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CHINA'S CREDIT CONUNDRUM

by

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Interview by Robert Brenner

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CHINA'S CREDIT CONUNDRUM

As a leading analyst of China's finance and economy, you were one of the first to identify and quantify the PRC's deepening debt problem and to warn about the implications of its slowdown. As background to this, could you give us your view of China's emergence as workshop of the world and second-largest economy on Earth? Clearly, its rise as the lowest-cost producer of a wide range of manufactures allowed it to secure, through imports, the increasingly complex capital goods and intermediate inputs required to climb the technological ladder, opening the way to an export-oriented growth path that was, at the same time, a particularly effective version of import-substituting industrialization (ISI). It also produced the enormous current-account surplus and huge reserves of foreign exchange, mainly in dollars, that meant China could effortlessly endow its non-financial corporations with the steady flow of loans and subsidies that underpinned their accelerated, investment-driven growth. But what made this possible? How did its initial rise come about?

China's emergence as a major exporting power from the 1980s to the mid 2000s was ultimately founded on its rich endowment of cheap and relatively skilled labour, the freeing up of that labour force in the late 1970s by way of a de-collectivization that issued in an historic wave of agricultural commercialization and rural industrialization (Township–Village Enterprises, or TVEs), and the reduction of trade barriers in the advanced world, culminating in China's Most Favoured Nation (MFN) status and its joining the WTO at the start of the twenty-first century. The Soviet Union had achieved a major industrial takeoff after World War Two in largely autarkic fashion, via ISI. China, by contrast, launched its industrial build-up in the midst of the shift toward the globalization of the world economy, in which it came to play the decisive role. Over time, as you say, China's inexpensive labour—plus government subsidies and low-cost loans for both domestic and foreign exporters—earned the country large trade surpluses and sizeable foreign-exchange reserves. At their height the latter totalled almost \$4 trillion and provided China with the increased bank deposits/money supply to finance the stepped-up lending that underwrote the country's historic growth in GDP and investment.

What role did China's integration into the already existing East Asian trade and commodity chains play in this? It's often said that it was this network, initially focused on Japan, Taiwan and Korea, that produced the capital goods and intermediate inputs that were worked up into manufactured commodities on the Mainland, and exported from there into the American market and the other advanced-capitalist economies. Would you agree with that?

Yes, I agree, but I would also highlight three further reasons why China was able to take advantage of its central position in the emerging global value chain so effectively. First, in terms of its size, and especially the scale of its cheap labour force, China far surpassed Japan and the NICs combined, with nearly a billion people even as early as the 1980s. This huge population made for a continually growing labour supply, which put downward pressure on labour costs, especially with the entry into the labour market of perhaps 150 million migrant labourers from the countryside. These workers were able to provide labour power at a particularly low price because they could subsidize their incomes from the peasant plots that they never relinquished. Second, China's rise coincided with major advances in information technology, which made possible the construction of the sophisticated international communications and transportation networks through which the economy expanded. Third, globalization and international free-trade agreements, such as the WTO and NAFTA, brought substantial reductions in barriers to imports throughout the world, opening the way for China to make the most of its increasing cost advantages and competitive strength. The PRC thus became part of the global production chain to a greater extent than even Japan had managed. According to one study, China's imports struck more industries in the US more quickly than any previous wave of imports. [1]

What about the role of the Chinese government in underwriting growth? How has China's organized capitalism, driven by subsidies and loans from state bodies at all levels—central, provincial, county, local—served to push growth forward?

What we have here is a kind of path dependence, where transnational producers across many light and increasingly also heavy industrial sectors came to rely on Chinese inputs for a growing part of their production chains. China has spent billions, even trillions, of US dollars on investments to maintain and expand its place in the global value chain. The support that its organized capitalism provides for this effort comes in part in the form of cheap land, world-class infrastructure, low taxes and cut-rate energy prices, as well as cheap credit for domestic exporters and, more and more, for firms competing with imported goods.

China's government, at all levels, has played an indispensable role in the provision of all these factors. Provincial, county and local administrations, much like state and city governments in the US, have been in competition with one another to attract investment to their localities, and they have done this by providing the greatest possible incentives to non-financial corporate producers and exporters—building infrastructure, developing land, offering credit, and so forth. In this way, they have enabled Chinese manufacturing to climb the technological ladder, producing increasingly complex goods, so as to be able to compete in an ever-broader range of manufacturing products.

You've said that China's vast export earnings and current-account reserves enabled it to grant large amounts of credit. What have been the implications for its currency?

There was a certain self-reinforcing logic to China's miraculous rise in the global production chain. That is, China's initial endowment of cheap labour allowed it to generate those current-account surpluses by exporting—at least at first—light-manufacturing exports. Chinese exporters were paid by US and other overseas purchasers in dollars, or other national currencies, but exchanged them with their banks for yuan, because they needed the local currency to pay their Chinese workers, and to buy the capital goods and intermediate inputs that they secured domestically. The banks, in turn, would sooner or later exchange those dollars for yuan with the People's Bank of China (PBOC), the Chinese central bank, which added them to its dollar and other foreign-currency reserves. The result was, for an extended period, a swelling of renminbi deposits in Chinese banks, which could be lent on to non-financial corporations, and a spectacular ongoing rise of dollar reserves held by China.

All else equal, rising Chinese current-account surpluses and the corresponding build-up of dollar reserves would have meant the supply of dollars outrunning the demand for them. That would have put upward pressure on the value of the renminbi against the dollar, making for a process of renminbi revaluation that would have tended to undermine Chinese competitiveness, reducing its exports and its current-account surplus. But, committed as it was to export-led growth, the Chinese government adopted a series of measures to prevent the rise of the renminbi exchange rate that would otherwise have taken place.

Above all, it enforced a fixed, then minimally fluctuating, renminbi-dollar exchange rate. In order to accomplish this, it printed renminbi roughly to the extent necessary to cover the shortfall of demand for dollars vis-à-vis yuan that was the counterpart of the Chinese current-account surplus. It then used those yuan to purchase dollars on the international market, driving up what would otherwise have been insufficient demand for dollars to prevent the renminbi from rising and to sustain the exchange rate at a fixed level. This enabled China's current-account surplus to continue to rise while preventing the value of its currency from ascending along with it, maintaining China's competitiveness and sustaining its regime of export-led growth.

Without the PBOC's intervention, the build-up of dollars in Chinese hands could have not only led to an appreciating currency, but encouraged Chinese private investors to invest those dollars throughout the world, wherever they could secure the highest rate of return. But Beijing strictly limited the extent to which private investors could take money out of the country and deplete its foreign-exchange reserves by imposing a tight regime of capital controls. These controls have so far succeeded in preventing its emerging wealthy class from exporting too much capital, protecting China from the rampant capital flight seen in many developing economies, not to mention devastating runs on its currency.

China's dollar surpluses and reserves have thus remained largely in the hands of the central bank, rather than private investors. It has used them to further strengthen China's international position, by purchasing safe dollar-denominated US assets, specifically Treasury bonds and bills, as well as the debt of US government-sponsored entities, notably Freddy Mac and Fannie Mae. These huge purchases of US government debt brought about an enormous increase in the supply of credit to the US compared with the demand for loans, and thereby drove down the cost of borrowing in the US. The Chinese central bank has thus not only pushed up the value of the dollar, but driven down US interest rates. As a result, US consumers were able to borrow more easily and with a more valuable currency than otherwise. They have pushed up the demand for Chinese exports in relation to US imports, further increasing China's current-account surpluses and its dollar foreign-exchange reserves: a powerful virtuous circle underwriting Chinese expansion.

What were the implications of this for China's rise?

The beauty of this self-driving process was that it relieved China of the need to borrow from abroad to finance ISI, because it could rely for such financing on increases in the money supply. Money flowed into China in the form of dollars from current-account surpluses, foreign direct investment, and hot money inflows. The recipients of those dollars sold them to their banks in return for renminbi. The banks themselves secured the increased renminbi to cover the dollar deposits by exchanging the dollars with the PBOC. The PBOC purchased the increased inflow of dollars from the banks by printing high-powered money. So, indirectly, the creation of high-powered money—in the form of renminbi—by the PBOC allowed foreign-exchange earners to increase their renminbi deposits even while the exchange remained roughly at the same level.

At its height, in the mid 2000s, China's trade surplus rose to nearly 5 per cent of the money supply, significantly enhancing China's growth potential. The associated growth in the money supply, which continued at a rapid pace from the mid 1990s to 2008, was enormously significant. It allowed China to plough trillions of yuan in new credit to non-financial corporations to help maintain China's edge in global production, to climb up the technological value chain, and to pursue import substitution across an ever-larger range of goods, enabling the production and export from China of goods that formerly had to be purchased abroad.

This minimal dependence on external debt allowed China to pursue ISI without having to face the threat of a payments crisis, which so many other developing countries have had to confront—a crisis set off by the withdrawal of external debt that might be motivated by rising external deficits, collapsing currencies and capital flight. By the same token, China had little need to worry about speculation against the renminbi, because the massive inflow of dollars tended, all else equal, to drive up the renminbi rather than undermine it. China was thus able to employ an export-oriented path to industrialization to overcome the classical problem that had tended to confront, and sooner or later to disrupt, standard efforts at ISI in the postwar era. That problem was the tendency to incur uncontrollable current-account deficits, resulting from the growing cost of increasingly complex capital and intermediate imports to support the new domestic industries. By contrast, China's industrializers could solve this problem simply by virtue of their rising current-account surpluses.

Along with the rest of the world, in 2008–09, China entered the global economic and financial crisis. Its immediate result was the disruption of the markets for China's manufacturing exports, producing a sharp, and indeed permanent, reduction in the growth of demand for exports that had been driving Chinese GDP. The global economic crisis was a turning point for China, for it was at this moment that the country found itself obliged to begin to move away from the export-led model that it had followed for close to three decades, as its exports ceased to deliver the dollars that had enabled stepped-up lending. Could you explain what lay behind the crisis for China and how Beijing initially sought to deal with it?

In the wake of the global financial crisis, the growth of Chinese exports dropped precipitously, and the fact and

form of the ensuing crisis suggested that China had reached a limit in achieving growth by way of exporting to the advanced-capitalist world. During the final years of China's boom, goods exports grew spectacularly, at around 20 per cent per year on average. But in 2009, Chinese exports plunged to minus 18 per cent. Export increases did come back fiercely, averaging 25 per cent per annum in 2010–11. By 2012, however, the honeymoon was over, and goods export growth collapsed to about 7 per cent per year for 2012–14, then minus 2 per cent for 2015–16. China's current-account surplus proceeded in a parallel manner. It had soared from 3–4 per cent of GDP in 2004 to 8–10 per cent of GDP in 2008–09. But it then dropped to 2 per cent of GDP in 2011 and continued at about the same level in the following years, through to 2016.

Even so, the constraint of collapsing exports did not materialize immediately, because the regime possessed ways to cushion the fall. The government's initial response to the fall-off in exports and ensuing economic downturn was to compensate for the plunge in demand from overseas by stoking demand at home. It turned to a Keynesianism of a familiar sort, but on an historically unprecedented scale. Wen Jiabao adopted a combination of an active fiscal policy and a loose monetary policy to implement a 4 trillion yuan (\$580 billion) stimulus package for 2009 and 2010. Nevertheless, it was indicative of China's looming difficulties that a large portion of this pile of credit was channeled into stock and property markets rather than into the real economy—financial assets rather than capital goods and wages. As elsewhere, so in China, the gain in GDP for any given infusion of credit fell back significantly.

When the crisis hit in 2008–09, banks were so well capitalized and had so much liquidity that they could respond by boosting lending by over 30 per cent in the first year of the stimulus. Yet China could only follow this path forward for a limited period of time, because the current-account surpluses that had been accumulated during the export boom were used up rapidly by the historic stimulus programme, and the sharp decline in export growth prevented them from being replenished. The trade surplus and foreign-exchange flows ceased to infuse the banking system with the large new deposits which, in the past, allowed the banks to roll over illiquid assets comfortably while still financing new economic activities. China would have to find ways to infuse credit into the economy under much less favourable conditions.

How did the regime respond to the need to extend credit to drive growth, in the face of the diminution of the deposits that had long been provided by its towering current-account surpluses?

To maintain uninterrupted growth in the manner of its great boom, China would have had to generate a sizeable trade surplus, ideally in the region of 2–3 per cent of the money supply every year. But that would have required emerging markets in the developing world somehow taking over from the OECD economies, to provide China with increased export demand, larger current-account surpluses, increasing foreign-currency inflows and rising renminbi bank accounts—an impossible feat, as it turned out. China was therefore doomed to rely for increased lending on money creation by the People's Bank of China.

At their height in 2008, net foreign-exchange inflows over a 12-month period had made for an increase in bank deposits amounting to 7 per cent of bank assets. Even as late as mid 2011, net foreign-exchange inflows were still increasing deposits by the equivalent of 3.5 per cent of bank assets over a 12-month period. But 2012 was the end of the line. That year, foreign-exchange inflows were the equivalent of a mere 0.5 per cent of banks assets over a 12-month period. So, starting around 2012, in order to sustain growth, China began to expand credit simply by printing yuan, rather than relying on increasing renminbi bank deposits that derived from rising dollar inflows. Easy money creation from the foreign-exchange inflows had become a thing of the past.

Is this path to growth by way of creating ever greater debt, outrunning current-account surpluses, actually sustainable? What problems do you expect it to generate?

China faces an inherent contradiction between what it needs to do to maintain growth and keep its edge in the

global production chain—which is to issue ever more credit—and what it needs to do to prevent the decline of the renminbi exchange rate and increasing pressure for capital to exit the country—which is to keep interest rates up and credit creation down. This contradiction has become more acute over time, because it's taking ever more credit to stimulate a given amount of growth.

In 2016, China needed three times as much credit to call forth the same amount of growth as in 2008. The scale of debt creation required to keep the economy moving forward has increased massively, and PBOC loans to domestic financial institutions rocketed from 4 trillion renminbi at the end of 2010 to 14 trillion renminbi by November 2017, a three-and-a-half-fold increase in the space of seven years. Total debt has grown from 163 per cent of GDP around 2009 to 328 per cent of GDP today, and this figure will likely continue to grow for the foreseeable future.

The bind that this extraordinary amount of debt creates for China is apparent in the huge levels of debt servicing—interest payments—it entails. In the twelve-month period ending in June 2017, the size of the increase in interest payments actually exceeded the increase in nominal GDP by 8 trillion renminbi. Since there were no large-scale defaults, the added interest burden must have been financed in some way. The increase in borrowing costs could, conceivably, have been paid for out of GDP (income) itself, directly reducing the growth of GDP. But, most likely, the new interest payments were covered by further loans, which made for a further rise in total debt. The Chinese economy has thus, by definition, become a Ponzi unit—engaging in what Hyman Minsky called Ponzi borrowing.

The upshot is that, if China wants to prevent the rate of growth from falling, it will have to continue to expand credit at a massive and ever-increasing rate, as it has been doing. But if the economy accumulates debt in this fashion, it will, unavoidably, drive down the value of the renminbi and create pressure for capital flight. Were the wall of capital controls to be substantially breached, it would open the way to financial crisis. If, on the other hand, China chooses to raise domestic interest rates so as to slow the growth of credit and shore up the currency, it will reduce the tendency for capital to leave the country but will also, at the same time, reduce the domestic lending and investment that has been so indispensable for sustaining growth.

It seems that China must choose between political stability—which requires growth and therefore a falling currency and rising debt—and financial stability, which means stemming capital flight and therefore a rising currency and slower growth of credit. The country seems to be coming up against the limits of its economic model. In the next three or four years, it will need to choose between, on the one hand, a large-scale devaluation resulting from the continuing build-up of debt, and, on the other hand, the bursting of the domestic financial bubble and an ensuing growth slowdown. It will be a tough choice that will test the Xi Jinping leadership.

In view of the contradictions inherent in depending on rising government-sponsored lending to drive growth, what policy responses are available to the Chinese regime?

The 2008–09 crisis and its sequels prompted several responses from the Chinese state. The smartest policy-makers in China understood the deepening contradictions and conflicts of interest built into the country's way of doing business. When Xi took office in 2012, he pushed for a slowdown in the expansion of debt, even though it would reduce the growth of GDP, under the slogan of the 'New Normal'. His advisers realized that the growth rate simply could not be sustained without putting enormous downward pressure on the renminbi, which would increase the pressure for capital flight and open the way to crisis.

The government therefore began to implement a series of steps to try to maintain stability as well as growth. First, slowing the pace of credit expansion—China has announced it is doing this, but whether it can actually accomplish it is not fully clear. Second, China needs to devote a larger share of what credit expansion does occur to fixed investment, to help it maintain its edge in manufacturing exports. It is therefore attempting to deflate

asset-price bubbles, especially in land, real estate and equities, in order to reduce the incentive to engage in speculative as opposed to productive investment. Third, in the face of higher interest rates, China needs to secure more money to lend from what current-account surpluses and associated bank deposits and currency reserves it does accrue. The government is therefore committed to reducing banks' reserve requirements, at least to some extent. Finally, China needs to see what gains in trade it can secure by further developing the so-called Belt and Road Initiative—the network of ports, railroads and highways linking China to Europe across Central Asia and the Indian Ocean, on which the government is counting to further its commercial impact.

It is true that none of these policies has been fabulously successful, but in combination they have succeeded in stabilizing the level of the trade and current-account surplus as a share of the money supply. Without these policies, external surpluses would have shrunk to a negligible share of money supply by now. Still, the future looks at best uncertain. In the likely event that the growth of the US and European economies begins to slow in the coming year or two, China's trade and current-account surplus growth will also decelerate—and even with the recent effort to slow the increase of credit, in a slowing world economy, money-supply growth will outstrip that of the trade and current-account surplus. Sustaining debt-driven growth is going to become more difficult.

To what extent is the Xi Jinping government, with its 'New Normal' policy agenda, in sync with the Chinese elite, which prioritizes the consolidation and enhancement of its recently amassed wealth? Does this layer support the 'New Normal'?

The Chinese miracle has brought an astounding increase in economic inequality, with a polarization of wealth that has itself entailed an extraordinary concentration of riches in the top 1 per cent and above. In 2010–11, the wealthiest 1 per cent of urban households disposed of assets estimated at up to \$5 trillion. Representing this new economic elite has naturally been a top priority for successive governments. Nevertheless, in attempting to do so, they have had to confront an array of difficult choices. Up to 2012–13 or thereabouts, declining real interest rates made for easy credit. But that entailed downward pressure on the renminbi, which meant a fall in the value of Chinese assets in international terms, and a corresponding drop off in the capacity to buy and invest abroad.

China's new rich, in possession of such a disproportionate share of the country's wealth, are not prepared to sit idly by and watch their assets being so brutally devalued. They have pressed, directly and indirectly, for a relaxation in the system of capital controls that has played such a central part in the country's growth strategy. They have not only tried to induce the government to slacken enforcement of capital controls, but have also attempted the sub-rosa export of capital themselves and sought to relocate their children to the US. The government, for its part, understands that capital controls constitute its ultimate line of defence in pursuing an independent economic strategy and has tried to protect that policy space even while avoiding controls that would be too draconian.

How has that been working?

Not too badly, at first. Until recently, the government managed to finesse the problem, because the banking system provided sufficient credit not just to nurture economic growth but to support various asset-price bubbles, from land to real estate to the stock market. The wealthy class was therefore able to make extraordinary profits by investing in China rather than abroad, by putting their money in markets for financial assets. Paradoxically, however, the 'New Normal' and the 'deleveraging' of the Chinese economy brought in by the Xi Jinping government began to short-circuit this form of money making, by deflating the various asset bubbles that had provided the wealthy elite with an alternative to capital flight.

As asset prices have fallen, the super rich have acquired a greater incentive to move their money out of the country, even though the government was hoping that slower credit growth would end up improving the long-term prospects for investment in China's real economy. Adding to the new turn to capital flight, the many risks associ-

ated with investing in China now included the political risk of getting pulled into a corruption scandal. If returns in China were no longer going to be extraordinary, Chinese investors might as well earn a more modest return in a much safer and more protected way overseas.

The 'New Normal' means in the first instance a slowdown in the growth of lending and of debt, for the sake of financial stability. But what about the longer run? What can the government do in qualitative terms to re-ignite China's economic dynamism?

In financial terms, the easiest thing to do is to copy what Japan did. In essence, the government can drive interest rates down to zero with massive quantitative easing, allow capital outflows and depreciate the currency, and issue a large quantity of government bonds to write down bad debt in the banking system. That could wipe out China's corporate debt almost overnight and make large-scale borrowing more sustainable, due to the near-zero interest rate. Were this to happen, exports would pick up, supported by a cheaper currency. However, for now, the leadership wants to avoid this approach, because growth would slow and the dollar value of China's economy would collapse, making it harder to catch up with the US economy in nominal terms.

To what extent does your analysis indicate that the export-based miracle is now behind us, due to the rise of manufacturing over-capacity in the world market and in China? Where does over-capacity fit into the story you have laid out?

Certainly, the combination of Chinese state control of the entire financial system and the lowering of trade barriers elsewhere allowed China to plough its trade surplus into massive investment in various industrial sectors and find demand in growing exports. If financial institutions had not been controlled by the government, private capital would have invested much more heavily overseas and in various services, from the beginning—diversifying its portfolio, so to speak, at the cost of manufacturing output and exports. However, due to the Chinese planners' priority on infrastructure construction and industrial capacity, the financial system devoted the bulk of its resources to these two areas, and this actually contributed to global over-capacity in a number of sectors, as China force-fed the build-up of fixed capital to aid the domestic production of goods that were already being made in the advanced capitalist countries, although at a higher cost.

In a sense one could say that China expanded through the systematic production of over-capacity in line after line, abroad and at home. This dynamic of over-supply generated trade shocks for industries and workers in advanced countries, as fixed investment soared and lower-cost Chinese goods squeezed the profits of producers abroad. But workers and corporations in China benefited mightily from it, as it detonated an unstoppable process of expansion that allowed China to avoid recession and unemployment for decades.

For China, the global crisis of 2008–09 was in the first instance a crisis of export markets: the upshot of China's way of appropriating market share via low-price, low-cost goods. Does it seem correct to understand this crisis of exports and the ensuing economic difficulties as an expression of a build-up of over-capacity originating in China and its credit-based wave of investment?

If we are talking about the domestic economy, I don't think, technically speaking, that over-capacity has been a major problem for China. This is because the regime can deal with the problem of demand in general—and problems of export demand in particular—simply by issuing more debt. Banks will, if necessary, roll over the distressed debt of money-losing state-owned enterprises (SOEs) and even of state-supported private firms. As we have said, this will lead to downward pressure on the currency, which could drive a crisis by way of capital flight. But this is why China has capital controls—precisely to prevent capital flight. So long as capital controls hold, this can go on forever.

But doesn't the reliance on credit to drive the economy in this way prevent the shakeout of low-profit businesses and

means of production and so exacerbate over-capacity—further discouraging investment, to the extent that that depends on securing decent profits? Isn't the apparent rise in the amount of credit required to drive a given amount of economic growth evidence of this?

In the medium run, of course, over-capacity does cause a growing problem for policy-makers hoping to staunch capital outflows. There has been such a heavy focus on fixed capital investment in manufacturing industries for so long, with worsening over-capacity, that the rate of return has been driven low enough to discourage further investment. That has provoked a search for alternative investments outside industry, leading to a huge concentration on real estate, making for bubbles, as well as infrastructure. Should real estate and infrastructure also suffer a reduction in their rate of return, the pressure to invest overseas will soar and capital controls will be further tested.

Globally, this has caused major dislocations because banks in capitalist countries wouldn't support too many money-losing firms in sectors with over-capacity. Because intensive investment allowed China to build up its production capacity so rapidly, many firms in advanced countries, especially the United States, couldn't adapt—or could only adapt by moving production to China. Their creditors, unlike Chinese banks, wouldn't carry on providing credit to firms that could not compete with the 'China price', so thousands of firms either shuttered or relocated, leaving millions of workers unemployed, or employed in marginal jobs, in the space of less than a decade. Although much of the rhetoric about the incompatibility of capitalism and socialism reflects a Manichean construct of the Cold War, there are some deep incompatibilities between private capital and China's system of state-controlled capital.

Is China actually capitalist? It has that appearance to some degree, as it attracts investment for manufacturing exports on what would seem to be the capitalist criterion of a high rate of return—secured through relatively low wages and relatively high skills and technology. But what about the widespread refusal to allow firms to go out of business? What about the pressure from government bodies to have firms invest, no matter what their rate of profit? Where do capital controls fit in? How would you understand Chinese officialdom's access to income without directly investing in private enterprises? Do the SOE s, like many state-owned firms elsewhere, adhere to capitalist norms and prioritize profit-making?

This is a tricky question to answer. I would still say that China has a system of 'state capitalism'—that is, although private households command trillions in financial and physical assets, the government still channels the vast majority of investment, both financial and in the real economy, into the areas it wants to support. The majority of assets held by Chinese banks, for example, are loans and bonds to finance state-sponsored projects or SOEs. Even Chinese households' love of property investment has been shaped by government policies to commodify land and housing, promulgated in the early 1990s—as well as by the lack of available alternatives, above all investing overseas.

You have repeatedly warned that there is a significant probability of a financial crisis in China, unless there is a big decline in the value of the renminbi. Could you unpack this for us?

As I have emphasized, the contradiction between the need to create credit, to drive growth, and the need to secure a stable currency, to avoid financial crisis, has intensified in recent years. In order to keep the economy turning over, the PBOC already had to carry out a devaluation in 2015, even if a relatively limited one. But this led almost immediately to major waves of capital flight in the fall of 2015 and in early 2016. This accounted for most of the trillion-dollar depletion of foreign-exchange reserves that took place over the period 2014–17, as wealthy citizens rushed their money out of the country. If the Federal Reserve were to increase interest rates in 2019, China would find itself in a still more precarious position. In a world where the interest rate on US treasury bonds, the safest assets in the world, rose to over 4 per cent, while Chinese bank deposits and government bonds offer a return of just 3.5 per cent, the temptation to move money out of China would be irresistible.

Prior to 2013, severe capital flight had been considered only a remote possibility in China. As late as the middle of 2014, foreign-exchange reserves still amounted to 20 per cent of the money supply. In subsequent years, however, the reduction of foreign-exchange reserves and the accompanying increase in the money supply cut the ratio between them to just 10 per cent. This meant that if households and firms were to move the equivalent of just 10 per cent of money supply out of the country, China's foreign-exchange reserves would basically be gone, leaving the economy profoundly vulnerable to a crisis triggered by capital flight, were the PBOC to continue to drive the economy by issuing more credit.

To stave off this eventuality, the Xi Jinping regime has implemented a series of radically escalating capital-control measures. These have included limits on corporations swapping renminbi into US dollars without underlying trade invoices, checks on the veracity of trade invoices to prevent over- and under-invoicing, higher hurdles for individuals to convert renminbi into dollars, and a crackdown on underground banks and popular offshore locations for currency exchange. These draconian steps have significantly restricted the exit of renminbi in the last few years.

But the fact remains that ongoing foreign trade still allows for the over- and under-invoicing of exports and imports, and the ability of Chinese citizens to take trips overseas means they can still whistle funds out of the country, with the consequence that a significant uptick in outflows of dollar reserves remains very possible. Indeed, if these processes were allowed to continue for long enough, they could easily lead to a crisis of confidence in the renminbi. The result might not be catastrophic, but a major devaluation implemented in response to capital flight would lead to several years of negative growth, some external default, and asset deflation. Were such a crisis of confidence in the currency to occur in lockstep with an international panic in the world's already highly vulnerable emerging markets, the squeeze on China could become very serious indeed.

[1] David Autor, David Dorn and Gordon Hanson, 'The China Syndrome: Local Labour Market Effects of Import Competition in the United States', *American Economic Review*, vol. 103, no. 6, October 2013.