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Will raising Chinese rates increase inflationary pressure?

Michael Pettis, Chief Strategist

My friend Mark Williams sent me last week a reference to a very interesting paper written by Malhar Nabar, an economist at the IMF. The paper is called “Targets, Interest Rates, and Household Saving in Urban China” and in it Nabar tries to measure the impact of changes in the real deposit rate on changes in Chinese consumptions levels.

How do interest rates normally affect the savings and consumption rate? The consensus view, of course, is that there should be a negative correlation between interest rates and consumption. In other words when interest rates rise, households should save more and so consume less out of current income.

Why? One reason may be that savings are simply postponed consumption, and we are willing to postpone consumption if we are paid enough to do so. The more you pay me to save in the form of a high interest rate, in other words, the more I save out of current income, and so the less I consume. The same thing happens, by the way, when rising interest rates cause the cost of consumer financing to rise, and so discourage the use of credit cards.

There is another reason why this may be the case. Typically we associate rising interest rates with falling stock, real estate and bond prices. If most of our wealth consists of those three kinds of assets, then higher interest rates should be associated with a decline in our wealth, and because we feel poorer, we reduce our consumption rate.

In both cases rising interest rates are assumed to bring declining consumption and higher savings. This relationship seems to be supported by the data in many countries.

I am nonetheless a little uncomfortable with the first explanation – that as you increase the reward for postponing consumption, households save more. I find it hard to believe that people really think this way about savings, and if they did, it seems to me that unless there were an enormous preference for liquidity, in any country in which deposit rates were negative in real terms (i.e. households are paying, not getting paid, to postpone consumption) consumption rates should rise to 100% or more.

This certainly isn’t the case. In China, for example, deposit rates are seriously negative and have been negative for many years, and yet the household savings rate is nonetheless very high. In fact it seems that, as a rule, countries with repressed interest rates have higher, not lower savings rates.
What’s more, I have seen US historic data that suggests when interest-rate declines have coincided with falling, not rising, stock and real estate markets (as they have recently), the savings rate usually rises rather than declines. In other words households care mainly about their wealth, not about the reward for postponing consumption.

Which explanation is more correct matters a lot for Chinese monetary policy. We tend to be so US-centric when we think about economics – including, unfortunately, most Chinese economists – that we automatically assume that because raising interest rates in the US will reduce consumption and so limit inflation, it must also be the case in China.

Even very prestigious newspapers, citing prominent economists and research analysts, assure us that in order to fight inflation the PBoC raises interest rates. Here for example, is what the Financial Times said three months ago:

*China has raised interest rates for the fifth time in eight months, indicating the country’s leaders are still focused on taming politically sensitive inflation, despite evidence that the world’s second-biggest economy is slowing. Benchmark one-year lending rates will be raised 25 basis points to 6.56 per cent from Thursday, while one-year deposit rates will go up 25 basis points to 3.5 per cent, the central bank said on Wednesday.*

*The rise suggests that inflation is likely to have accelerated to a three-year high of more than 6 per cent in June, well beyond Beijing’s comfort zone. The government is scheduled to announce the inflation figure next week.*

*Here is Xinhua, on the same day:*  

*The interest-rate hike will help check high inflation and the June CPI data will be 6.2 percent, Lu Zhengwei, chief economist for the Industrial Bank, predicted.*

*…Guo Tianyong, a professor with the Central China Finance University, said the move is necessary as it can help correct the negative interest rates and manage inflation, but it can also slow economic growth and precipitate inflows of speculative hot money.*

A quick Google search uncovers thousands of articles and OpEd pieces that make the same point.

**The empirical evidence**

But for many years I have strongly disagreed with this claim that raising rates is a way of combating inflation. If it is the wealth effect, and not the consumption-postponement effect, that really drives changes in savings and consumption rates, then raising rates would only reduce consumption if there were a negative correlation between interest rates and wealth, as there clearly is in the US.
Is there a negative correlation between the two in China? Probably not. Most Chinese savings, at least until recently, have been in the form of bank deposits. In a financial system in which deposit rates are set by the central bank, the value of bank deposits is positively, not negatively, correlated with the deposit rate.

Chinese households, in other words, should feel richer when the deposit rate rises and poorer when it declines. In that case, rising rates should be associated with rising, not declining, consumption and with higher, not lower, inflationary pressure.

I want to repeat this because I think it is a very important source of confusion. In the past few years the consensus on China has dramatically changed, and as a result many of the things I used to discuss which once sounded so strange and “contrarian” (I hate that word) – discussions for example about the unsustainable increase in Chinese debt, the role of financial repression in undermining household income growth, the nature of the Chinese growth model – are now pretty widely held.

But it is still very rare to hear anyone acknowledge that while raising interest rates in China may be a very good thing – because it reduces the capital misallocation on which Chinese growth is highly dependent – it does not reduce inflationary pressure. It increases it.

Needless to say that is why I found the Nabar paper so interesting. My argument had always been a conceptual argument based on balance sheet principles, but Nabar has tested the correlation. He went out and measured changes in consumption as a function of changes in the real deposit rate.

And he finds in fact, in line with my conceptual argument, that higher real rates really are associated with lower savings and higher consumption. Here is what he says:

> Although a large body of research has examined the determinants of household saving in China, little attention has been directed to interest rates and their impact on saving decisions. Bank deposits are currently the primary saving vehicle available to Chinese households.

> The return households earn on these bank deposits could therefore potentially influence household saving behavior in a tangible way. This research assesses how interest rates affect household saving decisions using a panel dataset that covers China’s 31 provincial-level administrative units over the period 1996–2009.

> The main findings are as follows.

- Panel estimates suggest that household savings respond strongly to a change in the real interest rate. A one percentage point increase in the real rate of return on bank deposits lowers the urban household saving rate by 0.6 percentage points.
A comparison of the relationship across sub-periods shows that the association is stronger in the later period, 2003–09, relative to the earlier period, 1996–2002. The relationship is robust to the inclusion of variables that proxy for other influences on saving such as life cycle considerations and self-insurance against income volatility.

The evidence also indicates that when the return on alternative investment is high (for example when real property price growth is relatively strong), a decline in the real return on bank deposits does not have as negative an impact on household portfolios.

The results suggest that China’s households save to meet a multiplicity of needs – retirement consumption, purchase of durables, self-insurance against income volatility and health shocks – and act as though they have a target level of saving in mind. An increase in financial rates of return, which raises the return on saving, makes it easier for them to meet their target saving. Financial reform that boosts interest rates could therefore have a strong effect on current tendencies to save.

The consumption share of GDP

I think this is a very important point. For one thing it confirms the claim that financial repression also represses consumption growth, and so is one of the factors at the heart of China’s economic imbalances – in fact I would say it is the main factor.

It also says that monetary policy may have very different consequences from our hidden assumption that it works the same way in China as it works in the US. In the US if the Fed wants to lower inflationary pressures, it raises interest rates to reduce household wealth, to raise the cost of consumer financing, and otherwise to put downward pressure on demand by reducing consumption.

In China however when the PBoC raises the interest rate it has limited effect through the cost of consumer financing (consumer finance is negligible in China) and it actually increases household wealth. This means that raising rates is more likely to encourage inflation than to reduce it.

And since real interest rates have actually declined in the past year, lower real rates help explain why inflation may have already peaked, and why it is coming down. In fact this may be why financially repressed countries can have both rapid monetary expansion and limited inflation, as they typically do. Inflation itself, by lowering real rates, can reduce inflationary pressure. It is self-correcting – at least until households begin withdrawing deposits and spending the money simply because the cost of holding money is too great.

Not surprisingly, as inflation has risen and deposits rates lagged during the past year, much of the evidence suggested that contrary to Beijing’s announced plans, consumption was likely to be declining as a share of GDP. I have said many times that when they finally published the 2010 data in the China Yearbook 2011, I would expect to see consumption drop from 35.0% in 2009 to 34% in 2010 and
perhaps another point lower in 2011.

On Friday my associate Chen Long told me the yearbook had in fact just been published, and he sent me the data. Our expectation turns out to have been right. Household consumption for 2010 is reported to be 33.8% of GDP.

Here is the full data:

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumption</th>
<th>Investment</th>
<th>Government</th>
<th>Trade</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>45.3%</td>
<td>34.6%</td>
<td>16.0%</td>
<td>4.0%</td>
</tr>
<tr>
<td>2002</td>
<td>44.0%</td>
<td>36.2%</td>
<td>15.6%</td>
<td>4.2%</td>
</tr>
<tr>
<td>2003</td>
<td>42.2%</td>
<td>39.1%</td>
<td>14.7%</td>
<td>4.0%</td>
</tr>
<tr>
<td>2004</td>
<td>40.6%</td>
<td>40.5%</td>
<td>13.9%</td>
<td>5.1%</td>
</tr>
<tr>
<td>2005</td>
<td>38.8%</td>
<td>39.7%</td>
<td>14.1%</td>
<td>7.4%</td>
</tr>
<tr>
<td>2006</td>
<td>36.9%</td>
<td>39.6%</td>
<td>13.7%</td>
<td>9.7%</td>
</tr>
<tr>
<td>2007</td>
<td>36.0%</td>
<td>39.1%</td>
<td>13.5%</td>
<td>11.4%</td>
</tr>
<tr>
<td>2008</td>
<td>35.1%</td>
<td>40.7%</td>
<td>13.3%</td>
<td>10.9%</td>
</tr>
<tr>
<td>2009</td>
<td>35.0%</td>
<td>45.2%</td>
<td>12.8%</td>
<td>7.0%</td>
</tr>
<tr>
<td>2010</td>
<td>33.8%</td>
<td>46.2%</td>
<td>13.6%</td>
<td>6.4%</td>
</tr>
</tbody>
</table>

Aside from the extraordinary decline in the consumption rate, it is interesting to see what happened to the trade surplus. At 6.4% of GDP in 2010, it is extremely high, but well off its record levels in 2007 and 2008, when as a share of global GDP China’s trade surplus may well have been the highest in modern history. Notice that as it declined from its peak, investment surged.

This is just what we would have expected. The negative growth impact of the sharp drop in China’s trade surplus may have forced GDP growth rates to nearly zero, and the sudden and violent expansion in investment was necessary as the counterbalance to keep growth rates high. Changes in the declining consumption share of GDP have had very little impact on changes in GDP growth. And it continues to decline.

While we are on the subject of consumption in China, when I was in Washington for the World Bank/IMF meetings, I made a presentation at Carnegie in which I went through the arithmetic of consumption growth under various rebalancing scenarios. I discussed some of these numbers in my August 25 newsletter, but the presentation at Carnegie was much more complete. Several people asked me to give them the numbers, which I am including here.

The arithmetic of consumption growth

In my presentation I assumed that household consumption in China was 34% of GDP in 2010, close to actual number, it turns out. This, as I never tire of repeating, is incredibly low. On average household consumption in the rest of the world tends to be around 65% of GDP. For the group of Asian countries that followed the Japanese growth model and so repressed consumption to achieve high growth rates, household consumption typically clocked in at 50-55% of GDP.
China was at the low end within this latter range in the 1980s, with household consumption ranging from 50% to 52% of GDP. During the 1990s, the household consumption share bounced around a little to end the decade at 46% of GDP. This is not unprecedented – I think Malaysia dropped to 45% for about a year immediately after the 1997 crisis – but it is nonetheless worryingly low.

But it was during the last decade that household consumption really collapsed as a share of GDP. From 2000 household consumption grew smartly – roughly 7-8% a year – but it grew much more slowly than GDP, which surged by 10-11% every year. By 2004-05 consumption had dropped to 40% of GDP, which set off alarm bells in Beijing, and policymakers promised that raising the consumption share of GDP would be a priority.

But to no avail. The household consumption share of GDP continued to drop, to a surreal 34% last year, and will probably be even lower in 2011.

This is completely unsustainable. Unless the world has an unlimited capacity to absorb a growing Chinese trade surplus, or China has unlimited debt capacity, China will adjust one way or another and consumption will rise as a share of GDP. Beijing has a few years to choose to manage the adjustment process, or the process will be forced upon the economy by an adverse external environment and excess domestic debt.

So how much adjustment will China undergo, and what will this mean? Let’s make some projections. I have proposed three adjustment paths in the following table.

The first projection is that Chinese household consumption will reach 54% of GDP in 10 years. This is pretty high historically for post-reform China, but given the already-very high levels of investment in the group of low-consuming Asian countries and the global weakness in demand (which will limit their trade surpluses), I believe that Asian consumption will have to rise as a share of Asian GDP as the rest of the world’s consumption share drops, and so I suspect that even 54% would still place China at the bottom of the group of low-consuming countries.

My second projection is that China gets back to the low end of where it was in the 1980s, and that consumption grows to reach 50% of GDP. This will be hard to do because economic conditions are tough and there will be limited possibility of a foreign counterpart to China’s low consumption, but never mind. Let’s set the bar low.

A very low bar

Finally, to lower the bar even more, I assume that China will just manage to get in 10 years to where it was 10 years ago – when household consumption reached a mere 46% of GDP. In that case we won’t be able to speak of any meaningful balance in the economy since household consumption would be close to what normally constitutes a crisis level – which is much easier to maintain when the world is over-consuming, as it was for much of the past decade before the crisis, than when it is not.
Given those three rebalancing projections, it is pretty easy to figure out the relationship between GDP growth and consumption growth. All you need is a spreadsheet and simple arithmetic. I presented the numbers in the table below.

To read the table, just make an assumption about the average GDP growth rate over the next 10 years. If you are optimistic about China’s growth prospects, you can project annual growth rates of 8% or 10%. If you are pessimistic you can project annual growth rates of 2% or 4%. I think the current consensus is settling around 6% (I personally am in the 2-4% group).

Here is the table:

<table>
<thead>
<tr>
<th>Expected GDP growth</th>
<th>Expected consumption share of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0%</td>
<td>5.1% 6.0% 6.8%</td>
</tr>
<tr>
<td>4.0%</td>
<td>7.2% 8.1% 8.9%</td>
</tr>
<tr>
<td>6.0%</td>
<td>9.3% 10.2% 11.0%</td>
</tr>
<tr>
<td>8.0%</td>
<td>11.3% 12.2% 13.1%</td>
</tr>
<tr>
<td>10.0%</td>
<td>13.4% 14.3% 15.2%</td>
</tr>
</tbody>
</table>

From the table it is a simple matter to calculate what level of consumption growth will get us to any of the three rebalancing scenarios I have listed. For example, if you think China will grow at 6% a year for the next 10 years, and you think Chinese household consumption will grow to 50% of GDP in 10 years, then implicitly you are projecting annual household consumption growth of 10.2%. If you think China will only rebalance to 46% of GDP in 10 years, then you are implicitly projecting a 9.3% annual growth in consumption.

The reason this is so interesting is that it implies that consumption growth will be a very tough and substantial upper limit to GDP growth. If China grows by 6% a year, and if we expect a minimal rebalancing to 46-50% of GDP, we would need consumption growth to surge to around 10%, a number never achieved before.

Is it possible? I guess it is possible, but it will require some major transformations in economic policy-making. Among other things we would probably need household income growth to surge to over 10%, even as GDP growth slows to 6%.

This might be tough to pull off for political reasons as almost by definition this will require a contraction in the state share of GDP nearly equal to or even greater than the growth in GDP. In other words instead of growing at roughly 14% a year as it has in the past, versus household income growth of around 8%, slower GDP growth and a contracting share of that growth will lower the growth in state wealth to just above zero. If GDP growth is much lower than 6%, state wealth will actually decrease in nominal terms. Political contentions that could be soothed by growth rates in state wealth of 10-15% might not be so easily soothed when growth in state wealth is very low or even negative.
But this is a problem I leave to the political scientists out there. It is enough for me just to show the arithmetic.

**Trade flows and capital flows (again)**

And finally, before finishing the newsletter, I know I wrote something similar in the last issue of my newsletter, but we really need to get this one right, and we aren’t. Robert Samuelson in last week’s *Washington Post* had an article calling once again for Chinese help in bailing out Europe. His concluding paragraph:

> Europe is caught in an economic pincer: slow-growth assaults from one side; fickle financial markets from the other. One obvious way out — the China option — seems barred by geopolitics. There is precedent. Historians blame the Great Depression’s severity in part on poor international cooperation. Economist Charles Kindleberger found a vacuum of power: Great Britain, the old economic leader, could no longer lead alone; and the United States — a replacement — wasn’t ready to help. Is there a parallel today between the United States and China? Are we repeating the mistakes of the 1930s? Unsettling questions.

Although I agree with Samuelson that without international cooperation we are unlikely to see anything resembling an orderly resolution of the European crisis, it is depressing that so many people truly believe that Chinese capital, or any foreign capital for that matter, will help Europe. It shows how little the simple balance of payments mechanisms are understood, even though it is precisely imbalances in trade and capital flows that are at the heart of the global crisis.

Europe does not need capital from foreigners. It is capital rich. In fact it is even a net exporter of capital. The reason certain European governments cannot borrow is not because Europe is capital poor. It is because these countries are perceived to be insolvent, and in altogether too many cases they almost certainly are.

Bailing out an insolvent government cannot help it. It will give it time to work out its problems, many argue, but the historical precedents suggest that the quicker an insolvent country acknowledges its insolvency and demands debt forgiveness, the better off it is in the longer term.

What is much, much worse, as I wrote in the last issue of my newsletter and in an article in last week’s *Financial Times*, is that an increase in foreign money inflows actually will make Europe’s problems worse. Europe needs more demand, not more foreign money. More foreign demand is the opposite of more foreign money.

Remember that a net increase in foreign capital means that foreigners are importing demand from Europe. But Europe needs them to export demand to Europe. More foreign capital inflows are exactly the wrong thing – and in fact what Europe really needs is to increase its exports of capital. Paul Krugman, by the way, makes almost exactly the same point when he says: “It is very difficult in real time to convince people that capital inflows pose a threat, no matter how obvious the numbers seem.”
But difficult or not, it is important that policymakers grasp this point and it is important that investors understand the consequence when policymakers fail to grasp it. The trade and currency wars that we are experiencing are nothing more than wars about exporting capital. Exporting capital is exactly the same as importing demand. Every country that wants to run a trade surplus is also by definition a country that wants to export capital.

And of course every country that accepts net foreign capital inflows must also accept a trade deficit (or, more correctly, a current account deficit). This isn’t a theory. It is an accounting identity.

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