Work Conducted by the Economic Unit on the Effects on Interest Rates on Aggregate Demand

Monetary policy actions by Central Banks impact on demand, and therefore, on output and inflation through a number of channels, which are briefly sketched in the attached chart:

- Effects on market interest rates at the short and long end and the knock-on effects on the rates of financial intermediaries and possibly on the 'availability of credit'. These, in turn, influence private domestic expenditures.

- Effects on the exchange rate which impact on net external demand, and, via trade prices, on inflation.

- Effects on expectations, which may influence wage/price formation and longer term market interest rates

The transmission of central bank actions onto aggregate demand is thus a relatively complex process which depends on a number of factors, including the linkages between short-term market interest rates and rates on longer maturities, the response of financial intermediaries to such changes, and the interest elasticity of private expenditures. As a result, the transmission mechanism may differ significantly across countries and over time.

Some work conducted in the Economic Unit has attempted to analyse the details of the transmission mechanism, paying particular attention to the extent to which Community countries differ in this respect.

1. First, the some preliminary work has examined the relationship between changes in short rates on longer rates. Briefly stated, the conclusion that arises from this analysis is that, while there some evidence of a positive relation between short and long rates, this is neither mechanical nor stable, as would be expected since both variables are jointly determined, but that it depends on the expected duration of the monetary policy change and whether it was anticipated by markets or not. In addition, the evidence suggest that for Community countries, movements in 'foreign' long rates - US rates in the case of Germany, and German rates in the case of other

EEC countries - exert an increasingly important influence on long rates in the Community and, corresponding, the importance of local short rates has declined. This is attributable to the increasing globalisation on capital markets as well as to the international convergence in policies and inflationary expectations. The 'bottom line' from this line of enquiry is that the degree of central banks' control over longer rates is limited. This has important implications for the transmission of policy actions to aggregate demand, especially where expenditures are more responsive to long rather than short rates.

2. Second, the linkage between market interest rates and key lending rates charged by financial intermediaries is also under examination. This research has shown so far significant differences between EEC countries in this respect. For example, there appear to be significant differences between EEC countries in relation to the rates charged on *outstanding* loans. This has important implications for the 'income effect' of interest rate changes. In some countries, such as Germany, most lending is long-term and fixed rates usually linked to long-term market rates; this implies that the 'income effect' of changes in short rates will be heavily diluted. In other cases, notably Ireland and the UK, the bulk of lending is at variable rates linked to short market rates - implying that short-term market rates have a more important role in the transmission mechanism. In relation to rates charged on *new* lending, the rates charged by financial institutions on short-term loans appear to be linked to short money market rates, although the degree of linkages varies significantly across countries. Rates charged on new long term loans appear to be linked to long-term market rates in countries where this type of lending is at fixed rates while, elsewhere, short-term market rates play a more important role. The overall thrust of these results is, therefore, that there are likely to be significant differences in the transmission of changes in short-term market interest rate changes to aggregate demand across Community countries.

3. A third key determinant of the impact of changes in short-market interest rates on aggregate demand - namely the response of private expenditures to changes in interest rates arising from substitution, income and wealth effects - has also been examined for EEC countries. Examination of the results of empirical studies of interest elasticity of the components of private expenditure yields the following conclusions:

- The evidence in favour of direct substitution effects of changes in interest rates on ***non-durable consumption*** is relatively weak. However, there does appear to be some support for indirect effects via changes in wealth and in income. In relation to ***durable consumption***, a number of studies have detected significant influences of interest rate changes.

- As regards ***investment***, there appears to be a robust relationship between ***residential investment*** and interest rate movements. For ***non-building investmen***t, however, it has proven difficult to establish a significant link with interest rate via the cost of capital or q ratio, although cash-flow variables, which in turn indirectly influenced by movements in interest rates, appear to have a significant influence.

- There is little evidence of a significant influence of interest rate changes on the level of ***stockbuilding***.

An important determinant of the response of private expenditures to changes in interest rates is the structure of corporate and personal sector balance sheets. Typically in countries where these sectors have high levels of debt linked to short market rates, expenditures will tend to be more sensitive to changes in interest rates. In this context a particular difference emerges between the personal sector in the UK, where a high level of debt at variable rates linked to market rates implies that UK households may be more sensitive to changes in interest rates that elsewhere in the EEC . In relation to the corporate sector, levels of debt relative to income appear to be lower in the UK. However, the prevalence of lending at variable rates linked to short market rates in the UK implies that corporate expenditure may also be relatively more sensitive to changes in these rates.

Interest Rate Transmission Mechanism