ECON4033 Money and Finance in China

Week 1: China's Financial System - An Overview[1]

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[1] These lecture notes are largely based on the materials prepared by Prof. Siu Kee Wong for the same topic.

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Objectives of the Course

- This course helps students to assimilate the development and the administration of the financial system (mainly) in the Mainland China.

- The role of the financial system in the economy at both micro and macro levels will be assessed.

- The fiscal, monetary and exchange rate reforms will be analyzed from the perspectives of a large developing country.

I. China's Financial System: An Overview

A financial system is a system with a set of institutions (such as banks, credit unions, investment companies, insurance companies, etc.) that allows the exchange of funds between lenders, investors, and borrowers.

1. China's financial system has been dominated by a large banking system:
   - China's banking system is still mainly controlled by the four largest state-owned banks. Some implications:
     - Banking system as a channel for implementing economic, financial, and political agenda.
     - Soft budget constraints for state-owned firms.
     - Political pecking order hypothesis: capital / equity structure, loan accessibility, leverage decision of firms.
2. The role of the stock market in allocating resources in the economy has been limited:
   - Two domestic stock exchanges: the Shanghai Stock Exchange (SHSE hereafter) and Shenzhen Stock Exchange (SZSE hereafter).
   - An investment platform more often than other functions.
3. A non-standard sector that consists of alternative financing channels, governance mechanisms, and institutions is a more successful part of the financial system, in terms of supporting the growth of the overall economy.

4. A brief history of China's financial system:

a) 1950 – 1978:

- After the foundation of the People's Republic of China in 1949, all of the pre-1949 capitalist companies and institutions were nationalized by 1950.
- Between 1950 and 1978, China's financial system consisted of one single bank – the People's Bank of China (PBOC), a central government owned and controlled bank under the Ministry of Finance.

b) 1950 – 1978:

- Banks were subordinate to the Ministry of Finance.
- The PBOC served as both the central bank and a commercial bank, controlling about 93% of the total financial assets of the country and handling almost all financial transactions.
- Commercial credits are prohibited at this stage.

c) 1978 – 1984:

- The PBOC was formally established as China's central bank and a two-tier banking system was formed:
    - By 1979, the PBOC departed the Ministry of Finance and became a separate entity.
    - Four state-owned banks (SOBs) took over the PBOC's commercial banking businesses:

中国银行 BANK OF CHINA — The Bank of China (BOC) specializes in transactions related to foreign exchange and international transactions;

中国建设银行 China Construction Bank — The People's Construction Bank of China (PCBC), originally formed in 1954, was set up to handle transactions related to fixed investment (especially in manufacturing);

中国农业银行 AGRICULTURAL BANK OF CHINA — The Agriculture Bank of China (ABC) was set up (in 1979) to deal with all banking business in rural areas extend loans to agricultural production projects and township industries

中国工商银行 INDUSTRIAL AND COMMERCIAL BANK OF CHINA — The Industrial and Commercial Bank of China (ICBC) (formed in 1984) took over the rest of the commercial transactions of the PBOC and centered around the financing of commercial and industrial activities.

d) 1980s:

- For most of the 1980s, the development of the financial system can be characterized by the fast growth of financial intermediaries outside of the "Big Four" banks.
    - Regional banks (partially owned by local governments);
    - A network of Rural Credit Cooperatives (RCCs) 农村信用社 & Urban Credit Cooperatives (UCCs) 城市信用社;
    - Non-bank financial intermediaries, such as the Trust and Investment Corporations (TICs) 信托投资公司.

e) 1990s:

- In the 1990s, the most significant event for China's financial system was the inception and growth of China's stock market.
    - Two domestic stock exchanges (SHSE and SZSE) were established in 1990 and grew very fast.
    - The real estate market also went from nonexistent in the early 1990s to one that is currently comparable in size with the stock market.
    - Both the stock and real estate markets are characterized by high volatilities and short-term speculation due to the lagging development of a supportive legal framework and institutions.

f) Key developments after 1997 Asian Financial Crisis:

- Following the Asian Financial Crisis in 1997, financial sector reform has focused on state owned banks and especially the problem of nonperforming loans (NPLs).[2] The China Banking Regulation Committee (CBRC 中国银行业监督管理委员会) was also established to oversee the banking industry.

- As a commitment for accession into the WTO in 2001, China continue to allow increasing competition from foreign financial institutions and more frequent and larger scale capital flows.

- In 2003, a few Qualified Foreign Institutional Investors (QFII) 合格境外機構投资者 entered China's asset management industry, and they have been operating through forming joint ventures with Chinese companies.

- China allowed Qualified Domestic Institutional Investors (QDII) 合格境内机构投资者 to invest in overseas markets beginning in July 2006. At the end of 2008, the ten QDII funds had a total of $109.4 billion assets under management.

[2] A nonperforming loan (NPL) is a sum of borrowed money upon which the debtor has not made the scheduled payments for a specified period.

f) Key developments after 1997 Asian Financial Crisis (cont.):

- The China Investment Corporation (CIC) was established in September 2007 with the intent of utilizing the accumulated foreign reserves for the benefit of the state and $207.91 billion foreign reserves were placed under management at the establishment. The transparency of CIC's investment strategy however is low.

- Endowed with limited capital and given problems with the administration of the pension system, pension funds have not played a significant role in the stock or bond market.

- At the top of the pension fund system, China's National Social Security Fund (NSSF) was established in August 2002 and is administered by the National Council for Social Security Fund.
    - This fund is mainly financed by capital and equity assets derived from the listing of state-owned companies, fiscal allocations from the central government, and other investment proceeds.
    - At the end of 2008, the fund had a total of $89.2 billion in assets; it grew to RMB856.7 billion ($142.8 billion) at the end of 2010.

5. Financial Regulatory Authorities:

- China Banking Regulatory Commission (中国银行业监督管理委员会) was established in 2003 in response to the swelling debt loads, undercapitalization, and nontransparent business practices of the banking sector. It is an agency of the PBOC to regulate the banking sector of China.

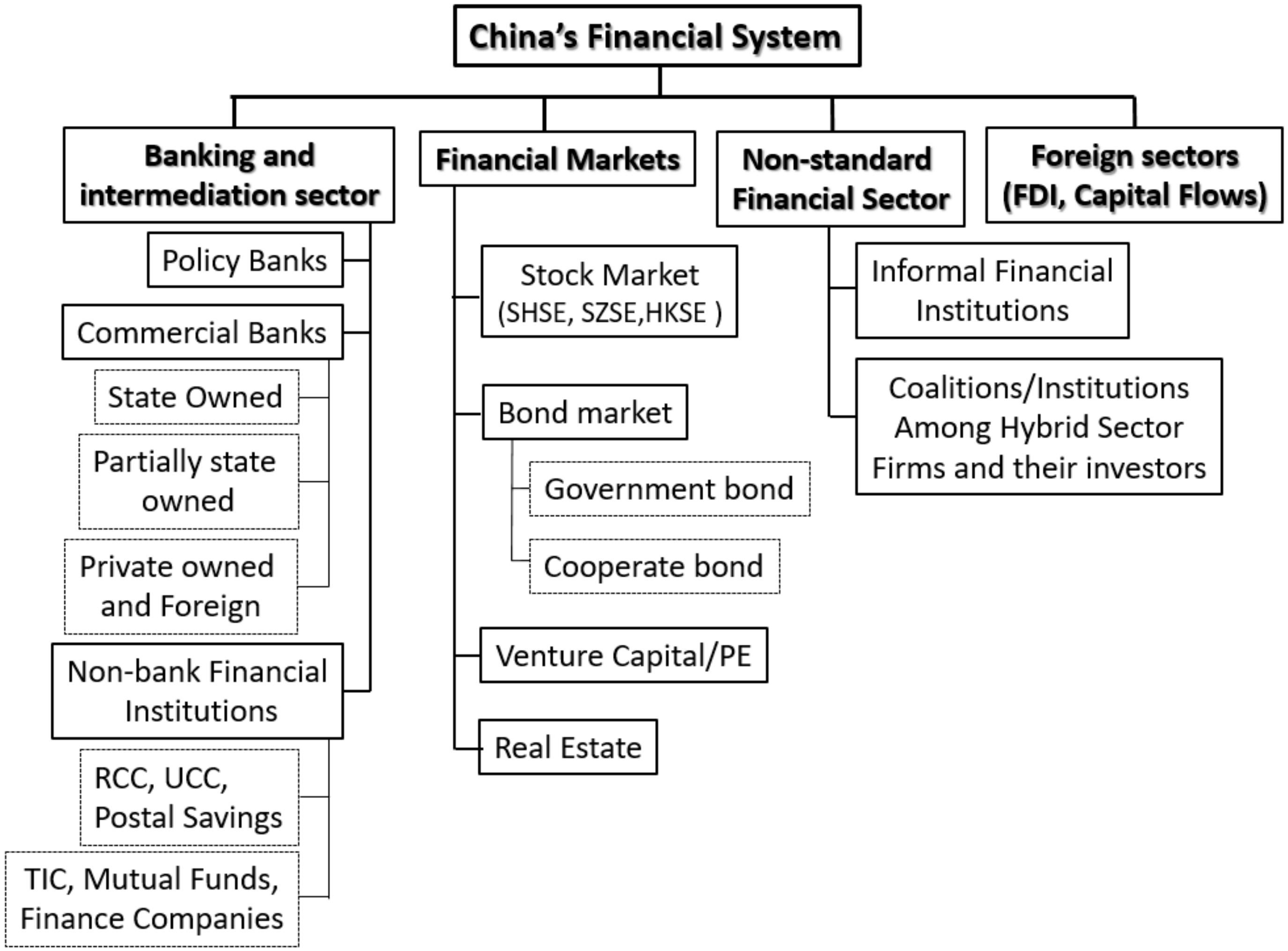
- The China Securities Regulatory Commission (中国证券监督管理委员会) oversees China's nationwide centralized securities supervisory system. Among its responsibilities include:

    - Formulating policies, laws and regulations concerning markets in securities and futures contracts.

    - Overseeing issuing, trading, custody and settlement of equity shares, bonds, investment funds.

    - Supervising listing, trading and settlement of futures contracts; futures exchanges; securities and futures firms.

Figure: The Structure of China's Financial System



Source: Allen et al. (2011).

II. A Basic Concept: Financial Repression

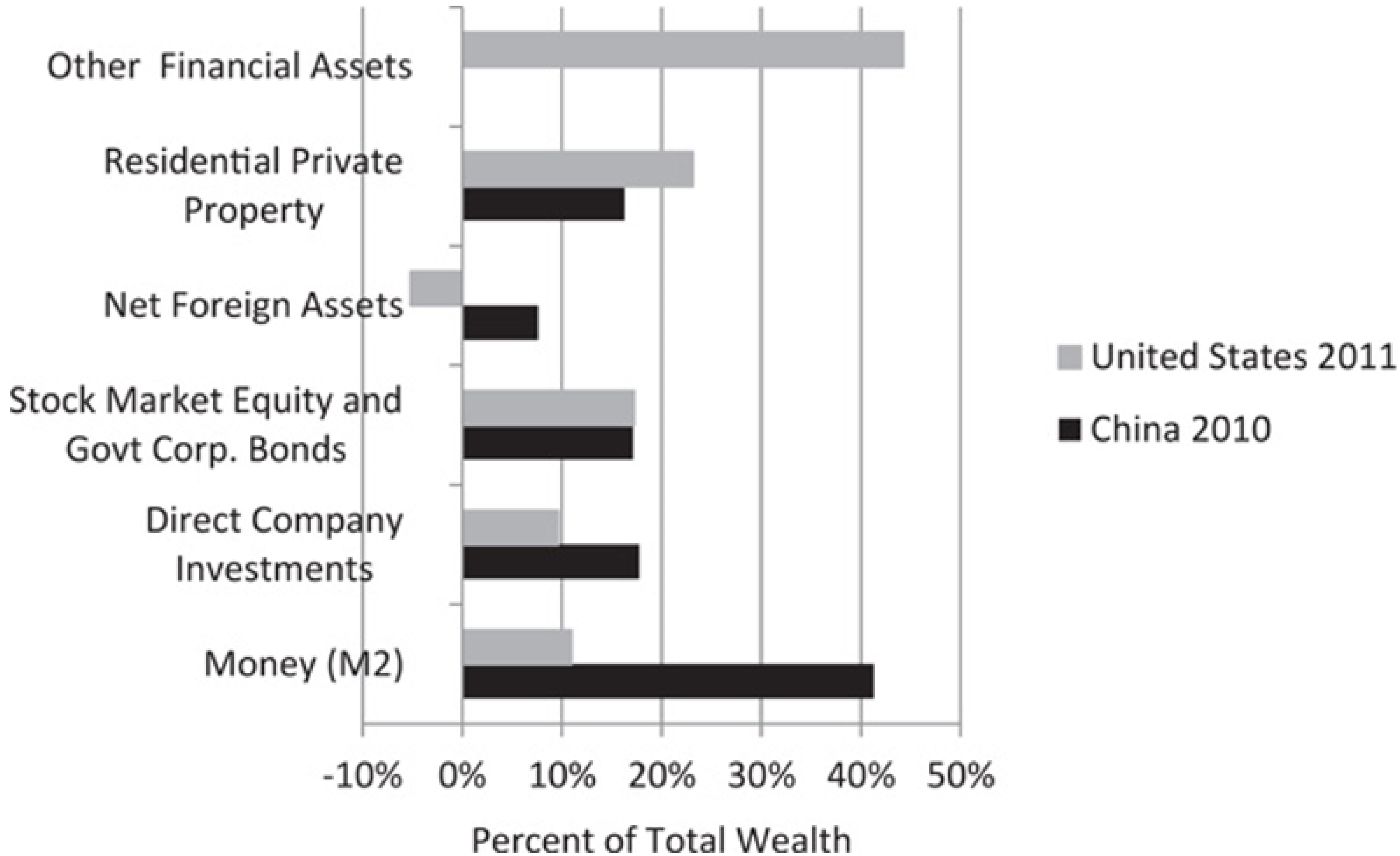
- Financial repression: any measure that governments employ to channel funds to themselves, that, in a free market, would go elsewhere.
- The term was first introduced by Stanford economists Edward Shaw and Ronald McKinnon.
- The private sector has limited access to external finance through the financial system.
- By maintaining the monopoly of state-owned banks, the government ensured that the bulk of the country's financial resources flowed to state-owned enterprises.
- The dominance of state-owned banks is protected by
    - limited entry of domestic and foreign private banks
    - controlled interest rates
    - relative high reserve requirements
    - strict control of capital flows

- Motives of Financial Repression:
  - Measures that repress the financial system maximize the flow of financial resources to government for implementing its industrialization strategy.
  - Financial repression also helps maintain macroeconomic stability for reform.
  - Unless the financial system is well developed, free capital mobility can lead to banking and exchange rate crises. See a figure on the next page on comparing the distribution of wealth between the U.S. and China. It is evident that financial markets are more well-developed in the U.S. Channels available for investment in China are still quite limited. This partially justifies the measure adopted.

- Problems:
  - When the state-owned banks lend at artificially low interest rate to state-owned enterprises, even when they are not credit-worthy, they were bound to end up with a large stock of non-performing loans.

Figure: Distribution of wealth in the US and China

Financial markets are more well-developed in the U.S.



III. Symptoms of Financial Repression: Inefficiency of the Financial System

- Data of the size of a country's banks and equity markets relative to that country's gross domestic product (GDP) show that China's banking sector still has scope to improve its efficiency:
  - Total stock market capitalization:

    China (64%) ⟷ the average of the other emerging economies (62%).
  - Stock market value traded:

    China (62%) ⟷ the average of other emerging economies (30%).
  - Total bank credit to non-state sectors:

    China (116%) ⟷ the average of other major emerging economies (46%).
  - NPLs:

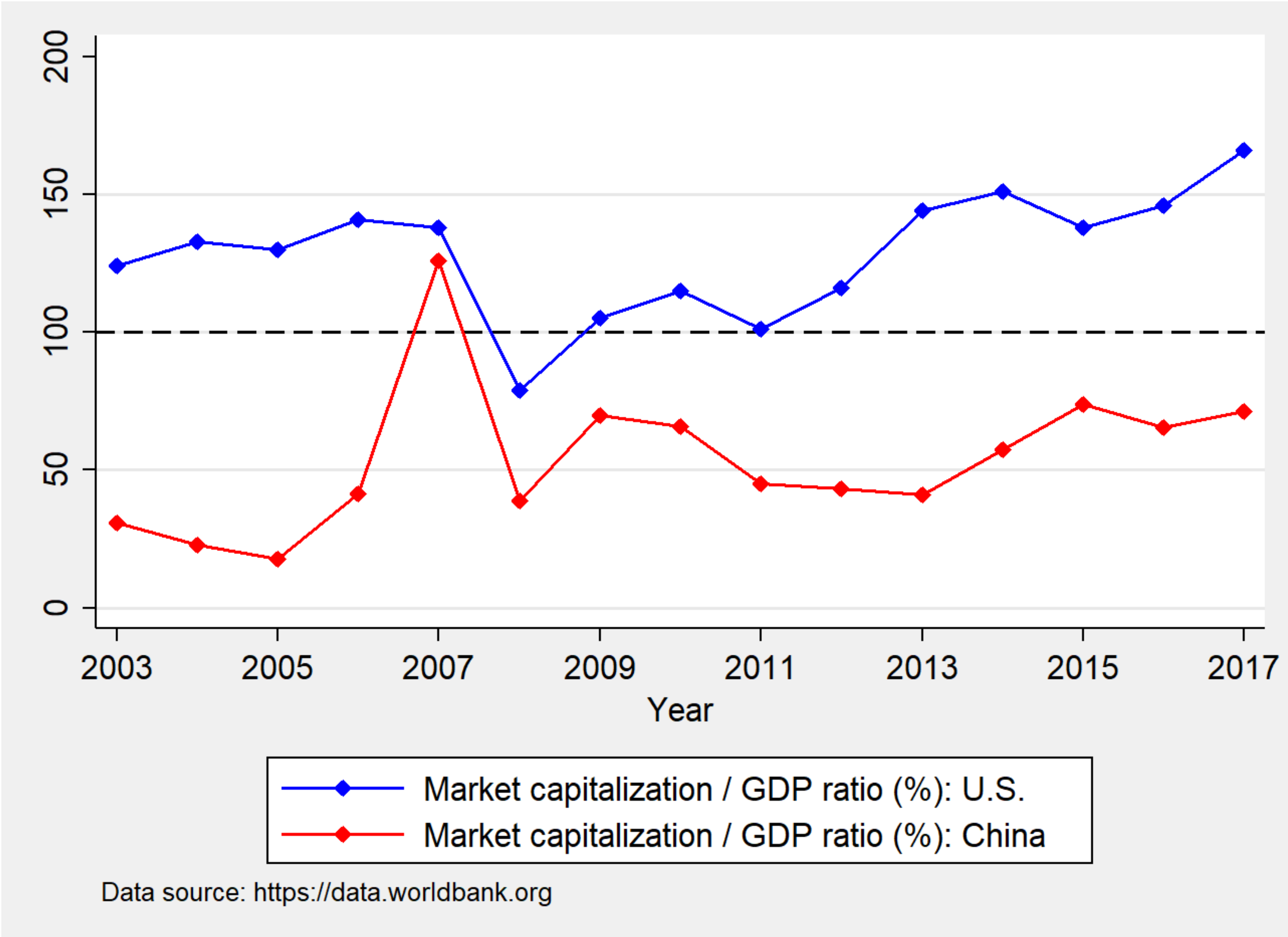
    China (16%) ⟷ the average of other major emerging economies (10%).

Comparing financial systems: Banks and Markets (average 2001-2007)

	Size of Banks and Markets			
Measures	Bank credit/ GDP	NPL/ Total Loans	Value traded /GDP	Market cap. /GDP
China	**1.16**	**0.16**	**0.62**	**0.64**
Argentina	0.14	0.10	0.04	0.48
Brazil	0.34	0.04	0.19	0.53
Egypt	0.52	0.21	0.19	0.60
India	0.37	0.07	0.57	0.64
Indonesia	0.24	0.12	0.12	0.28
Malaysia	1.15	0.12	0.43	1.45
Mexico	0.18	0.03	0.06	0.26
Pakistan	0.26	0.14	0.72	0.28
Peru	0.21	0.08	0.03	0.44
Philippines	0.34	0.15	0.07	0.47
Russian	0.26	0.04	0.27	0.65
S. Africa	1.38	0.02	0.88	2.06
Sri Lanka	0.31	0.15	0.03	0.18
Thailand	1.02	0.11	0.50	0.63
Turkey	0.20	0.10	0.39	0.28
Ave. for EMs	0.46	0.10	0.30	0.62

Source: Allen et al. (2011).

- There is a large difference between the U.S. and China in terms of the market capitalization / GDP ratio (Buffett Indicator). Your interpretation?



- China's stock markets are not efficient in that prices and investors' behavior are not necessarily driven by fundamental values of listed firms:
    - Poor minority investor protection;
    - Imperfect regulation of markets in emerging markets;
    - There have been numerous lawsuits against insider trading and manipulation.

- Overview of Bond Markets:
  - Compared to government-issued bonds, the size of the corporate bond market was small.

Table: China's Bond Markets: 1990 – 2009 (Amount in RMB billion)

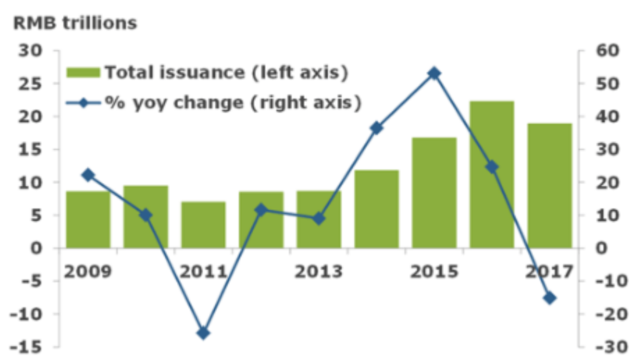
	Treasury Bonds			Policy Financial Bonds			Corporate Bonds		
Year	Amount Issued	Redemption Amount	Balance	Amount Issued	Amounts Redemption	Balance	Amounts issued	Amounts Redemption	Balance
1990	19.72	7.62	89.03	6.44	5.01	8.49	12.4	7.73	19.54
1991	28.13	11.16	106.00	6.69	3.37	11.81	24.9	11.43	33.11
1992	46.08	23.81	128.27	5.50	3.00	14.31	68.37	19.28	82.20
1993	38.13	12.33	154.07	0.00	3.43	10.88	23.58	25.55	80.24
1994	113.76	39.19	228.64	0.00	1.35	9.53	16.18	28.20	68.21
1995	151.09	49.70	330.03	--	--	170.85	30.08	33.63	64.66
1996	184.78	78.66	436.14	105.56	25.45	250.96	26.89	31.78	59.77
1997	241.18	126.43	550.89	143.15	31.23	362.88	25.52	21.98	52.10
1998	380.88	206.09	776.57	195.02	32.04	512.11	15.00	10.53	67.69
1999	401.50	123.87	1,054.20	180.09	47.32	644.75	15.82	5.65	77.86
2000	465.70	152.50	1,367.40	164.50	70.92	738.33	8.30	0.00	86.16
2001	488.40	228.60	1,561.80	259.00	143.88	853.45	14.70	0.00	100.86
2002	593.43	226.12	1,933.60	307.50	155.57	1,005.41	32.50	0.00	133.36
2003	628.01	275.58	2,260.36	456.14	250.53	1,165.00	35.80	0.00	169.16
2004	692.39	374.99	2,577.76	414.80	177.87	1,401.93	32.70	0.00	201.86
2005	704.20	404.55	2,877.40	585.17	205.30	1,781.80	204.65	3.70	401.81
2006	888.33	620.86	3144.87	898.00	379.0	2,300.80	393.83	167.24	553.29
2007	2313.91	584.68	4874.10	1109.02	413.36	2992.68	505.85	288.09	768.33
2008	855.82	753.14	4976.78	1082.30	406.38	3668.6	843.54	327.78	1285.06
2009	1792.7	707.15	--	1167.8	--	--	1662.9	440.0	--
Yearly Growth	25.3%	24.4%	25.0%	29.7%	27.7%	40.1%	25.5%	22.3%	26.2%

Source: Allen et al. (2011).

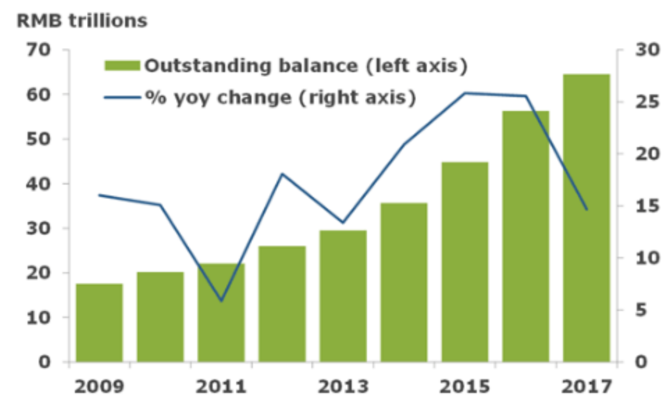
"Policy Financial Bonds" are issued by "policy banks," which operate under the supervision of the Ministry of Finance, and the proceeds of bond issuance are invested in government run projects and industries such as infrastructure construction.

- China's bond market experienced some setbacks in 2017: Domestic bond issuance declined by 15.1 percent during the year, compared to a 24.7 percent increase in 2016 (left figure).[3] With the smaller issuance, growth in outstanding onshore bonds decelerated to 14.7 percent, down from 25.5 percent growth in 2016 (right figure), according to data from China Central Depository & Clearing Co. (CCDC).[4] Bond market trading volume growth also moderated to the slowest pace since 2013. Nonetheless, the products offered by the Chinese bond market continued to grow in sophistication. The investor base has also become more diversified as overseas investors and non-bank domestic investors play a bigger role. These developments will likely contribute to the resilience of the bond market in the long run.[5]

China's domestic bond issuance (2009-2017)



Outstanding balance of China's domestic bonds (2009-2017)



[3] A domestic bond is an obligation of a domestic issuer, denominated in domestic currency, and sold and traded in the domestic market.

[4] Outstanding Bonds means the bonds not redeemed or otherwise discharged. Onshore bonds are life insurance policies that allow customers to invest a lump sum, and pay additional premiums, into a variety of available funds.

[5] Source: https://www.frbsf.org/banking/asia-program/pacific-exchange-blog/china-bond-market-slower-growth/.

- The small size of the bond market, especially the corporate bond market, relative to the stock market, is common among Asian countries.
  - Lack of sound accounting/auditing systems and high-quality bond-rating agencies.
  - Given low creditor protection and court inefficiency, the recovery rates for bondholders during default are low, which leads to underinvestment in the market.
  - Lack of a well-constructed yield curve (partially due to the small size of the publicly traded Treasury bond market and lack of historical prices).
  - The deficiencies in the term structure of interest rates have hampered the development of derivatives markets that enable firms and investors to manage risk, and the effectiveness of the government's macroeconomic policies.[6]

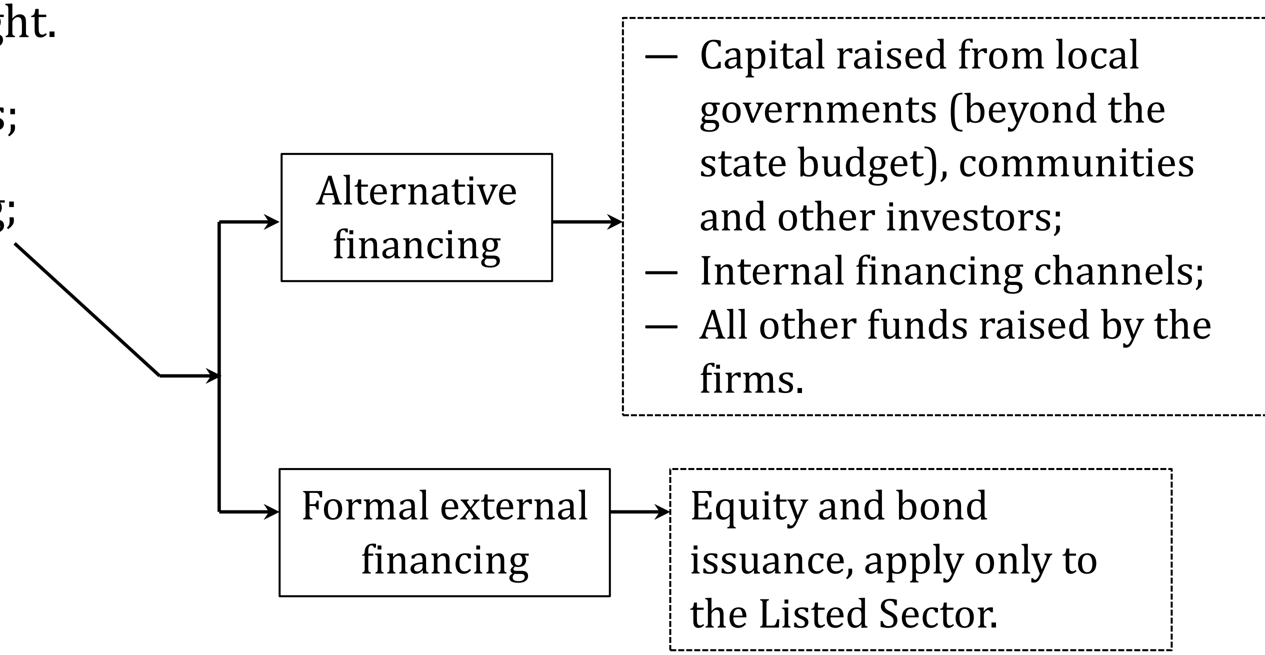
[6] The term structure of interest rates is the relationship between interest rates or bond yields and different terms or maturities. When graphed, the term structure of interest rates is known as a yield curve, and it plays a central role in an economy. The term structure reflects expectations of market participants about future changes in interest rates and their assessment of monetary policy conditions.

- China's banks and markets, or the formal sectors of the financial system, are as large as or larger than other major emerging economies (relative to its size of the economy).

- Where do most firms get the capital and funds?

  Four most important financing sources, with self-fundraising and bank loans carrying most of the weight.

  - (Domestic) Bank loans;
  - Firms' self-fundraising;
  - The state budget;
  - FDI.[7]



[7] For more on this topic, please see (1) Huang, Y., Y. Ma, Z. Yang, and Y. Zhang, (2016). A fire sale without fire: An explanation of labor-intensive FDI in China, Journal of Comparative Economics, Volume 44, Issue 4; (2) Huang, Y. (2003). Selling China: Foreign Direct Investment During the Reform Era. Cambridge University Press, New York, NY.

- The Listed Sector:
    - Around 30% of publicly traded companies' funding comes from bank loans, and this ratio has been very stable.
    - Around 45% of the Listed Sector's total funding comes from self-fundraising, including internal financing and proceeds from equity and bond issuance. Equity and bond sales only constitute a small fraction of total funds raised.
- The State Sector:
    - Self-fundraising is also the most important source of financing for the State Sector (45% to 65%).
- The Hybrid Sector:
    - Self-fundraising plays an even more important role for firms in the Hybrid Sector, accounting for close to 60% of total funds raised, while individually owned companies, a subset of the Hybrid Sector, rely on self-fundraising for 90% of total financing.

- In terms of the ratio of Time and Savings Deposits to GDP, China maintains the highest or second highest level (an average of over 90% in recent years). Looking at the breakdown of bank deposits in the table below, interest-bearing "savings deposits" are by far the most important form of deposits in China, providing a good source for bank loans and other forms of investment.

Comparisons of Total Savings and Deposits (in US$ billions)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
China												
Demand deposits[a]	320	391	465	533	647	777	899	1030	1265	1671	1931	2683
Savings deposits[b]	606	674	722	820	961	1143	1445	1748	2069	2363	3187	3811
Time deposits[c]	100	114	136	171	199	253	307	410	676	878	1205	1661
Time & Savings Dep/GDP	68%	73%	72%	75%	80%	85%	91%	95%	101%	92%	100%	114%
Japan												
Demand deposits[a]	1793	2259	2073	1838	2567	3523	3795	3541	3523	3683	4560	-
Time, savings & foreign currency deposits	7921	8997	8059	5351	5383	5416	5448	4642	4536	4778	6160	-
Time & Savings Dep/GDP	181%	185%	184%	142%	131%	118%	114%	109%	106%	106%	110%	-
South Korea												
Demand deposits[a]	18	22	23	27	36	38	46	54	67	66	50	63
Time, savings & foreign currency deposits	185	251	289	315	383	410	467	485	546	543	471	574
Time & Savings Dep/GDP	46%	54%	61%	64%	63%	64%	58%	57%	56%	52%	58%	63%
India												
Demand deposits[a]	24	28	31	32	35	44	60	71	89	114	96	119
Time, savings & foreign currency deposits	140	161	175	198	235	277	333	368	460	647	653	800
Time & Savings Dep/GDP	34%	36%	39%	42%	46%	46%	46%	46%	49%	54%	59%	60%

Source: Allen et al. (2011).

- NPLs related issues:

  1) Comparing NPLs in China with other economies:

     - China’s banking sector is dominated by large state-owned banks. The degree of competition within the banking sector has been low.
     - The most significant problem for China’s banking sector during the last decade was the amount of NPLs within state-owned banks, and in particular, among the Big Four banks.

Year	China		U.S.		Japan		Korea		India		Indonesia		Taiwan	
Panel A: Size of NPLs: In US$ billion and as percentage of GDPs in the same year (in brackets)														
		--	66.9	(0.8%)	217.4	(5.1%)	16.2	(3.1%)		--	0.2	(0.1%)	19.6	(6.5%)
1998	20.5	(2.0%)	71.3	(0.8%)	489.7	(12.7%)	23.2	(6.7%)	12.7	(3.1%)	5.5	(5.2%)	21.8	(7.9%)
1999	105.1	(9.7%)	72.2	(0.8%)	547.6	(12.6%)	54.4	(12.2%)	14.0	(3.2%)	3.2	(3.8%)	27.2	(9.1%)
2000	269.3	(22.5%)	90.1	(0.9%)	515.4	(11.1%)	35.5	(6.9%)	12.9	(2.8%)	6.3	(2.7%)	33.2	(10.3%)
2001	265.3	(20.0%)	108.4	(1.1%)	640.1	(15.6%)	12.2	(2.5%)	13.2	(2.8%)	4.3	(1.7%)	37.9	(13.0%)
2002	188.4	(13.0%)	107.8	(1.0%)	552.5	(14.1%)	9.9	(1.8%)	14.8	(3.0%)	3.3	(2.0%)	30.7	(10.4%)
2003	181.2	(11.0%)	95.9	(1.0%)	480.1	(11.3%)	11.7	(1.9%)	14.6	(2.5%)	4.7	(1.5%)	23.1	(7.7%)
2004	207.4	(10.7%)	81.3	(0.9%)	334.8	(7.3%)	10.0	(1.5%)	14.4	(2.2%)	3.8	(2.1%)	26.4	(5.1%)
2005	164.2	(7.3%)	84.6	(0.7%)	183.3	(4.0%)	7.6	(1.0%)	13.4	(1.7%)	6.0	(1.5%)	11.2	(3.2%)
2006	157.4	(5.9%)	103.8	(0.8%)	157.8	(3.6%)	8.2	(0.9%)	11.2	(1.3%)	5.2	(1.4%)	11.3	3.1%
2007	166.8	(5.1%)	168.1	(1.2%)	148.6	(3.4%)	8.3	(0.8%)	13.6	(1.2%)	4.5	(1.0%)	10.0	2.6%
2008	80.6	(1.9%)	328.7	(2.3%)	190.8	(3.7%)	13.0	(1.4%)	15.4	(1.3%)	4.3	(0.8%)	9.0	2.3%
2009	72.6	(1.5%)	477.5	(3.3%)	188.45	(3.63%)	13.9	(1.5%)	18.2	(1.3%)	4.6	(1.0%)	6.7	(1.8%)
2010	68.1	(1.1%)	423.4	(2.9%)	208.70	(3.82%)	26.8	(2.6%	20.7	(1.2%)	4.3	(0.6%)	3.8	(0.9%)

Source: Allen et al. (2011).

2) Reducing NPLs in China

- Since a large fraction of the NPLs among state-owned banks resulted from poor lending decisions made for SOEs, some of which were due to political reasons.
- The natural party to bear the burden of reducing the NPLs is the government. Treating NPLs as a fiscal problem implies that the ultimate source of eliminating NPLs lies in China's overall economic growth.
- Compares total outstanding government debt, and the ratio of (NPLs + Government Debt) to GDP across countries indicating the total burden of the government.

Year	China	U.S.	Japan	Korea	India	Indonesia	Taiwan
Panel B: Outstanding Government Debt ($ billion)							
	Outstanding Government Bond	Total Government Debt	Total Government Debt	Outstanding Treasury Bonds	Total Public Debt	Outstanding Government Bond	Outstanding Government Bond
1997	66.5	5,802.8	4,254.0	5.3	--		
1998	93.8	5,788.8	4,858.0	14.4	178.4		
1999	127.3	5,822.7	6,053.1	28.5	260.2	34.1	46.5
2000	165.1	5,612.7	6,209.8	32.7	232.4	45.1	45.5
2001	188.6	5,734.4	6,036.0	39.8	225.4	43.5	58.7
2002	233.5	6,169.4	6,321.3	45.2	250.2	42.1	77.7
2003	273.0	6,789.7	6,852.9	67.9	259.7	48.0	75.7
2004	311.3	7,335.6	7,446.6	107.0	299.6	44.7	85.2
2005	350.0	7,809.5	8,299.5	165.5	347.1	39.9	86.7
2006	364.6	8,451.4	7,587.1	216.7	375.2	45.7	85.8
2007	599.8	8,950.7	7,707.7	245.0	472.0	51.8	94.5
2008	701.6	9,985.8	8,966.2	217.8	496.4	52.8	90.4
2009	753.6	12,867.5	9,466.8	290.9	556.6	52.5	82.9
2010	805.3	14,551.8	11,284.9	364.0	643.6	68.4	102.0
Panel C: (NPLs + Outstanding Government Debt)/GDP							
	--	0.71 (0.54)	1.05 (0.40)	0.04	--	--	--
1998	0.11	0.67 (0.50)	1.39 (0.63)	0.11	0.46	--	--
1999	0.21	0.64 (0.45)	1.51 (0.64)	0.19	0.62	0.24	0.25
2000	0.36	0.58 (0.40)	1.45 (0.65)	0.13	0.53	0.31	0.24
2001	0.34	0.58 (0.39)	1.63 (0.83)	0.11	0.50	0.30	0.33
2002	0.29	0.60 (0.42)	1.76 (0.90)	0.10	0.54	0.23	0.37
2003	0.28	0.63 (0.45)	1.73 (0.86)	0.13	0.48	0.22	0.33
2004	0.27	0.63 (0.46)	1.70 (0.81)	0.17	0.47	0.19	0.32
2005	0.23	0.63 (0.47)	1.86 (0.84)	0.22	0.47	0.16	0.27
2006	0.20	0.65 (0.44)	1.78 (0.88)	0.24	0.44	0.14	0.26
2007	0.23	0.66 (0.45)	1.79 (0.89)	0.24	0.44	0.13	0.27
2008	0.18	0.72 (0.50)	1.78 (0.88)	0.25	0.42	0.11	0.25
2009	0.17	0.94 (0.46)	1.55 (1.15)	0.24	0.58	0.11	0.24
2010	0.21	1.01 (0.70)	1.94 (1.20)	0.33	0.45	0.10	0.25

The Chinese government has not issued a large amount of debt;

Japan is the only country in the group that has a large amount of NPLs and government debt for most of the period;

China's total government burden is relatively low.

- The injection plan in China:
    - The Chinese government injected large amounts of foreign currency reserves into the Big Four banks to improve their balance sheets in preparation for going public.

      This process began in 2003, with the establishment of the Central Huijin Investment Company (中央汇金投资有限责任公司), through which the PBOC injected US$45 billion of reserves into the BOC and PCBC, while ICBC received US$15 billion in 2005.
    - However, the injection plan will not prevent new NPLs from originating in the banking system.
    - All Big Four banks have since become publicly listed and traded on either the HKSE and/or the SHSE, including ABC (the last of the Big Four), which completed its IPO on July 15, 2010 (SHSE) and July 16 (HKSE).
        - "Too big to fail";
        - Moral hazard problem.

- The establishment of four state-owned Asset Management Companies (AMCs):
  - The goal of the AMCs is to assume the NPLs (and offering debt-for-equity swaps to the banks) accumulated in each of the Big Four banks and liquidate them.
  - The cash recovery on the bad loans processed by the AMCs ranges from 6.9% to 35% between 2001 and 2006 (first quarter) while the asset recovery rates are slightly higher.
  - A critical issue that affects the effectiveness of the liquidation process is the relationship among AMCs, banks, and the borrowers. As the old NPLs are liquidated, new NPLs from the same borrowers continue to surface.

中国长城资产管理公司
CHINA GREAT WALL ASSET MANAGEMENT CORPORATION

中国东方资产管理公司
China Orient Asset Management Corporation

中国信达资产管理股份有限公司
CHINA CINDA ASSET MANAGEMENT CO., LTD.

中国华融资产管理股份有限公司
CHINA HUARONG ASSET MANAGEMENT CO., LTD.

Remarks:

- The government is faced with the dilemma of either maintaining a defective financial system or abandoning its basic industrial strategy and with it the state-owned enterprises.
- In the long run, the financial system has to be liberalized as the state-owned industrial sector's contribution to production continues to decline and the private sector becomes the main source of industrialization and growth.

IV. Ten Basic Macro Facts Most Economists Could Agree Upon: A Chance to Review

Below are some central ideas in macroeconomics that are worth reviewing before progressing to our coming topics.

1. Demand is important. A large drop in aggregate demand can cause a recession.
2. Supply is important. A large drop in aggregate supply can cause a recession.
3. The money supply is important. High persistent inflation is caused by an overly rapid increase in the money supply relative to output over a long period of time.
4. Increased government spending when the economy is at full employment can crowd out other economic sectors: Private Investment, Exports, and Consumption.
5. Monetary policy works through several channels. A key one is known as the "transmissions mechanism," in which (1) the central bank open market operations impact short-term interest rates; (2) short-term interest rates impact longer-term interest rates; (3) both short- and long-term rates impact investment demand and consumer demand; (4) the change in investment and consumer demand impacts economic output and employment.
6. Lack of flexibility in wages and prices opens up the possibility of prolonged periods in which the economy is either in recession or operating above full employment.

7. There is no long-run tradeoff between inflation and the unemployment rate.
8. Fiscal policy is relatively more effective under fixed exchange rate regimes; monetary policy is relatively more effective under floating exchange rate regimes.
9. The presence of rational expectations (in which economic agents form expectations accurately and consistently with a true economic model) tends to reduce the effectiveness of activist fiscal and monetary policies.
10. Recessions triggered by financial crises have greater depth and length than recessions triggered by conventional demand and supply shocks.

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