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guideposts for the private investor

Week Commencing 27 October 2003

MONETARY POLICY CHANGES: WHAT IMPACT?

Despite continual speculation about movements in official interest rates, surprisingly little is known about the effect interest rate changes have on equity market values. New analysis emphasizes the difficulty as much as it offers answers.

In a recently published paper ("What Explains the Stock Market's Reaction to Federal Reserve Policy?", Staff Report No. 174, October 2003), economists Ben S. Bernanke and Kenneth N. Kuttner of the Federal Reserve Bank of New York set out to describe what impact a change in the US Fed Funds rate is likely to have on US equity values.

In attempting this task, they inadvertently illustrate why there is so little known about the impact of interest rate movements despite the direction and timing of monetary policy being the subject of speculation in the financial press virtually every day.

Because equity markets are forward looking, some interest rate expectations have already been incorporated into the existing pricing of equity assets. In the extreme, an interest rate change might not elicit any price response if it was already well embedded in the market's expectations.

"....on average, a 25 basis point change in the Fed Funds rate is likely to change equity values by 1% within the day."

Empirical analysis, therefore, has to be confined to those occasions when the interest rate change was unanticipated by the market. Only by identifying and isolating these surprise changes and measuring their impact is it possible to discern the effect of a change in monetary policy on equity market values.

The paper contains ample evidence of this being easier said than done.

Nonetheless, the two authors get around the difficulty with some deft analytics using movements in futures market pricing and econometrics. They conclude that, on average, a 25 basis point change in the Fed Funds rate is likely to change equity values by 1% within the day.

The effect can be influenced by circumstances. There is some evidence of a larger market response to policy changes that are perceived to be relatively more permanent, a larger response to reversals in the direction of funds rate movements and a smaller response to unexpected inaction on the part of the FOMC.

The surprise 50 basis point rate reductions on 3 January and 18 April 2001 which occurred between FOMC meetings were followed by one-day returns of 5.3% and 4.0%, respectively.

Another unusually strong reaction was generated by the 25 basis point rate cut on 15 October 1998. Again, this was between meetings and was made in response to events in Asia. The change lifted equities over 4%.

In other instances, the reactions were surprisingly muted or in a direction which was inconsistent with theoretical expectations. On 17 May and 16 August 1994, for example, surprise 50 basis point rate hikes were accompanied by equity price rises.

FOMC statements suggesting that further rate increases were not imminent accompa-

(Continued on page 3)

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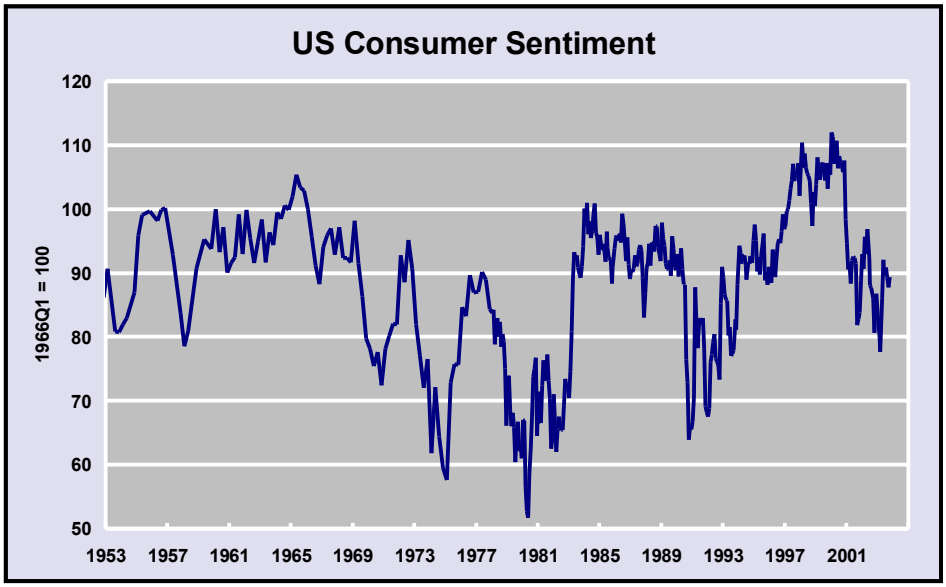
THE WEEKLY CHART SPOT

US consumer sentiment is showing little sign of robust recovery.

The chart shows the sentiment measure published each month by the University of Michigan.

While sentiment is not as depressed as in the early 1980s or early 1990s, a more positive momentum would signal some improvement in business conditions and the prospect of more buoyant corporate profitability.



Source: University of Michigan

CHINA AND THE USA: AUSTRALIA'S FUTURE

Australia had a glimpse of its future in the past week with the visits of the Presidents of China and the USA coinciding.

Geopolitical matters aside, the USA, already the world's largest economy, and China, soon to be the world's largest economy, will loom large in Australia's fortunes.

Among the western countries with which Australia is culturally familiar, the USA's growth will be the fastest. Because of its likely population contraction, Europe's economic performance is likely to be lagging that of the USA.

China's role as economic hub of Asia is likely to continue. The rest of the region will become even more dependent on China for its trade.

There is a lot riding on China's success. Without strong economic growth, it will be more difficult for the Chinese political leaders to keep the country's large population from thinking about political freedom and democracy. The current regime will seek at all costs to keep its population as gainfully employed as it possibly can.

And, of course, it is in everyone's interests for it to do so because the alternative is a momentous political upheaval which could destabilize the region and the world.

In seeking to cooperate with Australia in developing freer trade regimes both are following their own self interest (as, of course, is Australia). For the USA, access to more markets for its relatively sophisticated manufactured goods, services and intellectual property is an important objective.

For China, raw materials are important but so is foreign direct investment. To achieve its development aims it must persuade foreign investors that it offers a secure investment environment. It is probably not so concerned about giving Australian companies markets as much as generating more jobs for its burgeoning population.

In both cases, Australia's own interests rest on having access to larger markets for a wide range of goods and services but especially in the case of the USA, agricultural products.

With Australian economic growth set to slide with slower population growth, it will be necessary to tap these more vibrant economic regions to sustain living standards (and business profitability).

While trade agreements will remove some roadblocks for Australian companies, in neither case will there be an active lobby working on their behalf. Trade agreements or not, active programmes to market Australian goods in these destinations will still be needed.

MONETARY POLICY CHANGES: WHAT IMPACT? CONT'D

(Continued from page 1)

nied both of these larger-than-expected rate hikes. Consequently, expectations of the level of the funds rate in the future may have fallen despite the increases which had been announced.

Another finding is that the reactions differ considerably across industries. High-tech and telecommunications are the most sensitive with a response half again as large as that of the broad market indices. Other sectors, such as energy and utilities, seem not to be affected significantly at all.

Bernanke and Kuttner also looked at how the interest rate change is transmitted to the equity market. They tested for the effect of a change in interest rates on equity market values through:

- a decline in expected future dividends;
- an increase in the expected real interest rate used to discount future dividends; or,
- an increase in the expected excess return (i.e. the equity premium) associated with holding stocks.

It turns out that the largest effects come from revisions to expectations of future excess returns and to expectations of future dividends. Real interest rates have a very small direct impact. Which of the former two are most influential also varies depending on the time period reviewed.

At face value, this conclusion suggests that higher interest rates reduce stock prices by raising the required rate of return from equity investments. According to the authors, there could be two ways for this to happen:

- a tighter monetary policy could increase the riskiness of stocks directly by raising interest costs or weakening the balance sheets of publicly owned firms; or,
- monetary tightening could reduce the willingness of stock investors to bear risk by reducing expected income or wealth or increasing the probability of unemployment.

Given how much time is taken up each day worrying about the size and direction of the next interest rate change, you would expect that the impact would be better understood.

Regrettably, the economist's laboratory is not a sterile environment and he is frequently unable to replicate the conditions under which measurement can be done accurately. In other words, we know what should happen and we can often rationalize the circumstances when the expected change does not follow but predictive capability is limited by the complexity of the environment being forecast.

"…reactions differ considerably across industries. High-tech and telecommunications are the most sensitive with a response half again as large as that of the broad market indices."

OLDER AND LESS PROFITABLE CONT'D

(Continued from page 4)

omy and the strong growth in productivity among its trading partners. Giving the Reserve Bank the task of targeting inflation outcomes with monetary policy has also helped to reduce the rate of price increase. Price increases in the 2-3% range are now the policy objective.

Combined with 2% a year output growth, the rate of underlying corporate profit expansion would be limited to slightly over 4.5% or less than half the rate of increase to which we have become used.

What could prevent this from happening? Profits could grow at the expense of wages and other incomes. However, given Australia's economic history, this seems unlikely.

Productivity growth could be stronger than expected. During the 1990s, productivity growth in Australia (and the USA) was unusually strong measuring 2% a year in Australia rather than the 1.2% which had typified the 1980s. The Treasury growth projections already assume productivity outcomes closer to those which prevailed in the 1990s.

With a broadly based international economic recovery, might even this be exceeded? That could be the case and would be the most important source of additional profitability in this radically changed market environment.

As always, it is important to recall that the conclusions of economic analysis are very much dictated by their surrounding history. The unforeseen is never predicted!

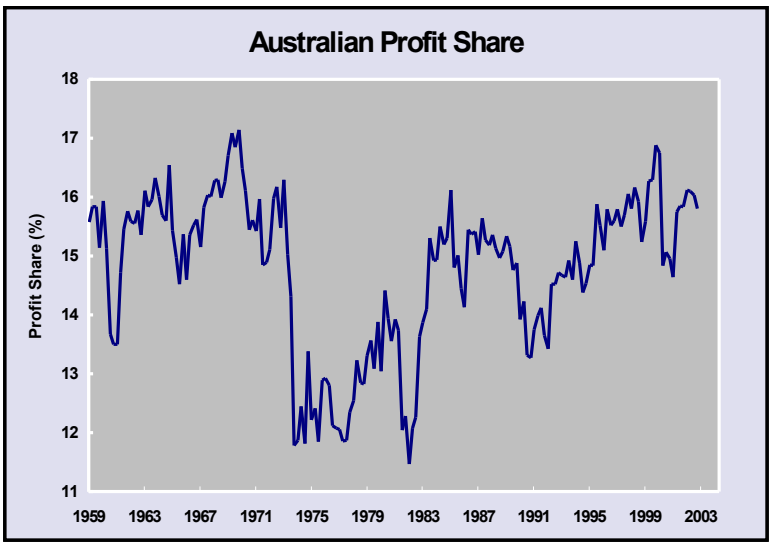
Nonetheless, the evidence is persuasive: profit growth will be doing well to hold at even half the rate which we have come to accept as the norm.

Older and Less Profitable

An aging population and slowing economic growth could halve the rate of company profit growth.

The intergenerational report accompanying the Australian government's budget in May 2002 forecast that the average rate of GDP growth in Australia could fall to 1.9% a year by the 2030s.

While this would be beyond the time horizon of most investors, the report also suggested that by the 2010s the rate of growth will have fallen to an average of 2.3% from the 3.7% average over the past forty years. On this timescale, the growth slowdown is more imminent.



While, for most, GDP is a somewhat abstract notion with little investment meaning, eventually it sets the boundary for the profit growth upon which equity markets must rely for their forward momentum.

Profit growth in Australia has largely been driven by prices and volumes. Australian enterprises have not been able to take a permanent share of income from other parts of the economy through lower costs.

The phenomenon is highlighted in the chart. It shows movements in private corporate gross operating surplus for the Australian economy as a share of total non-farm product. In the June quarter of 2003, gross operating surplus was equivalent to 15.8% of the value of non-farm output. Go back nearly 45 years and the ratio was exactly the same: 15.8%.

While there have been some fluctuations between these two points in time, the historical bounds are readily apparent from the chart. When the profit share is low, as it was in the early 1980s, for example, there was considerable concern that investment spending would dry up. Policies sought to encourage stronger profit growth and to limit the extent of wages growth.

Conversely, when the share of profit has been at the upper end of its range, pressures have emerged to constrain price rises or provide more generous wage increases. In some cases, more contractionary policies have stalled further profit growth.

Growth in Australian business profit has been limited to what it can be achieved through price and volume increases.

Over the period since 1960, corporate gross operating surplus has risen at an annual average rate of 9.8%. During this same period, general price rises contributed 3.65 percentage points and general output increases contributed 5.54 percentage points. The balance was attributable to the combined effects of prices and output working together.

Without a break in this longstanding relationship, Australian profit growth will continue to be limited by the extent of possible price and output increases. However, the outlook for both has changed considerably.

Australian price inflation has been reduced through more market responsive wage setting systems, a more open econ-

(Continued on page 3)

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