Economic Research Note

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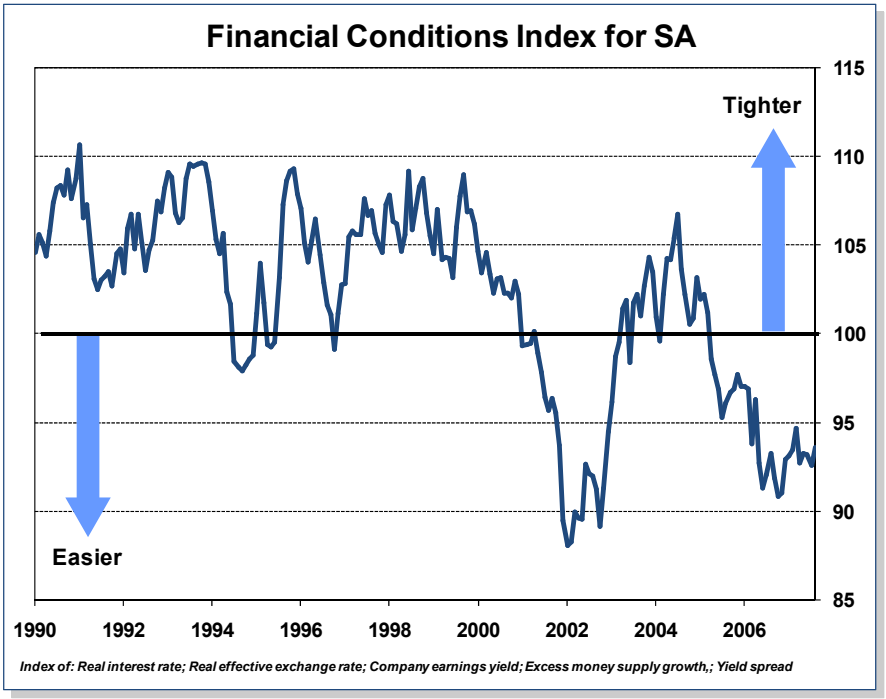
A financial Conditions Index for South Africa

With the repo and prime overdraft rates having risen by 350 basis points since June 2006, financial conditions are generally considered to be tighter now than they were a year ago. However, looking at a wider measure of financial conditions, we have found that financial conditions in general do not appear to have become much tighter, and that interest rate increases have thus far had a fairly limited impact on broadly measured financial conditions.

It is generally considered that a tightening in monetary policy will slow demand in the economy as credit becomes more expensive. Not only will demand for credit-financed purchases diminish, but the "crowding-out" of non-credit related purchases through increased interest costs could also cause an easing in the demand for other goods and services. The aim of such monetary policy tightening will be to reduce inflation, but an unintended consequence of this could also be a slowdown in the rate of economic growth.



Monetary policy and its wider impact through the so-called transmission mechanism, is a rather complex process, and could take between 12 and 24 months to affect the rate of inflation.

But the interest rate is not the only variable which affects financial conditions. Internationally, analysts have often attempted to identify and measure some of the other factors which have an impact on financial conditions.

The aim of a Financial Conditions Index (FCI)

It is an often overlooked fact that higher interest rates in nominal terms, may not imply higher rates in real terms if inflation is accelerating at the same time. Under such conditions, inflation may take longer to be brought under control. What is more, a stricter interest rate policy may be partially or even entirely neutralised by real exchange rate movements (such as a currency weakening brought about by external factors), or if credit demand accelerates even in the face of higher interest rates. A Financial Conditions Index (FCI) can signal overall financial conditions to economic agents, and can serve as rough indicator for the conduct of monetary policy – especially in times of high financial market volatility. An FCI gives a comprehensive view, which can be updated on a monthly basis, on the financial variables likely to impact on both future inflation and economic activity levels.

monetary authorities, and is used to signal whether they anticipate higher, lower or stable inflation conditions ahead. Real interest rate changes (nominal rates adjusted for current inflation) are expected to have an effect on future inflation with some time lag.

Change in financial Indicators*

	Prime rate change (% points - year ago)	Yield spread change (% points - year ago)	Excess money supply growth (y/y %)	Real effective exchange rate change (y/y %)
1997	-1.0	0.8	6.4	9.7
1998	3.8	-0.5	5.7	-14.8
1999	-7.5	4.9	-0.8	2.7
2000	-1.0	-0.1	-5.9	-7.1
2001	-1.5	0.3	6.0	-25.0
2002	4.0	-5.2	2.2	30.5
2003	-5.5	4.1	6.6	18.8
2004	-0.5	-0.1	0.5	4.5
2005	-0.5	-0.3	8.7	-1.1
2006	1.0	-3.4	8.4	-10.7
2007**	2.0	-1.0	12.3	4.0

** Based on year-end figures, except for 2007 where August figures were used*

*** Estimates were used for August 2007 excess money supply growth*

Monetary policy effects:

Expansionary
Neutral
Contractionary

Constituent factors and weights

We have identified the following factors as constituents of a Financial Conditions Index (FCI) for South Africa:

- **Real short-term interest rates.** Nominal interest rate changes are keenly observed by economic agents. It is the single most important policy instrument of the
- **Yield spread.** A yield curve is considered "normal" (positive yield spread) when short-term interest rates are lower than interest paid on investments with longer maturities. The reason is that the market usually expects more compensation for greater risk. Longer-term bonds are exposed to more risks such as changes in interest rates and an increased exposure to potential defaults. Investing money for a long period of time means that an

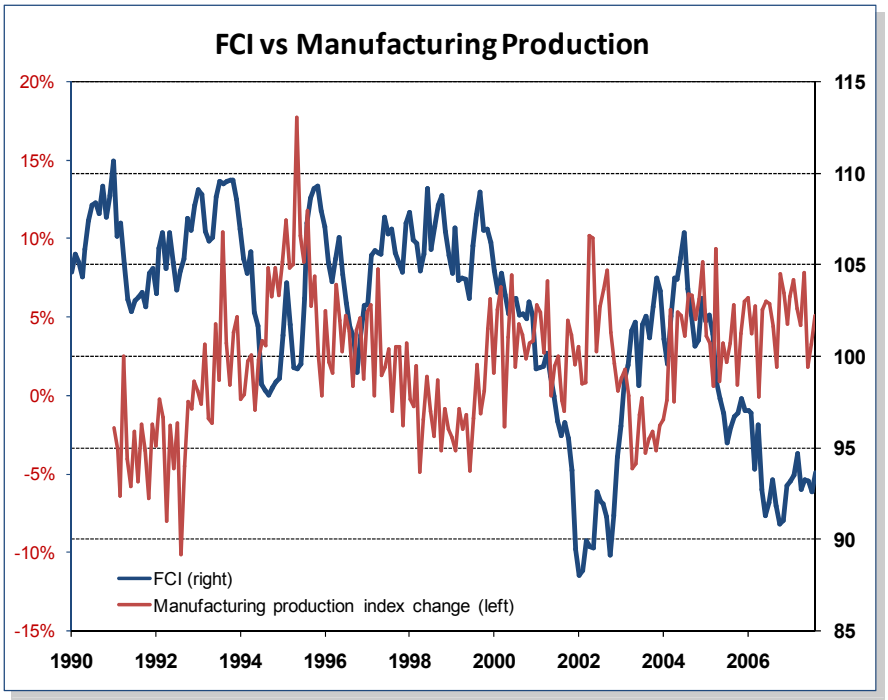
investor is unable to use the money in other ways, so the investor is compensated for this through the time value of money component of the yield. When a yield curve becomes inverted, it usually means that the monetary authorities have an aggressive approach towards fighting inflation and that investors generally believe that future inflation will go down.

- **Excess money supply growth.** Credit and general liquidity conditions can be gauged by the extent to which money supply growth (M3) exceeds the nominal growth in GDP. "Easy" credit conditions are usually reflected by high levels of money creation in the economy, which could become inflationary and may prompt a policy response.

- **Company earnings yield.** There are four ways in which changes in asset prices—and especially share prices—influence economic activity: through wealth effects; through effects on capital costs; through effects on companies' balance sheets; and through expectation effects, i.e. the degree of optimism or pessimism of consumers and entrepreneurs. The stock exchange earnings yield (inverse of the price/earnings ratio) is used to serve as an indicator of the degree that share prices are under or overvalued.

- **Real effective exchange rate movements.** A country's currency is usually affected by interest rate movements since both financial and real sector activity are influenced by financing costs and inflation expectations. But there can be times when, for example, real interest rates may be rising, while external factors may at the same time be causing the currency to depreciate. The overall impact on monetary policy could then be neutral, since the stimulation provided by higher exports may feed through to production and investment, and even cause GDP growth to accelerate.

The above variables were indexed, standardised, and rebased over the period 1997-2007.



They were also regressed on manufacturing production over the period 1990-2007, with the variables' coefficients used to give an approximation of the relative weights to be attached to each of the components. The following weights were given to the components:

- Real interest rate: 30%
- Excess money supply growth: 30%
- Real effective exchange rate: 25%
- Company earnings yield: 10%
- Yield spread: 5%

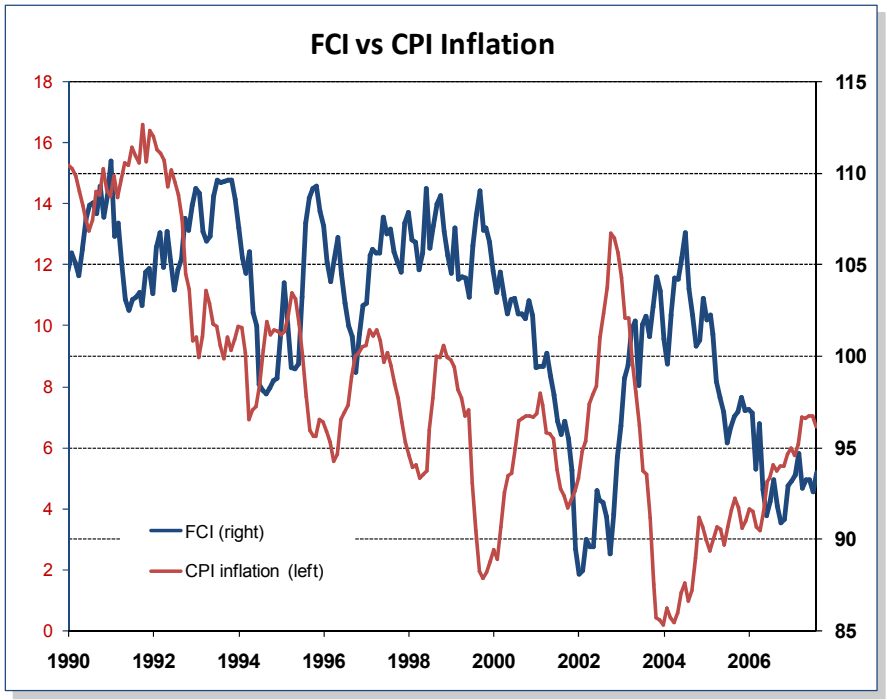
Monetary policy tightening — recent SA experience

As can be seen from the graph on page 1, overall financial conditions have remained fairly tight during most of the 1990s, with a significant loosening taking place in 2001-2003 mainly as a result of the sharp depreciation in the rand. With money supply growth coming under pressure and the real effective exchange rate peaking by mid-2004, financial conditions experienced a brief tightening phase, before the force of lower interest rates started to have a material effect on financial conditions. Soon excess money supply growth started to accelerate, the rand weakened slightly, and share prices started to rise.

Since mid-2006 when nominal interest rates have started moving upwards, the yield curve has flattened and the real effective exchange has strengthened, but real short-term interest rates have remained roughly unchanged. What is more, share prices have remained fairly high, while money supply growth has continued to exceed the rate of nominal GDP growth. These factors have to a large extent neutralised the potential tightening impact of nominal interest rates on economic activity.

Reasons for the relatively easy financial conditions

Interest rates have risen by 350 basis points since June 2006, but in real terms the prime overdraft rate has barely budged: it was 6,3% in real terms in May 2006, and stood at 6,4% in August 2007. In addition, share prices have remained at fairly high valuations, while money supply growth has remained persistently above the nominal GDP growth. These factors were sufficient to neutralise the tightening effect that a



rising exchange rate value could have had.

Conclusion and implications

Recent interest rate increases have been sufficient to roughly match the rise in inflation, but real interest rates have not become much higher. Although the real effective exchange rate has also appreciated somewhat, these factors have affected neither money creation nor stock market valuations to any significant degree. The result is that overall financial conditions as measured by our FCI, has not tightened materially (based on August 2007) numbers, and interest rates may very well have to rise further to counter the potential inflationary impact of the relatively "easy" financial conditions. Given the current stance and outlook for overall financial conditions, the impact of higher interest rates will probably not affect GDP growth to a significant degree. Household spending growth is likely to moderate, but capital formation growth may remain above trend.

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