REKENTHALER REPORT

Reinvesting Matters! (A Great Deal)

As does being careful when interpreting charts.

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Income versus Growth

Interest receipts provide the initial investment lesson. If you are fortunate enough to possess capital, others will pay to borrow it. Money for nothing! But of course, those receipts are not free, because you have paid an opportunity cost. Others now have your funds. They may put them to work, while you may not.

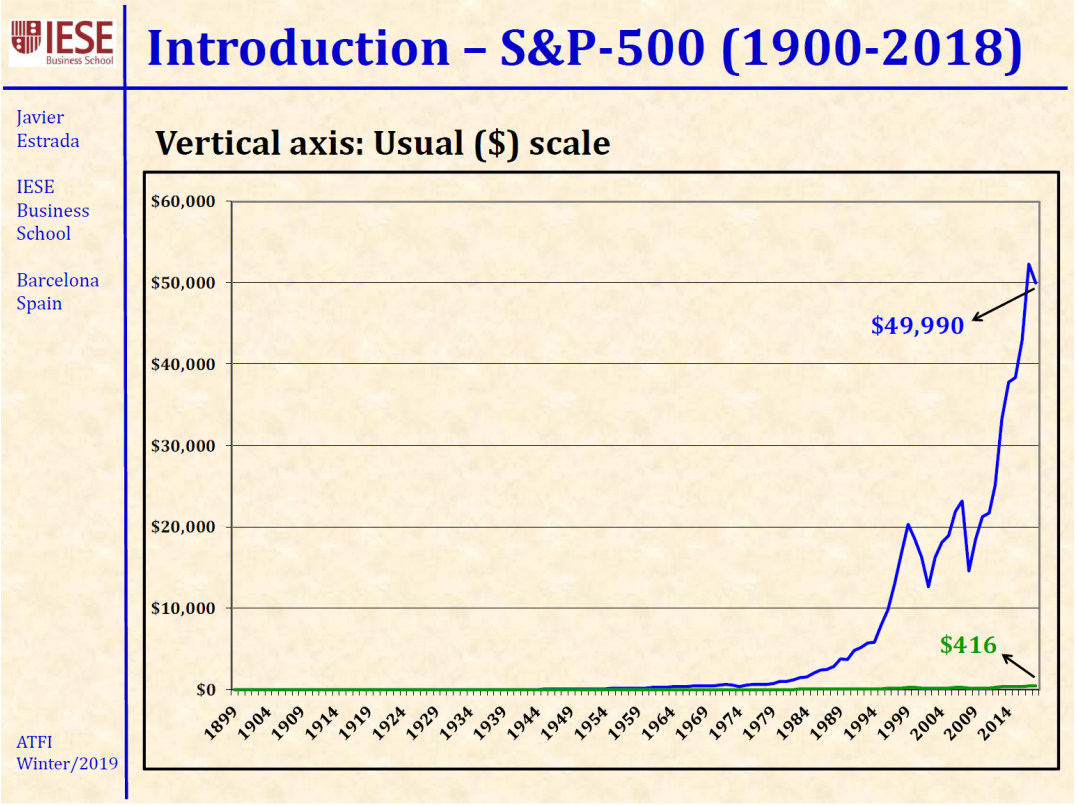
Then comes capital appreciation. That understanding arrives later, because most possessions lose value over time, not gain it. Among the exceptions are real estate and stock shares. When savers accumulate enough money to buy those items, they become investors (or, less happily, speculators). Now, they possess something tangible, rather than the mere promise of future payments. They own an asset.

The most-visible investment successes come from capital appreciation alone. California properties that consume cash rather than generate it, but which are eventually sold at huge profits. Berkshire Hathaway's equity, which has never declared a dividend. Bitcoin 2017. For purchases that don't require ongoing investment, the math is pleasantly simple: Total return = ending price/starting price - 1.

Income *With* Growth

What can be difficult to comprehend, says Javier Estrada of Barcelona's IESE Business School, is the combination of income and capital appreciation. The one greatly enhances the other, thanks to the effects of compounding. For most people, those effects are not particularly intuitive. Estrada has therefore created a chart of the S&P 500's long-term returns, to illustrate the point.

It appears below. The green line represents the price return on the S&P 500, on a one-time purchase. Invest one dollar into the index in 1900 (never mind how), discover the Fountain of Youth, then come back in 2018 to claim your shares. They are now worth $416, because the index grew from $6.02 to $2506.85. Something, though, is missing: the dividends. The blue line depicts the value of that $1 purchase, were the S&P 500's dividends promptly reinvested back into the index.



Source: Javier Estrada; IESE Business School

Quite the difference! As Estrada points out, this chart directly relates to my column on Renaissance Technologies' Medallion Fund. That fund boasts

stunningly high total returns that assume the reinvestment of all cash proceeds, only those proceeds can't be reinvested, because Medallion won't accept them, so as to maintain its slender asset base. Its oft-cited returns are therefore hypothetical. The performance is real, but because of the fund's reinvestment policy, its investors' profits are mostly illusory.

Interpret Carefully!

Also illusory is the gap between the two lines on Estrada's chart. That chasm powerfully demonstrates his point, that reinvested dividends are critical for stock-market performance. However, it also may deceive. The instant and obvious suggestion is that the S&P 500's income distributions dwarfed its capital growth. In fact, the opposite held. The index's capital appreciation was the larger of the two ingredients.

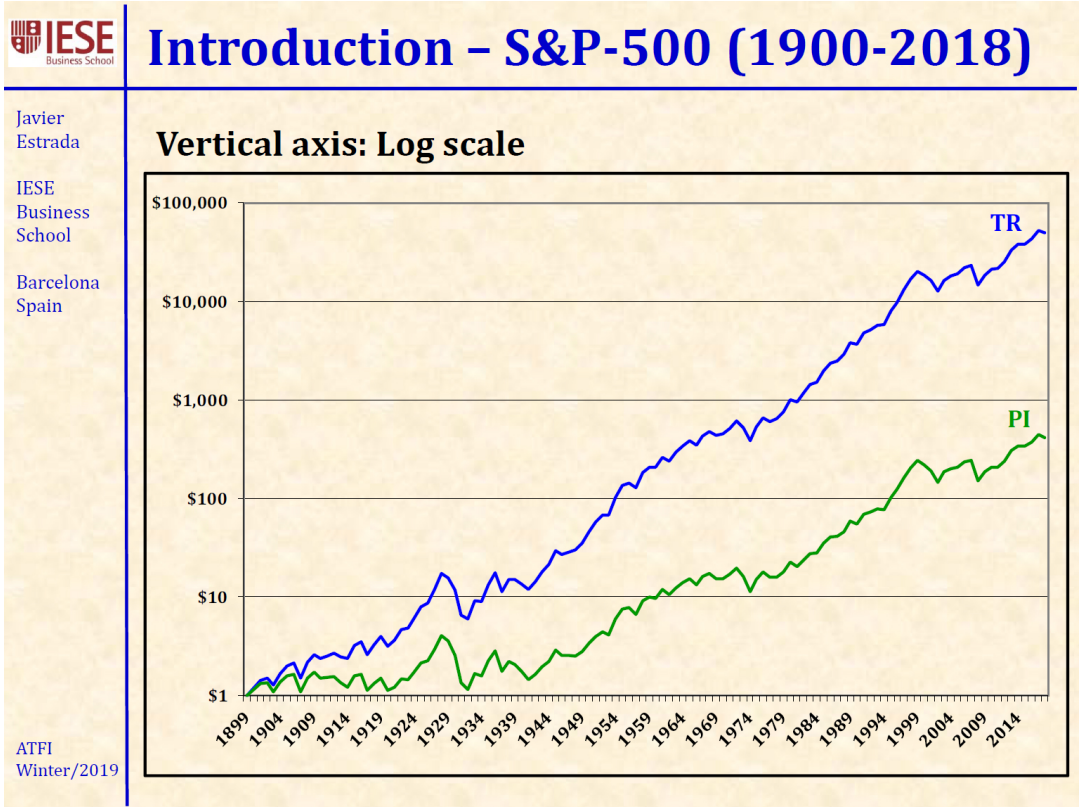
This may be understood by recognizing that areas underneath the two lines multiply, not sum. One should not interpret the space under the green line as arising from appreciation, and the space between the two lines as coming from income. Rather, the entire area is a product. That is, the $416 from capital growth multiplied by the income component equals $49,990. The income component, it turns out, is $120. That figure represents the total dividends that the S&P 500 would have distributed over the time period, on a $1 initial investment.

Another of the graph's mirages is the impression that nearly all these gains occurred over the past quarter century. Technically, that is true. The S&P 500 required 95 years to turn a $10,000 profit on a $1 investment, then 23 more years to make the next $40,000 (rounding up). The picture does not lie. But it

obscures. What matters for investors how the rate of return varied over time, and on that topic the diagram is silent.

Logarithmic Improvement

Which is why logarithmic graphs were invented. Estrada's second slide replots the returns, this time on a logarithmic scale. What a change!



Source: Javier Estrada; IESE Business School

The new chart conveys two important details that were concealed by the previous graph. First, it reveals the correct relationship between the price and

income returns. Each item is critical--the index's performance would have been far, far weaker without either one--but with this picture, capital appreciation receives its just due. It was indeed the larger of the two contributors. Second, we can now see that the index's rate of return has been consistent, at least since the late 1930s. The blue line has grown at a steady clip, pausing only briefly along the way.

(More subtly, the green capital-growth line is more volatile than the blue total-return line. This transpires not only because annual income levels are relatively stable while capital returns are not, but also because income is counter-cyclical. As stock prices drop, thereby damaging capital appreciation, income rises. To be sure, those improved yields only offer so much protection when stocks decline rapidly, but they nevertheless do pull in the opposite direction.)

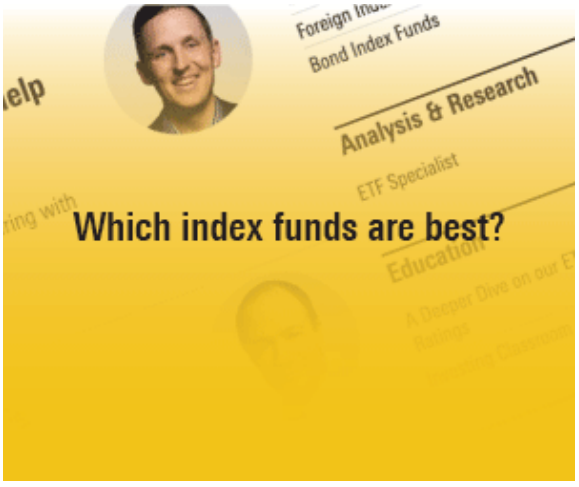
Setting the Controls

The stark contrast between stock market performance with dividends reinvested and performance without indicates the importance of fund-reinvestment programs. However, it's easy to overlook such features. When writing this article, I checked on my own investments. All my equity mutual funds automatically reinvest my dividends. However, my single ETF and single closed-end fund do not, because the dividend-reinvestment program is managed by the funds' brokers rather than the fund itself. When I purchased those investments, those brokers didn't offer reinvestment options.

They almost certainly do today; such features are routine. Nevertheless, the decision-making process is different when coming through the broker than when coming through the fund. One could easily overlook the detail.

Which leads to Estrada's final issue: European markets sell ETFs that have accumulating share classes, which means that they automatically reinvest their dividends, at the fund level. He writes, "If you don't have the discipline of periodically reinvesting the dividends when using "distribution" ETFs (which are the ones typically sold in the United States)--and most people lack that discipline--your return and the total return of the underlying index may be dramatically different." He wonders why there aren't accumulating share classes in the United States, too.

Good question.



Morningstar's list of highest-quality companies covered

John Rekenthaler has been researching the fund industry since 1988. He is now a columnist for Morningstar.com and a member of Morningstar's investment research department. John is quick to point out that while Morningstar typically agrees with the views of the Rekenthaler Report, his views are his own.