MONETARY POLICY'S LONG AND VARIABLE LAGS: THE CASE OF THE EUROZONE

Monetary policy influences the economy with long and variable lags. They should be considered when assessing the effects of past rate hikes on inflation and its drivers. Bank lending surveys may act as a leading indicator. Historically, tighter credit standards and weak expected credit demand were followed by slower growth of company investments and households' housing investments. However, the relationship between credit demand and supply factors and household consumption is very weak. Considering the current relatively tight credit standards and weak expected credit demand, one should expect a negative impact on company investment and housing investments by households over the next several quarters.

Monetary policy influences demand and activity through various channels: the level of interest rates -which influence credit demand-, a bank lending channel -the availability of bank credit and the conditions that are applied-, a balance sheet channel -in terms of borrowers through the value of their collateral, in terms of banks through the impact on their funding costs-, a risk taking channel -via changes in prices of financial assets, which influence capital markets based financing and via changes in the willingness to take risk of borrowers, investors and banks- as well as an exchange rate channel. Given the variety of transmission mechanisms, the effects of changes in official interest rates only manifest themselves with long and variable lags. This raises a challenge for central banks: when inflation has been running high and several increases in policy rates have already been implemented, how many additional rate hikes are necessary to bring inflation back under control whilst trying to avoid an 'overkill'? Obviously, the answer is also crucial for decisions of households, firms and investors.

When monitoring inflation -the ultimate objective of central banks- or demand and supply conditions in the economy -which influence price developments-, the lags in monetary transmission should be taken into account. When past rate hikes have had only a limited effect on inflation and its drivers, this may reflect a limited policy effectiveness or that the consequences still need to manifest themselves due to the long and variable lags. In this respect, bank lending surveys may provide useful information and act as a leading indicator: one would expect that in reaction to central bank rate hikes, banks will tighten loan conditions. They are also ideally positioned to report on their clients' reactions to higher interest rates. These supply and demand factors will probably influence the volume of new loans and hence economic growth. This should especially be the case in the Eurozone, given the importance of the banking sector in its financing.

To explore this, charts 1-6 show the relationship between, on the one hand, next quarter's loan demand expected by banks as well as the credit conditions banks expect to apply -both based on the ECB's bank lending survey- and, on the other hand, the average growth in the volume of investments by companies and households as well as the volume of household consumption over the next four quarters[1]. Table 1 also shows the regression coefficient and R² for longer time windows in terms of credit growth.

	CREDIT STANDARDS		CREDIT DEMAND	
Firms				
	beta	R2	beta	R2
4Q	-0.0737	0.2772	0.0538	0.2013
6Q	-0.06	0.3031	0.0424	0.2024
8Q	-0.0432	0.2432	0.0268	0.1255
housing loans and household investments				
	beta	R2	beta	R2
4Q	-0.0731	0.1589	0.0357	0.2246
6Q	-0.0608	0.1433	0.032	0.2348
8Q	0.0037	0.0062	0.0024	0.0155
consumer credit and household consumption				
	beta	R2	beta	R2
4Q	-0.0058	0.0051	0.0165	0.125
6Q	-0.0044	0.0048	0.0099	0.0712
8Q	-0.0009	0.0004	0.0066	0.0555

SOURCE: ECB BANK LENDING SURVEY (BLS), BNP PARIBAS

1 The bank lending survey results are reported as a diffusion index: the net percentage of banks applying tighter standards, the net percentage of banks expecting strong credit demand. A negative number for the latter implies there are more banks expecting weaker demand than banks expecting stronger credit demand.

> As time goes by, the impact of the ECB's rate hikes should become increasingly visible. Based on the correlation analysis over the various time windows, one should expect a negative impact on company investment and housing investments by households over the next several quarters.

EDITORIAL

Several conclusions can be drawn. One, as expected, tighter credit standards tend to be followed by slower growth of company investments and households' housing investments. However, the relationship with household consumption is very weak. Two, again as expected, when banks expect credit demand to be weak (strong), subsequent growth of company investments and households' housing investments tend to be weak (strong). The relationship with household consumption is again very weak. Three, the relationship between credit standards and corporate investments is the highest over a window of 6 quarters but even for 8 quarters, the R^2 remains relatively high compared to those of households' housing investments and consumption. Four, expected credit demand and corporate investments correlate well over 4 and 6 quarters, but far less for an 8 quarter window. Five, housing investments are more correlated with credit demand than with credit standards. In both cases, the correlation is very low for the 8 quarter window. Finally, the correlation between credit standards, expected credit demand and consumption growth is low for the different horizons. This probably reflects the limited role of bank credit in financing household consumption, in comparison with household income.

In each chart, the vertical line shows the results for the latest survey (1st quarter 2023). Generally speaking, credit standards are already relatively tight and expected credit demand rather weak, although in both cases we're not at historical extremes. Nevertheless, based on the correlation analysis over the various time windows, one should expect a negative impact on company investment and housing investments by households over the next several quarters, even in the absence of a further deterioration of the lending survey data. As time goes by, the impact of the ECB's rate hikes should become increasingly visible

William De Vijlder

EUROZONE: NET CHANGE IN FIRMS CREDIT DEMAND NEXT QUARTER

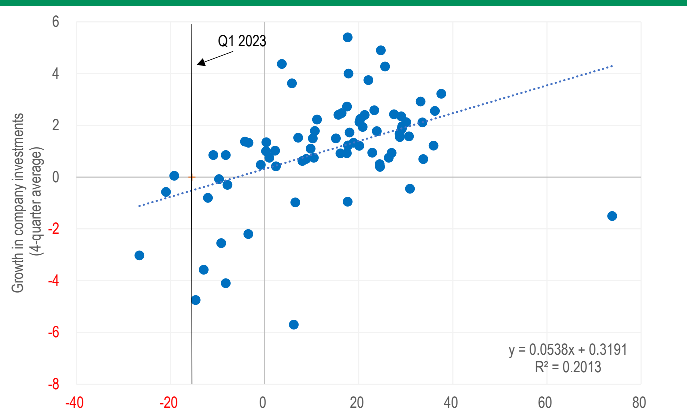

CHART 1

SOURCE: ECB BANK LENDING SURVEY (BLS), BNP PARIBAS

EUROZONE: NET CHANGE IN FIRMS CREDIT STANDARDS NEXT QUARTER

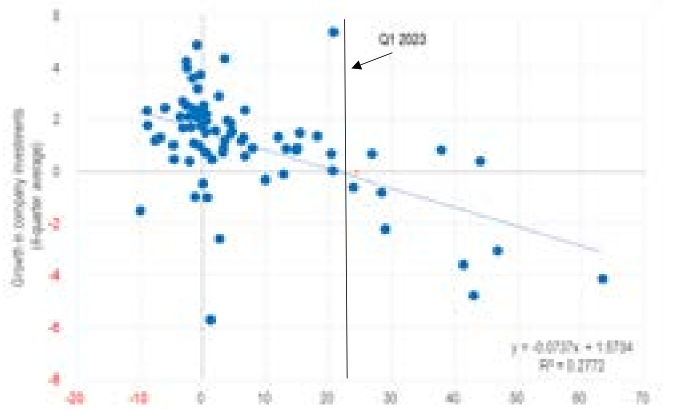

CHART 2

SOURCE: ECB BANK LENDING SURVEY (BLS), BNP PARIBAS

EUROZONE:NET CHANGE IN HOUSING CREDIT DEMAND NEXT QUARTER

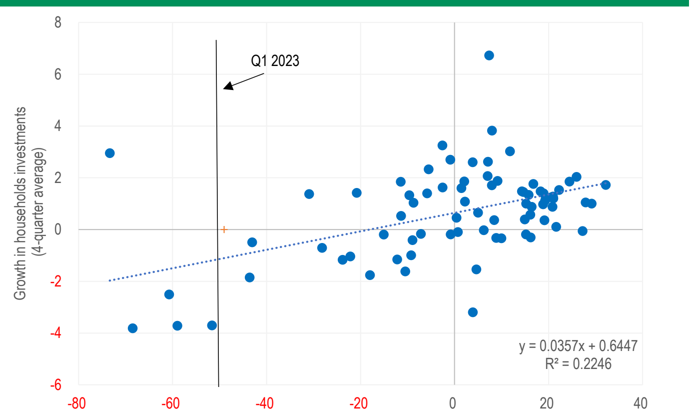

CHART 3

SOURCE: ECB BANK LENDING SURVEY (BLS), BNP PARIBAS

EUROZONE:NET CHANGE IN HOUSING CREDIT STANDARDS NEXT QUARTER

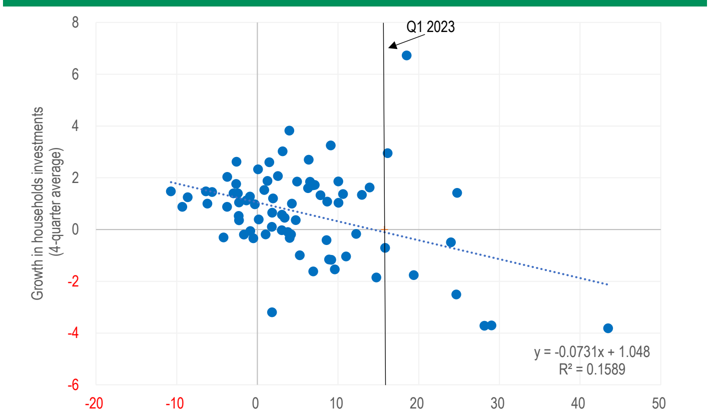

CHART 4

SOURCE: ECB BANK LENDING SURVEY (BLS), BNP PARIBAS

EUROZONE:NET CHANGE IN CONSUMER CREDIT DEMAND NEXT QUARTER

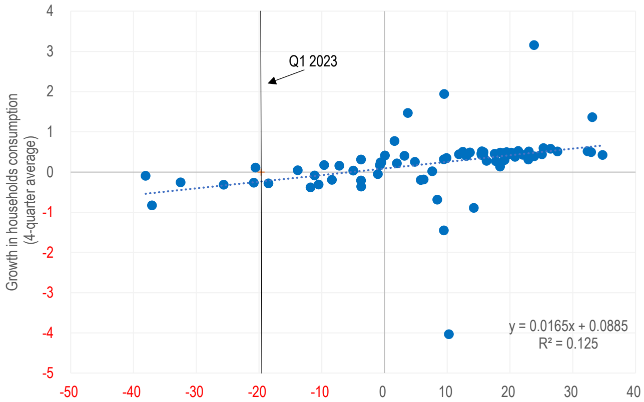

CHART 5

SOURCE: ECB BANK LENDING SURVEY (BLS), BNP PARIBAS

EUROZONE:NET CHANGE IN CONSUMER CREDIT STANDARDS NEXT QUARTER

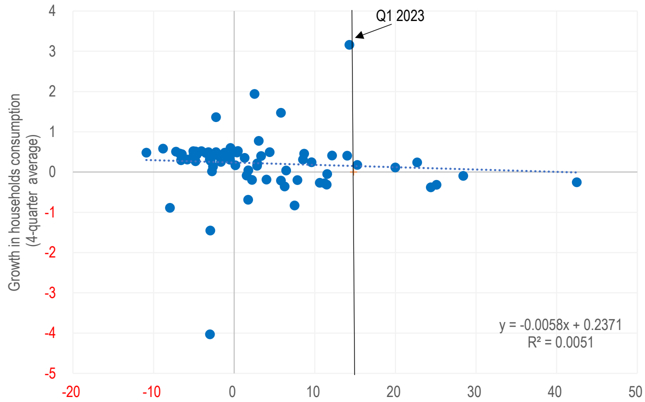

CHART 6

SOURCE: ECB BANK LENDING SURVEY (BLS), BNP PARIBAS