ECONOMIC NOTES

THE EFFECT OF EXCHANGE RATE VOLATILITY ON NEW ZEALAND'S EXPORTS 1981-87

Discussion Paper G89/1 –
A. M. G. Coleman

The real appreciation and volatility of the New Zealand dollar since its float in 1985 has raised concerns about the possible adverse effect of exchange rate volatility on New Zealand exports. The concern stems from the theory of the firm under uncertainty which suggests that, under certain assumptions, an optimising firm would reduce foreign sales or raise prices to offset the risk of losses caused by exchange rate movements. The counter argument is that low cost hedging devices exist which can protect the firm from the adverse effects of exchange rate volatility.

The aim of this paper is to measure the impact of exchange rate volatility on New Zealand's exports in the 1980s. Two approaches are taken. The first assesses the impact of exchange rate uncertainty on bilateral trade flows by regressing the volume of bilateral trade on an exchange rate risk proxy. The second analyses the reallocation costs of exchange rate volatility by estimating the extent to which the export sector reacted to temporary deviations from a trend measure of the exchange rate.

The major conclusion from the first approach to the empirical work in this paper is that there is little evidence that exchange rate uncertainty affected the volume of New Zealand's exports over the period 1981-87, even though the supply of most manufactured exports is highly dependent on the level of the real exchange rate. The effect of five different measures of daily, quarterly, and annual exchange rate volatility on fifteen different export classifications was estimated. In only one case, that of non-machinery manufactured exports to Australia (regressed on the real annual exchange rate risk proxy), were exports significantly and adversely affected by exchange rate uncertainty.

No firm conclusions can be drawn from the analysis of the reallocation effects of temporary exchange rate fluctuations. However, there is little in the results to indicate large reallocation costs associated with exporters responding to temporary exchange rate fluctuations.

The main conclusion of this study is that there is no apparent evidence to suggest that exchange rate volatility has adversely affected the export sector. It should be noted however that this study has not attempted to measure the possible longer term impact of exchange rate volatility on investment decisions.

AN AUTOREGRESSIVE APPROACH TO ANALYSING THE PROPERTIES OF NEW ZEALAND BUSINESS EXPECTATIONS

Discussion Paper G89/2 –
Chris Meads and
Bob Buckle[1]

The New Zealand Institute of Economic Research's Quarterly Survey of Business Opinion provides a rich source of information about business expectations and outcomes. The data have been the basis for recent research on the properties of business expectations of selling prices, costs, employment, output, orders and stocks (Buckle, Assendelft and Jackson (1988)). The research is extended in this paper by evaluating the inter-relationships between expectations of a wide range of business variables. A vector autoregressive (VAR) model is used to evaluate whether there are any expectation series upon which all others are critically dependent. The results point to the importance of expectations of orders and output in explaining subsequent movements in expectations of finished stocks, labour turnover, deliveries, overtime and orders and output. Expectations of selling prices and costs appear to form a separate sub-system within the overall VAR model, while expectations of numbers employed may form a third separate sub-system.

These results imply that expectations of 'quantity' variables such as orders and output are more important than expectations of prices as a determinant of the New Zealand business cycle. Price expectations may be important in financial decisions in terms of their impact on interest and exchange rates, and in the labour market in terms of wage setting behaviour, but the evidence presented in this paper does not confirm a direct influence on manufacturing output and employment.

From a practical viewpoint, the results of this paper are useful to those who use the Quarterly Survey of Business Opinion survey results as a leading indicator. The vector autoregressive model estimated in this paper can be used to improve the accuracy of the survey as a leading indicator by correcting the survey results for bias.

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THE CHOICE OF INTERMEDIATE AND OPERATING TARGETS FOR MONETARY POLICY

Discussion Paper G89/3 – A. Grimes

Despite the superficial attractiveness of adopting a strict target for monetary policy, in practice it is rare to find a central bank adopting such a target. In general, even when the final objective of monetary policy is clear, most central banks (including the Reserve Bank of New Zealand) adopt a pragmatic approach to monetary policy implementation; policy settings respond to movements in a number of indicators, rather than responding solely to keep a single indicator on some pre-specified target path.

The current paper explores these issues and extends previous theoretical analyses of the optimal choice of target(s) for monetary policy. The effects are analysed of adopting each of three possible intermediate targets for monetary policy – a monetary aggregate, the nominal exchange rate and a nominal interest rate – in an economy which is subject to shocks to money demand, real aggregate demand, the interest rate risk premium and the price level.

It is shown that the maintenance of any single target is insufficient to guarantee price (or output) stability under this range of shocks. In the face of some shocks, an exchange rate target will be preferable to a money base target while the money base target will be preferred in response to other shocks. The real exchange rate and the (nominal or real) interest rate are shown to be inappropriate intermediate targets for monetary policy, since none of these potential targets provides an anchor for the price level. However, the nominal interest rate may still be of use as a monetary policy operating target. An implication of these results is that it may be preferable to monitor developments in each of the nominal exchange rate, interest rates and the monetary aggregates rather than focussing on just one of these variables, since the latter approach involves the exclusion of valuable information provided by the remaining indicators.

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