

How China Has Defied the Monetarists & Caused a Glut of Global Capacity

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EXECUTIVE SUMMARY

The monetarists led by Milton Friedman argued that it is impossible to boost National Income or GDP in the medium- or long-term (i.e., for any period exceeding 2 years) by increasing the money supply. So, excessively-rapid increases in money supply would invariably lead to inflation. Yet, China has undertaken the biggest monetary expansion in world history over the past 12 years -- but *has* succeeded in boosting GDP (rather than inflation) throughout that period. Rapid increases in money supply have not boosted inflation in China; instead, they have mainly resulted in rapid increases in investment (and hence GDP), and the resulting (excessively-rapid) increases in output have kept inflation well-contained. Friedman has met his match in the PBOC!

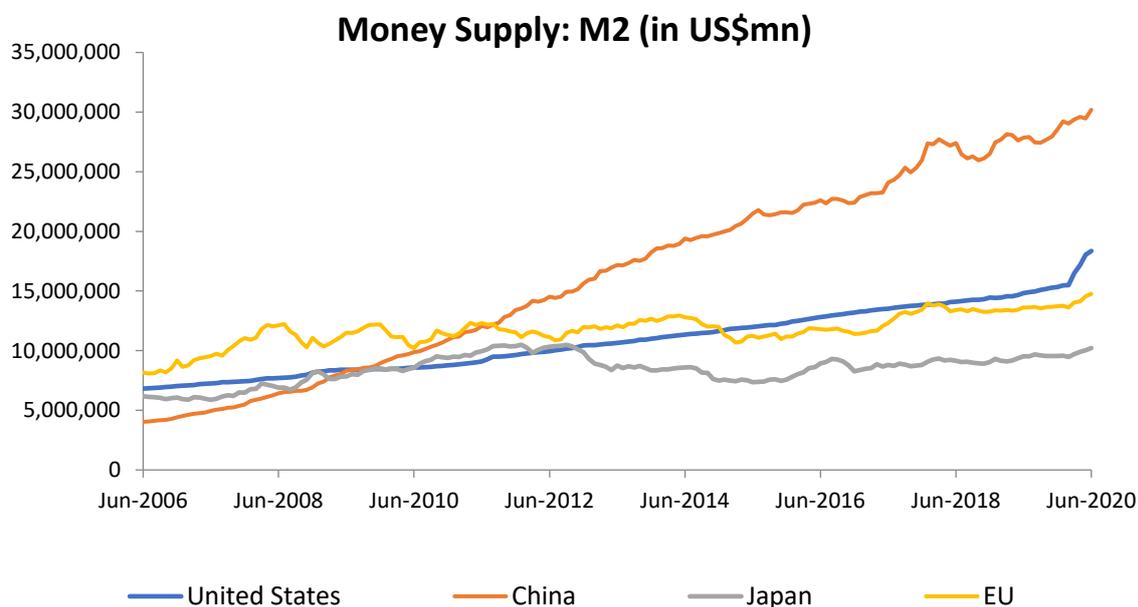
So, China has now had an investment/GDP ratio of over 40% for 17 consecutive years -- double the number of years that Korea and Thailand's investment/GDP ratios were at those elevated levels prior to the Asian Financial Crisis (AFC). The consequence (for them in the pre-AFC period, and for China now) is massive overcapacity in real-estate, and (especially in China's case) industry. In China, the tendency to over-invest was exacerbated by a bank rescue after 2003 (at a time when China's banking-system NPLs were at a stratospheric 50%), in which the NPLs were removed from banks at face value (i.e., without any hair-cuts or other costs imposed for poor past lending decisions). This was a huge contrast to Korea or Malaysia in the post-AFC period, where banks were forced to take large hair-cuts in the process of trimming bad-loans, and banks became very cautious about lending in subsequent periods, having learnt salutary lessons.

China accounts for over half of all global production of steel, aluminium and cement, 37% of world production of chemicals and 28% of world motor-vehicles production. China has massive overcapacity in most of these industries -- and China's over-investment in them has created a global problem of over-capacity, with other producing countries unable to invest in new capacity because of the huge excess capacity in China, which exerts downward pressure on global final-product prices. In several new industries (solar panels, 5G telecom equipment, semiconductors), China's rampant capacity-creation is similarly depressing prices, making other producers unviable. While China's investment spending grew 16-fold between 1996 and 2016, most of the rest of the world suffered an investment drought. With the global economy in recession, China's continued output expansion this year will soon run into a wall of sluggish global demand. Unless China is obliged to reduce its excess capacity, its banks will face a renewed surge of NPLs, and China will likely face a Japan-style slow-burning financial crisis by the end of 2020.

DETAIL

That **China's monetary expansion since the onset of the GFC (global financial crisis) has been the largest in history** is borne out by the chart below (where the size of M2 in the world's four largest economies is expressed in US\$). In August 2008, China's M2 money supply was equivalent to US\$6.56tn, while US M2 was just over US\$7.75tn. Already China's M2 stock was unusually large, given the size of its economy. But in the subsequent 12 years, China's M2 has soared to US\$30.2tn by June 2020 -- far larger than US M2 of US\$18.36tn in June 2020.

Thus **while US M2 has increased by US\$10.61 trillion over the 12 years since the onset of the GFC, China's M2 has increased by US\$23.64 trillion over the same period.** By definition, this is the biggest monetary expansion in world history, as no other country had ever had a stock of M2 of more than US\$15 trillion until August 2019 -- while the *increase* in China's M2 alone was US\$23.6 trillion over the latest 12 years.

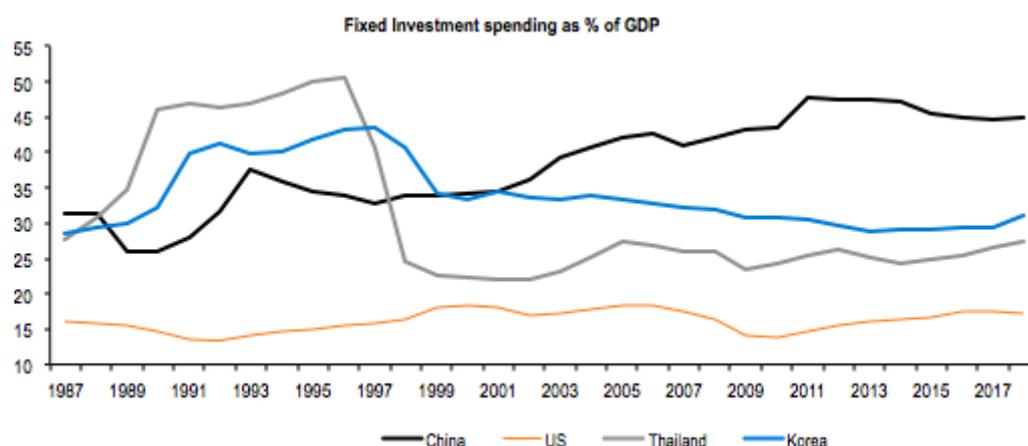


Source: REAL-Economics.com, based on data from FRB-St. Louis, BoJ, ECB

Since inflation stabilised in 1997, China's CPI inflation rate has exceeded 3% YoY in just four of the past 22 years (in 2004, 2007, 2008 and 2011). So, during the period that China has witnessed the biggest monetary expansion in world history (2009-2019), CPI inflation in China exceeded 3% YoY in just a single year (2011). Rapid increases in money-supply, according to the monetarists, can only boost output in the short-run (18-24 months), following which they will inevitably result in increased inflation. But in China's case, the largest monetary expansion in world history has, instead, merely boosted investment spending -- and, through investment, output. Continued increases in investment (and hence industrial and infrastructure capacity) have tended to depress rather than boost prices. In China, rapid increases in money supply have indeed boosted output substantially over the past 10 years (and also over the past 20 years), defying the monetarists' prediction.

China's investment/GDP ratio has been above 40% for 16 consecutive years, double the period this level of over-investment was reached pre-AFC by Korea and Thailand. One consequence of this monetary surge is that China has had an exceptionally long period of extremely high investment/GDP ratios. The countries hit by the Asian Financial Crisis (AFC) of 1997 (South Korea, Thailand -- both shown on the chart below -- Malaysia, Indonesia, Singapore)

had investment/GDP of over 40% for about 8 years each (see chart below for Korea and Thailand). China's investment/GDP ratio has been over 40% since 2003 -- i.e., for 17 years already. Such high levels of investment invariably cause over-capacity in real-estate and industry, as the AFC economies experienced in the aftermath of the AFC -- having to go through several years of sharply-declining investment (during which the investment/GDP ratio slumped from nearly 50% for Thailand in 1996 to just over 20% by 2001, and from nearly 45% for Korea in 1997 to 30% in 1999 and steadily declining to 25% by 2013).



Source: REAL-Economics, based on country data

The bigger consequence of this for the world economy is that China has become the largest producer of most traditional industrial products (table below). China produced well over half of the world's output of steel, aluminium and cement in 2019, 28% of world production of motor vehicles, and 37% of the value of chemicals produced globally in 2018. More than 3/4th of the increase in global production of steel in 2018 and 2019 came from China. The gap between China's annual production and that of the second-largest global producer is massive in all five industries (table below): China produces 9-times as much as the second-largest producer of steel and aluminium, and 2.5-times as many cars and chemicals (by value) as the second-biggest producer.

Production in key industries (2019)	China	World	2nd largest producer
Steel (m tonnes)	996.3	1869.9	111.2 India
Aluminium (th tonnes)	36000	63697	3700 India
Cement (m tonnes)	2200	4200	320 India
Motor vehicles (th)	25721	91787	10880 USA
Chemicals (Euro bn) -2018	1198	3347	468 USA

Source: worldsteel.org, cefic.org, Wikipedia

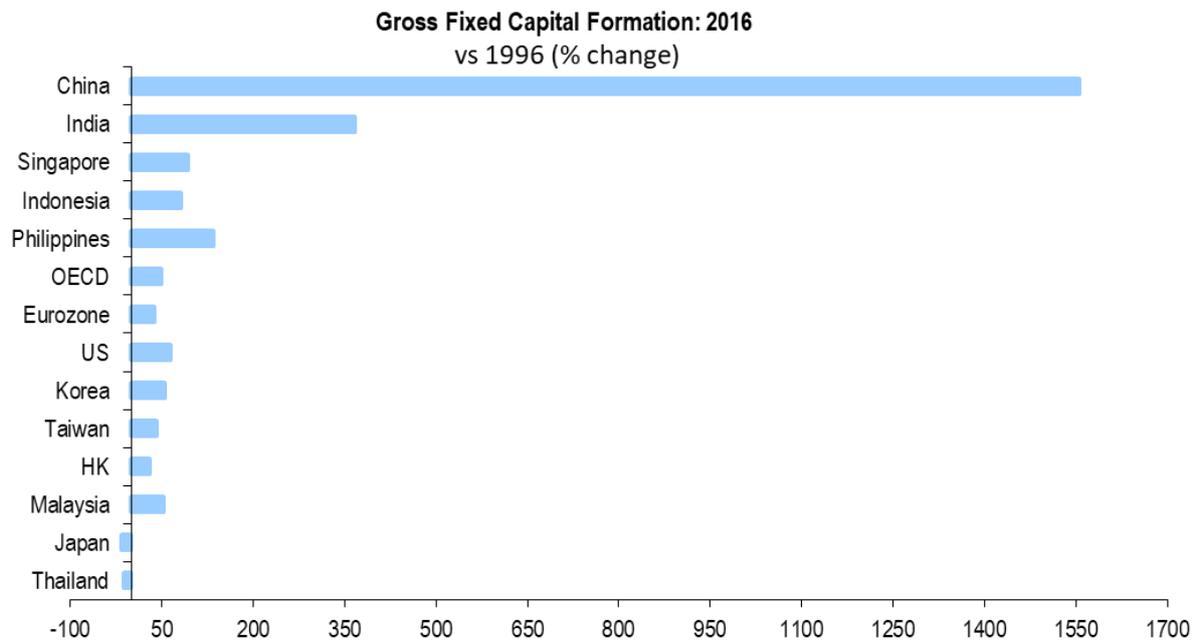
The reason this production surge happened in China (but not, for instance, in South Korea or Malaysia) is that China worsened moral hazard through the manner in which it rescued its banks in 2003. At that time, China's banking system NPLs were at 50% (according to S&P's calculations, as seen in this June 2003 report: [http://doc.bjreview.com/EN/200402/Business-200402\(C\).htm](http://doc.bjreview.com/EN/200402/Business-200402(C).htm)); under pressure from China's government, S&P was obliged to withdraw the report detailing Chinese banks' gargantuan NPLs. China's banking system in 2003 had a much higher proportion of bad loans than Korea, Thailand or Malaysia had at the time of the AFC. China removed 45% of banks' loans from their books at face value (i.e., with no hair-cuts at all for past bad lending decisions) in 2003-06. While Malaysia and Korea's bank-workout agencies (called Danaharta and KAMCO respectively) had removed loans at a steep discount to face value -- thus administering big losses to banks' shareholders, limiting moral hazard, and causing banks to be very circumspect about lending in subsequent periods -- China's banks were effectively given a carte blanche to keep lending without consequences. And they did!

Steel -- emblematic of China's over capacity -- shows how that overcapacity has been globalized; yet China keeps growing steel output faster than the world. In March 2007, China's then-Premier Wen Jiabao famously said that China's economy was "unbalanced, unstable, uncoordinated, and unsustainable." One of the key areas of concern for Premier Wen was massive over-capacity in most of China's industries. Steel was emblematic of the problem: no other nation had ever produced more than 128 million tonnes of steel in a year. China surpassed that level in the year 2000; seven years later, China's steel output was 495 million tonnes -- having expanded **285% in 7 years** (from the 128.5 million tonnes produced in 2000, already the highest ever for any single nation). In 2008, China's steel output expanded just 1%, as Wen's attempts to rein in credit slowed economic growth. But in the face of the GFC (global financial crisis), *China opened the spigot of bank lending in 2009, and its steel output expanded nearly 15% that year* (while **world** steel production **declined 8%**). China's steel output has continued to expand -- except for declines of 2-3% each in 2015 and 2016 -- with a marked acceleration in 2018 to 11.6% growth (while world production increased only 8%). In 2019, China's steel production increased 7.3%, while world production grew just 3.4% (implying, in fact, that the rest of the world's steel output declined in 2019). Similarly, while world steel output declined 6% YoY in 1H 2020 amid the Covid-induced global recession, China's steel output increased 1.4% YoY (having expanded YoY in each month of 2020 apart from March).

The evolution of world steel production is instructive. In 2000, world steel production was 850.1 million tonnes -- *much lower* than China's 2019 production (996.3 million tonnes). **Between 2000 and 2019, China's steel production has increased 675%, while the rest of the world's steel production has increased by just 21% over 19 years!** The rest of the world's steel output was growing at a more normal rate between 2000 and 2007 (up 18.7% over 7 years), but has grown just another 2% over the next 12 years (2007-2019). This is not because China possessed any special ability to make steel more efficiently over that period, but simply because the rest of the world operates on market principles (too much production causes losses to mount, forcing out marginal producers), while China does not. In particular, state-owned enterprises (SoEs) are able to obtain cheap loans from banks even if they have previously defaulted on loans (as, for instance, before 2003), and this evergreening on a grand scale keeps production flowing. Going further back in history, world steel output rose from 497.2 million tonnes in 1967 to 716.4 million tonnes in 1980 (a 44% increase over 23 years), and to 850.1 million tonnes in 2000 (a 19% increase over 20 years). Seemingly, the rest of the world continued expanding at the normal pace of the previous 40 years until 2007, but has since seen a sharp deceleration -- while China's steel output has expanded at a breakneck pace unprecedented for any country over any 20-year period.

China's over-capacity in steel has, since 2007, made it difficult for the rest of the world to expand output – exacerbated by China's propensity to continue its breakneck expansion of output.

The global investment drought of the past quarter-century likely resulted from China crowding-out the rest of the world's investment spending. While steel is the illustrative example, the same pattern can be traced across several old industries (aluminium, cement, automobiles, chemicals, shipbuilding) as well as new ones (semiconductors, solar panels, telecom equipment, robotics) where China's capacity has grown at extreme speed, effectively crowding out other global producers, depressing global prices, and constraining output growth in the rest of the world (other than in China). China's investment spending has also crowded-out investment spending in the rest of the world over the past 24 years. The chart below shows the 20-year rise in fixed investment in the main Asian economies, the US, Eurozone and the whole OECD between 1996 (the year before the AFC) and 2016. While China's fixed asset investment expanded **16-fold** over the 20-year period (and has continued growing rapidly since), there has been an investment drought almost everywhere else. India had a 3.5-fold increase in fixed investment, but that too has largely stalled since 2016. Across the OECD, the compound annual growth rate (CAGR) of fixed investment spending over the 20 years is barely 2.5%.



Source: REAL-Economics.com, based on country data

China's overcapacity is now a global problem of overcapacity in virtually all major industries. We expect that matters will come to a head in the rest of 2020 and 1H 2021 with the global economy climbing only slowly out of recession, while China continues to add to its overcapacity with a new lending boom. The slowing global economy (and increasing resistance to China's state-capitalism, in the form of growing trade barriers) will make it difficult for China to continue exporting its overcapacity to the rest of the world. Over the final few months of 2020, China is likely to face a slow-burning financial crisis. But unless the crisis forces substantial change on China's banks -- by obliging them to cut back on lending to unviable SOEs -- the crisis will unfold very slowly, and exert a significant drag on the global economy over the next 2-5 years.

Ignoring China (a non-market economy that is the world's largest manufacturer and exporter) is not only distorting the world economy, but also distorting Macroeconomics.

China's contribution to the global investment drought needs to be better understood, and incorporated more into analysis of the macroeconomy. Macroeconomic theory operates as if the world's second-largest economy (and world's largest manufacturer and exporter) does not exist. Since the world's largest manufacturer operates a non-market economy – which does not respond to normal market signals – it is massively distorting the global macro-economy. Just as China's boom in money supply (and credit creation) depressed prices in China between 1996 and 2019, now that globalized version of overcapacity is taking away pricing power from a slew of global industries – and contributing to a near-permanent period of sustained low inflation globally. Pretending that China doesn't exist distorts Macroeconomics, and results in fundamentally flawed theories about “secular stagnation”, the “investment drought”, the persistence of low inflation despite surging money-creation – all of which can plausibly be laid at China's door.