UBS ETF *Market Matters*

Eurozone Equities: Index Strategies Revisited

- Eurozone equity strategy indices are analysed in terms of tradable premium (and spread): *small caps minus-large caps, value-minus-growth and cyclical-minus-defensive.*
- Empirical findings indicate a consistent size premium, fading value premium (with a sign of rebound) and a need for sector rotation.
- For foreign investors with non-EUR funding currency, currency hedging proves critical in periods of high volatility in exchanges rates.

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Equities with the European exposure have attracted most of the inflows into the European-domiciled Exchange Traded Funds (ETFs) in January 2015 (Source: ETFGI monthly report), making up nearly USD 7bn out of 9bn in overall inflows. Part of that inflow can be linked to the EUR 1.1tn monetary stimulus (Quantitative Easing) announced in mid-January by the European Central Bank, with the aim of stimulating the economic recovery and to mitigate deflationary risk. Following on from these flows, this study looks into Eurozone equities from an MSCI perspective representing a suite of investible strategies. Specifically, we compare standard Eurozone exposure (MSCI EMU Index which captures large- and mid-caps weighted according to market capitalisation and which reflects the *market portfolio*) against alternative exposures:

- *large cap* (MSCI EMU Large Cap) and *small cap* (MSCI EMU Small Cap)
- *value stocks* (MSCI EMU Value) and *growth stocks* (MSCI EMU Growth)
- *cyclical sectors* (MSCI EMU Cyclical Sectors Capped) and *defensive sectors* (MSCI EMU Defensive Sectors Capped)

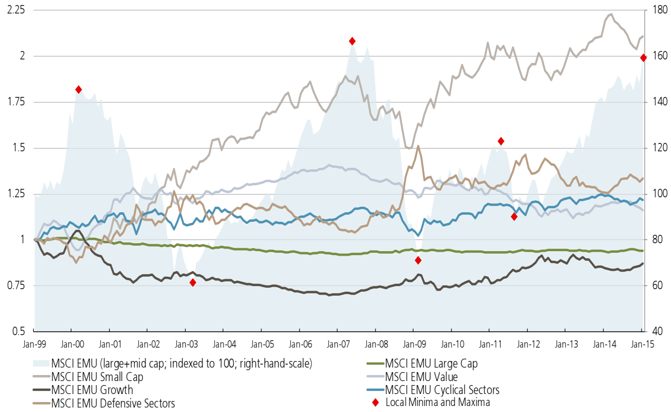
These pairs represent tradable strategies which focus on size, investment style and business cycle, respectively. The first two pairs also allow formation of the premium-related trades (size premium and value premium, respectively), while the third pair (due to mean-reverting return differential) is suitable for the statistical arbitrage (cointegrated pair), conditioned on the business cycle. The accompanying **appendix** provides more details behind the indices and corresponding ETFs.

Realised Performance of Eurozone equities

Figure 1 plots the "buy and hold" performance since January 1999 (official launch of the Euro), relative to the market portfolio. The large-caps and growth stocks have underperformed the market portfolio. In contrast, the small-caps have outperformed the market portfolio considerably, while cyclical and defensive sectors and value stocks have outperformed modestly. Understandably, it is the timing-variation of the strategy which determines the outcome. **Figure 2** shows the fraction of months when the strategy outperforms the market portfolio counted from the entry - on a monthly rolling basis - into the single strategy hold until this strategy starts underperforming the market portfolio (applying 3% buffer to avoid too much of noise). Some highlights can be summarized as follows:

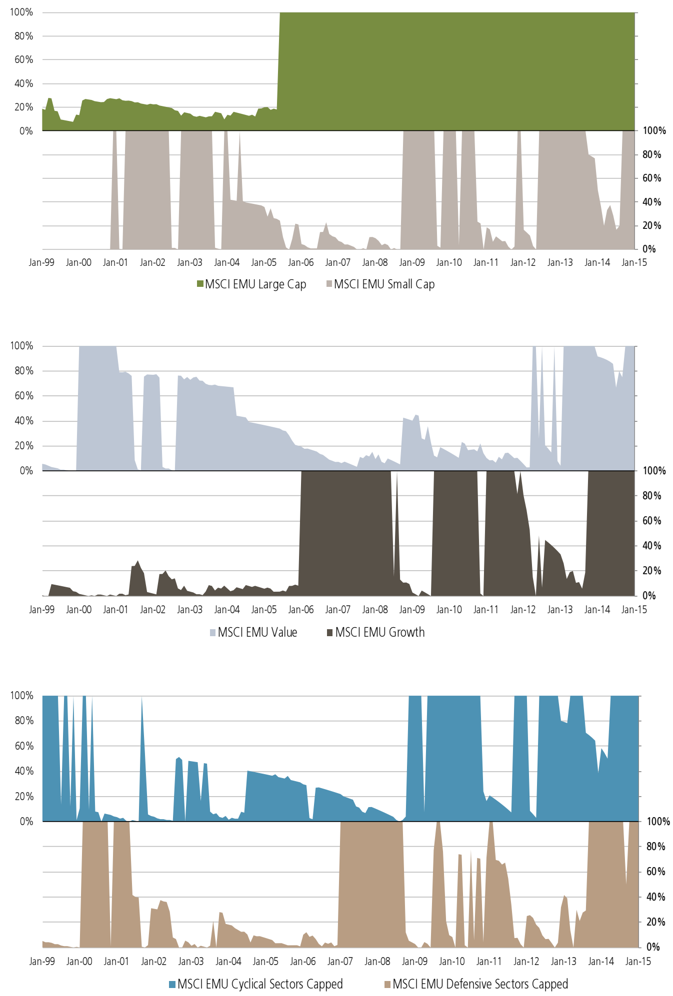
- Entry to large-cap exposure after June 2005 indicates performance consistently better or equal to the market portfolio up until January 2015; entry into the small-caps

Figure 1: Relative performance to the MSCI EMU Index
(monthly data, total return net in EUR; MSCI EMU Small Cap since Dec. 2000)



Source: MSCI, UBS Global AM, as of 31 January 2015

Figure 2: Remaining period of relative outperformance
(monthly data, total return net in EUR; MSCI EMU Small Cap since Dec. 2000)



Source: MSCI, UBS Global AM, as of 31 January 2015 segment proved particularly beneficial in 2001-2003, 2009-2010 and mid-2012 to 2013 (rebound following crisis periods);

- Value and growth stocks largely mirror that performance pattern: the entry to value stocks turned advantageous in 2000-2003 (coinciding with the dotcom-bubble), and more recently after 2012 (following EMU sovereign crisis); buying growth stocks proved beneficial in 2006-2007 (boom phase), 2010-2011 (prior to EMU sovereign crisis) and in 2014;
- Cyclical sectors and defensive sectors perform in opposite; while entry into defensive sectors around crisis times (2000-2002; 2007-2008; 2011 and 2014) proves correct, then entering cyclical sectors in recovery phases 1999, 2004, 2009-2010 and 2012-2013 delivers better performance.

These index-level observations imply that the pick of small-caps, value stocks or cyclical sectors ex-post verified as more favourable when implemented around (or right after) the market *bottom* points. By contrast the buying of growth stocks and defensive sectors during speedy recoveries or around the *market peaks* (bottom and peak times correspond to local minima and maxima of the market portfolio highlighted in Figure 1).

Tradable Premium (and Spread)

These considerations can be more formalised applying the academically-grounded premium (and spread) framework. **Figure 3** shows the cumulated return differentials: *small-minus-large, value-minus-growth and cyclical-minus-defensive*. The major insights can be summarized as follows:

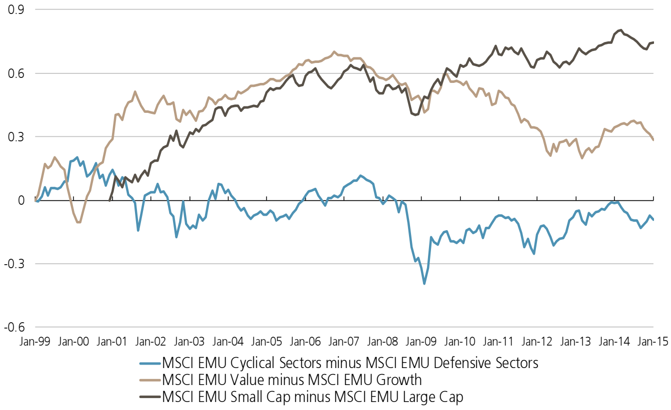
- **Persistent small-cap premium**: European small-caps have outperformed large-caps (6.8% annualised total return net compared to 2.9% over the entire period). The size premium is consistent (except 2008 and 2011) over the last 15 years.
- **Fading value premium**: value stocks outpaced growth stocks up until 2006, a turning point when growth stocks grew faster – with the exception of 2013-2014 when value premium bounced back (3.9% annualised total return net compared to 2.1% over the entire period).
- **Calling for sector rotation**: cyclical and defensive sectors need to be rotated to optimise the investment performance due to the mean-reverting spread (4.2% annualised total return net compared to 4.8% over the entire period); for example, defensive sectors performed more robustly than cyclical sectors in 2008, since then however, the return spread contracts towards 2015 – in favour of cyclical sectors - except in 2011 around the Eurozone sovereign crisis.

Index risk and return characteristics are summarized in **Table 1** and current fundamental ratios in **Table 2**. Firstly, the unconditional return distributions (despite low frequency) are all non-Gaussian: are left-skewed and have excess kurtosis implying material downside risk. Secondly, the small-caps were the riskiest ones (incl. higher moments), however investors have been additionally compensated for the risk-taking (realised excess return of 3.9%). Defensive sectors – by contrast – have featured overall the lowest risk (taking drawdown into consideration). Importantly, not only do these strategies feature different risk/return profiles, but they also they differ considerably allocation-wise as well as valuation-wise, see **Table 2** and **Figure 4** and **Figure 6** in the Appendix. For example, dividend yield is higher for values stocks (one of the selection criteria) compared to growth stocks. Regarding allocation, for example, the MSCI EMU Cyclical Sectors Index has an excess allocation to Germany, but has an equal 20% allocation to five cyclical sectors – which contrasts – to that of the market portfolio (MSCI EMU).

Currency Hedging (even more important)

The above analysis assumes funding currency equals investment currency, and both are in EUR. The Eurozone equities market of course also attracts foreign currency investors (CHF, GBP, USD, etc.), who need also to consider the risk of currency movements. Figure 4 shows the market portfolio viewed in terms of different currencies showing substantial swings in performance in relation to the MSCI EMU in EUR. For example, CHF-investors should have hedged their Eurozone equity position since 2007, whilst USD and GBP investors have been both exposed to substantial currency volatility, in particular since the financial crisis 2008. In recent months, currency hedging would have proved particularly justified with the EUR depreciation and pick up in the Eurozone equities market.

Figure 3: Cumulated return differential
(monthly data, total return net in EUR; MSCI EMU Small Cap since Dec. 2000)



Source: MSCI, UBS Global AM, as of 31 January 2015

Table 1: Index Risk and Return Characteristics (since January 1999)
(monthly data, total return net in EUR; MSCI EMU Small Cap since Dec. 2000)

Statistics	MSCI EMU	MSCI EMU Large Cap	MSCI EMU Small Cap	MSCI EMU Value	MSCI EMU Growth	MSCI EMU Cyclical Sectors Capped	MSCI EMU Defensive Sectors Capped
Ann. Return	2.9%	2.6%	6.8%	3.9%	2.1%	4.2%	4.8%
Ann. Volatility	18.5%	18.7%	19.8%	20.2%	17.7%	22.3%	13.1%
Skewness	-0.7	-0.7	-0.9	-0.8	-0.5	-0.6	-0.6
Kurtosis	4.5	4.5	5.3	5.1	4.4	4.6	3.8
Max Drawdown	60.1%	60.1%	65.4%	65.5%	69.0%	65.0%	43.6%
Peak-to-	Jul-07	Jul-07	Jul-07	Jun-07	Mar-00	Jan-08	Jan-08
Through	Mar-09	Mar-09	Mar-09	Mar-09	Mar-03	Mar-09	Mar-09

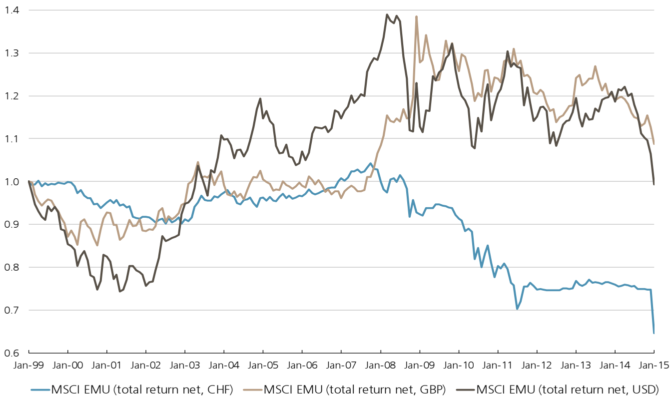
Source: MSCI, UBS Global AM, as of 31 January 2015

Table 2: Fundamental ratios

Ratio	MSCI EMU	MSCI EMU Large Cap	MSCI EMU Small Cap	MSCI EMU Value	MSCI EMU Growth	MSCI EMU Cyclical Sectors Capped	MSCI EMU Defensive Sectors Capped
Dividend Yield (%)	3.0	3.2	2.2	4.0	1.9	2.5	3.6
Price-to-Earnings	20.0	18.7	32.6	16.4	26.4	21.2	18.4
Price-to-Book Value	1.5	1.6	1.7	1.3	2.3	1.8	1.8

Source: MSCI, UBS Global AM, as of 31 January 2015

Figure 4: Relative market portfolio in different funding currencies
(monthly data, total return net)

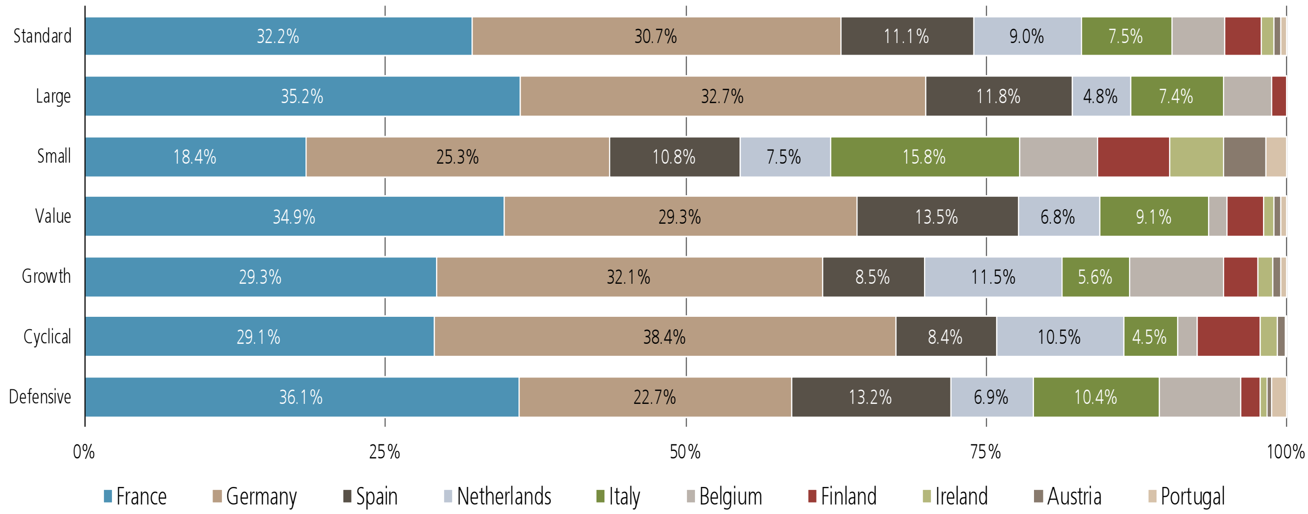


Source: MSCI, UBS Global AM, as of 31 January 2015

For all charts/tables: Past performance is not a reliable indicator for the future.

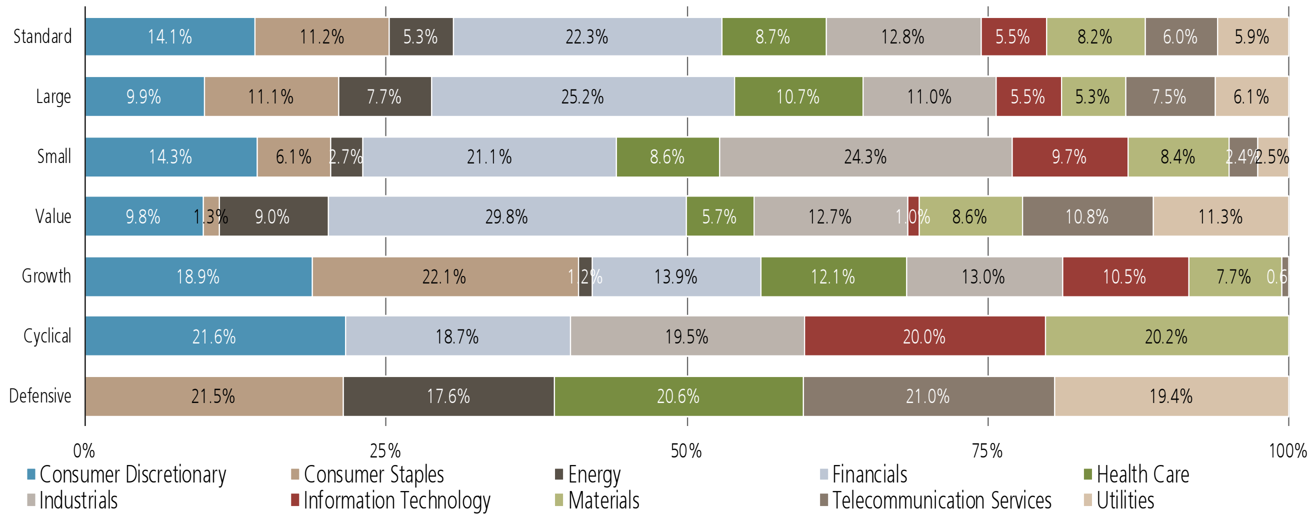
APPENDIX

Figure 5: MSCI EMU Country Allocation



Source: MSCI, UBS Global AM, as of 31 January 2015

Figure 6: MSCI EMU Sector Allocation



Source: MSCI, UBS Global AM, as of 31 January 2015

Table 3: Eurozone UBS ETFs

Fund name	TER	AuM	Base Ccy.	Replication	Domicile	Incept. date	ISIN	Bloomberg
UBS ETF (LU) MSCI EMU UCITS ETF	0.23%	1'239	EUR	Physical	Luxembourg	19.09.2002	LU0147308422	UB06 LN
UBS ETF (LU) MSCI EMU hedged GBP UCITS ETF	0.33%	310	GBP	Physical	Luxembourg	21.10.2013	LU0937835733	UB59 LN
UBS ETF (LU) MSCI EMU hedged GBP UCITS ETF			GBP	Physical	Luxembourg	30.09.2013	LU0950669688	UB60 LN
UBS ETF (IE) MSCI EMU SF UCITS ETF	0.02%	104	EUR	Synthetic	Ireland	23.03.2011	IE00B5B1MZ58	UC30 LN
UBS ETF (LU) EURO STOXX 50 UCITS ETF	0.15%	506	EUR	Physical	Luxembourg	29.10.2001	LU0136234068	UB01 LN
UBS ETF (LU) MSCI EMU Small Cap UCITS ETF	0.33%	17	EUR	Physical	Luxembourg	17.10.2011	LU0671493277	UB69 LN
UBS ETF (LU) MSCI EMU Value UCITS ETF	0.25%	13	EUR	Physical	Luxembourg	05.10.2009	LU0446734369	UB17 LN
UBS ETF (IE) MSCI EMU Growth SF UCITS ETF	0.23%	4	EUR	Synthetic	Ireland	06.10.2011	IE00B4MFJH03	EGEUAS SW
UBS ETF (IE) MSCI EMU Cyclical UCITS ETF	0.25%	9	EUR	Physical	Ireland	04.09.2014	IE00BMP3HJ57	EUCYC SW
UBS ETF (IE) MSCI EMU Defensive UCITS ETF	0.25%	5	EUR	Physical	Ireland	04.09.2014	IE00BMP3HL79	EUDEF SW

AuM in GBP, million

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