



THE ECONOMIC WAY OF THINKING

Thirteenth Edition

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Chapter 14

Money (货币)

Learning Objectives (学习目标)

- Describe the process by which money emerged and became bank notes (描述货币出现并且演变为银行票据的过程)
- Explain the process of money creation in the modern economy (解释现代经济中货币创造的过程)
- Describe how the central bank regulates the commercial banking industry (描述美联储是如何管制商业银行行为的)
- Explain the various tools used by the central bank to influence the amount of excess reserves in the economy (解释美联储采用什么工具来调节经济中的超额储备量)
- Introduce how the central bank might strive for monetary equilibrium as a way to minimize macroeconomic disturbances (解释美联储怎样争取实现货币平衡以将宏观经济波动风险降到最低)

Chapter Outline（大纲）

- The Evolution of Money（货币的演变）
- The Nature of Money Today（当今金钱的性质）
- So How Much Money Is Out There?（市面上有多少货币？）
- Credibility and Confidence（信用与信任）
- Banks Under Regulation: Legal Reserve Requirements（受监管的银行：法定存款准备金制度）
- Deposit Expansion and the Creation of Money（存款扩张和货币创造）

Chapter Outline（大纲）

- The Fed as Monitor and Rule Enforcer（美联储作为监督者和规则实施者）
- The Tools Used by the Fed（美联储的工具）
- Monetary Equilibrium（货币均衡）
- But Who is Really in Charge?（但是谁真正做主？）
- Appendix: What About Gold?（延伸阅读：那么黄金呢？）

The Evolution of Money（货币的演变）

- **Money** evolved to facilitate trade（货币的发展是为了促进贸易）
- Precious metals were the first accepted medium of exchange（贵金属是最早被接受的交换媒介）

The Evolution of Money（货币的演变）

- Coin evolved to establish a standard measure（硬币逐渐演变成一种标准的量度）
 - The coins had greater value than the metal because it reduced transaction cost（硬币比金属具有更大的价值，因为它降低了交易成本）
 - The person minting the coin kept some of the metal as profit for minting, called **seignorage**（铸币的人保留一部分金属作为铸币的利润，称为铸币税）
 - Milling the edges makes it more difficult for people to shave metal from the coins.（在硬币边沿轧楞让人们难从其边沿刮掉部分金属）

The Evolution of Money（货币的演变）

- Goldsmiths – the first bankers（金匠—第一批银行家）
- The goldsmiths issued receipts for metals deposited with them（金匠们为存放在他们那里的贵金属开具收据）
- The receipts were traded for goods（收据用于交换物品）
 - →the first form of paper money（纸币的最初形式）

The Evolution of Money（货币的演变）

- Later, commercial bankers arose.（后来，商业银行兴起）
 - They could lend out at interest some fraction of the money deposited with them.（银行家把存在他们那里的货币借出去一部分收取利息）
 - Just lend borrowers receipts（只需要借给借款人收据）
 - *the origin of most bank notes, the direct ancestors of our current paper money.*（这是大部分钞票或者说“银行票据”的起源，是我们现在使用纸币的直系祖先）

The Evolution of Money（货币的演变）

- The major difference between these bank notes and the paper money today:（这些银行券与今日货币的主要区别）
 - The latter tends to be issued exclusively by government-managed banks.（今日货币通常由政府管理的银行独家发行）
 - And they do not promise to pay the holder anything.（不再保证兑给持有者什么东西）
- Fiat money（法定货币）
 - Fiat: Latin for “let it be”（让它是）or “let it become”（让它变成）

The Evolution of Money（货币的演变）

■ Questions:

- Is the US dollar accepted as medium of exchange merely because the government decrees it so? (美元被接受为交易媒介, 仅仅是因为政府命令这样做吗?)
- What makes anything money is that it is **in fact** accepted and used by people as a medium of exchange. (能使某种东西变成货币的, 是它事实上作为交易媒介被人们接受并使用)

The Nature of Money Today （当今货币的性质）

- What do we use today as our medium of exchange?
（今天我们用什么作为交换媒介呢？）
 - Currency （现金）
 - Checkable deposits （支票存款） or demand deposits （活期存款）
- Currency and checkable deposits share two characteristics （货币和活期存款共有两个特点）
 - Accepted as a medium of exchange （作为交换媒介被接受的）
 - Liabilities issued by trusted institutions （有信誉的机构发行的负债）

The Nature of Money Today（当今货币的性质）

- Amount of medium of exchange in an economic system
（经济体系中交易媒介的数量）
 - private and public institutions（私人和公共机构）
 - persuading people to hold and circulate their liabilities（说服人们持有并流通其债务）

So How Much Money is Out There? （市面上有多少货币？）

- The People's Bank of China （PBC，中国人民银行）：
中国（大陆）的中央银行
- 货币供应量是中央银行重要的货币政策操作目标
- （中国的）货币供应量通常分为几个层次
 - M0：流通中的现金
 - 银行体系以外流通的现金之和

So How Much Money is Out There? （市面上有多少货币？）

- M1：狭义货币供应量

- M0+企事业单位在银行的活期存款
- *M1的流动性极强*

- M2：广义货币供应量

- M1 +企事业单位在银行的定期存款和城乡居民个人在银行的各项储蓄存款（通常称为“准货币”）

- 注：从2001年7月起，将证券公司客户保证金计入M2；自2011年10月起，M2已包括住房公积金中心存款和非存款类金融机构在存款类金融机构的存款。

- 通常所讲的“货币供应量”即是M2.

So How Much Money is Out There? （市面上有多少货币？）

■ The Fed Reserve（美联储）：美国的央行

□ M1

- Sum of currency in circulation +
- Demand deposits（活期存款） +
- Other checkable deposits（其他支票存款） +
- Traveler's checks（旅行支票）

So How Much Money is Out There? (市面上有多少货币?)

□ M2

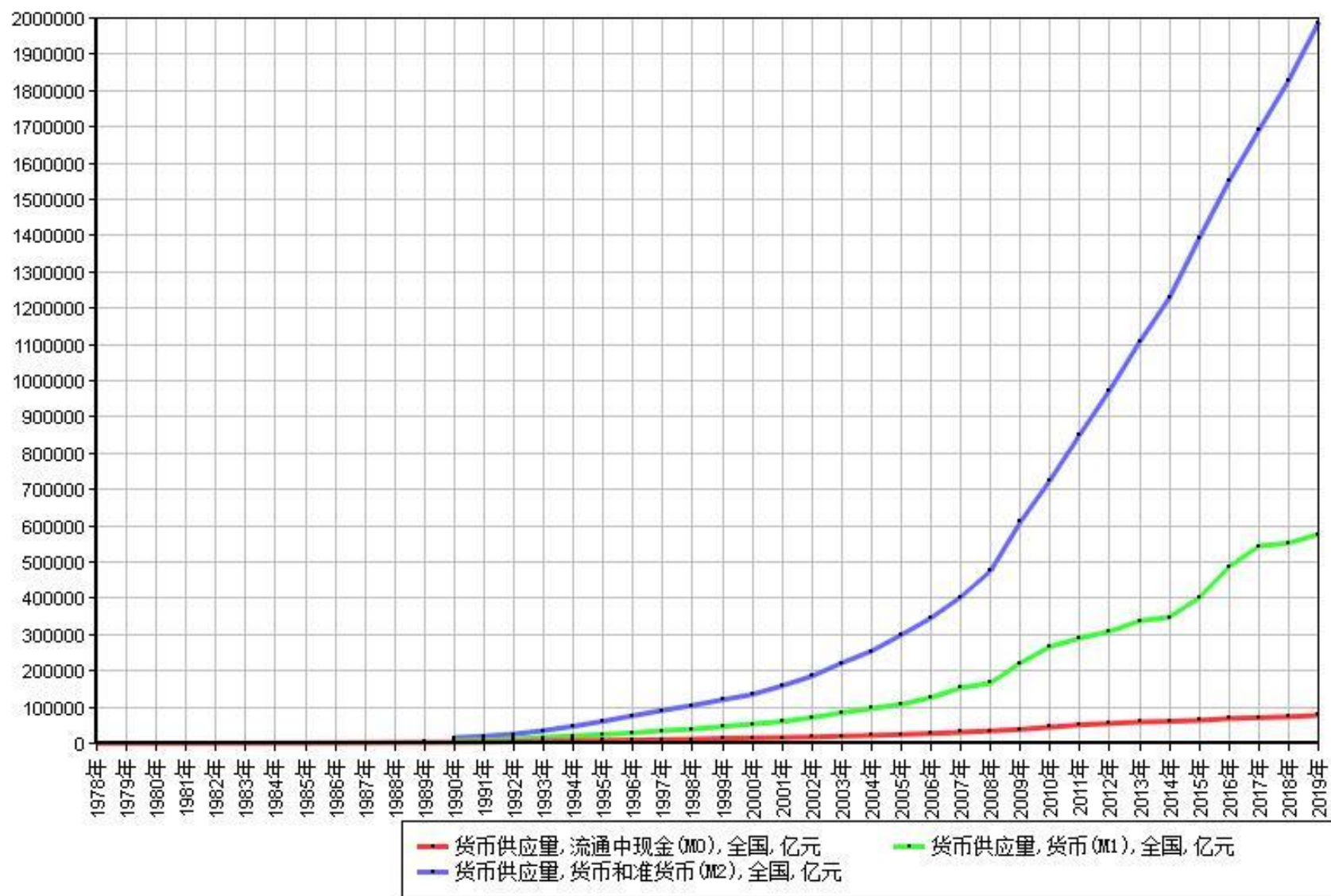
- M1 +
- Non-checkable deposits (定期存款) (<\$100,000) +
- Retail money market mutual funds (货币市场共同基金)
 - Funds allowing initial investments <\$50,000

□ M3 = M2 +

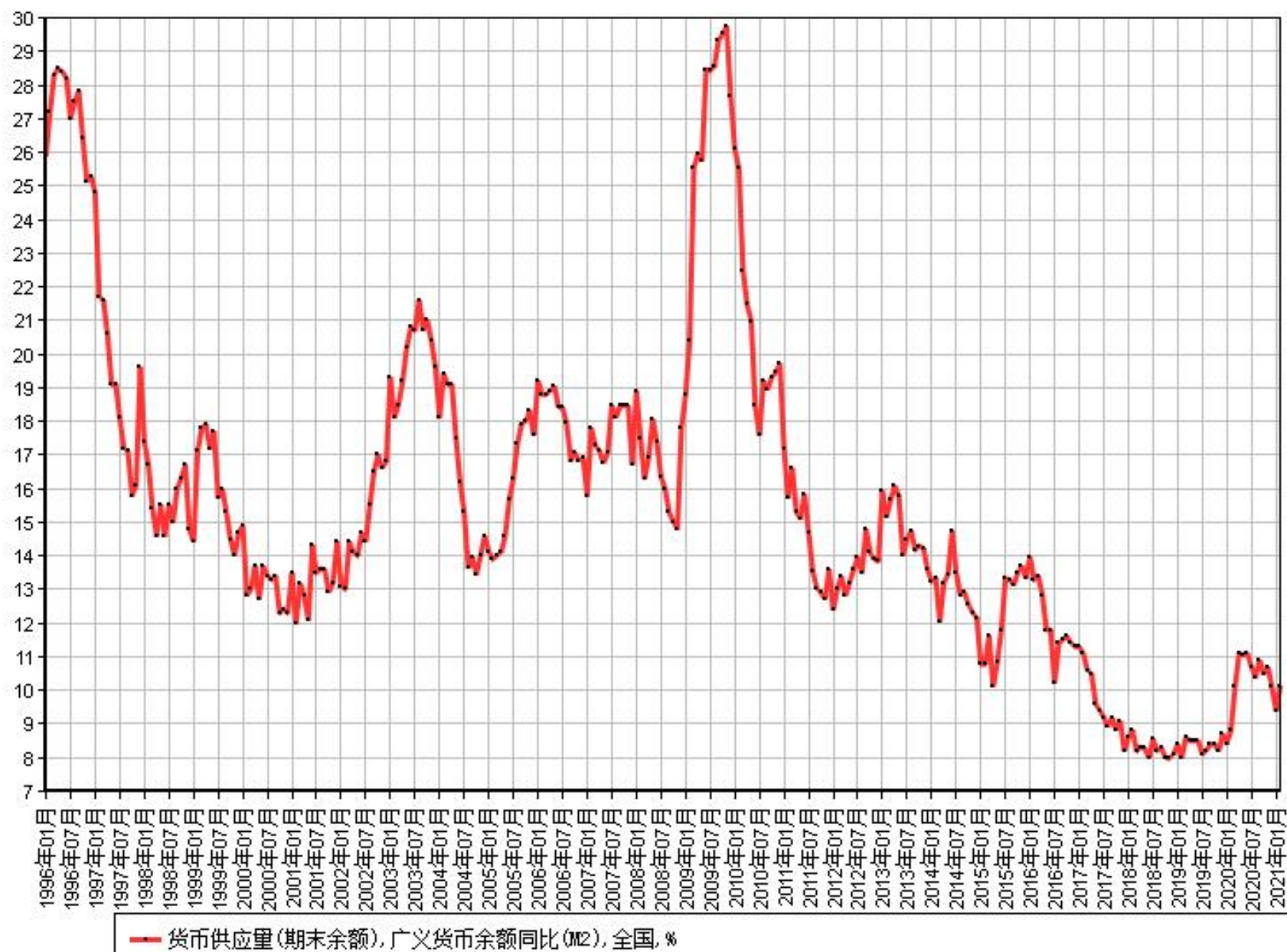
- Non-checkable deposits >\$100,000 +
- Mutual funds requiring >\$50,000

中国货币供应量（1978-2019）

货币供应量



中国广义货币供应量增长率（1996-2021）



美国货币供应量（1960.1-2021.2）



美国货币供应量增长率（1960.1-2021.2）

☆ M2 Money Stock (M2NS)

DOWNLOAD 

Observation:

Feb 2021: 27.0 (+ more)
Updated: Mar 25, 2021

Units:

Percent Change from Year Ago,
Not Seasonally Adjusted

Frequency:

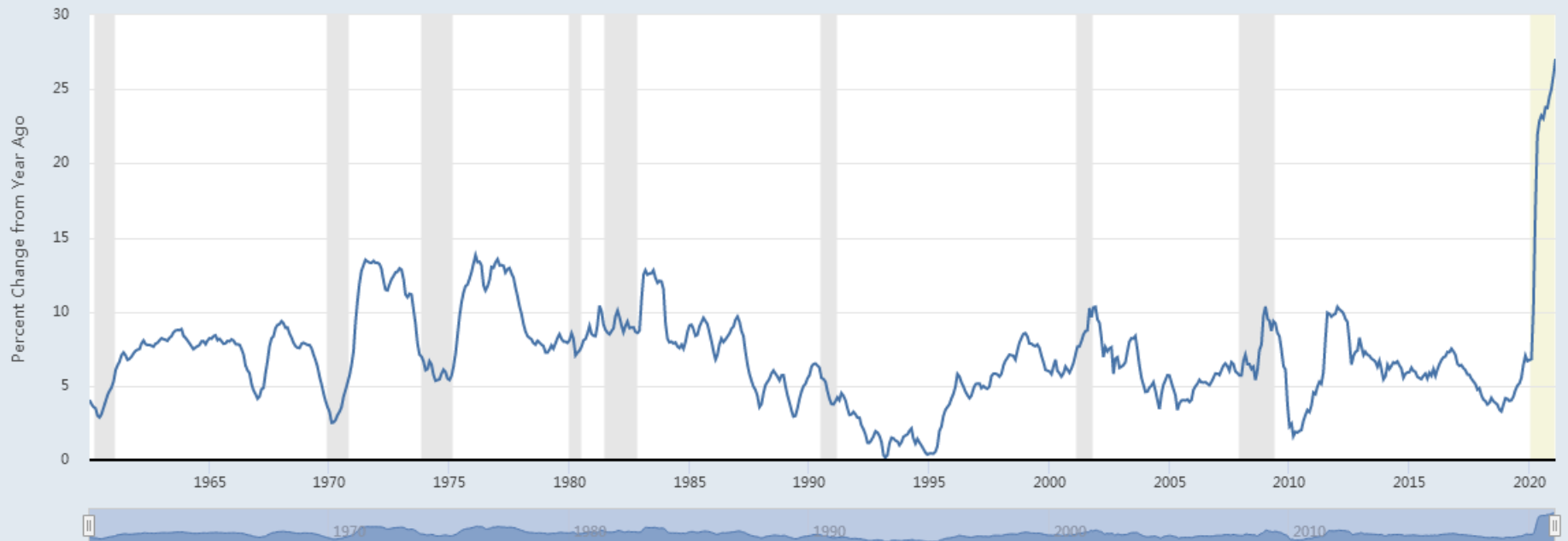
Monthly

1Y | 5Y | 10Y | Max

1960-01-0 to 2021-02-0

EDIT GRAPH 

FRED — M2 Money Stock



U.S. recessions are shaded; the most recent end date is undecided. Source: Board of Governors of the Federal Reserve System (US)

fred.stlouisfed.org

So How Much Money Is Out There? (市面上有多少货币?)

- Changes in M1 and M2 result from public preferences on how to hold money and money-like assets (M1和M2的变化源于公众如何持有货币和类货币资产的偏好)
- E.g., suppose you transfer \$500 out of your checking account and into your savings account (假设您将500美元从支票帐户转入储蓄帐户)

So How Much Money is Out There? （市面上有多少货币？）

- People at the Central Bank calculate the 3M's （中央银行计算三个层次的货币供应量）
 - Attempt to determine implications for the future （试图确定对未来的影响）
- 各国货币政策（*所声称*）的目标包括
 - 保持本国货币币值稳定
 - 保持物价稳定
 - 保持经济可持续增长

Credibility and Confidence（信誉和信心）

- If not regulated, the only limit on a bank creating money is the ability to maintain credibility（如果不加以监管，对银行创造货币的唯一限制就是维持信誉的能力）
- People must remain confident in a particular money or they will stop using it（人们必须对某一种货币保持信心，否则就会停止使用它）

Credibility and Confidence（信誉和信心）

- “Bank run”（银行挤兑）
- Banks must maintain a balance between（银行必须维持平衡）
 - Desire for additional income（增加收入）
 - The need to retain the confidence of their depositors（维持储户的信心）

Banks Under Regulation: Legal Reserve Requirements (法定准备金要求)

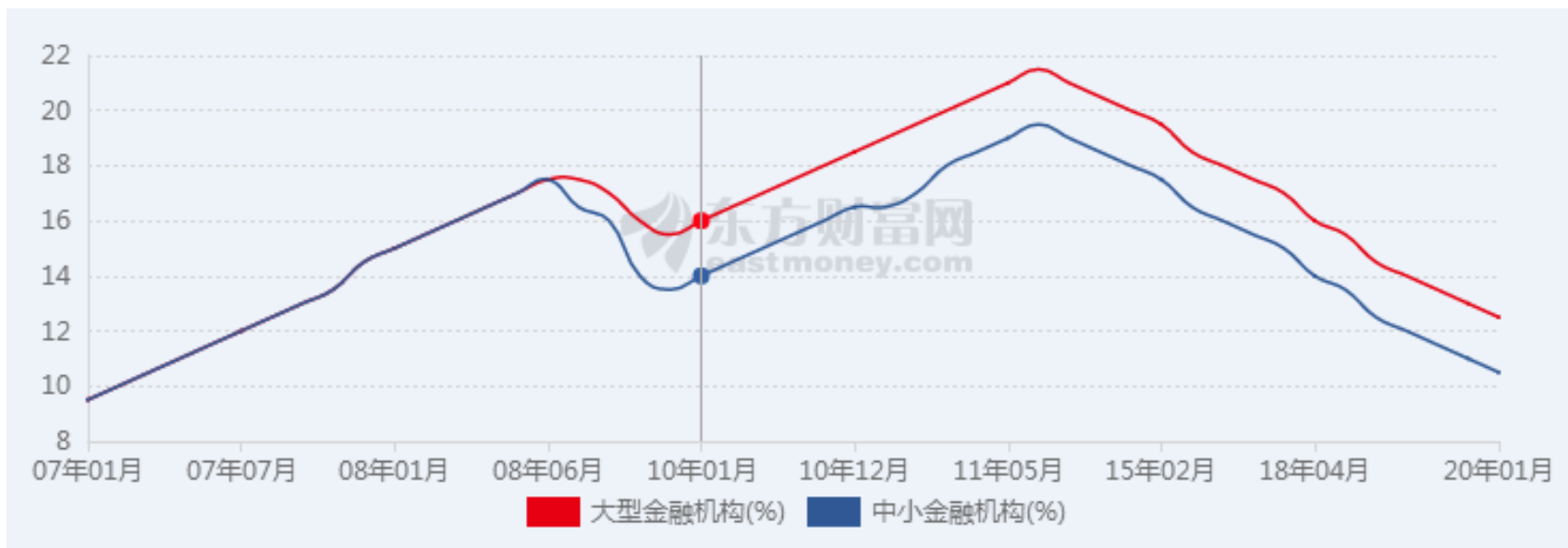
- Banks are not allowed
 - to have deposit liabilities in excess of some multiple of **reserves**
(银行的储蓄负债数量不得超过其存款准备金的一定倍数)
 - **required reserve ratio** (法定准备金率)
- The Fed reduced reserve requirement ratios to zero percent effective March 26, 2020.
 - Eliminated reserve requirements for all depository institutions.

Reserve Requirements

Liability Type	Requirement	
	% of liabilities	Effective date
Net transaction accounts ¹		
\$0 to \$15.2 million ²	0	1-21-16
More than \$15.2 million to \$110.2 million ³	3	1-21-16
More than \$110.2 million	10	1-21-16
Nonpersonal time deposits	0	12-27-90
Eurocurrency liabilities	0	12-27-90

中国金融机构存款准备金率

- 目前，中国大型金融机构法定存款准备金率为**12.5%**，小型金融机构为**10.5%**



Banks Under Regulation: Legal Reserve Requirements (法定准备金要求)

- Reserves usually earn no interest. (准备金通常无利息)
- Excess reserve (超额储备)
 - 指商业银行及存款性金融机构在中央银行存款帐户上的实际准备金超过法定准备金的部分

Banks Under Regulation: Legal Reserve Requirements (法定准备金要求)

- Increasing the required reserve ratio for a bank will mean:
(提高银行法定存款准备金率意味着)
 - Lower excess reserves (超额准备金减少)
 - Reduction in ability to make loans (放贷能力下降)
 - higher costs (更高的成本)
 - reduction in potential profit (减少潜在利润)

Deposit Expansion and the Creation of Money (存款扩张与货币创造)

- Banks create money by lending out their excess reserves. (他们借出超额准备金)
- Suppose you own a \$1,000 government bond, and you sell it directly to the Fed. (假设你拥有1000美元的政府债券，你把这债券直接售卖给了美联储)
 - The Fed deposits the money into your checking account at Acme Bank. (美联储把应付给你的钱存进你在阿卡姆银行的支票账户)
 - Assuming the required reserve ratio is 10 percent.

Deposit Expansion and the Creation of Money (存款扩张与货币创造)

- Look at the following sequence of transactions:
 - The expansion process continues and M2 converges toward a final figure. (扩张过程继续进行, M2趋向一个最终数字10000)

<i>Deposits into</i>	<i>Checkable Deposits</i>	<i>Required reserves</i>	<i>Excess reserves</i>	<i>New loans</i>
Acme Bank	+\$1,000	+\$100	+\$900	+\$900
Bailout Bank	+\$900	+\$90	+\$810	+\$810
Caesar Bank	+\$810	+\$81	+\$729	+\$729
...

Table 14-2

The Central Bank as Monitor and Rule Enforcer

（中央银行作为监督者和规则实施者）

■ 中国人民银行

- ❑ 中国的中央银行，国务院组成部门之一，成立于**1948年12月1日**。
- ❑ **1983年**国务院决定中国人民银行专门行使国家中央银行职能。
- ❑ 在国务院的领导下依法独立执行货币政策，履行职责，开展业务，不受地方政府、各级政府部门、社会团体和个人的干涉。
- ❑ 总行位于北京，**2005年8月10日**在上海设立中国人民银行上海总部。



The Central Bank as Monitor and Rule Enforcer (中央银行作为监督者和规则实施者)

- Federal Reserve – **central bank** in US (美联储)
 - created in 1913(创建于1913年)
 - government agency(政府机关)
 - 12 district banks(12个地区银行)
 - restrains lending activities of commercial banks(限制商业银行的借贷活动)
 - controls the process of money creation(控制货币创造的过程)



The Central Bank as Monitor and Rule Enforcer (中央银行作为监督者和规则实施者)

- FDIC (Federal Deposit Insurance Corporation, 联邦存款保险公司, 1933年成立)
 - Bank deposits insured by US government (银行存款由美国政府担保)
 - With fewer “bank runs” (银行挤兑很少了)



The Central Bank as Monitor and Rule Enforcer (中央银行作为监督者和规则实施者)

- The Central Bank may loan additional reserves (美联储可以提供额外的准备金)
 - Entire system is more flexible (整个系统更加灵活)
 - And more resistance to crises and temporary dislocations (对危机和暂时性混乱的抵抗力增强)

Tools Used by the Central Bank（中央银行的工具）

- Authority to establish legal reserve requirements（制定法定准备金要求的权力）
 - The Central Bank in US rarely changes the required reserve ratio, but frequently in China
- Altering the discount rate（调整贴现率）
 - Only infrequently（不经常）
- Open market operations（公开市场操作）
 - The most common technique（最常用）

The Discount Rate（贴现率）

- The Central Bank —“banker’s bank,” or a “lender of last resort.”（央行被称为“银行家的银行”或“最后贷款人”）
- The **discount rate** is the interest rate the Central Bank charges banks for short term loans.（贴现率是央行向银行收取的短期贷款利率）
- Decrease or increase in discount rate（降或升贴现率）
 - increase or decrease the overall reserves of the banking system and nation’s money supply（增或减银行准备金和货币供应量）

Open Market Operations （公开市场操作）

■ Open Market Operations

- Central Bank buys government bonds （央行购买政府债券）
 - banks get dollars and M1 increases （银行得到美元，M1增加）
 - interest rates fall （利率下降）
- Central Bank sells government bonds （央行出售政府债券）
 - banks get bonds and M1 decreases （银行获得债券，M1减少）
 - interest rates rise （利率上升）

Monetary Equilibrium (货币均衡)

- The idea of *coordination* is central to the economic system. (协调的思想是经济体系的核心)
- Although there may be *macroeconomic questions*, there are in the end only *microeconomic answers*. (可能存在宏观经济问题，但最终只有微观经济学的答案)
 - What matters is *the incentives and information* that individuals face. (重要的是个人面临的激励和信息)

Monetary Equilibrium (货币均衡)

- The monetary system is at the center of any advanced economy. (货币体系是任何先进经济的中心)
- Money by its nature cannot be “*neutral*”. (货币本质上不可能是“中性”的)
 - It provides the link to all exchange relationships throughout the economy. (货币扮演的是经济活动中所有交换关系的纽带)
 - Have an impact on the pattern of exchange and production in an economy (会影响经济体系的交换模式和生产)

Monetary Equilibrium (货币均衡)

- Ideally, the goal of the central bank, as official regulator of the nation's monetary system, is to keep the quantity of money supplied in balance with the quantity of money demanded. (理想情况下，作为国家货币体系的官方监管者，央行的目标是使货币供应量与所需货币量保持平衡)
 - Price stability, or stability of the purchasing power of money (物价稳定)
 - No seriously relative price distortions (没有严重的相对价格扭曲)

But Who Is Really in Charge? （但是是谁真正做主呢？）

- 中国人民银行货币政策委员会
 - 中国人民银行制定货币政策的咨询议事机构，1997年7月成立
 - 货币政策委员会委员提出的货币政策议案，经出席会议的2/3以上委员表决通过，形成货币政策委员会建议书
- The Federal Open Market Committee (FOMC) （联邦公开市场委员会）
 - 12 members （12名成员）
 - 7 governors （7名美联储委员） + Presidents of 5 of the 12 Fed banks （12家美联储银行中的5家行长）

But Who Is Really in Charge? （但是是谁真正做主呢？）

■ Main Questions

- Does the FOMC set the appropriate goals? （联邦公开市场委员会是否设定了适当的目标？）
 - Does the FOMC achieve its goals? （联邦公开市场委员会是否实现了目标？）
- ## ■ The management of the monetary system is a difficult and delicate task （货币体系的管理是一项艰巨而微妙的任务）
- With unintended consequences （意料之外的后果）

Appendix: What About Gold? （那么黄金呢？）

- The value of modern fiat money is based on
 - The demand （有需求）
 - A limited supply （有限的供给）
 - Confidence that the supply will remain limited （人们相信供应将持续有限）

Appendix: What About Gold? （那么黄金呢？）

- Pre-WWII Gold Standard （二战前的金本位）
 - Currency exchanged for gold at fixed ratio （货币以固定比率兑换成黄金）
 - Limited gold supply restricts increase in money supply （有限的黄金供应限制了货币供应的增加）

Appendix: What About Gold? （那么黄金呢？）

■ Similarity （相似之处）

- Nature makes gold relatively rare. （大自然赋予黄金相对的稀有性）
- The Central Bank keeps fiat money relatively rare. （中央银行决定法定货币的相对稀有性）

■ Difference （不同）

- Many people have far more confidence in the reliability of nature （多数人更相信大自然的可靠性）

Once Over Lightly（简单回顾）

- Money as a social institution（货币是一种社会制度）
- An item is money if exchangeable（如果物品可以交换，它就是货币）
- Financial institutions liabilities and money supply（金融机构负债与货币供应）
- M1 – M2 – M3
- Commercial banks / reserve requirements（商业银行的准备金要求）

Once Over Lightly（简单回顾）

- Reserve requirements, discount rate and open market operations
（准备金要求，贴现率和公开市场操作）
- Money must be acceptable in exchange and have limited availability.
（货币必须可接受用于交换，并且数量有限）