Macro Picture

2022 AND BEYOND: CLUES FROM PAST CRISES

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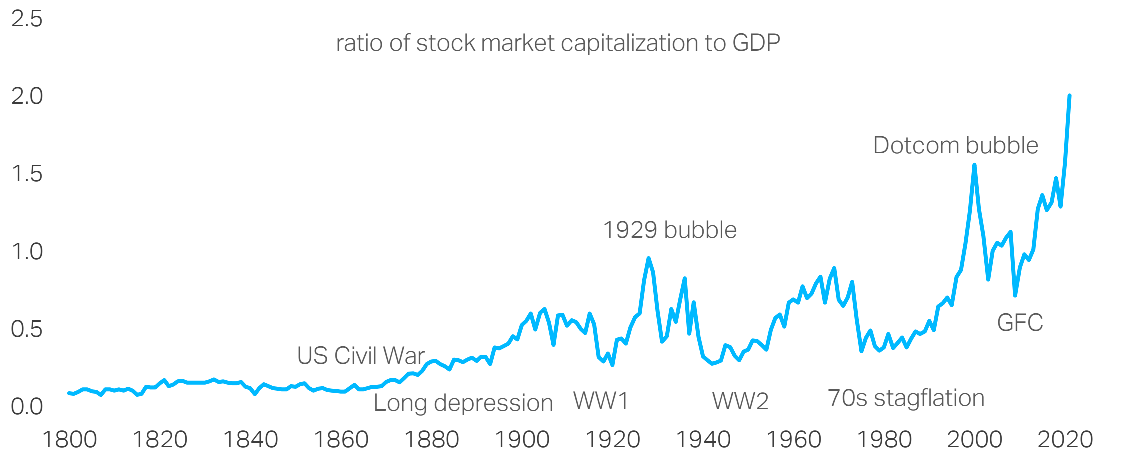
COVID-19 has caused huge dislocations in the economy. These distortions – not the business cycle – have driven macro outcomes (including high inflation). We look to history as a guide for what happens next. The immediate post-WW2 period provides the most compelling template: transitory inflation gave way to a Golden Age for growth. Could COVID have the same effect?

Chart 1: Maybe this time is different



Sources: MacroHistory, FRED, TS Lombard.

THINK WAR, NOT PANDEMIC

Macroeconomic data over the past two years have had nothing to do with the business cycle. The behavior of durable goods spending and asset prices shows this was no ordinary recession. So, investors have increasingly turned to history to find out what happens next. But COVID-19 was not a "regular" pandemic either, because it triggered a "war-time" government response.

INFLATION AFTER WW2

The aggressive policy-response to COVID-19 has staved off the deflationary impulse that took hold during previous pandemics. In fact, the immediate post-WW2 economy is now the most compelling precedent for the macro environment we see today. As in the late 1940s, the combination of pent-up demand and supply disruption has pushed consumer prices higher.

SECOND GOLDEN AGE?

Post-WW2 inflation was "transitory" as prices slowed even without tighter policy. There was no wage-price spiral. We expect a similar story in 2022-23. The tougher question is whether COVID-19, like WW2, will provide a secular break in the global growth trajectory. While there are reasons for optimism, any secular revival will be modest compared with the post-WW2 boom.

2022 AND BEYOND: CLUES FROM PAST CRISES

Since the start of the pandemic, macro investors have struggled to find a suitable "template" for understanding the impact of COVID-19. Clearly this has not been an ordinary recession: disruption from the virus – not the business cycle – has driven most of the economic trends we have seen. But economic history can sometimes help us understand current circumstances and predict future events. The Fed is tapering its QE – what happened the last time it did this? Storms have disrupted production – what can we learn when similar things happened in the past. During the COVID crisis, there has been no shortage of historical comparisons. Some have looked back to the Black Death for guidance, others the 1918 flu pandemic. In reality, of course, there is no perfect historical analogy for understanding 2020–21. We have had serious health crises before, but governments have never stepped in and paid people to stay at home. And while there have been historical events that triggered a comparable fiscal response, these were invariably associated with large-scale military conflicts, which destroyed the global capital stock. Bearing these caveats in mind, we do nonetheless see important lessons to be drawn from the post-WW2 economy, which seems the closest historical precedent for what we are seeing today. This period offers important lessons, especially for understanding inflation.

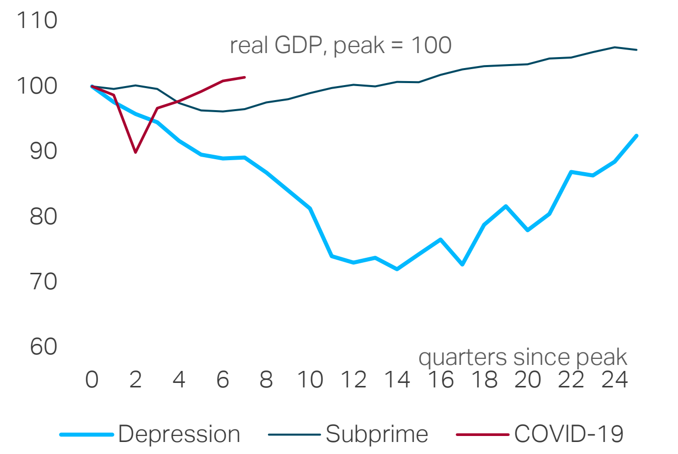
The end of WW2 led to a powerful rise in the price level. Two things contributed to this: pent-up demand and extreme supply-side disruption. After five years of conflict, households had built significant "excess savings". Government restrictions and anxiety about the future had prevented them from spending freely. The end of the war unleashed spending, causing a consumer boom. But the supply-side of the global economy struggled to accommodate this extra spending. Industry had been diverted to wartime needs (building ships, bombs etc.) and it took time to reintegrate millions of soldiers back into the workforce. Shortages continued through the late 1940s (especially in the UK) and wages accelerated, despite rising levels of unemployment (there was "mismatch" in the job markets). There are obvious echoes – albeit far less extreme – in the global economy today. The important point about the post-WW2 period is that while consumer prices shifted permanently higher, inflation declined relatively quickly. There was no "wage-price spiral", a phenomenon that is actually unique to the 1970s. Crucially, inflation declined after WW2 even without a monetary-policy response (it would have been unpatriotic to hike rates and governments still controlled most central banks). This is the perfect definition of "transitory" inflation: inflation declined even without a deliberate attempt to restrain demand. Though central banks have stopped using the "t-word", this is broadly what they expect in 2022.

Beyond the immediate post-war period of disruption, WW2 changed the trajectory of the global economy for the next three decades. Powerful new secular growth drivers emerged. There was a demographic boom, fuelled by younger, rapidly growing populations. Productivity surged, as new technologies – developed during the conflict – were put to civilian use. And there was explosive growth in construction activity and homebuilding, thanks to the rebuilding effort in Europe and Asia, five-years of pent-up demand and the "suburbanization" of the US (young families moving out of city centres). Governments also built extensive new transport networks to accommodate spectacular growth in the auto industry. There are fewer reasons to expect a strong secular revival after COVID-19. The virus has not destroyed the capital stock (there is nothing to "rebuild"), while populations are older and starting to shrink. But there is still a case for moderate optimism. Like WW2, the pandemic has accelerated technological diffusion, especially with the rapid digitization of many businesses. And climate change offers an opportunity to "build back better" and "greener" to head off future catastrophe. This will require a growth-friendly mix of big fiscal spending and monetary support, not premature tightening. As in the 1940s/50s, inflation is likely to remain volatile, which means horrible returns for bond holders.

1. THINK WAR, NOT PANDEMIC

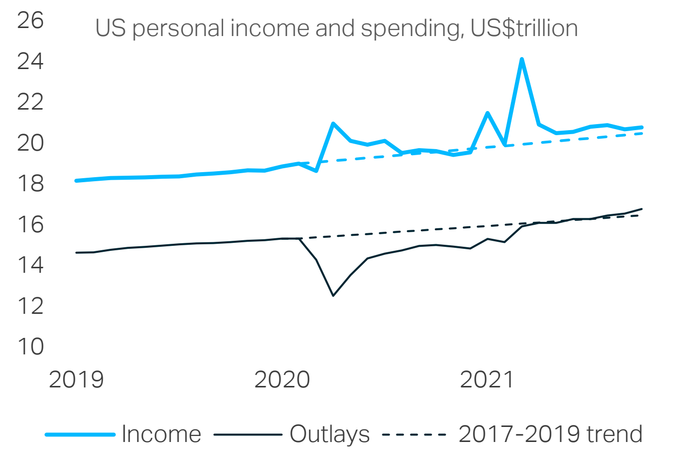
Since the start of the pandemic, investors and policymakers have struggled to understand the macro economy. Applying traditional business-cycle models, always fashionable in financial markets, did not provide any great insight into this particular downturn. Most countries suffered a spectacular plunge in GDP, but to describe this as a "recession" would be an exaggeration. Cyclical contractions in output usually happen in response to some underlying "imbalance" or macro vulnerability, not because governments impose strict restrictions on what people can do or because they force many businesses to close. Even today, we remain in a situation where it is the path of COVID-19 – not the underlying strengths/weaknesses of the economy – that will determine growth and inflation trends in 2022. Some sectors have not yet recovered, consumers have not returned to pre-pandemic spending patterns (which has had a powerful bearing on inflation) and the latest wave of COVID-19 is now prompting governments to impose fresh lockdowns. With the emergence of the Omicron variant, the outlook for 2022 has become even more uncertain. So, the recovery from this crisis is proving difficult, mainly for reasons that have nothing to do with the state of the business cycle. Trying to figure out "where we are" in this cycle is unlikely to help investors to navigate financial markets over the next 6-12 months.

Chart 2: No ordinary recession



Sources: BEA, TS Lombard.

Chart 3: Governments protected incomes

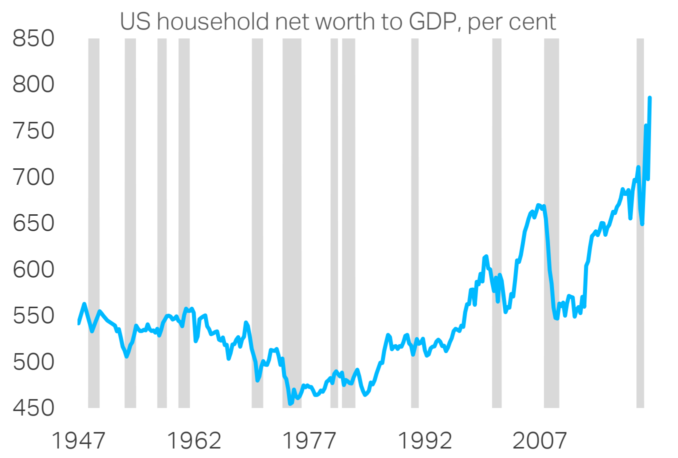


Sources: BEA, TS Lombard.

The clue was in asset prices

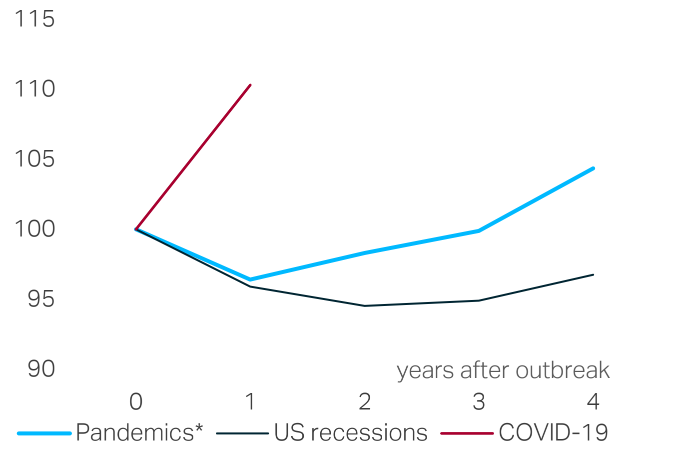
The performance of asset prices, which bounced strongly even as global GDP recorded its biggest contraction in 300 years, was a clear sign that this downturn was different. While it was easy to dismiss the bounce in equities on the basis that lockdowns would not affect some of the largest companies in the stock market (part of the K-shaped recession), it was harder to ignore what was happening in global house prices – which were booming, too, by the summer of 2020. The "stock market is not the economy", as one astute TS Lombard client pointed out; but the historical link between housing activity and economic performance has traditionally been much tighter. People do not typically buy houses, or take out mortgages, during a genuine economic recession (as one famous study put it, "housing IS the business cycle"). Official data on consumer incomes and spending also show that the COVID-19 contraction was unlike any previous downturn. Incomes continued to rise – thanks to aggressive government support programmes – and consumers continued to spend, particularly on "durables" such as autos and household furnishings. Again, these were signs of resilient optimism, not the usual consumer despondency that sets in during a cyclical recession. Even people who lost their jobs during the pandemic assumed this was just a temporary setback (or perhaps they were initially on furlough).

Chart 4: Households became wealthier



Sources: Federal Reserve, TS Lombard.

Chart 5: House prices were a signal

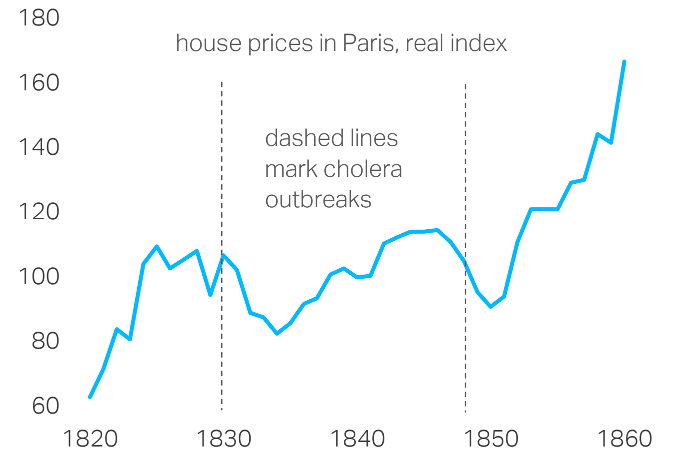


Source: TS Lombard.

Lessons from history

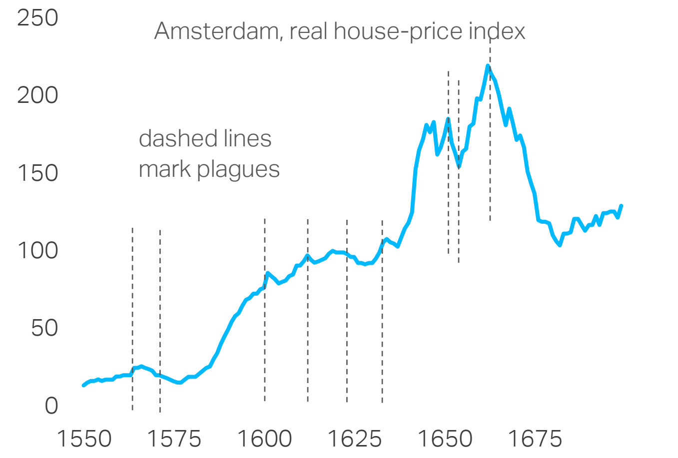
Once it became obvious the recession template could not be used to analyse the fallout from COVID-19, some investors hoped to draw inspiration from history. After all, the world had experienced horrible pandemics in the past, such as the Black Death, various plagues in Europe during the Middle Ages, the 1918 Spanish influenza outbreak and a number of recent health crises. These comparisons were always fascinating, especially in in terms of how they influenced psychology and public sentiment. We noted, for example, the link between Tulipmania – history's most infamous financial bubble – and an outbreak of the plague in 15th century Amsterdam, which seemed to echo some of the trends we saw in 2020. Unable to engage in regular commerce owing to government restrictions and lockdowns, disgruntled Dutch merchants sat around in taverns speculating on the price of tulip bulbs. We could see a modern-day version of this in people working from home fuelling a boom in cryptocurrencies, meme stocks and Robinhood retail investing. History never repeats, but perhaps it rhymes.

Chart 6: Health crises hurt housing



Source: Francke and Korevaar (2021)

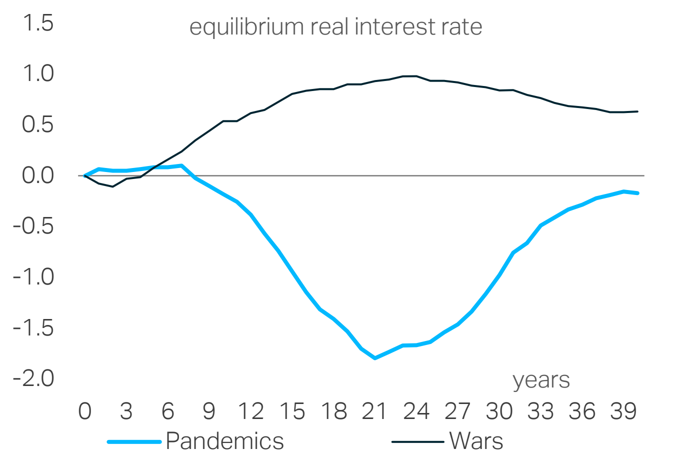
Chart 7: Pandemics were recessionary



Source: Francke and Korevaar (2021)

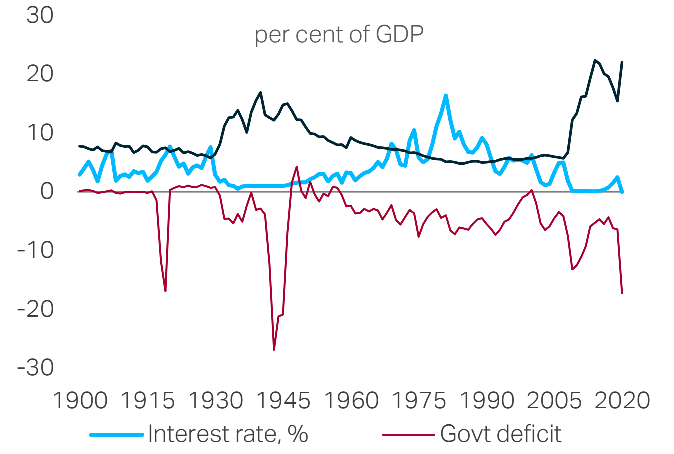
But drawing lessons from such distant historical events is tricky because it is debatable whether something that happened hundreds of years ago has any real relevance to modern economic and cultural systems. After the Black Death, for example, England experienced a rapid acceleration in wages, mainly because the disease had halved England's agricultural workforce, which destabilized the prevailing feudal system. It would be a stretch to say COVID-19 is having a similar impact today, even if the crisis has temporarily shifted the balance of power between labour and capital, boosting the wages of people at the bottom of the income distribution. And even if there are stories about "conspicuous consumption" after the Black Death, the depth of the crisis obviously matters – it took hundreds of years for England to recover. This does not necessarily have any relevance for how consumers will behave after COVID-19[1].

Chart 8: Wars versus pandemics



Source: San Francisco Fed.

Chart 9: Liquidity trap to Keynesianism



Sources: FRED, MacroHistory, TS Lombard.

Not the typical pandemic

Understandably, investors have been keen to know how the current pandemic will affect the longer-term trajectory of the economy. The historical evidence is not encouraging. For example, a study by the San Francisco Fed shows that pandemics are typically deflationary: they produce significant "scarring", which boosts household savings, discourages investment and undermines economic growth. Interest rates would need to stay lower for longer (Chart 8), which is bad news for a global economy that was struggling with secular stagnation even before COVID-19. But just as there are problems using the classic business cycle to understand COVID-19, so it is difficult to try to apply the historical pandemic template to current events. In the past, governments did not try to contain the disease by paying people to stay at home. The policy response to COVID-19 was radically different. Governments all over the world used their balance sheets to shield the private sector and, in effect, to put their economies into hibernation. From a historical perspective, this was closer to a "wartime" response rather than a typical pandemic. And the San Francisco Fed's analysis shows wars are usually inflationary, not deflationary. Given the recent surge in consumer prices, perhaps this is the historical template we should have been using.

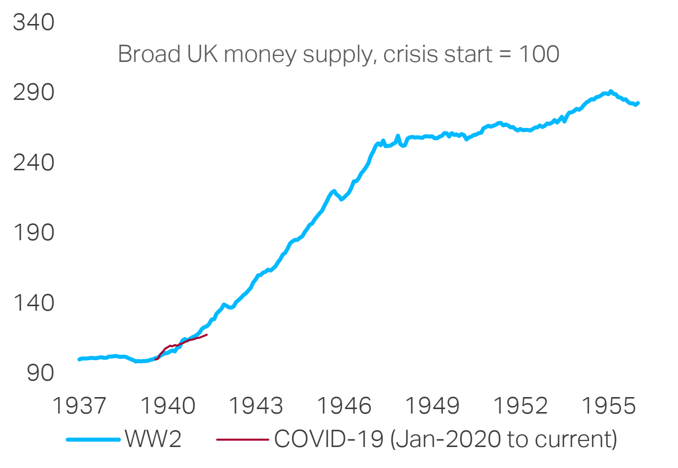
The war on COVID-19

Right from the start of this pandemic, governments told us they were "fighting a war" on COVID. The clue was in the language they used: doctors and nurses were referred to as "front-line"

[1] It is important to remember that the plague never really went away – it kept reoccurring over a period of several hundred years. With the omicron variant, COVID is starting to feel similar!

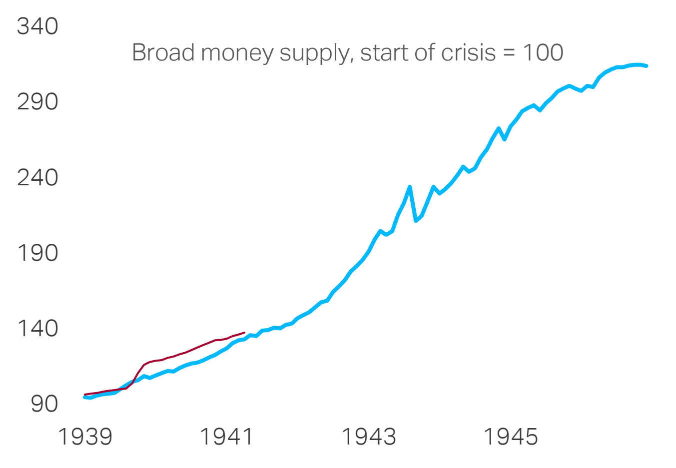
workers, and attempts were made to summon the "Blitz spirit" to lift the morale of people locked down in their homes. Certainly, the deterioration in the public finances that happened in 2020–21 is unprecedented during peacetime and on a par with the big military conflicts of the 20th century. And the policy response has been successful: the fact that we have spent all of 2021 debating the risks to inflation – not the danger of economic scarring, a wave of bankruptcies and mass unemployment – is testimony to the potency of fiscal policy. But if "war" is the correct template to use to understand COVID-19, which historical conflict is the most relevant? We see some striking similarities between the current situation and what happened post-WW2, particularly the period immediately after the conflict as the global economy initially struggled to shift resources from the war effort to meeting civilian needs. This even produced a surge in consumer prices, analogous to what has happened this year. Studying this period could shed some light on what might happen in 2022 and beyond, both in terms of the debate about the "transitory" nature of inflation and whether the pandemic will produce new secular catalysts.

Chart 10: COVID stimulus vs WW2



Sources: Bank of England, TS Lombard.

Chart 11: US went further towards WW2 stimulus

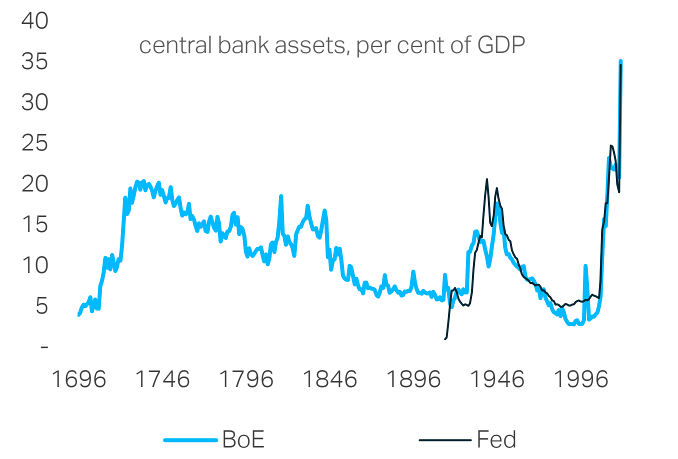


Sources: FRED, TS Lombard.

2. INFLATION AFTER WW2

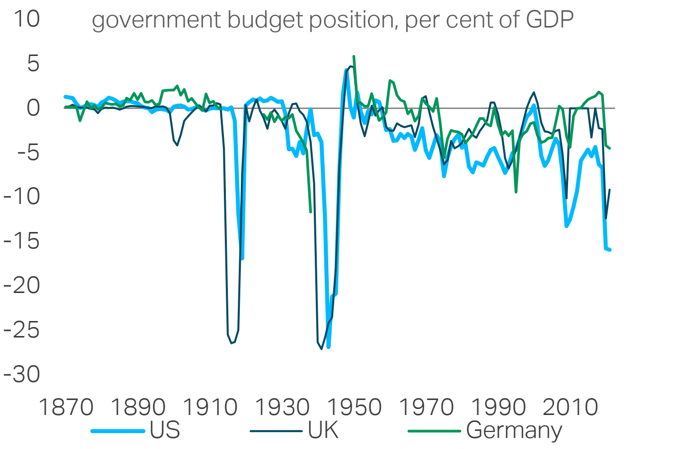
WW2 was unlike previous conflicts, which were typically confined to "battle zones", with civilians largely not targeted. It was also the first high-technology war on a global scale, involving a larger loss of life, greater suffering for the general population and more widespread and devastating damage to economic assets (particularly physical capital) than any other conflict. Compared with WW1, WW2 was a third longer in duration, included twice as many belligerent countries, touched four continents instead of one and mobilized 110 million people in the armed services (vs 70 million in WW1). From this perspective, we are obviously talking about an event of far greater historical significance than COVID-19. The pandemic has been hugely disruptive over the past two years, but its impact has not been as devastating as that of WW2. More than 5 million (mostly older) people have died, compared with 70-85 million in WW2, and there has been no physical destruction: unlike a military conflict, a "battle" with a virus leaves buildings and infrastructure virtually untouched (although it has certainly damaged human capital, bequeathing a legacy of poorer health and lost education). There are also superficial similarities between COVID-19 and WW2: both crises hit a global economy in a long secular funk – roughly a decade after a serious banking crisis – which, in both cases, was associated with rising populism, protectionism and the "regionalization" of trade. These events also forced a break in the macro policy regime, with "Keynesianism" and a massive fiscal expansion replacing monetary tools.

Chart 12: CB policy reminiscent of WW2



Sources: Bank of England, FRED, TS Lombard.

Chart 13: Wartime budget deficits, too

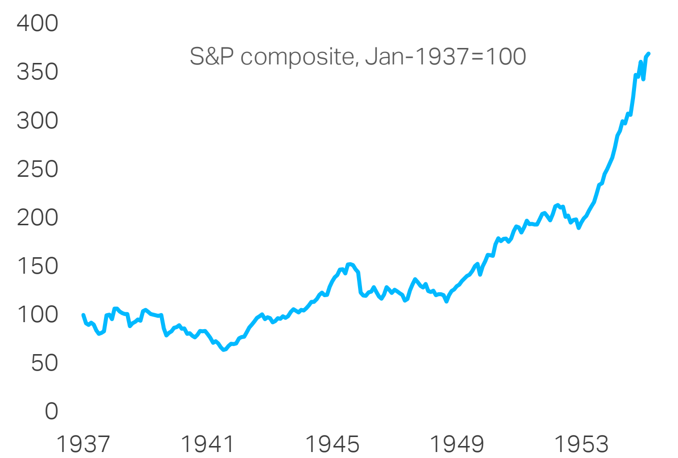


Sources: MacroHistory, TS Lombard.

The post-WW2 economy

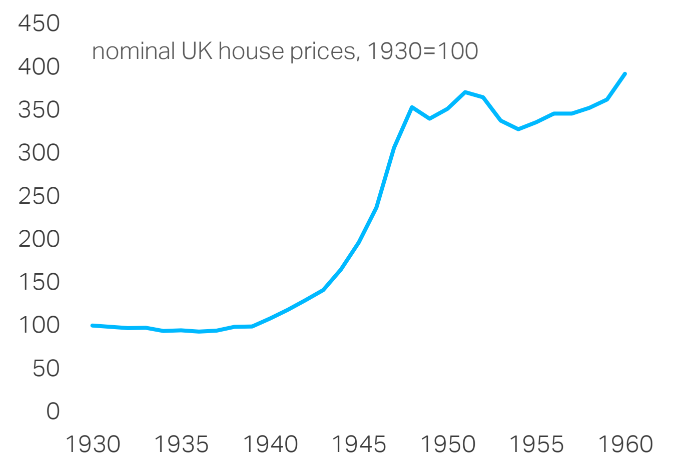
Our focus is not so much what happened during WW2, where there are big differences to COVID-19, as the state of the economy immediately after the crisis. Both events in effect shut down large parts of civilian business and caused a temporary – but huge – reallocation of resources, which led to serious problems when the world "reopened". The emergence of significant "pent-up" demand is one striking similarity, which collided with severe supply-side disruptions to produce a sharp rise in inflation. While governments did not make massive transfers payments during WW2, they supported household income in indirect ways, through a big expansion in government employment and production. At the same time, they placed strict controls on how people could spend their money, through wartime rationing and the redeployment of civilian production to support the war effort. Not only did governments ban the production of certain consumer goods (such as cars and household equipment); there were also widespread shortages of other items, including clothing and non-essential foods. The result, unsurprisingly, was a huge increase in personal savings – WW2, in fact, is the only other time US

Chart 14: Equities rebounded early in WW2…



Sources: FRED, TS Lombard.

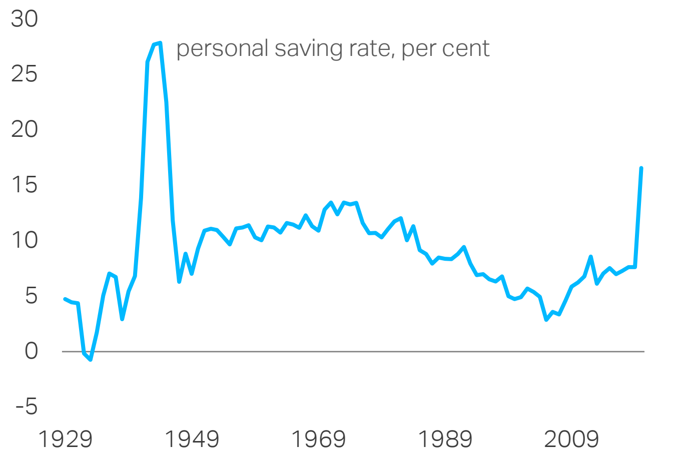
Chart 15: …and house prices were resilient



Sources: Bank of England, TS Lombard.

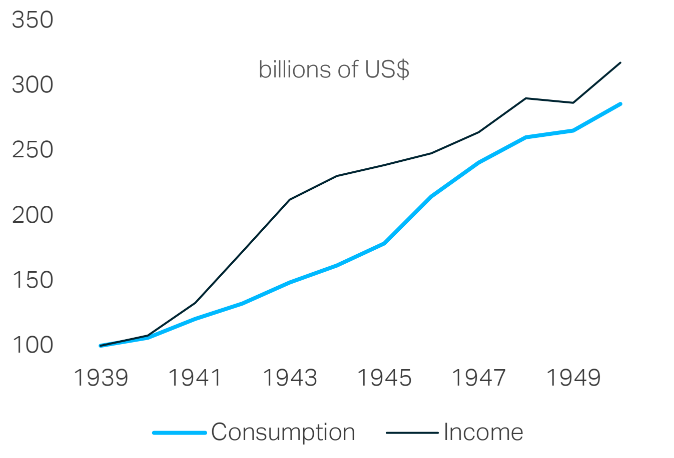
and UK household saving rates hit the levels we have seen during COVID-19. People were anxious about the future and "locked down", so they accumulated vast "excess savings".

Chart 16: US households saved during WW2



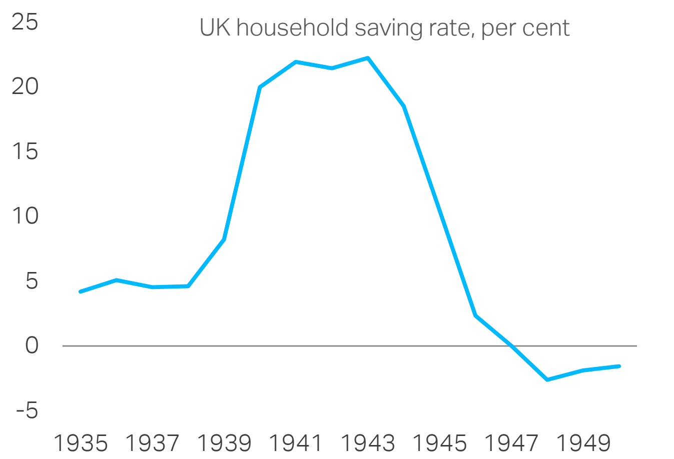
Sources: FRED, TS Lombard.

Chart 17: Pent-up US demand



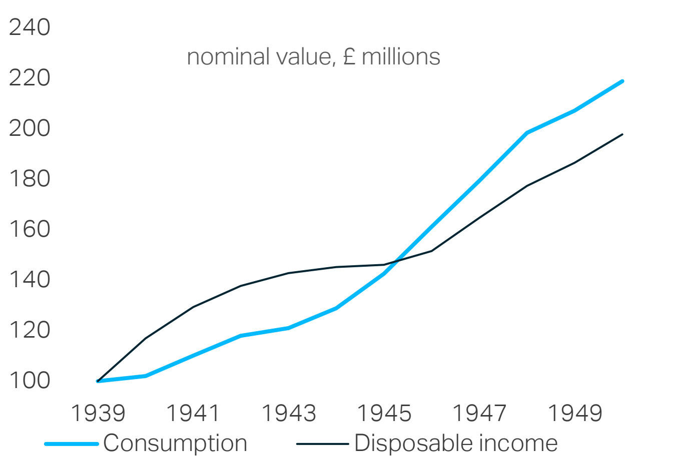
Sources: FRED, TS Lombard.

Chart 18: Similar behaviour in the UK



Sources: Bank of England, TS Lombard.

Chart 19: UK consumer dis-saved



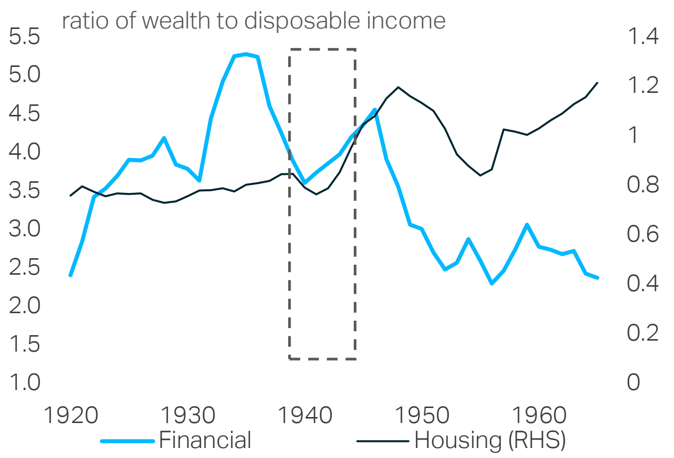
Sources: Bank of England, TS Lombard.

Households accumulated spending power

While we do not have good data on private-sector balance sheets during the 1940s, we can see from the information available that households – in aggregate – emerged from WW2 in surprisingly good health. Not only had they accumulated a significant "stock of excess savings"; the asset side of their balance sheets had held up well. Stock markets initially plunged but then rallied for much of the wartime period. Those investors alarmed by the resilience of equities during COVID-19 can perhaps take some comfort from the way markets behaved during the 1940s. House prices, too, remained surprisingly robust during WW2, rising rapidly towards the end of the conflict. Of course, there is an important caveat to these comparisons with the modern economy because both home and equity ownership rates were lower in the post-war economy. Still, the end of these crises triggered a powerful boom and households were in a better shape to deliver this compared with normal cyclical recessions and past pandemics.

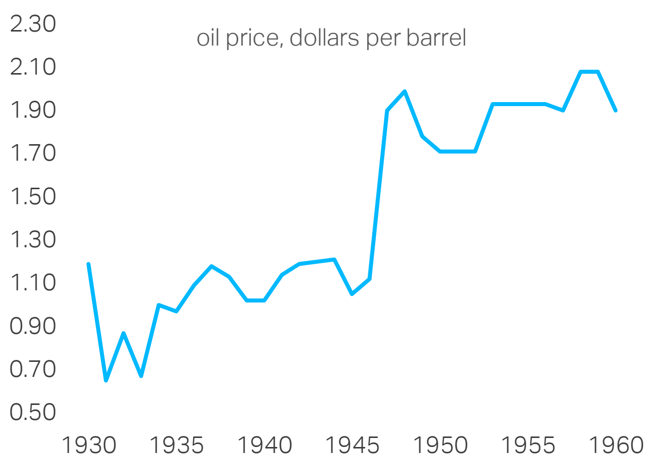
Today there is also a debate about whether the stock of accumulated savings will come "flooding back" into the economy. Our data suggest this is not what happened after WW2. With the exception of a brief period in the UK, saving rates did not turn negative[2].

Chart 20: UK WW2 household balance sheets



Sources: Bank of England, TS Lombard.

Chart 21: Post-war commodity shortage



Sources: Bank of England, TS Lombard.

Supply-side could not cope

Though the end of WW2 unleashed a consumer boom, the supply side of the global economy could not immediately accommodate the surge in spending. Large parts of industry, infrastructure and the housing stock in Europe and Asia had been destroyed, there were shortages of most commodities (which caused their prices to spike) and it took time to redeploy wartime resources to meet civilian needs. The factories, equipment and workers that had produced warships, bombs and aircraft had to be converted to the production of cars, fridges and other appliances. And, of course, there were millions of soldiers who were returning home and needed jobs[3]. The post-WW2 labour market provides clear evidence of the "mismatch" between the jobs on offer and the skills/geographical location of the people looking for work. Chart 23 shows a shift outwards in the Beveridge curve, the classic inverse relationship between the unemployment rate and the number of job openings. This is evidence of a structural deterioration in the labour market and a rise in the NAIRU. Wage growth, too, accelerated in the post-WW2 economy, despite a large increase in the number of people out of work. Again, this means it took time for the supply side of the economy to adjust to the new peacetime era. A reallocation of resources was necessary to shift between "crisis" and "non-crisis" states. In the mid-1940s most public officials were worried about how smoothly this transition would take place – many feared a serious depression, especially after the experience of the 1930s.

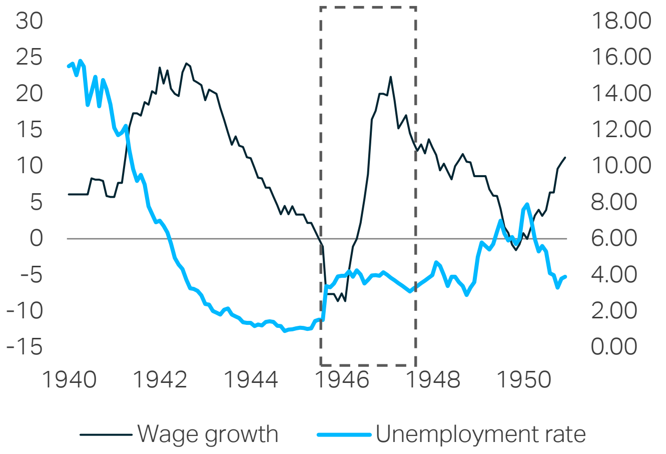
Consumer boom + supply problems = 'transitory' inflation

The combination of strong pent-up demand and severe supply constraints produced a surge in consumer prices after WW2. While US prices jumped around 20%, the spike in the UK CPI was roughly twice as large. Most of this inflation happened within a relatively short period (roughly 15

[2] Remember, saving is a "flow". If households had been spending out of the "stock" of savings they had accumulated after WW2, their consumption would have exceeded their income, which would have caused the saving rate to turn negative.
[3] 16 million Americans (more than 10% of the population) served in WW2; and when the conflict ended, around 8 million of them were overseas. Their average age was only 23. Within 18 months, more than 80% (6.5 million) of these people had returned to the United States.

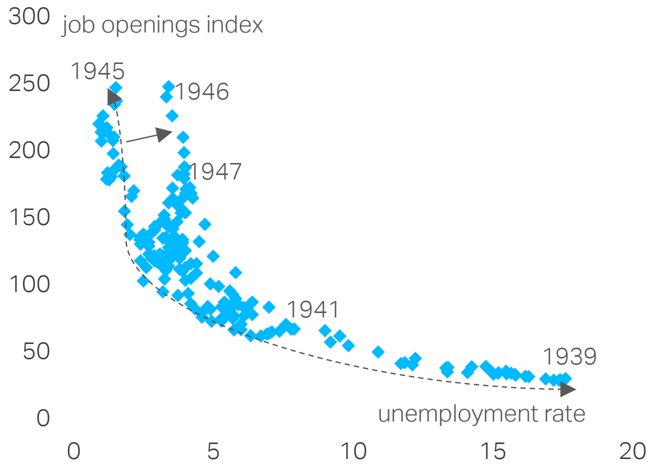
months in the US) and there is no doubt that wartime restrictions on wages and prices played an important role. The US government, for example, had imposed "wage and price controls" throughout the period 1940–46, although they were only really effective between 1943 and 1946. But government restrictions of this nature tend to influence more the timing of price hikes rather than the absolute amount of inflation, and there is no doubt the post-war environment would have been highly inflationary even without these measures. The more important point is that while the level of the CPI shifted higher, there was no "spiralling" in prices. Prices never returned to where they were previously, but inflation rates plunged. And this happened without a monetary-policy response. In the 1940s, central banks could not raise rates to try to squeeze demand because governments insisted they "support the war effort" by keeping state borrowing costs down. It would have been "unpatriotic" to tighten monetary policy, especially given the huge public debts governments had accumulated (i.e., this was a "fiscal dominance" regime).

Chart 22: US wages rose despite more jobless



Sources: BLS, FRED, TS Lombard.

Chart 23: US Beveridge curve shifted outwards

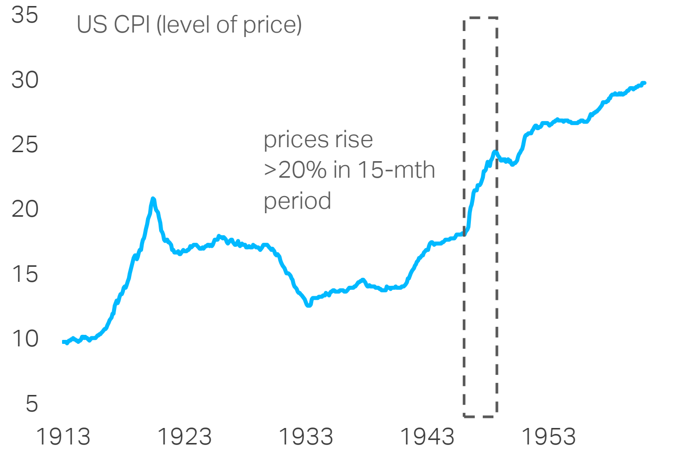


Sources: NBER, FRED, TS Lombard.

There are echoes of post-WW2 inflation today

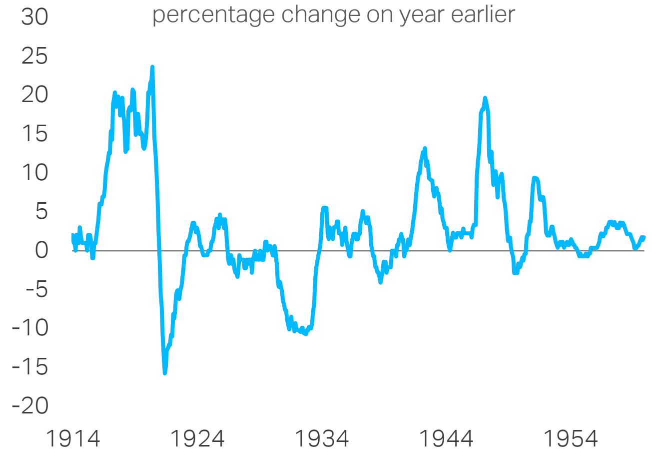
When central banks described today's high inflation as "transitory", the post-WW2 experience is what they had in mind. Prices will never revert to their pre-pandemic levels, but inflation should come down to levels the authorities find comfortable even if they do nothing about it. Although officials now regret using the "transitory" word – because it downplays the pain many households on fixed incomes are feeling (it has squeezed their living standards) – there is no doubt the authorities still believe inflation will follow a similar, albeit far less pronounced, trajectory to that of the late 1940s. Indeed, the same basic forces are at work. We have a situation where powerful pent-up demand – supported by a rapid deterioration in the public finances – has clashed with severe supply-side distortions, as the economy struggles to rotate from a "state of war" (in this case, war against COVID) to a more normal "peacetime" state. The price pressures we have today are obviously less intense than those of the 1940s – there is less pent-up demand and the supply-side challenges are less severe – but the basic story is similar. We end up with 5% pts shift in the price level rather than a 20-40% pts shift. But this is mostly a "levels effect": there is no reason to expect persistent wage-price spirals. "Spiralling prices" were an exclusive feature of the 1970s, the result of a "power conflict" between labour and capital.

Chart 24: Post-WW2 inflation burst



Sources: FRED, TS Lombard.

Chart 25: Inflation volatile in the 1940s



Sources: FRED, TS Lombard.

3. SECOND GOLDEN AGE?

As in the immediate post-WW2 period, the combination of strong demand and severe supply disruption has caused a burst of inflation that should prove mainly "transitory". In fact, today the problem is not just the overall level of demand but also its composition – consumers have been buying "things" rather than "experiences", which has compounded the pressure on global supply chains. When the pandemic ends and consumers rotate back into services, international goods prices could become highly deflationary (which, as usual, would totally shift the market inflation narrative since financial markets are always sensitive to the global industrial cycle). Yet, looking back at the WW2 experience raises more significant questions about the global economy, far beyond the short-term path of inflation. WW2 marked a "structural break" in the macroeconomic regime, ending a long episode of secular stagnation by providing the catalyst for a powerful multi-decade revival. Could COVID-19 have a similar impact? While there are certainly grounds for optimism, any secular macro improvement is likely to be far more gradual (and bumpier) than what happened in the decades after WW2. But this could still mean horrible real returns for international bond holders, especially as inflation will remain more volatile.

WW2 – Macro regime break

There is no doubt WW2 permanently shifted the trajectory of the global economy. US GDP, which in the late 1930s was still below its 1929 level, broke out of its secular slump and recorded rapid nominal growth for the next 30 years. Other countries, too, enjoyed a secular economic boom – the "Golden Age of capitalism" or, as the French called it, "Les Trente Glorieuses" (the Glorious Thirty [years]). In part, of course, this was a simple rebuilding story, especially for those parts of the world the conflict had devastated (see Table 1). WW2 destroyed huge parts of the capital stock, especially in Europe and Japan. Millions of homes lay in ruins, while bombing had destroyed factories, railways, ports and municipal infrastructure. In the UK, 70,000 UK homes had been completely destroyed and almost 2 million damaged. Even smaller cities like Coventry (which lost its entire centre in a single night of bombing) and Hull (where the Germans flattened 95% of the housing stock) had been decimated. Some estimates suggest around 30% of UK and German houses were destroyed, while the losses for France, the Netherlands and Belgium – at around 20% - were almost as large. And not only was it necessary to rebuild what had been lost; there had been virtually no new construction activity during the preceding five years.

Table 1: The global recovery from WW2

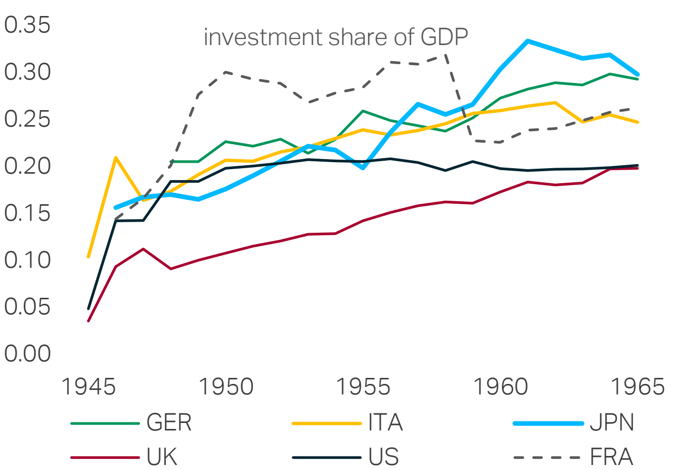
1937=100

Not affected by the war	1947	1948	1949	Centrally planned	1947	1948	1949
US	165	170	156	Czechoslovakia	83	99	107
Canada	162	169	171	E Germany	51	65	77
Ireland	117	128	139	Poland	106	146	177
Sweden	141	150	156	USSR	93	118	141
Less devastated				Latin America and Asia			
France	85	100	110	Argentina	175	178	173
Italy	88	92	100	Chile	136	143	140
UK				Mexico	129	128	137
Devastated by the war				India	102	114	111
Austria	58	89	118				
Germany	33	52	78				
Greece	66	70	82	World	121	135	140
Japan	28	40	53	World ex-US	96	115	131

Source: United Nations

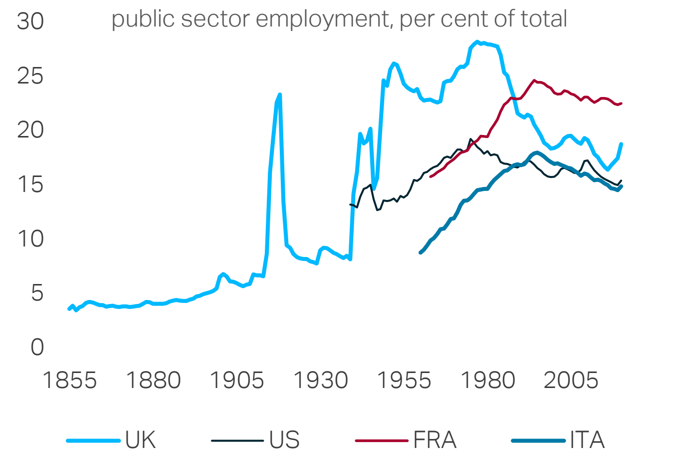
UK data show housing starts were trivial during the period 1939-45, down from around 350,000 annually before the conflict. If wartime destruction is factored in, this adds up to "pent-up" demand for housing equivalent to around 10 years of pre-war construction. Even the US, which had not suffered direct wartime destruction, entered the late 1940s with severe shortfalls in homebuilding and construction, which naturally powered a huge secular boom.

Chart 26: Post-war investment boom



Sources: MacroHistory, TS Lombard.

Chart 27: The mixed economy after WW2

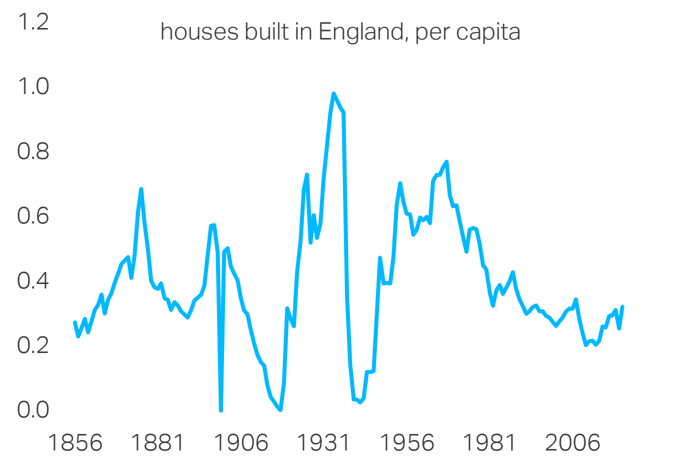


Sources: BoE, OECD, BLS.

Favourable demographics

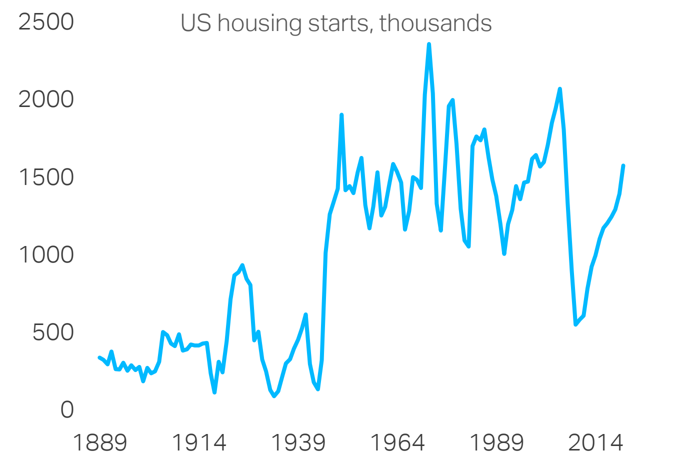
Demographics was another potent force driving the construction boom after WW2. The end of the conflict caused a surge in household formation, as soldiers returning home got married instead of returning to live with their parents. This produced a large increase in the birth rate and rapid acceleration in population growth across the entire developed world. Millions of young,

Chart 28: UK housing boom in 1950s



Sources: Bank of England, TS Lombard.

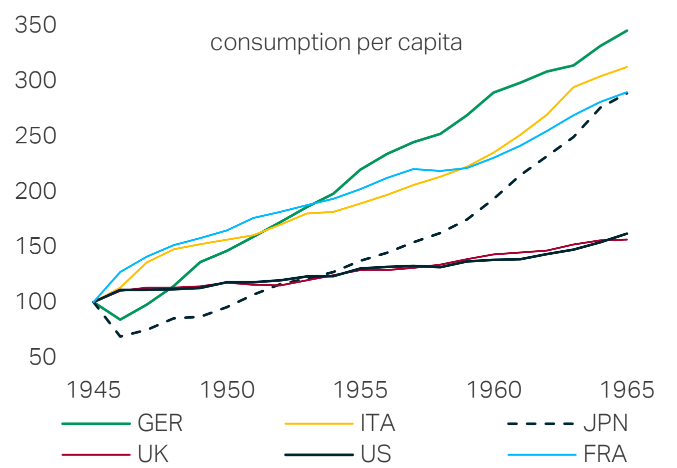
Chart 29: Similar boom in the US



Sources: FRED, TS Lombard.

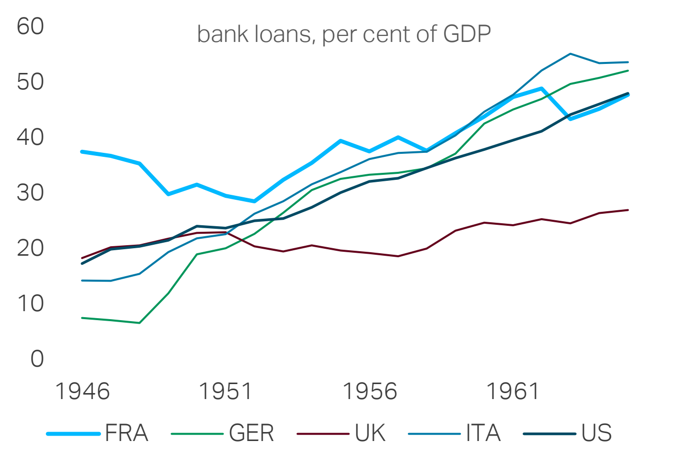
growing families needed new houses, furnishings and household appliances for those homes and even cars to get around. In many countries, there was also a trend towards suburbanization, with people looking to move out of city centres into the suburbs or smaller towns and cities. Owing to the experience of the war, which had highlighted the dangers from high-density housing, many governments were keen to encourage this shift. Over time, governments built extensive motorway networks, which further strengthened the dynamic. US car ownership, for example, rose from 58% at the end of WW2 to more than 75% in 1960. And the spectacular growth of the auto industry – not just in the US but also in other parts of the world – boosted sectors such as retail, wholesale and distribution, as economic activity spread more widely across the economy. The adults of the 1950s had grown up in poverty during the 1930s and then endured rationing during WW2. When consumer goods became available, they were desperate to spend. Factories that produced machine guns and propellers now made washing machines and kitchen appliances.

Chart 30: The birth of consumerism



Sources: MacroHistory, TS Lombard.

Chart 31: Post-WW2 credit boom

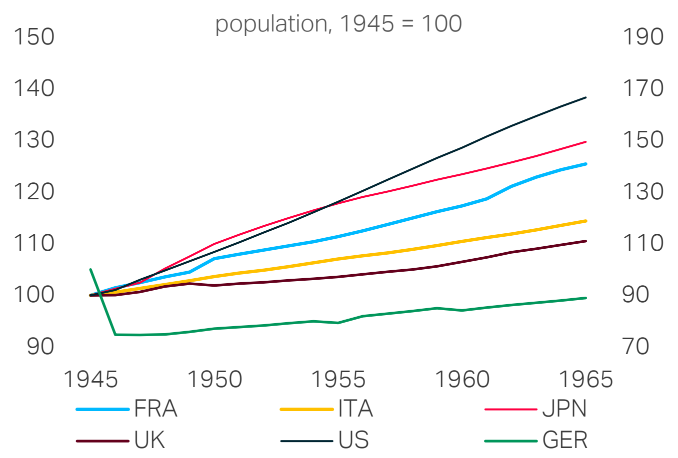


Sources: MacroHistory, TS Lombard.

Surging productivity from wartime innovation

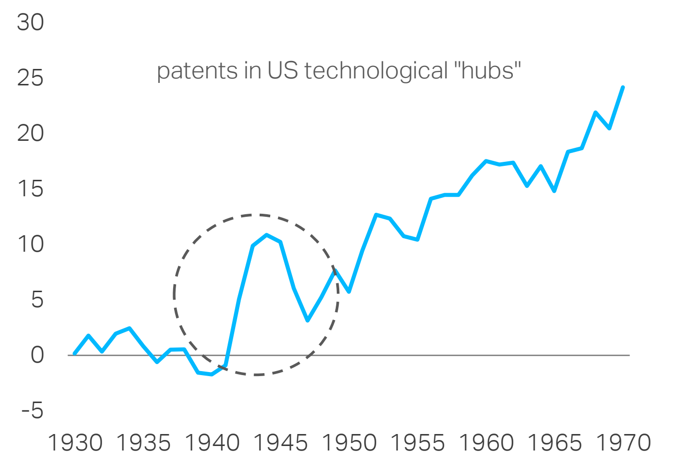
As in the period after WW1, the global economy enjoyed rapid productivity after WW2. While this was partly due to high levels of investment (capital deepening) it was also a story of strong "total factor productivity' (TFP), as new wartime technologies (plus innovations made during the 1920s and 1930s) were redeployed for civilian purposes. A 2020 study by Daniel Gross and Bhaven Sampat highlights a burst of R&D activity during WW2, with the government (especially the military) proving a crucial catalyst innovation. Radar, mass-produced penicillin and the atomic bomb are perhaps the most famous technological advancements, but there were also major advances in rocketry, jet propulsion, radio communications and electronic computing. Developments in chemical sciences were another key source of growth, in particular newly developed plastic polymers and other synthetic materials, treatments for malaria and pesticides like DDT. The output of the rubber, plastics and chemical industries accelerated sharply as a result of wartime innovations.

Chart 32: The baby boomer generation



Sources: MacroHistory, TS Lombard.

Chart 33: Government-led R&D burst



Source: Daniel Gross and Bhaven Sampat (2020).

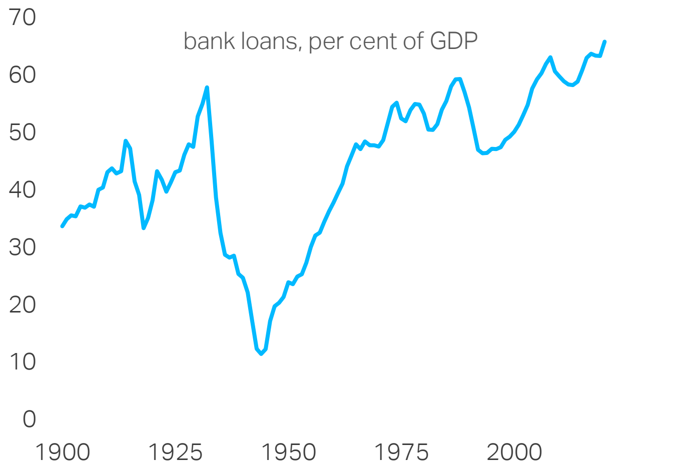
Post-WW2 credit boom

Private-sector credit increased rapidly in the decades after WW2, following the period of deleveraging during the 1930s. In part, this was cultural – a new attitude of "buy now, pay later", sparked by the strong appetite for consumer durables and the introduction of the first credit cards. But government policy encouraged this trend. In many countries, the state provided cheap subsidized mortgages to soldiers who had fought in WW2, while central banks kept borrowing costs down in order to support the post-war recovery ("financial repression"). In fact, for most of the 1940s and 1950s, real interest rates were deeply negative. Businesses and households had no problem servicing their debts, especially with rapid wage and profits growth. Obviously, the situation today is rather different because most countries will exit the pandemic with both private and public debt ratios close to historical highs. Naturally, it will be harder for governments to reduce their own debt ratios by "re-leveraging" the private sector.

International trade and cooperation

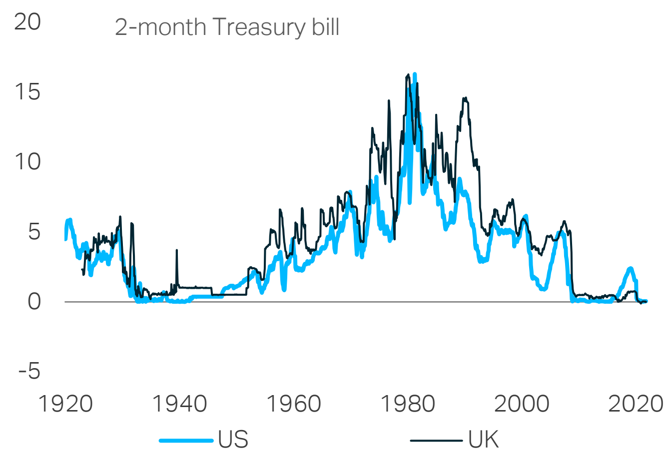
The Golden Age of Capitalism included a rapid recovery in world trade after WW2, reduced protectionism (albeit from extreme levels), the creation of new multi-national institutions, the Marshall Plan (US aid for European rebuilding) and the creation of an international payments system (Bretton Woods). Still, it is important to remember that trade became increasingly regionalized – part of the Great Power Conflict. "Countries falling within the ambit of the US and Soviet Union were under pressure to adopt the same form of economic and social organization as the power under whose security umbrella they sheltered" (Barry Eichengreen). After a brief period of uncertainty, Western Europe gravitated towards US-style market capitalism while Eastern Europe moved towards Soviet-style state communism. The Cold War became a powerful impetus for regional integration and trade. Intra-group trade accounted for 62% of world exports in 1962, up from 54% in 1950. This is something that we might see again after COVID-19, as world trade clusters around US, China and the EU regional blocs. Certainly, there is no sign that the pandemic will reverse this trend, which started in the 2010s.

Chart 34: The re-leveraging of the US economy



Sources: MacroHistory, TS Lombard.

Chart 35: Low interest rates in the 1940s/50s



Sources: Bank of England, FRED, TS Lombard.

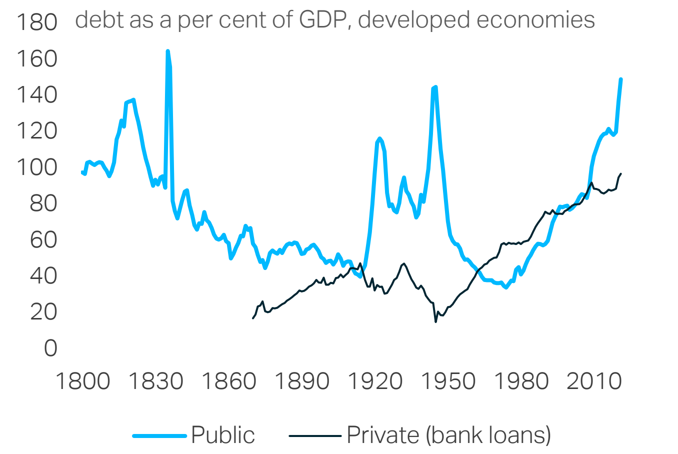
The 'mixed economy'

While neoliberal economists highlight the role of technology, deregulation and international trade in the Golden Age of Capitalism, there is also the argument that it was the "mixed economy" of the post-WW2 period that helped stimulate the revival. The "command economy" of the early 1940s was gone, but the state continued to play a more active role than in the pre-WW2 era. There were differences across countries – some economies were more "mixed" than others – but in general the public sector was more inclined to make long-term investments in defence (e.g., US and Soviet spending during the Cold War) and more willing to provide health and education (the new welfare state); at the same time, it pursued more activist fiscal policy (i.e., Keynesian "demand management") and placed more emphasis on maintaining full employment through monetary policy (rather than delivering low inflation). Trade unions became more powerful, with officials more likely to consult them on workplace relations and economic policy. And most governments embraced radical redistribution, which reduced inequality and lifted the wages of the poor. We know from the evidence accumulated over the past decade that high levels of inequality can contribute to secular stagnation – by concentrating spending power among those social groups least inclined to use it. Conversely, a policy regime that actively targets inequality should boost growth and inflation, raising the equilibrium interest rate.

The 2020s will not match the 1950s but...

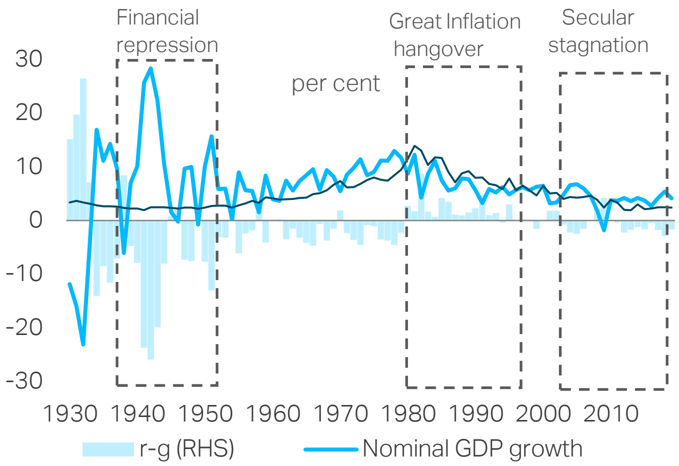
Obviously, it is going to be impossible for the post COVID-19 economy to recreate the post-WW2 boom. Demographics are less favourable and low interest rates are unlikely to generate a credit expansion of post-war magnitude. Yet there are still reasons for optimism – that is, echoes of the 1950s – that suggest the dismal performance of the last decade could end. First, the pandemic has accelerated the diffusion of digital technologies. These efficiency gains were available before COVID, but the technology was underused (concentrated among superstar companies). As we explained in a previous Macro Picture, faster tech diffusion will be crucial to ending the productivity slump of the last decade. A second reason for optimism is that even with slower population growth, new hybrid work patterns could spawn first-time homebuyers who were previously priced out of expensive city-centre housing markets. People working mainly remotely may now be willing to commute longer distances, which means they can live in more affordable parts of the country. This force is unlikely to operate on the magnitude of the post-WW2 "suburbanization" theme, but it points in the same direction. It could provide a secular boost to construction activity, property prices and even bank lending to households (which was subdued throughout the 2010s). In addition, the US is entering a demographic "sweet spot", with a significant share of the population now reaching prime homebuyer age (although other countries, including much of Europe, are in a weaker demographic position).

Chart 36: Debt ratios higher today



Sources: MacroHistory, IMF, TS Lombard.

Chart 37: Post-WW2 financial repression



Sources: FRED, TS Lombard.

The war on climate change

As in the 1940s, it seems governments are set to play a more active role in the post-COVID economy, which is another reason to expect mild secular reflation. For the first time in a generation, policymakers are willing to prioritize full employment over low inflation. Since central banks have limited scope to stimulate the economy (other than by not cutting the recovery short with premature tightening), the crucial issue is whether we will see sustained fiscal expansion. Of course, unlike the situation after WW2, there is nothing that needs "rebuilding" following the current crisis. COVID killed millions, but it did not destroy the capital stock. Still, governments have an opportunity to embrace more supportive attitudes to fiscal policy by tackling a problem that threatens to undermine the future capital stock – namely, climate change. As we explained in previous Macro Picture, decarbonization is set to become the secular growth story of the 2020s, requiring massive private and public investment. Government spending in these areas will not only help address the risks associated with the physical disruption from changing weather patterns; it could even provide a cure to secular stagnation, by raising the equilibrium interest rate. Decarbonization is also an opportunity to tackle other long-standing economic problems, including inequality, "poverty wages" and crumbling public infrastructure.

Modern 'financial repression'

While current anxiety about inflation is a setback for the proponents of expansionary fiscal policy – including even the MMTers – if we follow the "transitory" inflation path of the post-WW2 years, the appetite for large fiscal deficits is likely to return relatively soon (2023?). Fiscal policy has already prevented the sorts of economic outcomes associated with every previous pandemic and recession, so why not deploy these tools against some of the other macroeconomic and societal challenges we face. Obviously, this prospect worries those investors who believe continued fiscal stimulus will turn a temporary inflation burst into a longer-term problem – perhaps even a "1970s endgame". But a scenario of high secular inflation, or sustained "wage-price spirals" seems rather implausible – the 1970s is not the relevant template for today. More likely, we could be entering a regime where inflation is just more volatile, especially compared with the extreme stability of the past 30 years. This would still be bad news for bond holders. While central banks did not lose control of inflation in the post-WW2 period, the volatility of inflation generated horrible real returns (on average) for fixed income markets. These dynamics could play out again in the 2020s, especially with climate change set to cause wild swings in commodity prices. Unlike the post-WW2 era, governments will not need to impose "financial repression" but ignoring "transitory" episodes of inflation will, over time, have the same effect.

Bottom line

The COVID-19 contraction was unlike any previous recession. In fact, even past pandemics – deflationary in nature – have not been a good guide to developments over the past two years. The massive policy response, whereby governments shielded the private sector from the damage the virus would have caused, is a big part of the story. So, the macroeconomic impact of COVID-19 has been much closer to what typically happens during a war, when governments run massive fiscal deficits to beat a military opponent – only in this case they have been fighting a disease rather than a foreign aggressor. Similarly, the period immediately after WW2 is the most striking historical template for the economy we have today. Back then, as today, the combination of strong pent-up demand and severe supply disruption produced a rapid burst of inflation. But the crucial point about this period is that the rise in inflation was transitory, in the sense that inflation soon returned to pre-war levels without central banks needing to tighten monetary policy. The level of the CPI, the money supply and even wages all increased, but there was no "spiralling" effect. In contrast with the 1970s, governments did not need to squeeze inflation out of the system by trying to engineer a recession. We suspect the current rise in inflation will be short-lived, too, which means central banks are not hugely "behind the curve".

While the immediate post-WW2 period provides important lessons for the short-term behaviour of inflation today, there is also the question of whether COVID-19 could provide a "structural break" in the macro regime. Back in the 1940s, WW2 ended a period of secular stagnation by generating new sources of economic growth and a radically different policy mix (fiscal activism replaced a decade of zero interest rates). While the 2020s is unlikely to offer anything as powerful as the Golden Age of Capitalism – especially owing to worse demographics and the structural slowdown in China – there are reasons for optimism. Productivity should improve, construction activity is likely to remain relatively buoyant and there is room for households to re-leverage their balance sheets. Still, decarbonization offers the greatest opportunity to promote a strong economy in the 2020s, especially as it will require a massive expansion in public and private investment. Although COVID-19 did not destroy the capital stock – unlike in WW2 – governments have a chance to "build back "better" and "greener" after this crisis. For investors, this means a secular – but probably gradual and bumpy – inflection point in long-term real interest rates. Even without a serious wage-price spiral, inflation is likely to remain more volatile throughout the 2020s, which on average will mean poor returns in fixed-income markets.