

# The Dangers of Increasing Debt Burdens

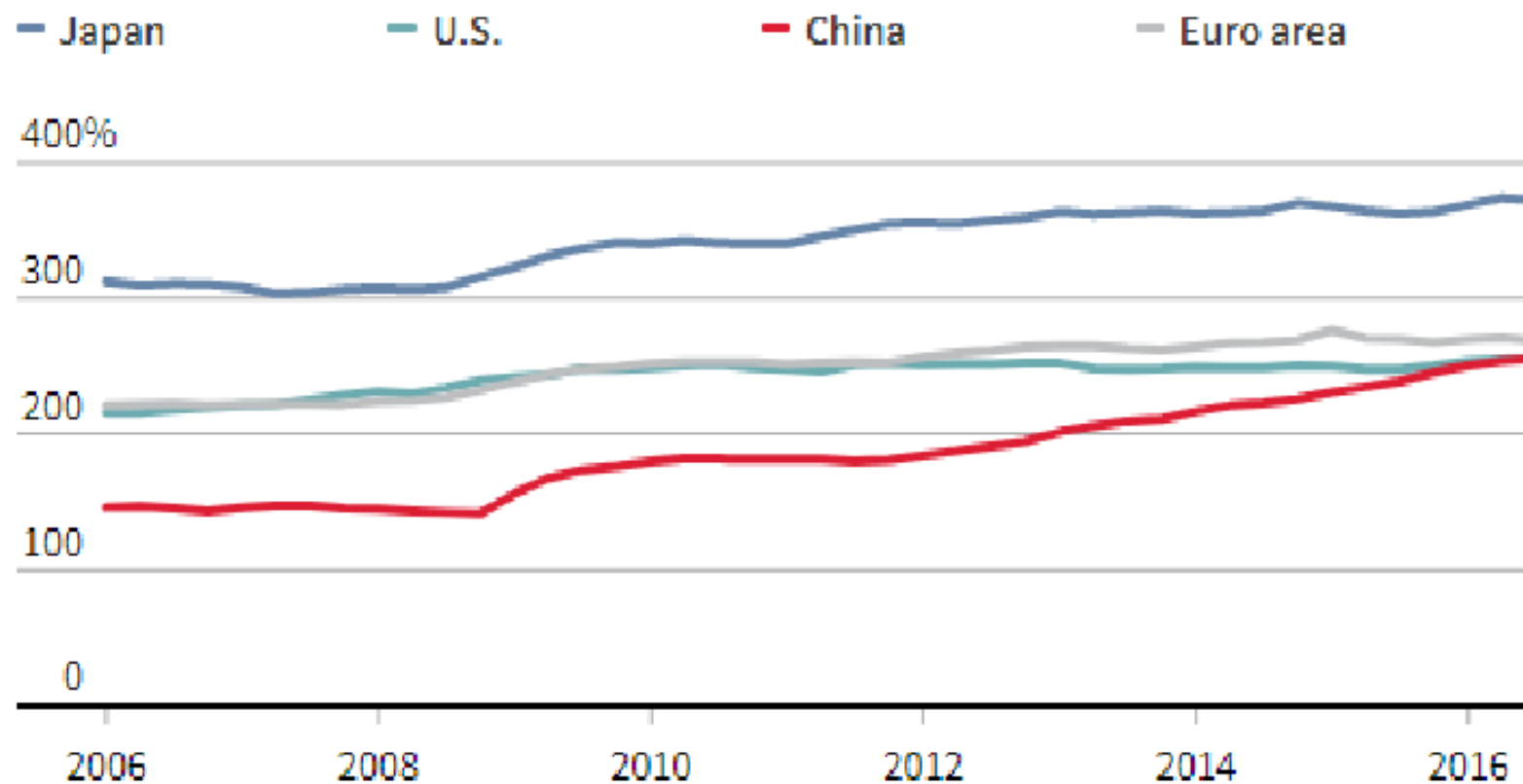
## The Case of China Today

Source: Thomson-Reuters <http://fingfx.thomsonreuters.com/gfx/rngs/CHINA-DEBT-GRAPHIC/0100315H2LG/>

## How bad is it?

China's debt is more than 250 percent of GDP, higher than the United States. It remains lower than Japan, the world's most indebted leading economy, but some experts say the concern is that China's debt has surged at the sort of pace that usually leads to a financial bust and economic slump.

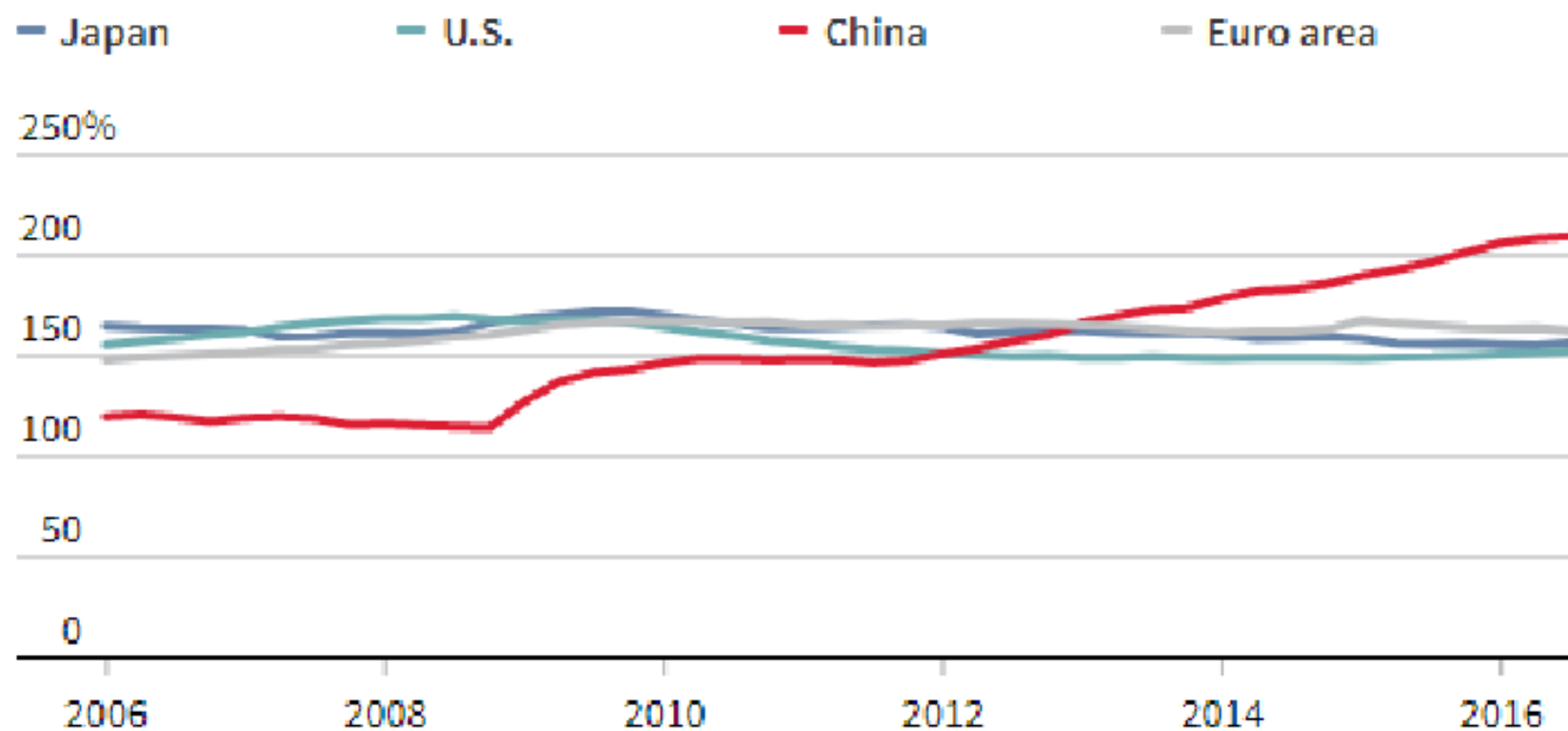
### Total debt to GDP



# The worrying part

However, when government debt is removed from the comparison, you see a very different picture. China's corporate and household debt has risen sharply and this is where most worries are focused.

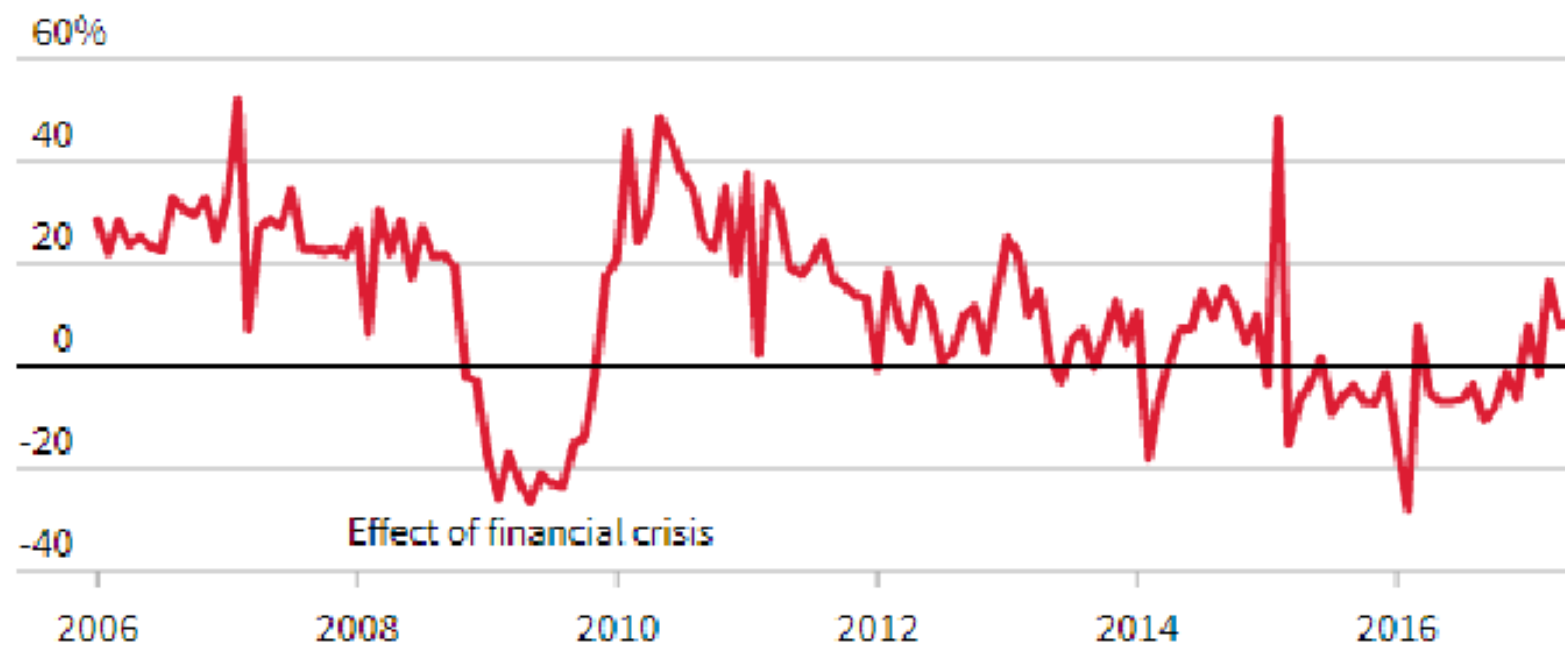
## Private debt to GDP



## Financial crisis cripples exports

During the global financial crisis in 2008/2009, global trade collapsed. This meant a huge decrease in China's exports, a sector that had largely fuelled the country's meteoric rise to global economic superpower.

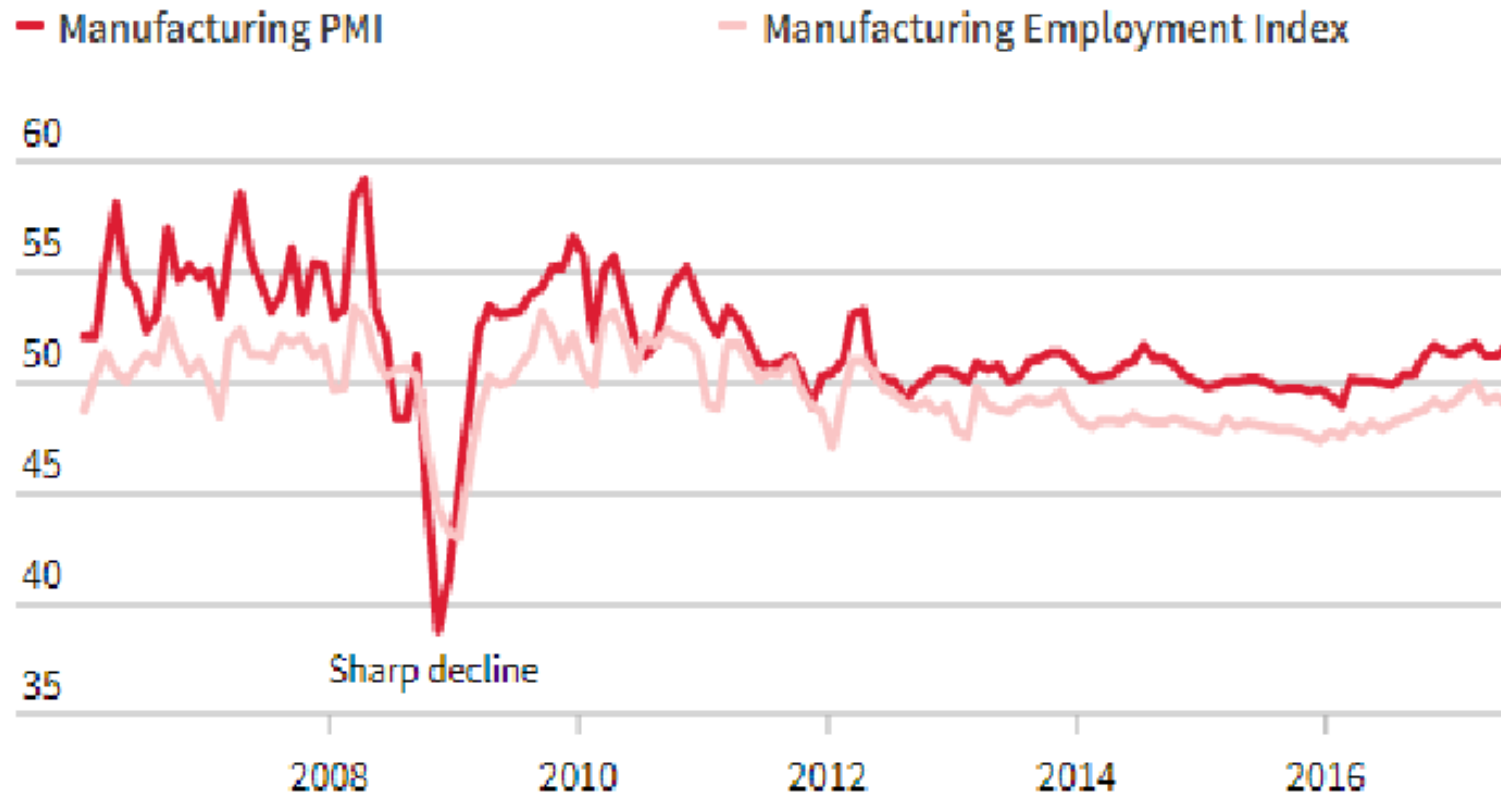
### Exports (year on year change)



# Manufacturing stalls

As Chinese exports collapsed, many factories closed and millions of workers lost their jobs. The government, concerned that this spike in unemployment might lead to social unrest, announced the world's largest stimulus package.

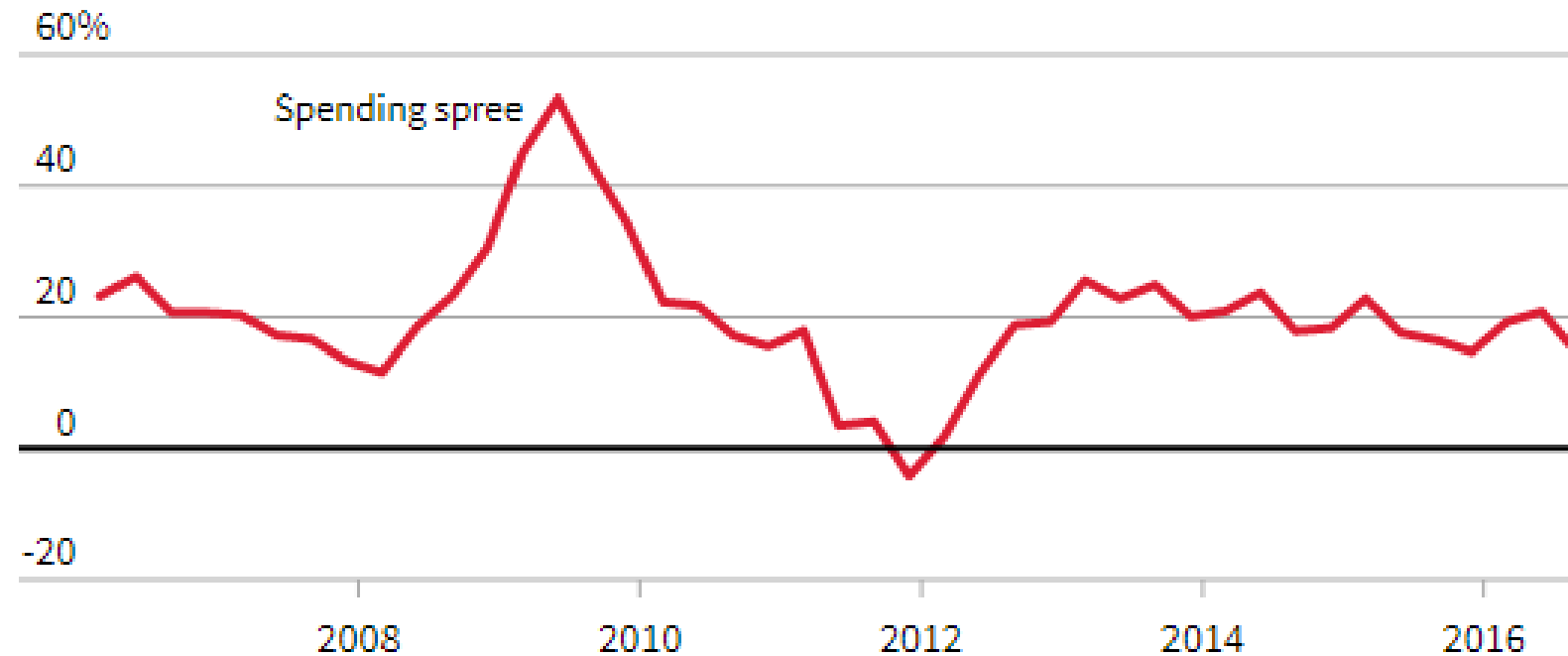
## China manufacturing PMI



# A switch to infrastructure

The \$600 billion plan was largely geared to encouraging a massive boost to public infrastructure building. The goal was to quickly create millions of jobs, ranging from construction to accounting, to reduce unemployment.

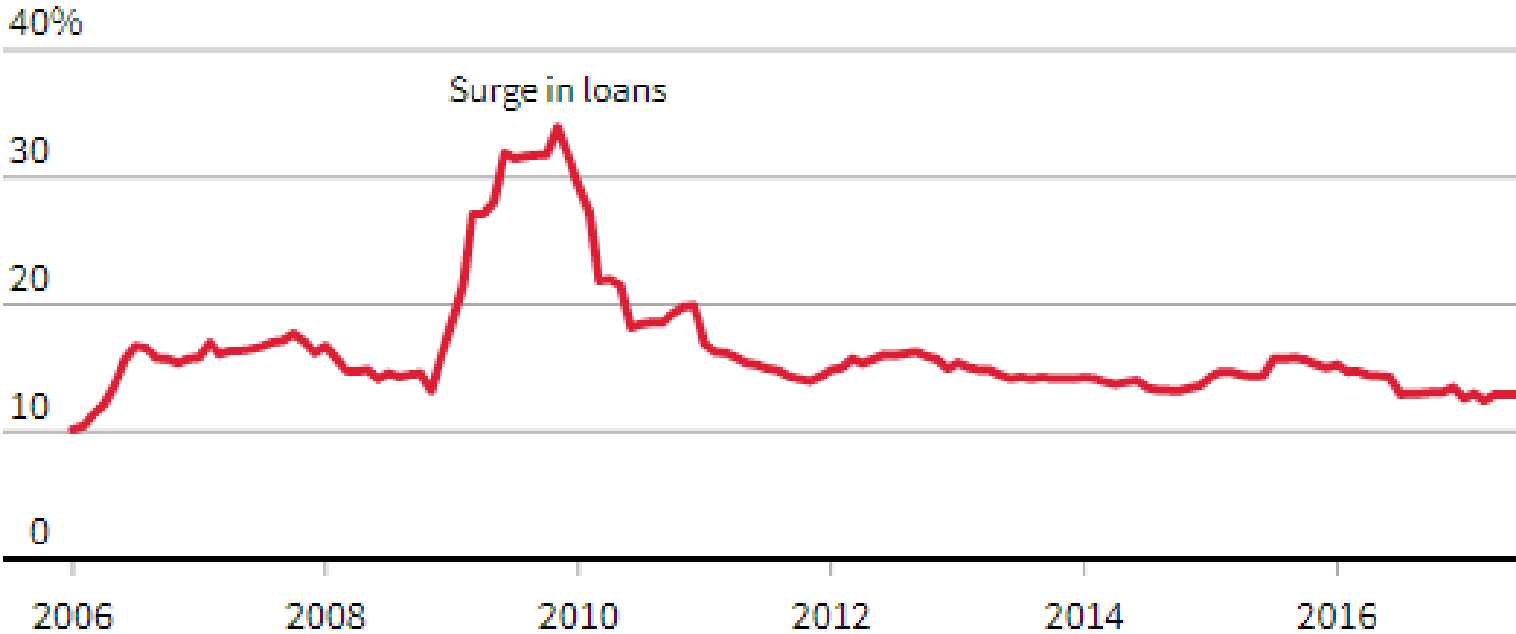
## Infrastructure investment (year on year change)



# Distributing money

Typically, such a massive injection of cash into an economy is funded directly through government fiscal spending. China, however, chose to fund the stimulus via loans from its state banking system.

## Lending by financial institutions (year on year change)



# Local governments

Local governments also borrowed heavily to promote major projects. At the time most weren't permitted to borrow directly from banks or to issue bonds, so they needed to find another way that would allow them to borrow.

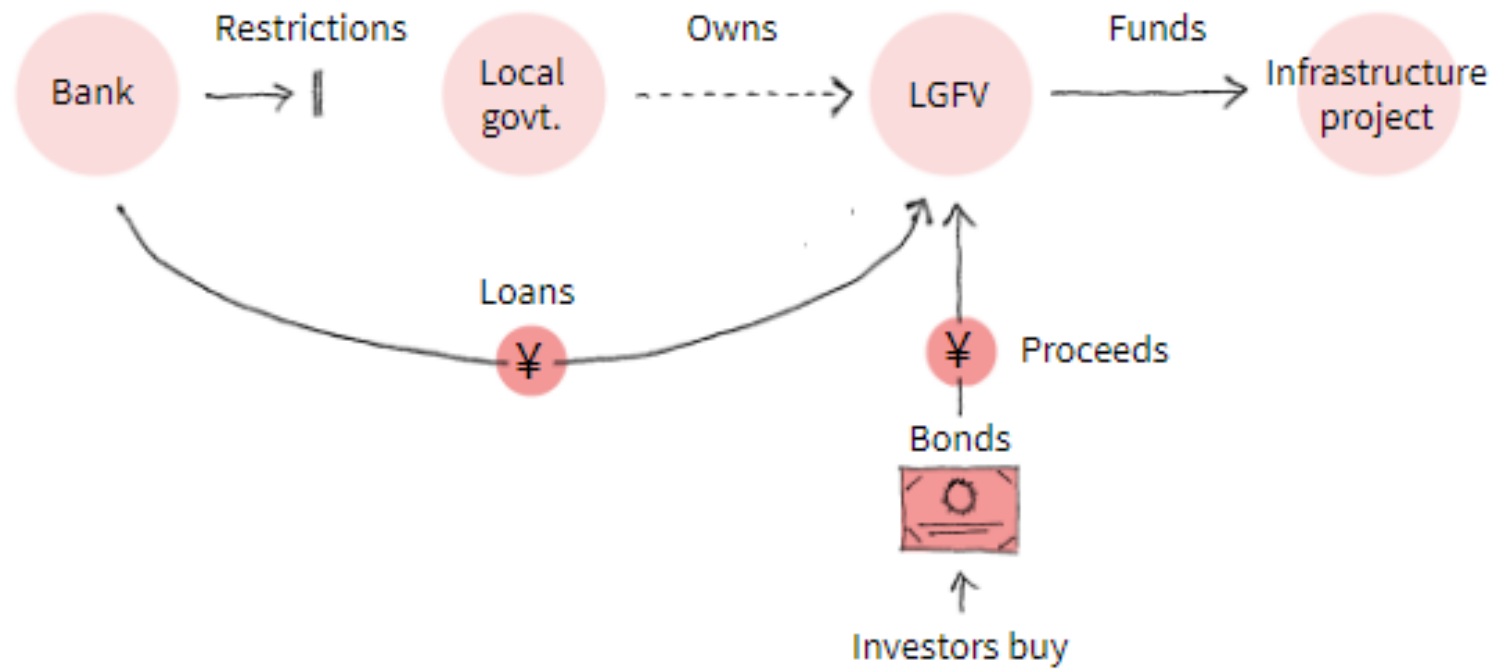
**Debt to GDP**  
End of 2015





# The rise of financing vehicles

That avenue was local government financing vehicles (LGFVs) – corporate entities created by cities and provincial authorities to circumvent official limits on fundraising. These entities were able to take bank loans and issue bonds. The problem? Economists can only guess how much LGFV debt is out there.

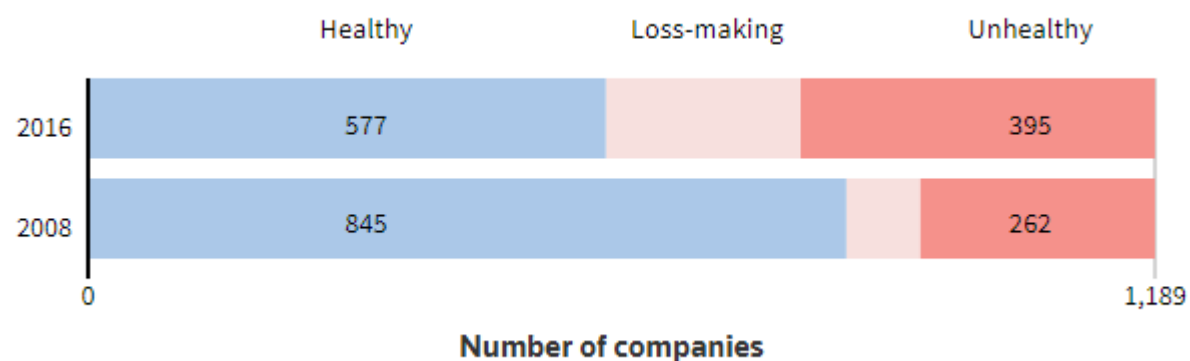


## The health of Chinese companies

China is taking on more debt, but the real concern is the rate at which its companies are borrowing. Since 2008, non-financial sector debt-to-GDP has risen at breakneck speed. Encouraged by government calls to support economic growth, companies gorged on cheap credit. Analysts estimate that two-thirds of corporate debt is in the hands of China's sprawling state-owned enterprises, many of which are unprofitable and inefficient.

### Chinese listed companies

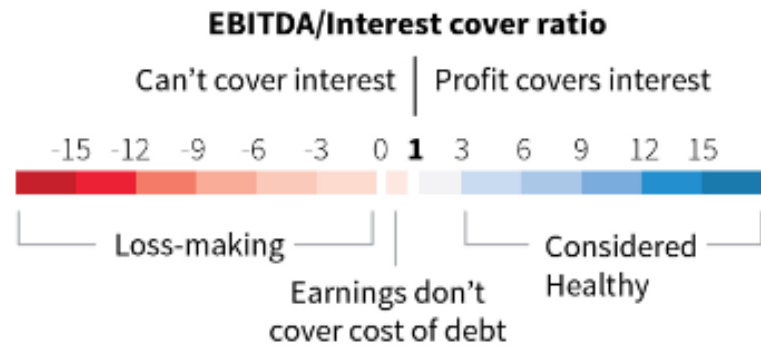
As borrowing increases and earnings flatline, many more Chinese companies are struggling to keep up with their repayments. A snapshot of Chinese corporate debt compared to earnings, as represented by a group of 1189 mid- to large-cap companies who reported net debt in 2008 and 2016, paints a bleak picture. The chart below analyses net debt/EBITDA, a ratio used to show how many years it would take for a company to pay back its debt if current metrics remained constant. The number of companies with a ratio between 0 and 5, a measure usually considered healthy, has fallen by 31.7%. The number of companies making a loss or companies with an unhealthy ratio above 5 has risen.



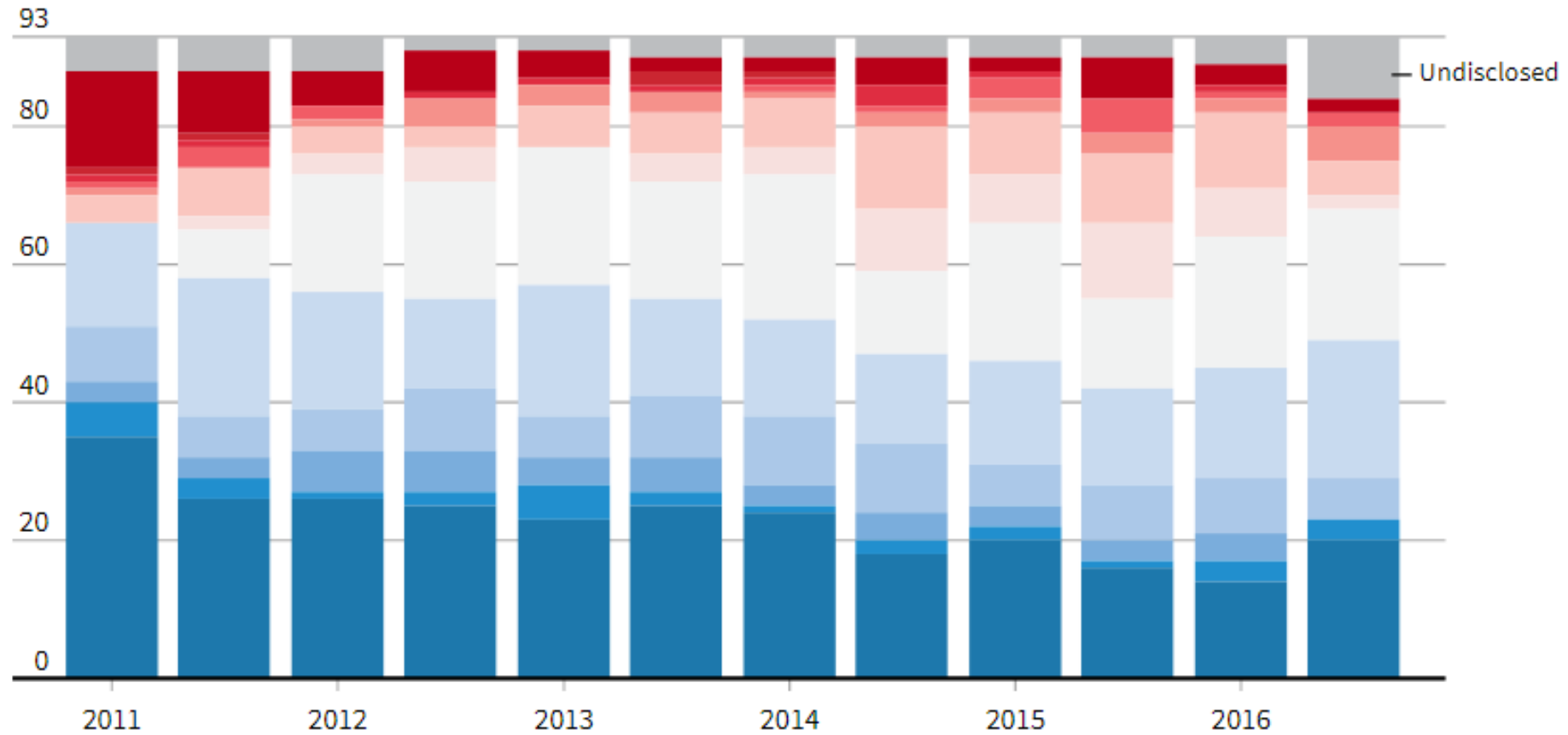
## Listed in Hong Kong

Chinese companies listed in Hong Kong are generally considered to be among China's healthiest due to greater financial disclosure rules. The chart below looks at a group of 93 companies with listings dating back to 2011.

By December 2016, the number of companies with earnings at least three times the interest cover on their debt, a measure generally considered to be healthy, shrank from 66 to 49.



**Number of companies**

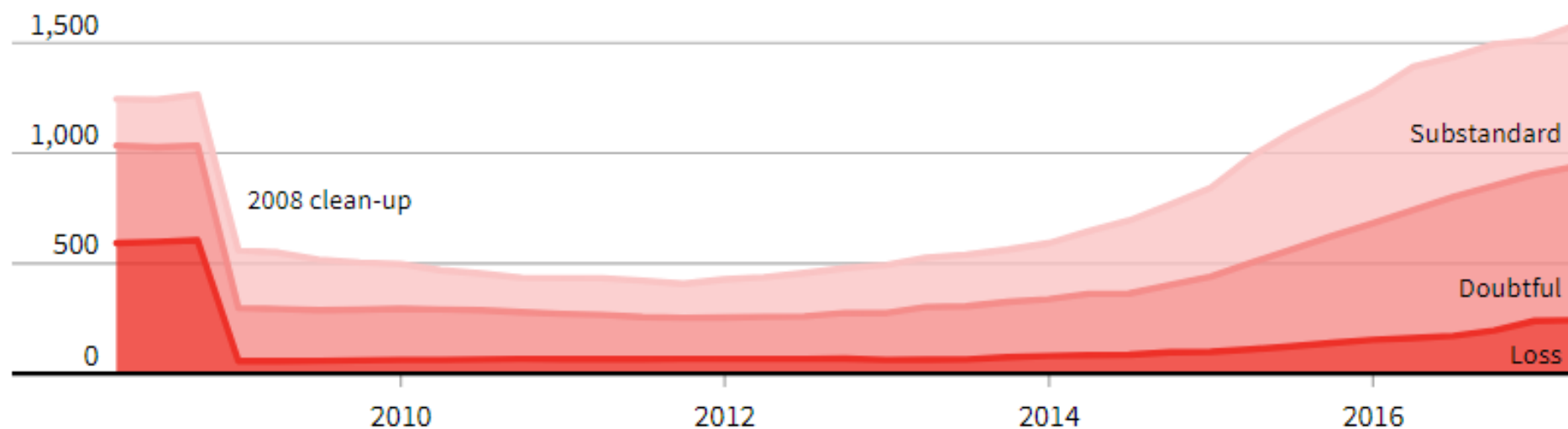


## The impact on banks

Bad debts on bank books have been rising steadily as borrowers struggle to repay their loans. Officially, non-performing loans at China's commercial banks total around 1.5 trillion yuan. But some analysts say the bad debt is as much as 14 times higher because lenders use various methods to conceal the true figure. The chart below shows how the official figure has surpassed 2008 levels, when a major government clean-up of bad debt at state controlled banks caused the industrywide bad-loan level to drop by more than half.

### Non-performing loans

¥2,000 bn



## **Doubts of a hard landing**

The major argument suggesting China likely faces a crisis is that other countries that experienced a similarly rapid increase in debt suffered a financial crash or economic downturn. But other experts argue the risk of a hard landing is low. China has little overseas debt, and a high national savings rate. In addition, most of the debt is state owned – state-controlled banks loaned funds to state-controlled firms – giving the government the ability to manage the situation.

$$rB + PG = \tau PY + \Delta B + \Delta M$$



$$rb + g = \tau + \frac{\Delta B}{PY} + \frac{\Delta M}{PY}$$



$$rb + g = \tau + \frac{\Delta B}{B} b + \frac{\theta}{V}$$

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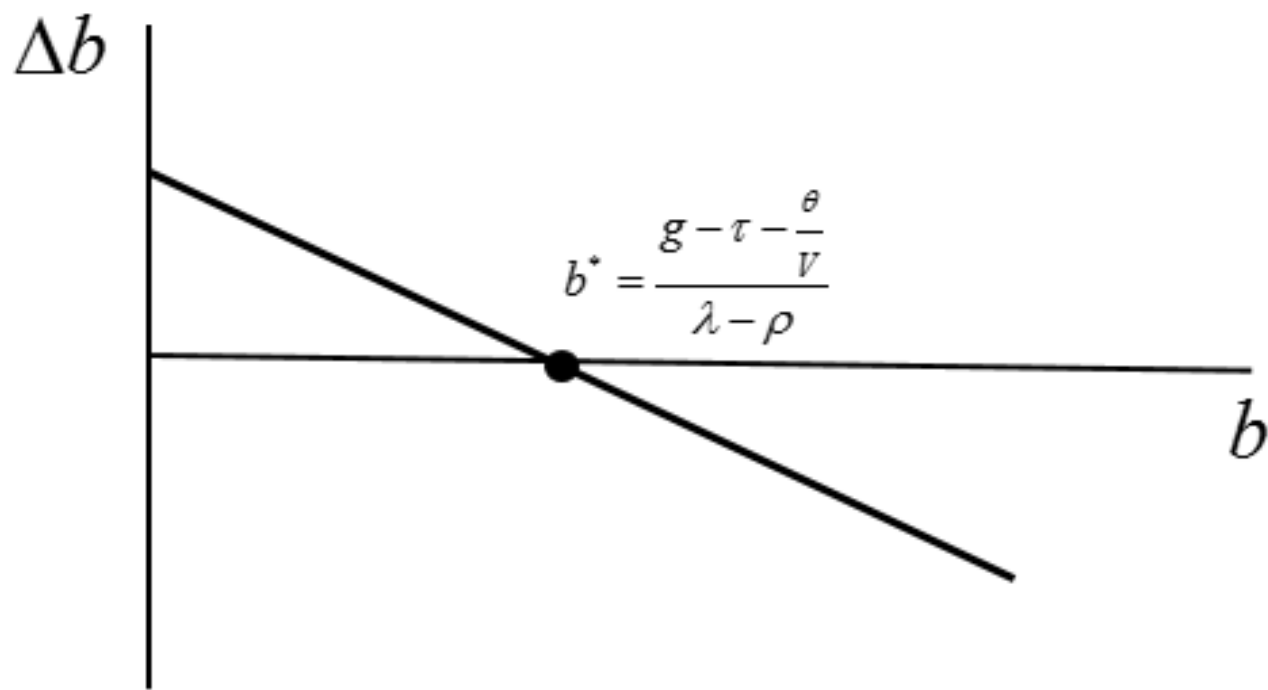
But it is relatively  
easy to show

$$\frac{\Delta B}{B} b = \Delta b + (\pi + \lambda)b$$

$$\Delta b = \left(g - \tau - \frac{\theta}{V}\right) + (\rho + \pi)b - (\pi + \lambda)b$$



$$\Delta b = \left(g - \tau - \frac{\theta}{V}\right) - (\lambda - \rho)b$$



## What Determines the Long Run Debt/GDP Ratio?

- (1)  $g$  = Government Spending/GDP
- (2)  $\tau$  = Income Taxes/GDP
- (3)  $\theta$  = growth of money supply
- (4)  $V$  = velocity of money
- (5)  $\lambda$  = growth of real GDP
- (6)  $\rho$  = real rate of interest

Of course, there may be significant interactions between these variables that we have assumed are constant. It will be useful to consider which of these is relatively constant and which is influenced by the others. This is largely an empirical matter.