

# Corporate Investment, Financial Flexibility, and the COVID-19 Crisis

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## Abstract

The paper investigates how the COVID-19 crisis and monetary policy impact corporate investment, and whether firm financial flexibility measured by cash holdings and leverage change these impacts. Using firm quarterly data from 2010 Q1 to 2021 Q3, we find cash and leverage affect firm investment differently during the COVID crisis. Cash does not significantly impact firm investment, while high-leverage firms and more financially constrained firms experience a greater decrease in investment. We also find the investment channel of monetary policy is weakened during the COVID-19 crisis. However, monetary policy is more effective for low cash holding and small firms.

**Keywords:** Corporate Investment, Cash holdings, Financial Flexibility, Leverage, COVID-19, Monetary policy, Effectiveness

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In response to the COVID crisis, the Federal Reserve Board (Fed) rapidly lowered the federal funds rate to stimulate the economy. Expansionary monetary policy is expected to raise business investment, which may lead to higher short-term and long-term economic growth. However, the effectiveness of the monetary policy on corporate investment may be impaired during COVID pandemic because of a significant increase in uncertainty for future economic conditions.

Firms' financial flexibility, typically measured by cash holding and leverage, also affects investment decisions. Gamba and Triantis (2008) showed that firms with more cash holding are in a better position to restructure their financing to respond to unexpected crises. Ottonello and Winberry (2020) showed that firms with high debt levels invest significantly less than other firms following a monetary policy shock. Therefore, we analyze how monetary policy impacts corporate investment, and how firm financial flexibility impacts this relationship before and during the COVID-19 crisis.

To investigate these questions, we employ a differences-in-differences approach to compare firm investments before and after the onset of COVID crisis. We then capture the impact of monetary policy and the interaction between monetary policy and firms' financial flexibility, controlling the COVID crisis. Our sample consists of quarterly firm data on publicly traded firms available on Compustat from 2010 Q1 to 2021 Q3 . Monetary policy is measured by the effective federal funds rate, as well as the Wu-Xia (2016) shadow rate, which is estimated by Wu and Xia (2016) term structural model, to address the concern of zero lower bound for the federal funds rate.

We have three main findings. First, we find that financial flexibility measured by cash holdings and leverage impact firm investment differently from the 2007 financial crisis. During COVID-19 crisis, cash does not significantly impact the decrease in investment. However, High leverage firms and more financially constrained firms experience greater decrease in investment. Second, we find that the investment channel of monetary policy is weakened during the COVID-19 crisis. Although the expansionary monetary policy can still significantly increase investment, but the effectiveness is weakened during the COVID pandemic. Lastly, we find that monetary policy is more effective for low cash holding firms and small firms.

We make three novel contributions to the literature. First, we contribute to the literature that studies how monetary policy impact firm investment during non-crisis times. We investigate how the COVID-19 crisis changes the monetary policy impact. Second, we add to the literature on the benefits and costs of financial flexibility. Our paper provides empirical evidence on how firms have precautionary cash holdings react differently to monetary policy. Third, we contribute to the crisis literature. A large literature examines how the strength of firms' balance sheets mediate the impact of the global financial crises (GFC). However, the COVID-19 crisis differs in many ways from the GFC; therefore, studying how firm financial flexibility affects firm investment during the COVID-19 shock is helpful to better understand the role of firm balance sheets during crises.

References:

- Gamba, A., & Triantis, A. (2008). The value of financial flexibility. *The journal of finance*, 63(5), 2263-2296.
- Ottonello, P., & Winberry, T. (2020). Financial heterogeneity and the investment channel of monetary policy. *Econometrica*, 88(6), 2473-2502. <https://doi.org/10.3982/ECTA15949>
- Wu, Jing Cynthia and Fan Dora Xia (2016) "Measuring the Macroeconomic Impact of Monetary Policy at the Zero Lower Bound", *Journal of Money, Credit, and Banking*, 48(2-3), 253-291.