

Government Policy: QE and Fiscal Policy

Pengfei Jia

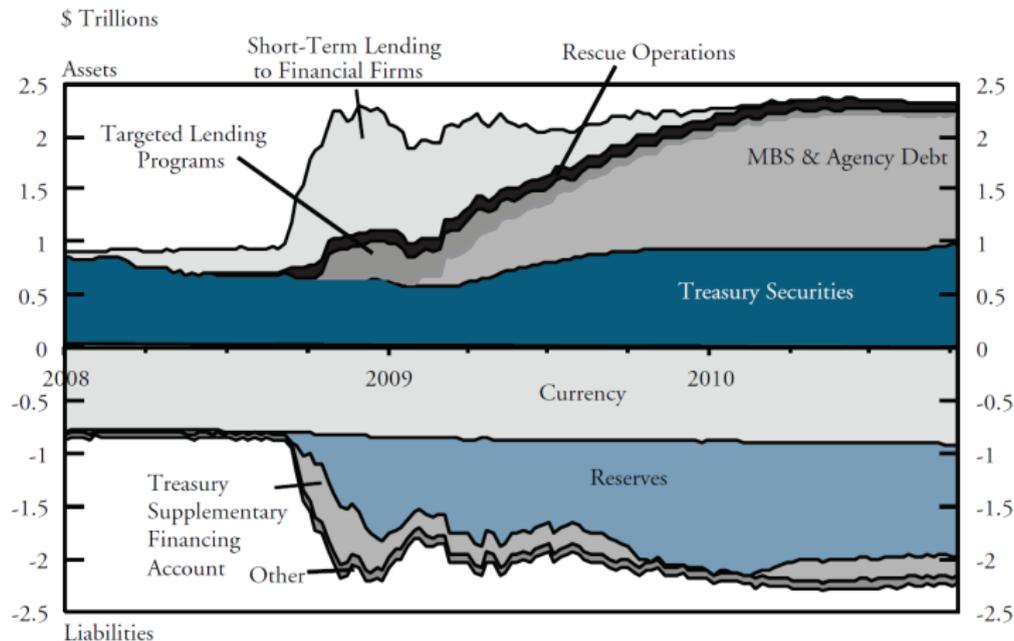
Business School, Nanjing University

Key questions

- What is Quantitative Easing (QE)?
- How does QE work?
- **Does QE create money(or broad money)?**
- What is the transmission mechanism for asset purchases?

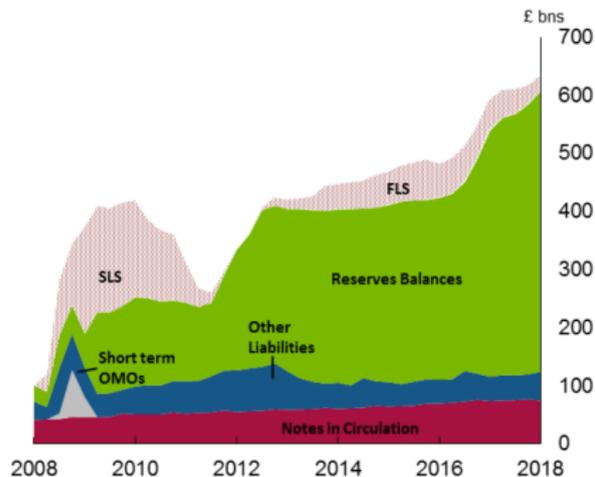
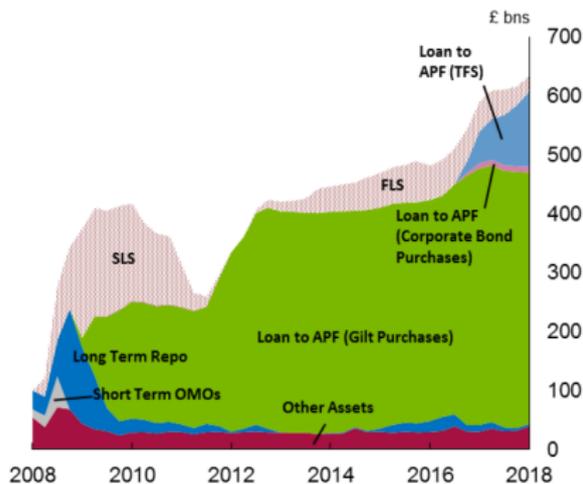
A look at Fed's balance sheet

FEDERAL RESERVE BALANCE SHEET



Source: Federal Reserve

A look at BOE's balance sheet



Source: Bank of England

"Fun" facts

- "Printing money"?
- "Hyperinflation"? (the old "money multiplier" perspective)
- How about asset price inflation?
- A lag in inflation?

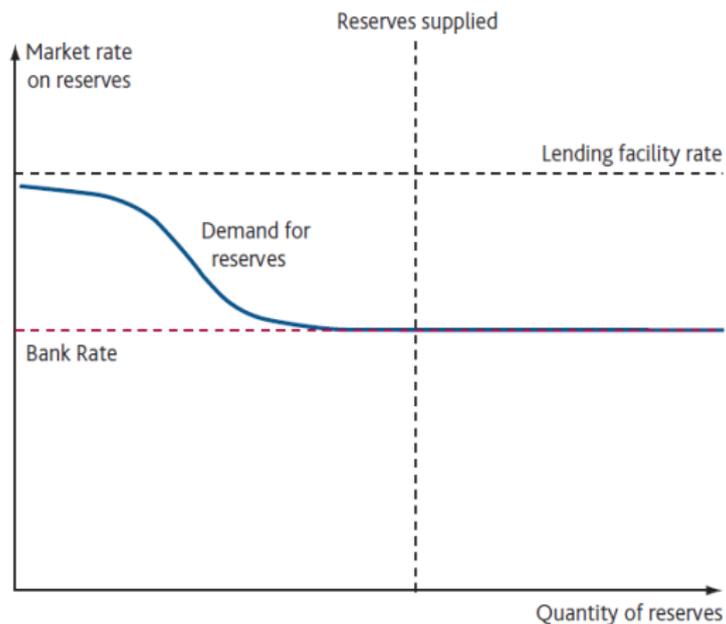
US inflation rate



The current reserve system

- BOE currently operates a "floor system" whereby all reserves are remunerated at **Bank Rate**
- Bank rate serves as a "floor" since no participant is willing to lend at a lower rate
- Again, market arbitrage makes the market rate in line with bank rate

The "floor" system

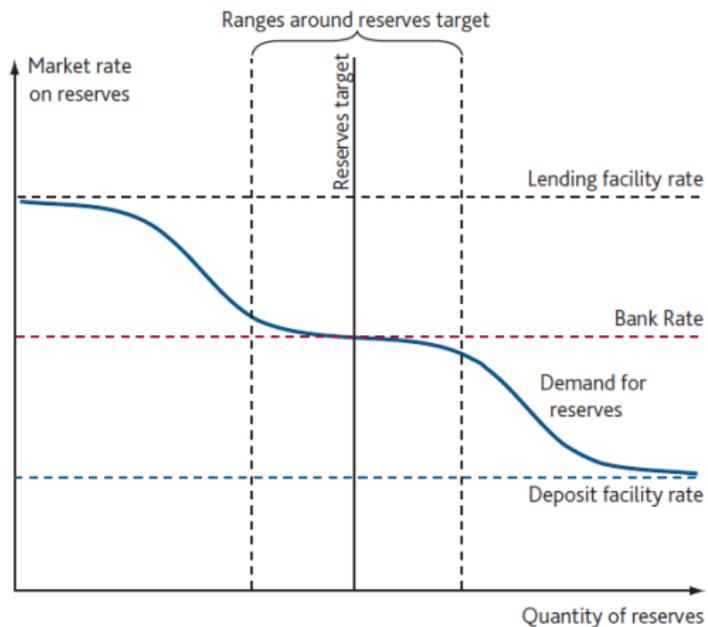


Source: Bank of England (2015)

Why not a "corridor system"

- There is no meaningful market supply of reserves (i.e., no market force), as it is controlled by the MPC
- The supply of reserves does not reflect changes in the demand for reserves
- This potential imbalance in the demand and supply of reserves makes it hard to achieve the target

A recap: the "corridor" system



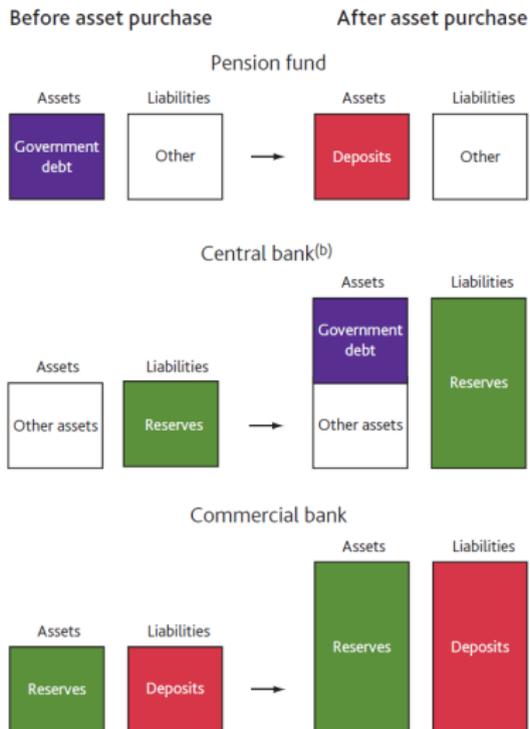
What is QE?

- QE means central banks use **created** reserves to buy financial assets
- Once short-term interest rates reach ZLB, it is not possible to further stimulate the economy by lowering the rate at which reserves are remunerated
- QE involves a shift in the focus of monetary policy to the quantity of money
- The MPC uses the quantity of reserves directly as a tool of monetary policy

Does QE create broad money?

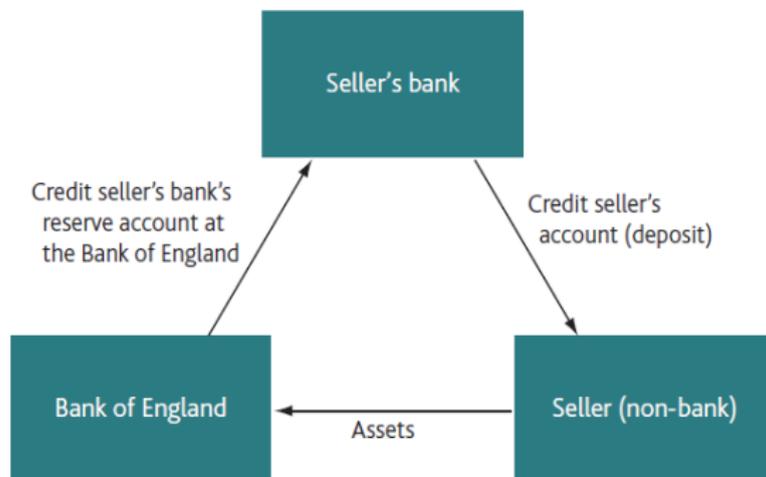
- The answer is **yes**
- QE has a direct effect on the quantities of both base and broad money
- BOE aims to buy assets, government bonds, mainly from **non-bank financial companies**
- The role of banks is as an intermediary to facilitate the transaction (banks earn interest on the newly created reserves)
- What if central banks buy assets from commercial banks?

Impact of QE on money creation



Source: McLeay et al. (2014)

BOE asset purchase from a non-bank company

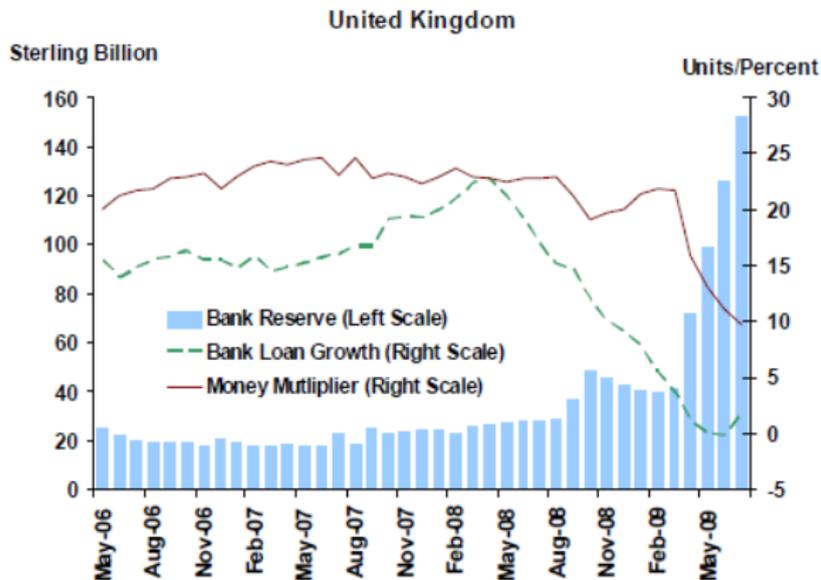


Source: Benford et al. (2009)

Two misconceptions about how QE works

- **Misconception 1:** the extra reserves are "free money" for banks
- **Misconception 2:** the extra reserves are multiplied up into new loans and broad money

A graph



Source: Disyatat (2010)

How does QE affect the economy?

- The aim of QE is to inject money into the economy to revive nominal spending
- Asset prices and portfolio effects
- Bank lending and quantity effects
- Expectations

Three channels – asset prices and portfolio effects

- Cost of borrowing: QE – higher asset prices – lower cost of borrowing (firms and households) – more borrowing – more spending and income
- Wealth effects: QE – higher asset prices – total wealth increases – more spending
- Portfolio effects (like "hot potato"): QE – excess deposits for financial institutions – portfolio rebalancing – buying other assets – higher asset prices
- Lower yield also encourage agents to purchase other assets

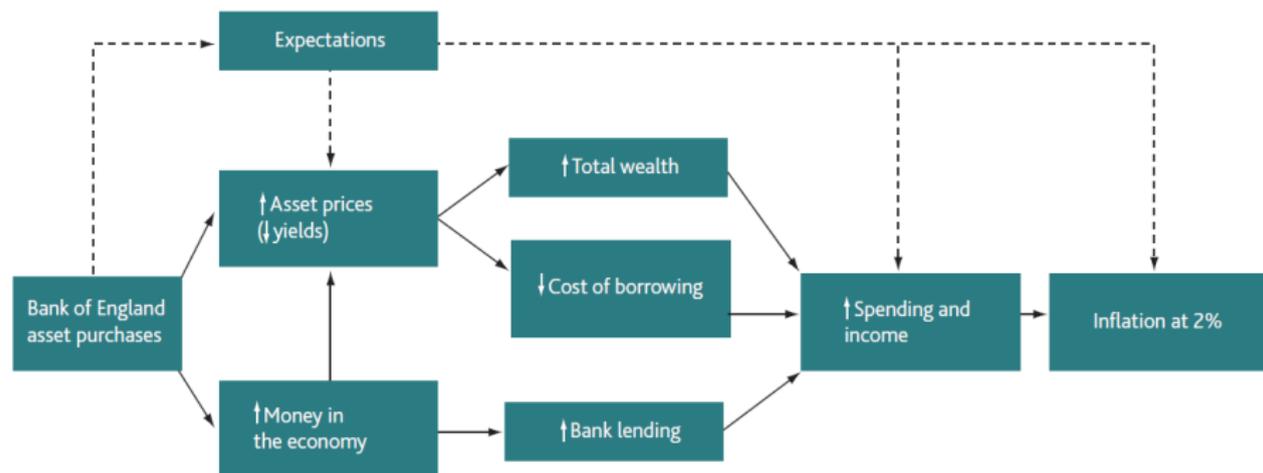
Three channels – bank lending and quantity effects

- QE – excess reserves for banks – lower liquidity risk – more new lending – more spending
- Does it eliminate liquidity risk?
- Also more deposits

Three channels – expectations

- QE sends a signal that the MPC will do whatever it takes to meet the inflation target (i.e., 2%)
- Expectations of future inflation should be anchored to the target, which means the real rate is low (encouraging spending and investment)
- Higher inflation expectations also influence price-setting behavior by firms (i.e., setting a higher price), leading to a more direct impact on inflation

How does QE affect the economy?



Source: Benford et al. (2009)

Any "side effects" from QE?

- QE and wealth inequality
- QE and housing prices
- QE favors Wall street

Limitations of QE

- Central banks can only buy financial assets
- The current mandate favors banks and financial institutions, especially the big ones
- The impact of QE is mainly indirect, that is, through a line of transmissions
- QE has distributive effects

Other way out – "helicopter money"?



Source: internet picture

Can "helicopter money" work

- It aims to encourage nominal spending
- Wealth effects
- It may not work if agents save the money or use the money to pay down debt
- How about agents using the money to buy financial assets?

Other way out – fiscal policy

- Government issues bonds – selling through or to banks – getting deposit money – buying goods and services – increasing spending
- It's like government **creating** broad money directly
- In a recession, government debt increases, spending increases, while taxes could fall
- However, it's fine to run budget deficits in a recession

Other way out – tax policy

- Can taxing the rich work?
- It generates positive distributional effects as the marginal propensity to spend is low for the rich

Other way out

- Bailouts and moral hazard
- Debt restructuring

A deep question: why do we have economic cycles?

- Mainstream macroeconomic models typically use exogenous shocks (productivity shocks, monetary policy shocks, etc.) to generate cycles
- However, the economy is prone to instability (Minsky, 1986)
- Financial instability is endogenously determined by current economic system
- It's credit cycles or debt cycles
- One needs to understand money and credit (or debt)

A deep question: why do we have economic cycles?

- In short, **borrowing** creates cycles
- Why? Borrowing creates money, money is debt, one has to pay it back
- Consider a man with constant income \$1000, he is trustworthy enough to borrow \$500 – borrowing \$500 from the bank – the bank **creates** \$500 new money – he spends \$1500 – another person gets \$1500 income – another person can borrow more...
- But money is debt, the man has to pay \$500 back in the future, when he does, money **disappears** – less spending – less income – less borrowing – less credit...

A deep question: why do we have economic cycles?

- Economic upturn: a lot of borrowing – a lot of credit (or debt) – high spending – high income – more borrowing – high inflation and asset prices (**leveraging period**)
- Economic downturn: debt gets to be paid – less money available – less spending – less income – less borrowing – deflation and low asset prices (**deleveraging period**)

A deep question: why do we have economic cycles?

- The cycles are generated without exogenous shocks
- Financial factors, for example, collateral effects can play an important role
- Monetary policy can play a big role in shaping cycles
- Human psychology can influence cycles
- Ultimately, it's credit cycles or debt cycles
- Again, understanding money and credit (or debt) is the key to understand cycles