

Monetary policy works with long and variable lags. Because of these lags, policy makers need forward-looking indicators to predict the effect of policy changes on their intermediate and final target variables. The most useful indicators are those whose predictive capacity is invariant to changes in economic structure and to the state of the economic cycle. Unfortunately, few such indicators exist. A second-best solution is to determine how the predictive power of an indicator changes as economic structure or the state of the cycle changes. One can then use this information to determine which set of indicators is more likely to be reliable in a given circumstance.

Of particular concern to monetary policy is the considerable instability in the ability of financial variables to predict GDP growth and inflation – for example, as found in Stock and Watson (2003) some financial variables work well in some countries or over some time periods and forecast horizons, but the results do not show any clear pattern. One reason for this may be the changing nature of financial structures within countries across time, or the differing types of financial structures across countries. For example, one reason attributed to the poor performance of monetary aggregates as indicators for monetary policy in the United States is that financial markets in the US are highly developed, very complete and efficient so that financial asset prices contain all the information that monetary policy needs.

There are two aspects to this question. The first stems from the idea that prices may be informationally efficient when financial markets are so well developed that informational frictions do not exist and contracts are enforceable (Smith 1999). The second stems from the idea that financial prices do not reveal everything when financial markets are incomplete and/or information is costly to acquire. In particular, credit may be rationed in this case because of the residual imperfect information that persists even after financial institutions examine loan applications (Stiglitz and Weiss 1981). This imperfect information about the value of projects can cause creditors to deny loans to borrowers who appear equivalent to those who receive loans, and hence loan demand can be greater than loan supply at the equilibrium interest rate. It is reasonable to believe that financial institutions make more use of quantity rationing than financial markets, who may be more likely to allocate credit using price rationing. This is because markets manage risk by distributing the financing of a project among many participants, each of whom takes a small standardized piece of the action, and therefore the entrepreneur is more likely to obtain all the credit that they want at the transacted interest rate. If financial institutions use quantity rationing but financial markets use price rationing, we should find that financial asset prices provide better indicators for monetary policy in countries where a greater proportion of credit is allocated through financial markets. Conversely, quantity indicators constructed from financial institution balance sheet data should be more useful in countries where borrowers have more limited access to or make more limited use of financial markets.

Moreover, highly developed financial systems tend to use standardized products that can be priced efficiently. If true, we should find that financial asset prices provide better indicators for monetary policy in countries with highly-developed financial systems. Conversely, bank-based financial quantity variables should provide better indicators in countries where pricing in financial markets is less efficient.

Our methodology is as follows. For 29 countries we select two common targets for monetary policy – fluctuations in GDP which we view as an intermediate target, and CPI inflation which we view as a final target. For each country we also select up to four commonly-used financial quantity variables and up to four commonly-used asset price variables. We choose variables for which data are readily available in the belief that these are the variables most likely used by policy analysts in that country. We then use the procedure in Stock and Watson (2003) to determine the power of each variable as an indicator of the target variable for time horizons up to and including eight quarters ahead. Finally, we test whether the best financial quantity indicator for a country contains information about the future path of the target variable over and above that contained in the best asset price indicator.

In the second stage of the study we use financial structure indices and financial development indices constructed by Levine (2002) to classify countries according to the nature of their financial structures. Levine has constructed two financial structure indices, one based on the relative size of financial markets (namely, the market capitalization of exchange-traded companies relative to bank credit outstanding) and one based on the relative intensity of activity in financial markets (namely, the volume of equity traded on the stock exchange relative to bank credit outstanding). The financial development indices measure the activity, size and efficiency of the financial system as a whole. We also look at the regulatory and legal environment in which financial institutions in a country operate, based on indices developed by Levine (2003) and Ergungor (2003), respectively. The idea here is that market-based asset prices will be better indicators (i.e., contain relatively more information) in financial systems with less onerous regulatory restrictions and more flexible legal environments because financial markets in such economies are more likely to operate fairly and effectively. We relate the financial structure and development indices to the relative information content of financial quantities and asset prices to see if the two are related across countries.