

Relative Value Investing

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For more than two decades many Lazard Asset Management equity strategies have maintained an investment philosophy based on fundamental analysis. This philosophy has been implemented by assessing the relationship between financial productivity and valuation.

We refer to this philosophy as 'Relative Value' investing and see it as the foundation of value creation and investment opportunities.

In 2010 Jeremy Taylor, our Co-Director of Research, wrote 'The Benefits of Returns Based Investing'. In it Jeremy demonstrated that whilst there is indeed a positive relationship between firms' return on capital and their share prices over the long term, combining an analysis of returns on capital with a strong valuation discipline should help deliver more attractive and sustainable investment returns. He also stressed the importance of identifying high return on capital companies that are able to reinvest their cashflow at similar or even higher rates of return.

This paper extends our work into this investment framework. In it we have expanded our analysis to cover the global market as we seek to answer the following questions:

1. Do firms with high financial productivity outperform the market?
2. Do firms with low financial productivity underperform the market?
3. If we can identify those firms that can sustain high levels of financial productivity, do they outperform by even more? Likewise will firms that sustain low levels of financial productivity underperform by an even larger magnitude?
4. Do firms with significantly improving financial productivity outperform? Do declining levels of financial productivity bring underperformance?
5. Finally, if we combine our understanding of financial productivity with a disciplined valuation approach, can we improve returns even further?

To answer these questions, we have examined financial productivity, valuation, and shareholder returns since 1996 with compelling results. We present this analysis in what we have termed Global Heatmaps.

Chapter 1

Global Heatmaps

Section 1: Methodology

Building the Global Heatmaps

1. Reconstituting the MSCI AC World Index
2. Populating with financial productivity, valuation and shareholder returns data

Constituents

The first challenge of our analysis was creating a database of global companies. Simply using today's MSCI ACWI (MSCI AC World Index) constituents and their history of financial productivity and equity returns would fail to adjust for survivor bias.

For example Lehman Brothers, which had reported relatively high levels of financial productivity in the mid 2000s (albeit which proved to be hardly sustainable!) and which subsequently fell into bankruptcy, would not have been captured in the database. Using today's index would also fail to capture companies that had been in the benchmark but were subsequently acquired.

Therefore we reconstituted the active members of the MSCI ACWI as of the 1st January every year until the mid-1990s.

We then populated these companies with their reported financial productivity, valuation and shareholder returns history.

Financial productivity

The financial productivity of a business can be measured by comparing its cashflow generation against its total capital investment.

In choosing the most appropriate measure of financial productivity, we recognized that we needed a measure that would allow us to compare companies with different accounting policies, in different sectors, and in different countries.

When performing company analysis, we typically measure financial productivity in a variety of ways. For this project we concluded that the best approach was to use CFROI[®] (Cash Flow Return on Investment) for non-financial companies and RoE (Return on Equity) for financial companies.

Note that CFROI[®] measures a corporate's ability to generate cash-flow. It is an internal rate of return that equates the cash a business generates today with the cash (expressed in present value) that has been invested in the business. Essentially this means CFROI[®] is more a reflection of 'economic profit' than 'accounting profit'. It can thus be used to compare companies with differing levels of leverage, in different sectors and regions.

For Financials, we felt RoE was the appropriate measure of financial productivity.

Valuation

Just as there are many versions of financial productivity there are also several different measures of valuation.

For our study we decided to use EV to EBITDA (Enterprise Value to Earnings Before Interest, Taxes, Depreciation and Amortization) for non-financials and PE (Price to Earnings) for financials. The two main reasons we chose these metrics are comparability and availability.

Equity returns

We used annual total shareholder return figures, i.e. share price return plus dividends, measured in US dollar terms.

All in all this process provided us with a global database of over 3,500 companies spread across the globe, with financial productivity, valuation and share price histories dating back over 15 years.

Section 2: Financial Productivity

Testing Financial Productivity

1. Do companies with high financial productivity outperform?
2. Do companies with low financial productivity underperform?

Armed with our database we can now test whether financial productivity on its own is an important driver of equity returns.

Financial productivity deciles

Each year we grouped the active members of the MSCI ACWI into deciles of reported financial productivity for the previous year.

We recognized that segmenting the database into deciles relative to the entire index would inevitably introduce sector and industry bias into our analysis. For example, due to the inherent economics of their industries, software and household & personal care companies generally produce the highest levels of financial productivity. If we measured the decile calculations relative to the entire index, the test of whether financial productivity drives share prices would be confused with testing whether software or household & personal care firms outperform the market.

As we wanted to focus on financial productivity as the driver of share price, we used industry-neutral decile calculations. For example, decile 1 contained each industry's highest financial productivity companies, while likewise decile 10 held each industry's lowest financial productivity companies.

By doing so, we could more accurately establish whether there is a correlation between historic financial productivity and share price performance.

Each year we calculated the average total return for each financial productivity decile and compared this to the equally weighted return of the MSCI ACWI. These relative returns are displayed on an annualised rolling three year basis in Exhibit 1.

Exhibit 1
Level of Financial Productivity Drives Relative Returns

Decile	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Ave
1	3%	2%	-1%	4%	1%	2%	1%	0%	1%	3%	1%	2%	1%	5%	2%	2%
2	10%	3%	-3%	-1%	3%	5%	3%	2%	0%	3%	1%	2%	1%	6%	4%	3%
3	4%	1%	-1%	2%	4%	1%	0%	-1%	1%	1%	-1%	0%	0%	4%	2%	1%
4	2%	4%	-1%	0%	-1%	-1%	-1%	-4%	-2%	1%	0%	0%	0%	2%	2%	0%
5	2%	-4%	-6%	-2%	3%	-1%	-4%	-2%	2%	3%	1%	1%	0%	1%	0%	-1%
6	1%	1%	2%	2%	0%	-4%	-6%	-4%	-2%	0%	-1%	0%	-1%	0%	0%	-1%
7	-6%	0%	1%	-1%	-2%	1%	4%	3%	0%	-1%	1%	1%	1%	0%	-1%	0%
8	-8%	-9%	-6%	-6%	-1%	-1%	-1%	0%	1%	0%	1%	-3%	-3%	-5%	-1%	-3%
9	-7%	-4%	1%	-3%	-4%	-5%	-3%	0%	-1%	-4%	-1%	-3%	0%	-5%	-2%	-3%
10	-4%	6%	11%	4%	-4%	2%	3%	7%	-1%	-4%	0%	-1%	0%	-8%	-6%	0%

As at 31 December 2012

Source: Bloomberg, Credit Suisse, Lazard, MSCI

Our working hypothesis was that there should be some degree of correlation between financial productivity and shareholder returns. We believe that companies which deliver financial productivity over and above their cost of capital create 'shareholder value', and are thus rewarded by the market with higher share prices.

Exhibit 1 suggests that financial productivity is indeed a meaningful driver of share prices. In general, a portfolio of companies that all generated industry-leading levels of financial productivity would have consistently outperformed the equally weighted MSCI ACWI. Meanwhile, over long periods of time, a portfolio of companies generating the lowest levels of financial productivity compared to their industry would have underperformed the index.

It is important to emphasise the equal weighting of our benchmark. By removing the market-cap weighting of the index, we can more accurately test the strength of financial productivity as a driver of companies' share prices, irrespective of market capitalization. Had we used the standard market-cap weighted MSCI ACWI as our benchmark, the outperformance of high financial productivity companies would have been significantly greater.

It is also important to recognize that there have been periods when high financial productivity companies underperformed the average global company, which tends to coincide with periods when companies with the lowest levels of financial productivity themselves outperformed.

For example, in the years around the peak of the TMT (Technology, Media and Telecom) boom in the late 1990s and 2000, we can see the rolling 3 year relative return for decile 1 companies in 2000 was -1% per annum, whilst the bottom decile group produced significant outperformance. Similarly, towards the end of the credit expansion years in the mid 2000s, companies with the lowest financial productivity again outperformed the highest financial productivity companies.

Nevertheless over the long term we can say that higher financial productivity delivers higher shareholder returns.

Section 3: Forward Looking Insights

1. The future level and direction of financial productivity has a significant influence on equity returns
2. Be mindful of the risk-reward trade-off from changing levels of financial productivity

The investment returns displayed in Section 2 were calculated using reported levels of financial productivity. However, it is a common investment belief that share prices reflect investors' perception of the future rather than the past.

With this in mind we wanted to test whether the future levels and trends in financial productivity drive equity returns.

To accomplish this we introduced the element of 'foresight' into our analysis of financial productivity. We assumed that on the 1st January of each year we could successfully predict the financial productivity decile of each company in the coming calendar year. We recognize that in the real world context this is not possible. However, it is important to understand empirically whether knowledge of future financial productivity levels is valuable from an investing perspective.

Foresight allows us to categorize and test the investment returns from owning 'high and sustainably high financial productivity' companies, i.e. those firms with marginal rates of financial productivity at least equal to existing levels, as well as 'low and sustainably low financial productivity' companies.

We can also use foresight to identify firms with improving financial productivity, and test to see whether they are rewarded by the market. As mentioned, foresight is not possible in a real-world context.

However, it is important to note that insight is. At Lazard, our extensive network of sector specialists cover companies around the globe, maintaining forecasts for their respective firms. Developing insights into the future level and direction of companies' financial

productivity is something that our analysts seek to achieve. Insight requires an understanding of each industry's drivers and firms' competitive positions within it, an appreciation of the incremental returns on capital that companies can achieve, and an awareness of management's capital deployment decisions.

Level of financial productivity

Foresight allows us to isolate high financial productivity companies that can sustain elevated levels of financial productivity relative to their peers. We can then test whether these firms outperform the average global company (and the global benchmark).

Our hypothesis was that companies that sustain high financial productivity should outperform. We would also expect them to outperform a portfolio of best-in-industry companies based on past financial productivity as some of these companies would not maintain their high returns and would subsequently perform less well.

We suspected that outperformance occurs because investors generally accept the premise that all firms' return on capital eventually fades up or down to a corporate average. Consequently, companies that defy this trend by sustaining levels of high financial productivity would tend to outperform.

Our conviction in this hypothesis would be strengthened if companies with consistently low financial productivity clearly underperformed the global average.

The results of this part of our analysis are displayed in Exhibit 2.

The results in Exhibit 2 appear to confirm our hypothesis.

Companies that deliver and maintain industry-leading levels of financial productivity tend to outperform the average global company. Likewise, companies that consistently produce the lowest levels of financial productivity in their industry tend to underperform.

Comparing these investment returns to those in Exhibit 1, when we used reported financial productivity, highlights the incremental value of forward looking insights into companies' future financial productivity.

Direction of financial productivity

Foresight allows us to track the returns from investing in firms with sustainably high levels of financial productivity. It also allows us to observe the equity returns from investing in companies that materially improve their levels of financial productivity.

We define these 'Improvers' as companies whose decile ranking increases during the year of observation. 'Decliners' are defined similarly, except that their decile of financial productivity falls instead of increases. Measuring the relative returns of these two types of companies enables us to test the relationship between the direction of financial productivity and shareholder returns.

Exhibit 2
Financial Productivity Relative Returns with Foresight

Decile	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Ave
1	-2%	0%	3%	7%	6%	4%	5%	3%	3%	6%	5%	7%	5%	9%	5%	4%
2	-1%	-11%	-9%	-2%	8%	5%	2%	0%	3%	3%	3%	5%	4%	9%	7%	2%
3	1%	-9%	-3%	-1%	8%	2%	-2%	-4%	0%	2%	6%	5%	4%	6%	7%	1%
4	0%	11%	11%	12%	4%	1%	-1%	-7%	-4%	-4%	3%	6%	5%	4%	2%	3%
5	-1%	-8%	-11%	-8%	1%	-1%	-4%	-9%	-4%	0%	3%	2%	1%	-1%	1%	-3%
6	5%	-2%	-2%	-5%	-2%	-6%	-9%	-8%	-4%	-3%	1%	5%	2%	5%	1%	-1%
7	0%	-6%	-3%	-4%	1%	-5%	-5%	-6%	-3%	-3%	2%	4%	4%	0%	2%	-1%
8	-2%	-11%	-10%	-12%	-5%	-4%	0%	0%	-3%	-2%	2%	3%	4%	5%	1%	-4%
9	2%	-5%	-3%	-7%	-1%	-6%	-5%	-4%	-3%	-8%	-3%	-1%	4%	-1%	1%	-3%
10	0%	1%	-2%	-7%	-11%	-7%	-4%	-1%	-9%	-13%	-5%	-6%	-4%	-12%	-9%	-6%

As at 31 December 2012

Source: Bloomberg, Credit Suisse, Lazard, MSCI

Exhibit 3a Relative Returns from Improvers

Companies with improving financial productivity relative to their industry outperform the broader market

	Foresight	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Ave
Decile 1																	
Decile 2	<2	11%	19%	25%	11%	10%	18%	22%	25%	16%	27%	17%	21%	16%	22%	13%	18%
Decile 3	<3	0%	13%	14%	17%	8%	12%	13%	12%	11%	12%	6%	13%	9%	15%	6%	11%
Decile 4	<4	-2%	0%	1%	5%	10%	17%	18%	10%	8%	9%	10%	9%	9%	11%	13%	9%
Decile 5	<5	7%	7%	11%	12%	12%	10%	6%	8%	12%	16%	14%	16%	11%	12%	9%	11%
Decile 6	<6	1%	10%	14%	14%	8%	5%	6%	10%	12%	15%	9%	12%	10%	10%	5%	9%
Decile 7	<7	6%	14%	17%	10%	6%	13%	18%	18%	11%	13%	10%	13%	9%	11%	6%	12%
Decile 8	<8	3%	6%	9%	9%	12%	10%	9%	8%	13%	12%	9%	5%	5%	4%	6%	8%
Decile 9	<9	5%	10%	11%	4%	1%	5%	8%	13%	11%	10%	8%	3%	5%	2%	6%	7%
Decile 10	<10	9%	24%	25%	15%	5%	11%	12%	18%	11%	11%	10%	7%	8%	-1%	0%	11%

As at 31 December 2012

Source: Bloomberg, Credit Suisse, Lazard, MSCI

Exhibit 3b Relative Returns from Decliners

Companies with declining financial productivity relative to their industry underperform the broader market

	Foresight	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Ave
Decile 1	>1	-5%	-3%	-10%	-4%	-7%	-4%	-7%	-7%	-6%	-5%	-8%	-5%	-6%	-2%	-4%	-5%
Decile 2	>2	-2%	-17%	-11%	-9%	-5%	-4%	-7%	-9%	-9%	-7%	-7%	-5%	-6%	-3%	-3%	-6%
Decile 3	>3	-3%	-14%	-12%	-8%	-1%	-6%	-8%	-8%	-6%	-8%	-9%	-8%	-6%	-4%	-4%	-7%
Decile 4	>4	-3%	-10%	-15%	-15%	-11%	-15%	-14%	-14%	-8%	-7%	-8%	-8%	-7%	-5%	-4%	-10%
Decile 5	>5	-7%	-18%	-19%	-12%	-6%	-11%	-8%	-8%	-3%	-5%	-8%	-9%	-7%	-7%	-6%	-9%
Decile 6	>6	-3%	-10%	-11%	-8%	-7%	-12%	-16%	-16%	-13%	-14%	-12%	-12%	-12%	-9%	-5%	-11%
Decile 7	>7	-7%	-10%	-15%	-16%	-14%	-12%	-6%	-9%	-11%	-14%	-10%	-12%	-9%	-11%	-8%	-11%
Decile 8	>8	-8%	-25%	-31%	-29%	-15%	-15%	-12%	-14%	-13%	-14%	-11%	-13%	-12%	-15%	-10%	-16%
Decile 9	>9	-6%	-8%	-16%	-16%	-19%	-20%	-18%	-17%	-16%	-19%	-13%	-16%	-11%	-21%	-17%	-15%
Decile 10																	

As at 31 December 2012

Source: Bloomberg, Credit Suisse, Lazard, MSCI

The results of Exhibits 3a and 3b clearly suggest that companies with improving levels of financial productivity outperform, whilst companies with deteriorating levels of financial productivity tend to underperform.

Understanding the risk-reward trade-off

Following this analysis, it seems clear that having insights into companies' future level and direction of financial productivity is a powerful ally in the search for outperformance. But we must also ask – how realistic is this concept of foresight? How frequently do best-in-industry companies remain best-in-class? How often do companies manage to meaningfully improve their financial productivity relative to their industry?

Using the global database we are able to make a number of observations. Across all companies, regardless of their level of productivity, there is approximately a 36% probability of remaining in the same financial productivity decile after one year. This figure is broadly similar across all deciles, the exception being decile 1. For these best-in-industry firms, the observed probability of remaining in the top decile is much higher, at 64% as can be seen in Exhibit 4, which makes intuitive sense. We believe the highest levels of financial productivity are derived from firms' 'economic moats', to quote Warren Buffet. Economic moats are generally thought of as the competitive advantages that one company has over other companies in the same industry. By their very nature, these economic moats tend to persist over time. Hence it is not surprising that the highest financial productivity companies have a good chance of retaining their top status.

Exhibit 4
Financial Productivity Stability

Decile	Probability %
1	64
2	40
3	31
4	28
5	27
6	25
7	26
8	29
9	36
10	55

As at 31 December 2012

Source: Bloomberg, Credit Suisse, Lazard, MSCI

These probability statistics also help put the investment return figures into context. Take for example the returns from companies that improve their financial productivity (Exhibit 3a). Improvement is clearly highly rewarded, but as can be seen in Exhibit 5, it is also a rarity. Across all the deciles, improvement (i.e. moving up at least one decile) only occurs on average for roughly 30% of companies. Furthermore, the higher the starting decile the less likelihood of improvement taking place. For example the likelihood of a decile 2 company becoming a decile 1 company (i.e. best-in-industry) is approximately 18%.

Exhibit 5
Risk-Reward Trade-Off

Today	Foresight	Relative Return	Probability
2nd Decile	Up	+18%	18%
	Stable	+2%	48%
	Down	-5%	34%
5th Decile	Up	+9%	31%
	Stable	-3%	31%
	Down	-9%	38%
9th Decile	Up	+11%	35%
	Stable	-3%	43%
	Down	-15%	22%

As at 31 December 2012

Source: Bloomberg, Credit Suisse, Lazard, MSCI

Results by sector

Is the relative outperformance of high financial productivity companies broadly spread across sectors, or is the outperformance concentrated in only a few sectors? To answer this question, we disaggregated our results by GICS Sector classifications, as can be seen in Exhibit 6. Happily, it seems that the outperformance of high financial productivity companies and underperformance of low financial productivity companies occurs broadly across most sectors.

Exhibit 6
Sector Breakdown

Sector	High Financial Productivity	High & Sustained Financial Productivity	Low Financial Productivity	Low & Sustained Financial Productivity
Consumer Discretionary	2%	8%	-3%	-6%
Consumer Staples	0%	1%	1%	-3%
Energy	-3%	9%	-1%	-9%
Financials	-1%	2%	0%	-1%
Healthcare	5%	2%	-9%	-9%
Industrials	3%	6%	-5%	-6%
IT	2%	12%	-6%	-11%
Materials	3%	5%	-6%	-15%
Telecoms	9%	9%	-7%	-11%
Utilities	2%	1%	-1%	-5%

As at 31 December 2012

Source: Bloomberg, Credit Suisse, Lazard, MSCI

Section 4: Alpha Sources

1. Compounders
2. Improvers
3. Structural Losers

We can summarize our studies by emphasizing the potential alpha available to investors in three particular areas.

1. Compounders
2. Improvers
3. Structural Losers

Companies are considered to be Compounders if they fall within the top 3 deciles of financial productivity, which they have sustained.

Improvers are those companies which are able to generate a relative improvement in their financial productivity such that they raise their decile ranking by at least one place.

Structural Losers fall within the bottom 3 deciles of financial productivity, from which they were unable to improve.

History suggests that owning Alpha Sources 1 and 2, while avoiding Alpha Source 3 is a successful investment strategy.

Understanding the likelihood of future financial productivity trends and the risk-reward trade-off also helps us reach the conclusion that a global portfolio manager might want to have most of his exposure reside in Compounder type companies. This type of portfolio should then be supplemented with smaller sized positions in what will hopefully be Improving companies.

But this is by no means the end of the journey. We have seen how financial productivity is an important driver of share prices. In the next section we will introduce the importance of valuation and how, when used in combination with financial productivity, returns can be improved even further.

This is Relative Value investing.

Section 5:

Productivity and Valuation

The Essence of Relative Value Investing

1. Does buying high financial productivity companies at attractive valuations further improve returns for investors?
2. Can attractive valuation come to the rescue of low financial productivity companies?

Previously we established that financial productivity is an important factor in explaining equity returns. Over time, companies with high financial productivity tend to outperform, while companies with low financial productivity tend to underperform.

We also saw how gaining accurate insight into the future path of financial productivity improves investment returns even further. Companies that can sustain high levels of financial productivity tend to outperform to an even greater extent (with a similar but opposite result for companies that sustain low levels of financial productivity). We have also seen that meaningful improvements in financial productivity are positively correlated with shareholder returns.

Now we examine the impact of adding a valuation component to our global analysis.

We will test whether buying high financial productivity companies when they are trading at attractive valuations improves returns for investors.

To us, this is really the essence of Relative Value investing.

As we mentioned in the Methodology section, we have used EV to EBITDA for non-financials and PE for financials as our measures of valuation. We used 12 month trailing numbers for both ratios, struck on the 1st January of each year.

Each stock's valuation is compared to its industry's median. We then make a very simple evaluation. If the stock's valuation is below the industry median, then we deem it 'attractive'.

Now we can combine the productivity and valuation factors and observe their relationship with equity returns.

Focusing on the top 3 deciles of financial productivity, we selected only those companies that were also trading at 'attractive' valuations. We repeated this process for the bottom 3 deciles of financial productivity, but only selected companies that were also trading at 'unattractive' valuations (i.e. higher than the industry median).

The conclusions are clear. Combining financial productivity and valuation is a powerful approach to investing, as can be seen in Exhibit 7. Buying best-in-industry companies when they are trading at valuation discounts to the industry average generates strong returns for investors. Conversely, it is sensible to avoid low financially productive firms when they are trading at valuations premiums to the industry.

If we used financial productivity with foresight, we see a further improvement in investment returns (see Exhibit 8). One might argue that using persistently low financially productive and unattractively valued companies is not the most instructive comparison to make with our attractively valued Compounders, even if it does highlight the clear need to avoid them. Instead we looked at the shareholder returns from investing in Structural Losers that are trading at ‘attractive’ valuations, as can be seen in Exhibit 9.

Exhibits 8 and 9 suggest that in situations where companies are unable to improve mediocre levels of financial productivity, valuation can mitigate value destruction. But they are unlikely to generate significant alpha for investors. With no prospect of a positive change in financial productivity, optically cheap valuations are more often than not a value trap.

All in all, these studies strongly suggest that an investment strategy focused on high financially productive companies combined with a disciplined approach to valuation, can produce very satisfactory returns for global investors over time.

Exhibit 7
Combining Valuation with Financial Productivity Improves Relative Returns

Decile	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Ave
1	13%	10%	2%	9%	10%	14%	10%	4%	3%	6%	3%	6%	4%	7%	2%	7%
2	9%	5%	3%	8%	11%	14%	10%	8%	7%	6%	2%	4%	4%	9%	4%	7%
3	3%	4%	6%	9%	7%	7%	5%	5%	4%	5%	1%	3%	0%	5%	2%	4%
4																
5																
6																
7																
8	-12%	-17%	-15%	-17%	-10%	-12%	-7%	-5%	-3%	-2%	-4%	-7%	-7%	-6%	-1%	-8%
9	-7%	-12%	-6%	-11%	-9%	-10%	-6%	-3%	-1%	-5%	-1%	-6%	-1%	-7%	-1%	-6%
10	-6%	-2%	-1%	-1%	-7%	-6%	-2%	-4%	-2%	-3%	0%	-1%	0%	-10%	-7%	-3%

High Financial Productivity trading at attractive valuations

Low Financial Productivity trading at unattractive valuations

As at 31 December 2012
Source: Bloomberg, Credit Suisse, Lazard, MSCI

Exhibit 8
Financial Productivity with Foresight and Valuation is a Powerful Combination

Decile	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Ave
1	33%	8%	-5%	7%	19%	20%	15%	8%	7%	11%	8%	12%	9%	13%	8%	12%
2	21%	-2%	-12%	5%	16%	13%	5%	4%	12%	7%	2%	3%	4%	12%	7%	6%
3	23%	8%	-8%	9%	15%	8%	1%	-1%	2%	7%	10%	7%	3%	5%	7%	7%
4																
5																
6																
7																
8	-8%	-20%	-18%	-18%	-12%	-15%	-9%	-3%	-4%	-2%	-5%	-8%	-7%	-4%	-2%	-9%
9	7%	-9%	-10%	-15%	-4%	-12%	-6%	-9%	-5%	-10%	-2%	-6%	-2%	-9%	-2%	-6%
10	-9%	-17%	-9%	-8%	-12%	-11%	-9%	-2%	-10%	-11%	-9%	-8%	-7%	-14%	-10%	-10%

Compounders trading at attractive valuations

Structural Losers trading at unattractive valuations

As at 31 December 2012
Source: Bloomberg, Credit Suisse, Lazard, MSCI

Exhibit 9
Relative Returns from Low Financial Productivity Companies Trading at Attractive Valuations

8	0%	-10%	-4%	-4%	8%	7%	12%	5%	-1%	-1%	9%	3%	1%	-5%	-1%	2%
9	13%	2%	-2%	-8%	2%	-1%	-3%	-1%	-4%	-7%	-3%	5%	9%	6%	0%	-1%
10	-7%	-3%	-3%	-6%	-3%	-3%	-2%	-11%	-11%	-16%	-2%	-6%	0%	-12%	-9%	-7%

Structural Losers at attractive valuations

As at 31 December 2012
Source: Bloomberg, Credit Suisse, Lazard, MSCI

Section 6 Relative Value Investing by Region

In order to test whether a Relative Value investing approach works on a regional basis we have replicated our Global Heatmap analysis for different regions of our global universe.

The regions we tested are:

1. Global ex-US
2. Emerging Markets
3. Europe
4. US
5. Japan

In each case we looked at the rolling 3-year total shareholder returns from the top 3 financial productivity deciles (based on reported numbers) that were also trading at valuation discounts to their industry. Likewise, we also examined the returns from the bottom 3 deciles which were also trading at industry premiums, as can be observed in Exhibit 10.

The analysis suggests that as an investment approach, relative value investing works across most regions over time.

Section 7 Opportunity Set Today

So much for history, what are the opportunities for Relative Value investing today?

As one exercise, if we focus on the broad opportunity set offered by the current constituents of the MSCI ACWI with market capitalisations above \$2 billion, we have a diverse and investable universe of over 2,100 companies.

Next we filter that universe for companies that meet our Compounder criteria. This reduces the list to just over 500 companies that are currently delivering industry-leading levels of financial productivity and which are expected to continue to do so.

Finally, we remove those companies that are trading on valuation premiums to their respective industries.

This leaves us with 188 companies as shown in Exhibit 11. These Compounders are represented in all the major regions of the world. They are forecasted to generate around 18% CFROI for 2014 and are trading on average at 11.4 times 12 month forward earnings (Bloomberg, As of 9/16/2013). This is a broadly similar multiple to the overall MSCI ACWI itself.

Exhibit 10
Financial Productivity and Valuation by Region

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Ave
Global ex-US	9%	12%	8%	11%	7%	3%	2%	1%	-1%	2%	2%	7%	3%	5%
Emerging Markets	11%	17%	11%	15%	12%	11%	6%	5%	3%	4%	4%	6%	5%	8%
Europe	4%	4%	7%	7%	5%	0%	2%	2%	1%	3%	3%	6%	2%	3%
US	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	0%	2%
Japan	4%	5%	3%	3%	1%	1%	3%	1%	1%	1%	1%	2%	0%	2%
Global ex-US	-9%	-11%	-7%	-10%	-6%	-3%	-3%	-3%	0%	-3%	-3%	-9%	-4%	-5%
Emerging Markets	-13%	-15%	-10%	-11%	-8%	-8%	-5%	-5%	-2%	-3%	-4%	-10%	-8%	-8%
Europe	-3%	-5%	-6%	-7%	-3%	1%	0%	0%	-1%	-5%	-4%	-6%	-3%	-3%
US	0%	1%	1%	1%	1%	0%	-1%	-1%	-1%	0%	1%	2%	2%	0%
Japan	-11%	-11%	-6%	-3%	-1%	2%	-2%	-2%	0%	-1%	0%	-5%	0%	-3%

As at 31 December 2012
Source: Bloomberg, Credit Suisse, Lazard, MSCI

Exhibit 11 Where in the World are Compounders?

	Count	Ave CFROI®	Ave EV to IC ¹	Ave EV to EBITDA	Ave PE
North America	79	20.6	3.1	7.2	12.5
Asia	61	13.5	1.6	5.9	9.2
Europe	27	22.3	3.1	7.4	12.5
Latin America	14	15.3	2.1	6.4	12.3
Japan	7	28.2	4.1	5.8	11.8
Total	188	18.4	2.6	6.7	11.4

As at 16 September 2013

¹ Enterprise Value to Invested Capital ("EV to IC") is the market's valuation of a firm's invested capital

Source: Bloomberg, Credit Suisse, Lazard, MSCI

It will never be possible to fully replicate the degree of insight that is assumed in the results of Global Heatmaps. We can model and backtest the power of insights, but actually arriving at them is no easy task. That said, by understanding the risks and rewards associated with changing levels of financial productivity we feel we can more effectively deploy our fundamental research capabilities.

Finally we have observed that once identified as a sustainably high or improving financial productivity company, buying them 'at the right valuation' improves investment returns even further. The Global Heatmaps take a rather simplistic approach to valuation. In our daily analysis of equities we are far more detailed, and look at many valuation metrics.

So to conclude, what are the building blocks to successful investing? We believe they are threefold:

- A solid understanding of historic financial productivity.
- An accurate assessment of the future direction of financial productivity.
- A discipline of buying these companies when they are attractively valued.

At Lazard we seek to deliver this through detailed, proprietary fundamental analysis via a globally integrated research platform combined with a disciplined portfolio construction process.

Furthermore and as we have highlighted, we believe that today there are plenty of opportunities to invest in companies that offer scope for significant alpha generation over time.

In this way we aim to ensure that our clients' capital is protected and rewarded.

Chapter 2

Section 1: In Summary

Our Findings

1. Financial productivity is a primary driver of share prices
2. 'Insights' into future levels of financial productivity is key, as it allows us to identify three key alpha sources: Compounders, Improvers and Structural Losers
3. Combining financial productivity with valuation improves returns for investors

Conclusions

Our study of global equity markets has helped strengthen our belief in our Relative Value investment philosophy.

It suggests that a firm's financial productivity is a critical driver of its share price. Over time, a portfolio of companies with industry-leading levels of financial productivity should outperform the global index.

In addition we have observed that gaining insights into future financial productivity is extremely powerful from an investment perspective. Insights enable us to identify two types of companies that our studies show tend to significantly outperform the market. These are firms that deliver and sustain high levels of financial productivity (Compounders) and those that offer a material improvement in their financial productivity profile (Improvers). It also suggests that companies with sustainably low financial productivity relative to their industry (Structural Losers) tend to significantly underperform.

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Louis Florentin-Lee is a Portfolio Manager/Analyst on the Global Equity Select team. He was formerly the co-Portfolio Manager/Analyst for the Lazard European Explorer fund between 2004 and 2010. Louis began working in the investment industry in 1996. Prior to joining Lazard in 2004, he was an equity research analyst with Soros Funds Limited. Previously he was an analyst with Schroder Investment Management. He has a BSc (Hons) in Economics from the London School of Economics.

Notes

The information is provided for illustrative purposes only and does not represent any product or strategy managed by Lazard. The index is unmanaged and has no fees. One cannot invest directly in the index.

Source: Credit-Suisse, MSCI and Bloomberg.

As of December 2012. All data measured from 1996 to December 2012.

Deciles based on CFROI[®] and are calculated on an industry-neutral level.

Relative Returns measure the 3-yr annualized decile returns against the equally weighted MSCI AC World Index return.

Relative Returns with Foresight measures the 3-yr annualized returns against the equally weighted MSCI AC World Index return for those companies which stay in their decile.

Relative Return from Improvers measures companies which improved their financial productivity decile ranking.

Relative Return from Decliners measures companies which decreased their financial productivity decile ranking.

Financial Productivity Stability measures the observed probability of a company remaining in the same decile.

Risk-Reward Trade-Off measures the probability and the Relative Returns of companies which move or stay in the same decile.

High and High and Sustained Financial Productivity refers to decile 1 companies, while Low and Low and Sustained Financial Productivity refers to deciles 9 companies.

Combining Valuation with Productivity measures the Relative Return for those companies trading at valuations below the industry average.

Financial Productivity and Valuation by Region measures the Relative Returns of deciles 1, 2 and 3 by region for those companies trading at valuations below the industry average, while the lower half of the chart measures deciles 8, 9, and 10 valuations above the industry average.

Important Information

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