the day after

#12 | October 2020

Changing shares of labour and capital incomes: what implications for investors?

Amundi
ASSET MANAGEMENT

Authors

Jean-Jacques BARBÉRIS
Head of the Institutional and Corporate Clients Division

Pierre BLANCHET
Head of Investment Intelligence

Théophile POUGET-ABADIE
Business Solutions and Innovation

The share of national income that is distributed to labour vs. capital has fallen to historically low levels in several advanced economies, such as the United States and the United Kingdom. We believe the Covid-19 crisis, along with other factors, will trigger a rebalancing in favour of labour over the next two decades. A reversion to the long-term average ratio of labour and capital in the share of income would probably enhance social and political stability, and would better fit with a consumer-driven growth model. This would be positive for investors if it happens smoothly over a long period. However, such a rebalancing of the equilibrium will be inflationary in nature, with negative implication for assets with stable income streams. Both parameters should be included in the long-term asset returns assumptions used in our strategic asset allocation.

Introduction

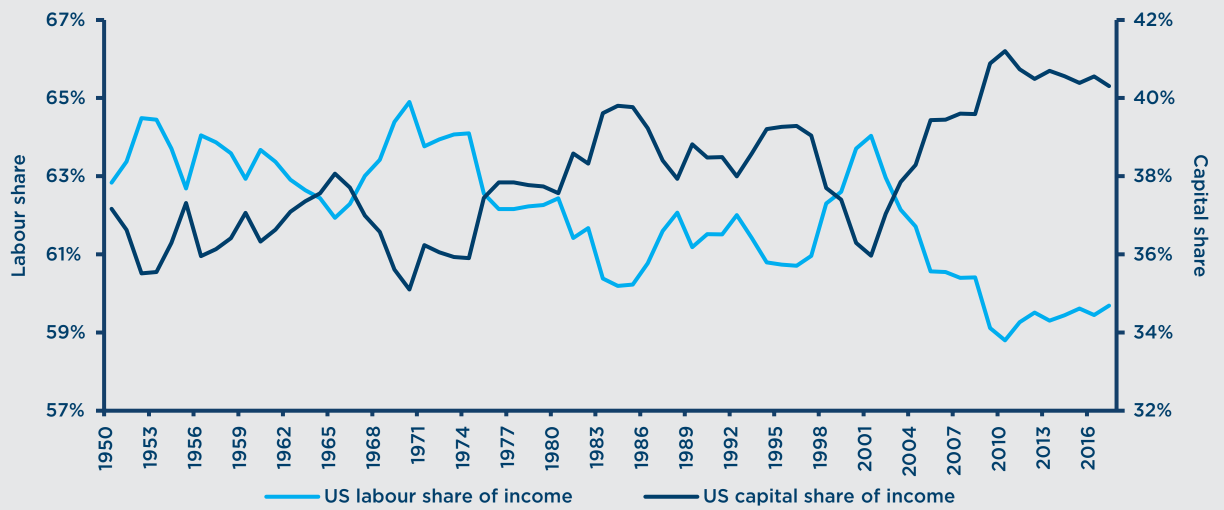
The question of how much national income should be distributed to labour versus capital has been an endless source of debate among politicians and economists since the 19th century. One common view is that a rising labour share of income undermines profits, investment returns and eventually economic growth, while a rising capital share brings inequality, fuels social tensions and harms economic growth. Therefore, only a fine balance between the two factors leads to sustainable growth. Given its relevance for many metrics that investors look at, careful consideration should be paid to the impact that the Covid-19 crisis could have in this regard in the medium to long term.

In theory, if a broad range of economic agents owned capital, the income share of labour vs. capital would have little influence on individuals' wealth over time. However, in the real world, capital distribution is highly skewed towards a very limited number of agents. This implies that a sustained imbalance in the ratio leads to inequality and eventually a suboptimal allocation of national or international income[1].

Over the past decades, the share of national income paid to workers has fallen. This is particularly the case in advanced economies such as the US, where the breakdown of output is more favourable to capital than it has ever been since WWII (see graph 1).

We started this Day After series with "*Covid-19: the invisible hand pointing investors down the road to the 70s*", in which our CIO Pascal Blanqué argued that the current crisis

Graph 1: US labour and capital share of income



Source: Fed of St Louis, 1950-2017.

1. Joseph Stiglitz (2012), The price of inequality, WW Norton and company.

would lead to a regime shift that takes us back to the conditions of the 1970s. If that were to happen, it could mean a reversal in terms of the labour and capital shares of income.

In this paper, we look at the short, medium and long-term relationship between the two factors and highlight some of the reasons behind the downward trend in labour's share of income in advanced economies since the 1980s. History shows that big economic or political shocks can be turning points in the breakdown of the distribution between labour and capital, and the Covid-19 crisis could be one such shock. A further increase in capital's share of income could be detrimental for advanced economies, as inequalities would undermine their long-term growth prospects. A medium-term rebalancing in favour of labour towards the long-term average should lead to more sustainable economic growth and corporate profits. We believe investors should take this potential change into account in their strategic portfolio allocations.

Labour's share of income has been falling since the 1980s

The capital vs. labour ratio is difficult to define and measure

The definition and measurement of the capital and labour shares of income has long caused intense debate among economists and statisticians. The labour share is usually defined as the value of aggregate wages divided by nominal GDP[2] and the capital share as the ratio of capital revenue divided by nominal GDP. However, debates on measurement abound in academic literature as national accounting methods differ, making it hard to get a long-term view or compare countries[3].

A stylised fact that is changing over time

Up until the 1980s, the labour share was considered to be constant over time[4]. Keynes called this stability "one of the most surprising, yet best-established facts in the whole range of economic statistics". Although countercyclical, the labour share of income was supposedly stable over the cycle as the underlying causes of change (in sector composition, for instance) cancelled each other out when aggregated. Over time and across countries, the capital share of income would range between 30-40%, with the labour share between 60-70%. Assuming labour and capital shares were constant was a useful hypothesis for economists using Cobb-Douglas production functions[5] (assumption of constant output elasticities of capital and labour and determined by available technology). Moreover, developing economies are supposed to converge towards advanced economies and therefore a constant labour vs. capital ratio was a 'fair' assumption.

In fact, changes in the labour vs. capital shares of income have been limited on a short-term basis, except during extreme circumstances such as WW1 and WW2. The average labour share in the US was 59.7% over 14 years, with a standard deviation of 1.08, and 58.8% for the EU-28, with a standard deviation of 0.76 (see Graph 2). Compared with the volatility of other macroeconomic statistics, it makes sense to use a constant ratio on a short-term basis.

However, several studies in the 1990s highlighted that changes do occur over the medium term. Olivier Blanchard (1997) compared the United States and Europe during the 1970s, and showed how labour supply, productivity, institutional frameworks and technology can explain these changes[6]

2. If we assume that the value-added Y is a function F (K;L) of capital K and labour L, then the labour share of output $s_L = WL / PY$, where W is the wage and P the price of output, and $s_K = 1 - s_L$.

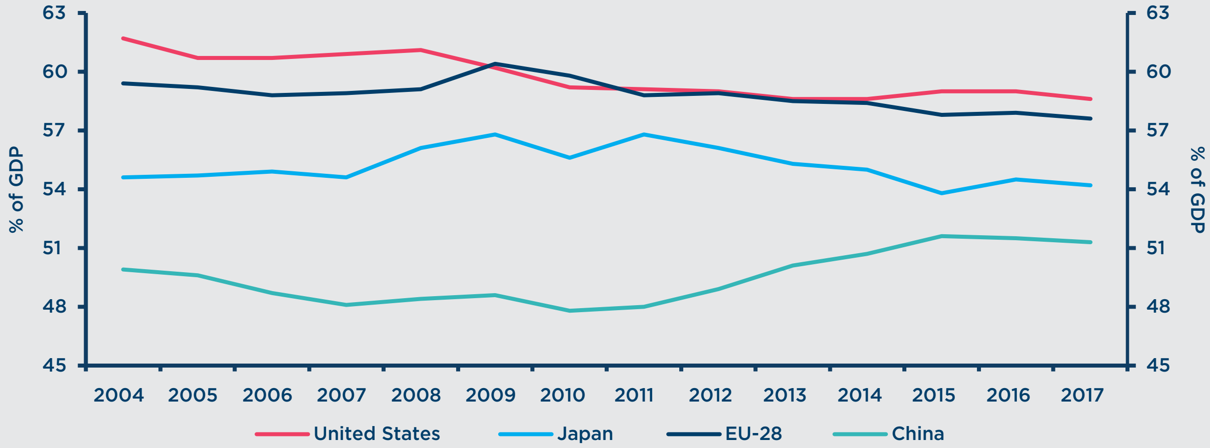
3. For example, the concept of total compensation is not clearly defined: how do we include self-employed? How do we compare benefits to workers such as health insurance? Therefore, the structures of economies probably play a distorting role in the measurement of labour shares.

4. This is known as Bowley's law, after the economist Arthy Lyon Bowley and one of Kaldor's stylised facts of economic growth. Kaldor, Nicholas (1957), "A Model of Economic Growth", The Economic Journal. 67 (268): 591–624.

5. Cobb, C. W. and Douglas, P. H. (1928), A Theory of Production, American Economic Review.

6. Olivier Blanchard, The Medium Run, Brookings Papers on Economic Activity, 1997, vol. 28, issue 2, 89-158.

Graph 2: Labour income as a share of GDP



Source: International Labour Office (modelled estimates) 2004-2017.

(see part 2). Recent data suggest that in several advanced economies, the labour share of income has fallen to a 40-year low, which confirms the medium-term variability. Thomas Piketty's[7] work showed that the elasticity of capital over labour is above 1 (est. 1.3-1.6), and also that the capital share of income has been rising since 1970s, as it did at the end of the 19th century. He argued that the capital share should keep rising since there is no mean-reverting process to stop it. A more recent paper by Matthew Rognlie (2015)[8] which looks at the composition of capital shows that "the net capital share has increased since 1948, but once disaggregated this increase turns out to come entirely from the housing sector". Therefore, it would be more the scarcity effect than the accumulation factor, which explains the changes.

Low labour share of income and rising inequality

According to US labour statistics, the labour share of output in the nonfarm business sector reached 66% in 1960 but had come down to 56% in 2012[9]. As graph 1 shows, the divergence has increased since the 2000s in the US. A 10pt shift, albeit over several decades, has economic, social and political consequences, even more so if it affects fragile social groups as highlighted in a recent OECD study[10]. Moreover, the decline in the labour share is concomitant with income inequality. The International Labour Office warned in its 2019 global study of labour income distribution that: "*10% of workers receive 48.9% of total global pay, while the lowest-paid 50% of workers receive just 6.4%.*" This is partially due to a weakening of middle- and low-skilled workers' income relative to GDP. The IMF recently showed that between 1995 and 2009, the income share of high-skilled labour rose both for advanced economies and for emerging market economies, while the income share of middle-skilled labour, especially in sectors prone to automation and offshoring, had taken a hit. When one considers the vital importance that the middle class plays in generating growth and in ensuring the stability of democratic institutions, this should be a cause for concern.

7. Thomas Piketty (2013), Capital in the 21st century, Havard University Press.
8. Matthew Rognlie (2015), Deciphering the Fall and Rise in the Net Capital Share: Accumulation or Scarcity? MIT.
9. Michael D. Giandrea and Shawn Sprague, Estimating the US labour share, Monthly Labour Review, U.S. Bureau of Labor Statistics, February 2017, https://doi.org/10.21916/mlr.2017.7.
10. "Technological change in the investment goods-producing sector and greater global value chain participation have compressed labour shares, but the effect of technological change has been significantly less pronounced for high-skilled workers. Countries with falling labour shares have witnessed both a decline at the technological frontier and a reallocation of market shares toward "superstar" firms with low labour shares ("winner-takes-most" dynamics)." Labour share developments over the past two decades: The role of technological progress, globalisation and "winner-takes-most" dynamics, OECD Economic department working paper n153, Sept 2018.

What are the main drivers of the medium-term labour share of income?

There are several drivers that are often cited as factors explaining the fluctuation (or lack thereof) of the labour share of income. Most of these interact with one another, and any analysis becomes complex due to the fact that more often than not, these drivers push simultaneously in opposite directions.

Globalisation

Trade and globalisation are widely regarded as one factor explaining the apparent decline in the labour share since the 1980s[11]. Indeed, increasing globalisation has led capital-abundant economies to specialise in the production of capital-intensive goods, and labour-intensive economies to do the opposite. This ties in with the "institution factor" that we will cover below. Another explanation is that global competition among the labour force drives down the bargaining power of labour due to the threat of offshoring.

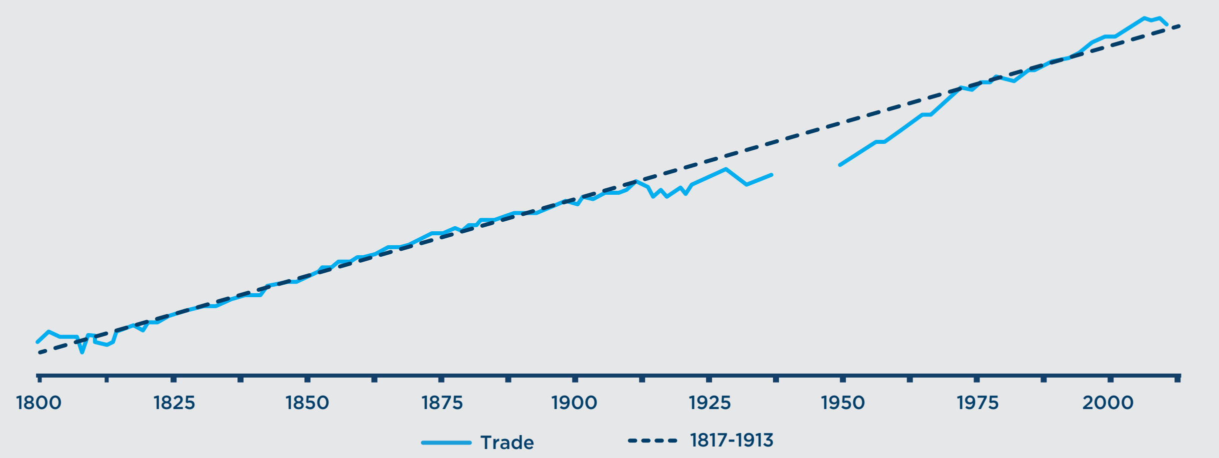
The relationship between labour bargaining power and labour share is complex. For instance, in a world with strong labour bargaining power securing higher wages, the higher costs for firms could be passed on to consumers through increased prices, which itself reduces the labour share through a reduced purchasing power. This process is strengthened by the job market insider/outsider paradigm[12], which in this context decreases the purchasing power of outsiders since they can't easily access the best paid jobs. Therefore, the overall labour share of income can be reduced but increases in favour of insiders.

Another known aspect is participation in global value chains, with firms' offshoring labour-intensive production to areas with lower labour costs. This lowers the labour share of income in advanced economies, which tends to be more capital-intensive than emerging economies. Therefore, the ratio of labour vs. capital remains constant on an aggregate basis, i.e., for the same volume of output, but the income share of labour increases in EM and the income share of capital increases in DM. This issue is at the heart of American and European populist claims.

Technology

Technological progress is another factor that is usually cited and one that works through

Graph 3: The growth of world trade, 1800–2015 (log scale)



Source: VoxEU, Giovanni Federico, Antonio Tena-Junguito, 7 February 2016.

11. Michael Elsby, Bart Hobijn and Aysegul Sahin, The Decline of the US Labor Share, Federal Reserve Bank of San Francisco Working Paper, 2019.
12. Lindbeck, Assar and Dennis J. Snower (1988), The Insider-Outsider Theory of Employment and Unemployment, MIT Press, Cambridge, Massachusetts.

two main channels: (1) technological progress in capital-intensive sectors lowering the price of investment goods; and (2) growing automation of routine tasks, which displaces workers. In both cases, firms are more likely to substitute capital for labour, lowering the share of labour in production and income.

By technological progress, we mainly refer to enhanced machinery and equipment, as well as information and communications technology. Again, the impacts are not straightforward, and numerous studies have shown that technology has had a negative impact on the labour share[13], while other studies have shown the opposite[14]. That is because technology can also increase the labour share, by raising output and productivity, and then wages. Again, a deeper and sectorial view is likely necessary to understand the interactions between technology and the labour share.

However, we should consider the strength of technological progress and adoption rather than the level. A linear technological adoption might not affect the labour share of income vs capital much if productivity rises as well, whereas exponential adoption or disruption could significantly undermine the share of labour in favour of capital.

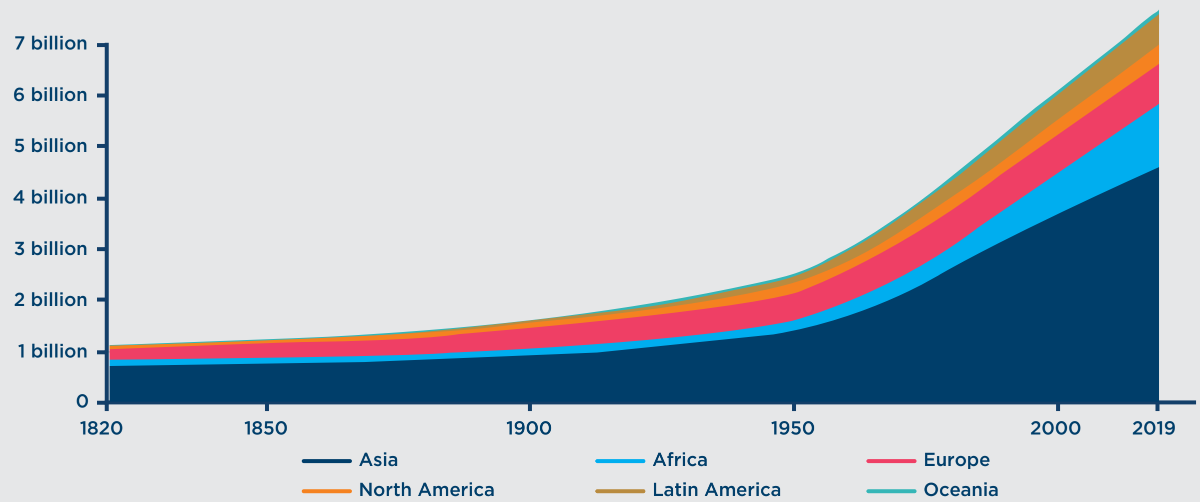
Demography

Demographic changes can also play a role in determining the distribution of income between capital and labour, namely migration and the composition of the population (age pyramid). A rise in the population via migration can increase the labour share (more working-age people), whereas a rise in the natural increase (more births) can decrease the labour share through a larger constituent of dependents[15]. Moreover, an increase in the age of the workforce can also drive a decline in the labour share as older workers are less active in the job market.[16]

Institutions

Economic institutions are often cited as another driving force behind the share of labour in income. Two types of institutions are particularly involved: labour market institutions and product market institutions. For the former, the effects, as we have seen, may be ambiguous: a decline in unionisation may lead to lower social bargaining power

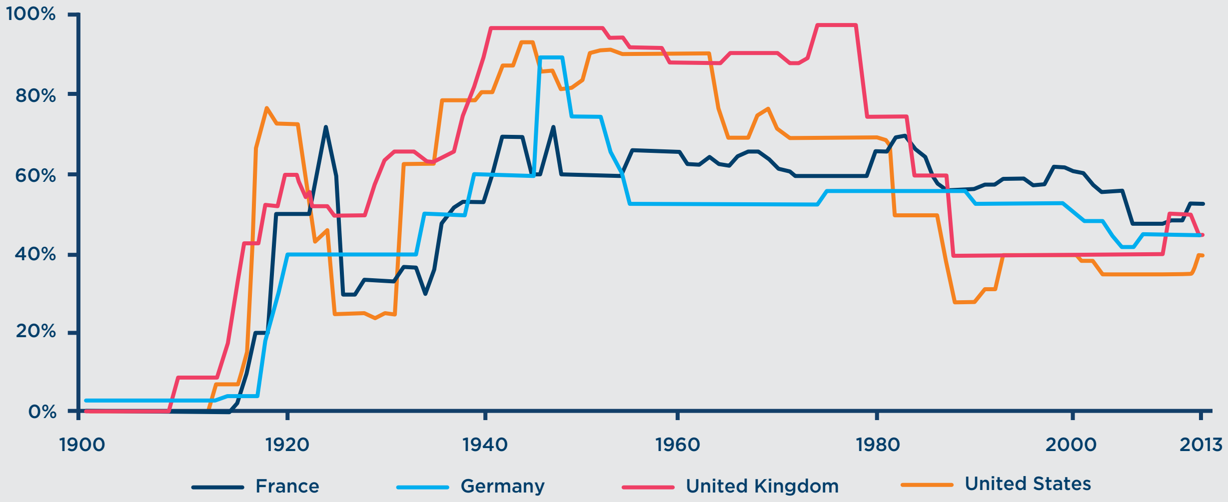
Graph 4: World population by region



Source: HYDE (2016) & UN (2019).

13. Daron Acemoglu and Pascual Restrepo, Modeling automation, National Bureau of Economic Research (NBER) Working Paper, 2018.
14. Florence Jaumotte and Irina Tytell, How Has The Globalization of Labor Affected the Labor Income Share in Advanced Countries?, IMF Working Paper, 2007.
15. Hippolyte d'Albis, Ekrame Boubtane and Dramane Coulibaly, Demographic Changes and the Labor Income Share, Paris School of Economics Working Paper, 2019.
16. Andrew Glover and Jacob Short, Demographic Origins of the Decline in Labor's Share, 2018.

Graph 5: Top marginal income tax rate, 1900 to 2013



Source: Piketty (2014).

and hence a lower share of labour, but a policy designed to raise wages may increase the labour share in the short run while reducing it in the long-run by incentivising firms to substitute labour for capital. A decline in corporate income tax rates may also push the substitution of capital for labour.

However, as graph 7 shows, Margaret Thatcher's reforms of the UK economy, including the labour market, in the 1980s coincided with a pick-up and then a decrease of the labour share of income. Graph 8 illustrates the case of France, where during the 1970s inflation indexation of wages (among other factors) brought the capital share down. The reverting trend was constrained by social protection and minimum wage policies[17].

The decline in "worker's power" in the US, which coincides with the dominance of shareholder return in the corporate governance paradigm, is mentioned as a key institutional factor. L. Summers recently argued that "declining unionization, increasingly demanding and empowered shareholders, decreasing real minimum wages, reduced worker protections, and the increases in outsourcing domestically and abroad have dis-empowered workers". The decline in worker power would explain the rise in American corporate profitability and the US market valuation (more than the increase in monopoly or monopsony power).

Other factors

A number of other factors are also included in the mix (see McKinsey & IMF studies). These include:

- "Superstar effects", whereby certain firms reap rising shares of profits and value-added to the benefit only of their capital owners (and to their limited number of employees). This is especially the case in knowledge-intensive sectors and/or where intellectual property gives companies a huge competitive boost.
- Cycles and boom-busts, where the fate of a sector can have a large effect on the labour share of income (real estate, for instance).

Covid-19 will accelerate a rebalancing in favour of labour

Big crisis brings big changes

The Covid-19 crisis will lead to multiple changes. Some of these were already happening and therefore the crisis is merely accelerating existing trends. The main drivers

17. The French minimum wage (SMIG) was increased by 25% in 1968 (Accord de Grenelle) and the follow-up index (SMIG) doubled between 1970 and 1990.

that explain changes in the breakdown of income between capital and labour – globalisation, technology, demography and institutions – have all been affected by the current crisis. Some of the factors that had been driving the labour share lower could be reversed, in particular globalisation, institutional arrangements and demographic pressures. The impact of technology is more nuanced, as we have highlighted above. Indeed, digitalisation and information technology have made exponential progress and could therefore decelerate going forward. However, one of the next big technological breakthroughs is driverless cars and trucks and the impact of this on what is currently a major source of low skilled jobs might be fateful.

Deglobalisation and the repricing of critical jobs

Global trade growth and globalisation began to reverse a couple of years ago (mainly due to the US/China tensions). The need to diversify supply chains and avoid a collapse in production capabilities due to an overreliance on a single country (namely China) was a powerful driver in that context. This means that shareholders and clients will ask for alternative suppliers, which should be geographically closer and more integrated. The need for drug production independence in Europe is a similar topic, which had been ignored or neglected by political leaders before Covid. This is likely to lead to a reshoring of drug production and research facilities. Finally, yet importantly, the need for better quality and more efficient healthcare infrastructures in Europe and the US has become a top priority among governments, which means higher investments into local infrastructure, better technology, more staff and eventually, higher wages. This could also be expanded to low paid but critical jobs such as transport, cleaning and face-to-face services. Although automation will play a role, the de-globalisation trend and the repricing of critical jobs will probably have a bigger direct impact on the balance of income between capital and labour over the next decade.

The end of cheap EM labour competition

The requirement for alternative local supply chains and drug production reshoring as part of an overall requirement for regional industrial independence arises at a time where global workforce competition is diminishing. The main reasons are that two decades of super-charged growth in China have significantly increased Chinese labour costs, while internal demand has risen to the extent that production capabilities are more efficiently used for the internal market rather than for exports[18]. Chinese exports face higher taxes and regulatory barriers in the US and potentially in Europe in the context of a strengthening RMB. Moreover, China needs cheap suppliers for its own market and therefore these extra capabilities will be less focused towards advanced economies. Finally, it is not easy to create and maintain cheap production capabilities with high standards at a global scale, as China did. It requires a high degree of centralisation, long-term capital commitments, low barriers to exports and significant technology transfers. India, Nigeria, Indonesia and Pakistan are unlikely to be able to achieve this to the same degree China did.

As usual when it comes to economics, it is the marginal rate of change that matters. In a decade, Europe will still import goods from Asia and use cheaper labour in Africa. Yet the structural negative pressures on labour costs in advanced economies will fade. This factor is independent from the Covid crisis, but the crisis will certainly accelerate the adjustment.

The *policy mix* and institutions will probably favour labour over capital going forward

Low or negative interest rates and asset purchase programmes brought asset price

18. China private consumption as a % of GDP has risen from 24% in 2010 to 38% in 2019 and household consumption from 34% to 38% of GDP, according to economic studies.

inflation but little consumer price inflation during the 2010s. Although unconventional policies were initiated with the Global Financial Crisis, the scale of balance sheet expansion and money creation used to support economies in 2020 was unprecedented. Therefore, the impact of monetary expansion on inflation might be more pronounced in future. Moreover, this monetary expansion works hand in hand with recovery plans. The Fed (and soon the ECB) has amended its reaction function and will allow a significant overshoot of inflation versus the 2% target. We can therefore assume that the impact of the policy mix will be more inflationary in nature going forward. This could bring about a regime change (see Day After #1). Finally, these stimulus plans, which by nature are more offer driven than demand driven, will be implemented at the regional level, i.e., US, European Union, China. This, in the context of the deglobalisation process, could trigger further wage pressures.

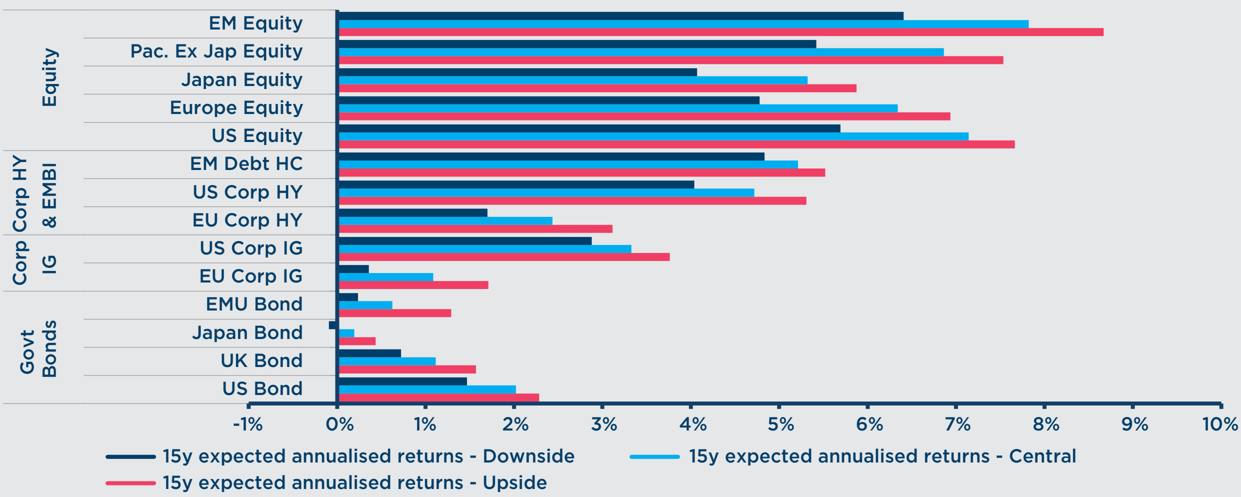
A second important input could come from institutions. The French example shows that institutions can mitigate the rise of capital's share of income, while the UK example shows they can also exacerbate it. Since we've fallen to historically low levels of the labour share of income in the US and the UK, and considering that one of the "after Covid" big asks is better paid jobs, it is reasonable to assume that part of the rebalancing in favour of labour could be attributed to institutional impulses in the coming decade.

A smooth rebalancing in favour of labour is positive for long-term investors

If we assume that the current crisis is a catalyst for a rebalancing of income towards labour, then the key question is at which speed will this happen? A brutal rebalancing towards the long-term average of the labour vs. capital share of income would undermine corporate margins and profits, undermine corporate debt sustainability, unanchor inflation expectations and lead to an increase in interest rates, alongside a change in the bond/equity returns correlation. This labour cost shock would lead to a risk-off scenario for financial markets.

However, a smooth medium-term adjustment would create a very different picture. Indeed, a gradual rebalancing in favour of labour would increase the low- to middle-wage purchasing power, therefore enhancing consumption-related growth, which accounts for 50-70% of GDP in advanced economies and will do so soon in China. This would trigger a portfolio rebalancing towards internal/consumption

Graph 6: Standard asset class long-term expected return under three scenarios



Source: Amundi Asset Management CASM Model, Amundi Asset Management Institutional Advisory and Research Teams, Bloomberg. Data as of 7 January 2020. Local currency. Discover more in Detecting the tipping points, January 2020.

demand vs external/infrastructure-driven demand. Moreover, this would lead to a more balanced social model with more sustainable growth, fewer social tensions and higher visibility for investments. All these parameters could potentially increase investors' risk-adjusted returns.

An important aspect to bear in mind is that market participants are not assuming any substantial rebalancing in favour of capital going forward. **Most investors believe that a revival of the worker power mentioned earlier is quasi impossible. This is therefore a source risk or asymmetry in the consensus, with consequences for long-term economic and financial assumptions.**

For example, Amundi's ten-year asset class return forecast models assume a ratio of capital vs. labour by country that is constant. This is consistent with the short-term stability highlighted earlier in this piece and since this constant is the past decade's average, it implies a mean reverting process. Alternative upside and downside scenarios encompass the same constant ratio[19]. The upside scenario for DM assumes, among other factors, that "policymakers take up the challenge and implement a combination of structural reforms aimed at increasing productivity and competitiveness and mitigating the effects of adverse demographics may succeed in increasing the labour force participation rate". However, we do not assume an increase in the relative size of labour in the production function. Therefore, there is room for adjustment to our long-term models.

Investors with a long-term horizon could benefit from the rebalancing process in favour of labour via thematic investments, ESG investing and sector and country selection.

Asset allocations should also assume a rebound in inflation as one of the outcomes of a greater share of income in favour of labour. We take into account these parameters in the long-term asset returns assumptions used in our strategic asset allocation.

19. Detecting Tipping Points Asset classes views: Medium to long-term scenarios and return forecasts, Amundi Research link

Appendix: Is the capital vs labour ratio mean reverting over the long run or not?

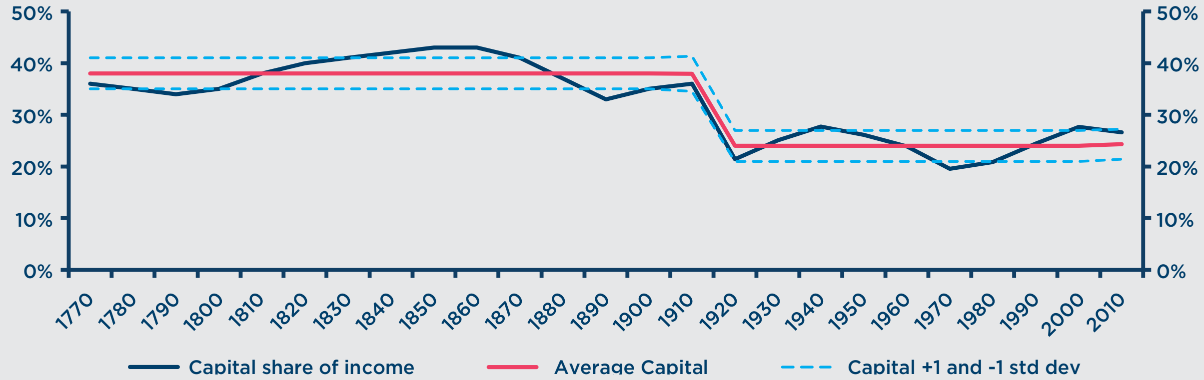
There are only a few very long-term data series available and it is difficult to draw a general conclusion from these, but we believe the capital vs. labour share of income tends to mean revert. Using the same data series as Thomas Piketty for the United Kingdom (1770–2010) and France (1896–2010), it is difficult to find a clear trend, though we can see regimes or long-term means around which the income shares of labour and capital are oscillating.

Data for the United Kingdom show a step change pre and post WW1 (see graph 7). If we consider the first global conflict as a breaking point, then there are actually two regimes: (1) from 1770 to 1910, with a mean of a 62% labour share and a standard deviation of 3%: and (2) from 1920 till 2010, with an average of 76% and also a 3% standard deviation. The medium-term downward trend is confirmed in the case of the UK, with an 80% high in the 1970s falling to 73% in 2000. But assuming that the actual regime persists, the labour share of income should revert back to its 76% mean, and probably overshoot to previous highs over the next 20 to 30 years, as happened from 1940 to 1970.

France shows a different picture. The capital share of income has oscillated at around 24% since 1990, which is interestingly enough its 100-year average. However, there have been significant changes in the mean level or regime between capital and labour. The two global conflicts brought huge volatility to the ratio, which then stabilised at different levels. Since WW2, the capital share of income has averaged 22%, but dropped during the 1970s and 1980s to revert back to its long-term average.

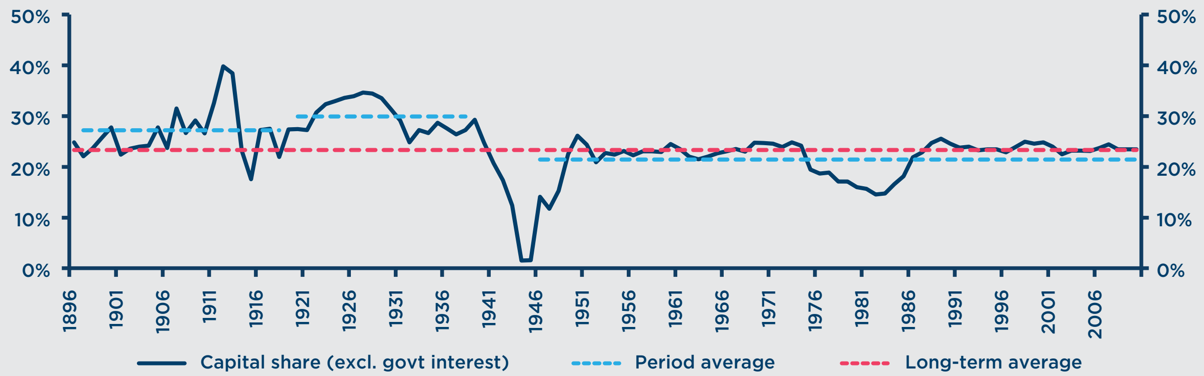
Therefore we consider that the capital and labour shares of income are roughly stable in the short term, except under extreme circumstances, but can show differing trends over the medium term though will still oscillate around the long-term average that defines a regime.

Graph 7: UK capital share of national income, 1770-2010



Source: Amundi Reserch, Allen, Piketty and Zucman.

Graph 8: France capital share of income, 1896-2010



Source: Amundi Reserch, Piketty, 2010.

Amundi
ASSET MANAGEMENT

REF-2915