Banking on better returns

Low inflation brings a cheerful outlook for bank sector

The average return on equity for the bank sector has moved up significantly over the past decade. Since 1986, the average nominal ROE for the banks has risen from around 11% to 16%. **MARK ARNOLD** predicts that bank stocks will continue to produce stronger earnings growth than non-bank industrials over the long term.

During the five years from 1986 to 1990 (inclusive) the average return on equity for the bank sector was 11%. In the four years from 1994 to 1997, the average ROE for the bank sector is estimated to have increased to 16%. The return on equity over the next two years is expected to be maintained around 16%. This forecast ROE is expected to result from share buybacks, higher non-interest income, cost reductions and continuing high dividend payout ratios. However, lower interest margins are having a negative influence on the sector's profitability levels. It should be noted that the major banks are forecast to continue producing a higher average ROE compared with the regionals.

The improvement in the bank sector's average return on equity is shown in Figure 1.

This gradual trend towards higher rates of ROE for the banks has occurred during a period in which inflation rates in Australia have declined significantly. The real (inflation-adjusted) ROE for the bank sector over the past decade and a half shows a dramatic increase.

![Figure 1: Bank sector return on equity](chart.png)
During the years from 1980 to 1989 the average real ROE for the bank sector was around 4%. In the seven years between 1990 and 1996 the average real ROE for the banks was 10%. In the past year, the return has been 16% - four times the rate produced in the 1980s.

As mentioned, the increase has coincided with a significant decline in the level of inflation in the past 15 years. The historical inverse relationship between the inflation rate and the real ROE is illustrated in Figure 2.

Analysis of the historical correlation between inflation and the real ROE for the banks indicates a negative relationship. The relationship appears substantially linear with a regression relationship for the period 1984 to 1998 being Y (real ROE) = 14.3 - 1.3 X (inflation rate). We believe this relationship is statistically significant based on an R² (coefficient of determination) of 0.71. This R² indicates that 71% of the change in the bank sector's real ROE is explained by movements in the inflation rate. The implied correlation is negative 84%.

This simple linear regression indicates that (on average) a 1% increase (decrease) in inflation will result in a 1.3% decrease (increase) in the ROE (profitability) of the bank sector.

A simple linear relationship is also found if the inflation-adjusted ROE is regressed against the long-term bond rate (LTBR). This linear regression has strong explanatory power with an R² of 0.74. The equation Y (real ROE) = 23.3 -1.4 (LTBR) indicates that a 1% increase (decrease) in the LTBR results in a 1.4% decrease (increase) in the bank sector’s real ROE.

The negative correlation between the ROE for the bank sector and inflation suggests that the profitability of this sector deteriorates substantially when exposed to a sustained period of high inflation, resulting in below-average ROEs. In a low-inflation environment, the bank sector’s level of profitability improves dramatically and is reflected in an above-average ROE.

The negative correlation raises two important issues:
- Is there a cause-effect explanation behind this strong statistical relationship?
- Does this relationship have implications for the price-earnings ratio (PER) discount at which banks currently trade, relative to the industrial sector of the market?

Banks do not perform well in a high-inflation environment for the following reasons:
- The equity of a bank is invested primarily in monetary assets (not real assets). High levels of inflation adversely affect the value of these assets. In other words, the net worth of a bank is similar to that of a bond-market investor. Investors in the bond market suffer in periods of high inflation because principal amounts are repaid in nominal amounts (no adjustment for inflation). In periods of high inflation, bond investors demand higher interest rates to compensate for the increased...
erosion of their principal. However, the higher interest rates designed to compensate for erosion of principal value are taxed as income, reducing the capital value recovery from the higher rates.

High inflation reduces economic stability and tends to decrease the ability of the government to avoid significant boom/bust cycles. Banks suffer particularly badly in economic recessions. The reason banks fare relatively poorly (compared with non-bank industrials) is the combination of high financial gearing and bad debts that occurs in recessions. On average, the bank sector has $16 in assets for every $1 dollar of shareholders’ funds. This high level of financial gearing means that if 1% of a bank’s loans go bad and are written off, this would reduce the bank’s book equity by approximately 16% (assuming loans = total assets). Consequently, bank shares underperform during recessions.

It is well documented that industrial stock PERs exhibit a strong negative correlation to inflation. Thus, during periods of rising inflation, the overall industrial sector of the market normally suffers from poor return performance.

If both bank and non-bank industrial stocks were adversely affected by inflation to a similar degree then there would be no reason to expect the relative PER of the bank sector to improve during sustained periods of low inflation.

However, historical data indicate that non-bank industrials are able to handle periods of high inflation much better than banks. Moreover, the non-bank industrials do not appear to benefit to the same extent as the banks from sustained periods of low inflation.

The non-banks’ lower level of sensitivity to changes in inflation suggests that the discount PER at which the banks sell, relative to the overall industrial sector, should expand during periods of sustained high inflation (such as the 1970s and 1980s) and contract during sustained periods of low inflation.

The average nominal ROE (before abnormal items) for the large listed non-bank industrial stock over the past 14 years has remained in a band between 10% and 14% (with a downward bias). Over the same period the inflation level has declined significantly. A regression of the average nominal ROE for the non-bank industrials indicates a positive correlation of 82% with an R² of 60%.

The least squares regression equation is

\[ Y = 11.1 + 0.4 (X) \]

This relationship would logically be expected, given that the level of inflation would directly and positively influence the nominal rate of return. Interestingly, the relationship between the nominal bank ROE and inflation exhibits a weak negative correlation of 33%. Thus, even the banks’ nominal average ROE does not appear to benefit from high levels of inflation.

There is, however, a negative correlation between the real ROE for non-banks and inflation, based on historical data for the past 14 years. The linear relationship between the real ROE for non-banks and inflation is summarised in the equation

\[ Y \text{ (real ROE)} = 11.1 - 0.6 (X) \text{ (inflation)} \]

for the relationship between inflation
and the real ROE for the non-banks is 0.87.

The slope of the regression line for the bank sector’s real ROE is negative 1.3 compared with the non-bank’s slope of negative 0.6. Thus, a 1% change in inflation explains a 1.3% change in bank real ROE, whereas the expected change in the real ROE for the non-banks would only be 0.6%.

This analysis suggests that the real ROE for the banks is almost twice as sensitive to changes in inflation as that of the non-bank industrials. In other words, the (inflation-adjusted) profitability of the banks benefits substantially more than the non-banks from reductions in inflation and suffers more from moves to higher inflation levels.

The real ROE has increased for the non-banks over the past 13 years. This increase in real ROE has occurred despite a reasonably flat trend in the nominal ROE for the non-bank industrials during this period.

Over the past 14 years, as the inflation rate has declined, the ROE of the banks has increased relative to the non-banks’ ROE. In the high-inflation period during the 1980s the non-banks generally produced higher ROE figures compared with the banks. As the inflation rate has declined, the ROE of the banks has steadily increased relative to that of the non-banks. In fact, during the past few years the banks’ ROE has moved well above the non-banks.

The bank sector is expected to continue to produce a higher average ROE compared with the non-bank industrials during the next few years.

Inflation is forecast to remain low (in the 2% to 3% range) in the medium term. The major forces ensuring a low-inflation environment include corporate restructuring, the competitive effects of globalisation, the focus of central banks on maintaining low inflation, and a general reduction in world-wide inflationary expectations. In a sustained low-inflation environment the bank sector is expected to continue to perform well relative to other...
industrial stocks.

If a company can reinvest its retained earnings at a higher rate of return over the longer term (all other things being equal), it should produce higher earnings growth than a company that can only reinvest its retained earnings at a lower rate of return.

The non-bank industrial sector is expected to produce a ROE of around 13% in both 1998 and 1999 (these return figures have been boosted by the listing of Telstra). These rates of return compare with an average rate of return in 1997 of 12%. The ROE for the bank sector in 1998 is estimated at about 16%. Thus, over the medium term, the banks should produce relatively strong earnings growth compared with the non-bank industrials.

LONG-TERM EARNINGS OUTLOOK

The following equation gives an implied long-term theoretical earnings growth rate based on the company's earnings retention rate and expected ROE.

\[ g = \text{ROE} \times (1 - \text{dividend payout ratio}) \]

The estimated dividend payout ratios for the banks and non-banks are fairly similar in the 60% to 70% region. In 1997, the average dividend payout ratios were 63% and 65% for the banks and non-banks respectively.

Thus, the banks, on average, are retaining 37% of their earnings (excluding the impact of share buybacks). Based on this equation and our forecast ROE and dividend payout ratios, the bank sector's implied earnings growth rate is

\[ g = 16\% \times (1 - 0.63) \]
\[ g = 6\% \]

The non-bank sector's implied growth rate is

\[ g = 11\% \times (1 - 0.65) \]
\[ g = 4\% \]

Assuming a continuation of these ROE and dividend payout ratios in the longer term, the banks have the potential to continue to produce superior earnings growth.