Absolute Return Partners

The Absolute Return Letter

November 2021

When r>g

What are the implications when capital market returns outstrip economic growth?

r>g?

Last month, I argued that wealth *cannot* grow faster than GDP forever. It is quite simply a mathematical impossibility. If you didn't read the October Absolute Return Letter, you should. It is a terribly important topic, hence why this month's letter contains more of the same. The October letter raised a few eyebrows, though, and my inbox momentarily looked like Fifth Avenue during evening rush hour. *"What prevents wealth from out-growing GDP forever?"*, was the typical question asked. This is a rather hairy topic, but let me try and simplify it as much as I possibly can.

△GDP is a proxy for income growth at the aggregate level. Let's keep things simple and call that g. In other words, △GDP ≈ g. If the rate of return on financial assets (r) is used as a proxy for the growth of wealth (and it is indeed a good proxy), I am essentially arguing that r cannot be bigger than g forever.

When r>g, wealthier households enjoy high rates of returns relative to economic growth, while the opposite is the case for poorer households. In other words, inequality worsens. There are both microeconomic and economic policy implications associated with that, as most governments would want to curb the rise of inequality in society.

In this month's Absolute Return Letter, I will do my very best to explain what the implications are, should wealth continue to grow faster than income, as it has done for quite a while, but also why the trend is very unlikely to continue forever. Woody Brock of Strategic Economic Decisions introduced me to the topic some 12 years ago. More recently, the French economist, Thomas Piketty, Professor at Paris School of Economics, published a book on the topic called *Capital in the 21st Century*. The book even made it to the New York Times bestseller list, which is highly unusual for a book on economics.

Why wealth cannot grow faster than income forever

Since the World began to recover from the Global Financial Crisis, wealth has grown fast in many countries, but nowhere has it grown faster than in the US. That is at least the case as far as the OECD is concerned. I suggest you take another look at Exhibit 1 in the October Absolute Return Letter which you can find here. As you can see, wealth-to-GDP has risen almost vertically in the US over the last few years.

Another good proxy for wealth is total equity market capitalisation which, as you can see in Exhibit 1 below, has surpassed the elevated levels of 1999 and is now at an all-time high. Obviously, equities do not provide the full picture, but if you include the steamy property markets we have enjoyed in recent years, I am sure you get the point.

Exhibit 1: Global equity market capitalisation, $Tn
Note: Global market cap provided by MSCI and global GDP by IMF and World Bank
Source: MRB Partners

Please be aware that the long-term mean value of wealth-to-GDP is not exactly the same all over the world, and the reason for that is that capital efficiency (how much capital is required to grow GDP by $1) varies from country to country. On average, wealth-to-GDP is about 4 times, and in the US – the biggest economy of them all – it is 3.8 times. In other words, in the US, it takes on average 3.8 units of capital (wealth) to generate one unit of output (GDP).

However, over 'shorter' periods of time, that number may fluctuate a great deal depending on the nature of the regime we are in. For example, from 1966 to 1980 – a period characterised by uncomfortably high inflation – the cumulative growth of inflation-adjusted financial asset wealth in the US was -43.5%, (source: Strategic Economic Decisions). If you subscribe to ARP+, you should take a look at our Research Paper from February 2021 for more details on the topic.

Now, with inflation starting to rear its ugly head again, it is indeed possible that another regime change is imminent. Could we already be in the early stages of a higher-inflation regime? Wealth has benefitted from falling interest rates over the last 40 years and, with inflation getting perkier again, bonds may finally have reached the end of their multi-decade bull market run.

Don't get me wrong. I do *not* expect a repeat of the late 1970s, but less is required to upset the cards. Even if the rise in interest rates is limited to only a couple of percentage points, it may be enough for the wealth regime to change.

The ratio of wealth-to-GDP is only one of several well-established ratios that define the nature of financial conditions overall. Take for example the ratio of debt-to-GDP – i.e. how much debt is required to grow GDP by $1 – or think of the most celebrated ratio of them all – the price-to-earnings ratio, aka the P/E ratio. The debt-to-GDP ratio establishes where we are in the debt supercycle (see our ARP+ paper on debt supercycles here), while the P/E ratio is *the* key driver of investors' appetite for equities in deciding whether they are attractive or not.

All these ratios have a well-established mean value with the P/E ratio being the easiest to explain, so let me have a go. You have probably heard someone tell you before that the long-term mean value of P/E ratios is about 15, but have you ever wondered why 15? Why not 10 or 20 or something completely different? Because interest rates have, over the long-term, averaged about 5%, and a P/E ratio of 15 generates a rate of return on equities equal to the 5% in bonds plus the long-term average risk premium that investors typically require when investing in equities. Precisely for that reason, P/E ratios have, over the long-term, averaged 15.

You may argue that, just because the P/E ratio has averaged 15 times over the long-term, why should (US) wealth-to-GDP have a well-defined mean value of around 3.8 times? What do the two ratios have in common to justify that? The key when looking for the answer to that question is *risk premium*. Just like equity investors require a certain risk premium, so do capital owners when making their capital available for economic growth.

Now, think of wealth as the total amount of capital available for investments in the real economy and think of GDP as the total output in the economy. Wealth-to-GDP is thus a gauge of capital-to-output and measures how much capital is required to produce one unit of output. By applying some elements from economic growth theory, which is a very hairy topic (I hardly understand it myself!), one can prove that the capital-to-output ratio is always in the range of 3.5-4.5 times regardless of how developed the economy in question is, *as long as* it is an open market economy.

The follow-on from that is that the capital-to-output ratio should be unaffected by the invention of new technologies and, consequently, so should wealth-to-GDP. We therefore know that the steep rise in wealth-to-GDP over the last quarter of a century is unsustainable and can only be justified if the underlying theory – economic growth theory – can be proven wrong, and nobody has been able to do so yet.

An introduction to Thomas Piketty's work

I want to bring up Thomas Piketty in this context, as he has been very vocal on the subject of wealth inequality. He is essentially arguing that capital owners (owners of wealth) will get richer, and the poor will get poorer, unless there is a political will to destroy wealth through a wealth tax or other means.

Thomas Piketty is of the opinion that the gap between after-tax returns on capital (r) and the economic growth rate (g) – a gap that has started to widen again after getting smaller for most of the 20th century – explains why the gap between rich and poor is getting bigger (Exhibit 2). Furthermore, as already mentioned, he is arguing that short of an external shock of some sort, the gap will continue to widen.

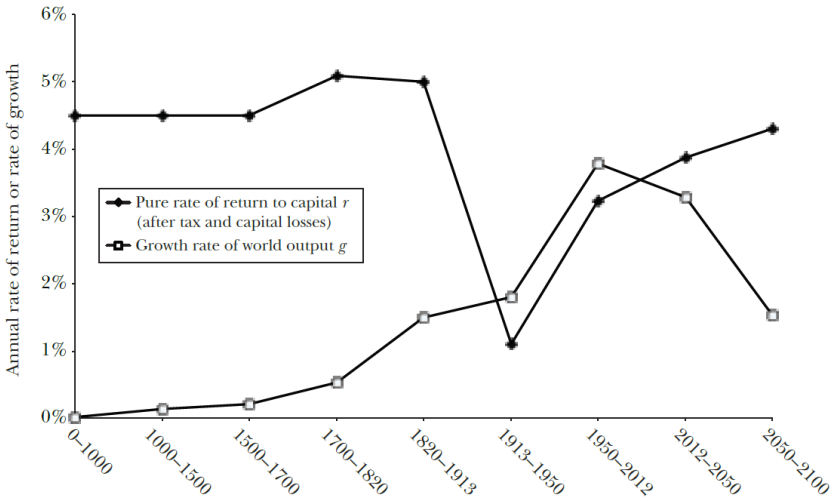

Exhibit 2: Worldwide after-tax rate of returns, from antiquity to 2100E
Source: Thomas Piketty

The problem with Piketty's argument is that, for the return on capital (r) to exceed the GDP growth rate (g) for longer periods of time, the elasticity between capital and labour *must* be greater than one. There is, however, plenty of empirical evidence to suggest that the elasticity between the two is in fact well below one. In other words, as Woody Brock and others have argued, the inequality gap *cannot* continue to rise forever and ever.

Having said that, and as you saw in Exhibit 2, r has exceeded g in recent years after about a century of not doing so. In pre-industrial times, capital owners grabbed most of the pie, but the 20th century was a bad century for them. Workers unionised, and their living standards vastly improved. However, more recently, r has started to exceed g again.

What does it all mean?

What will happen eventually if the rich continue to get richer and the poor continue to get poorer? As we learnt from the French in the 18th century, the simple answer to that question is "revolution", but you deserve a more nuanced answer than that. Allow me to explain.

To begin with, let me share some statistics with you to back up Piketty's claim that inequality is definitely on the rise again. As you can see in Exhibit 3 below, in the last 35 years, the wealth of the extraordinarily wealthy has risen more than three times faster than the wealth of ordinary people, +6.8% vs. +2.1% in annual terms. In other words, at least in relative terms, the rich are indeed getting richer and the poor getting poorer.

For top 1/(100 million) highest wealth-holders (about 30 adults out of 3 billion in 1980s, and 45 adults out of 4.5 billion in 2010s)	6.8%
For top 1/(20 million) highest wealth-holders (about 150 adults out of 3 billion in 1980s, and 225 adults out of 4.5 billion in 2010s)	6.4%
For average world wealth per adult	2.1%
For average world income per adult	1.4%
For world adult population	1.9%
For world GDP	3.3%

Exhibit 3: Average real growth rate of wealth per year, 1987-2013
Source: Thomas Piketty

One could argue that *everybody* is in fact getting richer, so what is the problem? That is indeed correct, but that is not how the human mindset works. If your neighbour can suddenly afford to buy the fancy new Porsche that you have been dreaming about for months, you suddenly feel poorer, even if you aren't.

"The Unintended Consequences of Letting the Rich Get Richer" is a fascinating blog I came across when researching this topic. Lots of good points are made, but I shall not repeat them here. Instead, I suggest you read the blog yourself – you can find it here. I missed one unintended consequence, though. The global rise of populism, which, in my opinion, is one of the most important ones of them all.

Populist parties always do well in crises, whatever the root problem is. Parts of Europe have suffered a major unemployment crisis in recent years, and that has fostered a wealth of new parties, more or less populistic in nature. How powerful the link between the two is, you can see below – the more unemployed we have had in Europe, the more have voted for a populist (Exhibit 4).

One of the many problems with populists is that they say whatever people want to hear, irrespective of what the truth is. You could argue that one could say the same about

virtually all politicians, but I would argue that there is a heck of a difference between for example a Jair Bolsonaro (President of Brazil) and an Angela Merkel (ex-Chancellor of Germany).

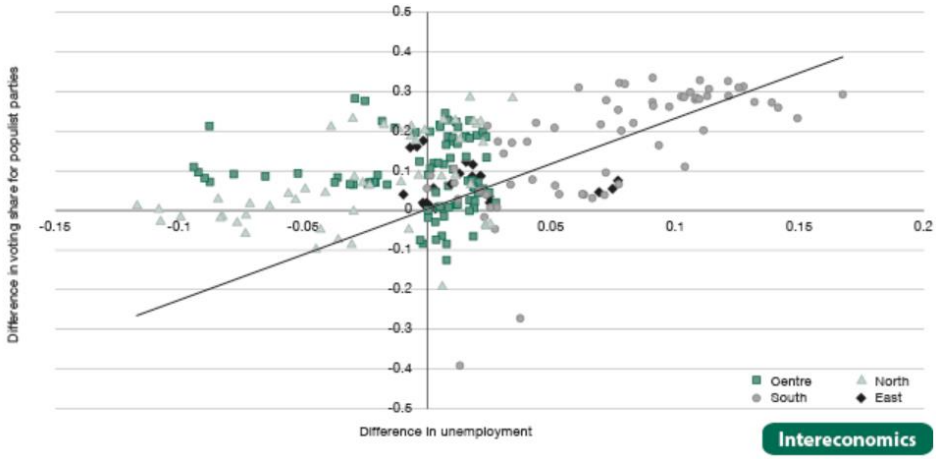

Exhibit 4: The link between unemployment and voting for populists in Europe
Source: *Intereconomics*

The problem becomes unavoidable when populists find their way into mainstream parties. Take for example a certain Boris Johnson who was fired from at least two other jobs for being a notorious liar, but that didn't prevent him from becoming Prime Minister of a country that prides itself on honesty and fair play. The secret? Tell people exactly what they want to hear, in this case Brexit, and worry about everything else later.

Before wrapping this month's letter up, let's go back to the Bastille Day outcome that I hinted at earlier. The Scandinavian model may offer a solution to that nightmare scenario. In Norway, Sweden and Denmark, wealth inequality is actually substantial, but income inequality is not. Scandinavians accept that some have amassed extraordinary amounts of wealth as long as they can afford certain privileges themselves – particularly privileges their parents couldn't afford. It may not be a new Porsche, but less will do.

Final few words

I hope you now have a slightly better understanding as to why wealth cannot grow faster than GDP forever and why, given that wealth-to-GDP is already at extreme levels in many countries, we are due some mean reversion sooner or later.

I find it very frustrating that the economic growth theory underpinning it all provides no clues whatsoever on timing, making it hard to integrate into one's portfolio construction strategy. The card house might collapse tomorrow morning, or the show might go on for many years to come. We can all speculate, but nobody holds the answer to that question.

I vividly remember the Japanese experience of the late 1980s. When the Japanese card house finally collapsed in late 1991, many good and honest people had already lost their jobs. Their crime? Warning their clients too early. When I see the Wall Street show unfolding today, there is more than one thing that reminds me of the time leading up to the Japanese bloodbath in the early 1990s – a horror show that is still affecting financial markets in Japan some 30 years later.

Am I saying you should sell everything and run for the hills? No, I am not. I don't think mayhem is imminent. The economic policy programme conducted in Washington D.C. at the moment is very reflationary, but it is also a programme that will most likely lead to vast amounts of capital being misallocated. Therefore, in the short-term, financial markets will most likely respond favourably to strong economic growth (provided inflation doesn't get out of control), and only later will the penny drop that much of the capital provided more recently has been invested non-productively.

One final word. If you find the topic I have discussed today of more than passing interest, and don't have the appetite to go through Thomas Piketty's book, I suggest you read a paper he published in late 2015, which you can find here. Enjoy!

Niels C. Jensen
1 November 2021

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