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RESEARCH & STRATEGY

EQUITY IN A NUTSHELL

LEVEL 1

DIVERSIFICATION

"Do not put all your eggs in the same basket"

IS DIVERSIFYING THAT DIFFICULT?

Investors have an innate sense that diversification is key in managing wealth. Financial newspapers and specialists keep on insisting on the benefits of diversification. In the past, stories have illustrated what could happen when investors were focusing on a single holding. ENRON is known for being the biggest financial scandal; the company was once the biggest firm in the world before filing for bankruptcy in as little as a year due to malpractices. The company was also well known for having a pension fund that was mostly invested in the company's stocks; ENRON employees were relying on these savings to retire. Once the company filled for bankruptcy, employees saw their retirement plan reduced to nothing. The problem very often faced by investors is dual; either the portfolio is composed of too many stocks – which does not allow for a proper follow-up of corresponding firms, or too few holdings – which would also hurt the portfolio's performance due to the fact that one declining stock would weigh on the performance of the portfolio. In the first case, an investor has to deal with a tremendous amount of news and has to rebalance, adapt, his portfolio accordingly; this requires a lot of time and energy. It is also capital consuming as taking positions and reshaping the portfolio increases transaction costs.

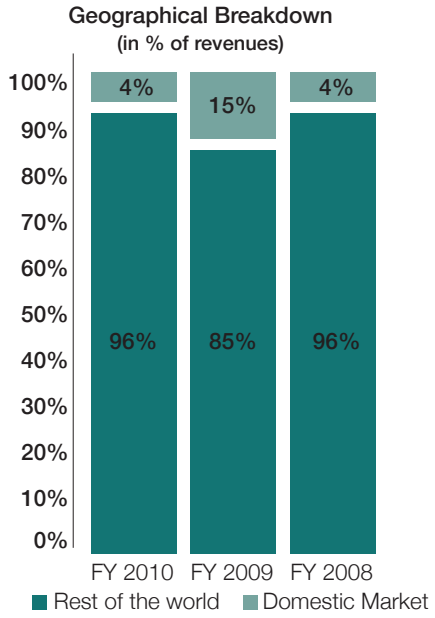
Investors usually have an understanding for the need of diversification; however, it is easy to make mistakes while trying to achieve it. Following Berkshire Hathaway's CEO, Warren Buffett, motto, one should invest only in what one understands; investors should focus on industries they know and companies they understand which would help reducing the investment universe to fewer markets, fewer industries and will end up with a handful of stocks bearing the same types of risks.
On the other hand, some investors tend to over-diversify and think that owning all the stocks part of an index is a proper diversification. Reducing risk via this method could result in a portfolio generating performances lower than that of an underlying index because of transaction costs; in that case, it would be wiser to invest in an Exchange Traded Fund (ETF). The aim of diversification is thus to provide a lower level of risk while, in the mean time, generate a return higher than that of an index.

CURRENCIES; A BET ON COUNTRIES RATHER THAN EQUITIES

We constantly hear that the U.S. Dollar is a safe heaven and that once the World economy is plunging, investors should rush to invest in that currency. It is true that this currency generally appreciates against others when the economic environment is gloomy. When in sync with the appreciation of a specific equity, it is a win-win situation however, does that appreciation compensate for a bad bet on a stock? It is obvious that investing in various currencies helps diversifying as they move one against the other, they form a certain cushion.

INTERCONNECTED MARKETS MAKE REGIONAL APPROACH OBSOLETE

Some investors believe geographical diversification to be the proper approach to diversifying there holdings; the main issue with that approach is that nowadays markets are interconnected and companies are global thus involving several countries in their production processes… Because properly narrowing down the origin of cash flows is time consuming and cumbersome, investors very often achieve a "false diversification". Let us assume that this company has headquarters in the Middle-East.



The previous chart highlights the various risks the company could be facing. That geographic breakdown mitigates the risks on revenues as almost all the revenue is generated from the Rest of the World market. One could think he bought a stake in a Middle-East firm while, in fact, his investment is depending on other regions.

We will now focus on other regional risks a company can face. If we take a car manufacturer as an example and try identifying where its production sites are, we will notice that the firm has assets all over the world. Each country has

its regulation concerning amortization, ownership… It is becoming increasingly difficult to understand and manage all these data and forecast their potential impact on the bottom line. Moreover, there is a geopolitical risk that could affect companies with operations in unstable countries which could lead to destruction of the assets (war) or forced nationalization (like in Argentina in 2001).

SECTOR APPROACH; A NAÏVE DIVERSIFICATION

There is a similar problem with a sector approach; companies tend to be increasingly diversified, both vertically (owning its suppliers and/or clients) and horizontally (buying competitors). Set aside companies focusing on a core business e.g.: Apple, PSA…, it is increasingly difficult to consider that a company is only impacted by events related to its historical activity. General Electric is one of these global conglomerates that mixes both constraints; GE revenue is well spread globally and is generated by activities spanning from engine development (industrial) to financing solutions (GE Capital). If we look into the stakes in other companies, we notice that GE owns 51% of NBC Universal; that stake was generating 10% of GE's 2010 operating income. To stay up-to-date with such a company requires time and a certain level of knowledge of the various industries in which it is involved.

It is to be noted that this approach offers another bias that is somehow easier to grasp and avoid. Industries are interlinked and we can see some react to the same news. An investor could think he has a diversified portfolio when holding some shares from a car manufacturer and food retailer. If the economy is contracting, the demand for goods and services would decrease thus impacting the bottom line of both firms. A somewhat efficient diversification would be to invest in gold mines and electronic manufacturers; the electronic industry is using gold for cables and other devices so when the cost of gold increases they use less yet mines generate profits by still selling the commodity to other agents. When cost of gold decreases, electronic manufacturers see their margins increasing thus allowing them to generate more profits.

A QUANTITATIVE SOLUTION

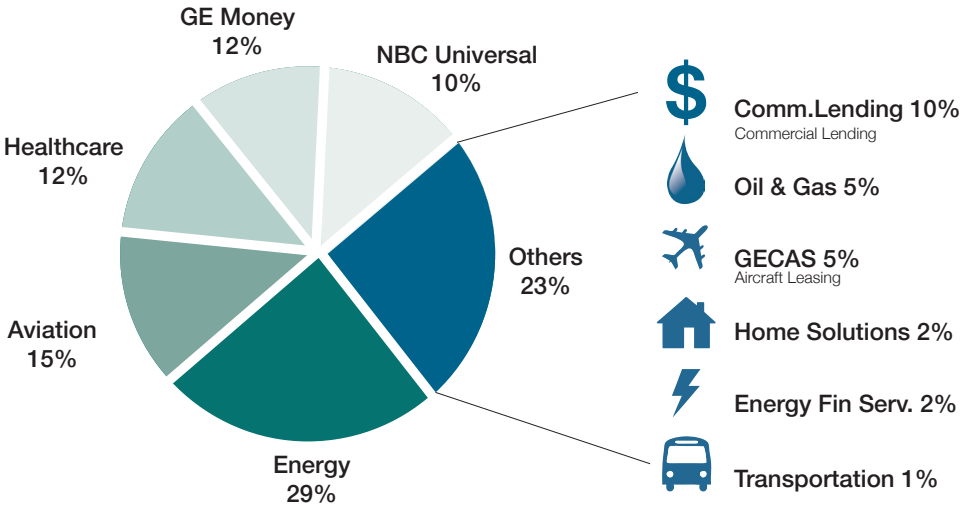
In The Intelligent Investor, Ben Graham explained that an optimum diversification could be obtained with 10 to 30 stocks. Since then, various research papers proved that with 20 stocks, the total risk of a portfolio was reduced by 70%. Over diversifying is a commonly made mistake and does not make economical sense. Imagine a portfolio in which the position on XYZ's stock represents only 0.5% of the equity portfolio, and let us assume, for the sake of it, that this investor is 20% invested in equities; by simple virtue of multiplication, that position represents only 0.10% of the total portfolio. Now let us say that this investor is a great stock picker, applying a perfect bottom-up strategy, and that the stock is skyrocketing +100%; the impact on the portfolio would only be a gain of 0.10%. When applying the 20 stocks rule and managing an equally weighted portfolio, which could imply some regular rebalancing, each stock represents 5% of the equity portfolio; a chance is given to each stock to perform and noticeably impact the overall performance of the portfolio.

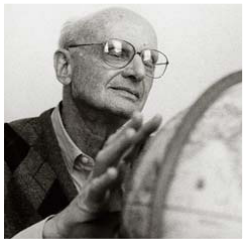
The Modern Portfolio Theory (MPT), developed by Markowitz, tries to create optimum equity portfolios that would maximize returns for a certain level of risk. If we go into details, the idea is to minimize the variance, which is computed by using the standard deviation and the mean of time series and is defined as being the measure allowing to understand how spread out a distribution of returns is, while maximizing the said return. This first step of defining how many assets should be included in the portfolio is closely followed by the selection of each individual asset according to its relationship - its correlation – to all others. The main idea is to select stocks that are not correlated in order to minimize sudden increases or decreases of their market values. Building a correlation matrix can require time and tools not always readily available to investors.

IN A NUTHSELL

We highlighted the intricacies of diversifying an equity portfolio. We identified the various keys one could use to obtain a balanced portfolio and explained the various underlying biases an investor could face. But this is just one part of what an investor should do to manage his wealth properly. The proper diversification should encompass all asset classes (investing in a South African bond and investing in gold mine equities would lead to an overexposure to a specific sector and a specific region) and the specific investor situation (nationality, other investments, …).

General Electric Co. (GE US)
Repartition of 2010 Operating Income





Markowitz

Born in 1927, H. Markowitz was the recipient of the 1990 Nobel Prize in Economics along with M. M. Miller and W. F. Sharpe. In his studies that led to Modern Portfolio Theory (MPT), Markowitz proved that the risk of a portfolio was not just the weighted average sum of the risks generated by individual securities but rather a function of the degree of co-movement of the returns of those individual assets. W. Sharpe was one of his students at the University of Chicago.

Coming soon: «Holding your stock. Hold it tight !»
To go further, please refer to your usual contact.