



FEDERAL RESERVE BANK *of* NEW YORK

# The Federal Reserve in the 21<sup>st</sup> Century

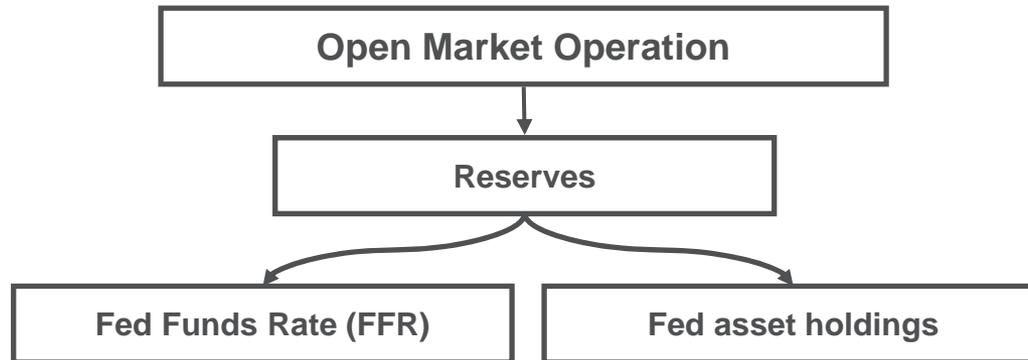
## The Monetary Transmission Mechanism

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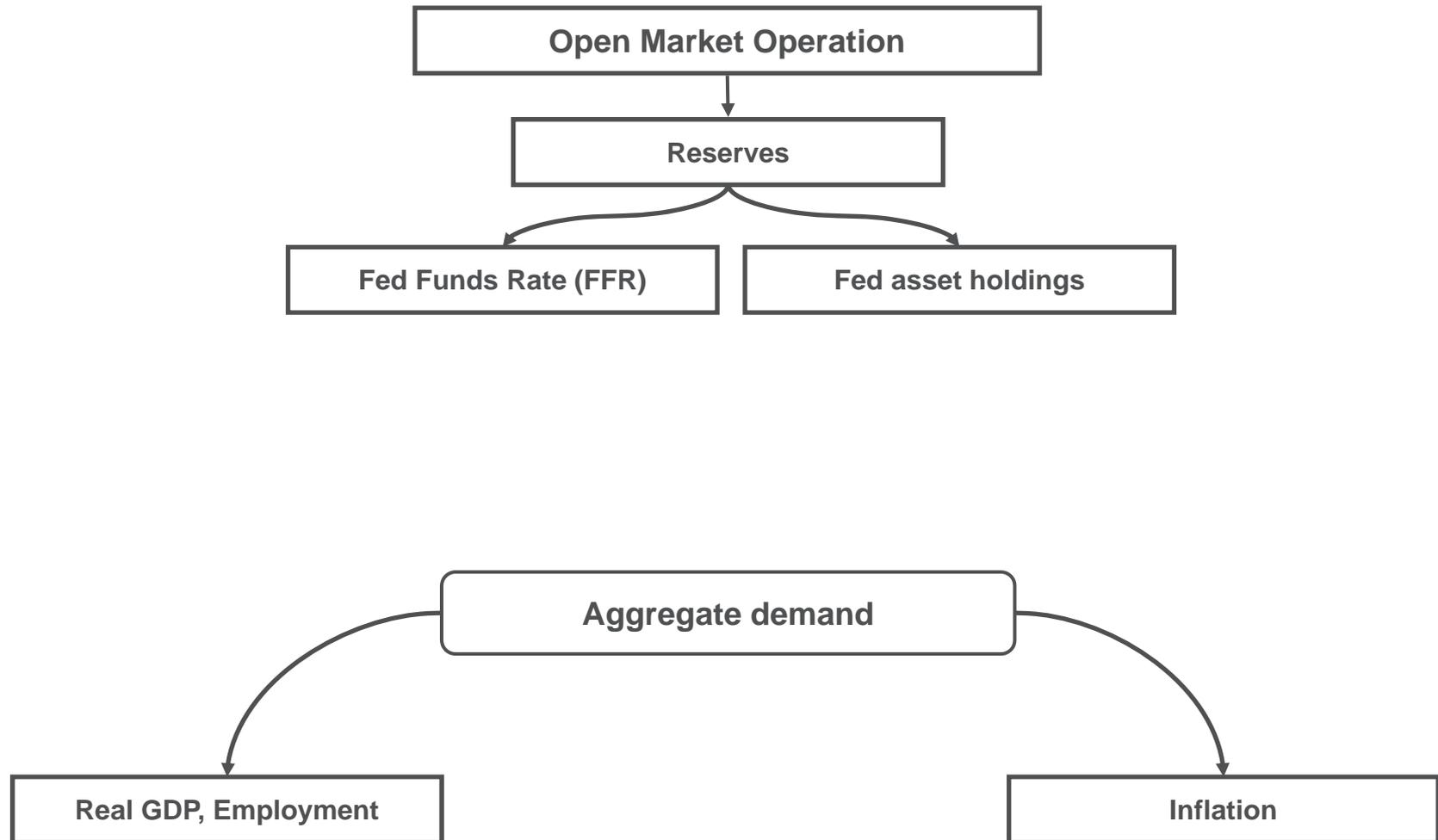
March 19, 2012

*The views expressed in this presentation are those of the presenter and not necessarily those of the Federal Reserve Bank of New York or The Federal Reserve System*

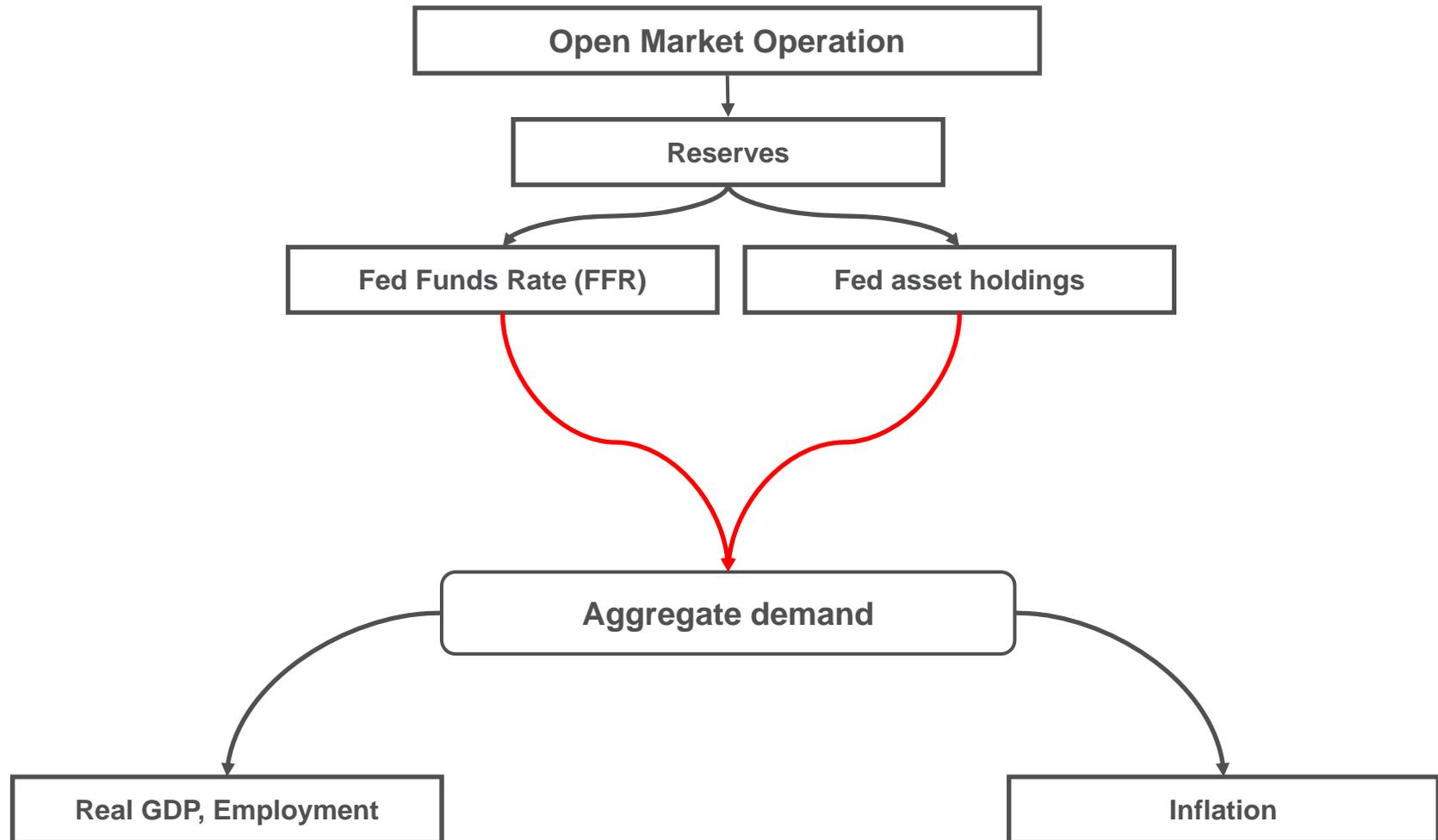
# Tools, Operating Targets, and Implementation



# Goals: Maximum Employment and Price Stability



# From Targets to Goals: Transmission Mechanism



# How Monetary Policy Affects the Economy

- Monetary transmission mechanism is quite complicated
- Operating targets and policy have little *direct* effect on spending
  - Few households and businesses borrow at the FFR
  - Asset holdings of the Federal Reserve not important for household and business spending decisions
- Policy affects the *term structure* of nominal interest rates
  - Policy influences aggregate demand largely through these effects
  - Many transmission channels



# Overview

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- Monetary transmission mechanism
  - Six channels
- Transmission in current circumstances
  - Scope for accommodation
  - Sources of accommodation
- Effects of recent policies
  - On financial markets
  - On the broader economy

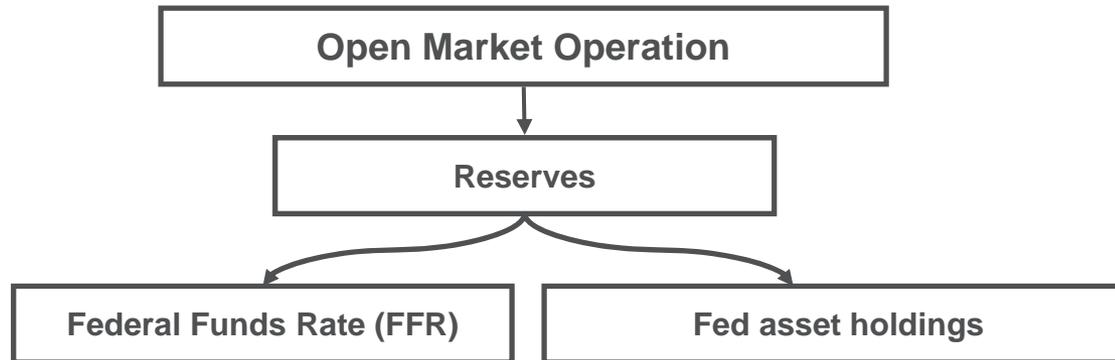


# Monetary Transmission Mechanism

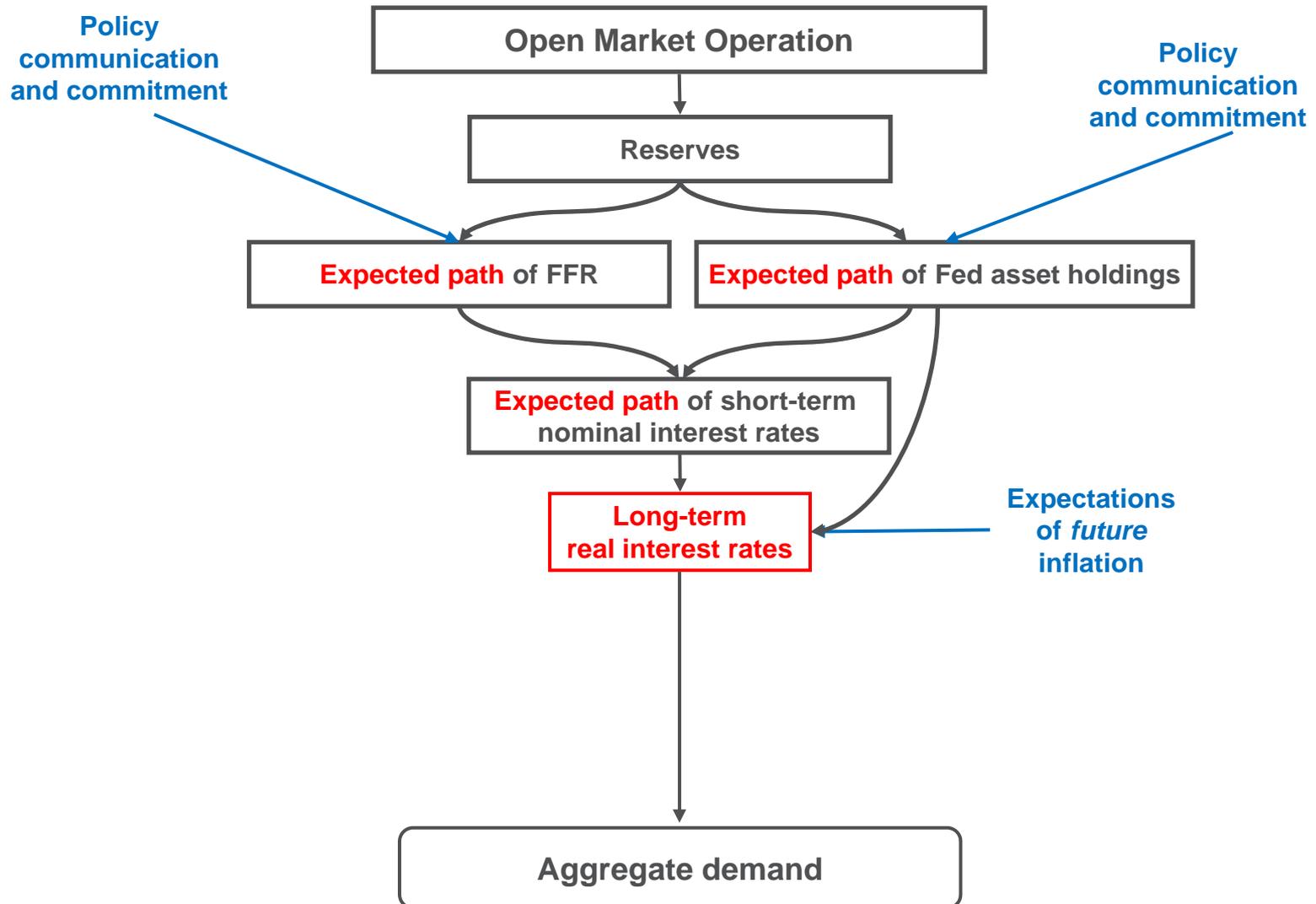
- Policy is transmitted through effects on:
  - The **expected path** of the Federal funds rate (FFR)
  - The **expected path** of Federal Reserve asset holdings
- Six channels of transmission of policy changes to aggregate demand
  - Interest rate channel
  - Exchange rate channel
  - Wealth channel
  - Balance sheets channel
  - Bank lending channel
  - Portfolio balance channel



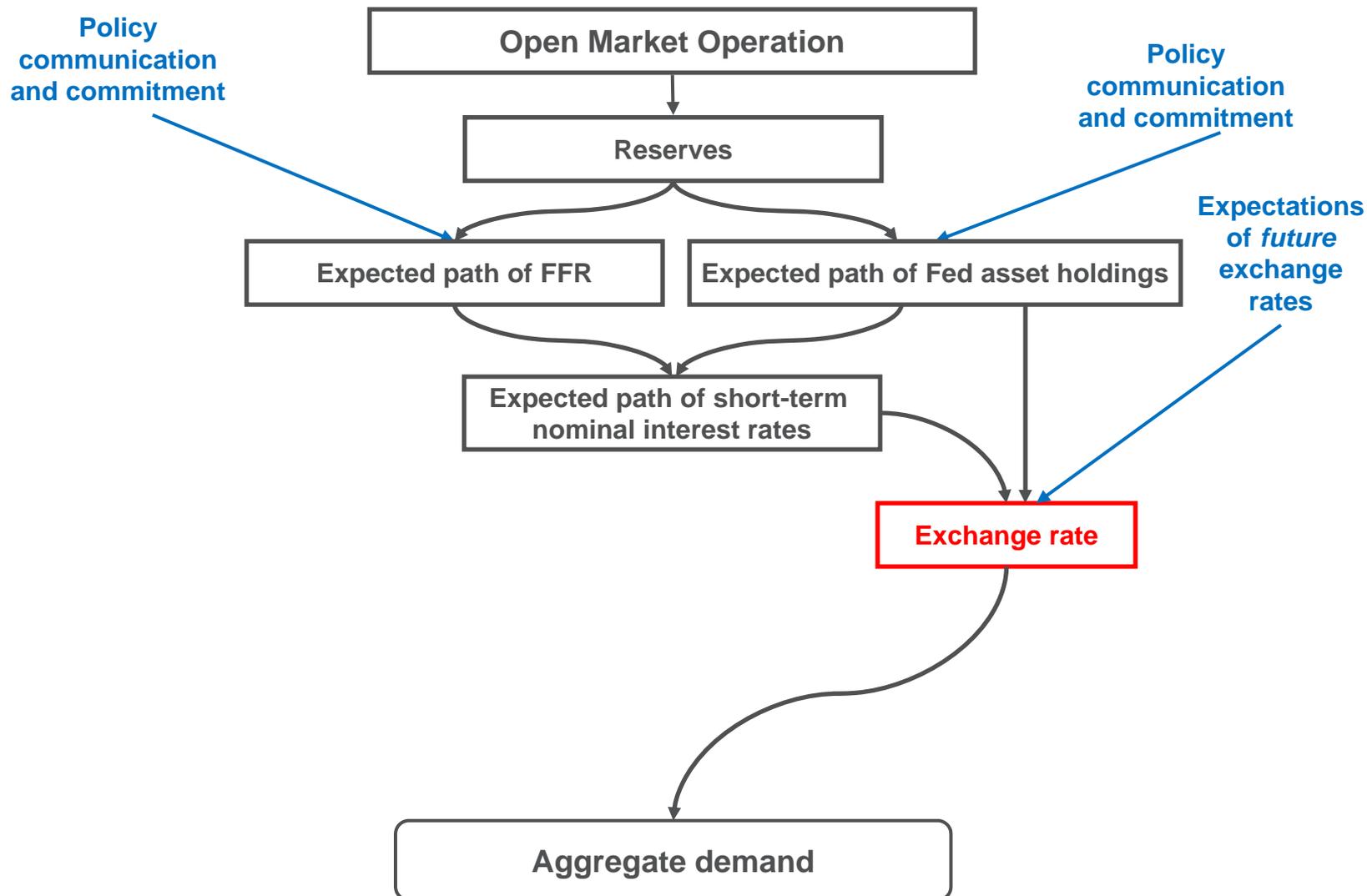
# Interest Rate Channel



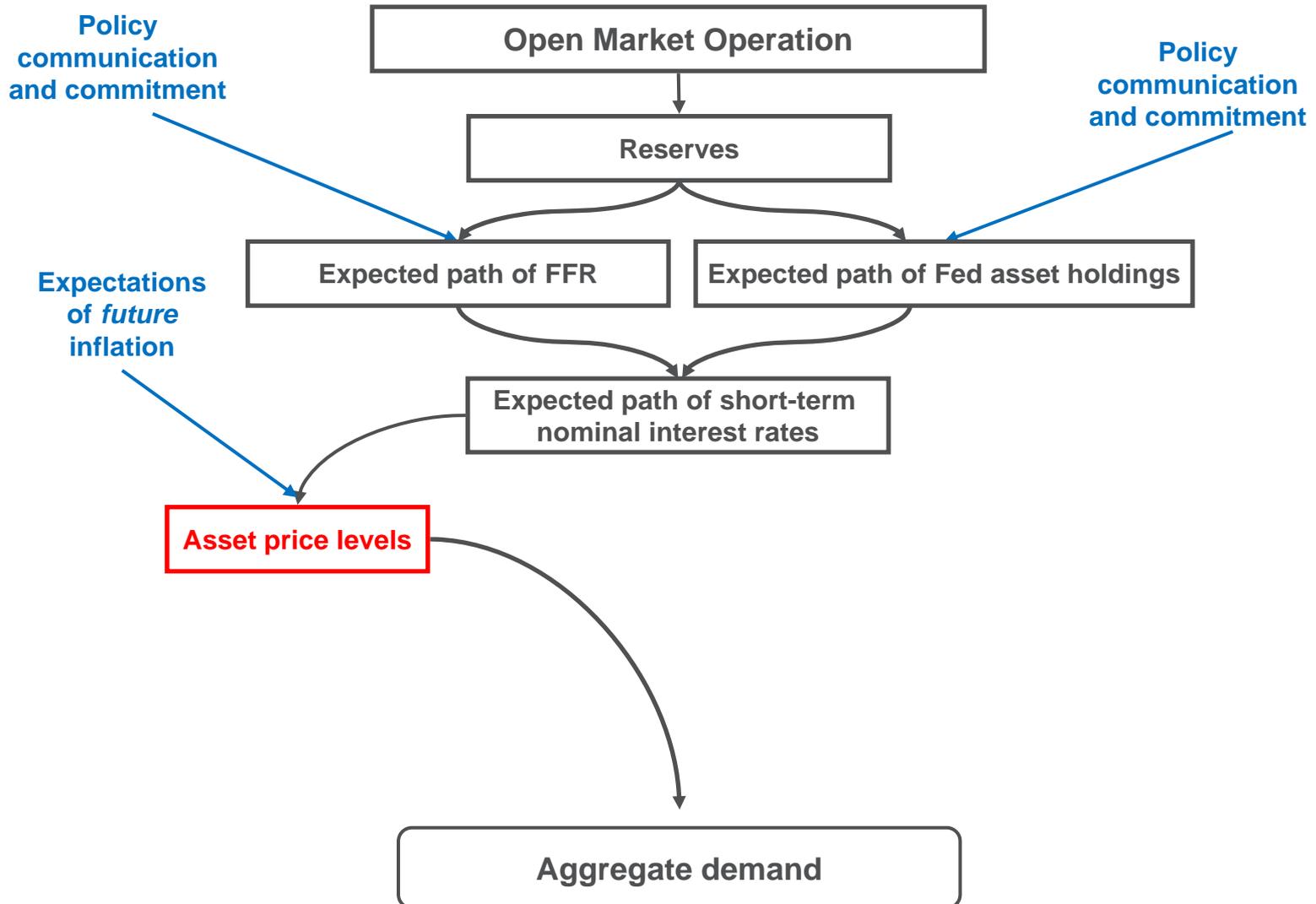
# Interest Rate Channel



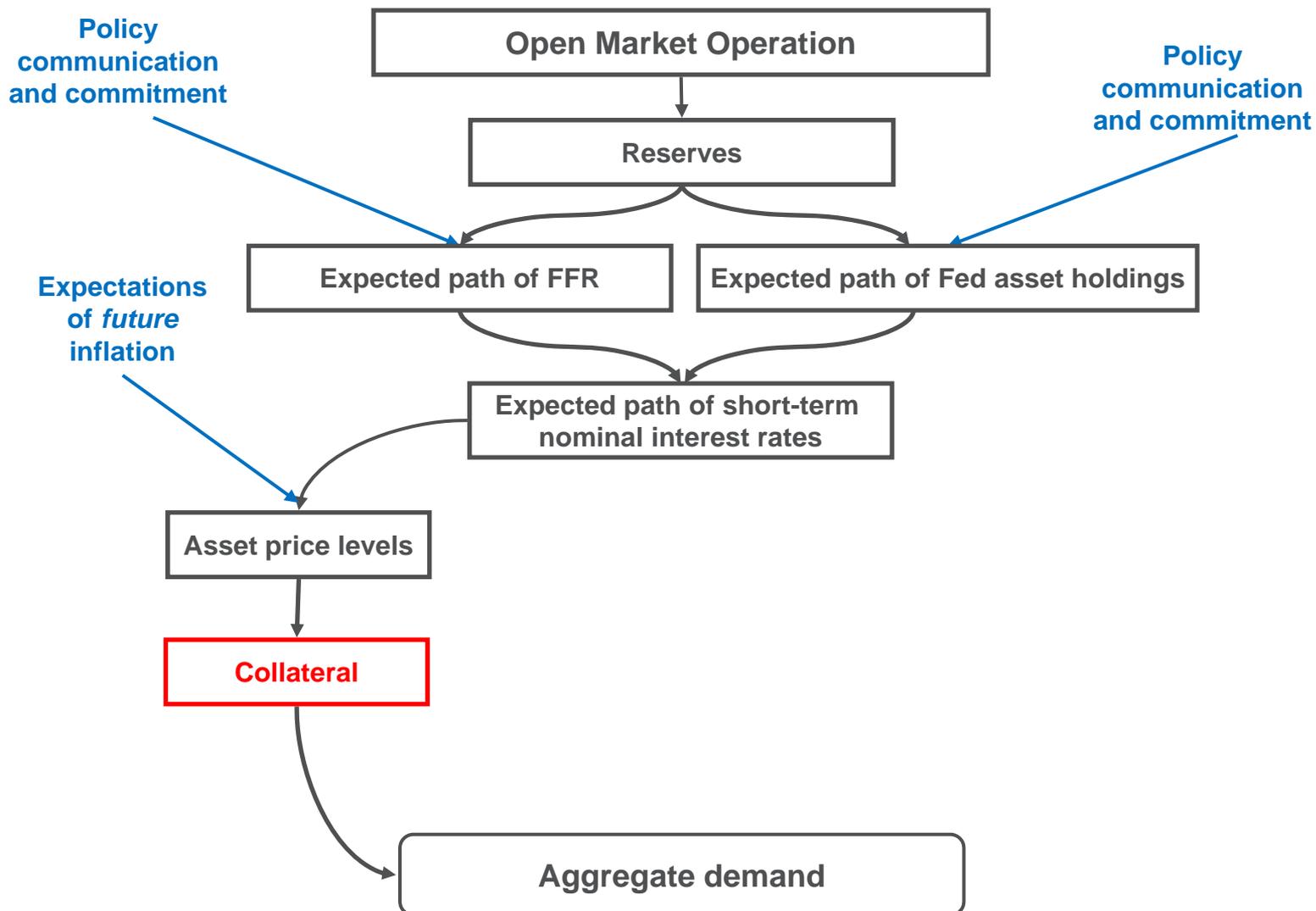
# Exchange Rate Channel



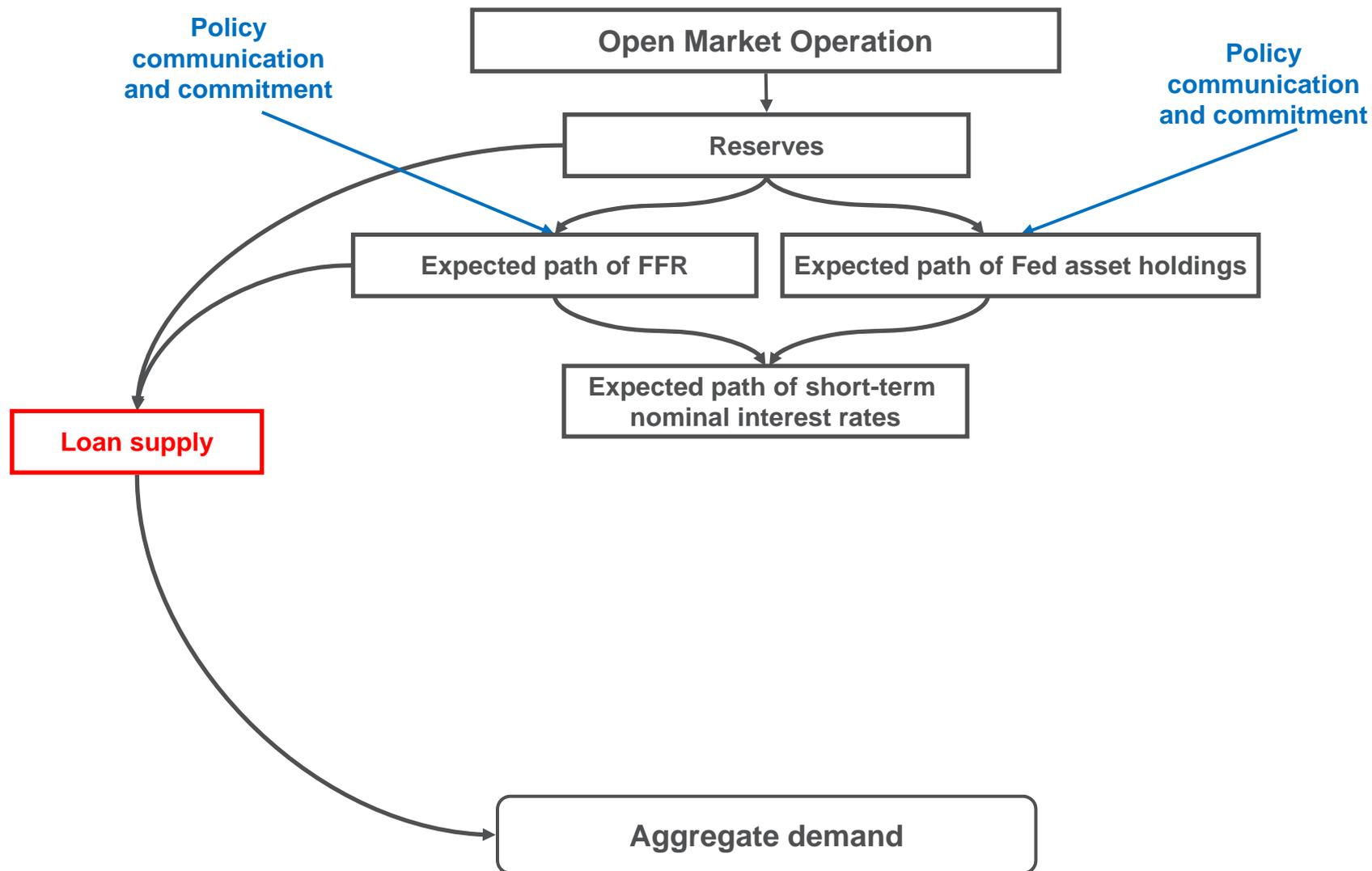
# Wealth Channel



# Balance Sheets Channel



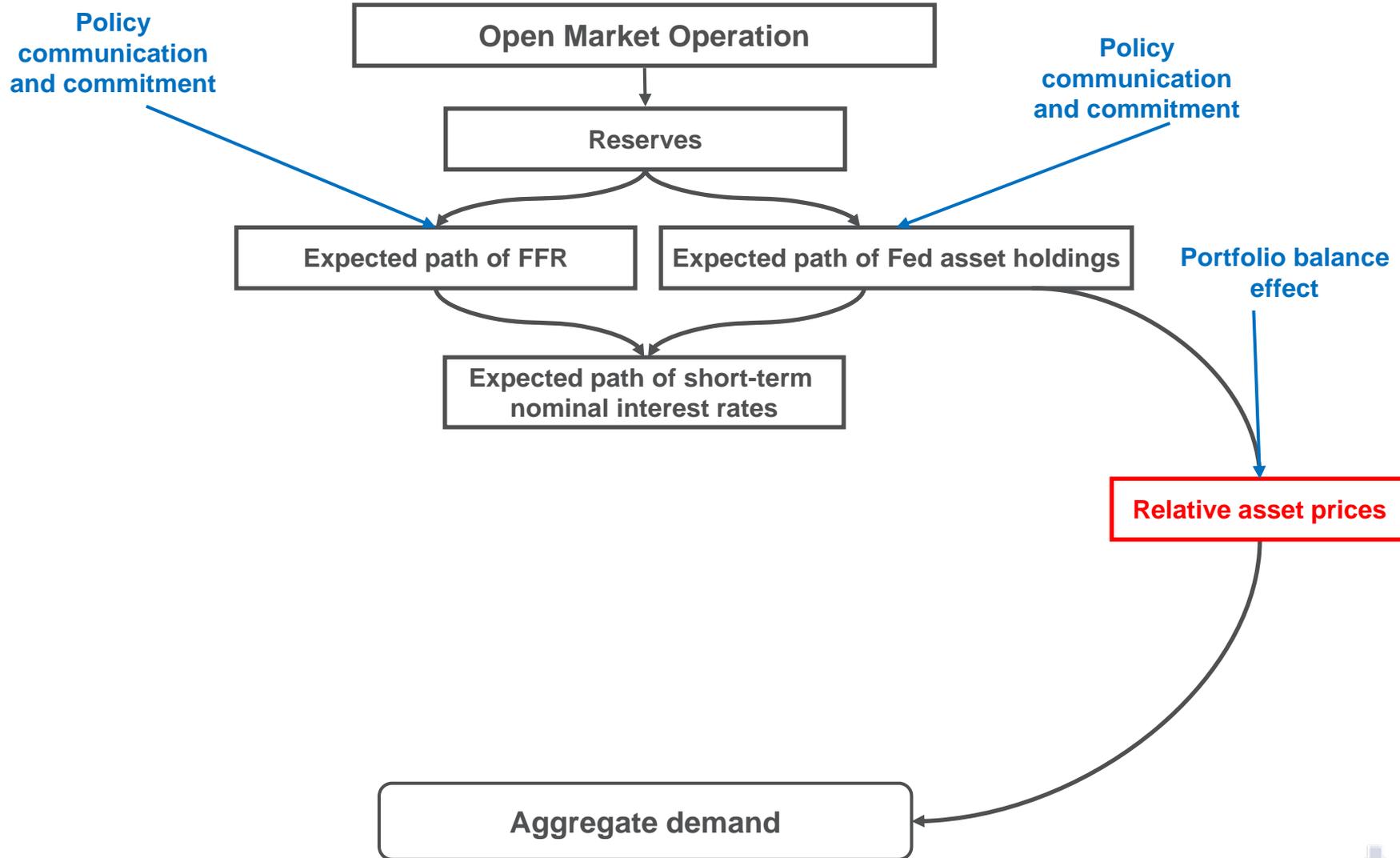
# Bank Lending Channel



# Portfolio Balance Effect

- Separate from effects associated with FFR path expectations
  - Effect through *term premium* on securities
    - Term premium partly reflects risk compensation
- Federal Reserve purchases assets in an open market operation
  - Reduces private sector holdings of these assets
  - Increases bank reserves in private sector
- To induce private investors to reduce their holdings of assets purchased by the Fed,
  - Relative yields on those assets need to be lower
- The portfolio balance effect requires some limits on arbitrage
  - Some investors exhibit *habitat preference*

# Portfolio Balance Channel





# Six Channels of Monetary Transmission

- The relative importance of these channels will vary:
  - Across countries
  - Across time
  - In response to a changes in the financial system
- Some channels can become “clogged” at times
  - Example: Impact of problems in the housing market
- Measuring the effects of these channels is very challenging
  - Especially given the unusual circumstances in recent years



# Monetary Transmission in Current Circumstances

- With FFR near zero, little scope for further reductions
- Does this situation preclude further accommodation? **No**
  - Still influence expectations of FFR and balance sheet
- Two sources of accommodation
  - Forward guidance—promise low future FFR
  - Increase size or change composition of Fed asset holdings
    - Large scale asset purchases: two separate programs
    - Maturity extension program



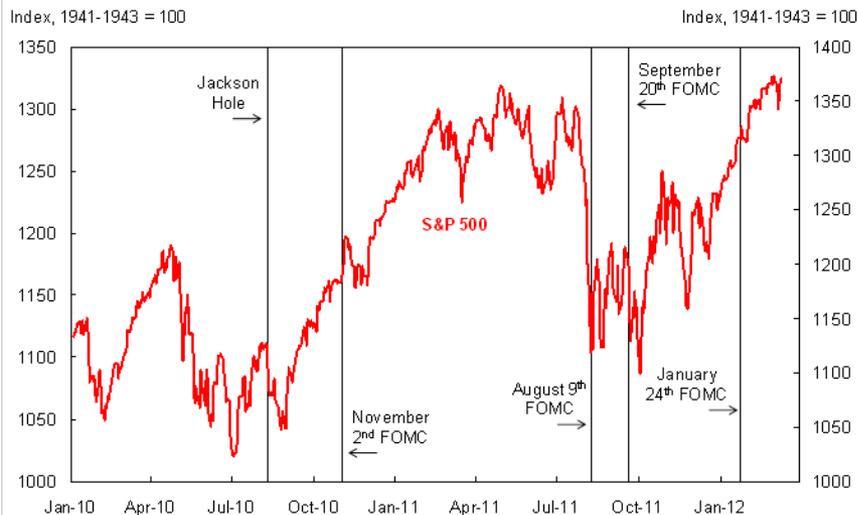
# Effects of Recent Policy—Financial Markets

- Measuring financial market effects
  - Complicated by differences in timing of:
    - Market expectations of actions
    - Timing of announcements
  - Suggests modest to moderate portfolio balance effects
- Financial market responses consistent with expected effects
  - Nominal and real long-term interest rates lower
  - Inflation expectations up from lows, but still contained
  - Corporate bond spreads narrow
  - Equity prices rise

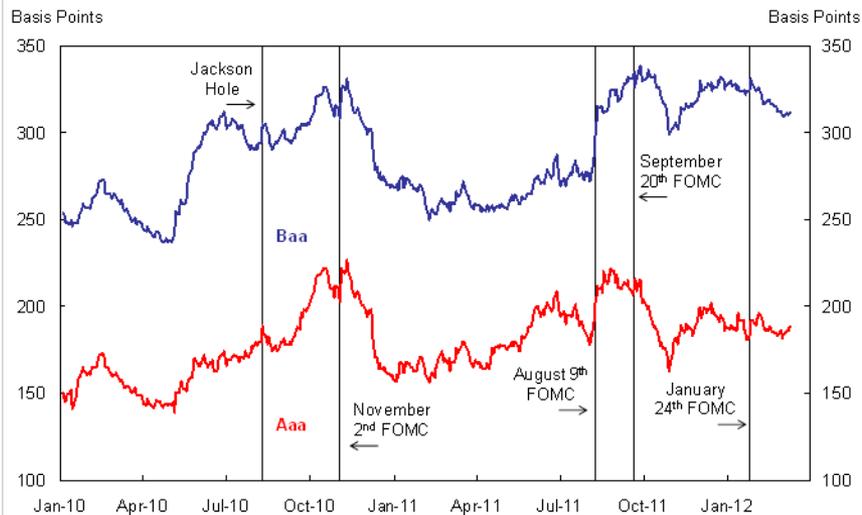


# Financial Markets Since January 2010

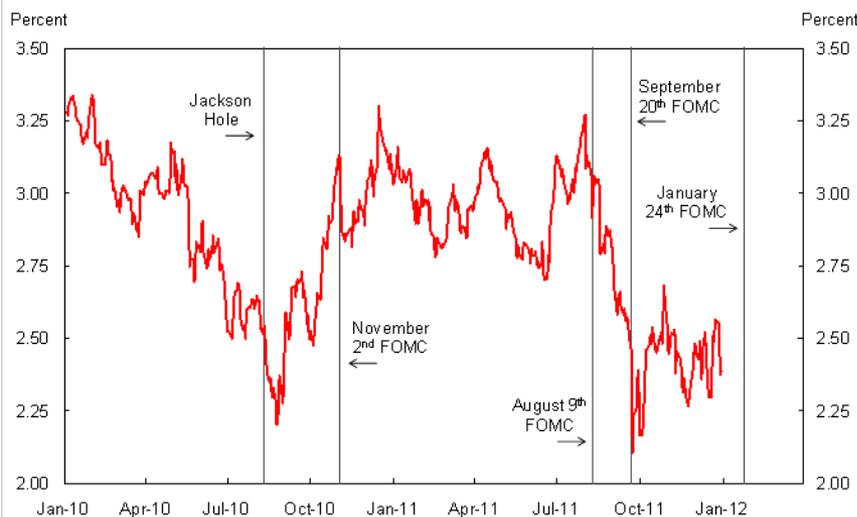
## Equity Prices



## Corporate Credit Spreads



## 5-10 Year Horizon TIPS Implied Inflation



Source: Federal Reserve Board

Note: Carry-adjusted.

## Real 10-Year Treasury Yield



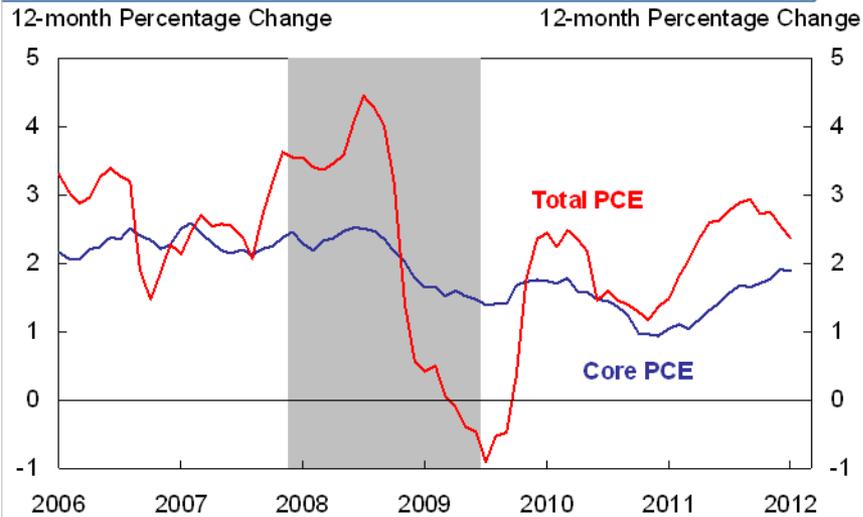
Source: Federal Reserve Board

# Effects of Recent Policy—Economic Conditions

- Economic effects less clear
  - Inflation near objective
  - Real GDP growth modest
  - Housing market still depressed
  - Unemployment rate has fallen recently, but still elevated
- Factors that could be inhibiting transmission
  - Housing market
    - Example: Effect of negative home equity
  - Deleveraging in the private sector
  - Continued tight credit and lending standards
  - Labor market
    - Example: Impact of long-duration unemployment
  - European sovereign debt crisis

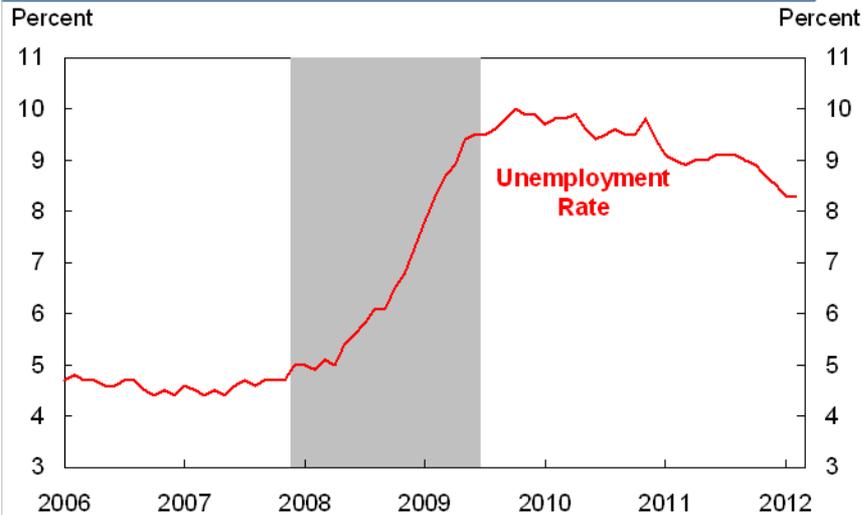
# Effects of Recent Policy—Economic

## Total and Core PCE Inflation



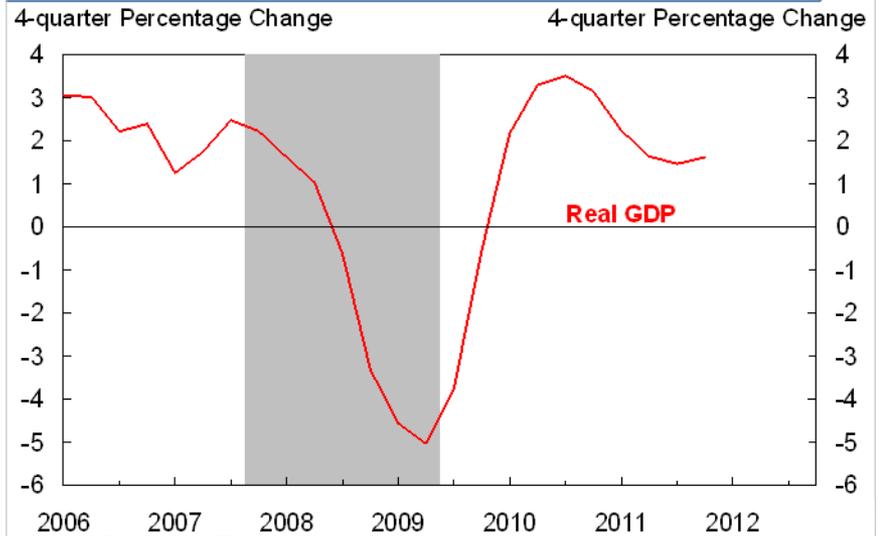
Source: Bureau of Economic Analysis.

## Unemployment Rate



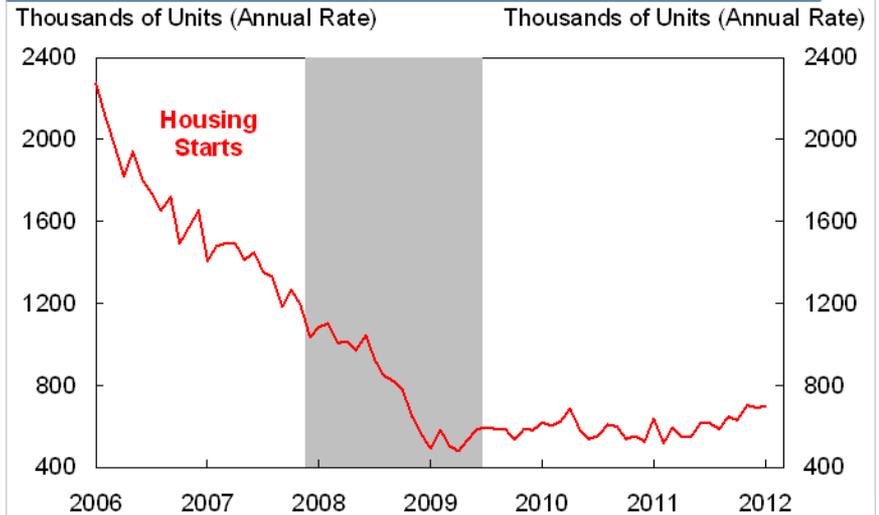
Source: Bureau of Labor Statistics.

## Real GDP Growth



Source: Bureau of Economic Analysis.

## Housing Starts



Source: US Census Bureau