiments for stock investments, UBS-MAP invests equal amounts in the S&P 500® TR Index (USD) and the Euro STOXX 50® TR Index (EUR).
- Commodities – like equities – show a high chance of profits as well as a high risk of loss. Therefore UBS-MAP can redirect the funds allotted to commodities in the active portfolio to a market-neutral cash position when the UBS DERI points to increased risks and the momentum of commodities indicates a down-trend in prices at the same time. However, if the UBS DERI or the momentum in commodities point to a positive environment for commodities, an investment is made in the UBS Bloomberg CMCI Composite TR Index.



In times of severe market stress UBS-MAP may replace equities and commodities with cash. For illustrative purpose only.

\* Past performance is not indicative of future performance.



### **UBS DERI indicator (DERI)**

The DERI, short for Dynamic Equity Risk Indicator, was developed developed by UBS Investment Bank Research, which is independent from other UBS business divisions. It measures the sentiment and risk appetite on the global financial markets permanently, every trading day. The indicator uses selected metrics which are then compressed by statistical methods into a single number representing market sentiment. Depending on the reading of DERI, market sentiment is categorized into bullish (positive), bearish (negative) and neutral market sentiments. Each of these sentiments suggests a certain price direction.

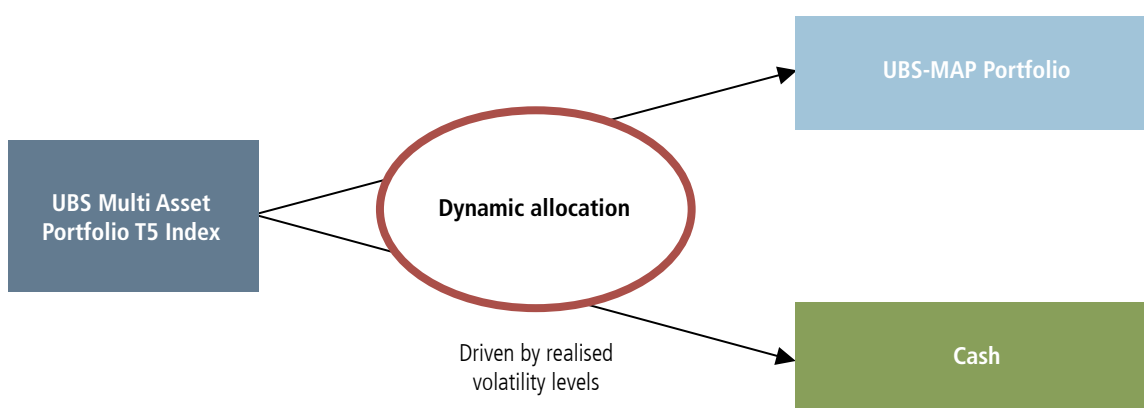
Please always read in conjunction with the glossary and the disclaimer provided at the end of the document.

The UBS Multi Asset Portfolio concept (UBS-MAP) is not only widespread in equities, bonds, commodities and cash – furthermore, several intelligent, interconnected control mechanisms adjust the portfolio weightings regularly. These key characteristics already qualify the portfolio as a long-term basis investment.

In addition, UBS-MAP goes one important step further to enable it to react quickly to market changes such as sudden market shocks: a daily volatility control which is both sensitive and strict. The aim of this fourth step is to keep the realized volatility of the UBS-MAP Portfolio – as an important measure of risk – within stringent limits. In concrete numbers, the targeted, annualized volatility is 5 percent.

To achieve this, the UBS Multi Asset Portfolio T5 Index balances the allocations of the UBS-MAP Portfolio and the reserve asset cash against each other on a daily basis. This dynamic process initiates a breaking manoeuvre when the volatility of the UBS-MAP Portfolio increases. In contrast, falling volatilities may cause the UBS Multi Asset Portfolio T5 Index to switch to a higher gear.

## Step 4: Fine-tuning with volatility control



Source: UBS AG  
For illustrative purpose only.

### Meeting the target volatility of 5 percent

The UBS Multi Asset Portfolio T5 Index targets a volatility of 5 percent p.a., hence “T5”. Each trading day, UBS-MAP measures and assesses the volatility of the UBS-MAP Portfolio. As long as the volatility of the UBS-MAP Portfolio is within the range of 4 percent to 6 percent, no adjustment is made as a result of the volatility control of the UBS Multi Asset Portfolio T5 Index. In this case, the UBS Multi Asset Portfolio T5 Index is invested around 100 percent in the UBS-MAP Portfolio. If the volatility leaves the target range of between

4 percent and 6 percent, however, adjustments take place. In the case of volatility falling below 4 percent, the exposure of the UBS Multi Asset Portfolio T5 Index to the UBS-MAP Portfolio can increase up to a maximum of 200 percent of the funds invested. On the other extreme, if volatility breaks out upward and exceeds the threshold of 6 percent, the exposure of the UBS Multi Asset Portfolio T5 Index to the UBS-MAP Portfolio is reduced accordingly in favour of a higher cash portion. This brings volatility back to the target level of 5 percent.

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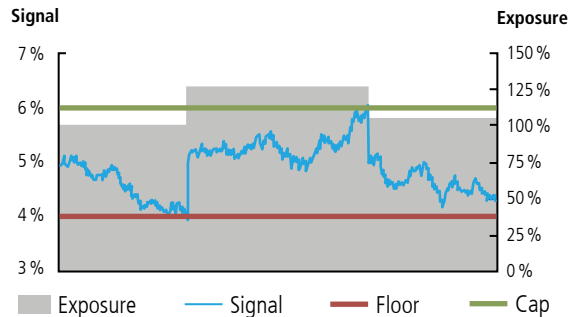
**Volatility risk control with clear limits**

**Low volatility period**  
Signal < Floor 4%



Result of volatility control:  
index volatility brought  
back within range

Source: UBS AG



**High volatility period**  
Signal > Cap 6%



Result of volatility control:  
index volatility brought  
back within range

The volatility control of the UBS Multi Asset Portfolio T5 Index aims for a volatility level of 5 percent with a tolerance range of 1 percentage point upward and downward, i.e.

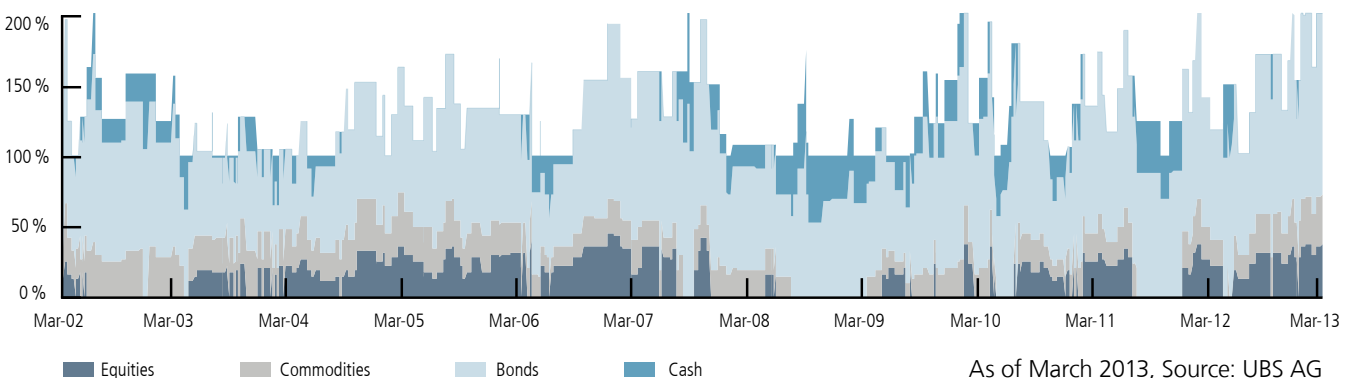
4 percent to 6 percent. To achieve this volatility target, UBS-MAP Portfolio exposure can vary between 0 percent and 200 percent. For illustrative purpose only.

**Changing tempo in the beat of the markets**

Exposure of the UBS Multi Asset Portfolio T5 Index to the UBS-MAP Portfolio can vary between 0 percent and 200 percent. With an exposure of less than 100 percent the UBS Multi Asset Portfolio T5 Index reduces the allocation to the UBS-MAP Portfolio in favour of cash. On the other hand, an exposure higher than 100 percent results in leverage, since

the individual components in the UBS-MAP Portfolio will be increased accordingly. The additional funds required for the leveraged investment are borrowed at the current overnight rate (EONIA for Euro investments and USD LIBOR for U.S. Dollar investments) plus 1 percent per annum.

**Dynamic allocation of UBS Multi Asset Portfolio T5 Index\***



As of March 2013, Source: UBS AG

\* This material contains data derived from the back-testing of data and is provided by UBS in good faith using our standard methodology for information of this kind. Past performance is not indicative of future performance, please refer to the important back-testing disclaimer at the end of this document. For illustrative purpose only.



# Step by step to *calculable* added value\*

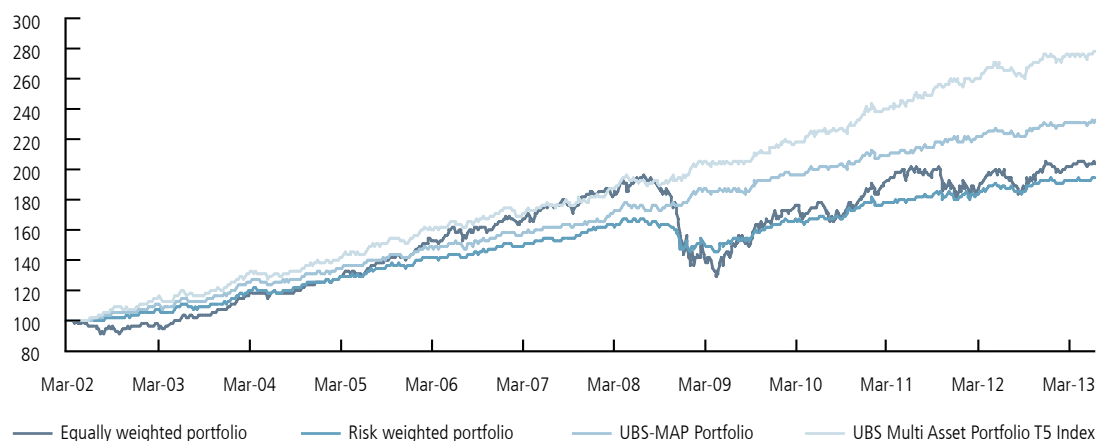
Is all this effort really justified? Does UBS-MAP actually add value? Does it offer you a measurable benefit? A simulation and comparison of the various portfolio concepts can give a clear answer.

The chart below shows the results of a simulation of the portfolio after each step on the way to the UBS Multi Asset Portfolio T5 Index since March 2002 (back-tested from March 2002 to 30 August 2012, live from 31 August 2012 onwards). It is apparent that every step has improved the risk-adjusted return (Sharpe ratio) of the overall portfolio in the past by increasing the yield and/or by keeping the risk (in the form of the realised volatility) in check. (Status of all data: March 2013)\*

## Performance of the UBS Multi Asset Portfolio T5 Index since March 2002\*

	Equally weighted portfolio	Risk weighted portfolio	UBS-MAP Portfolio	UBS Multi Asset Portfolio T5 Index
<b>Total return</b>	104.35%	94.62%	132.59%	178.28%
<b>Annualized return</b>	6.67%	6.20%	7.93%	9.69%
<b>Annualized volatility</b>	10.49%	4.76%	4.03%	5.01%
<b>Sharpe ratio</b>	<b>0.45</b>	<b>0.90</b>	<b>1.49</b>	<b>1.56</b>
<b>Worst drawdown</b>	-34.74%	-14.00%	-3.57%	-4.53%

Each step has enhanced the risk-adjusted return (Sharpe ratio)



As of March 2013, Source: Bloomberg, UBS AG

\* This material contains data derived from the back-testing of data and is provided by UBS in good faith using our standard methodology for information of this kind. Past performance is not indicative of future performance, please refer to the important back-testing disclaimer at the end of this document. For illustrative purpose only.

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# Investor profile

UBS Open End PERLES are solutions for investors with a medium to higher risk tolerance who wish to participate with little administrative effort in the performance of equities, commodities and bonds. Investors in this product should be experienced investors familiar with both derivative products and the stock markets. The methodology of the UBS Multi Asset Portfolio T5 Index uses several self-regulating processes to try to respond to the most current market conditions by maintaining a portfolio with a balanced risk-reward.

## Opportunities and Risks

### Opportunities

- Investors can participate in a broadly diversified portfolio that may include equities, commodities, bonds and cash.
- UBS-MAP abates investors from crucial timing decisions: Multi-layer and objective control processes are sought to automatically find promising entry and exit points in the asset classes of equities and commodities.
- Daily risk control (volatility control) aims to reduce the impact of potential market crashes or other experiences of loss in the UBS Multi Asset Portfolio T5 Index.
- UBS-MAP works cost efficiently: Ongoing portfolio adjustments based on numerous market data are implemented automatically at several layers of the certificate on the UBS Multi Asset Portfolio T5 Index for a management fee of only 1.00 percent per annum.

### Risks

- No capital protection: The value of the UBS Open End PERLES depends on the performance of the UBS Multi Asset Portfolio T5 Index which can decrease in value.
- The steps performed in the underlying UBS Multi Asset Portfolio T5 Index are based on statistical assumptions and empirical observations. This assumed basis of conditions (i.e. correlations) may change in the future, which may have a negative effect on the index performance.
- Currency risk: The UBS Multi Asset Portfolio T5 Index is calculated in U.S. Dollars as well as in Euros. However, as individual index components of each currency version are traded in Euros and in U.S. Dollars, a change of the EUR/USD currency pair may adversely affect the index value and thus reduce the price of the respective certificate.
- Issuer risk: Investors in certificates bear the counterparty risk of the relevant issuer and therefore the risk that the capital employed – regardless of the change in the underlying index – can be lost in the event of the insolvency of the issuer.



## Open End PERLES on UBS Multi Asset Portfolio T5 Index

	UBS Multi Asset Portfolio T5 Index (USD)	UBS Multi Asset Portfolio T5 Index (EUR)
<b>Ratio</b>	1:1	1:1
<b>Index Type</b>	Total Return (TR)	Total Return (TR)
<b>Valor</b>	19670171	19747701
<b>ISIN</b>	CH0196701715	CH0197477018
<b>Symbol</b>	MAPU5	MAPE5
<b>Currency</b>	USD	EUR
<b>Management Fee</b>	1.00% p.a.	1.00% p.a.
<b>Maturity</b>	Open End	Open End
<b>Issuer</b>	UBS AG, London Branch	UBS AG, London Branch
<b>SVSP Name</b>	Tracker Certificate	Tracker Certificate
<b>SVSP Code</b>	1300	1300

For more information about the products presented, including opportunities and risks, please see the glossary and the risk information provided at the end of this document as well as the termsheets and factsheets that can be viewed using the Valor or ISIN on the webpage [www.ubs.com/keyinvest](http://www.ubs.com/keyinvest)



# Components of the UBS Multi Asset Portfolio

## Asset class bonds

The bonds asset class in the UBS-MAP Portfolio is represented by the following four UBS indices and strategies which are designed to replicate a buy and hold strategy in the respective underlying bonds:

- The UBS 5Y Treasury TR Index reflects the performance of a strategy that rolls US-dollar-denominated futures contracts on 5-year US Treasury Notes every quarter.
- The UBS 10Y Treasury TR Strategy reflects the performance of a strategy that rolls US-dollar-denominated futures contracts on 10-year US Treasury Notes every quarter.
- The UBS 5Y Euro Bond TR Index reflects the performance of a strategy that rolls Euro-denominated futures contracts on 5-year German government bonds (Bobl Futures) every quarter.
- The UBS 10Y Euro Bond TR Strategy reflects the performance of a strategy that rolls Euro-denominated futures contracts on 10-year German government bonds (Bund Futures) every quarter.

## Asset class equities

The equities asset class in the UBS-MAP Portfolio is represented in equal amounts by the UBS RADA Europe Long Index and the UBS RADA US Long Index. RADA stands for “Risk Adjusted Dynamic Alpha”.

Each of these two indices reflects the performance of an algorithmic strategy that can enter into either a market-neutral cash position or – depending on the current market sentiment – a long position in the target index, either the Euro STOXX 50® TR Index or the S&P 500® TR Index. Market sentiment is measured by the sentiment indicator UBS Dynamic Equity Risk Indicator (“DERI”), which was developed exclusively by UBS Investment Bank Research. DERI uses several factors that provide information on market

Please always read in conjunction with the glossary and the disclaimer provided at the end of the document.



sentiment, the risk appetite of investors and investment positioning. DERI is calculated and published on a daily basis, for example on the KeyInvest webpage ([www.ubs.com/keyinvest](http://www.ubs.com/keyinvest)). If DERI stays in positive territory, a long position in the target index is maintained. If however DERI stays in negative territory, the UBS RADA strategy closes down the long position in the respective stock index and instead holds a market-neutral cash position.

The UBS RADA Europe Long Index has the Euro STOXX 50® TR Index as a target index. The Euro STOXX 50® TR Index (EUR) is calculated and published by Stoxx Ltd. The index reflects the performance of 50 blue chips from the Euro area countries in Euros, whereby it reinvests any net dividends of the index members into the index. The weighting is based on the market capitalization of the free float of the index members. The maximum weighting of a stock is capped to ten percent at regular index review dates.

The UBS RADA US Long Index has the S&P 500® TR Index as a target index. The S&P 500® TR Index (USD) is an index calculated and published by Standard & Poor's. The index reflects the performance of 500 US blue chips in U.S. Dollars, whereby it reinvests any net dividends of the index members into the index. The weighting is based on the market capitalization of the free float of the index members.

### **Asset class commodities**

The commodities asset class in the UBS-MAP Portfolio is represented by the Momentum Rotator Strategy Index on the UBS Bloomberg CMCI Composite TR Index. The Momentum Rotator Strategy Index reflects the performance of an algorithmic strategy that can enter either into a market-neutral cash position or into a long position in the target index, the UBS Bloomberg CMCI Composite TR Index. A long position in the target index depends on both the current momentum of the target index and on the current market sentiment as measured by the UBS Dynamic Equity Risk Indicator ("DERI").

The momentum aims to reflect the currently prevailing market dynamics by comparing a short-term moving price average of the target index with a long-term moving price average – or, in other words, by comparing a relatively sensitive and a relatively sluggish moving price average.

If either the momentum or the DERI is positive, the Momentum Rotator Strategy maintains a long position in the UBS Bloomberg CMCI Composite TR Index. If both parameters are negative, however, the long position in the UBS Bloomberg CMCI Composite TR Index is closed down and instead a market-neutral cash position is set up.

This index aims to track the real performance of commodity prices via futures contracts as closely as possible. Besides the broad-based diversification across 27 commodities futures, the UBS Bloomberg CMCI Composite TR Index uses up to five constant maturities reflecting the entire pricing picture in order to reduce the possible influence of negative roll returns. Finally, daily rolling ensures that the average time-to-maturity of the futures contracts is kept permanently constant.

As a total return index, the UBS Bloomberg CMCI Composite TR Index considers not only the price development of commodities but also roll yield and possible interest income resulting from the investment in futures contracts.

### **Asset class cash**

The cash asset class in the UBS-MAP Portfolio will yield at the currently prevailing overnight rate (EONIA for Euro cash and USD LIBOR for U.S. Dollar cash).

# Glossary

**Active portfolio** in the context of UBS-MAP is composed of the assets of equities, commodities and bonds. The two asset classes of equities and commodities can have a tactical overlay resulting in a market-neutral cash position instead.

**Allocation** in the context of UBS-MAP describes the allocation of investment funds to the asset classes of equities, commodities, bonds and cash according to a fixed and traceable set of rules.

**Back-testing** is a simulated back-calculation based on historical prices without the calculated past performance having really occurred. The material here contains back-testing, which was created by UBS in good faith and using standardized methods. Please note that neither simulated nor past performance is an indication of future performance. Please also take into account the relevant risk information at the end of this document.

**Bearish** describes a negative market environment, which is characterized by falling market quotes.

**Bullish** describes a positive market environment, which is characterized by increasing market quotes.

**Bonds** are financial instruments that are used by institutions such as governments for the procurement of debt capital. Investors usually have the prospect of getting a coupon over an often fixed term in return for funding the nominal amount. Please also see asset class bonds under "Components of the UBS Multi Asset Portfolio".

**Cash** – including cash position, cash, or cash balance – can be viewed in the context of UBS-MAP as a market-neutral asset class. For the exact cash components, please see the corresponding description under "Components of the UBS Multi Asset Portfolio".

**Cash ratio** is the percentage of a portfolio or an index invested in a cash position.

**CMCI** (Constant Maturity Commodity Index) is the name of the commodity index family developed by UBS and Bloomberg that aims to reduce the negative roll yields through daily rollover and through investing over the entire liquid futures curve. Please also see asset class commodities under "Components of the UBS Multi Asset Portfolio".

**Diversification** describes the distribution of the return responsibility to multiple components in a portfolio. In principle, the lower the correlation between the portfolio components, the higher the achievable diversification benefit.

**EONIA** (Euro Overnight Index Average) is determined daily by the European Central Bank as an average reference interest rate at which banks give each other unsecured Euro loans on an overnight basis.

**Euro STOXX 50® TR Index** (please see asset class equities under "Components of the UBS Multi Asset Portfolio")

**Futures contracts** are standardized, exchange-traded financial instruments that ask for settlement of the agreed

transaction (delivery or acceptance of the underlying asset) at a fixed date in the future at the currently traded futures price. Commodities, for example, are mainly traded via futures contracts, because this method avoids the costs of a physical delivery. The UBS indices track the performance of commodities (see CMCI) as well as US and German government bonds (e.g. UBS 5Y Treasury Index and UBS 5Y Euro Bond Index) via futures contracts.

**Index** – in the financial world – usually represents a portfolio following a fixed set of rules (please also see UBS Multi Asset Portfolio T5 Index).

**Investment ratio** equals the proportion in the UBS Multi Asset Portfolio T5 Index that can be invested in the UBS-MAP Portfolio in balance with the cash ratio. The investment ratio in the UBS-MAP Portfolio can range between zero and 200 percent of the available investment capital. An investment ratio of more than 100 percent results in a leverage effect or leverage (see Leverage).

**Correlation** (interdependency) in financial mathematics indicates how much a diversification benefit can be achieved in a portfolio by combining assets that show a low correlation with one another.

**Leverage**, or leverage effect, is in place with the UBS Multi Asset Portfolio T5 Index if the volatility control results in an investment ratio into the UBS-MAP Portfolio of more than 100 percent. The additional funds that may be required for the leveraged investment are borrowed at the current overnight rate (EONIA for Euro investments and USD LIBOR for U.S. Dollar investments) plus one percent p.a. Please note that leverage can heighten both profits and losses.

**Long position** is a buy position in a financial asset that benefits from the rising prices of this financial asset.

**Momentum** reflects the currently prevailing market dynamics by comparing a short-term moving price average of the target index with a long-term moving price average. Positive momentum occurs when the short-term moving price average is higher than the long-term moving price average. Negative momentum arises, however, when the short-term moving price average is lower than the long-term moving price average.

**Momentum Rotator Strategy on UBS Bloomberg CMCI Composite TR Index** (please see asset class commodities under "Components of the UBS Multi Asset Portfolio")

**Overnight rate** (see EONIA and USD LIBOR)

**p.a.** stands for the Latin "per annum" and means "per year".

**Performance** is another term for development, which is usually expressed as a percentage.

**Portfolio** is a collection of various financial instruments (see UBS-MAP).

**RADA or UBS RADA** (see asset class equities under "Components of the UBS Multi Asset Portfolio")



**Reserve asset** in the context of UBS-MAP is the market-neutral asset class cash (see Cash).

**Risk parity** means that each asset class contributes the same amount of risk to the overall risk at each rebalancing date. The risk is measured in terms of volatility.

**Roll effect** or **roll yield** is due to the rolling of futures contracts. The rolling describes the simultaneous purchase and sale of futures contracts on the same underlying with different maturities in order to hold on to the respective position in the futures contract. Since the buying and the selling price of the contracts in question are not usually the same, it results in a so-called rolling effect, often referred to as roll yield. The rolling effect can be positive or negative and depends on the form of the futures curve. If a rising futures curve prevails, which means that longer-term contracts are more expensive than short-term contracts, roll losses generally occur (contango). If a falling futures curve prevails, which means that longer-term contracts are cheaper than short-term contracts, roll profits generally occur (backwardation).

**Sharpe ratio** is a risk-adjusted return measure that compares the profits with the risk taken. Rule of thumb: The higher the Sharpe ratio, the better the profit or yield compared to the risk taken. The Sharpe ratio formula uses volatility (see Volatility) as a risk measure.

**Short position** is a sell position in a financial asset that benefits from falling prices of this financial asset.

**S&P 500® TR Index** (please see asset class equities under "Components of the UBS Multi Asset Portfolio")

**TR** stands for Total Return on a security or a portfolio of securities. The Total Return on equity shares for example comprises the price changes, distributions of interest and dividends, and par value repayments.

**T5** in the UBS Multi Asset Portfolio T5 Index stands for "Target 5", indicating that the UBS Multi Asset Portfolio T5 Index aims to achieve a (target) volatility of five percent.

**UBS Bloomberg CMCI Composite TR Index** (please see asset class commodities under "Components of the UBS Multi Asset Portfolio")

**UBS DERI** or **DERI** stands for Dynamic Equity Risk Indicator. For a more detailed description of the sentiment indicator, please see the information box on page 11.

**UBS-MAP** stands for UBS Multi Asset Portfolio and is a fixed, sequentially structured set of rules for forming the UBS Multi Asset Portfolio Index.

**UBS-MAP Portfolio** is a portfolio that basically consists of equities, commodities, bonds and cash and follows a fixed set of allocation and weighting rules in accordance with UBS-MAP.

**UBS Multi Asset Portfolio T5 Index** is the underlying index of the UBS Open End PERLES that is based on the UBS-MAP Portfolio as corresponds to the investment ratio determined

## Further information

UBS Open End PERLES, also known as certificates, are bearer bonds of UBS AG, and investors are therefore subject to the issuer risk of UBS AG.

Issuer: UBS AG, London Branch  
Rating: A2 / A / A

As of March 2013

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Exchange information on UBS Multi Asset Portfolio T5 Index and the related UBS Open End PERLES can of course be found in the Bloomberg exchange information system. Relevant overviews can be found under the commands ULTAUMAP Index as well as ULTAEMAP Index.

by the volatility control (please see «Step 4: Fine-tuning with volatility control»).

**UBS 5Y Treasury TR Index** and **UBS 10Y Treasury TR Strategy** (please see asset class bonds under "Components of the UBS Multi Asset Portfolio")

**UBS 5Y Euro Bond TR Index** and **UBS 10Y Euro Bond TR Strategy** (please see asset class bonds under "Components of the UBS Multi Asset Portfolio")

**USD LIBOR** (USD London Interbank Offered Rate) is the daily average reference interest rate at which banks of the British Bankers' Association in London grant one another unsecured U.S. Dollar short-term loans.

**Volatility** is a recognized measure of risk which provides information about the extent and frequency of variations in the performance of financial goods in one direction or another. A volatile value is characterized by a performance that strongly and often swings upwards or downwards. The volatility used in UBS-MAP corresponds mathematically to the standard deviation of the returns achieved.

**Yield** represents the percentage return on an investment. It usually includes both possible price changes as well as recurring income contributions such as dividends, interest or roll effects. The return can also (as in the case of the roll yield in futures contracts) focus on a particular income contribution related to the value of an investment. Often, the return is also shown in annualized terms.



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