ECONOMIC SCENARIOS.COM
Issue 8
Essential Economic Analysis for Strategic Thinkers

China: the implications of the policy tightening?

China is now a major player in the world economy and its economy has been booming. Last year imports grew by 40 per cent. China has accounted for over 20 per cent of global growth over the last three years (chart 1). Last year China's real GDP grew by 9.1 per cent. Bank credit is up 21 per cent, inflation is rising and some economists believe the true inflation rate is above 5 per cent.

Authorities have moved to cool the economy. They are likely to succeed. The key questions are whether the economy is in for a hard or soft landing and what does that mean for other Asian and world economies.

Key points

- **A soft-landing in China has few implications for other world economies due to off-setting trade and investment effects.**
- **A slowdown increases the risk of a crisis in the banking system which is technically bankrupt.**
- **A banking crisis would become a fiscal crisis and a hard landing the result. China would be in recession.**
- **Borrowing by China to bail out banks reduces growth elsewhere.**
- **The worst scenario is if a banking crisis in China unnecessarily leads to contagion around the region.**

China last attempted to rein in growth in 1994-95 and came in for a hard landing. Several years of deflation followed. The question now is whether the Chinese can slow growth gradually or whether a hard landing is likely. A hard landing could come from a banking crisis since the banking system, which is dominated by four state-owned banks, has non-performing loans of 40 to 50 per cent. Since the government cannot afford to let the banks fail they will end up bailing them out.

The government has come to the rescue of the banks in the past, but the dimension of the problem is so great that if things cool unexpectedly quickly and the non-performing loan problem worsens, the government could quickly end up with a fiscal crisis on its hands. And remember the contagion around Asia during 1997-98 Asian financial crisis? Confidence in banking around the region could weaken again should an all out banking crisis in China develop.

Previous tightening

The last significant monetary and fiscal tightening occurred from mid-1993. In the first quarter of 1993, economic growth was 14.1 per cent and raw material prices were rising by 40 per cent with retail prices rising by 10.2 per cent.[1]

Official interest rates were lifted, government expenditure cut and banks ordered to recall loans that were above limits. A soft landing was the

[1] See *Economic Scenarios*, 'The SARS outbreak: how bad could it get', Issue 5, May 2003 for a description of the potential impact of a SARS outbreak.

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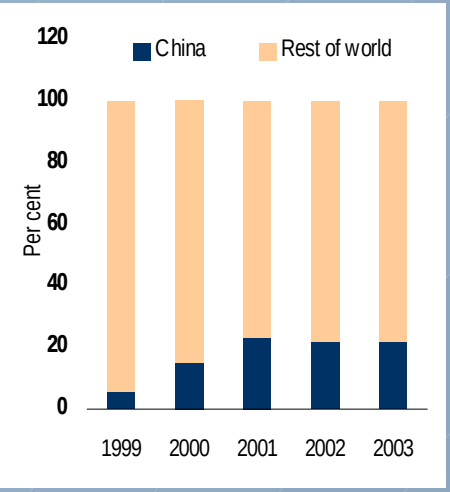
Using these scenarios

Nobody can foretell the future. If they could, they wouldn't tell you about it. These scenarios are not predictions or forecasts. To make profitable investments from this information you also need to decide how likely the events portrayed here are, and what is already priced in the markets. The value of this material is in the insights it offers into the economic effects of various possible events.

Chart 1 World growth: China's contribution (PPP basis)



Source: World Bank, *World Development Report, 2003 and Centre for International Economics.*

Box 1 APG-Cubed

The version of the model used here is APG-Cubed Version 55n, which is the same as 53n, but with the reaction function of Asian central banks spelt out on page 3 included.

To see a full description of the model, either follow the links on this website or directly access www.msgpl.com.au

result. But the profitability of state-owned enterprises fell, exacerbating the non-performing loan problem of the banks.

In this setting the Asian financial crisis hit in 1997 and 1998, but since the Chinese authorities held their currency peg, the over-valued exchange rate led to deflation in 1998 and 1999. The government responded by stimulating the economy through easier monetary policy and increased fiscal spending. The combination of recovery from that stimulus, the fundamental economic growth and 'catch-up', plus the extra monetary stimulus from the now under-valued exchange rate[2] under the same currency peg have generated the latest boom.

Authorities have now moved to rein in growth by administrative means such as restricting credit through the banks by tightening criteria for loan approvals and issuing decrees limiting investment in particular sectors. A soft landing is the intention. But there are two things to keep in mind: the Chinese economy has grown by 136 per cent over the decade since the tightening in 1993 and is now a bigger player in the world economy and the problem of non-performing loans has not gone away despite the recent economic boom. If authorities misjudge the macro tightening or if an external shock occurs, the non-performing loan problem of the banks could easily turn into a crisis.

The non-performing loan problem

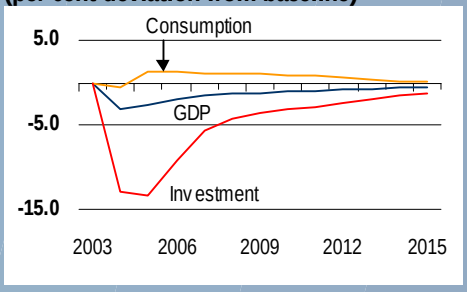
One of the preconditions for a crisis in the financial system already exists in China — insolvent banks. The four large state-owned banks account for 86 per cent of total banking assets. Estimates vary of the size of the non-performing loan problem. *The Economist*[3] puts the non-performing loan problem at more than US$442 billion or 32 per cent of GDP, while independent rating agencies cite 45 per cent of loans as non-performing — double the official IMF figure[4]. The problem of non-performing loans persists because most loans by the banks are to other State-owned enterprises and the government cannot politically either close enough of them down or turn them into profitable ventures (by, for example, laying off workers).

Reforms of the banking system have not, to date, solved the problem. The latest injection of funds of US$45 billion into two of the four banks last December was to shore up capital adequacy ratios to international requirements. Other reforms to the banking system are under way, but the basic non-performing loan problem will remain for as long as reform of state owned enterprises (SOEs) is postponed. Reform of SOEs has occurred, some have been closed and new 'creditor friendly' bankruptcy laws setting market based rules for SOEs to declare insolvency are proposed. Existing laws put the interests of workers, not creditors, first. That is proposed to change. But there is a question of whether the change is fast enough and whether a downturn in the economy, with less job creation, creates a political climate of inaction, which in hindsight proves to be too little, too late. Chinese authorities know the right direction for

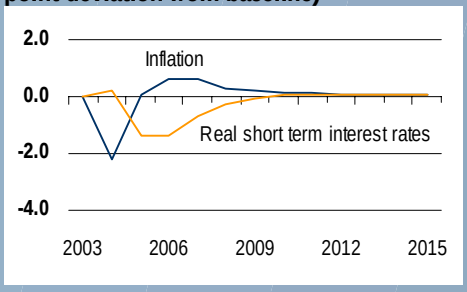
[2] See the last issue of *Economic Scenarios*, Issue 7, December.
[3] *The Economist*, 'Behind the Mask: A Survey of Business in China', 20 March 2004.
[4] International Monetary Fund (IMF) 2004, *World Economic and Financial Surveys, Global Financial Stability Report, Market Developments and Issues*, Washington DC, April, p. 211.

CHART 2: EFFECTS OF A SLOWDOWN ON CHINA

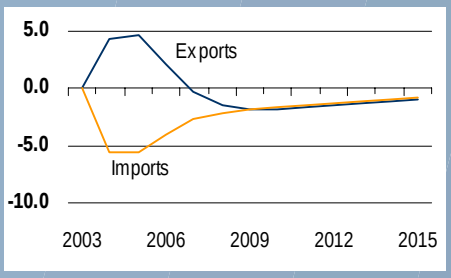
Real GDP, consumption and investment (per cent deviation from baseline)



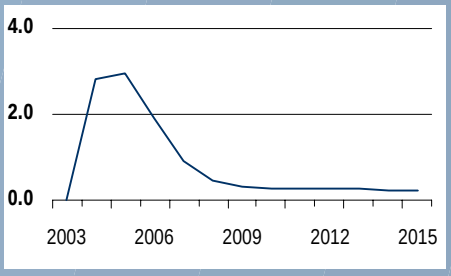
Interest rates and inflation (percentage point deviation from baseline)



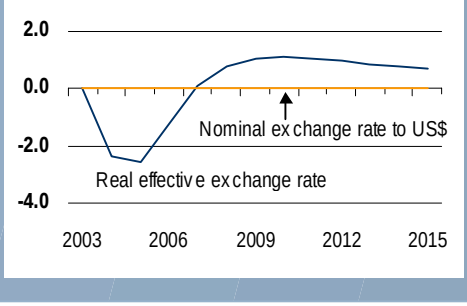
Exports and imports (per cent deviation from baseline)



Current account (per cent of GDP change from baseline)



Exchange rates (percentage point change from baseline)



reform, but, for example, the proposed new bankruptcy law has taken a decade to get to this stage. The government would be forced to resort to another fiscal bail out.

But the government's fiscal accounts are not all that rosy. The budget deficit last year was nearly 3 per cent of GDP and that was during a boom! And with non-performing loans of 32 per cent of GDP, the scale of the problem is potentially serious. There is the risk that a rapidly slowing economy causes a deterioration in the government's fiscal accounts, which, together with a bail out of the banks, becomes a full blown fiscal crisis. This scenario could be made worse if confidence in other Asian economies falters, as it did with the contagion of the Asian financial crisis that started with Thailand in 1997.

Hence, we analyse three scenarios: a slowdown in the economy; a slowdown that leads to a Chinese banking crisis that becomes a fiscal crisis; and a third scenario where contagion occurs around the region and there is a loss of confidence in banking in South East Asian economies. After all, Thailand's banking system still has 15.5 per cent of its loan classified as non-performing.[5] These scenarios are all analysed within a consistent economywide framework of the global economy (box 1) that fully endogenises the links between economic growth, trade, capital flows and the government's fiscal accounts.

The three scenarios

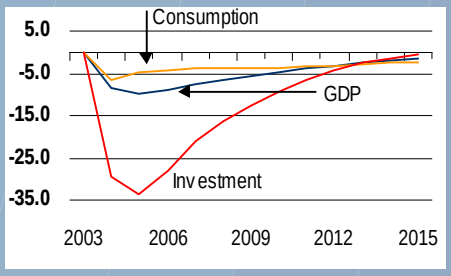
Specifically, the three scenarios analysed are as follows.

1. A slowdown in the Chinese economy due to a reduction in investment by administrative means. The reduction is 10 per cent in 2004 and there are no other indirect problems flowing from this reduction. The 'administrative' reduction in investment is simulated in the model as a rise in the equity risk premium that causes the cost of capital to rise.
2. The reduction in investment and consequential slowdown causes a banking crisis in China. This crisis leads to a fiscal crisis, an increase in transaction costs as banks 'shut their doors', a write down of the capital stock as the worst loans are written-off and a loss of confidence in China's fiscal system, which shows up as an increase in China's country risk premium. The specific shocks in addition to the shock in scenario 1 are:
   - an increase in government spending (financed by borrowing) of 8 per cent of GDP in year 1, 7 per cent in year 2 and so on to 1 per cent of GDP of extra spending in year 8, giving a combined injection of funds amounting to 36 per cent of GDP;
   - an increase in transaction costs, represented as a small negative productivity change of 0.5 per cent in year 1, phasing to 0.1 per cent by year 5;
   - a reduction in the capital stock of each sector of 10 per cent; and
   - an increase in the country risk premium of 200 basis points in 2004, 150 basis points in 2005, 100 in 2006 and 50 in 2007.

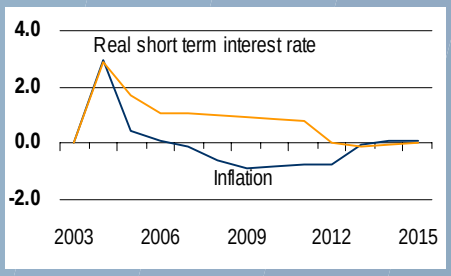
[5] International Monetary Fund (IMF) 2004, *World Economic and Financial Surveys, Global Financial Stability Report, Market Developments and Issues*, Washington DC, April, p. 211.

CHART 3: EFFECTS OF SLOWDOWN AND BANK CRISIS ON CHINA

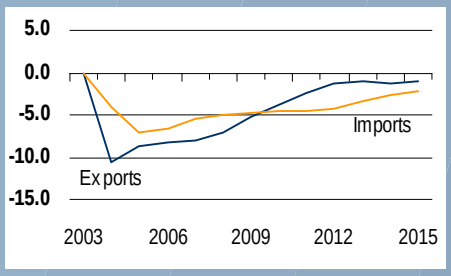
Real GDP, consumption and investment (per cent deviation from baseline)



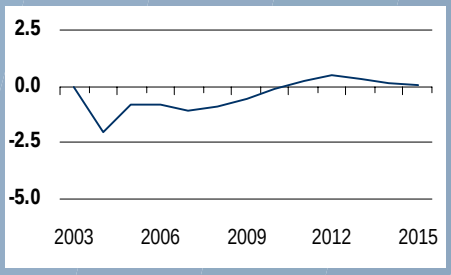
Interest rates and inflation (percentage point deviation from baseline)



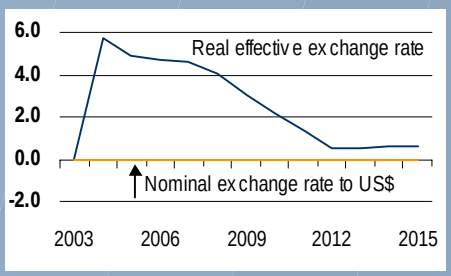
Exports and imports (per cent deviation from baseline)



Current account (per cent of GDP change from baseline)



Exchange rates (percentage point change from baseline)



3. The banking crisis in China leads to contagion around the region. This scenario is the same as for scenario 2, but with the effects repeated for other Asian economies except Japan, which did not experience contagion during the Asian financial crisis of 1997-98. The other Asian economies are Thailand, Indonesia, Malaysia, the Philippines, Singapore, Korea, Taiwan and Hong Kong.

Investment downturn leads to a slowdown

The results for scenario 1 are shown in chart set 2. The changes are relative to a baseline projection that has China growing at 9 per cent a year. The investment slowdown of 10 per cent below baseline in 2004 — as simulated — leads to a drop in real GDP of 3.1 per cent below what it would otherwise be in 2004 before recovering over the following decade as investment recovers. With the fall in real investment there is less demand for savings — both domestic and foreign. The fall in domestic savings leads to a rise in real consumption, but the fall in incomes in the first year offsets this effect so real consumption hardly changes from baseline in 2004. Real consumption shows a small net increase above baseline in 2005 before tapering off as real investment (and hence domestic savings) recover thereafter (see panel 1 of chart set 2).

The fall in demand for foreign savings with the drop in investment shows up, of course, as less capital inflow. With less capital inflow, the current account moves into surplus as shown on panel 4 of chart set 2. With this surplus on current account, there is also an improvement in the trade balance, which shows up as an increase in exports and decrease in exports in 2004 and 2005 from baseline of roughly plus and minus 5 per cent respectively (panel 3 of chart set 2).

The initial drop in domestic demand causes inflation to fall below baseline in 2004 (panel 2 of chart set 2). Since the nominal exchange rate is pegged to the US dollar, it is the real effective exchange rate that must change to facilitate the increase in exports and drop in imports with the lower capital inflow (or extra capital outflow). The real effective exchange rate initially depreciates by over 2 percentage points from baseline in 2004 and 2005, before appreciating slightly (panel 5 of chart set 2).

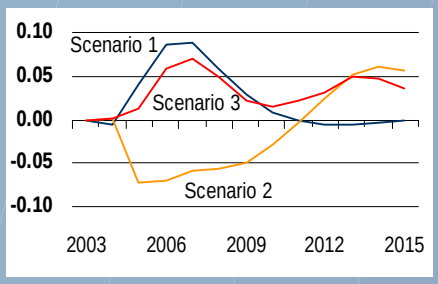
Compounding effects of a banking crisis

With a banking crisis simulated as described earlier, the downturn in China becomes serious as shown in chart set 3. There is now a pronounced effect on real investment, which falls by nearly 35 per cent below baseline in 2005 before recovering. The drop in real investment and increase in transaction costs as banks 'close their doors' causes real GDP to fall, as shown in panel 1, with the maximum effect being 10.1 per cent below baseline in 2005. Sharply lower incomes leads to a drop in real consumption, which exhibits a similar pattern to real GDP. China would be in recession.

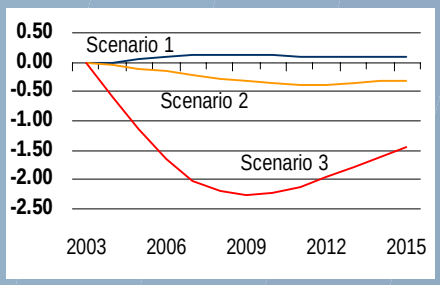
The fiscal stimulus required to bail out the banks causes additional borrowing by government and leads to a sharp rise in real short term interest rates of nearly 300 basis points above baseline in 2004. The extra

CHART 4: EFFECTS ON REAL GDP FOR OTHER COUNTRIES UNDER EACH SCENARIO (PER CENT DEVIATION FROM BASELINE)

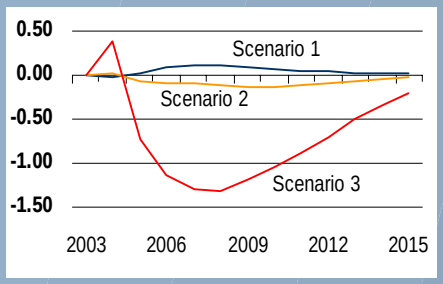
Japan



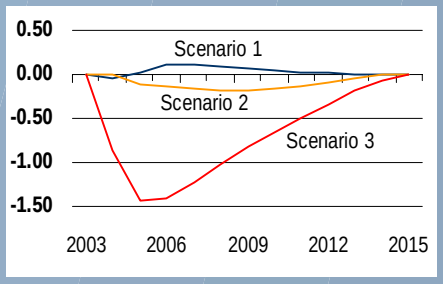
Thailand



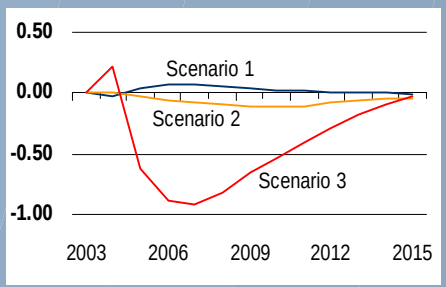
Singapore



Korea



Taiwan



borrowing is partly met by foreign capital inflow, so there must be a deterioration from baseline in the current account (panel 4 of chart set 3). Remember that this is the net effect of two opposing forces. This scenario incorporates the slowdown scenario described earlier wherein the current account witnessed an improvement of 3 per cent of GDP from baseline so the real deterioration from the banking crisis alone is over 5 per cent of GDP from baseline. The two effects cancel out to an extent.

Notice, too, that the banking crisis, with its accompanying rise in transaction costs, write-down of wealth and fiscal borrowing, changes the trade position. Whereas exports rose under scenario 1, now they fall under a sharp 6 per cent appreciation (above baseline) of the real effective exchange rate (the nominal rate still being pegged to the US dollar) — shown in panel 5 of chart set 3. The loss of competitiveness on exports mean they now fall by 10 per cent below baseline before recovering over the next decade.

The real appreciation of the currency could be thought to increase the level of imports, but these fall, not rise (panel 3 of chart set 3). Basically, there are two effects operating: a price effect and an income effect. The real appreciation lowers the price of imports, but the lower domestic production, and hence incomes, reduces demand. The reduction in demand due to the income effect dominates the rising demand due to the price effect in this case.

Other country effects and contagion

With lower economic growth in China, lower exports and lower imports, there are repercussions around the region. These repercussions are mostly overstated since media attention is often given to just China's imports, which are other country's exports.

But China's exports also change under scenario 1 and 2. And there are different financial flows, which have repercussions around the world and must also be considered. On top of that, there is the third scenario whereby there is the possibility of contagion to other Asian economies (except Japan) if China suffers a banking crisis. The differences in impact on real GDP for other countries is shown in chart set 4.

Panel 1 of chart set 4 shows that Japan actually benefits from a slowdown in China (scenario 1) and from the contagion of a banking crisis around the region, except in Japan (scenario 3). Real GDP in Japan falls under scenario 2 when there is a banking crisis in China, however — it falls by 0.1 per cent below baseline in 2005. These differences highlight the competing effects of the real and financial sectors and the need to use a complete framework that integrates both effects. When China slows (scenario 1), that has a slowing effect on Japan's trade with China and would be a negative but the investment downturn in China means less international borrowing so more investment is available in Japan and that has a positive effect. It just so happens the positive effect through the financial linkages outweighs the negative effects through the trade linkages. That might seem surprising to readers but there is a classic example of this effect in the real world — Australia's experience during the Asian financial crisis (see box 2).

Box 2 Australia's experience during the Asian crisis

Over half of Australia's exports go to Asia. When the Asian financial crisis hit in 1997-98, most media commentary was that Australia would be hit hard. But Australia sailed through the crisis. How did this come about? Basically the investments going into Asia went elsewhere, kept interest rates lower than would otherwise be the case and stimulated the construction and consumer durables sectors. The boost to these sectors outweighed the negative effects from Australia's exports — something the APG-Cubed modelling framework predicted at the time.

Table 1 Effects of a banking crisis in China on real GDP in the region in 2005

Country	Real GDP	
	No contagion	With contagion
	Per cent deviation from baseline	
China	-10.1	-10.0
Japan	-0.1	0.0
Singapore	-0.1	-0.7
Thailand	-0.1	-1.1
Taiwan	-0.0	-0.6
Korea	-0.1	-1.4
Hong Kong	-0.1	-0.4
Malaysia	-0.1	-1.2
Philippines	-0.1	-1.0

Source: APG-Cubed.

Table 2 Effects of a banking crisis in China on real exports in the region in 2005

Country	Real exports	
	No contagion	With contagion
	Per cent deviation from baseline	
China	-8.7	-9.2
Japan	-0.3	-1.3
Singapore	-0.3	0.2
Thailand	-0.1	1.8
Taiwan	0.2	1.5
Korea	-0.2	1.5
Hong Kong	-0.7	2.6
Malaysia	-0.1	1.0
Philippines	-0.1	1.2

Source: APG-Cubed.

By contrast when there is a banking crisis in China combined with the slowdown (scenario 2), Japan suffers a small contraction. The reason is that China borrows heavily to bail out bankrupt banks some of which comes from overseas.

The net result of the capital inflow into China is that it means less capital for investment by other Asian economies. That, combined with trade effects causes the contraction in real GDP in Japan under scenario 2. For scenarios 1 and 2 the same mechanism is working for other Asian economies to varying degrees shown on the other panels of chart 4.

For scenario 3, there are major differences between Japan and other Asian economies due to the different assumptions about contagion around the region. As noted earlier, Japan did not experience direct contagion during the Asian financial crisis and although its banks have a large number of non-performing loans, the problems have been well-known for a long time and believed to be manageable. So when other Asian countries besides Japan experience a banking crisis like that in China, they too experience a downturn for the same reasons China does. But Japan experiences a very small boost to real GDP growth above baseline because the incentive to invest in other Asian economies has fallen and relatively Japan looks a better economy in which to invest. Global capital finds its home where it earns the highest return for a given level of risk. The biggest impact is on Thailand which experiences a drop in real GDP below baseline of over 2 per cent from 2007 to 2012. The effects on real GDP and real exports with the banking crisis in China (scenario 2) and with contagion (scenario 3) are shown in tables 1 and 2.

Summary and implications

China is now a big player in the world economy and has experienced an overheating of the economy as the result of a number of factors. Authorities have moved to cool the economy by reining in investment. A slowing economy from very high growth rates will not have dire consequences for the world economy — in fact, there is a small boost for Asian economies due to the beneficial financial effects of China's slowdown out-weighing the trade effects.

It is under the scenario of a banking crisis in China and accompanying fiscal crisis that China's fortunes become a problem for other countries. But the effect is small with declines in real GDP around 0.1 per cent below baseline in 2005. A banking crisis in China becomes more serious if there is contagion around the region. The biggest risk to the region is the misinformed view that somehow a sharp downturn in China, even if accompanied by a banking and fiscal crisis, is disastrous for the region and will lead to similar problems emerging in other Asian economies. This view is not tenable based on the scale of direct spillovers through financial and trade linkage that currently exist. There are off-setting effects between trade and financial flows and an integrated quantitative framework is required to assess these effects. However it is always possible that investor panic could make a more severe contagion possible especially in a period of rising real interest rates globally.

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