

Long-term returns

Wrong for the right and wrong reasons

Investment Outlook

Triodos @ Investment Management

There are only a few examples in history when pandemics changed the course of the global economy and society: The Black Death in the Middle Ages, the Spanish flu in 1918-1920, and COVID-19, which we are right in the middle of now. There are also examples in history when ecological disruption wiped out entire ecosystems. Think of the poor dinosaurs. And yes, again, we are right in the middle of such a disruption.

The strange thing is that financial markets by and large continue as if nothing is happening. Yet there is a lot going on in our ecosystems, our societies, our economies, all with grave consequences.

Economic activity is slowly recovering, but a sustainable recovery is not yet to be seen.

We think it is time to face the challenges and to start making different investment choices.

Both for the long and short term.

Our longer-term investment outlook is one of generally lower financial returns in the coming years, in a highly uncertain environment. The investment winds have turned: the tailwinds of the last four decades, favouring higher returns, have changed into headwinds leading to lower expected long-term returns across the board.

Our most urgent recommendation is that the financial industry should look at returns in a different way. Otherwise, clients will be misguided for the right and the wrong reasons in what returns to expect from their investments. In addition, we issue this warning: expecting the same financial returns as before boils down to financing the collapse of ecosystems and leads to short-term gains at the cost of permanent loss.

Long-term returns, ecosystems and the avoidance of collapse

Long-term returns: wrong for the right and wrong reasons

Hans Stegeman

In the financial sector, most metrics are backward looking. The metrics that we promise our clients to deliver upon – notably expected returns – are chiefly based on historical performance. Yet we know that looking backwards does not suffice, hence our traditional disclaimer: ‘past performance is no guarantee for future returns’. Furthermore, the COVID-19 crisis has brought us to a turning point; the world economy needs to and will radically change, which will certainly have repercussions on economic growth and financial returns. This is, of course, what we aim to achieve with our investment approach.

Our longer-term investment return expectations are therefore based on a different perspective. In our long-term outlook, we forecast generally lower financial returns in the coming years, in a highly uncertain environment. Almost all the **headwinds we foresaw** two years ago are currently playing out.

Our most urgent recommendation, however, is that the financial industry should look at returns in a different way. Otherwise, clients will be misguided for the right and the wrong reasons in what returns to expect from their investments. In addition, we issue this warning: expecting the same financial returns as before boils down to financing the collapse of ecosystems and leads to short-term gains for a permanent loss.

The origins of high historical returns

Long-term returns of risky assets such as equities have long averaged around 7% per year (Jorda, Knoll, Kuvshinov, Schularik, & Taylor, 2019). Safer investments, such as government bonds, yielded 1-3% on average but were rather volatile (Jorda, Knoll, Kuvshinov, Schularik, & Taylor, 2019). Recent research shows that the notion of asset returns (r) exceeding the rate of economic growth (g) seems to hold in the long run with a yearly gap of around 5% on average. This is especially true since 1990 when the size of the stock market became really detached from the size of the economy (Kuvshinov & Zimmerman, 2020). This idea was put forward by Thomas Piketty ($r > g$), and implies that inequality increases because the wealth of asset owners grows faster than the average income in an economy (Piketty, 2014).

Why were returns on assets so much higher than economic growth? Of course, part of it is risk premium. Another part can be a composition effect, since listed companies, which generally make up the largest part of asset portfolios, represent only a part of the total economy and thus do not need to equal average growth. Nevertheless, can we explain this high return phenomenon in hindsight? A comprehensive quantitative approach is almost impossible. Several

qualitative factors, however, can explain both the high returns and in some cases the higher economic growth.

First, (financial) globalisation likely helped to increase global economic growth over the last decades (Grossman & Helpman, 2015). In addition to the evidence that globalisation enhanced factor productivity, there is some evidence that financial returns were positively influenced, although it is questionable if this is more than the overall performance of the economy (Bekaert, Harvey, Kuguel, & Wang, 2016).

Second, financial deregulation and lower taxation supported asset returns, especially equity returns. For instance, average corporate tax rates decreased globally from 46.7% in 1980 to 26.3% in 2019, declining in every major region.¹

Third, further commodification of the economy increased GDP with the same level of economic activity. Commodification is the transformation of all kinds of products, services, nature, information, etc. into tradeable commodities, bought and sold on markets. This ranges from household or care

¹ <https://taxfoundation.org/publications/corporate-tax-rates-around-the-world/>

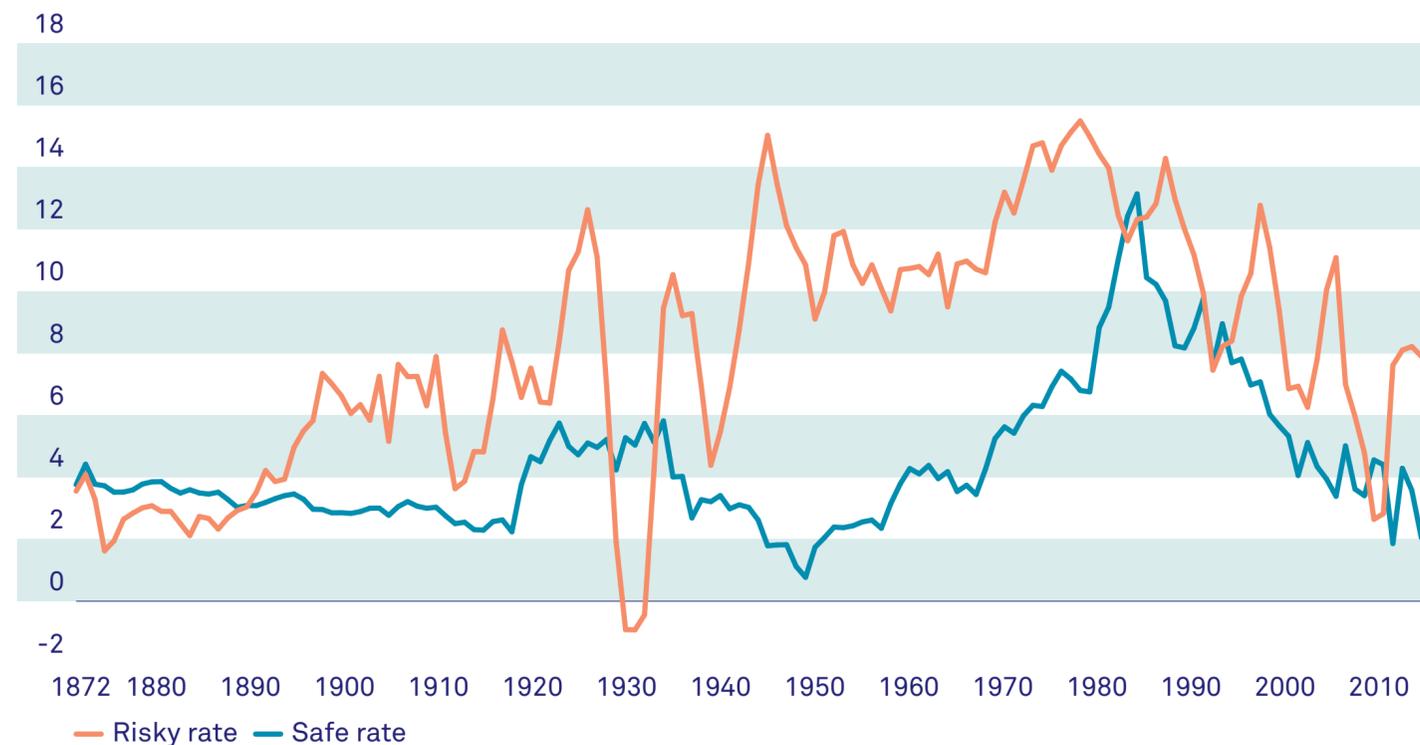
activities that were formerly done within a family (childcare, cleaning, restaurant or takeaway meals), to marketisation of all forms of leisure activities that became commodities (fitness schools, holidays).

Fourth, debt-to-GDP (both private and public) has surged during the last half a century fuelling returns and laying a claim on future production (future GDP growth). Currently, global debt is higher than ever which implies that our claim on future production is also higher than ever. An important factor in the emergence of this enormous debt pile is that interest rates have been declining since the early 1980s, for a large part the consequence of monetary policies (Borio, Disyat, Juselius, & Rungcharoenkitkul, 2017). Claims on future productivity have thus become cheaper while current returns have increased.

In addition to these monetary arguments, returns exceeded economic growth for another important reason. The cost of externalities was lower than is optimal from a societal perspective; all external effects, from water and ground pollution to carbon emissions that were emitted during production, were never priced. Energy is a case in point. Ever since the Industrial Revolution, the whole economy has been fuelled and transformed using cheap fossil energy. Mainstream economic theory attributes all economic

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Figure 1 Historical returns on safe and risky assets (annual returns, %, 5-y moving average)



Source: (Jorda, Knoll, Kuvshinov, Schularik, & Taylor, 2019), database accessed 21 October 2020.

productivity to labour and capital. Yet the Industrial Revolution primarily meant the substitution of human labour by machines, fuelled by fossil energy. We only attribute the investments in machinery (which enable the use of fossil fuels) to a production factor (capital) and leave the rest (energy use) up to ‘technological

progress’, while in fact it is substitution from human labour to energy. One barrel of crude oil performs about 1700 kWh of work, a human labourer about 0.6 kWh in one workday. Simple arithmetic shows that one barrel of oil equals over 11 years of human labour. Not explicitly taking energy (and the laws of

thermodynamics) into account is a flaw that many ecological economists have already warned about (Kummel & Lindenberger, 2020). Correcting growth accounting for this omission shows that the production factor energy accounts for a substantial part of economic growth that mainstream economics has attributed to unexplained ‘technological progress’. This development has led to higher private returns at the expense of the environment. In addition, the fact that cheap energy is almost exhausted must be considered when looking at future developments.

And what is true for energy, is also true for other, mostly negative, externalities from production, such as deforestation, biodiversity loss, cheap labour and poor working conditions. These factors have all contributed to higher returns than socially desirable.

Many factors that facilitate high returns can be recognised. Demography has also contributed considerably to real, overall growth, especially in the second half of the 20th century.

Forward-looking flaws

Traditionally, long-term growth expectations – the basis for longer-term return expectations – are calculated based on the classical Solow model (Solow, 1957). This shows growth in labour supply, changes in capital supply and productivity growth, in most cases based on historical averages. Based on these rather simple economic assumptions, structural growth paths for different economies are derived using a growth accounting framework. Growth expectations differ because of differences in labour supply. Aging countries grow less while differences in capital and productivity increase, and less advanced countries typically catch up on growth, also based on their institutions and integration in the world economy. Together with current market valuations, expected risk premiums and inflation, these growth figures are used to calculate long term return for different asset classes.

Our calculations arrive broadly at the consensus of relatively low long-term return expectations compared to historical averages (see box). The main reasons for this are a lower or even negative contribution from labour supply in most advanced economies (aging), low expected productivity gains, and the current high valuations in most markets. Generally, real global

Standard long-term asset returns

The expected long-term financial asset returns are part of our strategic asset allocation considerations. We use the ‘business as usual’ scenario to calculate these returns. We calculate these long-term returns for a period of 15 years, thus eliminating a permanent influence of short-term deviations, such as a strong COVID-19 recovery or a delayed recovery. However, this scenario completely neglects the negative effects of our current economic growth model for people and the environment, or the unsustainability of certain developments. This is synonymous with an unsustainable world. Standard calculations of expected returns on government bonds, corporate bonds and equities are low from a historical perspective. The calculated expected returns of US treasuries are the highest and also closest to their historical returns, compared to UK gilts, government bonds from eurozone countries and Japanese government bonds. The calculated expected returns for eurozone investment-grade credits deviate even further from their historical returns. The calculated expected returns of UK and Japanese equities match their historical returns. Expected returns of European and especially US equities remain far removed from their historical returns. Overall, risk taking is only mildly rewarded from a historical perspective.

annual growth expectations average between 1 and 1.5% annually while the historical average is around 3%.

This straightforward method has big advantages. It leaves a lot out of the equation, from economic inputs such as natural resources to consequences and causes of growth such as debt inequality and carbon emissions. And it makes very simple assumptions about the big unknown – productivity growth. It also assumes that capital can be substituted by labour or natural resources (and vice versa) and that ultimately technology will help us save the economy from ecological disasters.

This approach is wholly unsuitable, however. Firstly, it assumes that natural inputs play no role and that they are merely extrapolated from the past as a ‘total factor productivity’ black box. Yet we know that cheap fossil fuels are rapidly becoming depleted. Changing the energy mix going forward will have drastic consequences for economic growth. Other material inputs, from wood to metals, are also becoming scarcer and therefore more expensive.

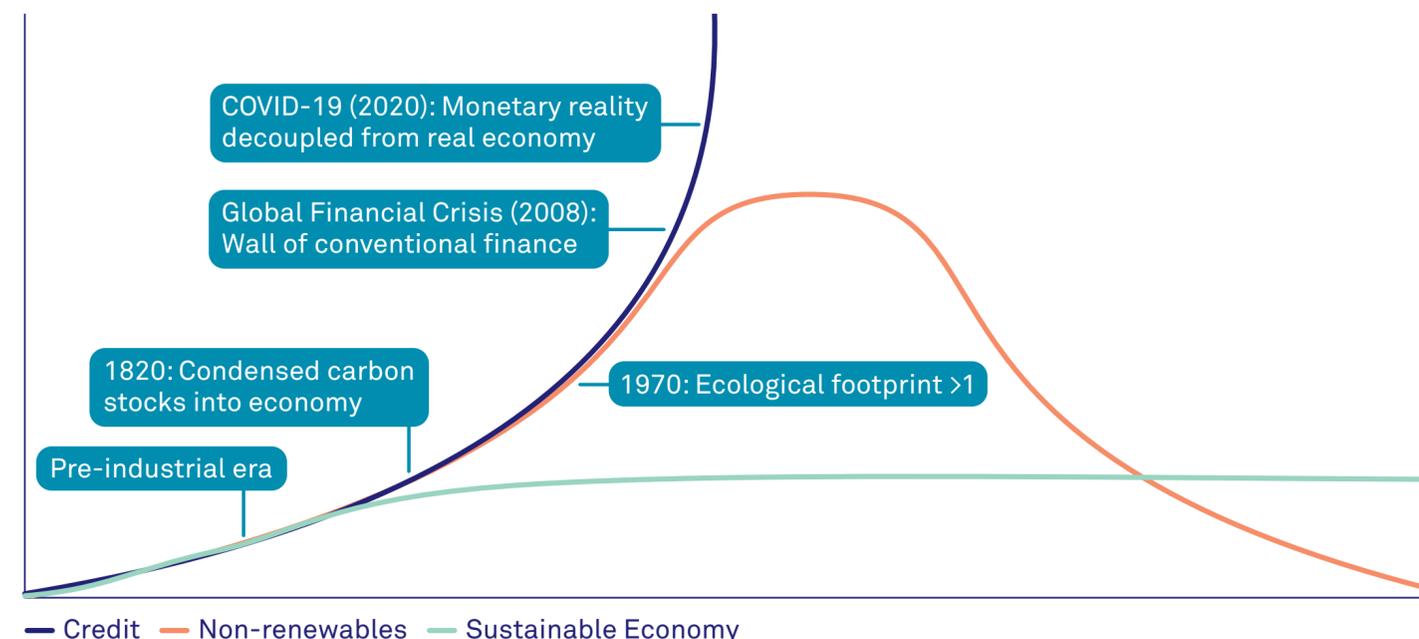
Secondly, this method assumes that historical averages of productivity growth and growth in inputs to the economy are in some way indicative of what

might happen in the future. This is highly doubtful. The factors that contributed to higher returns have a huge ‘one-off’ factor and cannot easily be repeated in the years to come. What is more likely is that some of these factors will be reversed, leading to even lower average returns. Only a forward-looking approach, which considers all the different factors that contributed to a favourable financial environment in the past, can give some direction for future return expectations.

Third, and most importantly, it assumes that historical factors that contributed to growth (except demographics) will continue forever.

Figure 2 is a highly stylised version of the relation between material inputs, economic growth and credit in the economy, based on Hagens (Hagens, 2020). Figure 3 shows the ‘real-life’ situation of developments based on actual world data. Credit can, in the long

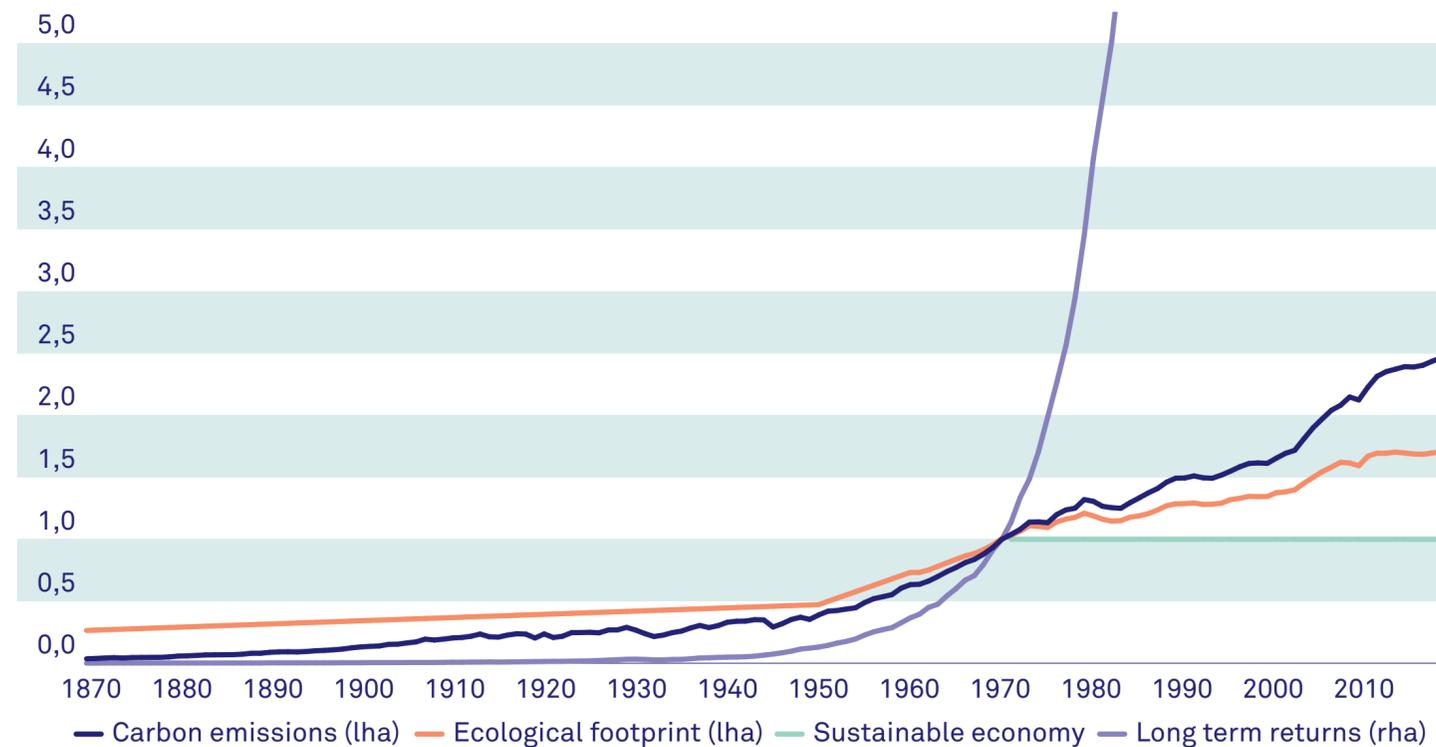
Figure 2 Resources, credit growth and a sustainable economy



Source: Triodos IM, adapted from Hagens (2020)

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Figure 3 Resource use, carbon emissions and long-term returns (Index, 1970=1)



Sources: Long term returns: Macrohistory; Carbon emissions: Our world in data; Ecological footprint: Global footprint network, Toth & Szigeti, 2016

term, be loosely interpreted as financial asset returns. In pre-industrial times, it was quite clear that economic activity, credit and material inputs were on average directly linked to each other. The share of the financial system in relation to the rest of the economy was incomparably smaller, and economic activity stayed

clearly within ecological boundaries. Around 1820, economic activity started crossing these boundaries when we started using coal as easy-to-grab inputs for our economic system. The resulting economic growth led to materially improving living conditions. The success of this model led to an economic system

that had exceeded its ecological boundaries by 1970. From the 1980s onward, the great disconnect between the real economy and finance accelerated with an increasing amount of the economy becoming financialised until the financial crisis in 2008. Since then, we are stuck in an era of unconventional finance characterised by strong interventions by central banks with extremely low interest rates and accommodative monetary policies, as well as huge public and government debt to support economic activities. The success of these policies and measures has been limited, and the last 10 years were marked by a lack in effective demand (Summers, 2018), resulting in lower growth rates (yet higher financial returns).

COVID-19 might be a watershed moment. Since the outbreak of the pandemic, our exponentially increasing financial growth model needed the support of unprecedented 'rescue' packages: a fiscal impulse of around 12% of global GDP and a monetary impulse of around 4% of global GDP (IMF, 2020). This resulted in a further disconnect between real economic activities and financial returns.

Looking forward: lower is inevitable, unless...

If we take time to reflect, it is very clear that we need a different, more forward-looking approach to see what the long-term returns of investments might be. Expecting the same returns as before would be equal to financing a collapse: possible in the short term, but inevitably disastrous in the long run.

The 21st century is diverging from the trajectory we have experienced in previous decades:

- 1 Energy and resources are again becoming constraining factors on economic and societal development.
- 2 Physical expansion predicated on credit is becoming riskier and will eventually reach a limit.
- 3 Societies are becoming polarised and are losing trust in governments, media, and science.
- 4 Ecosystems are degrading, having to absorb large quantities of energy and material waste from human systems.
- 5 Favourable financial circumstances for corporate profitability such as tax reductions will probably reverse.

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We don't know how these effects will play out in the years to come. However, we can break them down into several factors that are relevant for the investment environment.

First, the energy transition requires a long-term orientation. Not only in terms of expected labour productivity, which, as we have explained, is part of the productivity increase attributed to energy, but also in terms of asset allocation. Whereas investing in fossil fuels is not the best option from a sustainability perspective or a risk-return perspective. Therefore, investing in transitions, either in energy or in general non-renewable to renewable resources, is a better option in asset allocation.

Second, making finance with finance is becoming a more dangerous game (although it can go on for some time), with high debt levels globally. The best way to achieve an adequate financial risk-adjusted return in the longer term is to invest in the real economy. Companies with strong balance sheets that do not depend on high growth expectations are the safer options.

Third, geopolitical tensions are here to stay and can make global supply chains highly vulnerable. There is no easy way to mitigate this risk in the strategic asset

allocation; we leave that problem to our tactical asset allocation framework in this investment outlook. In the long run, we expect that adverse effects of geopolitics will in general be covered by changes in supply chains and strategic adaptations in business models and sourcing.

Fourth, harnessing against degrading ecosystems in an investment approach can be done in two ways. The positive approach is to invest in sustainability solutions, such as overweight companies that contribute to a circular and/or regenerative economy. Or avoid companies that have high risk (in business and externally) to sustainability threats and use vulnerable ecosystem services in an irresponsible way in their business model.

The challenges we face should be taken into account in every strategic asset allocation framework. Our approach is to assess them from a positive angle and to invest in impact and transitions. This approach will help to avoid risks and guarantees a positive long-term return.

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