Who's afraid of Volatility

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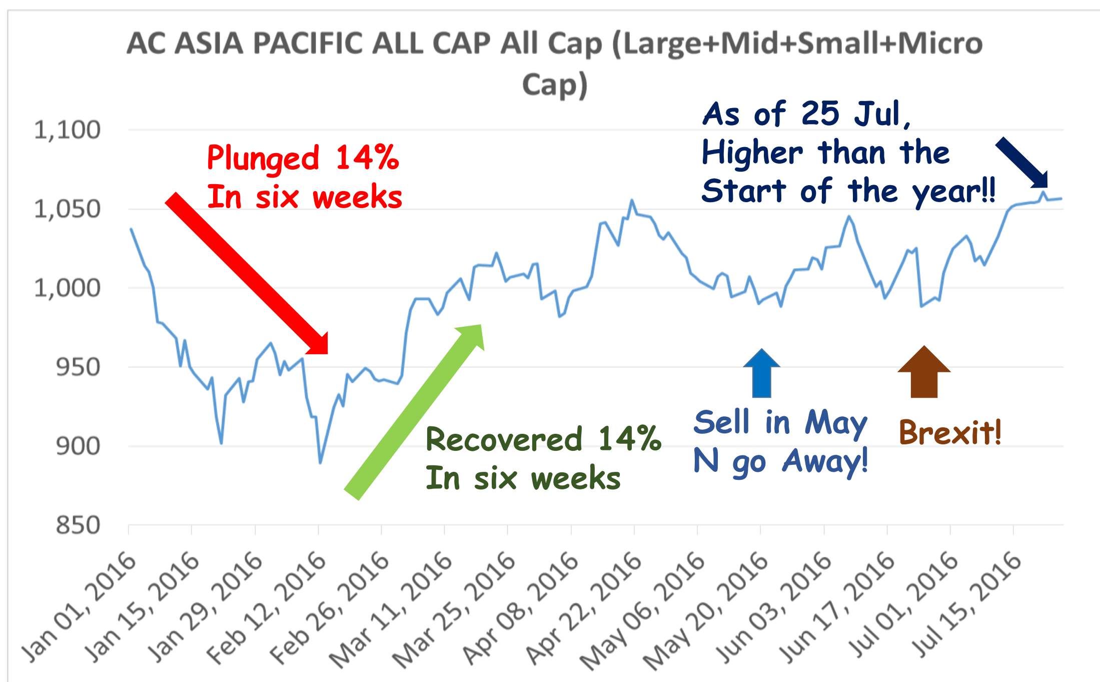

Understanding economic value creation (1)

- It's a gradual and incremental process
- The productive capacity of the economy (the company) comes from the skills and size of the workforce and the country's (company's) accumulated intellectual and physical capital
- If GDP falls, it's because aggregate demand has fallen. When demand recovers, the economy will be able to ramp up production quickly

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Understanding economic value creation (2)

- Hegel's spiral theory - nothing is lost or destroyed but raised up and preserved as in a spiral, but there can be temporary setbacks

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Understanding economic value creation (3)

- There would be economic growth for as long as there continued to be availability of factors of production (workforce, natural resources) and demand (continued growth in population).

Understanding an asset's value

- Value of asset = Present value of all future expected cash flows
- Two numbers go into the calculation: the expected future cash flows (CF) and the rate used to discount the cash flows to present value (r)
- $PV = CF1/(1+r) + CF2/(1+r)^2 + CF3/(1+r)^3 + ...$

Understanding an asset's price

- Price is determined in the market place based on:
  - ➢ demand and supply

- When there are more buyers than sellers, prices go up, and vice versa

- The demand and supply could be driven by sentiment, change in business fundamentals etc.

Most times

price ≠ value

A Test

- Robert Shiller, the Nobel Prize winning Yale economist did a simple but powerful test of this almost 30 years ago in a paper for *Science* magazine
- Using US stock market prices and dividends going as far back as the 19th century, he came up with a fair value estimate for the market based on the actual dividends that were paid over the next 50 years.
- Us investment firm GMO reproduced and updated the analysis below:

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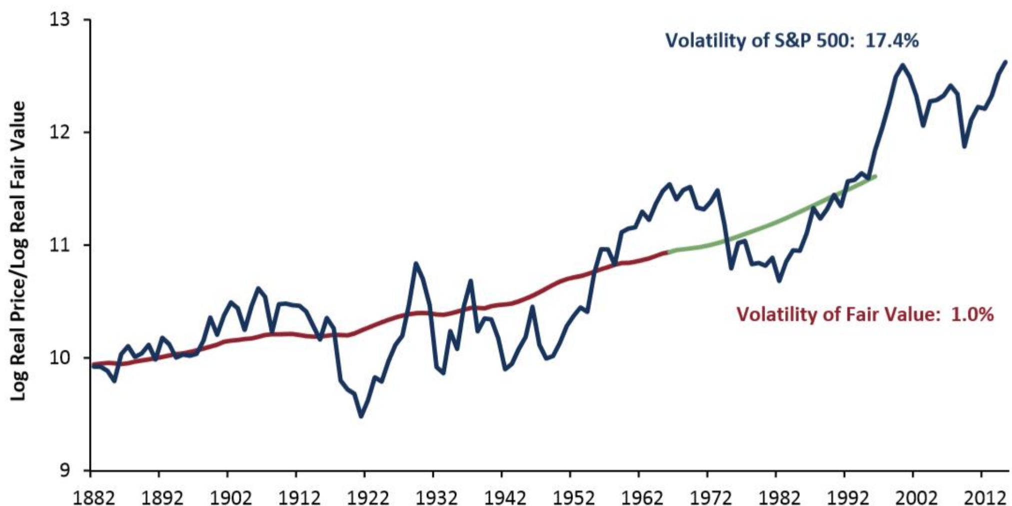

Source: Robert Shiller, GMO; Data from 1900-2016

Important points

- The volatility of US stocks since 1881 has been a little over 17% per year.
- The volatility of the underlying fair value of the market has been a little over 1% per year.
- Well over 90% of the volatility of the stock market cannot be explained as a rational response to the changing value of the stream of dividends it embodies.

Inference

- This means the volatility is due to some combination of:

➢ changing discount rates applied to those cash flows, and

➢ **changes to expectations of future dividends that turned out to be incorrect**

Inference (2)

- If a changing discount rate had historically been a significant driver of stock market volatility, we would expect to see some correlation between bond rates and stock prices

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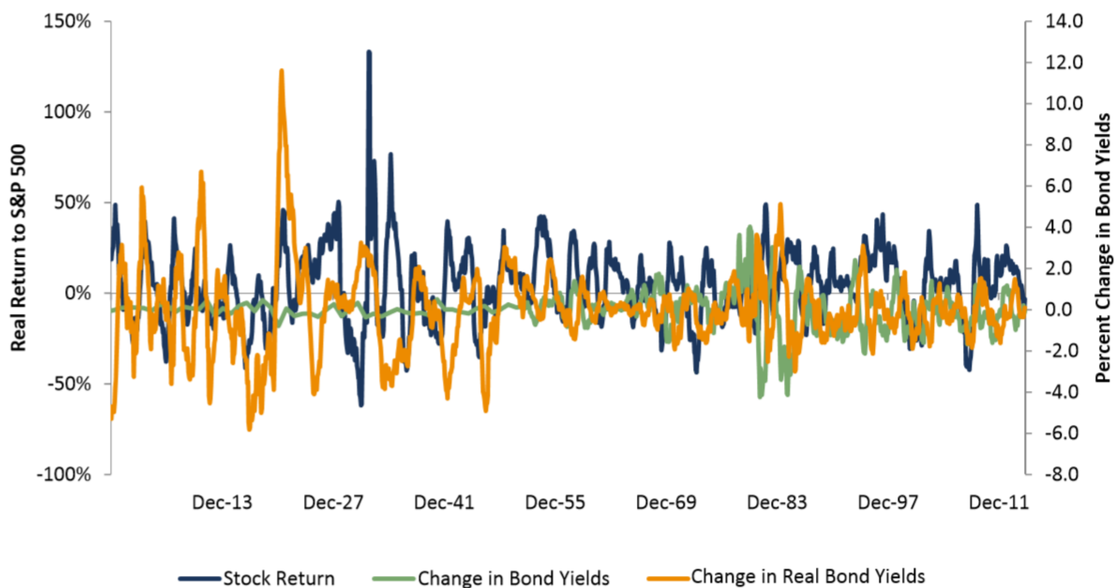

Source: Robert Shiller; Data from 1900-2016

Almost zero correlation!

- We cannot explain any meaningful part of the excess volatility of the stock market historically as coming from the piece of the discount rate that can be observed

- **That leads us to conclude that the excessive volatility in price is due to changes in expectations of future dividends that turned out to be incorrect**

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Two ways to make money in the market

Given the market reality that prices frequently move away from fair value driven by changing market expectations, investors can make money in two ways:

1. Out-predict the rest in the market; or

2. Be acutely aware of the difference between price and value, and to trade when an asset deviates significantly from its fair value.

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Strategy 1: Out-predict everyone

For this strategy to work, an investor will have to:

1. Have an uncanny ability to know when everyone else is wrong;
2. Have the conviction to act on that belief; and
3. be quick to take advantage of the market reaction

Strategy 1: Out-predict everyone (2)

- If you are able to predict what everyone else is also predicting, then that expectation would have been factored into the price already – you won't be able to make any money

- **You have to predict the unexpected in order to make money in this strategy!**

"This just isn't doing it for me. Could we go back to using the crystal ball?"

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"Prophesy is a good line of business, but it is full of risks. "

--Mark Twain in Following the Equator

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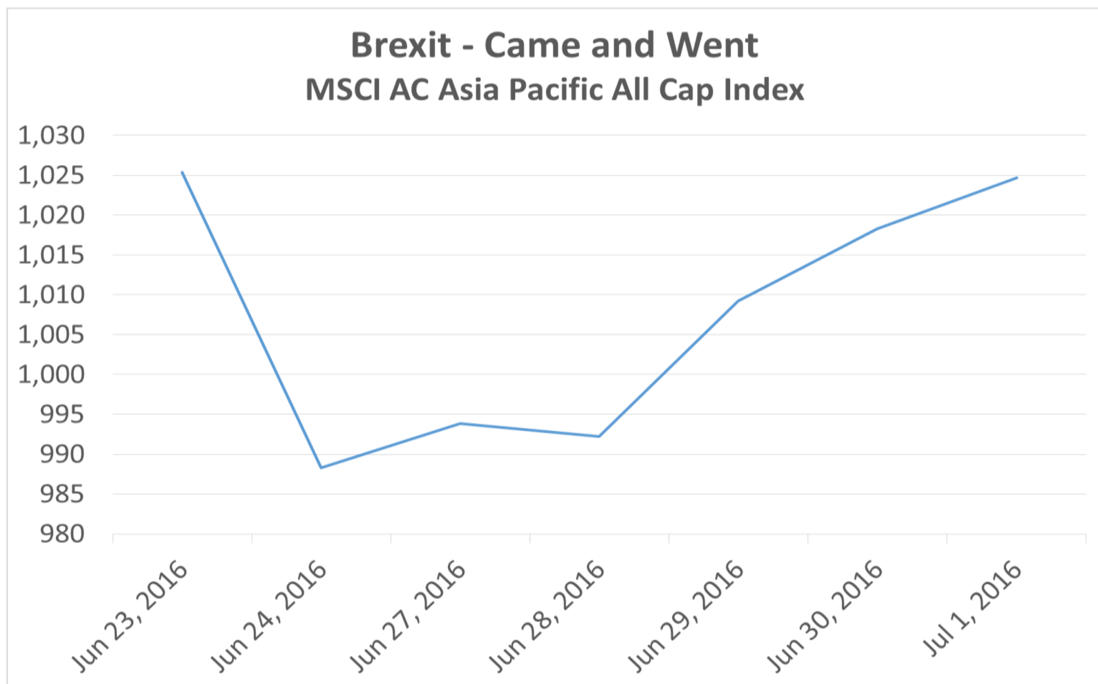
Brexit example

- You have to predict that the UK people would vote for LEAVE when the consensus is that the REMAIN camp would win
- You have to have the conviction to sell all your holdings or short the market before the results are out
- And you have to be quick to square off all your positions



Impact market valuations have on returns

- By way of contrast, look at the impact market valuations have on returns
- **There is more persistence**

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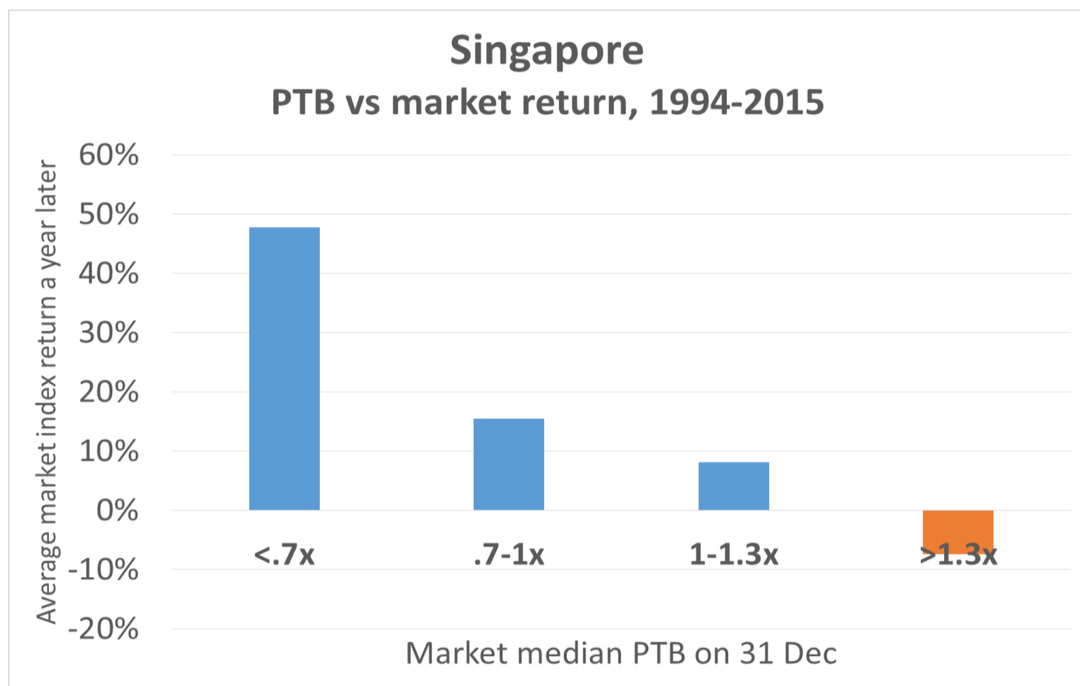

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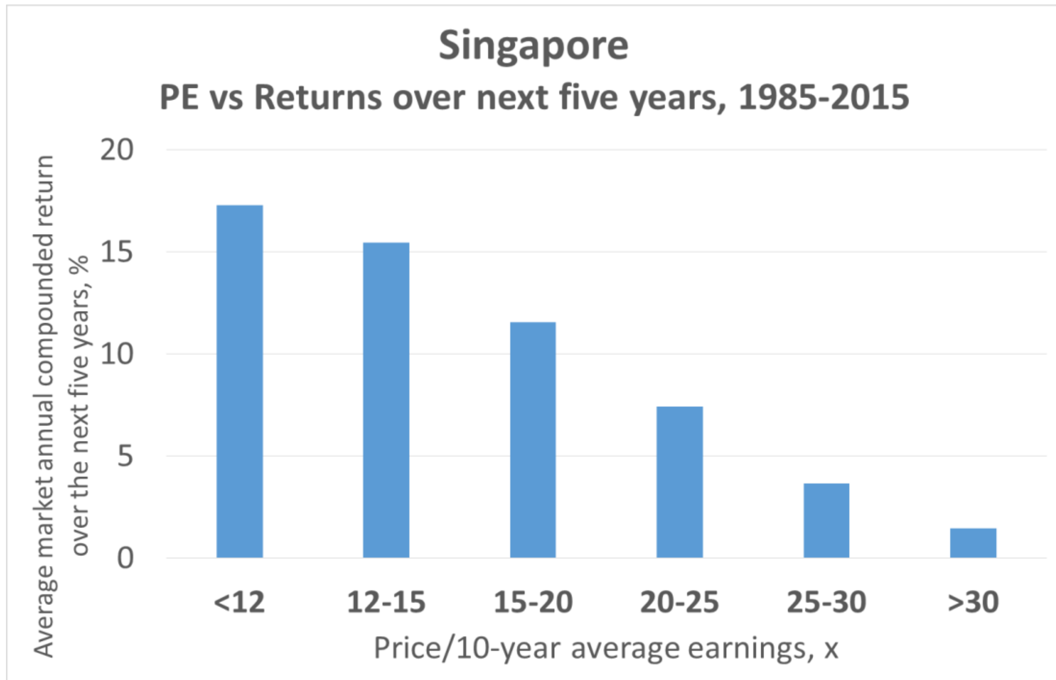

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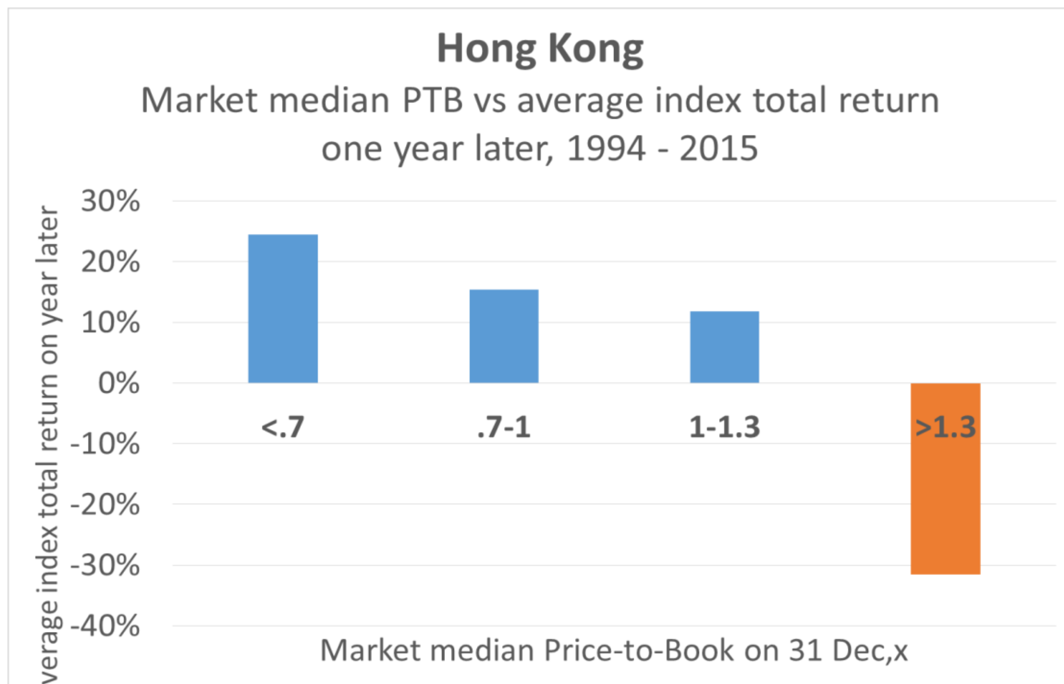

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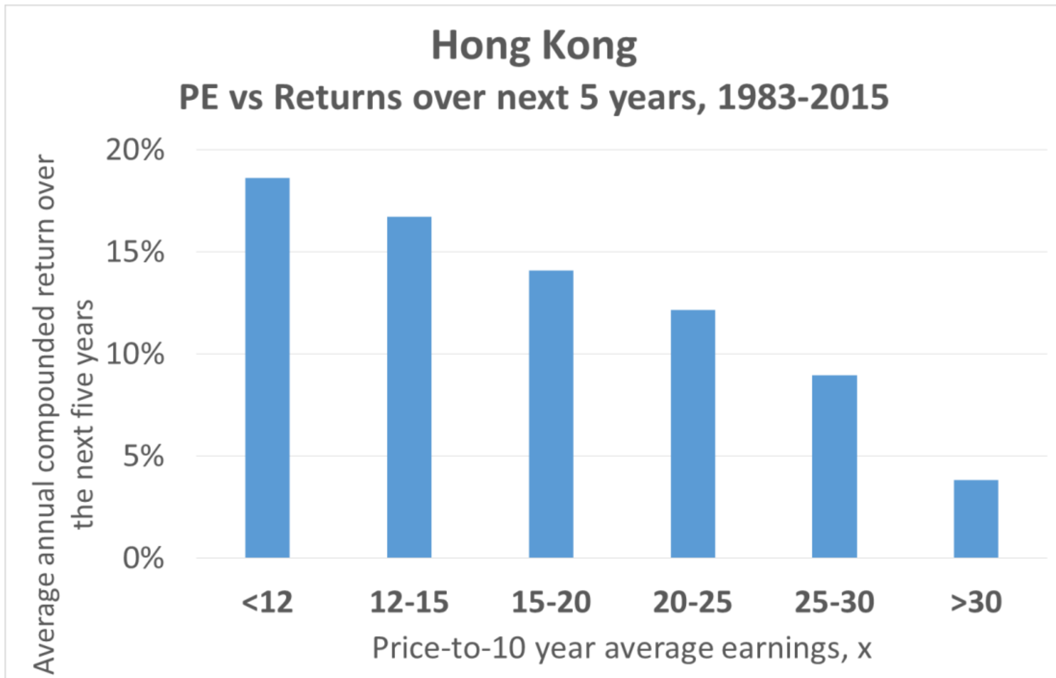

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Evident from the charts

- That cheaper than average market valuations lead to higher average market returns over time
- Note: The lower the Price/10 year average earnings or PE, or Price-to-Book or PTB, the cheaper the market is deemed to be
- **The returns may not come in the next one day, one week, one month or even one year. But over time, it will definitely come.**

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Gravitational pull of the financial markets

- Value has been referred to as the gravitational pull of the financial markets
- The impact of value is small over a single day but as the number of days grows, the impact becomes more and more material

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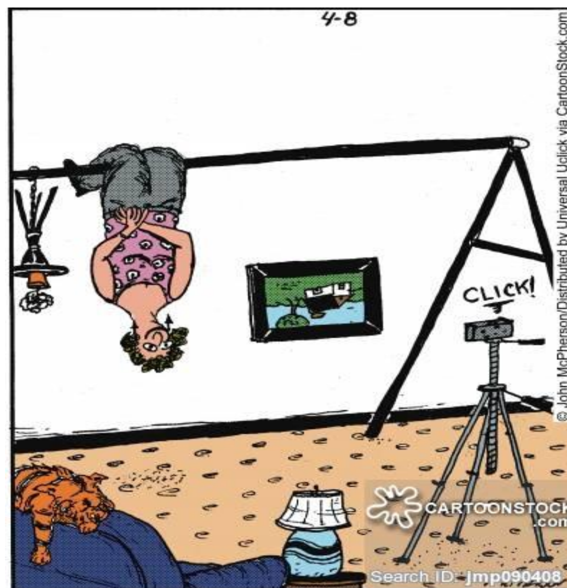

Although gravity had taken its toll on Connie, she had devised a way to look youthful in her online dating photo.

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"I am not overweight. I'm gravity enhanced."

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If you want to make a quick buck…

- over a day or a week or a month, try to predict market surprises
- For example, who will win the US elections or when the Federal Reserve will raise interest rate and by how much
- **If you can out-predict everyone, you'll make more money than value could over that day, week or month**

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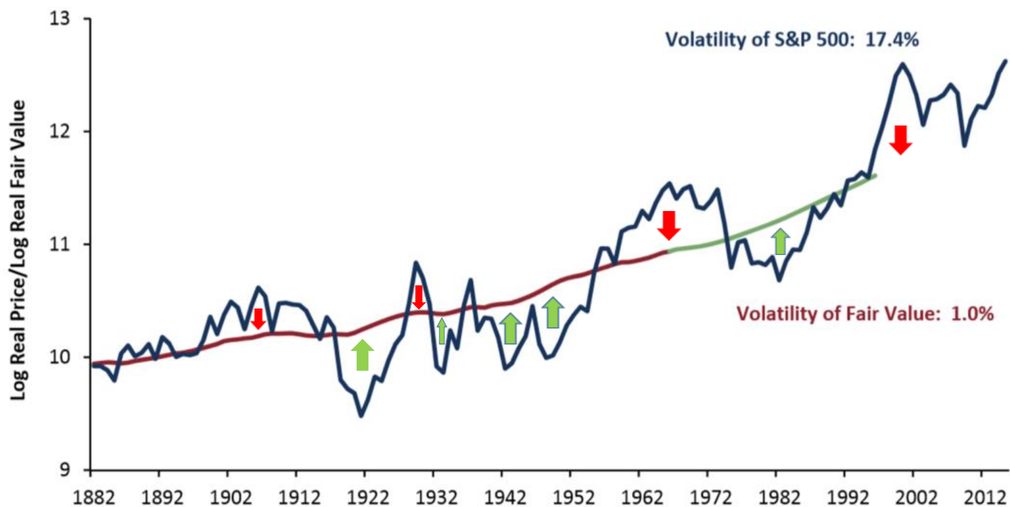
But predicting surprises is hard. Most people who attempt it will fail.

"I always avoid prophesying beforehand because it is much better to prophesy after the event has already taken place. "

--Winston Churchill

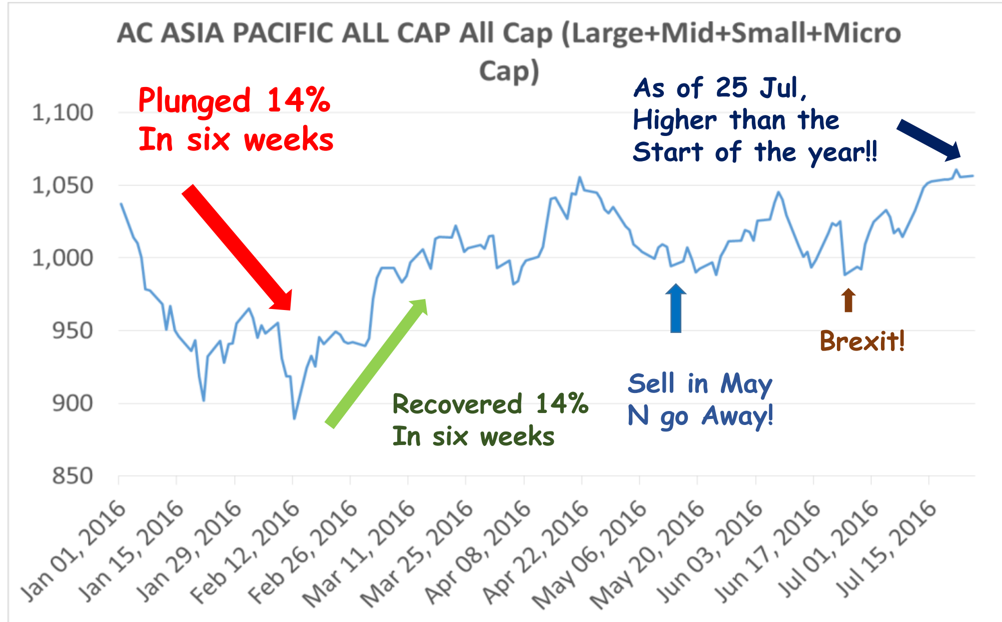


Source: Robert Shiller, GMO; Data from 1900-2016

Imagine a perfectly efficient market

- Prices would reflect fair values all the time
- That means prices would be fairly stable, with perhaps an upward bias of 2-3% a year in line with economic value creation over the long term.

It is investor myopia and short-termism that we have this!



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Shouldn't grumble

- But we should not grumble too much about this volatility
- It is this exact short-sightedness and jumpiness of certain market players that create the very opportunities for us to outperform the markets over the long term
- If not, all of us will have to contend with just 2-3% return a year!

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So who's afraid of volatility?