FINC 402
Monetary Theory

Session 2 – Evolution of the payment System?

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UNIVERSITY OF GHANA

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Session Overview

In this session, we will explore;

- Evolution of the payment system,

- Are we approaching a cashless economy?

- Measuring money in the economy

Session Outline

The key topics to be covered in the session are as follows:

- Identify different types of payment systems
- Compare and contrast the M1, M2 and M2+ money monetary aggregates

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Reading List

- Frederic S. Mishkin, The Economics of Money, Banking, and Financial Markets, 7th or 9th edition (Addison Wesley: New York).

- Walsh, Carl E. Monetary theory and policy. MIT press, 2010.

Topic One

EVOLUTION OF THE PAYMENTS SYSTEM

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Evolution of the Payments System

- We can obtain a good picture of the functions of money and the forms it has taken over time by looking at the evolution of the payments system, the method of conducting transactions in the economy.

Evolution of the Payments System

1. *Commodity Money*

- An object that clearly has value to everyone is a likely candidate to serve as money, and a natural choice is a precious metal such as gold or silver. Money made up of precious metals or another valuable commodity is called commodity money.

2. *Fiat Money*

- The next development in the payments system was paper currency (pieces of paper that function as a medium of exchange).

- ➢ Fiat money: paper money decreed by governments as legal tender.

Evolution of the Payments System

2. Fiat Money (continuation)

- Major drawbacks of paper currency and coins are that they are easily stolen and can be expensive to transport in large amounts because of their bulkiness.

- To combat this problem, another step in the evolution of the payments system occurred with the development of *modern banking: the invention of cheques.*

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Evolution of the Payments System

3. *Cheques*

•   an instruction to your bank to transfer money from your account.

•   Cheques allow transactions to take place without the need to carry around large amounts of currency. The introduction of checks was a major innovation that improved the efficiency of the payments system.

Evolution of the Payments System

3. Cheques

There are, however, two problems with a payments system based on cheques.

➢ First, it takes time to get checks from one place to another, a particularly serious problem if you are paying someone in a different location who needs to be paid quickly.

➢ In addition, if you have a current account, it usually takes several business days before a bank will allow you to make use of the funds from a check you have deposited.

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Evolution of the Payments System

4. Electronic Payment

e.g. online bill pay

- Necessitated by the development of inexpensive computers and the spread of the Internet.

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Evolution of the Payments System

5. E-Money (electronic money):

Electronic money (or e-money), is money that exists only in electronic form. The first form of e-money was the debit card or bank card as usually called in Ghana.

Debit cards or bank cards enable consumers to purchase goods and services by electronically transferring funds directly from their bank accounts to a merchant's account.

At most supermarkets, for example, you can swipe your debit card through the card reader at the checkout station, press a button, and the amount of your purchases is deducted from your bank account.

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Evolution of the Payments System

5. E-Money (electronic money):

- Debit or bank card

- Stored-value card (smart card)

- E-cash

- Mobile money

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Evolution of the Payments System

Are We Headed for a Cashless Society?

- Predictions of a cashless society have been around for decades, but they have not come to fruition.

- Although e-money/mobile money might be more convenient and efficient than a payments system based on paper, several factors work against the disappearance of the paper system.

➢ Can you think of reasons that can impede e-money dominance?

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Topic Two

MEASURING MONEY IN AN ECONOMY

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Measuring Money

- How do we measure money? Which particular assets can be called "money"?

- Central banking authority responsible for monetary policy has conducted many studies on how to measure money.

- The problem of measuring money has recently become especially crucial because extensive financial innovation has produced new types of assets that might properly belong in a measure of money.

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Measuring Money

- Central banks in many countries have modified their measures of money several times and has settled on the following measures of the money supply, which are also referred to as *monetary aggregates*.

Construct monetary aggregates using the concept of liquidity:

- M1 or Narrow money (most liquid assets) = currency + traveler's checks + demand deposits + other checkable deposits.

Measuring Money

- *M2 or broad money (adds to M1 other assets that are not so liquid)* = M1 + small denomination time deposits + savings deposits and money market deposit accounts + money market mutual fund shares.

- In Ghana there is also M2+ which is M2 plus foreign currency deposits

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Measuring Money

■ Table 1 Measures of the Monetary Aggregates.

Measures of the Monetary Aggregates

	Value as of May 16, 2011 ($ billions)
M1 = Currency	958.8
+ Traveler's checks	4.6
+ Demand deposits	573.1
+ Other checkable deposits	399.0
Total M1	1,935.5
M2 = M1	
+ Small-denomination time deposits	848.3
+ Savings deposits and money market deposit accounts	5,530.4
+ Money market mutual fund shares (retail)	688.4
Total M2	9,002.6

Source: www.federalreserve.gov/releases/h6/hist.
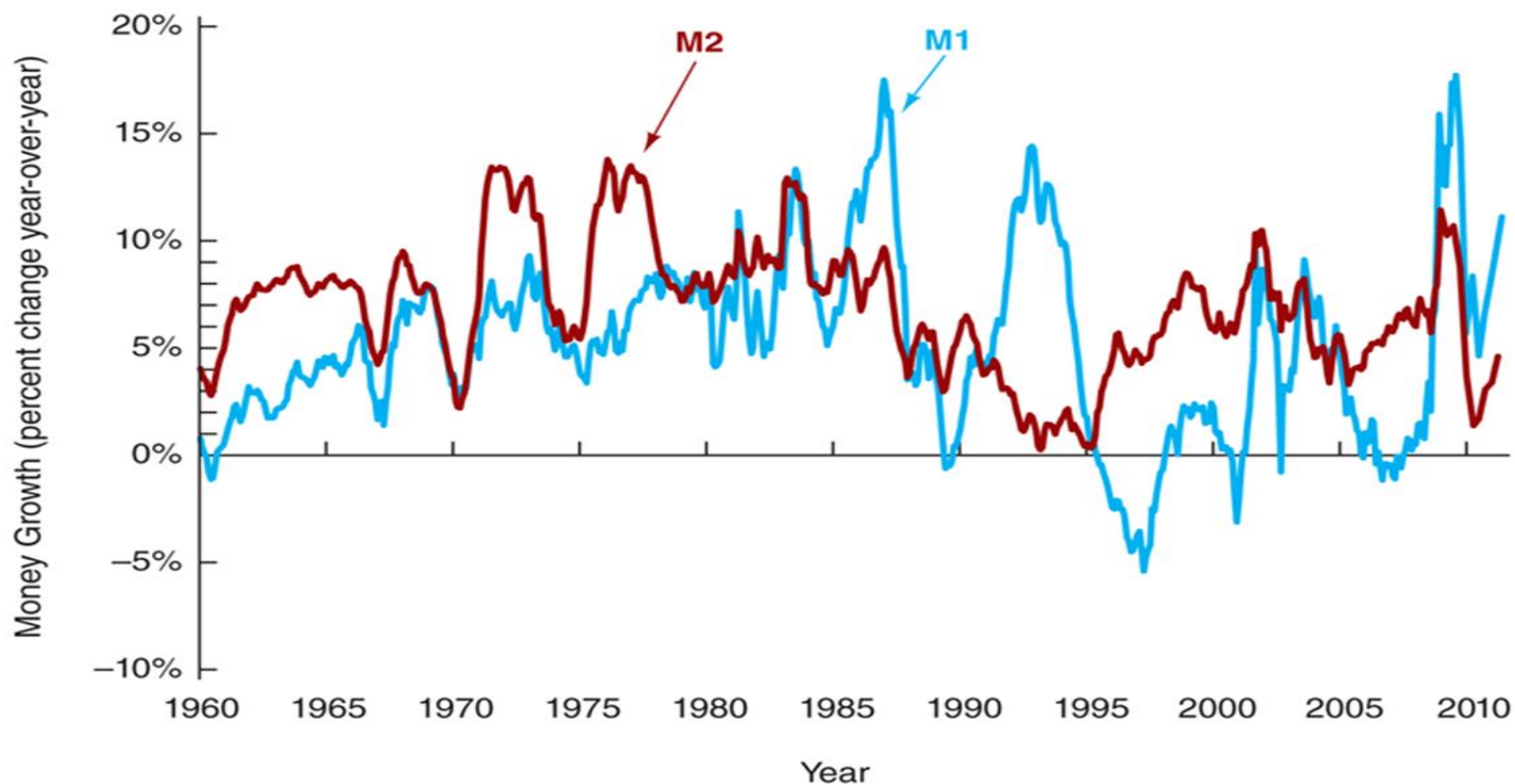
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M1 vs. M2

- Does it matter which measure of money is considered?

- M1 and M2 can move in different directions in the short-run (see figure).

- Conclusion: the choice of monetary aggregate is important for policymakers.
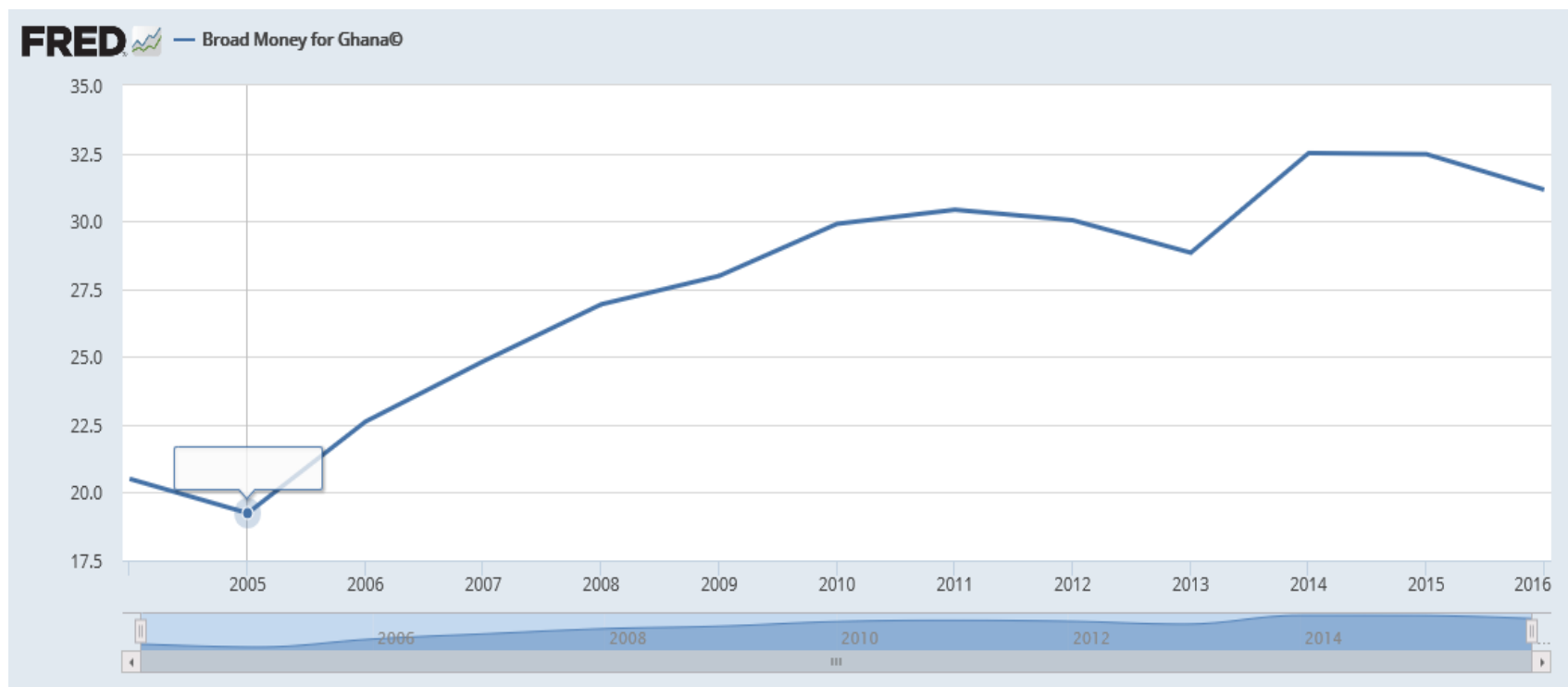
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Measuring Money

- Figure 1 Growth Rates of the M1 and M2 Aggregates, 1960–2011.

Sources: **Federal Reserve Economic Database (FRED); Federal Reserve Bank of Saint Louis;**
http://research.stlouisfed.org/fred2/categories/25

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Measuring Money

- Figure 2 Broad Money for Ghana, 2005–2016.

Source: International Monetary Fund, Broad Money for Ghana© [GHAFMBGDPPT], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/GHAFMBGDPPT, February 8, 2017.

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