

EQUITY IN A



Measuring Performance

Introduction:

When imputing the word “Investment”, a well-known web browser returns over 941 million references while in fact, all that matters is that it is the process of “purchasing assets” (130m) in order to either resale it or rent it so that one would obtain a gain. Because we have an Equity biased approach to investments, it is rather logical to find that “purchasing equities” represents only a small amount of resources (5m). However, when it comes to finding out about the “performance of an investment” which is the percentage return accounted for at the end of the investment process, we are overwhelmed by the amount of available literature (690m). The debate over how to quantify and qualify performance is all the rage and we will try to shed some light on this topic.

Relative and absolute return:

A performance can either be absolute or relative. An absolute value is simply obtained by looking at the difference between the amount at a certain date and the amount that was initially invested. If, at year end, you have €150 on your account while you had invested €100 on January 2nd, your absolute return would simply be 50%; you would obtain that number with the following formula: $(150 - 100) / 100 = 50\%$. That is most interesting value for an investor as it shows the performance of his investment without taking into account the market or any other consideration.

Because financial markets are going through a period of extreme volatility and uncertainty, and it has been especially true for the past four years, it became more and more relevant for clients to understand the performance of their portfolio with regards to the global financial environment; benchmarking a performance allows an investor to grasp the evolution of his investments in a larger framework. Suppose you have a stock in your portfolio which has posted a performance of -15% over the past year (from 31.12.2010 to 30.12.2011).

Everyone would agree that it is a bad performance; the investor had €100 to invest and has only €85 remaining. However, if you use a relative measure, you would see that this investment only posted a performance of -2% compared to a national benchmark (it would have generated a performance of -17%).

Furthermore, you would notice that, compared to a national sector index; i.e. an index composed of values of a same sector within a country, the above mentioned equity has had a relative performance of 16%. The computation subtracts the performance (-15%) of the stock to that of the national sector index (-31%).

How to interpret these data? It is rather simple. Let us suppose that the sector in which you invested was a bad bet (-32% in a year) and the country sector you invested in was pressured by markets and posted a negative performance of -31%. Then, your stock-picking strategy, your stock selection, was a relatively good one as the company's equity performed better than the average stock in the industry.

Which Index should I choose as a benchmark:

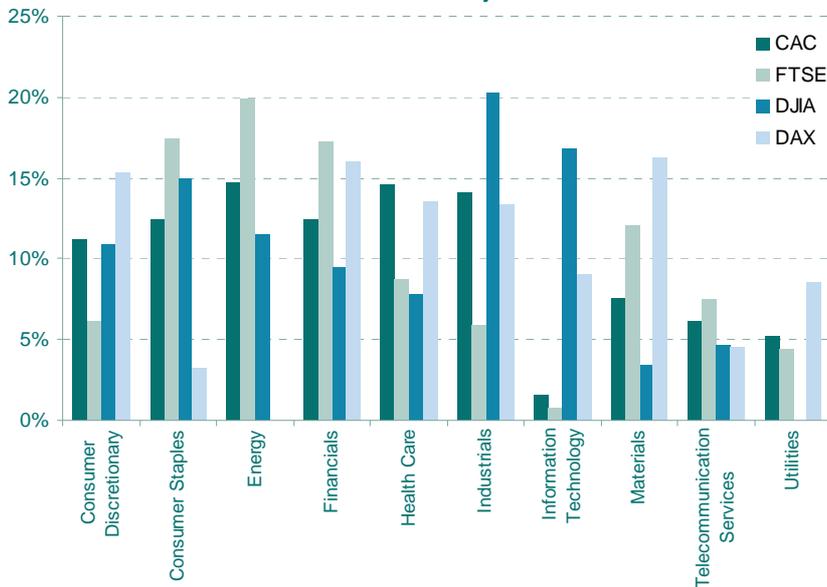
This leads us to one of the most important question: “which index should I chose?”

This choice mostly depends on your investment profile; that is, in which countries do you invest and in which sectors?

If you have a portfolio with investments only in France but across all sectors, we would recommend using the CAC 40 as a benchmark even though the energy sector has a large weight in this national benchmark and can thus create a bias when the sector is exhibiting a downward trend. The chart below allows seeing how major indices are composed. There are interesting facts to note. The German Index, DAX, has no exposure to the energy sector; if you were buying a German energy related stock, it would be irrelevant to use the DAX as a benchmark. We also note that the Dow Jones Industrial Average has no exposure to Utilities and that the Fotsie 100 is only exposed 0.8% to Information Technology stocks.

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Sector Breakdown of Major indices



If you were to diversify your holdings across Europe, we would suggest the Eurostoxx 600 while if you go global, we would probably select the MSCI World Index which is covering all sectors in over 40 countries. The bias of global indices is that mostly large capitalization companies are used in the methodology to build them; if you invest in small or mid caps, you could be beating the index just because of the higher volatility of smaller vis-à-vis larger caps.

While selecting a benchmark, one has to be aware of one main factor we could consider as being externalities. As we said in the Nutshell on diversification, companies seldom focus on one country (especially the ones included in large benchmarks); these companies also depend from foreign markets and their performance could suffer from data and/or circumstances outside the country in which an investor wanted to invest. Not only does this exposure bears country risks (nationalizations etc...), but it bears a currency risk. If the company sells in the US but produces in France (Airbus for instance) the company could be hurt by a depreciation of the US Dollar vis-à-vis the Euro; products would have to be more expensive to maintain margins at their level which would have an impact on competition and equity performance.

How can benchmarks' computations affect performance?

Benchmarks can be computed following two methodologies I) taking into account the market capitalization of the firm, or

II) taking into account the price of the share. Another difference in benchmarks is the way capital operations are treated; some take into account a reinvestment of distributed dividends, and some don't. This matters because when using total shareholder's return (including dividend in the computation of returns), a stock could beat an Index while, without dividend, you would perform relatively worst than a given benchmark. Amongst the major national equity indices, it is to be noted that only the DAX 30, the German Index, is taking into account dividends.

The CAC 40, which is the French national index, is computed by taking into account the market capitalization of firms (price of a stock multiplied by number of outstanding share). To obtain the index level, you would add all market capitalizations of the companies listed in the index and rebase it (for the CAC, 1000 as of 1987.12.31). The Dow Jones Industrial Average (DJIA) is composed of 30 blue-chips (high quality companies) that are generally leaders in their industries. The index was created in 1928 and is using the price-average methodology.

The level of the index is computed by dividing the average price of all firms composing the index at a given time by the average price of these firms at a base time. It is then multiplied by a base value. The higher a price, the most important the related stock is.

Another crucial point to take into account is the timeframe of the performance. The table below exhibit the various observations one can make about the CAC 40. If you had measured the investment performance on a 12-month basis, it would have been -19% as of July 10, 2012. The same computation as of August 10, 2012 would have been +14%. The spread in performance is due to a more profitable base in August 2011.

Selecting a timeframe is a difficult task; one should take into account market cycles and should coincide with investment constraints. We could consider 2 main approaches:

- **Year-to-Date:** The base date for the investment is either the last market day of the previous year or the first one of the current year depending on which is the closest to the January 1st mark. This gives a performance that could represent the new fiscal year if the company has an accounting period equal to that of the calendar.
- **Year-on-Year:** The base date used is set one year ago from the observation date. It allows for the tracking of one year set of data.

CAC 40 - Evolution and Various Time Frame Performances

	10/07/2011	10/08/2011	10/07/2012	10/08/2012
10/07/2011	3913.55			
10/08/2011	-23%	3002.99		
10/07/2012	-19%	6%	3175.41	
10/08/2012	-12%	14%	8%	3432.58

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