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Why has US monetary policy become ineffective lately?

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ABSTRACT

Some recent studies show that US monetary policy has lost its stimulative traction, especially since the early 1980s. They argue that the Fed's forward guidance has enabled economic agents to anticipate the changes in interest rates more accurately. As a result, it is harder to find truly exogenous monetary policy shocks, which has made monetary policy ineffective. In this article, we find that anomalous economic behaviours of financial institutions might be the true reason for the ineffective monetary policy. Our structural vector autoregressive model shows that increases in the US money supply mostly flowed into the financial sector to increase its profits instead of stimulating the real sector of the economy through business investment.

KEYWORDS

Federal funds rate; the Federal Open Market Operation (FOMO) borrowing; behaviours of financial institutions

JEL CLASSIFICATION

E52; C32

I. Introduction

Many studies have recently reported that federal funds rate targeting through the Federal Open Market Operation (FOMO) generated unexpected policy impacts since the early 1980s (Ramey 2016; Christiano, Eichenbaum, and Evans 1999). Contractionary monetary policy interventions have stimulated GDP. Conversely, the observations imply that expansionary monetary policy tools might exert negative or null effects on the economy. According to the studies, the Fed's federal funds rate targeting has been more forward looking or forward guiding, and as a result, economic agents have successfully anticipated the changes in federal funds rates. Therefore, monetary shocks could not identify truly exogenous federal funds rate shocks (Barakchian and Crowe 2013; Campbell et al. 2012).

However, these studies are focused so much on measurements of the monetary shocks that they lose sight of a huge change in the macroeconomic dynamics. We instead assert that the crucial point is not the identification of federal funds rate or forward-looking shock measures, but that of the sample period under consideration for three main reasons. First, Christiano, Eichenbaum, and Evans (1996) reported that higher federal funds rate shocks decreased GDP between 1960 and 1992. However, when Barakchian and Crowe (2013) applied the same method to a different sample period of 1988–2007, contractionary monetary policy interventions boosted GDP. Bernanke and Mihov (1998) found a negative relationship between federal funds rate shocks and industrial production between 1965 and 1996. When Barakchian and Crowe (2013) applied their identification method to the 1988–2007 period, higher federal funds rates stimulated industrial production. Ramey (2016) applied the above-noted Christiano et al.'s method to the 1983–2007 period and found that higher federal funds rates boosted industrial production.

Second, even when Ramey (2016) applied Coibion’s (2012) enhanced Romer and Romer (2004) measures to the 1983–2007 period, higher federal funds rates increased industrial production. Third, multiple studies that used samples between the early 1960s and 2000 consistently reported that positive monetary shocks (lower interest rate shocks) increased GDP (Christiano, Eichenbaum, and Evans 1999; Romer and Romer 2004; Smets and Wouters 2007; Coibion 2012).

In this article, we present more nuanced venues through which monetary policy shocks affect GDP. The 1999 repeal of the Glass-Steagall Act via the Financial Services Modernization Act allowed financial institutions to do investment-banking business, such as purchasing mortgage-backed securities or investing in risky but highly profitable financial derivatives (Roubini and Mihm 2010, 72–76). Cheap
credits rendered by the FOMO lending augmented aggressive and greedy economic behaviours of the financial institutions by using the federal credits to purchase various financial assets. Therefore, the 1999 repeal of the Glass-Steagall Act might have stimulated the profit-seeking motives of the financial institutions, but did not stimulate the real-sector economy by augmenting business investment. In other words, the federal credits fell prey to the profit-seeking behaviours of the financial institutions. While the studies introduced above generally related the profit-seeking motives of the financial institutions, but did not stimulate the real-sector investment.

In the next section, we introduce a structural vector autoregressive (SVAR) model to test the impacts of FOMO lending and the Steagall Act was repealed. This issue is directly related to the sample period we emphasized earlier. All dollar values are converted to 1984Q1 to 2014Q4, while excluding the year 1999 as indicated earlier. All dollar values are converted to 2014 Q4 constant dollar values, by using the GDP deflator.

We rewrite Equation 2 using lag operator, \( L \), as

\[
(I - A_1L - A_2L^2 - ... - A_kL^k)X_t = A_0 + \varepsilon_t
\]

(3)

Pre-multiplying both sides of Equation 3 by \((I - A_1L - A_2L^2 - ... - A_kL^k)^{-1}\), we have

\[
X_t = (I - A_1L - A_2L^2 - ... - A_kL^k)^{-1}(A_0 + \varepsilon_t)
\]

(4)

To impose restrictions, we use the Wold (or moving average) representation of the reduced-form of Equation 4 as follows:

\[
X_t = \mu + \Psi(L)\varepsilon_t,
\]

(5)

where \( \mu = (I - A_1 - A_2 - \ldots - A_k)^{-1}A_0 \), \( \Psi(L) = (I - A_1L - A_2L^2 - \ldots - A_kL^k)^{-1} = \sum_{k=0}^{\infty} \psi_k L^k \) and \( \psi_0 = I \). The error terms are generally contemporaneously correlated and have covariance matrix \( \Omega \). We can also derive the structural moving average representations of the equations as follows:

\[
X_t = \mu + \Theta(L)\varepsilon_t,
\]

(6)
where \( \Theta(L) = (I - A_1 L - A_2 L^2 - \cdots - A_k L^k)^{-1} \) \( B^{-1} = \Psi(L) B^{-1} = \Theta_0 + \Theta_1 L + \Theta_2 L^2 + \cdots \), and \( \Theta_0 = B^{-1} \neq I \).

We determine the optimal lag length (or the value \( k \)) to be two (or \( k = 2 \)) in Equation 1, using Akaike’s Information Criterion and Schwarz’s Bayesian Criterion.

In Equation 1, we have 10 more parameters than in Equation 2. Therefore, we need to impose 10 restrictions on Equation 1 to recover the structural parameters. We impose both contemporaneous (short-run) and long-run restrictions to identify the structural parameters. These restrictions are explained in Table 1.

### III. Results

**Responses of business investment to FOMO borrowing: before 1999**

Figure 1 shows the accumulated responses of business investment to FOMO borrowing. A one percentage change in FOMO borrowing boosts business investment by about 15 basis points by Quarter 2. Then, the accumulated impacts of FOMO borrowing on investment stabilize around 11 basis points from about Quarter 8 to Quarter 20. The results are compatible with standard macroeconomic theories. Before 1999, credits, which originated from the FOMO market, seem to have flowed into the business sector.

**Responses of GDP to FOMO borrowing: before 1999**

Figure 2 shows how GDP responds to FOMO borrowing. As we can normally expect, FOMO borrowing positively affects GDP, which is consistent with the findings in Figure 1. For instance, a one percentage change in FOMO borrowing increases GDP by about 0.8 basis points by Quarter 2. The accumulated impacts of FOMO borrowing on GDP start stabilizing around 0.5 basis points beginning from Quarter 7.

In sum, monetary policy interventions via FOMO borrowing generally exert expected impacts on business investment and GDP before 1999.

**Responses of business investment to FOMO borrowing: after 1999**

Figure 3 reports the accumulated responses of business investment to FOMO borrowing after 1999. The accumulated responses drop to about negative 65 basis points by Quarter 2 and then rise back to

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**Table 1. Identifying restrictions.**

<table>
<thead>
<tr>
<th>Long-run restrictions</th>
<th>Short-run restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LR1: no long-run impacts of inflation shocks on GDP</td>
<td>SR1: no contemporaneous impacts of federal funds shocks on GDP</td>
</tr>
<tr>
<td>LR2: no long-run impacts of federal funds shocks on GDP</td>
<td>SR2: no contemporaneous impacts of borrowing shocks on GDP</td>
</tr>
<tr>
<td>LR3: no long-run impacts of borrowing shocks on GDP</td>
<td>SR3: no contemporaneous impacts of investment shocks on GDP</td>
</tr>
<tr>
<td>LR4: no long-run impacts of investment shocks on GDP</td>
<td>SR4: no contemporaneous impacts of investment shocks on federal funds rate</td>
</tr>
</tbody>
</table>

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**Figure 1.** Responses of Business Investment to FOMO Borrowing: Before 1999.
about negative 50 basis points. But the accumulated responses gradually decline to negative 80 basis points by Quarter 15. Increased credits through FOMO borrowing do not seem to reach business corporations. Financial institutions might have had first quicker access to the substantial parts of the federal credits, which they might have used for their investment in risky but profitable financial assets, including financial derivatives, riding on the repeal of the 1999 Glass-Steagall Act.

**Responses of GDP to FOMO borrowing: after 1999**

Figure 4 shows how GDP responds to FOMO borrowing. After a dip in Quarter 2, the accumulated responses of GDP to FOMO borrowing gradually increase to about 3 basis points by Quarter 7 and then gradually tend to 0 by Quarter 20. This link shows that FOMO borrowing still stimulates GDP but these observations should be caveated. One must factor in potentially different business productivity between the two periods. In addition, there is a high possibility that there might be different interaction effects between FOMO borrowing and federal discount window borrowing. More importantly, the accumulated responses of GDP to FOMO borrowing eventually tend to 0 beginning from Quarter 16. In addition, the long-run behaviours of GDP in response to FOMO borrowing shocks mirror that of business investment reported in Figure 3.
In sum, monetary policy interventions via FOMO borrowing generally exert negative impacts on business investment after 1999. They exert similar impacts on GDP.

IV. Conclusions

Some recent studies contended that Fed’s forward-guiding policy interventions enabled economic agents to fully anticipate interest rate shocks. As a result, it is harder to find true monetary policy shocks, which has made US monetary policy ineffective. In this article, however, we find that sample periods under study are more critical than the measurements of the shocks. Since the 1999 repeal of Glass-Steagall Act, financial institutions seem to have invested federal credits in risky but profitable financial assets rather than circulating them into business investment. More specifically, the credits, which the financial institutions borrowed from the FOMO market, did not flow into business investment, thereby damaging GDP growth.

Disclosure statement

No potential conflict of interest was reported by the authors.

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