

The Forgotten Fundamental

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At the last strategy day, I talked about intrinsic value, including the fundamentals that determine it. Today, I want to delve deeper into one of those drivers which has been quite topical over the last 6 months.

CYTD performance

Revenue and
Earnings



Price



First, let's recap what's happened over the last 6 months. We had the 1H21 results in February and from an earnings perspective, this results season has arguably been one of the best in the fund's history. But, the price performance says something completely different with significant share price falls along with the rest of the market. So, the natural question for us is whether the market is behaving irrationally given the strong earnings performance of our businesses? As tempting as that might be to conclude, I don't think so and I am hugely reluctant to draw that conclusion. I think rather than dismiss what the market is doing as irrational, it's better to try and make sense of why is the market doing what it is and then determine whether, on the balance of probabilities, we agree with it or not. And as always, I like to go back to fundamentals and think through each component of what drives intrinsic value on a bottom-up basis.



This is a slide that I've shown previously and to recap, there are only 4 things that matter to intrinsic value:

- Growth in earnings.
- Reinvestment required to generate that growth.
- When does the business become a mature business.
- And finally, the risk in a business or the opportunity cost of capital for a business.

Going by the first half results, we don't yet see a problem with the earnings growth of our holdings, although as I said, things can change quickly on that front. And nothing in the last 6 months suggests that we need to make any major changes to the maturity assumptions of these businesses. If anything, some of these businesses are expanding into new markets and may be able to sustain higher growth for a period longer than we currently anticipate.



That leaves us with the opportunity cost of capital or the discount rate, as it is more popularly known. **And this is the one driver of intrinsic value that most investors have had the privilege to ignore for much of their investing lives and the one that I want to focus on in this presentation.**

Opportunity cost of capital

Risk free rate

Equity risk premium

	31-Dec-21	Today	Delta
Rf	1.5%	3.3%	1.8%
ERP	4.5%	5.2%	0.7%
Cost of equity	6.0%	8.5%	2.5%

What are the components of the cost of capital?

- The first is the risk free rate which is simply the return that you would get by investing in a riskless asset and we use long term government bond as a proxy for that.
- The other component is the equity risk premium which is the excess return that investors demand for investing in equities as a class. Think of the equity risk premium as a receptacle of all the hopes and dreams and fears of equity investors at any given point in time. When investors are fearful, that number is high and when investors are feeling certain and confident about the future, that number moves lower.

Both of these components are dynamic and combine to form the total opportunity cost of investing in equities. So, what's happened to these numbers in the last few months? We came into 2022 with the 10Y US T-bond rate at 1.5% and the equity risk premium at about 4.5%, giving us a total cost of equity of about 6%. In the last 6 months, that number has moved to 3.3% for the T-bond rate and 5.2% for the ERP, giving us a delta of slightly more than 2.5% in the discount rate.

Impact on intrinsic value

	Scenario 1	Scenario 2	Scenario 3
Rf	1.5%	3.3%	3.3%
ERP	4.7%	5.2%	5.2%
Cost of equity	6.0%	8.5%	8.5%
LT growth	1.5%	3.3%	1.5%
Value of \$1	19.7x	14.4x	12.7x
Return	-NA-	-27%	-36%

"Interest rates are to asset prices like gravity is to the apple. They power everything in the economic universe."

Now to see what difference such a delta can make to intrinsic value, let's take a simple example of a mature business growing at the risk free rate of the economy. In the first scenario, we get a value of \$19.5 for a \$1 of earnings growing in perpetuity at the long term bond rate and being discounted at 6.0%.

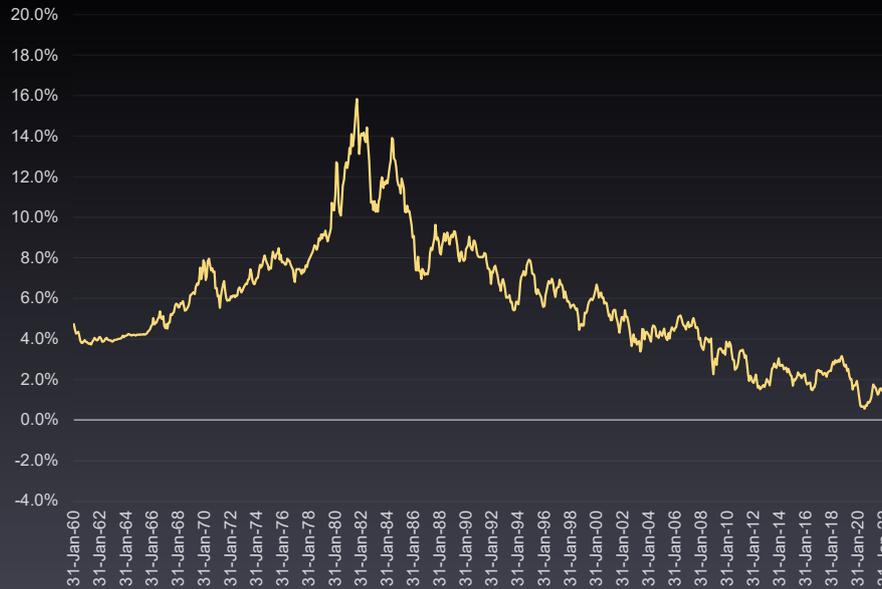
In the second scenario, which is basically where we sit today, we get a value of \$14.5 for that \$1, about 27% below the previous level.

As if that doesn't bring home the point, there is another, more devastating scenario. The big assumption in scenario 2 is that the long term growth equates to the long term bond rates for the economy. But, there is also a scenario, albeit, with a much lower probability, where a rise in the risk free rate does not lead to a corresponding increase in the long term earnings growth for the economy. In such a scenario, intrinsic value is destroyed by about 32%.

Hopefully that establishes why long term interest rates are important for intrinsic value. Of course no presentation of mine would be complete without a quote from Warren Buffett and it's quite appropriate that he equates interest rates to gravity for financial assets.

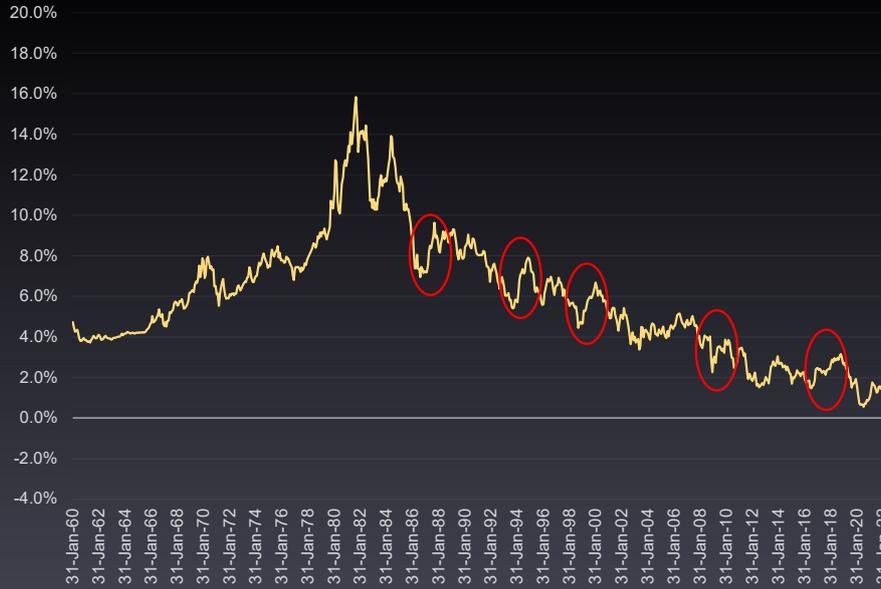
"Interest rates are to asset prices like gravity is to the apple. They power everything in the economic universe."

Bond yields have been declining for 4 decades...



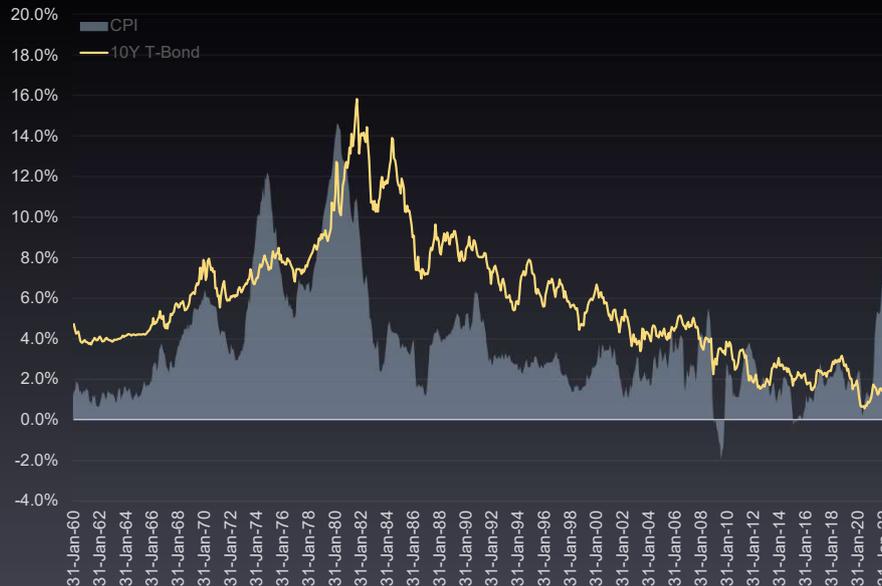
Let's explore interest rates in more detail now. This is the chart of bond yields since 1960 and as we all know, bond yields have been in a declining trajectory since the 1980s.

...with multiple periods of short spikes...



But why should we be concerned about the most recent spike in interest rates? After all, we've had multiple periods of short spikes in the bond yield only for them to resume their downward trend. Why should it be any different this time?

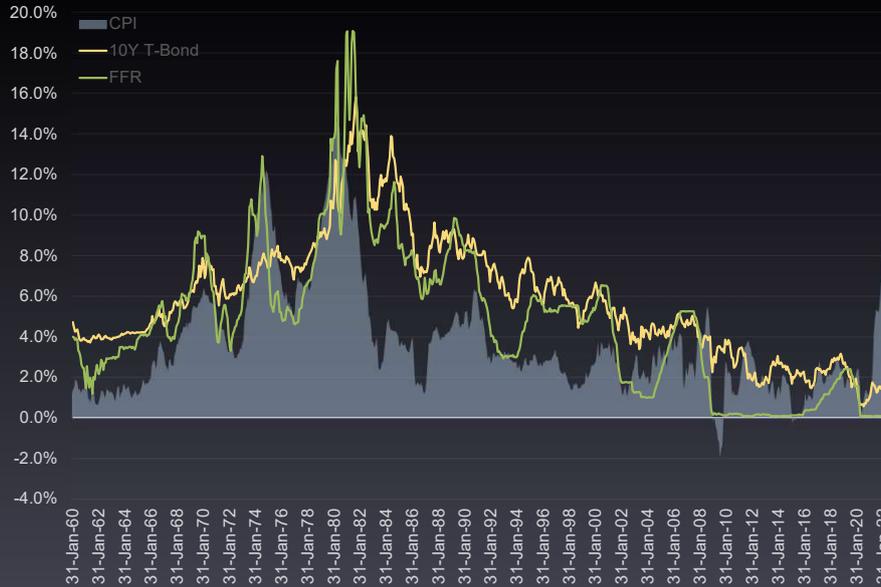
...inflation during those spikes was benign...



I am not saying they won't, anything is possible, but there is something different about this particular spike. The shaded area is the inflation during the same period and what's quite clear is that none of those short spikes were accompanied by inflation running persistently higher than the bond yield.

Ultimately, interest rates are a function the expected inflation and the expected real growth in the economy and if inflation expectations are going to settle at a higher level then, it's almost a given that interest rates will follow suit. And we have already seen what a higher interest rate does to intrinsic value.

...allowing the Fed to keep rates low



Just to round out this section, this chart overlays the Federal Funds Rate which is the green line on the chart. And with the benefit of hindsight, it is clear that the Fed has been behind the curve in responding to inflation. What this chart also shows is that investors ascribe far more power to the Fed than it deserves. Ultimately, the Fed is constrained by fundamentals and cannot set rates in a vacuum. If inflation continues to run higher, it is very likely the Fed (and probably prudent that the Fed continues to raise rates.

Inflation eats at the core of financial assets

Period	CPI	10Y	PE	Nominal return
Jan-41	1.4%	2.0%	10.0x	
Apr-42	12.6%	2.5%	7.7x	-24%
Apr-46	3.4%	2.2%	21.2x	
Apr-47	19.6%	2.3%	11.0x	-22%
Aug-72	2.9%	6.4%	18.2x	
Jan-75	11.8%	7.5%	8.3x	-30%
Dec-76	5.0%	6.8%	10.6x	
Mar-80	14.6%	12.6%	6.9x	-5%

Let's now look at some data on how markets have actually behaved in previous periods of high and rising inflation. In the last 80 years or so, there have been 4 periods of high and rising inflation in the US - two in the 1940s and then we had the infamous 1970s.

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Take for instance the period from Apr-1946 to Apr-1947. Inflation started at 3.4% and went up to 19.6%. During that time, the 10Y didn't move much, the market PE went from 21.2x to 11.0x and the nominal return was -24%. You would notice that the 10Y didn't move much during this period, despite inflation running very high. And the reason for this is that the Fed fixed the term structure of interest rate in order to finance WW2.

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We all know that 1970s was a disastrous period for equities but the bulk of the damage was done in the first round of inflation when valuation expectations going in were much higher. Particularly interesting is the late 70s, where inflation was high but nominal returns were not as bad as in previous episode. And the obvious reason is the starting valuation, i.e. investor expectations in equities going into that period were already low. Although mind you, real returns were still quite negative during this period.

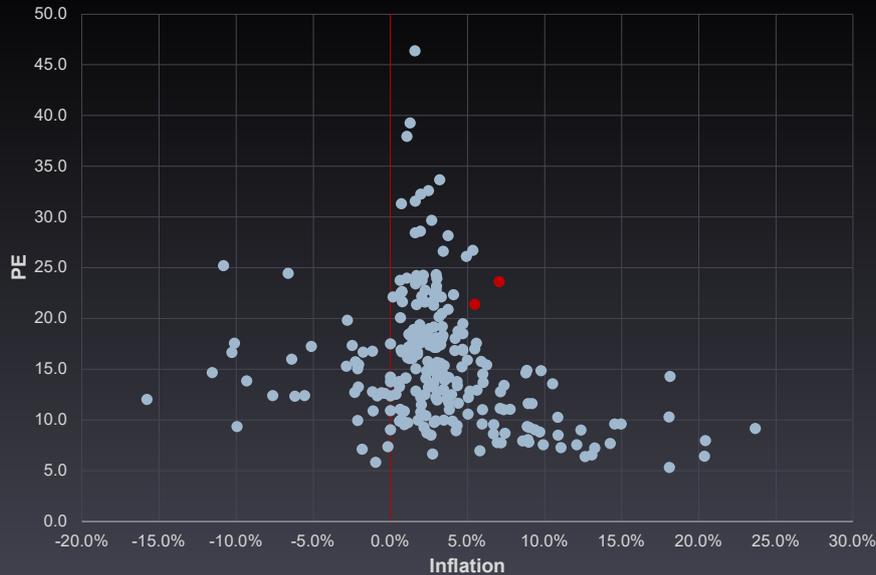
Suffice to say, an inflationary environment is not a good environment for equities or other long dated financial assets.

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May-22	8.6%	3.5%	19.0x	?

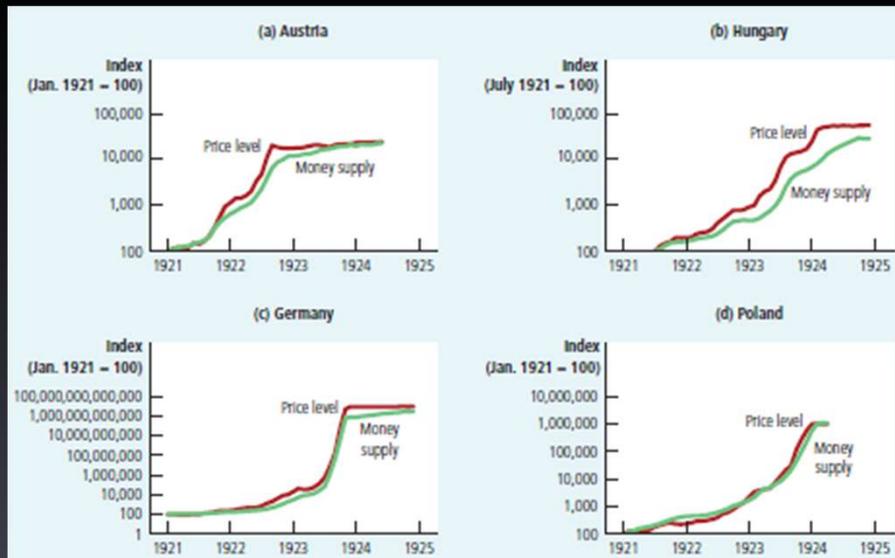
And this is where we are even after the fall of the last 6 months. Inflation is running at 8% while the PE is 19x

Inflation eats at the core of financial assets



I want to close this section with a chart that maps out the PE ratio of the S&P 500 at various levels of inflation over the past 100 years. I think this chart is quite instructive. Clearly, inflation anywhere between 0-5% is the sweet spot for equities. As soon as inflation goes beyond 5%, historically, the probability of a decent outcome for equities is quite low. The red dots represent the two outliers which are very recent data point from 30-Jun-21 and 31-Dec-21. And we know that in the last 6 months, the market has corrected for those outliers somewhat.

What causes inflation?

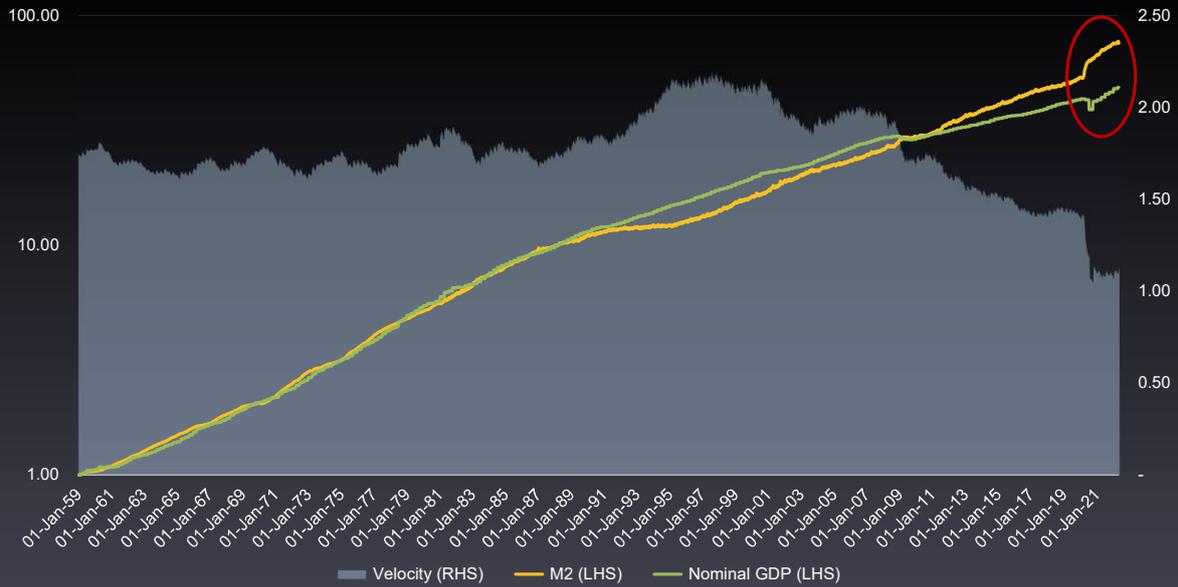


Source: *Principles of Economics, 8th Edition, Greg Mankiw*

I want to now talk about what causes inflation? Nobody knows for sure but to some degree we are all cognizant of the supply side factors and the difficulties businesses have been having on that front. Supply side factors, however, are probably more benign as they historically have seemed to sort themselves out. There's another side to inflation which is the demand side, that is too much money chasing too few goods. And that is a bigger problem.

Which brings us to money supply. Over the long term, there is some linkage between money supply and inflation in an economy, even though it might not be perfect. For example, have a look at the hyperinflation of the 1920s in these European countries. The one thing that they had in common was a big jump in the money supply of these economies. And price levels stabilised only once these governments stopped printing money.

US: Money supply and Nominal GDP



So what's happened to money supply in the US? Well, we all know it's been expanding since the GFC. But the pace of expansion since COVID has been quite stark. And in hindsight, with employment running at record low levels, the stimulus packages were too excessive in the US.

Just to be clear, this increase in money supply is not even close to mirroring the increase in some of the European countries we looked at in the previous slide. However, it is big enough to cause a spike in inflation. And the difficult thing about inflation is that once it's out of the bottle, it's difficult to put back in.

*“Only people who have never lived through an inflationary period will say, ‘what's the big deal about inflation?’. **It drives everything else out of the conversation and it drives markets.**”*

Ultimately, this quote from Prof. Aswath Damodaran sums up the current situation well.

"Only people who have never lived through an inflationary period will say, 'what's the big deal about inflation?'. It drives everything else out of the conversation and it drives markets."

It should come as no surprise if over the coming months inflation continues to dominate how markets behave.

Money Supply



Inflation



Bond Yields



Intrinsic Value

So, bringing it all together, money supply drives inflation which drives bond yields and thus has an impact on intrinsic value.

What are we doing about it?

**Increased Cash
Balance**

**Strong Balance
Sheet**

Pricing power

And finally, I want to end with what we are doing given this backdrop. Firstly, we took the opportunity of the bounce in March to raise the cash levels in the fund. Secondly, our portfolio has a very strong balance sheet with minimal debt. And lastly, we have allocated more of our portfolio in companies that we think have pricing power although we cannot be sure since none of those companies were in existence last time we had inflation. So, only time will tell.

Every market crisis is slightly different and it is important to put it in its right context. For example, the current one seems very different to March 2020. COVID was brutal but it was quick. This one could be prolonged depending on how long inflation persists and how high it gets.



To end on a lighter note, strap in, this is going to be a wild ride.