EC38037: Unconventional Monetary Policy: Theory and Practice

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I. Overview

Instructor: Ciaran Rogers

Course Objectives: This course will attempt to help students understand asset purchases as a monetary policy tool, both in theory and in practice. It begins with introducing and describing the mechanics of asset purchases. It then moves towards illustrating how the literature incorporates this policy tool into otherwise standard models. It continues with surveying the literature that attempts to empirically evaluate asset purchases in terms of impacting asset prices and/or the real economy. It concludes by investigating some potential adverse effects caused by this policy tool that is gaining increased attention in the past year or two.

Textbook: We will not be following any textbook. Instead, each part will have a particular focus on one paper that will be recommended reading. I include other pieces of literature for those interested in understanding further the topic.

Lectures: There will be 10 hours of lectures in total. We may not cover the full content within this time frame, but all materials will be made available to you. The preliminary schedule is below, but may be subject to some minor changes.

Date	Room
Tue, 30 April, 14-17	D215
Tue, 7 May, 10-12	F239
Tue, 7 May, 13-15	F239
Fri, 10 May, 13-16	F255

Grading: This will be split into the following:

1. Class Participation (30%) - incorporates asking questions and contributing to discussions in the lectures, and overall engagement.

2. Paper Proposal (70%) - this should be around 2-3 pages long and describe: the question you want to address; why you think it is important; why you think the answer of the previous literature is unsatisfactory; and how you plan to improve it. You can use an existing project idea, or a new idea inspired by what we cover. It does not need to be directly related to what we study, as long as it contains some flavor of macro/monetary. This can be done either individually or in a group of 2 (and in fact encouraged to be in a group!)

II. Topics Covered

Below I outline what we will cover in the lectures. This is a preliminary guide, and subject to regulat change. Various new Other Readings will be added over time.

A. Part 1: Introduction and Irrelevance Result

We begin by explaining the very recent history of rising central bank balance sheet sizes induced by asset purchases as a policy tool, and the current discourse amongst policymakers surrounding this policy. After summarizing what we will cover in the course, we will go through the result in Wallace (1981) that outlines the irrelevance result applied to asset purchases. We use this setup to convey what conditions would allow asset purchases to have potentially real effects.

- *Recommended Reading*: Wallace (1981)

- *Other Readings* - Rajan (2023), Eggertson and Woodford (2003)

B. Part 2: Mechanics: Scarce vs. Ample Reserves Regime

Central banks typically finance asset purchases through the issuance of central bank reserves. However, the ability to do so depends on the choice of regime. Using the seminal paper of Poole (1968), we can gain an insight into the mechanics of central bank operations depending on the choice of regime, how asset purchases could possible work in tandem with interest rate policy, and speak to the current policy debate over which regime to decide on. This lecture will help a lot in understanding the mechanics of asset purchases in practice.

- *Recommended Reading*: Poole (1968)
- *Other Readings*: Grossman-Wirth (2019), Afonso et al. (2020), Copeland et al. (2021), Kim and Nosal (2020), Schnabel (2023) Duffie and Krishnamurthy (2016) Nelson (2021) d'Avernas and Vandeweyer (2023)

C. Part 3: Theory: Bank Lending Channel

We introduce the prominently known "bank lending channel" of central bank asset purchases: by buying risky assets from banks and replacing them with risk-free assets, it releases risk capacity for banks that can be allocated to new funding for private firms. Using the framework of Gertler and Karadi (2011), we investigate the transmission mechanism of asset purchases via the bank lending channel, the state-contingency of its strength, some more easily testable predictions, and the extensions made in more recent work to this paper.

- *Recommended Reading*: Gertler and Karadi (2011)
- *Other Readings*: Gertler and Karadi (2013), Bocola (2016), Brunnermeier and Sannikov (2014), He and Krishnamurthy (2013), Papoutsi et al. (2022), Coenen et al. (2019)

D. Part 4: Theory: Convenience/Collateral Channel

We introduce the "collateral channel" of asset purchases: adjusting the supply of collateral available to the private sector that is used to back the issuance of funding sources (firm borrowing, bank deposits etc). We use the setup of Piazzesi et al. (2021) to convey this mechanism, but will also speak to other work emphasizing this channel.

- *Recommended Reading*: Piazzesi et al. (2021)
- *Other Readings*: De Fiore et al. (2024), Rogers (2023) Benati et al. (2021), Krishnamurthy and Li (2022), Corradin et al. (2020)

E. Part 5: Theory: Other Channels

We will explore the various other theoretical sources of non-neutrality for asset purchases: segmented markets (limited arbitrage), safe asset scarcity (altering the supply of safe assets), non-rational expectations (not internalising effects on future taxes), signalling channel (indication of commitment to future policy rates) etc.

- *Recommended Reading*: Caballero et al. (2016)
- *Other Readings* Curdia and Woodford (2011), Vayanos and Vila (2021), Koijen and Yogo (2019), Iovino and Sergeyev (2023), Caballero and Farhi (2018) Bhattarai et al. (2015), Jeanne and Svensson (2007), Goncharov et al. (2021)

F. Part 6: Empirics: Evaluation of Asset Purchases

We will explore the empirical evaluation of the effects of asset purchases. After emphasizing that it works through "narrow" channels, we firstly show the effects on asset prices (more easily identified), and more recent attempts at investigating effects on bank lending, investment, and output.

- *Recommended Reading*: Krishnamurthy and Vissing-Jorgensen (2013), Koijen and Yogo (2019)

- *Other Readings* D'Amico and King (2013), Joyce et al. (2011), Lucca and Wright (2022), Krishnamurthy and Vissing-Jorgensen (2011), Di Maggio et al. (2020), Greenlaw et al. (2018) Andrade et al. (2016), Slacalek and Lenza (2018) Carpinelli and Crosignani (2021), Krishnamurthy et al. (2018), Gross-Rueschkamp et al. (2019), Haddad et al. (2020), Darmounii and Siani (2022),Acharya and Steffen (2020) Koijen et al. (2021) Selgrad (2024)

G. *Part 7: Issue 1: Central Bank Solvency*

Over the past year, central banks have been raising interest rates at unprecedented rates to combat inflation. This has generated significant mark-to-market losses on the assets they purchased in the past, and brought into question the sustainability of consistent losses. Through the lens of the framework of Hall and Reis (2015), we dig deeper into central bank accounting, explore the idea of central bank insolvency, and discuss the current policy debate surrounding these losses.

- *Recommended Reading*: Hall and Reis (2015)

- *Other Readings* Christensen et al. (2015), Del Negro and Sims (2015), Kjellberg and Vestin (2021) Buiter (2009)

H. *Part 8: Issue 2: Stability of Financial Sector*

Beyond CB losses, there are growing concerns that the increased footprint of central banks in asset markets has created instability within the financial sector. In particular, Acharya and Rajan (2022) writes a model that demonstrates how asset purchaes may make the financial sector more, not less, exposed to liquidity shocks. This may negate any potential positive effects of asset purchases.

- *Recommended Reading*: Acharya and Rajan (2022)

- *Other Readings*: Coimbra and Rey (2017), Acharya et al. (2022)

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