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Global Quantitative Viewpoint

**MSCI Growth & Value Indices:
De-Mystifying the Dynamics Of Style Benchmarks**



**International
Quantitative
Strategy**

Executive Summary

Although there has always been some uncertainty as to the construction methodology of the MSCI Growth and Value Indices, the basic framework for their construction follows the precedent set by the Barra/S&P Growth and Value indices established in the US years ago. We find many shortcomings in the MSCI methodology.

1. **High Price-to-Book does not equal Growth!** Time and time again, there are examples of expensive stocks that do not demonstrate superior earnings growth and yet this methodology makes the implicit assumption that expensive *equals* growth. *We feel that to identify Growth stocks, one must utilize an EPS growth measure. This seems logical to us, and yet the old method prevails in the world's growth benchmark indices.* The Merrill Lynch Growth portfolios are constructed on an equal-weighted basis by selecting the top quintile (highest 20% of the stocks in the market index by greatest EPS Momentum.)
2. **The cheapest “half” of the market has *too* much valuation dispersion to truly reflect a “value” portfolio.** As our analysis will demonstrate, the MSCI Value indices have a rather broad range of price-to-book value ratios. As this valuation dispersion widens, the “valuation” factor becomes less of a factor in classifying the value index.
3. **All of the stocks in the market should not be classified as *either* Growth or Value!** By “forcing” every stock in the index into either a Growth or Value profile, we clutter each index with stocks that simply do not behave as “true” Growth or Value stocks do. *It is our contention that more suitable style indices should reflect the desired style factor in as concentrated and “pure” a manner as possible in order to eliminate the likelihood of misleading information from other factors present in the portfolio. For this reason, the Merrill Lynch Growth and Value indices do not contain all of the stocks in the local market index.*
4. **Cumulative capitalisation weighting does not build “fair” indices.** Unlike the MSCI benchmarks, we do *not* select the top quintile based on cumulative market capitalisation. In markets where there are less than one hundred stocks and a small portion of those stocks comprise the majority of the market's total capitalisation, there is the risk that one or two extremely large companies are the entire Growth or Value index!
5. **We rebalance our Style Portfolios on a monthly basis.** Rather than arbitrarily deciding when to reexamine the portfolios, we have chosen to rebalance at the end of each month. Detailed turnover analysis suggests that even though we reconstruct the portfolios every month, in most cases there is manageable turnover.
6. It is interesting to note that as we expected, our Value indices tended to track the MSCI indices much more so than did our Growth indices. **We believe that the key to explaining this phenomenon lies with the fact the MSCI uses High Price-to-Book Value to choose growth stocks while we utilize actual EPS growth rates.** In the Appendix, there is a list of the current Merrill Lynch Pan-European Value and Growth Portfolios.
7. After all of the excitement and anticipation of a unified European Equity market following the introduction of the common currency in January, our work still does not suggest that we have harmonized equity markets yet. **Interest rates may be the same across markets but their impact on local economies, corporate profits and growth versus value has been somewhat inconsistent with a harmonized Europe.**
8. The trend towards including the United Kingdom into the Eurozone stock market suggests the potential for introducing additional confusion on the part of investors who subscribe to this theory. **The UK economy is not particularly tied to the Eurozone economy and more importantly, the differing currencies and term structure of interest rates will tend to wreak havoc on growth or value investors as they attempt to select stocks across these borders.**
9. We have noticed that style performance in each of the major Eurozone markets has tracked rather closely since the inception of EMU. We do not believe that this trend is justified by the economic and earnings data that is currently out there. We do believe that it may be partially due to the tremendous amount of European investment capital that has adopted a European Sector perspective. **However, unless the economic data and earnings from each of these markets begin to actually converge (unlikely in our near-term view), we would expect to see style performance begin to correct as investors are faced with the reality of an unsynchronized Eurozone.**

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1. Overview

Over the years we have been very vocal about the use of standard “Growth” and “Value” benchmark indices. We have consistently believed that in most cases, these indices do not truly represent the investment style they claim to emulate. Fund managers may have had much difficulty in explaining their relative performance using these benchmarks. They may also have been misled as to what is really going on in the market based upon the behavior of these style benchmarks. It is our goal to fully dissect the existing Growth & Value benchmarks in Europe and to propose a set of portfolios (using *our* methodology) that have historically provided consistent outperformance in each of their styles (growth and value.) In particular, our work suggests the following:

- **Growth & Value are NOT mutually exclusive.** There are expensive stocks that may not possess earnings growth as there are also relatively inexpensive stocks that *do* possess earnings growth. In fact, we find there to be four basic types of stocks:
 1. **Inexpensive *With* Growth**
 2. **Expensive *With* Growth**
 3. **Inexpensive *Without* Growth**
 4. **Expensive *Without* Growth**
- **Growth should NOT be defined in terms of a stock’s price-to-book value.** Measuring two very different characteristics (valuation and earnings growth) using only one measure does not provide an optimal means of identifying Growth stocks. Just because a stock is expensive does not always suggest that there is better than market earnings growth. More importantly, there is no direct mathematical relationship between how expensive a stock may be and how fast its earnings are growing.
- **If growth & value are not mutually exclusive then a style benchmark consisting of *all* stocks in the market does not make sense!** In our view, the methodology of dividing the market in half by capitalization and then assigning stocks into either a value index (lower half by price-to-book value) or a growth index (upper half by highest price-to-book value) suggests that ALL stocks in the market are either “growth” stocks or “value” stocks. This is simply not the case.
- **Growth and value relative performance is primarily driven by the corporate profits cycle. European corporate profits cycles are not currently synchronised. Therefore, growth and value relative performance should also not be synchronized across Europe.** As the charts will indicate, historically, there have been markets where growth outperformed value while in other markets, the opposite relationship was occurring. It is our premise that until the European profits cycle becomes more synchronised, this phenomenon will continue.
- ***Diversification using style portfolios significantly reduces portfolio risk more so than by simply diversifying at the market index level.***
- **If price-to-book value is used to determine a stock’s “value”, then cross-border valuation comparisons only make sense if the accounting systems in each market follow the same regulations.** Although we sympathise with those who would try to determine whether or not German stocks are more expensive than French stocks, we have always maintained that this is an extremely difficult exercise.

The purpose of this report is to provide investors with a better understanding of the existing MSCI Pan-European growth and value benchmarks. By understanding the benchmarks and their shortcomings, investors may be better equipped to provide their clients with improved relative performance. At the same time, we hope to demonstrate that our simple growth and value portfolios offer an investment vehicle that does, in fact capture the desired style.

2. Methodology & Theory

The MSCI Growth & Value Indices

Although there has always been some uncertainty as to the construction methodology of the MSCI Growth and Value Indices, the basic framework for their construction follows the precedent set by the Barra/S&P Growth and Value indices established in the US years ago. Basically, all of the stocks in the local market index are sorted in ascending order by price-to-book value. The top half of the companies by market capitalization (i.e., the companies with the lowest P/BV) comprise the Value Benchmark while the remaining companies (those with higher P/BVs) comprise the Growth benchmark. While constructing such an index may appear logical at the outset, we find many shortcomings in this methodology.

- 1. High Price-to-Book does not equal Growth!** Time and time again, there are examples of expensive stocks that do not demonstrate superior earnings growth and yet this methodology makes the implicit assumption that expensive *equals* growth. Although many stocks with above average EPS growth rates *do* in fact sell at a premium, there is no linear relationship between the magnitude of EPS growth and the relative multiple on the stock. Therefore, the most expensive stock is *not* necessarily the fastest growing stock. The fault in this methodology lies in the assumption that the valuation of a stock clearly delineates its growth rate. It does not. *We feel that to identify Growth stocks, one must utilize an EPS growth measure. This seems logical to us, and yet the old method prevails in the world's growth benchmark indices. The Merrill Lynch Growth Portfolios are constructed by sorting the market index in descending order based upon each company's EPS growth rate.* The portfolios are constructed on an equal-weighted basis by selecting the top quintile (highest 20% of the stocks in the market index by greatest EPS Momentum.)
- 2. The cheapest “half” of the market has *too* much valuation dispersion to truly reflect a “value” portfolio.** As our analysis will demonstrate, the MSCI Value indices have a rather broad range of price-to-book value ratios. As this valuation dispersion widens, the “valuation” factor becomes less of a factor in classifying the value index.
- 3. All of the stocks in the market should not be classified as *either* Growth or Value!** As we suggested in our first bullet comment on the previous page, there are many stocks in a given index that do not fall clearly into either category. By “forcing” every stock in the index into either a Growth or Value profile, we clutter each index with stocks that simply do not behave as “true” Growth or Value stocks do. This cluttering effect causes the index to sometimes mislead the investment community into believing that one style is in fact outperforming another, when there may be other factors affecting performance. *It is our contention that more suitable style indices should reflect the desired style factor in as concentrated and “pure” a manner as possible in order to eliminate the likelihood of misleading information from other factors present in the portfolio. For this reason, the Merrill Lynch Growth and Value indices do not contain all of the stocks in the local market index.*
- 4. Cumulative capitalisation weighting does not build “fair” indices.** Unlike the MSCI benchmarks, we do *not* select the top quintile based on cumulative market capitalisation. In markets where there are less than hundred stocks and a small portion of those stocks comprise the majority of the market's total capitalisation, there is the risk that one or two extremely large companies are the entire Growth or Value index! Consider companies such as Nokia, Royal Dutch, Deutsche Telekom, France Telcom and Ericsson. In their respective markets they can meaningfully dominate the index performance. To us, this does not help to explain the performance of value stocks or growth stocks.

The Merrill Lynch Value and Growth Portfolios **are not** constructed in this manner. They are constructed on an equal-weighted basis by selecting the top quintile (lowest 20% of the stocks in the market index by price-to-book value.) For example, if there are 100 stocks in the index, we select the 20 with the lowest price-to-book value. It is that simple and yet our work suggests that these portfolios are far superior in identifying the performance of growth and value stocks in the market.

5. **We rebalance our Style Portfolios on a monthly basis.** Rather than arbitrarily deciding when to reexamine the portfolios, we have chosen to rebalance at the end of each month. Detailed turnover analysis suggests that even though we reconstruct the portfolios every month, in most cases there is manageable turnover. Much of the turnover in the value portfolios is due to significant outperformance by a few stocks. Naturally, as these stocks become much more expensive, they are no longer characterised as “value”. The other major source of turnover in the value portfolios arises when the new book values are reported. Fortunately, this has little impact in the aggregate because book values do not tend to change dramatically from year to year (although of course there are exceptions). **On average, the value portfolios turnover has been approximately 80-100% per year since 1989.** The Merrill Lynch Growth portfolio turnover is slightly larger than in the Value portfolios although it occurs less often during the year. Since most company earnings are only updated semiannually, the EPS growth rates do not really change until the latest interim EPS reports come into the database. **On average, the Merrill Lynch Growth portfolio turnover has been approximately 100% per year.** We believe that the turnover impact on performance going forward will be less of a factor as trading costs continue to decline in Europe. Additionally, we believe that **as long as managers can build an alpha that exceeds the trading costs, net results should not be meaningfully impacted.**

Interpreting the Charts

The charts on the following pages highlight the excess return of the Merrill Lynch Growth and Value portfolios against the MSCI style indices for the major European markets. Each page consists of three charts. The top chart shows the excess return of the Merrill Lynch Value Index versus the local market index (the maroon solid line) while the dotted line indicates the relative excess return of the MSCI Value index for the same market or region. The middle chart provides the same information but for the Merrill Lynch and MSCI Growth indices. Finally, the chart on the bottom highlights the relative performance of growth versus value using the MSCI and the Merrill Lynch Growth and Value indices.

The tables to the left of the top two charts on each page highlight key information about the indices themselves. For the Growth portfolios, we provide the highest, lowest and simple average EPS growth rates for the stocks within the portfolio. **Comparison of the range and average EPS growth rates in the MSCI Growth Index versus the Merrill Lynch Growth portfolio clearly indicates that the MSCI Growth Index contains stocks with below average EPS growth. Conversely, the Merrill Lynch Growth portfolios have a much greater concentration of stocks with superior EPS growth rates.** Additionally, we highlight the number of stocks in each portfolio as well as the correlation between the MSCI and Merrill Lynch indices. Finally, the annualized excess return and standard deviation of returns (risk) is provided over the last ten (8812 – 9907) and three (9607 – 9907) years.

The tables to the left of the Value Index charts (middle of the page) provide the high, low and average price-to-book value for the MSCI and Merrill Lynch Value Indices. **Clearly, the MSCI Value indices contain some relatively expensive stocks while the dispersion of price-to-book value ratios within the Merrill Lynch Value portfolios is considerably narrower and therefore more indicative of a true low P/BV basket.**

Anomalies In the MSCI Indices

The table below highlights some of the companies that are currently in the MSCI Growth index that do not (in our view) belong in a Growth Benchmark. They are there because of their above average price-to-book value even though they have *negative* earnings growth. It should also be noted that some of these stocks have considerably large weightings in the index and therefore significantly impact the performance of the index. Together, they comprise nearly 10% of the MSCI Europe Growth Benchmark!

MSCI Growth Index Constituents With Negative Growth

Company Name	Country	Price /Book	EPS Momentum
FRANCE TELECOM	France	4.5	-1%
LLOYDS TSB GROUP	UK	6.6	-3%
ERICSSON(LM)TEL	Sweden	8.9	-7%
ALLIANZ AG	Germany	6.3	-13%
SIEMENS AG	Germany	3.3	-6%
UNILEVER NV	Netherlands	14.4	-38%
UNICREDITO ITALIAN	Italy	3.6	-50%
KON KPN NV	Netherlands	3.6	-44%
REUTERS GROUP	UK	39.8	-6%
BRITISH SKY BROADC	UK	-33.7	-36%

Source: Merrill Lynch Int'l Quantitative Strategy, MSCI

Note that there are some stocks in the MSCI Pan-European Growth Index that have lower price-to-book values than some of the stocks in the corresponding Value Index (Unicredito Italian and KON KPN NV). The explanation for this has to do with the methodology that MSCI uses to build the Pan-European Indices. They are first constructed at the market level and then combined at the MSCI Pan-European Total Market Index weightings. As we mentioned earlier, because of accounting differences and the way that companies handle book value, individual company valuations are not comparable in all cases. This explains why there can be low price-to-book values in a Growth Index. In principle, we have no argument with this methodology as we believe it is currently the only logical means by which to create regional indices.

The table below highlights some of the largest holdings in the MSCI Pan-European Value Index that also possess superlative EPS growth. Note also the range of P/BV from 0.9 to 5.5. This supports our argument that the MSCI Value Index contains companies that really aren't typical "value" stocks. However, these stocks only comprise about 3% of the MSCI Pan-European Value Index. Because of the lower relative weighting of these "non-value" stocks, there tends to be a higher degree of correlation to the Merrill Lynch Value Indices.

MSCI Value Index Constituents With High Positive Growth

Company Name	Country	Price /Book	EPS Momentum
DAIMLERCHRYSLER AG	Germany	2.3	76.9%
IMPREGILO SPA	Italy	0.9	145.6%
BARCLAYS	UK	3.6	22.2%
ABB LTD	Switzerland	5.5	153.5%
CREDIT SUISSE GRP	Switzerland	3.5	672.8%
HALIFAX GROUP	UK	2.3	16.3%
BAYER HYPO-VEREINS	Germany	2.1	40.4%
SUEZ LYONN EAUX	France	2.8	40.3%
BG	UK	1.6	49.5%
DRESDNER BANK AG	Germany	2.3	17.5%

Source: Merrill Lynch Int'l Quantitative Strategy, MSCI

Implications for Fund Managers

While we do not profess to have some magical ability to outperform the market, we are very confident in our ability to capture the relative performance of Growth and Value styles using our portfolios. As the charts on the following pages indicate, in most markets, the Merrill Lynch Growth and Value portfolios provide meaningfully greater returns than the MSCI Benchmarks. Analysis of the standard deviation of returns (risk) indicates that there has not been a significantly higher acceptance of risk in order to have achieved these returns in the past.

We do not mean to suggest that investors should simply buy and hold our style portfolios. We are merely attempting to show a basket of stocks that behaves in the same general manner. More importantly, we are trying to get managers to focus more on the salient characteristics of style performance and away from the misleading information that sometimes accompanies the traditional Growth and Value benchmarks.

It is interesting to note that as we expected, our Value indices tended to track the MSCI indices much more so than did our Growth indices. We believe that the key to explaining this phenomenon lies with the fact the MSCI uses High Price-to-Book Value to choose growth stocks while we utilize actual EPS growth rates. In the Appendix, there is a list of the current Merrill Lynch Pan-European Value and Growth Portfolios.

Implications For EMU: Euro-Phoria? The UK Too?

After all of the excitement and anticipation of a unified European Equity market following the introduction of the common currency in January, our work still does not suggest that we have harmonized equity markets yet. Interest rates may be the same across markets but their impact on local economies, corporate profits and growth versus value has been somewhat inconsistent with a harmonized Europe. For example, year-to-date, the two largest Eurozone markets have had hugely different returns. France has already outperformed Germany by more than 10% in nine months. We still do not believe that the structural, economic, political and social differences between Eurozone countries have been reconciled to the point that would facilitate a common equity market. We continue to suggest that investors consider country risk to be as important as company risk.

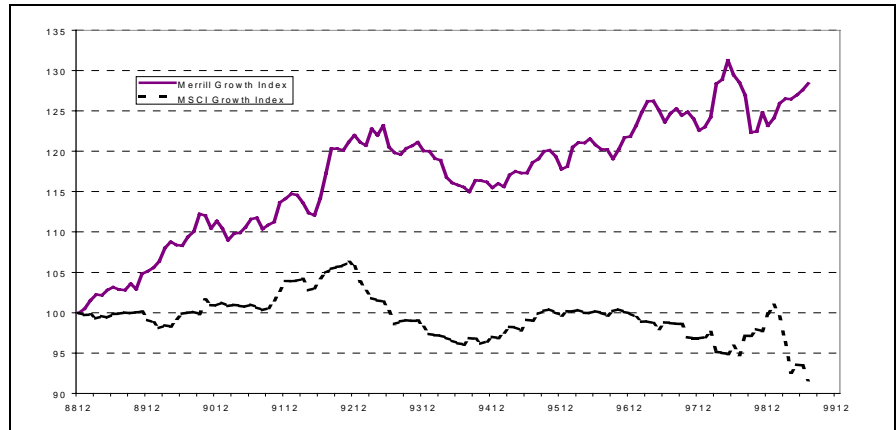
The trend towards including the United Kingdom into the Eurozone stock market suggests the potential for introducing additional confusion on the part of investors who subscribe to this theory. The UK economy is not particularly tied to the Eurozone economy and more importantly, the differing currencies and term structure of interest rates will tend to wreak havoc on growth or value investors as they attempt to select stocks across these borders.

Having said that, we have noticed that style performance in each of the major Eurozone markets has tracked rather closely since the inception of EMU. We do not believe that this trend is justified by the economic and earnings data that is currently out there. We do believe that it may be partially due to the tremendous amount of European investment capital that has adopted a European Sector perspective. However, unless the economic data and earnings from each of these markets begins to actually converge (unlikely in our near-term view), we would expect to see style performance begin to correct as investors are faced with the reality of an unsynchronized Eurozone.

Pan European Growth & Value Indices

Pan European Region: MSCI Growth Index vs. Merrill Lynch Growth Index

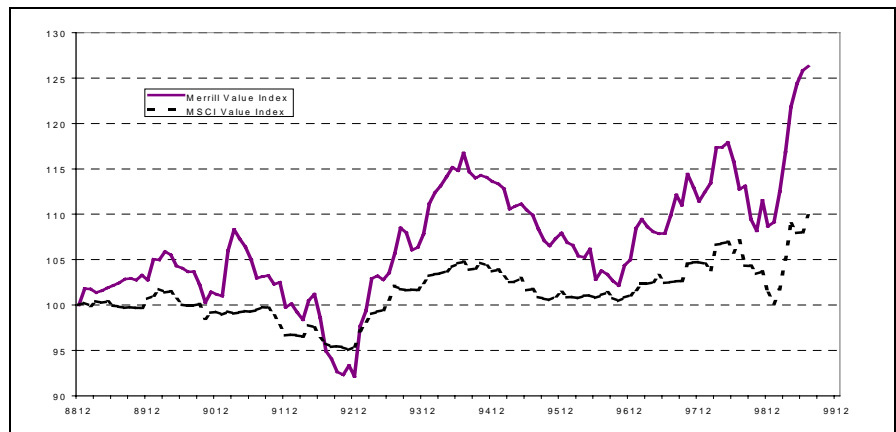
	<u>MSCI</u>	<u>M/L</u>
EPS Growth		
Low	-1124%	18%
High	1251%	1400%
Avg.	17%	150%
# of Stocks	155	144
Correlation:		
8812 – 1997	-0.03	
9607 – 1997	-0.35	
Annualized Excess Ret. Std. Dev.		
	-0.8% / 0.9%	2.4% / 1.0%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

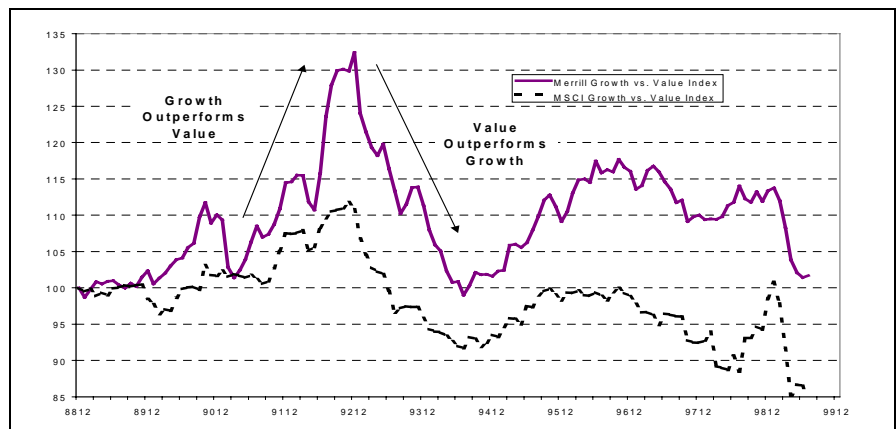
Pan European Region: MSCI Value Index vs. Merrill Lynch Value Index

	<u>MSCI</u>	<u>M/L</u>
Price / Book		
Low	0.4	0.4
High	15.0	1.6
Avg.	2.2	1.1
# of Stocks	409	131
Correlation:		
8812 – 1997	0.57	
9607 – 1997	0.57	
Annualized Excess Ret. Std. Dev.		
	0.9% / 0.9%	2.2% / 1.6%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

Pan European Region: Growth vs. Value Relative Performance



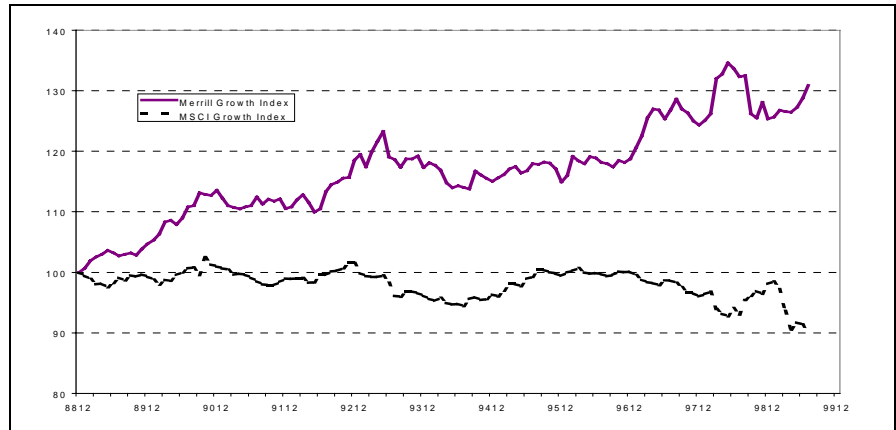
Source: Merrill Lynch Int'l Quant Strategy, MSCI

*Charts represent an index of excess return versus the local MSCI Index

Europe (ex UK) Growth & Value Indices

Europe (ex UK) Region: MSCI Growth Index vs. Merrill Lynch Growth Index

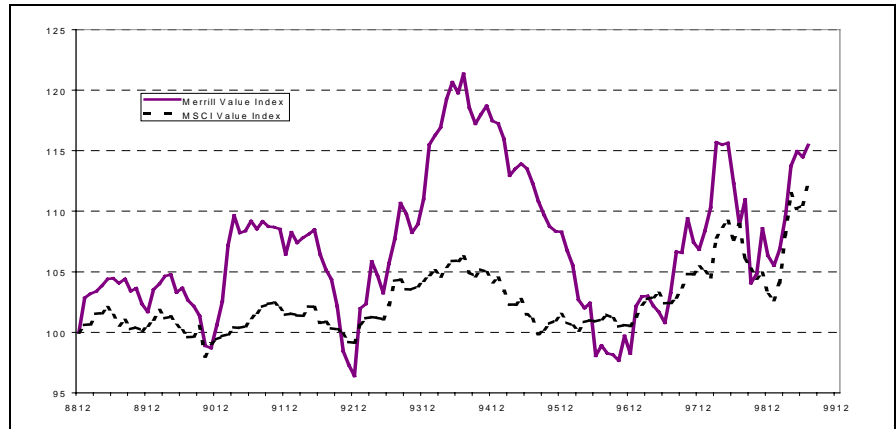
	<u>MSCI</u>	<u>M/L</u>
EPS Growth		
Low	-1124%	22%
High	1251%	1400%
Avg.	21%	168%
# of Stocks	123	106
Correlation:		
8812 – 9907	-0.10	
9607 – 9907	-0.35	
Annualized Excess Ret. Std. Dev.		
	-1.0% / 0.9%	2.6% / 1.2%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

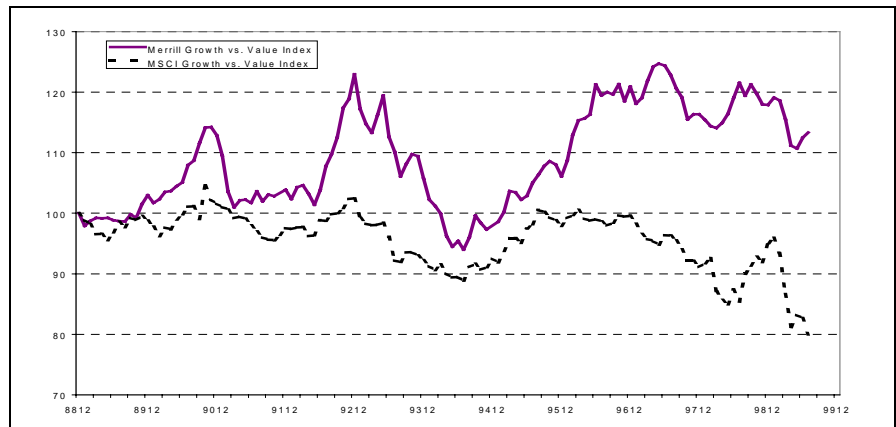
Europe (ex UK) Region: MSCI Value Index vs. Merrill Lynch Value Index

	<u>MSCI</u>	<u>M/L</u>
Price / Book		
Low	0.4	0.4
High	15.0	1.6
Avg.	2.2	1.1
# of Stocks	315	97
Correlation:		
8812 – 9907	0.51	
9607 – 9907	0.45	
Annualized Excess Ret. Std. Dev.		
	1.1% / 0.9%	1.4% / 1.8%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

Europe (ex UK) Region: Growth vs. Value Relative Performance



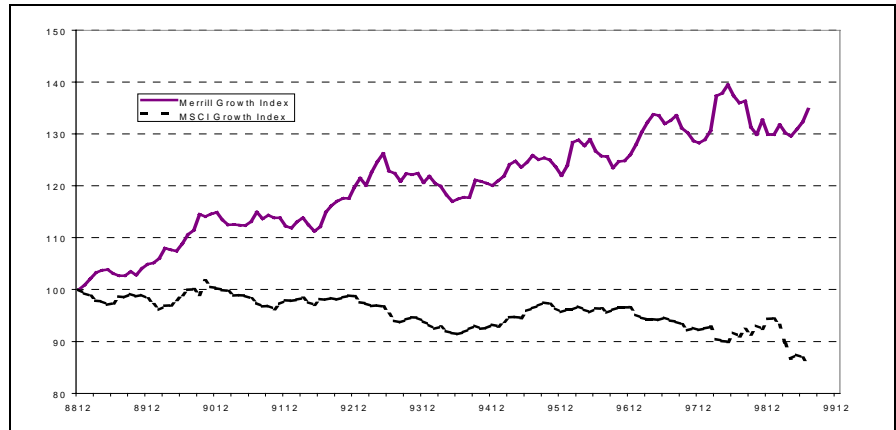
Source: Merrill Lynch Int'l Quant Strategy, MSCI

*Charts represent an index of excess return versus the local MSCI Index

EMU Growth & Value Indices

EMU Region: MSCI Growth Index vs. Merrill Lynch Growth Index

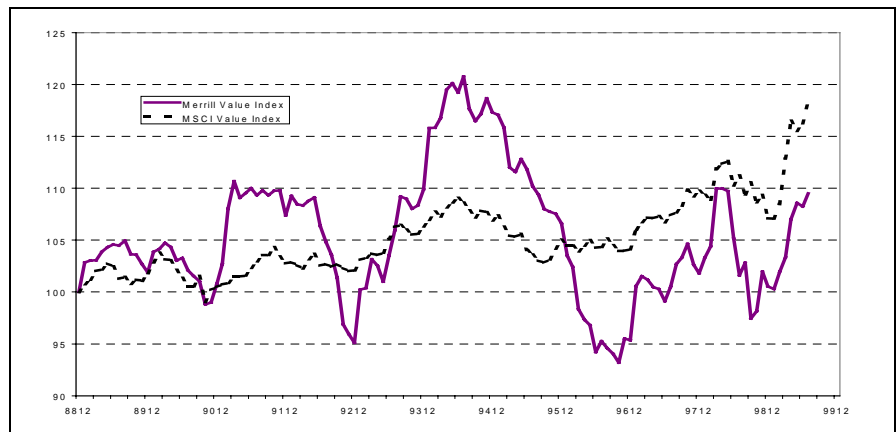
	<u>MSCI</u>	<u>M/L</u>
EPS Growth		
Low	-1124%	22%
High	1251%	1400%
Avg.	24%	155%
# of Stocks	98	94
Correlation:		
8812 – 9907	-0.05	
9607 – 9907	-0.27	
Annualized Excess Ret. Std. Dev.		
	-1.5% / 0.9%	2.9% / 1.3%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

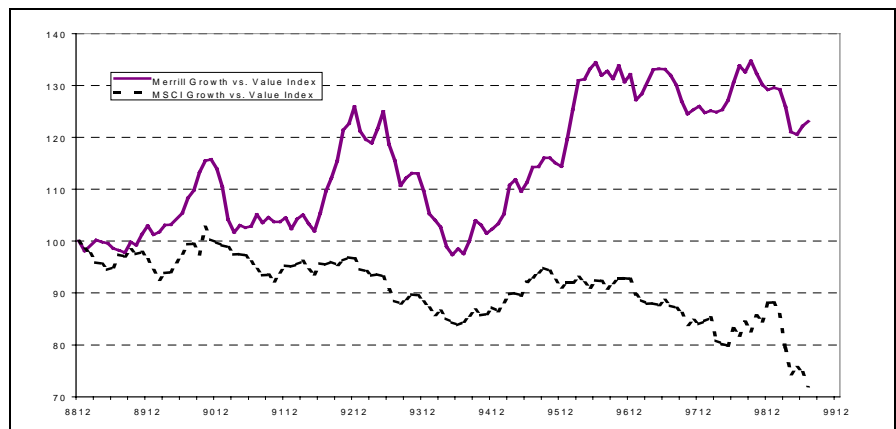
EMU Region: MSCI Value Index vs. Merrill Lynch Value Index

	<u>MSCI</u>	<u>M/L</u>
Price / Book		
Low	0.4	0.4
High	15.0	1.6
Avg.	2.1	1.1
# of Stocks	227	86
Correlation:		
8812 – 9907	0.43	
9607 – 9907	0.39	
Annualized Excess Ret. Std. Dev.		
	1.6% / 0.9%	0.9% / 1.9%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

EMU Region: Growth vs. Value Relative Performance



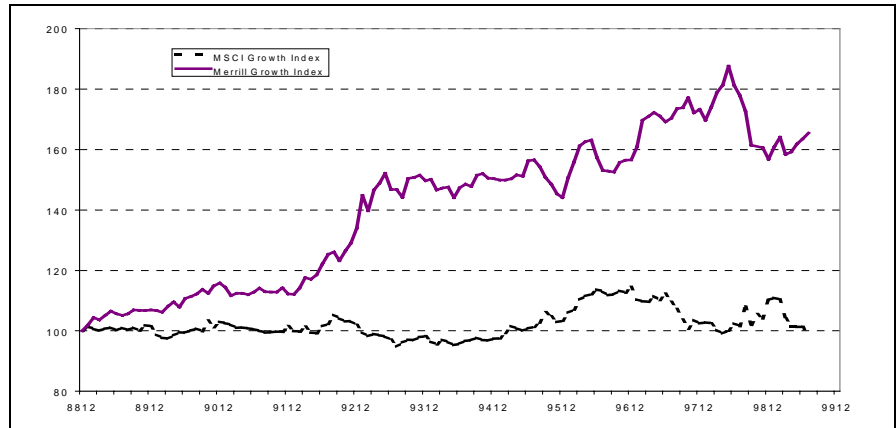
Source: Merrill Lynch Int'l Quant Strategy, MSCI

*Charts represent an index of excess return versus the local MSCI Index

FRANCE: Growth & Value Indices

FRANCE: MSCI Growth Index vs. Merrill Lynch Growth Index

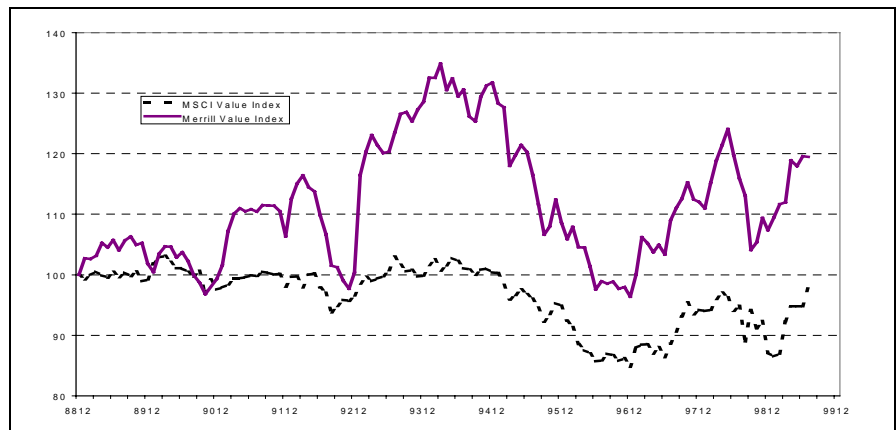
	<u>MSCI</u>	<u>M/L</u>
EPS Growth		
Low	-32%	29%
High	97%	500%
Avg.	17%	105%
# of Stocks	18	25
Correlation:		
8812 – 9907	0.01	
9607 – 9907	-0.10	
Annualized Excess Ret.	-0.2%	4.9%
Std. Dev.	1.8%	2.1%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

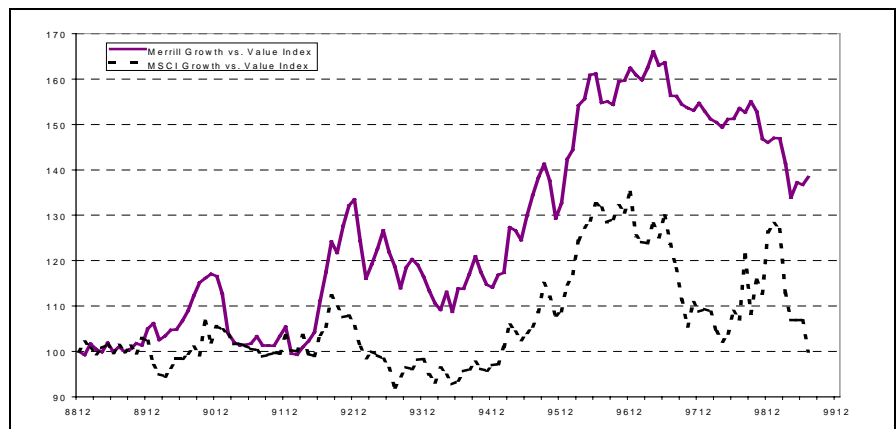
FRANCE: MSCI Value Index vs. Merrill Lynch Value Index

	<u>MSCI</u>	<u>M/L</u>
Price / Book		
Low	0.7	0.5
High	4.6	1.4
Avg.	2.3	1.0
# of Stocks	47	21
Correlation:		
8812 – 9907	0.37	
9607 – 9907	0.24	
Annualized Excess Ret.	-0.2%	1.7%
Std. Dev.	1.8%	2.9%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

FRANCE: Growth vs. Value Relative Performance



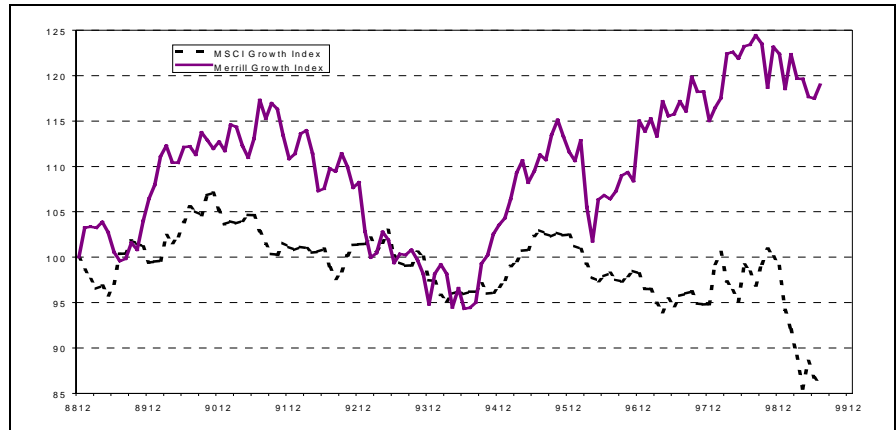
Source: Merrill Lynch Int'l Quant Strategy, MSCI

*Charts represent an index of excess return versus the local MSCI Index

GERMANY: Growth & Value Indices

GERMANY: MSCI Growth Index vs. Merrill Lynch Growth Index

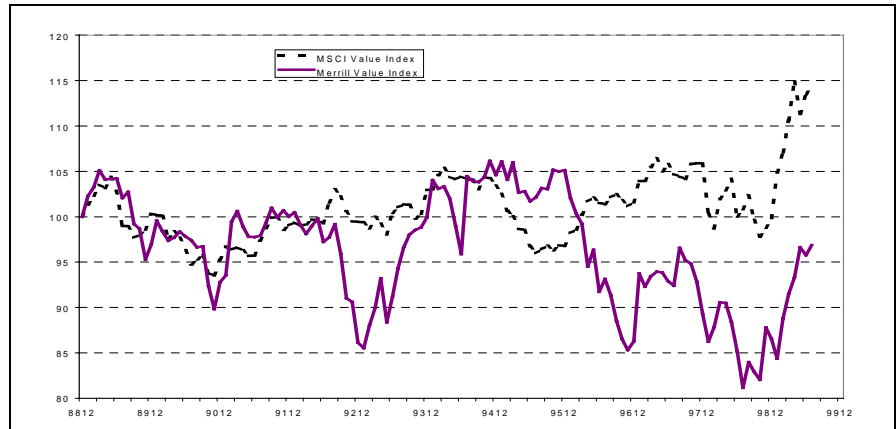
	<u>MSCI</u>	<u>M/L</u>
EPS Growth		
Low	-13%	44%
High	131%	192%
Avg.	28%	96%
# of Stocks	17	22
Correlation:		
8812 – 9907	0.03	
9607 – 9907	-0.01	
Annualized Excess Ret.	-1.4%	1.7%
Std. Dev.	1.4%	2.1%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

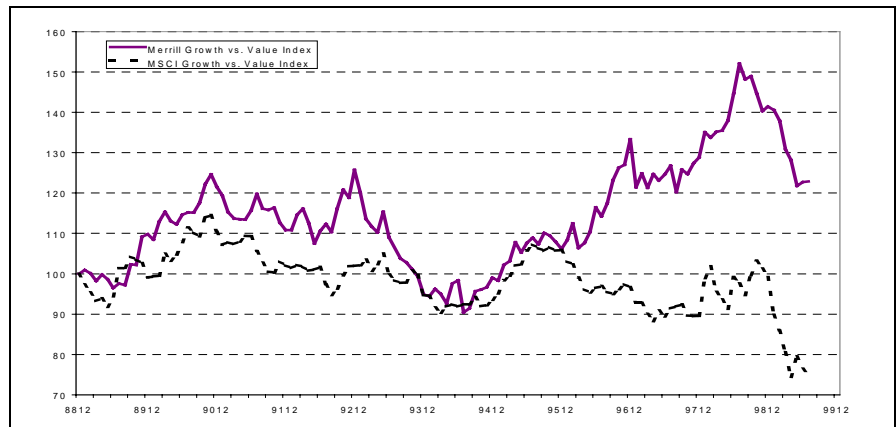
GERMANY: MSCI Value Index vs. Merrill Lynch Value Index

	<u>MSCI</u>	<u>M/L</u>
Price / Book		
Low	0.4	0.4
High	5.7	1.6
Avg.	2.2	1.2
# of Stocks	41	22
Correlation:		
8812 – 9907	0.30	
9607 – 9907	0.31	
Annualized Excess Ret.	1.3%	-0.3%
Std. Dev.	1.5%	2.6%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

GERMANY: Growth vs. Value Relative Performance



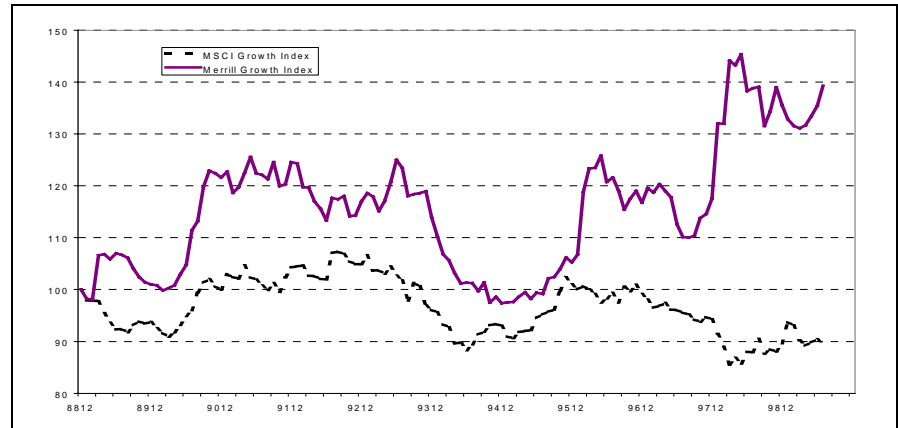
Source: Merrill Lynch Int'l Quant Strategy, MSCI

*Charts represent an index of excess return versus the local MSCI Index

ITALY: Growth & Value Indices

ITALY: MSCI Growth Index vs. Merrill Lynch Growth Index

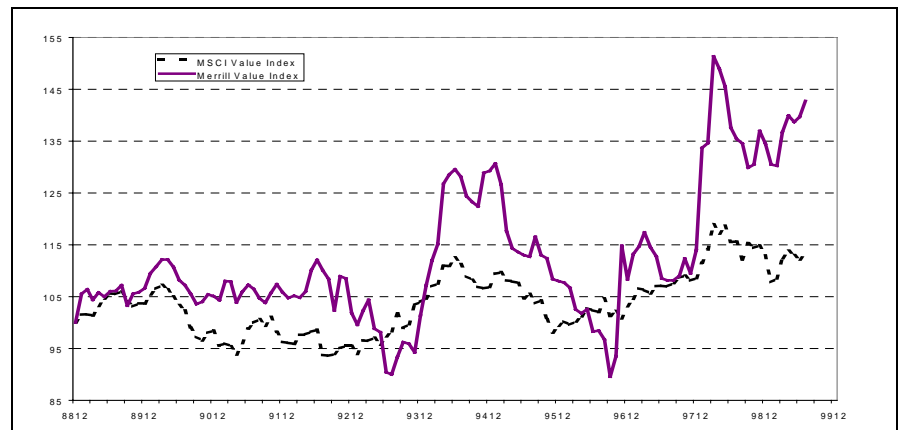
	<u>MSCI</u>	<u>M/L</u>
EPS Growth		
Low	-56%	71%
High	1251%	1400%
Avg.	118%	377%
# of Stocks	13	26
Correlation:		
8812 – 9907	0.07	
9607 – 9907	-0.37	
Annualized Excess Ret. Std. Dev.		
	-1.0% / 1.7%	3.2% / 2.1%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

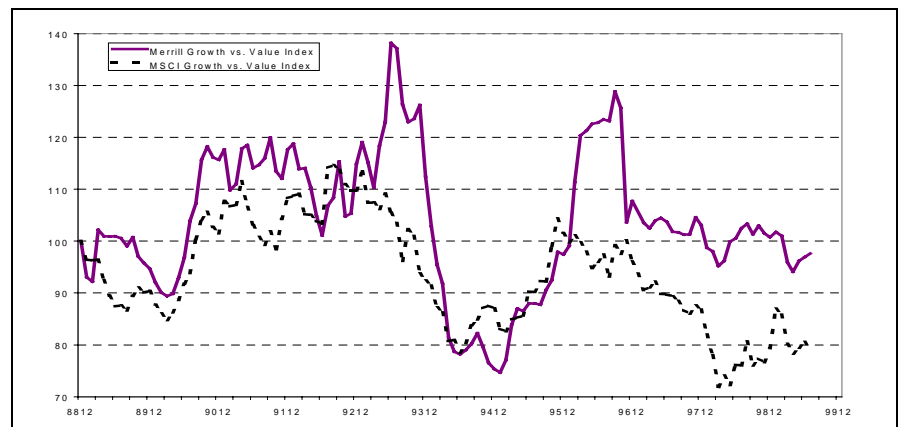
ITALY: MSCI Value Index vs. Merrill Lynch Value Index

	<u>MSCI</u>	<u>M/L</u>
Price / Book		
Low	0.6	0.6
High	3.3	1.0
Avg.	1.6	0.8
# of Stocks	39	22
Correlation:		
8812 – 9907	0.32	
9607 – 9907	0.31	
Annualized Excess Ret. Std. Dev.		
	1.2% / 1.7%	3.4% / 4.0%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

ITALY: Growth vs. Value Relative Performance



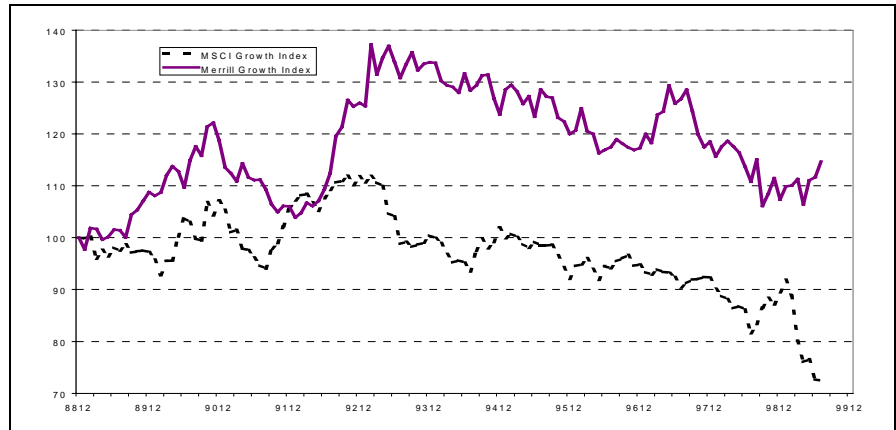
Source: Merrill Lynch Int'l Quant Strategy, MSCI

*Charts represent an index of excess return versus the local MSCI Index

NETHERLANDS: Growth & Value Indices

NETHERLANDS: MSCI Growth Index vs. Merrill Lynch Growth Index

	<u>MSCI</u>	<u>M/L</u>
EPS Growth		
Low	-44%	22%
High	37%	40%
Avg.	10%	29%
# of Stocks	13	10
Correlation:		
8812 – 9907	0.08	
9607 – 9907	0.02	
Annualized Excess Ret. Std. Dev.		
	-3.0% / 2.3%	1.3% / 2.5%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

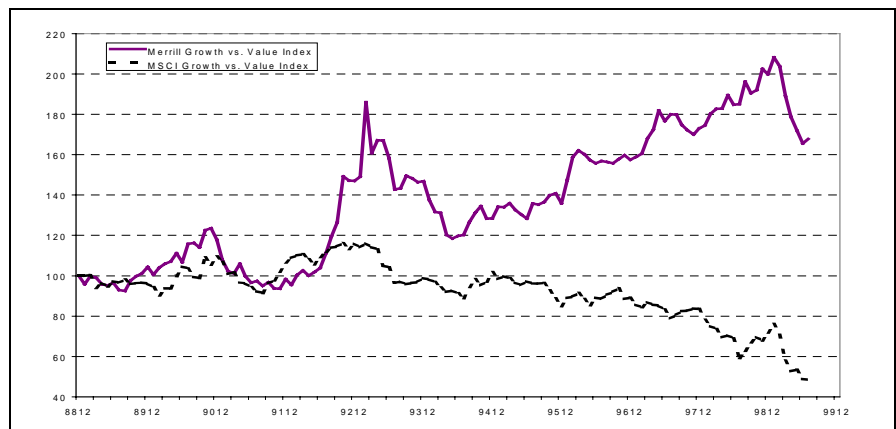
NETHERLANDS: MSCI Value Index vs. Merrill Lynch Value Index

	<u>MSCI</u>	<u>M/L</u>
Price / Book		
Low	0.4	0.4
High	7.0	1.4
Avg.	2.2	1.1
# of Stocks	12	10
Correlation:		
8812 – 9907	0.25	
9607 – 9907	0.30	
Annualized Excess Ret. Std. Dev.		
	3.9% / 1.9%	-3.5% / 3.3%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

NETHERLANDS: Growth vs. Value Relative Performance



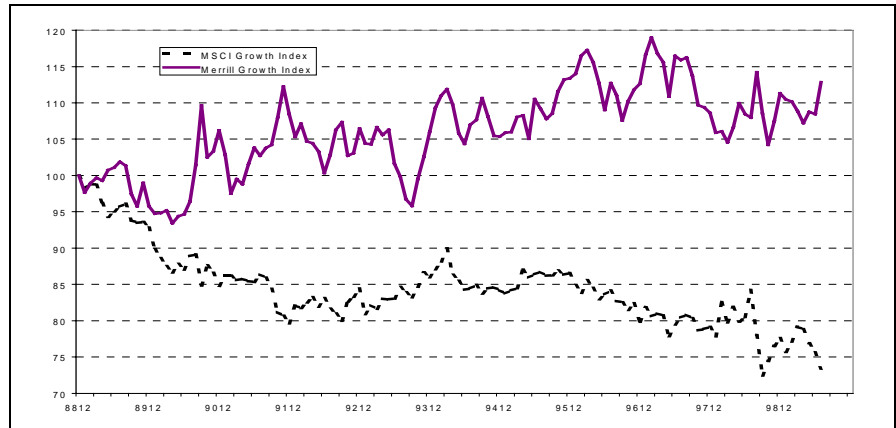
Source: Merrill Lynch Int'l Quant Strategy, MSCI

*Charts represent an index of excess return versus the local MSCI Index

SPAIN: Growth & Value Indices

SPAIN: MSCI Growth Index vs. Merrill Lynch Growth Index

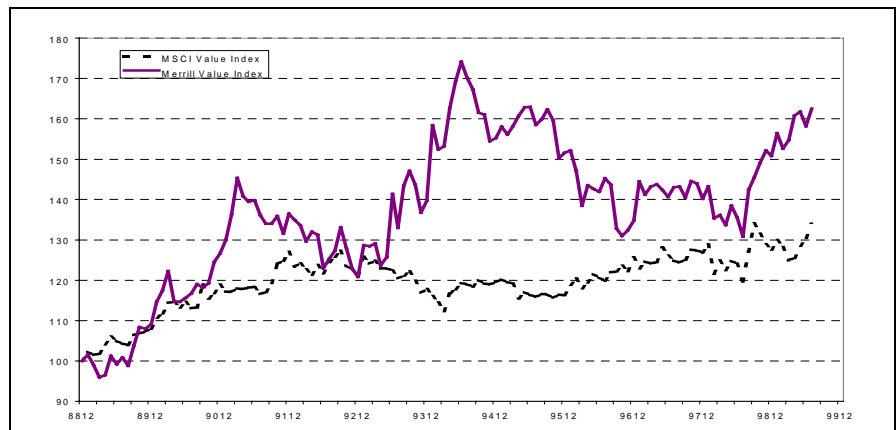
	<u>MSCI</u>	<u>M/L</u>
EPS Growth		
Low	-14%	31%
High	369%	471%
Avg.	43%	171%
# of Stocks	13	11
Correlation:		
8812 – 9907	-0.04	
9607 – 9907	0.09	
Annualized Excess Ret. Std. Dev.		
	-2.9%	1.1%
	2.0%	2.6%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

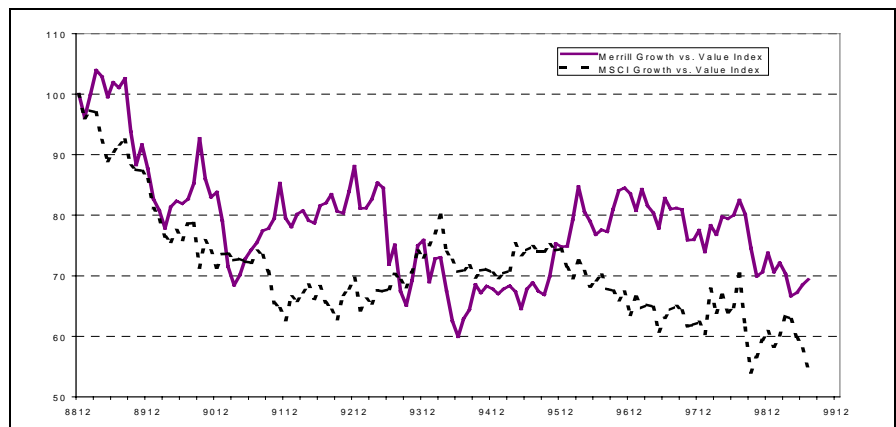
SPAIN: MSCI Value Index vs. Merrill Lynch Value Index

	<u>MSCI</u>	<u>M/L</u>
Price / Book		
Low	1.2	0.6
High	4.1	1.5
Avg.	2.1	1.2
# of Stocks	18	11
Correlation:		
8812 – 9907	0.36	
9607 – 9907	0.41	
Annualized Excess Ret. Std. Dev.		
	2.8%	4.7%
	1.8%	3.5%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

SPAIN: Growth vs. Value Relative Performance



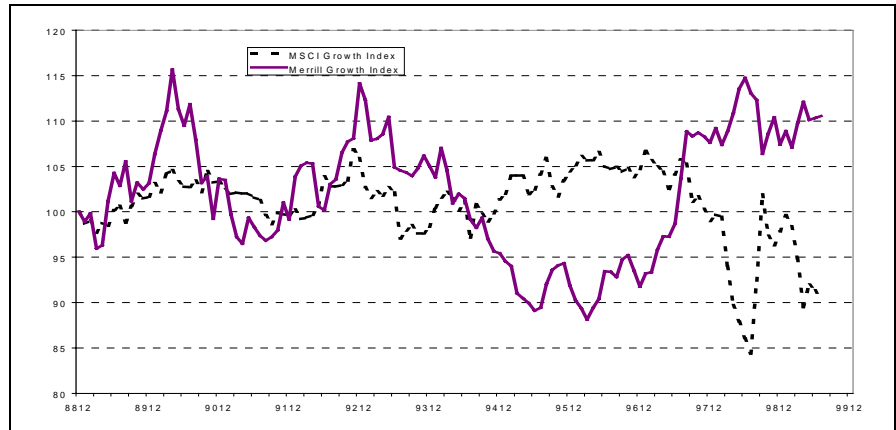
Source: Merrill Lynch Int'l Quant Strategy, MSCI

*Charts represent an index of excess return versus the local MSCI Index

SWITZERLAND: Growth & Value Indices

SWITZERLAND: MSCI Growth Index vs. Merrill Lynch Growth Index

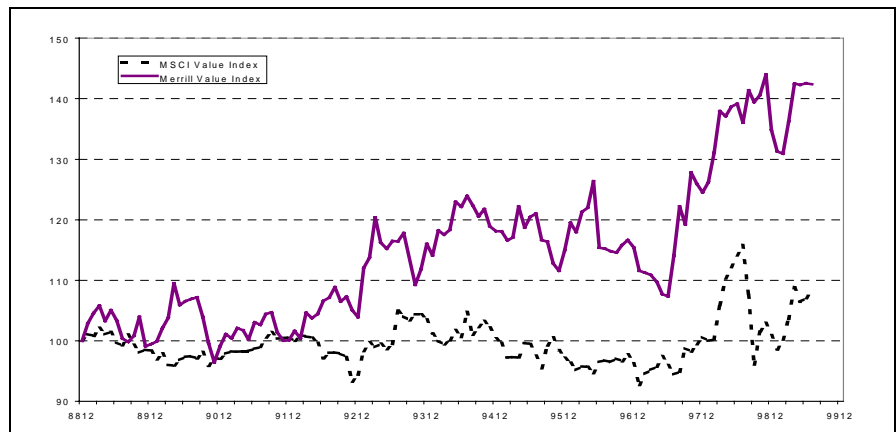
	<u>MSCI</u>	<u>M/L</u>
EPS Growth		
Low	3%	39%
High	22%	787%
Avg.	10%	228%
# of Stocks	4	12
Correlation:		
8812 – 9907	-0.13	
9607 – 9907	-0.42	
Annualized Excess Ret.	-1.0%	1.0%
Std. Dev.	2.1%	2.3%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

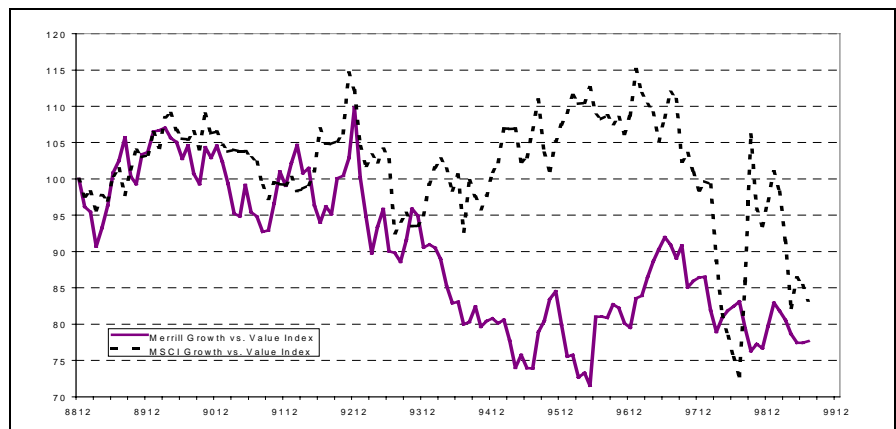
SWITZERLAND: MSCI Value Index vs. Merrill Lynch Value Index

	<u>MSCI</u>	<u>M/L</u>
Price / Book		
Low	1.2	0.9
High	7.1	1.4
Avg.	3.0	1.2
# of Stocks	25	11
Correlation:		
8812 – 9907	0.12	
9607 – 9907	0.16	
Annualized Excess Ret.	0.8%	3.4%
Std. Dev.	2.1%	2.7%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

SWITZERLAND: Growth vs. Value Relative Performance

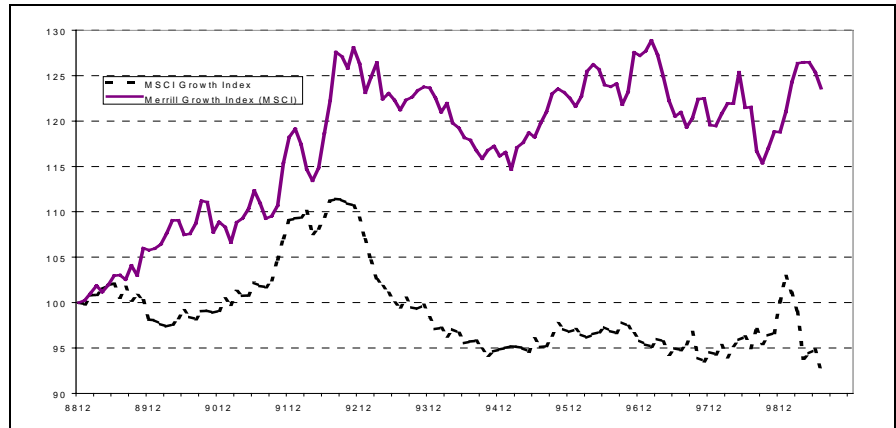


Source: Merrill Lynch Int'l Quant Strategy, MSCI

*Charts represent an index of excess return versus the local MSCI Index

UNITED KINGDOM: Growth & Value Indices
UNITED KINGDOM: MSCI Growth Index vs. Merrill Lynch Growth Index

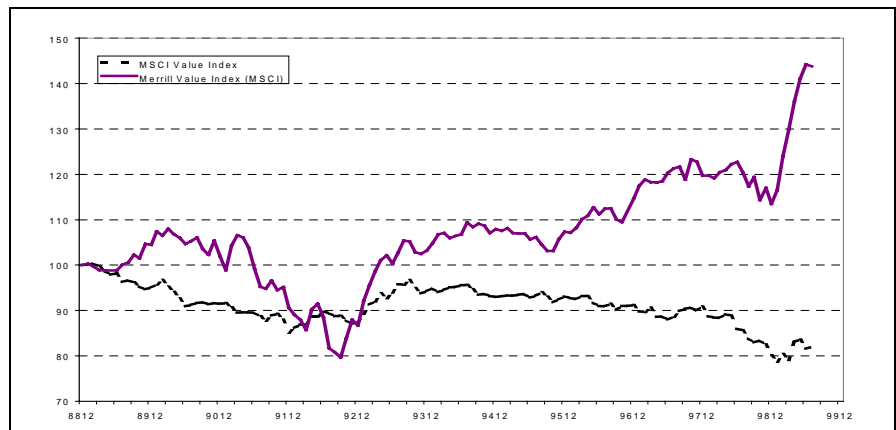
	MSCI	M/L
EPS Growth		
Low	-36%	18%
High	32%	332%
Avg.	28%	43%
# of Stocks	17	38
Correlation:		
8812 – 9907	0.09	
9607 – 9907	-0.17	
Annualized Excess Ret. Std. Dev.		
	-0.7% / 1.2%	2.0% / 1.5%



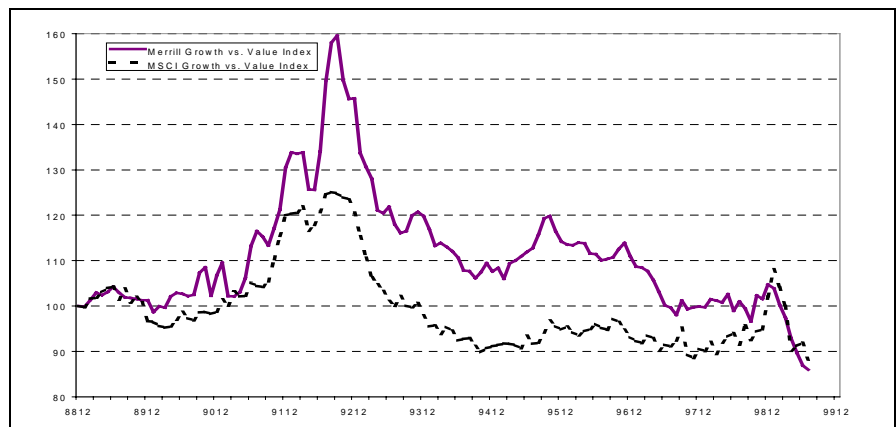
Source: Merrill Lynch Int'l Quant Strategy, MSCI

UNITED KINGDOM: MSCI Value Index vs. Merrill Lynch Value Index

	MSCI	M/L
Price / Book		
Low	0.5	0.5
High	7.9	1.4
Avg.	2.5	1.0
# of Stocks	94	37
Correlation:		
8812 – 9907	0.52	
9607 – 9907	0.58	
Annualized Excess Ret. Std. Dev.		
	0.5% / 1.2%	3.5% / 2.3%



Source: Merrill Lynch Int'l Quant Strategy, MSCI

UNITED KINGDOM: Growth vs. Value Relative Performance


Source: Merrill Lynch Int'l Quant Strategy, MSCI

*Charts represent an index of excess return versus the local MSCI Index

Merrill Lynch Pan-European Growth Index (7/31/1999)

Company Name	Country	Company Name	Country
ABB LTD	Switzerland	KARSTADT AG	Germany
ADIDAS-SALOMON AG	Germany	KLOECKNER WERKE	Germany
AGIV AG	Germany	KRONES AG	Germany
AIRTOURS	United Kingdom	LA FONDIARIA ASSIC	Italy
ALSTOM	France	LAGARDERE SCA	France
AMEC	United Kingdom	LOGICA	United Kingdom
ANSALDO TRASPORTI	Italy	LONMIN	United Kingdom
ASS GEN DE FRANCE	France	MAN AG	Germany
AUTOSTRADA SPA	Italy	METROVACESA	Spain
AVA ALLG HANDELS V	Germany	MILANO ASSICURAZIO	Italy
BABCOCK BORSIG AG	Germany	MISYS	United Kingdom
BALOISE-HLDGS	Switzerland	MOVENPICK HLDGS	Switzerland
BARCLAYS	United Kingdom	NATL WESTMINSTER	United Kingdom
BARRATT DEVEL	United Kingdom	NH HOTELES	Spain
BCA COMM ITALIANA	Italy	NORD EST	France
BCA DI ROMA	Italy	NYCOMED AMERSHAM	United Kingdom
BERISFORD	United Kingdom	OLIVETTI SPA	Italy
BG	United Kingdom	PARGESA HLDGS SA	Switzerland
BHF-BANK AG	Germany	PEARSON	United Kingdom
BOSKALIS WESTMNSTR	Netherlands	PEUGEOT SA	France
BQE NATL PARIS	France	PHOENIX AG	Germany
BRITISH AEROSPACE	United Kingdom	PILKINGTON	United Kingdom
BRITISH ENERGY	United Kingdom	PORSCHE AG	Germany
BRITISH LAND CO	United Kingdom	PORTLAND VALDERRIV	Spain
BUHRMANN NV	Netherlands	RAILTRACK GROUP	United Kingdom
CAMPOFRIO ALIMENTA	Spain	RANDSTAD HLDGS NV	Netherlands
CAP GEMINI	France	REMY COINTREAU	France
CENTRICA	United Kingdom	RENAULT(REGIE NTL	France
CGIP	France	RENO DE MEDICI	Italy
CGU	United Kingdom	RENTOKIL INITIAL	United Kingdom
CIMENTS FRANCAIS	France	RHODIA	France
CIR-COMPAGNIE INDS	Italy	ROYAL BK SCOT GRP	United Kingdom
CLARINS	France	RUTGERS AG	Germany
CLUB MEDITERRANEE	France	SAGE GROUP	United Kingdom
COFIDE	Italy	SAN PAOLO-IMI SPA	Italy
COMMERZBANK AG	Germany	SCHINDLER-HLDG AG	Switzerland
CREDIT LYONNAIS	France	SEAT-PAGINE GIALLE	Italy
CREDIT SUISSE GRP	Switzerland	SECURICOR	United Kingdom
DAILY MAIL&GEN TST	United Kingdom	SEMA GROUP	United Kingdom
DAIMLERCHRYSLER AG	Germany	SGE	France
DAMART SA	France	SIDEL	France
DBV-WINTERTHUR HLD	Germany	SIG SCHW IND HG AG	Switzerland
DEUTSCHE BANK AG	Germany	SIGNET GROUP	United Kingdom
DEUTZ AG	Germany	SIMCO	France
EL AGUILA SA	Spain	SLOUGH ESTATES	United Kingdom
ESCADA AG	Germany	SMI(SOC MET ITAL)	Italy
FAB AUTOM RENAULT	Spain	SOC GENERALE	France
FOM CONST Y CONTRA	Spain	ST.JAMES PLACE CAP	United Kingdom
FORBO HLDGS AG	Switzerland	STAGECOACH HLDGS	United Kingdom
GETRONICS NV	Netherlands	STEFANEL SPA	Italy
GROUPE ANDRE SA	France	SUEZ LYONN EAUX	France
GROUPE GTM	France	T.I.M.SPA	Italy
GRUPO DRAGADOS SA	Spain	TAYLOR WOODROW	United Kingdom
HAGEMEYER	Netherlands	TF1 - TV FRANCAISE	France
HAMMERSON	United Kingdom	THYSSEN KRUPP AG	Germany
HAVAS ADVERTISING	France	TRANSPORT DEV GRP	United Kingdom
HAYS	United Kingdom	UNION ELEC FENOSA	Spain
HEINEKEN HOLDING	Netherlands	URALITA	Spain
HERO AG	Switzerland	VEDIOR	Netherlands
HILTON GROUP	United Kingdom	VNU NV	Netherlands
IHC CALAND NV	Netherlands	WIMPEY(GEORGE)	United Kingdom
IMPERIAL TOBACCO	United Kingdom	WOOLWICH	United Kingdom
IMPREGILO SPA	Italy	WPP GROUP	United Kingdom
INA(IST NAZ ASS)	Italy	ZANDERS FEINPAPIER	Germany
INMOBILIARIA URBIS	Spain		
INTERSHOP HLDG AG	Switzerland		
ITALCEMENTI	Italy		
ITALGAS(SOC ITAL)	Italy		
ITALMOBILIARE	Italy		
JULIUS BAER HLDG	Switzerland		

Source: Merrill Lynch Int'l Quantitative Strategy, MSCI

Merrill Lynch Pan-European Value Index (7/31/1999)

Company Name	Country	Company Name	Country
3I GROUP	United Kingdom	KLM	Netherlands
ACERALIA CORP SIDE	Spain	KON NEDLLOYD NV	Netherlands
ANGLIAN WATER	United Kingdom	KRONES AG	Germany
ARCADIA GROUP	United Kingdom	LAND SECURITIES	United Kingdom
ASSOCD BRIT FOODS	United Kingdom	LEGRIS	France
ASSOCD BRIT PORTS	United Kingdom	MAGNETI MARELLI	Italy
AUMAR(AUT DEL MAR)	Spain	MAN AG	Germany
AZUCARERA EBRO AGR	Spain	MEPC	United Kingdom
BALOISE-HLDGS	Switzerland	METALEUROP SA	France
BANKGESELL BERLIN	Germany	MFI FURNITURE GRP	United Kingdom
BHF-BANK AG	Germany	MICHELIN(CGDE)	France
BILFINGER & BERGER	Germany	MONTEDISON SPA	Italy
BOBST AG	Switzerland	MONTEFIBRE	Italy
BOBST AG	Switzerland	MOVENPICK HLDGS	Switzerland
BODEGAS Y BEBIDAS	Spain	NATEXIS BQE	France
BONGRAIN SA	France	NORD EST	France
BRITANNIC	United Kingdom	NORWICH UNION	United Kingdom
BRITISH AIRWAYS	United Kingdom	PARGESA HLDGS SA	Switzerland
BRITISH LAND CO	United Kingdom	PECHINEY	France
BRITISH STEEL	United Kingdom	PEUGEOT SA	France
BROCACEF HOLDING	Netherlands	PHOENIX AG	Germany
BURGO(CARTIERE)SPA	Italy	PILKINGTON	United Kingdom
CAFFARO SPA	Italy	PIRELLI & CO	Italy
CATE TEN KON	Netherlands	REMY COINTREAU	France
CGU	United Kingdom	ROYAL&SUN ALLIANCE	United Kingdom
CHARGEURS	France	SAFEWAY	United Kingdom
COATS VIYELLA	United Kingdom	SAI(SOC ASSIC)	Italy
COCA-COLA BEVERAGE	United Kingdom	SAIRGROUP	Switzerland
COMMERZBANK AG	Germany	SALAMANDER AG	Germany
CORP MAPFRE SA	Spain	SCHMALBACH LUBECA	Germany
COURTAULDS TEXTILE	United Kingdom	SEVERN TRENT	United Kingdom
CPR	France	SIG SCHW IND HG AG	Switzerland
CREDIT LYONNAIS	France	SLOUGH ESTATES	United Kingdom
CREDITO FONDARIO	Italy	SMI(SOC MET ITAL)	Italy
CRISTALE ESPANOLA	Spain	SNIA SPA	Italy
DANIELI & C	Italy	SOC AIR FRANCE	France
DELTA	United Kingdom	SOMMER-ALLIBERT	France
DRAGERWERK AG	Germany	SOPAF	Italy
DYCKERHOFF AG	Germany	STOREHOUSE	United Kingdom
ELEMENTIS	United Kingdom	STORK NV	Netherlands
ERAMET	France	STRABAG AG	Germany
ERCROS SA	Spain	SWISS LIFE	Switzerland
ERIDANIA BEGHIN SA	France	SYLEA	France
EURAFRANCE	France	TABLEROS DE FIBRAS	Spain
EURO DISNEY SCA	France	TAYLOR WOODROW	United Kingdom
EUROPISTAS CESA	Spain	THISTLE HOTELS	United Kingdom
FAB AUTOM RENAULT	Spain	TRANSPORT DEV GRP	United Kingdom
FAG KUGELFISCHER	Germany	UNIONE IMMOBILIARE	Italy
FIAT SPA	Italy	UNIPOL	Italy
FIAT SPA	Italy	USINOR	France
FORBO HLDGS AG	Switzerland	UTD ASSURANCE GRP	United Kingdom
GAMMA HLDG NV	Netherlands	VALLOUREC(USIN A T	France
GREAT PORTLAND EST	United Kingdom	VARTA AG	Germany
GREENALLS GROUP	United Kingdom	VIB NV	Netherlands
HAMMERSON	United Kingdom	VICKERS	United Kingdom
HELVETIA PATRIA	Switzerland	VILLEROY & BOCH AG	Germany
HERLITZ AG	Germany	VOLKSWAGEN AG	Germany
HERLITZ AG	Germany	WALTER BAU AG(WTB)	Germany
HIDROEL CANTABRICO	Spain	WALTER BAU AG(WTB)	Germany
HOLLANDSCHE BETON	Netherlands	WERELDHAVE NV	Netherlands
HOOGOVENS(KON)	Netherlands	WILSON(C) HLDGS	United Kingdom
IFI(ISTIT FIN IND)	Italy	WIMPEY(GEORGE)	United Kingdom
IFIL(IST FIN ITAL)	Italy	ZANDERS FEINPAPIER	Germany
IFIL(IST FIN ITAL)	Italy	ZELLWEGER LUWA AG	Switzerland
IKB DT INDUSTRIEBK	Germany		
IMPREGILO SPA	Italy		
INCHCAPE	United Kingdom		
ITALCEMENTI	Italy		
ITALMOBILIARE	Italy		
KELDA GROUP	United Kingdom		

Source: Merrill Lynch Int'l Quantitative Strategy, MSCI

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