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Should Monetary Policy Monitor Risk Premiums in Financial Markets?

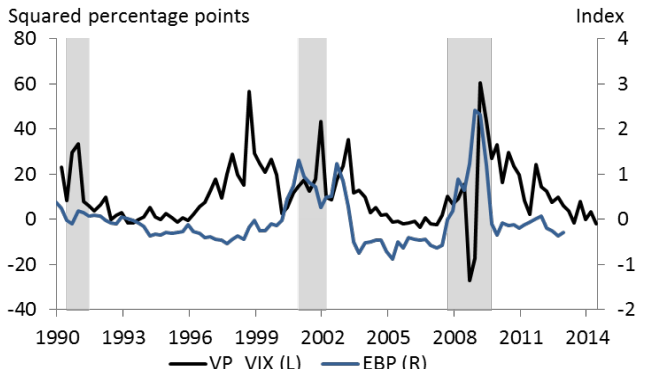
By Taeyoung Doh, Guangye Cao, and Daniel Molling

The 2007-08 financial crisis reignited interest in whether monetary policy should respond to financial stability concerns. If monetary policy makers are concerned about macroeconomic tail risks associated with financial instability, monitoring a broad range of risk premiums in financial markets may be worthwhile. By influencing investors' risk appetites, monetary policy can mitigate financial market vulnerabilities not necessarily reached by a targeted regulatory approach.

The financial crisis of 2007-08 challenged the pre-crisis consensus that monetary policy should play a relatively passive role in promoting financial stability. Proponents of this consensus view argued monetary policy should respond to financial instability concerns only to the extent they significantly alter the likely path of inflation or real activity. However, the severity of the financial crisis and subsequent slow recovery reignited interest in an alternative view that monetary policy could mitigate financial instability concerns before they materialize into a full-blown crisis.

Recently, some policymakers have suggested that adjusting interest rates in response to risk premiums in financial markets could effectively mitigate financial instability. When risk premiums are at unusually low levels, for example, investors might endanger the economy through excessive risk-taking. Monetary policy tightening could discourage this behavior. Since a higher interest rate raises the cost of borrowing, it changes financial intermediaries' incentives to engage in risk-taking behavior in a way the regulatory approach cannot easily address.

Chart 1: Excess bond premium (EBP) and VIX variance premium (VP_VIX)



Note: Gray bars represent NBER-defined recessions.
Sources: Gilchrist and Zakrajsek; Drechsler and Yaron; authors' calculations.

We look at risk premiums in a broad range of asset markets and find that two measures of risk premiums are particularly useful for promoting financial stability through monetary policy (Chart 1). The first measure of risk premium is the excess bond premium (EBP) from corporate bond markets. The EBP measures the additional compensation investors demand for taking default risk above and beyond what can be explained by the expected default probability. By construction, this measure captures the variation of investors' risk aversion for the same amount of default risk. One nice feature of the EBP is that it has predictive power for future real GDP growth even after controlling for typical macroeconomic indicators. Interestingly, the predictive power is somewhat asymmetric, as Table 1 shows. A

Table 1: EBP's predictive power for future GDP

	Four-quarter-ahead real GDP
Increase in the EBP	-2.904***
	(0.607)
Decrease in the EBP	-1.065
	(0.680)

Notes: Robust standard errors in parentheses. Units are percentage points.
*** Significant at the 1 percent level.
Sources: Authors' calculations; Gilchrist and Zakrajsek.

high level of the EBP signals a decline in future real activity, but a low level of the EBP does not necessarily imply a boom in economic activity. Hence, from the perspective of monetary policy, it is important to monitor what leads to a spike in the EBP.

The equity variance risk premium from the derivative market (VP_VIX) is a useful predictor of future increases in the EBP. The VP_VIX is positive when investors expect stock market volatility to be higher than projected by past realized stock market volatility. Therefore, a positive level of VP_VIX suggests investors overestimated stock market volatility relative to the level implied by a statistical model. Interestingly, a negative level of the VP_VIX predicts a future increase in the EBP (Table 2). The pattern suggests that an unusually low level of the VP_VIX, if sustained, could increase the possibility of a future spike in the EBP that could, in turn, lead to an economic downturn.

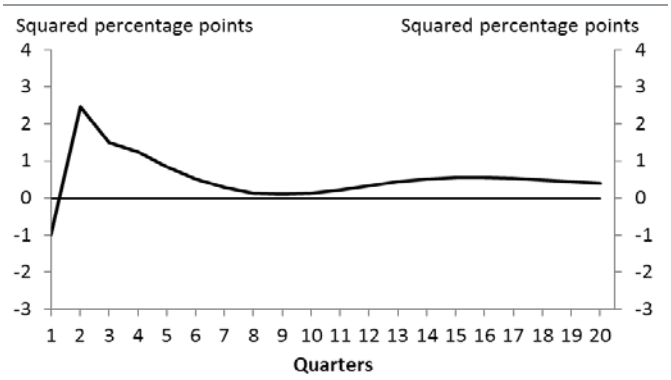
Table 2: VP_VIX predicts EBP

	Change in EBP
Lag EBP	-0.108
	(0.077)
Lag VP_VIX	-0.008**
	(0.004)

Notes: Robust standard errors in parentheses. Units are percentage points.
** Significant at the 5 percent level.
Sources: Authors' calculations; Gilchrist and Zakrajsek.

The remaining question for monetary policy makers is whether monetary policy can effectively influence these risk premiums. Since monetary policy works with a significant lag, policy must react to forward-looking measures. In this sense, it is important to look at the response of the VP_VIX to monetary policy. Chart 2 shows the response of the VP_VIX to a 1-standard-deviation positive shock to the real federal funds rate. An unexpected monetary policy tightening increases the VP_VIX, reflecting investors' higher risk-aversion, which reduces the possibility of a future spike in the EBP.

Chart 2: Response of VP_VIX to a positive shock to the real federal funds rate



Note: Structural-form impulse response function for a four-variable VAR (business cycle, monetary policy, VP_VIX, forecast equity market return volatility).

Based on the above analysis, using monetary policy to promote financial stability is feasible if policymakers monitor relevant risk premiums. However, policy tightening carries its own risks. While tightening can reduce the chances of a disastrous macroeconomic outcome after a burst of financial excesses, it can also slow down current economic activity through conventional monetary policy transmission channels that affect consumption and business investment. Calculating the net benefit of using monetary policy to promote financial stability is thus non-trivial. Nevertheless, our evidence suggests using monetary policy to promote financial stability concerns may be appropriate in some circumstances.

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