



# Money and velocity during financial crises: From the great depression to the great recession<sup>☆</sup>



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## ABSTRACT

This study models the demand for a broad monetary aggregate (M2) from the Great Depression through the Great Recession. Key to the model is the interaction between a measure of time-variation in economic agents' perceived financial risk and an index of the cost of portfolio adjustment. The finding of a useful money demand relationship suggests that skepticism regarding the indicator role of a broad, liquid money aggregate as a policy guide may be exaggerated. Further, our model provides some guidance for policymakers who face the challenge of unwinding large balance sheets as risk premia return to normal and velocity adjusts.

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## 1. Introduction

The Great Depression and the Great Recession are the defining American financial crises of the past century.<sup>1</sup> Although Federal Reserve policy was better in the latter than the former, it did not meet its full employment and price stability objectives: unemployment was persistently higher, and inflation persistently lower, than desired.<sup>2</sup> Despite solid M2 growth,

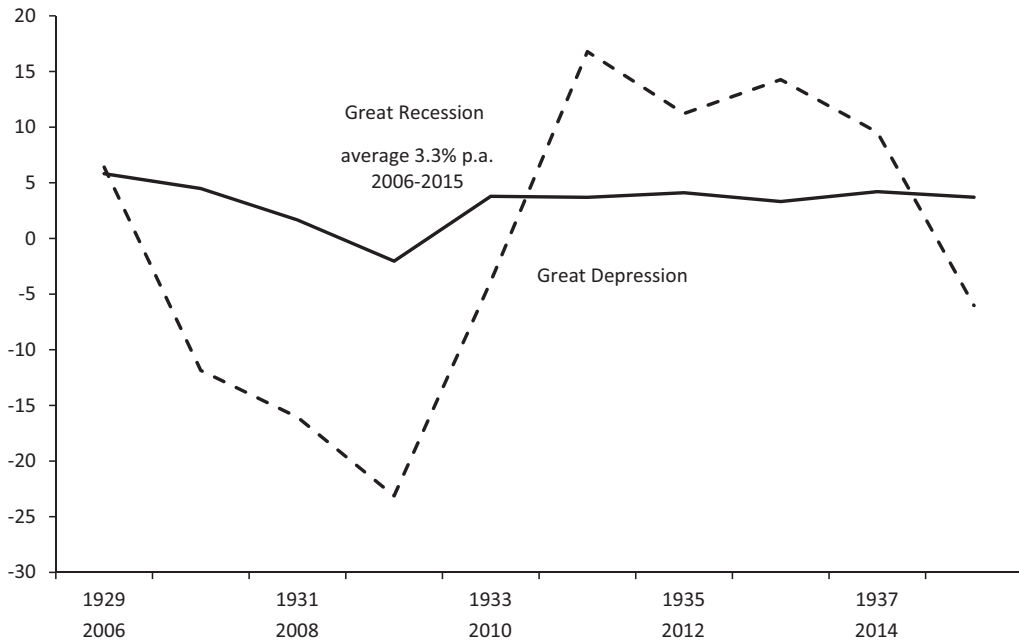
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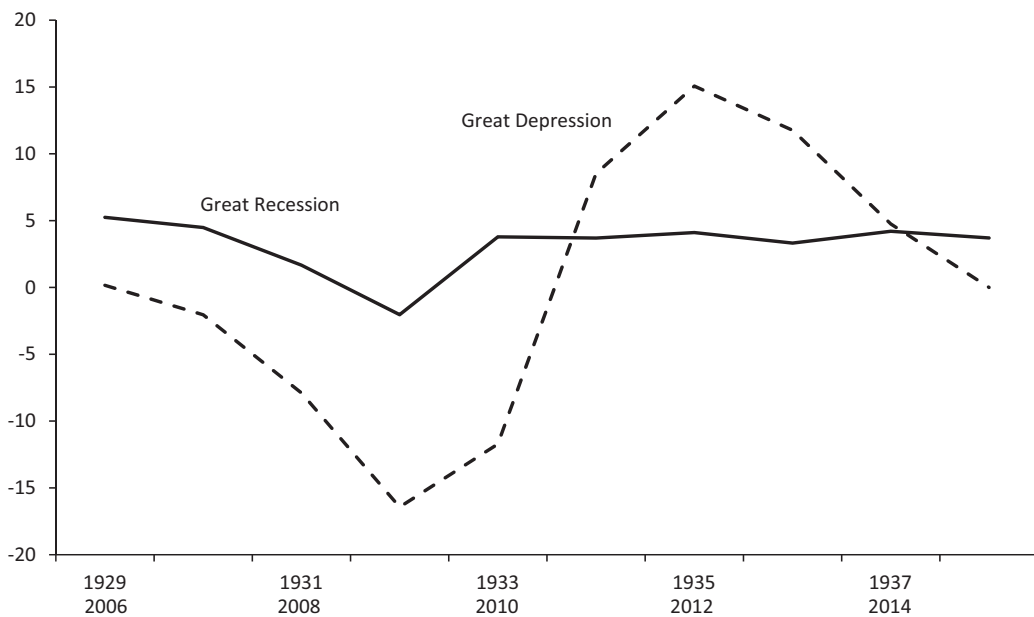
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<sup>1</sup> In a related paper, [Bordo and Haubrich \(2012\)](#) discuss other American financial crises.

<sup>2</sup> In the Great Depression, the unemployment rate peaked near 25% ([Lebergott, 1957](#)) and the CPI fell for five straight years for a cumulative 25% decline. In the Great Recession, the monthly civilian unemployment rate, not seasonally adjusted, peaked at 10.6% in January 2010 and averaged 7.5% during 2009–



**Fig. 1.** Nominal GDP growth was more stable during the great recession than during the great depression 1929–1938, 2006–2015 (percent annual rate).  
 Source: Bureau of Economic Analysis; Balke and Gordon (1986); authors' calculations.



**Fig. 2.** M2 growth during the great depression and the great recession 1929–1938, 2006–2015 (percent annual rate).  
 Source: Friedman and Schwartz (1970); Rasche (1990); Board of Governors of the Federal Reserve.

the Great Recession reflected a shortfall in nominal demand (Figs. 1 and 2). Our study asks whether monetary policy, after allowing for shifts in money demand and the effects of unconventional monetary policy, in fact provided adequate liquidity during the crisis.

The Great Depression and the Great Recession, like many financial crises, were marked by two mutually self-reinforcing factors: sharp increases in risk premia and flights to quality. Bagehot (1873) famously observed that during the crises he observed from 1825 to 1866 the public would be satisfied only with gold or Bank of England notes; no other asset would

2016. Inflation, measured by the Q4/Q4 change in the seasonally-adjusted PCE all-items chain-price index, peaked at 2.7% in 2011, fell to 0.43% in 2015, and averaged 1.41% during 2009–2016. On recent policy goals, see Federal Open Market Committee (2015).

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