Global Macro

The end of secular stagnation? (Part I)

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Productivity growth was anaemic during the decade that followed the financial crisis. A lack of investment and of business dynamism, as well as slow adoption of new technologies, have all contributed to weak productivity. But the pandemic could mark the end of this regime. Corporate investment intentions are booming, business formation is surging and the vast majority of employers are planning to accelerate further the digitalisation of their work processes. If these forces persist, there is a good chance that trend productivity growth could finally shift into a higher gear.

Investors appear to believe that secular stagnation will persist once the reopening surge is over

Secular stagnation characterised the decade following the financial crisis. And while advanced economies are expanding at their fastest pace in decades, the reduction in bond yields over the past few weeks suggests that investors expect this state of weak economic growth, low inflation and low interest rates to persist, once the sugar high from the post-pandemic reopening surge has faded away.

We are more hopeful as the pandemic appears to have accelerated some pre-existing trends. One of these is a more rapid adoption of new technologies

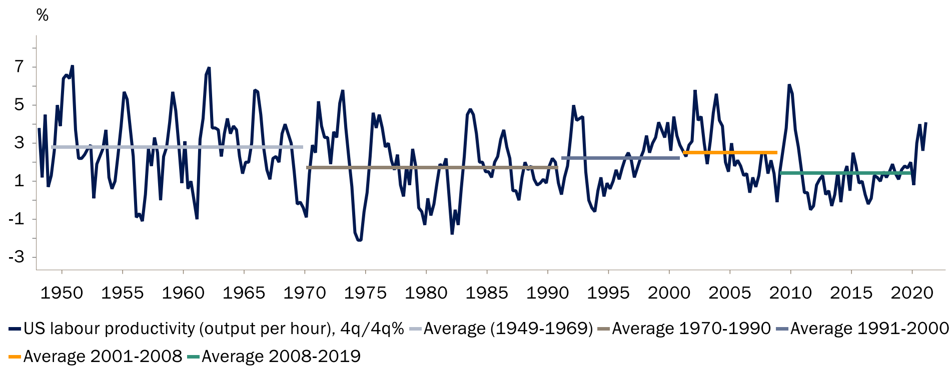
We think there are good reasons to be more optimistic about the future. The Covid-19 crisis appears to have accelerated some pre-existing trends that have the potential to boost investment relative to savings and to lift the long-term neutral interest rate. In particular, we see three major forces of change: (i) a more rapid and widespread adoption of new technologies pushing productivity growth higher; (ii) a policy regime change, with fiscal policy playing a more active role in macroeconomic stabilisation; (iii) a shift in the structure of the population moving away from ageing to aged (or rather retired). We will explore the first force of change in this note, and the other two in subsequent publications.

Understanding weak productivity growth

US productivity has oscillated between regimes of high and low trend growth. In Europe and Japan, productivity growth has trended down over the past fifty years

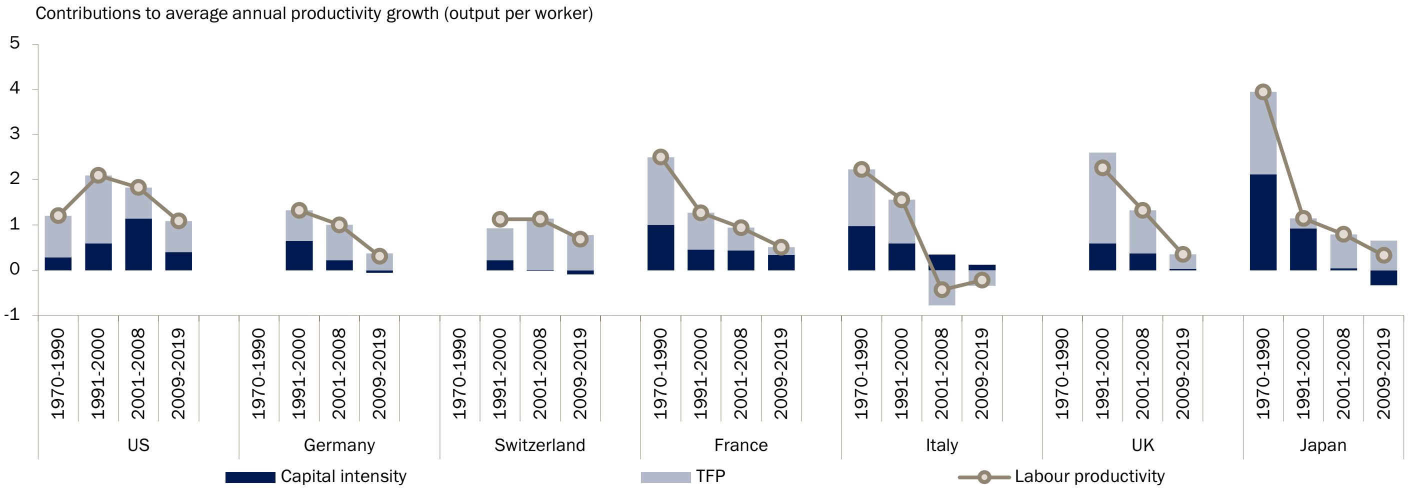
Labour productivity – that is, output per hour worked or per worker – in the US over the post-war period appears to have alternated between regimes of high and low trend growth. The beginning of the post-WWII period saw high levels of productivity growth. Then, during the 1970s and '80s, the US economy experienced a productivity slowdown that is sometimes associated with the dramatic rise in oil prices. While the next two decades saw a labour productivity rebound, probably triggered by the rise in information technology, productivity slowed again after the Great Financial Crisis. Most European countries and Japan did not experience this rebound in productivity growth in the 1990s and the 2000s. In some countries, the decline even accelerated during this period (Exhibits 1-2).

Exhibit 1: US productivity growth has oscillated between regimes of high and low trend growth



Source: Macrobond, Bank J. Safra Sarasin, 09.07.2021

Exhibit 2: Capital deepening and total factor productivity growth have declined in all major advanced economies over at least the past 20 years



Source: Macrobond, AMECO, Bank J. Safra Sarasin, 09.07.2021

Three factors appear to have driven down productivity growth

So what has led to this trend decline across all economies over at least the past 20 years? No single explanation is entirely convincing, but three of them fit the data best. First, there has been a lack of investment, depleting the capital stock per worker or per hour worked. Second, there has been a drop in the competitiveness of markets. Third, technologies and practices that should lead to higher levels of productivity have failed to percolate through all segments of the economy.

Productivity can be broken down into two parts: capital intensity and total factor productivity

Before going through these explanations, it is useful to break labour productivity down into two parts: capital intensity – that is the amount of capital per worker or hour worked – and total factor productivity (TFP). Capital is defined in a broad way; it includes traditional physical capital, e.g., tools and machinery, and also intangible capital such as R&D and intellectual property, which are particularly relevant for the digital economy. TFP is in fact a residual in growth accounting, i.e., it is the portion of output not explained by the amount of inputs used in production. It is often associated with a more efficient use of resources by various management techniques, new technologies and innovation, and their widespread adoption across the economy. Sometimes labour quality is also included, though historically it has accounted for a smaller share of productivity (in our charts, it is part of TFP).

(1) There has been lack of investment, resulting in a slower increase or a decline in capital intensity

The first explanation relates to the first component, and is particularly relevant for the decade after the financial crisis. Movements in capital intensity are closely tied to movements in labour productivity, all other things being equal. An increase in capital per hour worked (or capital deepening) leads to an increase in labour productivity. Typically, capital deepening increases during the recovery phase of the business cycle, as business investment picks up. However, during the recovery phase after the financial crisis, investment did not increase sufficiently to boost the capital-to-labour ratio in advanced economies. Indeed, between 2009 and 20019, the ratio was marginally up in the US and in the euro area, flat in the UK and Switzerland, and it fell in Japan (Exhibits 3-4).

(2) There has been a decline in market competitiveness and business dynamism

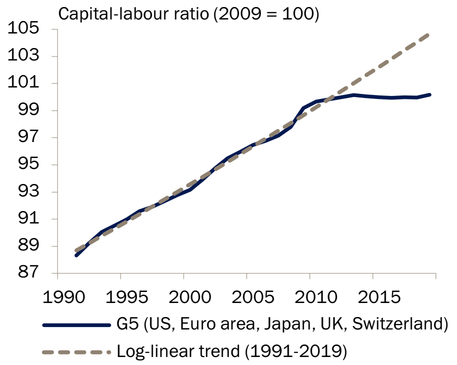
Over the past decade, a steady flow of research has shown a strong real-world relationship between competitive markets, technological innovation and higher productivity. In a recent paper, Klenow and Li, respectively economists at Stanford University and the Federal

Reserve Bank of San Francisco, show that innovation by new and young firms (aged between 0 and 5) contributed to about half of US productivity growth (and close to 60% of new employment) between 1982 and 2013, their sample period. But over this period, Exhibit 5 shows that the growth rate of new US firms trended down, perhaps reflecting higher barriers to entry, or other forms of anti-competitive behaviour by established ones. This same chart also suggests that a drop (rise) in the growth rate of new firms is associated with lower (higher) productivity growth three years later (admittedly, the correlation is not very tight as many other factors play a role too).

Young firms seem to be particularly good at coming up with new products or improving existing ones to displace incumbents

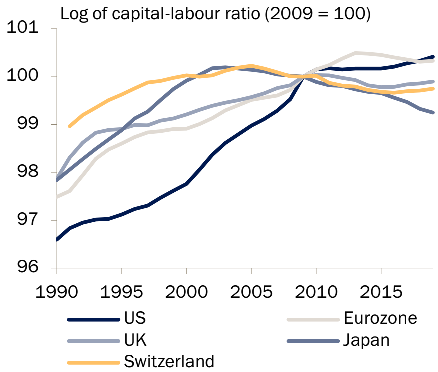
One explanation for this relationship is that new and young firms may be especially good at coming up with new products. They probably also have more incentive to overtake other businesses by improving their own products than do incumbents, which already tend to enjoy a big market share. The basic idea of the replacement effect is that a monopolist has less incentive than a competitive firm to innovate, owing to the monopolist's financial interest in the status quo. This finding is known as the Arrow Replacement Effect.

Exhibit 3: Capital intensity has flatlined



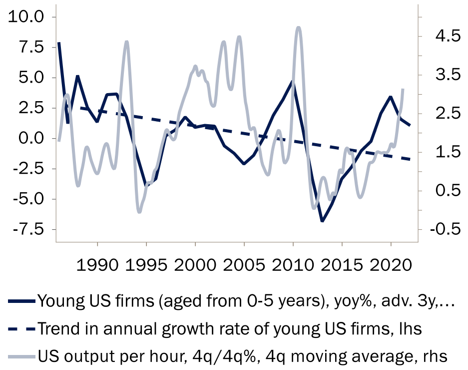
Source: Macrobond, Bank J. Safra Sarasin, 09.07.2021

Exhibit 4: It has declined in some places



Source: Macrobond, Bank J. Safra Sarasin, 09.07.2021

Exhibit 5: New firms tend to boost productivity



Source: Macrobond, Bank J. Safra Sarasin, 09.07.2021

(3) Technologies have failed to diffuse across economies

Finally, part of the explanation for low productivity growth is that technologies and practices that lead to higher levels of productivity are not diffusing sufficiently across and within economies. For example, an OECD study conducted in 2015 found that the productivity gap between the leading 100 firms in various industries and the rest of the firms in that industry has been rising, which may explain the drop in total factor productivity growth that occurred across most advanced economies after the financial crisis. In a more recent study, Andy Haldane from the Bank of England found that the gap between the most productive and least productive firms in the UK is large, and that the 'tail' of low-productive firms is particularly big, which probably explains why the UK is one third less productive than its international competitors.

Shifting into a higher gear

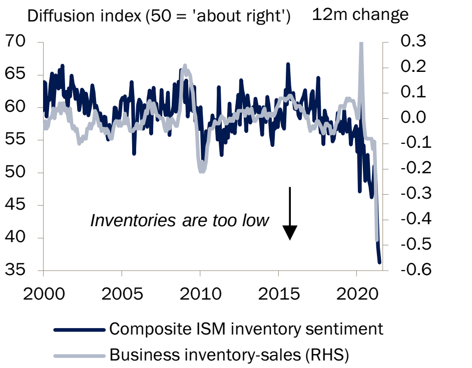
There are encouraging signs that trend productivity growth is shifting up

There are encouraging signs that advanced economies might finally be moving into a higher productivity growth regime, which the pandemic appears to have accelerated. James Kahn and Robert Rich, respectively from the Federal Reserve Bank of Cleveland and the Federal Reserve System, have designed a regime-shifting model that assigns a probability to whether the US economy is operating either in a low- or high-growth productivity regime. In the past, their model has been successful in assessing changes in trend productivity within a year or two of their occurrence. Its latest update shows that the probability of productivity being in a low-growth regime has dropped significantly.

Corporates seem to be much more willing to invest than they were after the financial crisis

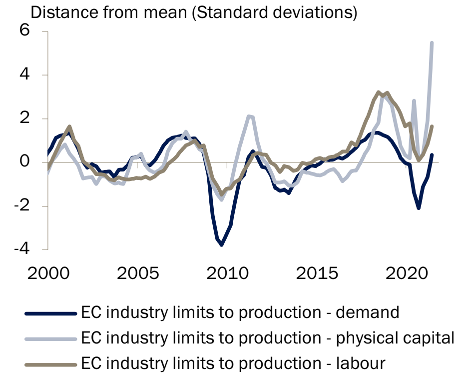
While we have to take these results with a pinch of salt given the unprecedented circumstances, we see three reasons to be more optimistic about the outlook. First, corporates seem to be much more willing to invest in this business cycle than they were after the financial crisis, probably reflecting strong expected demand and profit growth, a need to rebuild depleted inventory stocks and economies already operating at a high level of capacity utilisation (Exhibits 6-7). As a result, surveys of investment intentions or proxies for corporate investment have risen across all major economies (Exhibits 8).

Exhibit 6: US inventories have been depleted



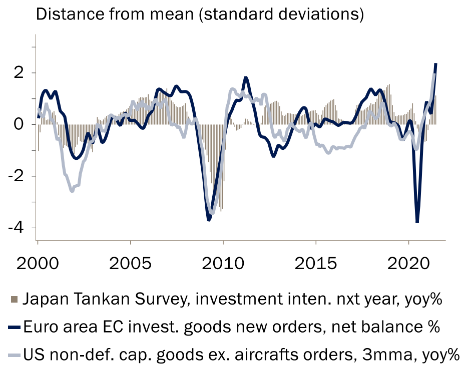
Source: Macrobond, Bank J. Safra Sarasin, 09.07.2021

Exhibit 7: Euro area firms are lacking capital



Source: Macrobond, Bank J. Safra Sarasin, 09.07.2021

Exhibit 8: Investment intentions have risen

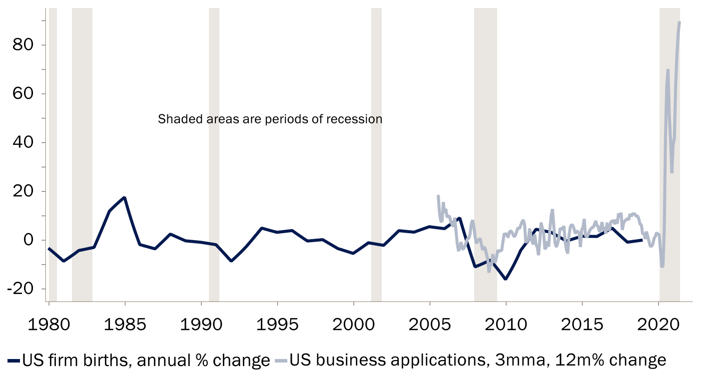


Source: Macrobond, Bank J. Safra Sarasin, 09.07.2021

Business formation has been booming since the start of the crisis, a healthy sign for future productivity growth

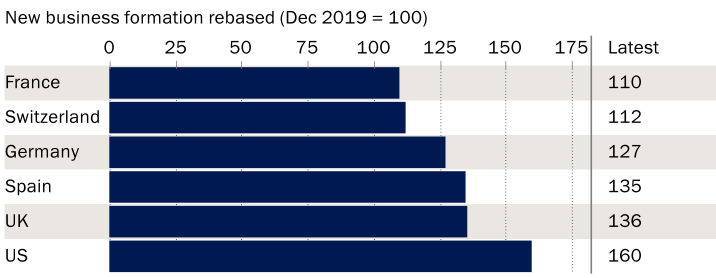
Second, the crisis has led to a boom in business formation in the US, and, to some extent, in Europe too (Exhibits 9-10). In the US, one third of these newly created businesses are in the retail sector, particularly in e-commerce. So, despite the alleged anti-competitive behaviour of 'big tech' companies, new entrants apparently see new opportunities. Perhaps the most striking change is that four times as many single-person companies have been founded since the pandemic began as during a similar time-period during the financial crisis. This may reflect sound foundations for building a new business (incomes and house prices have risen strongly over the past 12-18 months and the banking system has remained in good shape) or perhaps new evidence of the emergence of new kinds of remote work. It is still unclear what all of this exactly means, or whether the trend will persist. But, if it does, this would be an encouraging signal as business formation tends to precede high levels of job creation, innovation and productivity growth, as we argue above.

Exhibit 9: US business applications were up 90% yoy in May



Source: Macrobond, Bank J. Safra Sarasin, 12.07.2021

Exhibit 10: New businesses in parts of Europe have grown strongly too

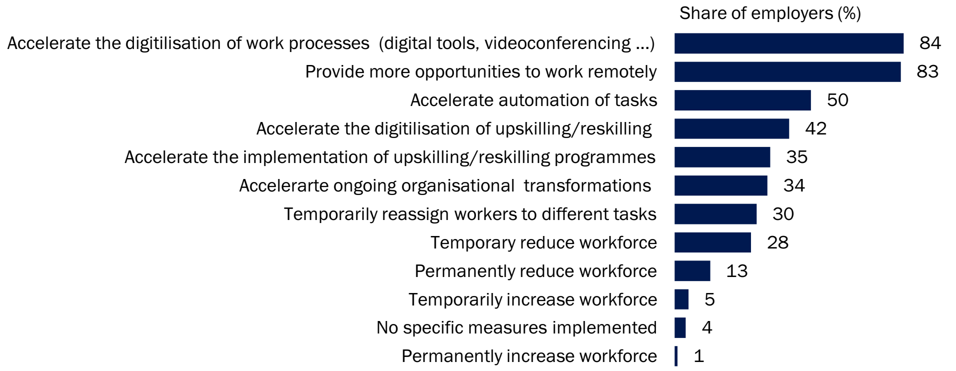


Source: Macrobond, Bank J. Safra Sarasin, 12.07.2021

In response to the pandemic, a vast number of employers plan to accelerate the adoption of new technologies

Finally, the pandemic seems to have accelerated the adoption of new technologies by a wider range of companies. The latest 'Future of Jobs Survey' from the World Economic Forum shows that more than 80% of the business leaders surveyed plan to accelerate the digitalisation of their work processes and to expand their use of remote work. A significant 50% also indicate that they are set to accelerate the automation of jobs in their companies (while this may hurt employment growth, indicators show that employers are struggling to find enough staff to fill open positions) (Exhibit 11). What's more, the past two years have, according to the survey, also seen a clear acceleration in the adoption of new technologies. Cloud computing, big data and e-commerce remain high priorities, following a trend established in previous years. There has also been a significant rise in interest in encryption, reflecting the new vulnerabilities of our digital age, and a significant increase in the number of firms expecting to adopt non-humanoid robots and artificial intelligence, with both technologies slowly becoming a mainstay of work across industries.

Exhibit 11: More than 80% of employers plan to accelerate the digitalisation of work processes



Source: WEF, Bank J. Safra Sarasin, 12.07.2021

To sum up, productivity growth has been very weak for the past twenty years. But the pandemic and the policy response appear to have helped reverse some of the forces that have weighed on productivity. Higher trend growth should help lift interest rates

Productivity growth in advanced economies has been depressingly weak over at least the past two decades. This has contributed to the trend decline in the neutral interest rate, and pushed central banks into ever more unconventional territory. Larry Summers has defined this state of the world, also characterised by an excess of savings over investment, as secular stagnation. Bond investors expect this environment to persist long into the future. We are more optimistic and believe that the pandemic could end up being a boon for productivity growth. Capital spending by corporates appears to be booming. If this is sustained, the amount of capital per labour – a key component of productivity – should rise again after having flatlined in the wake of the financial crisis. In addition, new businesses, particularly in the US, are flourishing at an unprecedented pace. Finally, the pandemic has forced companies across the world to learn and adopt new technologies at a record pace. This success seems to have been a catalyst for a vast majority of employers further to accelerate the digitalisation of work processes over the coming years.

We will explore in subsequent publications two other trends that could shake the world economy out of secular stagnation

In subsequent publications, we will explore two other forces that the crisis has intensified – policy regime change and a shift in the structure of the population – which should contribute to a world where interest rates are structurally a bit higher.

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