

The Road to Globalization: China's Development of its Financial Markets

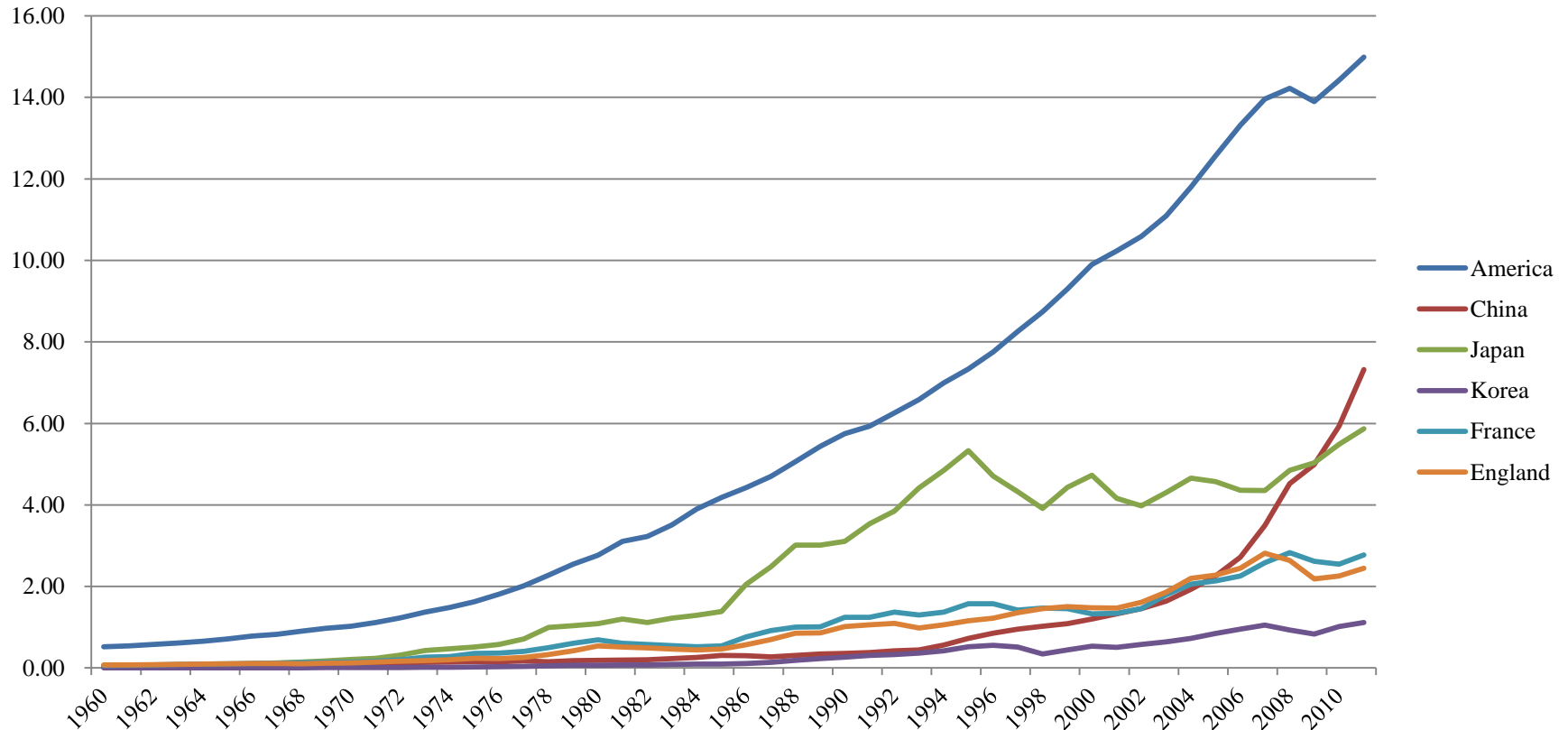
Hui Ou-Yang

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China's GDP in the Last 20 Years

GDP of different countries (Unit: trillion USD)

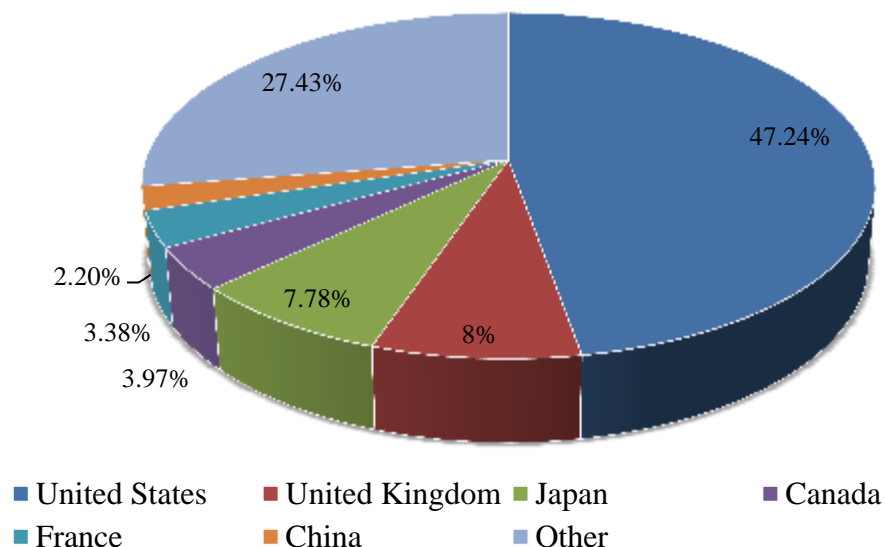


Source: the World Bank

- China's GDP has grown very fast in the past 20 years from 0.19 trillion USD in 1980 to 8.3 trillion USD in 2012.
- In 2012, China's GDP accounted for around 10% of world's total GDP.
- China's GDP growth rate remains higher than world's GDP growth rate, with a 7.8% rate in 2012.

China's Equity Market and the World Equity Market

MSCI ACWI country weights



MSCI ACWI top 10 constituents

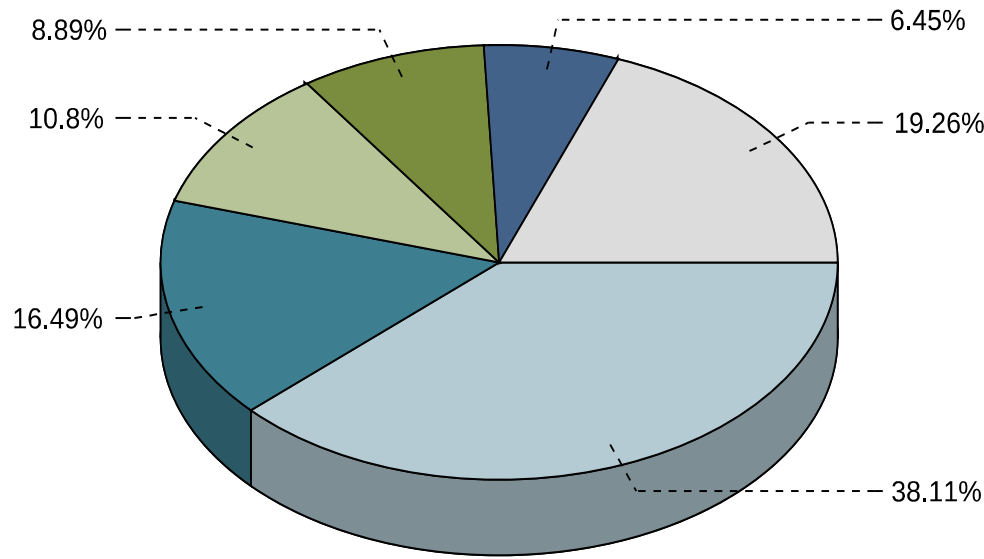
	Country	Mkt Cap (USD Billions)
APPLE	US	416.38
EXXON MOBIL CORP	US	410.84
GENERAL ELECTRIC CO	US	242.44
NESTLE	CH	233.78
CHEVRON CORP	US	232.55
IBM CORP	US	228.96
JOHNSON & JOHNSON	US	225.94
MICROSOFT CORP	US	216.72
PFIZER	US	212.48
PROCTER & GAMBLE CO	US	210.70
Total		2,630.81

Source: <http://www.msci.com/>

- ◆ In MSCI ACWI Index, US accounts for 47.24%, while Japan accounts for 7.78% and China about 2.2%.
- ◆ 9 out of 10 MSCI ACWI top constituents are US companies. Asian companies have smaller market caps. SAMSUNG with the market cap of 151.62 billion USD is the largest in Asia, while Apple from the US has a market cap of 416.38 billion USD. The market cap of China's largest company, China Mobile, is only 63.85 billion USD.

China's Equity Market and Asian Equity Market

MSCI AC Asia country weights



- Japan 38.11%
- Australia 16.49%
- China 10.8%
- South Korea 8.89%
- Taiwan 6.45%
- Other 19.26%

Source: <http://www.msci.com/>

MSCI AC Asia top 10 constituents

	Country	Mkt Cap (USD Billions)
SAMSUNG ELECTRONICS CO	KR	151.62
TOYOTA MOTOR CORP	JP	142.58
COMMONWEALTH BANK	AU	114.10
BHP BILLITON LTD	AU	109.69
WESTPAC BANKING	AU	98.81
TAIWAN SEMICONDUCTOR MFG	TW	82.74
ANZ BANKING GROUP	AU	80.86
MITSUBISHI UFJ FIN GRP	JP	75.63
NATIONAL AUSTRALIA BANK	AU	74.66
CHINA MOBILE	CN	63.85
Total		994.55

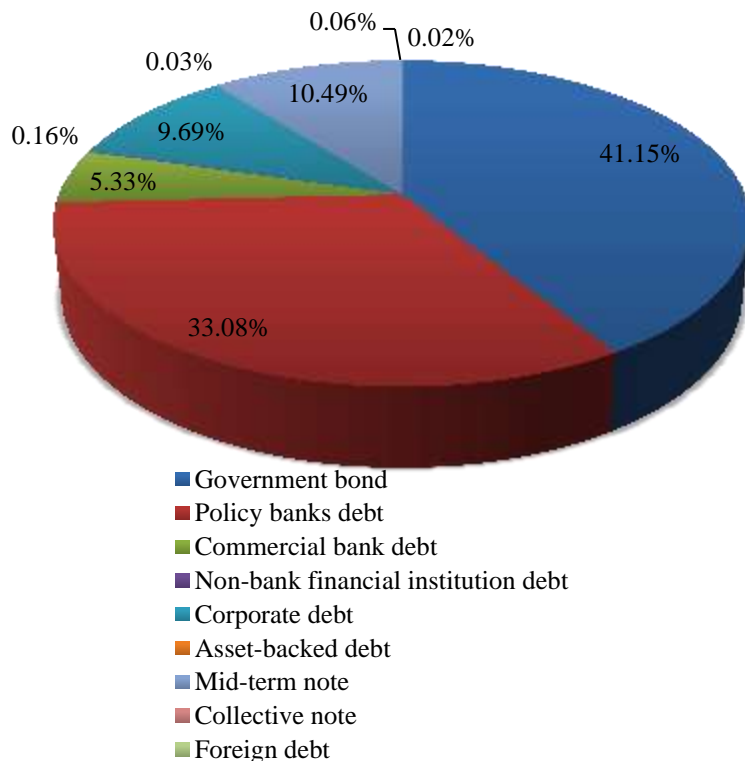
- ◆ In MSCI AC Asia Pacific Index, Japan accounts for 38.11%, while China accounts for 10.8% and South Korea 8.89%.
- ◆ Chinese companies have relatively small market cap compared to other Asian companies.

Bond Markets: China and the US

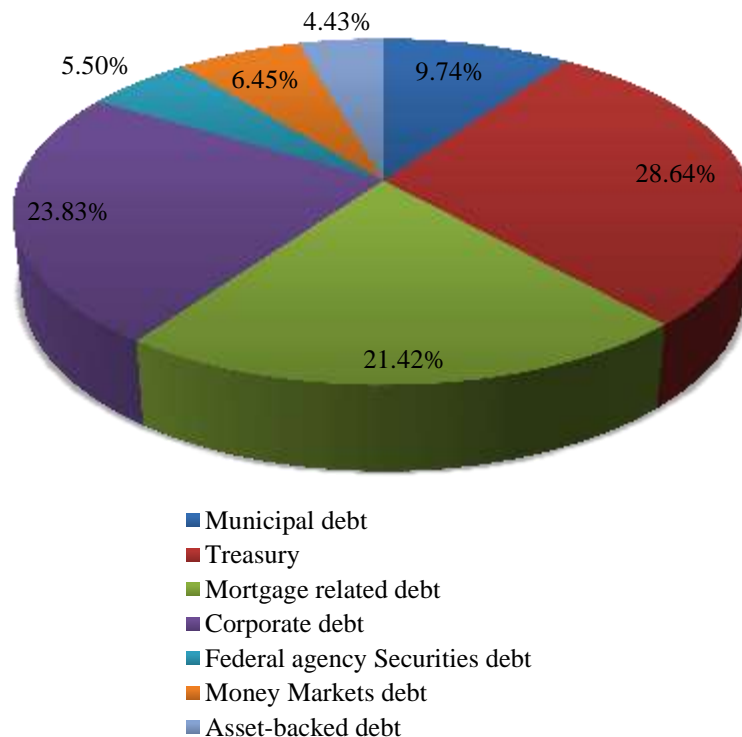
	China	America
Bond market size	23.76 trillion RMB (3.82 trillion USD)	38.14 trillion USD
GDP	47 trillion RMB (7.55 trillion USD)	15.7 trillion USD
Proportion of bond market size to GDP	0.51	2.43

- ◆ China's bond market size is much smaller than that of the US.
- ◆ Government bond and policy bank debt dominate China's bond market with proportions of 41.15% and 33.08%, whereas in the US, treasury, corporate debt and mortgage related debt dominate the bond market, with proportions of 28.64%, 23.83% and 21.42%, respectively.

China's Bond Market Breakdown



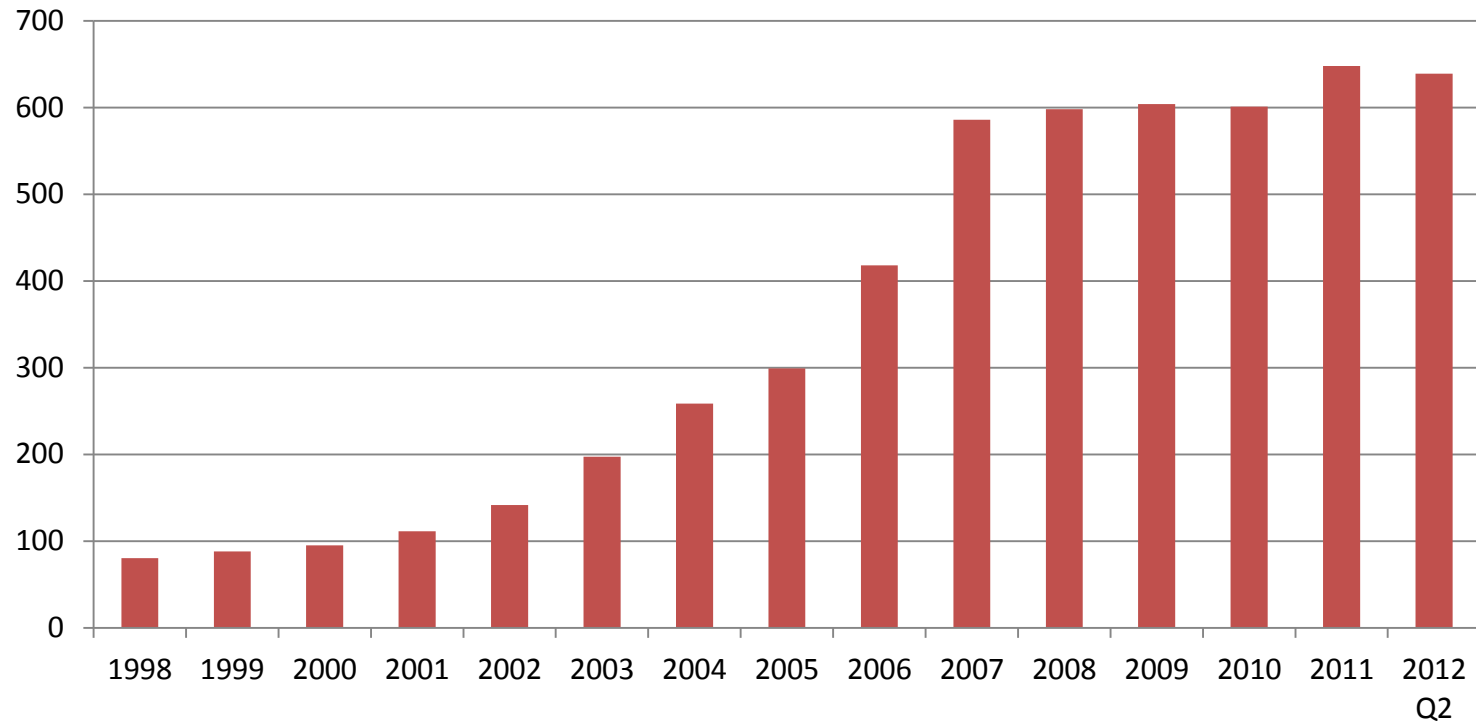
US Bond Market Breakdown



Common Derivatives and Structured Products

- ◆ **Futures**
- ◆ **Options**
- ◆ **Mortgage Backed Securities (MBS)**
- ◆ **Credit Default Swaps (CDS)**
- ◆ **Collateralized Debt Obligations (CDOs)**

Global Outstanding Amount of OTC Derivatives (Par Value) (Unit: trillion USD)

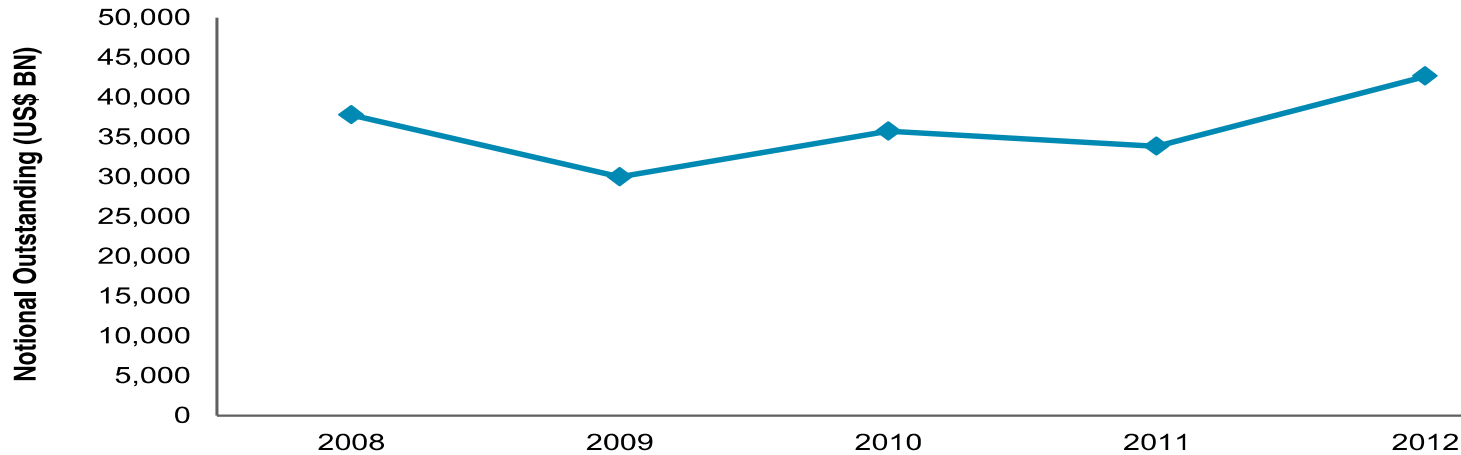


- From 2002 to 2007, the global outstanding amount of OTC Derivatives surged from a total value of 140 trillion USD to 585 trillion USD but has remained flat after the financial crisis.

Source: <http://www.bis.org/statistics/derstats.htm>

Asia-Pacific OTC Derivatives Market

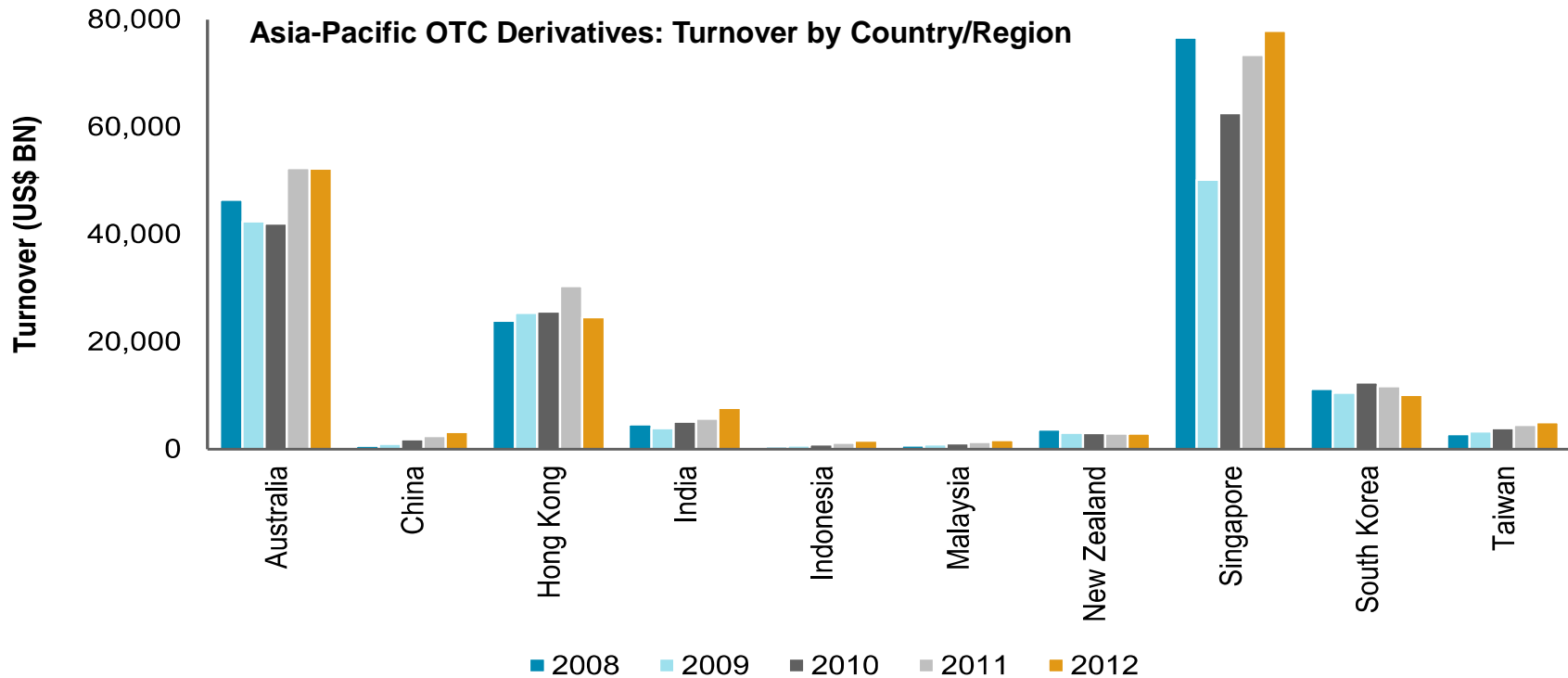
Asia-Pacific OTC Derivatives: Notional Outstanding



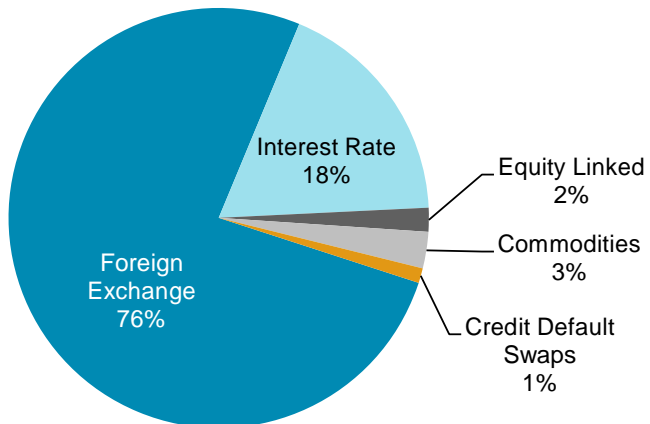
- After the global financial crisis in 2008, notional declined in 2009 before rising in 2010.
- Notional outstanding spiked in 2012 (over 25% from 2011 to 2012), due to the strong growth in FX and interest rate derivatives

Source: Celent analysis based on central banks, BIS, IMF, World Bank, news sources

Asia-Pacific OTC Derivatives Market

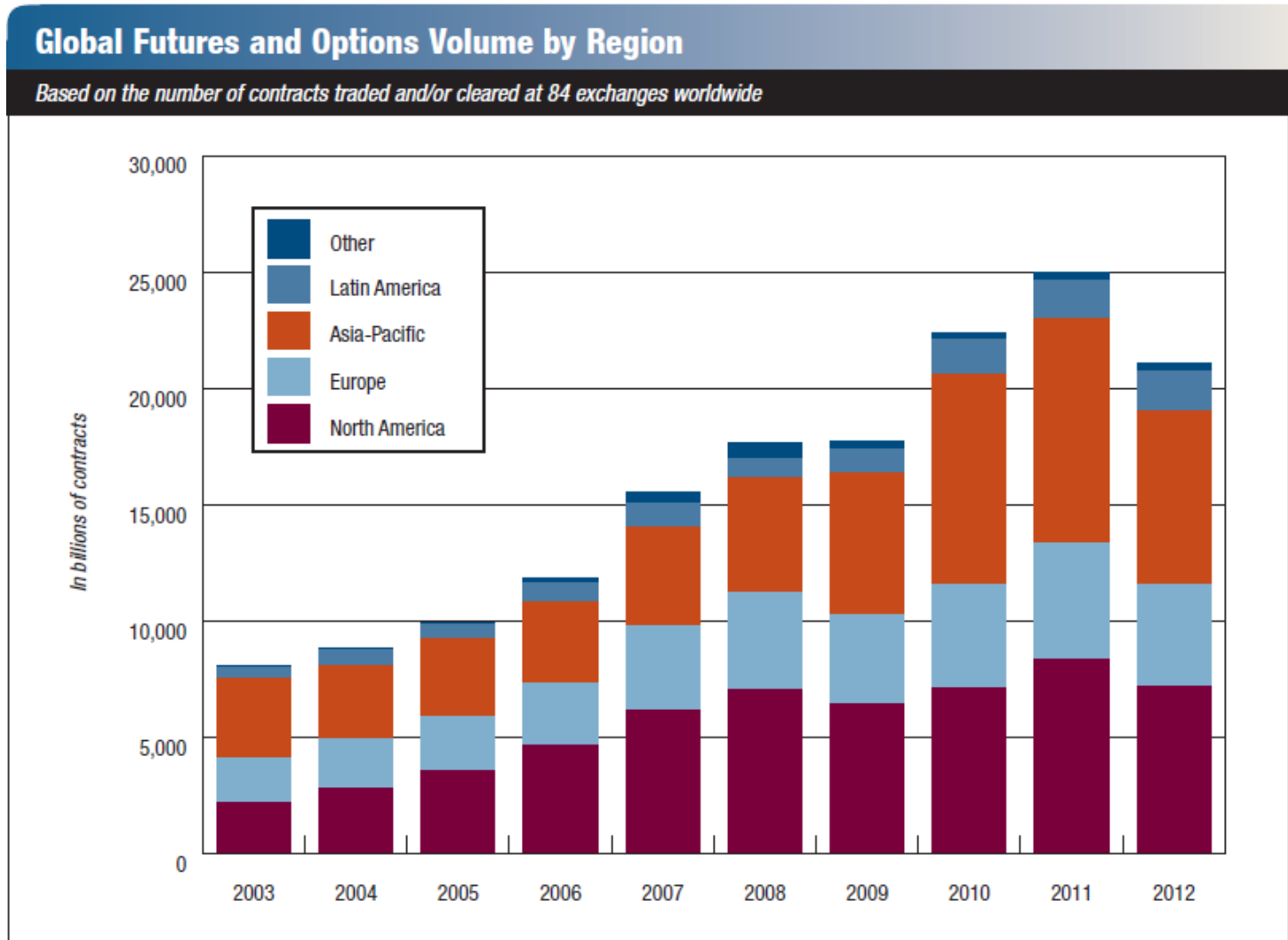


Asia-Pacific OTC Derivatives: Share of Turnover



- Leaders in Asia-Pacific OTC derivatives are Singapore, Australia, Hong Kong.
- In 2012, FX OTC Derivatives accounted for a whopping 76% of Asia turnover, with interest rate derivatives a distant second at 18%.
 - Multiple sets of rules and regulations drive the need for hedging currency exposure.
 - Many global and regional firms in Asia have financing needs from other countries.

Global Futures Market



<http://www.futuresindustry.org/volume-.asp>

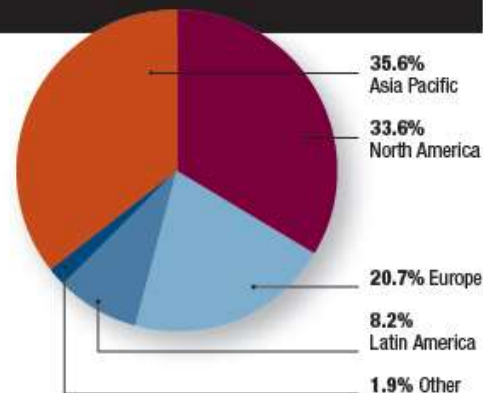
Global Futures Market

Global Futures and Options Volume by Region

Based on the number of contracts traded and/or cleared at 84 exchanges worldwide

Region	Jan-Dec 2011	Jan-Dec 2012	% Change
Asia Pacific	9,825,035,798	7,525,104,448	-23.4%
North America	8,185,544,285	7,207,682,122	-11.9%
Europe	5,017,134,049	4,388,879,712	-12.5%
Latin America	1,603,203,726	1,730,633,144	7.9%
Other	350,764,885	318,088,419	-9.3%
Total	24,981,682,743	21,170,387,845	-15.3%

Note: Location of exchanges is determined by country of registration. Other consists of exchanges in Dubai, Israel, South Africa, and Turkey.

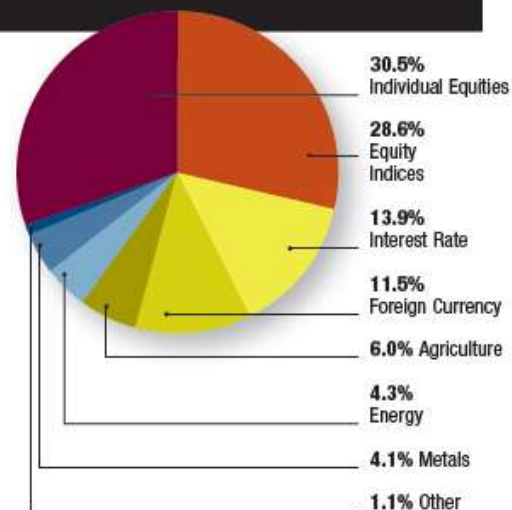


Global Futures and Options Volume by Category

Based on the number of contracts traded and/or cleared at 84 exchanges worldwide

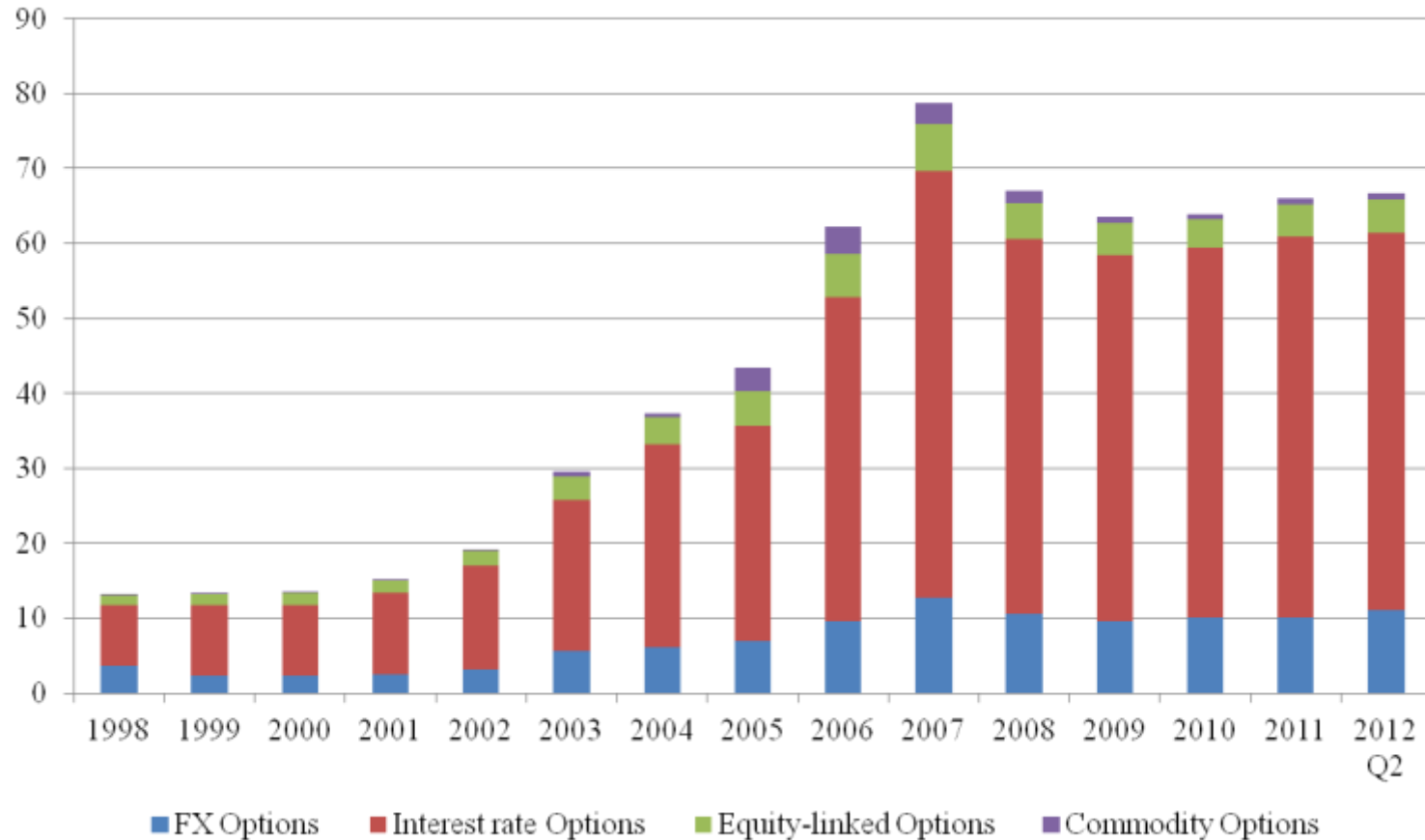
Category	Jan-Dec 2011	Jan-Dec 2012	% Change
Individual Equity	7,062,567,141	6,467,944,406	-8.4%
Equity Index	8,462,371,741	6,048,262,461	-28.5%
Interest Rate	3,491,200,684	2,933,255,540	-16.0%
Currency	3,147,046,787	2,434,238,493	-22.7%
Agriculture	996,837,283	1,270,531,588	27.5%
Energy	814,774,756	905,856,150	11.2%
Non-Precious Metals	435,113,003	554,253,069	27.4%
Precious Metals	342,057,656	319,267,659	-6.7%
Other	229,713,692	236,778,479	3.1%
Total	24,981,682,743	21,170,387,845	-15.3%

Note: Other includes contracts based on commodity indices, credit, fertilizer, housing, inflation, lumber, plastics and weather.



Global Options Market

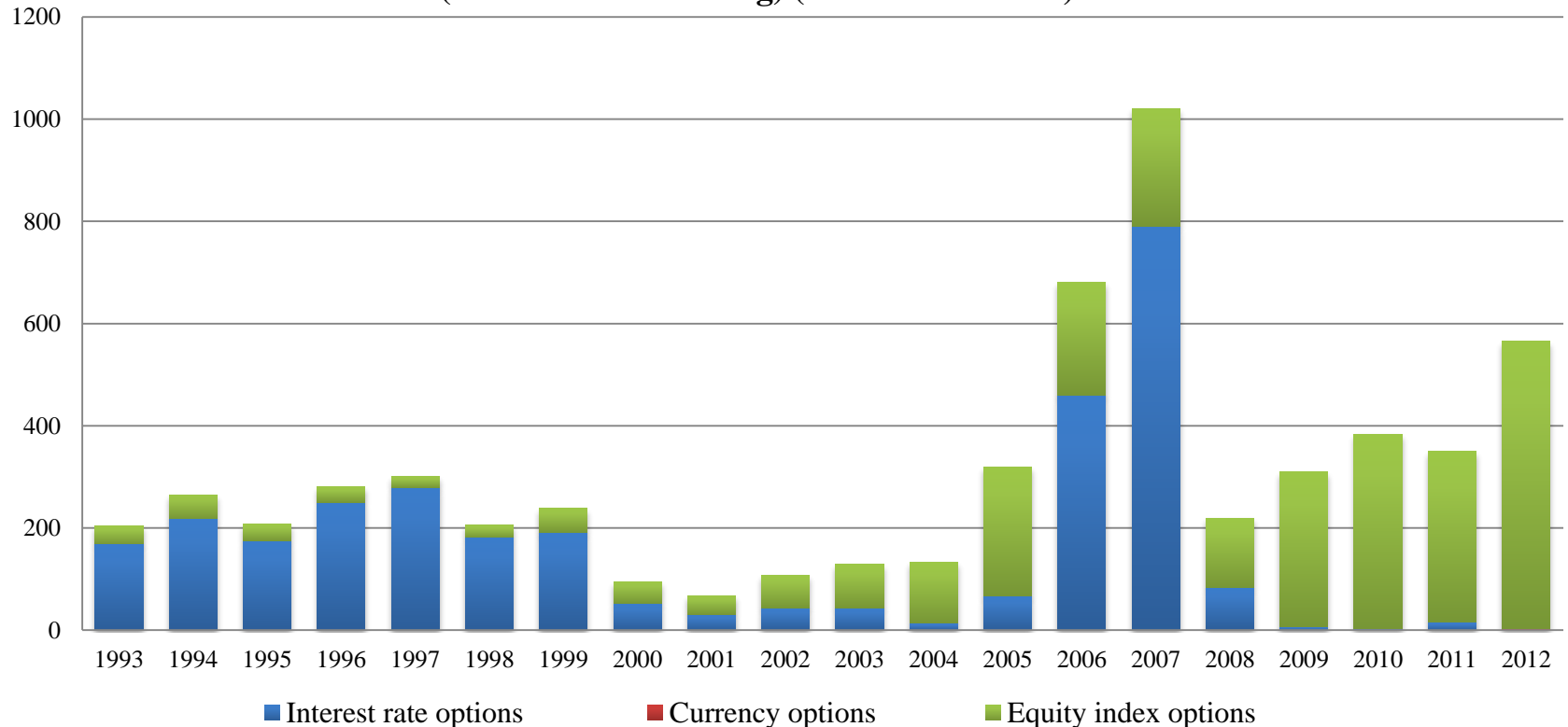
Global Outstanding Amount of OTC Options (Par Value) (Unit: trillion USD)



- During 2002-2007 the global outstanding amount of options surged from a total par value of around 20 trillion USD (2002) to nearly 80 trillion USD (2007) but has fallen below 70 trillion USD since 2008.
- Interest rate options account for the largest proportion.

Asian Options Market

Asia Pacific Outstanding Amount of Exchange Traded Options
(Notional Outstanding) (Unit: billion USD)

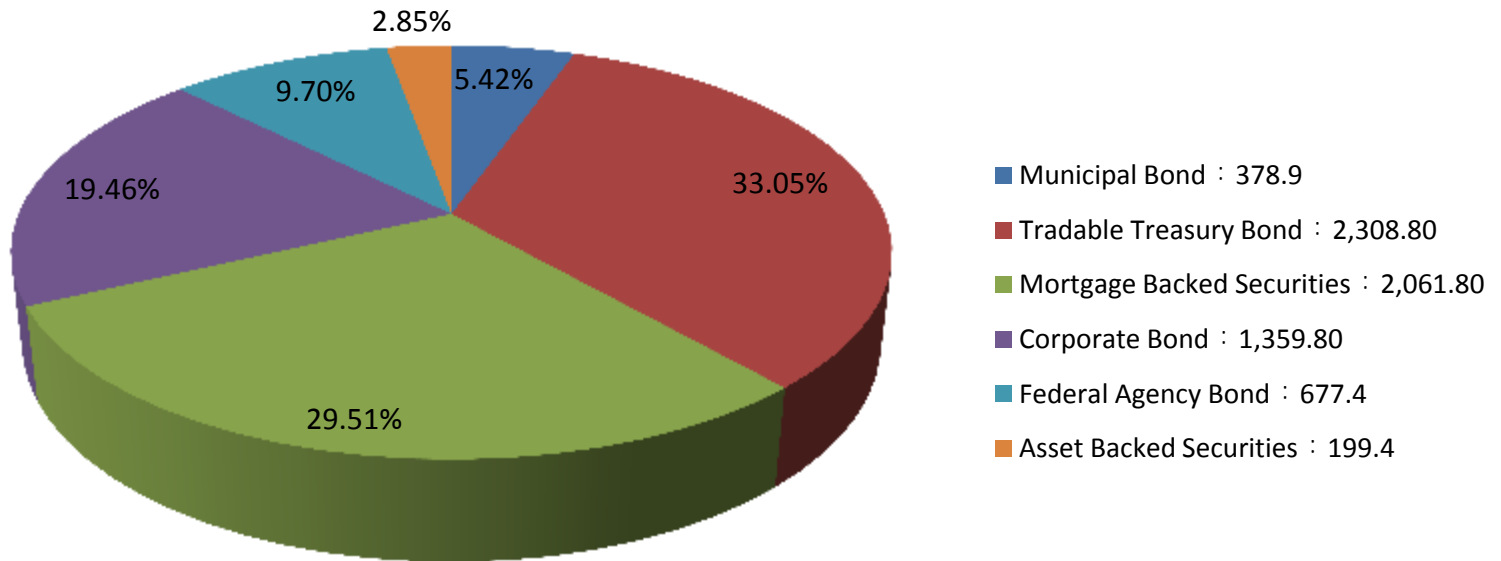


Source: <http://www.bis.org/statistics/derstats.htm>

- From 2001 to 2007, Exchange Traded Options increased significantly from 67.67 billion USD in 2001 to 1020.73 billion USD in 2007.
- The total amount dropped tremendously in 2008 and has been rising moderately.
- The amount of Interest Rate Options decreased in 2000 to 2004 and surged till 2007, then decreased suddenly to almost none.
- The amount of Equity index options increased steadily and accounts for the largest proportion.

MBS

2012 US Bond Issuance Amount Breakdown (Unit : billion RMB)

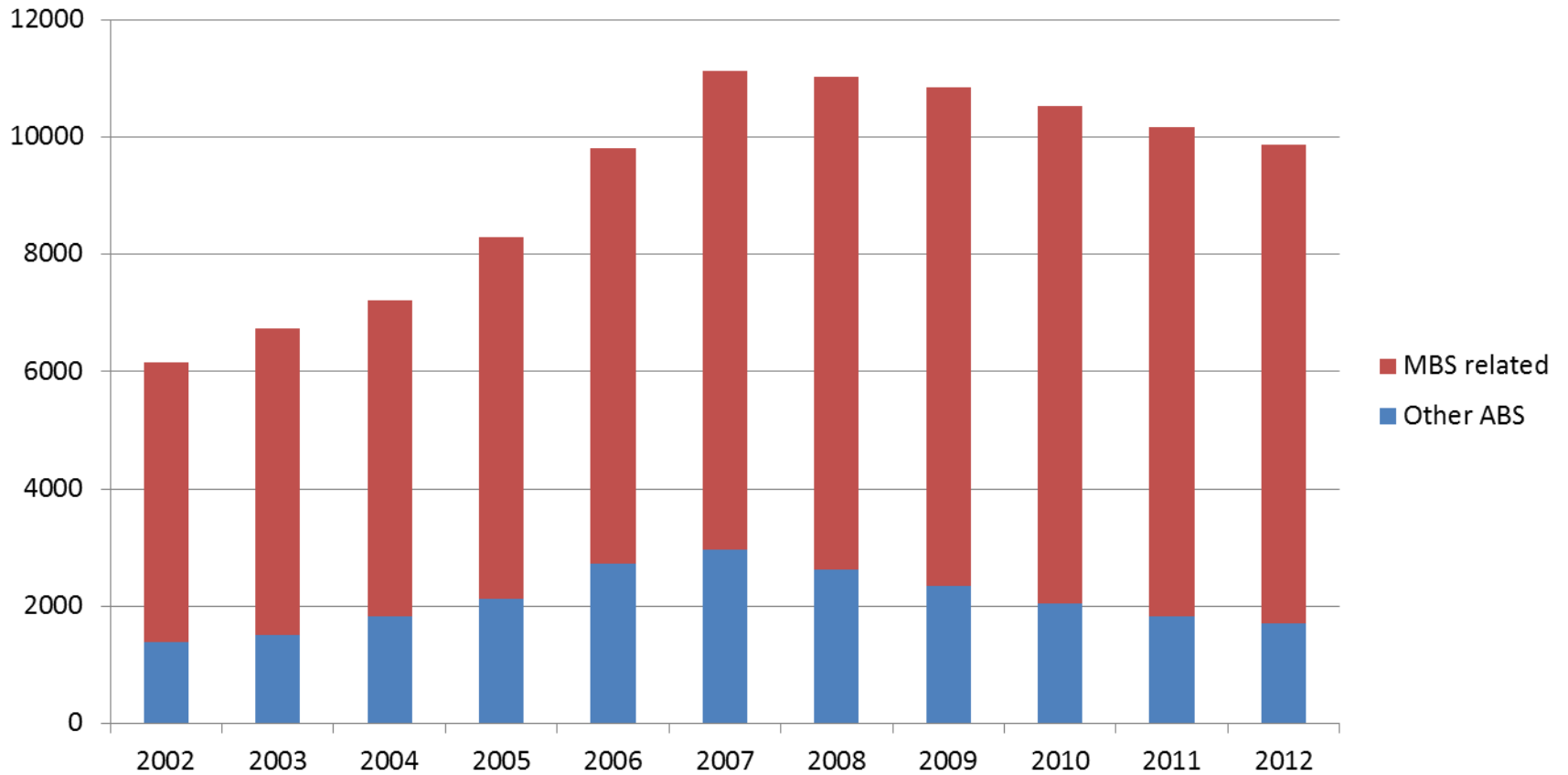


- The total issuance amount of US Bonds in 2012 was around 6941 billion USD. There were six main types of bonds that accounted for this amount. Treasury Bonds enjoyed the largest share of bond issuance amount (33.05%), followed by Mortgage Backed Securities (29.51%) with an amount of 2061.80 billion USD and Municipal Bond (19.46%) with an amount of 1359.80 billion USD.

Source: <http://www.sifma.org/research/statistics.aspx>

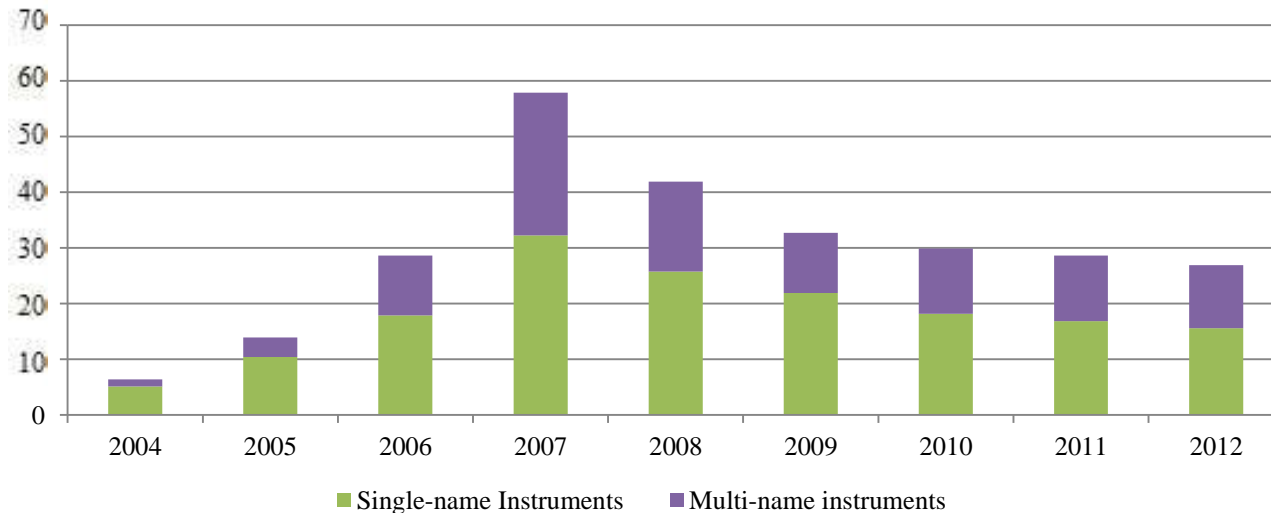
MBS and ABS Outstanding

U.S. ABS and MBS securities outstanding (USD billions)



CDS

**Global Outstanding Amount of CDS (Par Value)
(Unit: Trillion USD)**

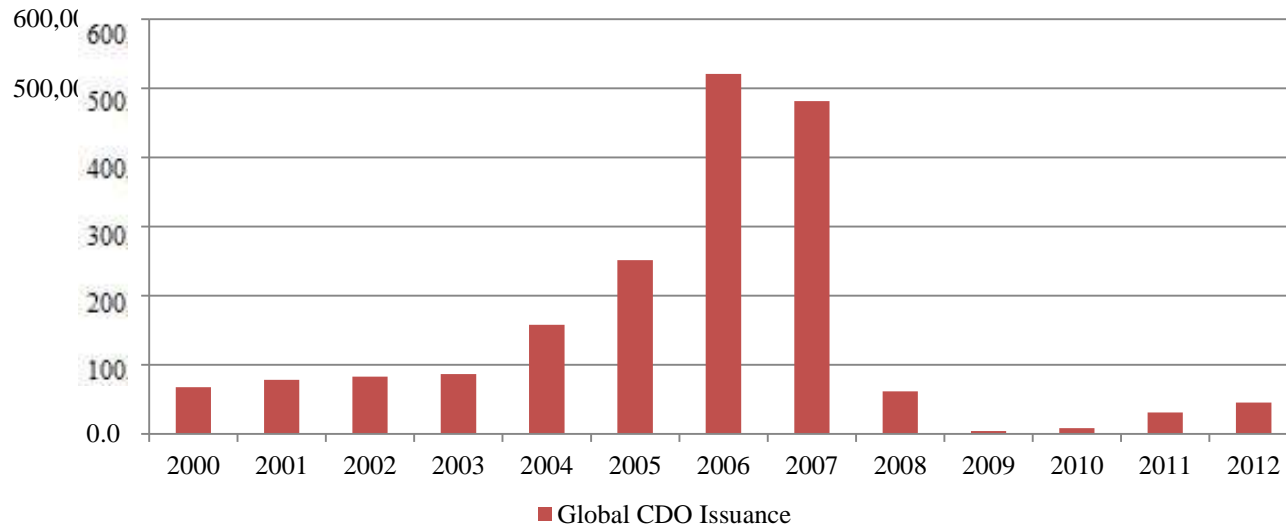


- The global outstanding amount of CDS peaked in 2007 (nearly 60 trillion USD). After 2007, the outstanding amount of CDS declined due to the financial crisis.
- Single-name Instruments take a larger proportion than Multi-name instruments.

Source: <http://www.bis.org/statistics/derstats.htm>

CDO

Global Issuance Amount of CDO (Unit: Billion USD)

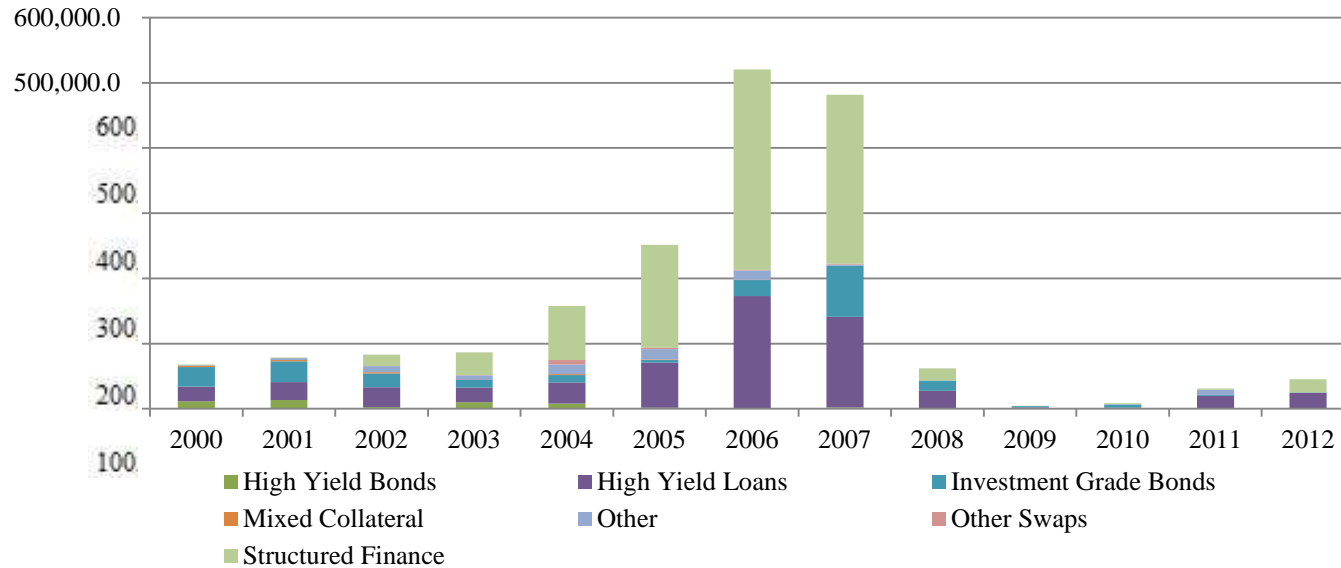


- The issuance amount of CDO peaked in 2006 (more than 500 billion USD). It, however, fell back dramatically in 2008 and had essentially no issuance in 2009 and 2010. It has started to grow slowly since 2011.

Source: <http://www.sifma.org/research/statistics.aspx>

CDO

**Global Issuance Amount of CDO (Unit: Billion USD)
by Collaterals**



- There are six main types of collaterals for CDOs.

Economic Development and Financial Markets

China's economy has grown fast but its financial markets have not kept pace

- ◆ Financial Regulation: Administrative-dominated and Decentralized Networks of Regulators
 - Practice of Administrative Examination and Approval
 - Separate supervisory structure in financial operations
 - Lack of innovation impetus in financial markets due to strong control
 - Confusion and competition among different financial regulators
 - Lack of a unified and timely information collecting and processing platform

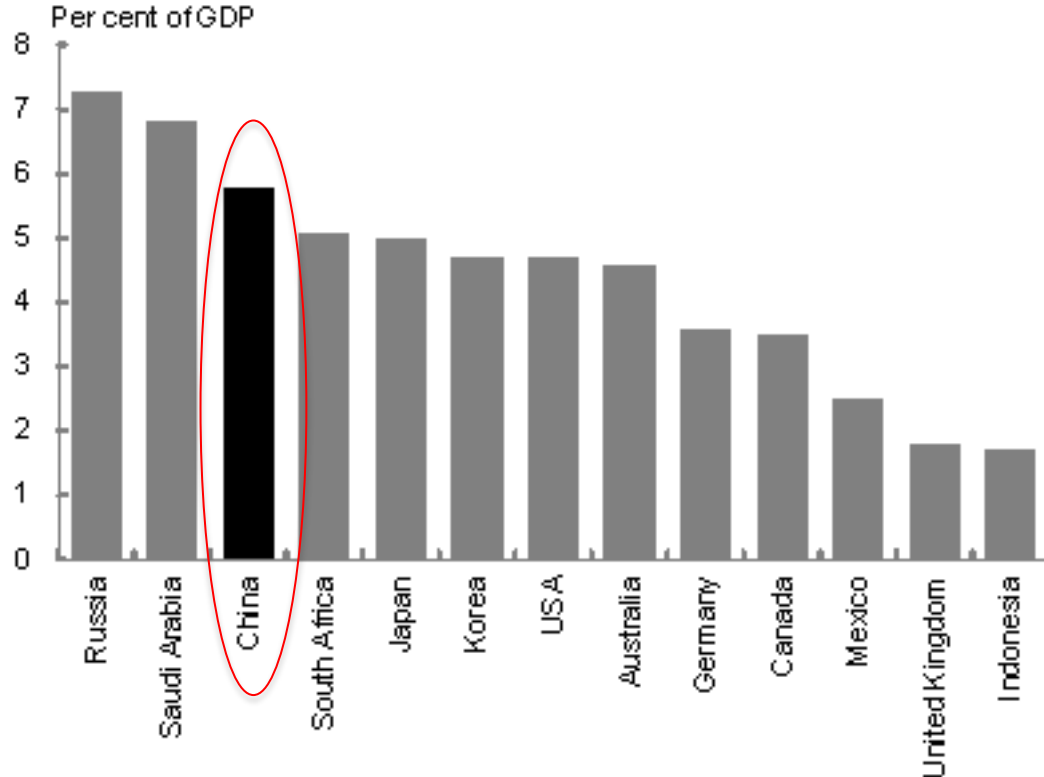
- ◆ Low Degree of Capital Account Liberalization
 - Capital account liberalization: key to financial market internationalization
 - Strict control on capital account: FDI, foreign borrowing, foreign lending, cross-border securities investment

- ◆ Developing pattern: Investment-driven
 - China's economy has a big investment part, which is mostly driven by bank loans.

Economic Development and Financial Markets

- ◆ For example, China announced a RMB 4 trillion stimulus package in Nov. 2008.
- ◆ The package was predominantly investment-focused, in contrast to the packages announced in many other economies. In China's centrally planned, investment-orientated economy, investment was seen as the most direct and effective way of stimulating activities.
- ◆ Infrastructure made up the majority (72%) of the stimulus package.

Combined 2009 and 2010 stimulus, by country



Source: IMF 2010

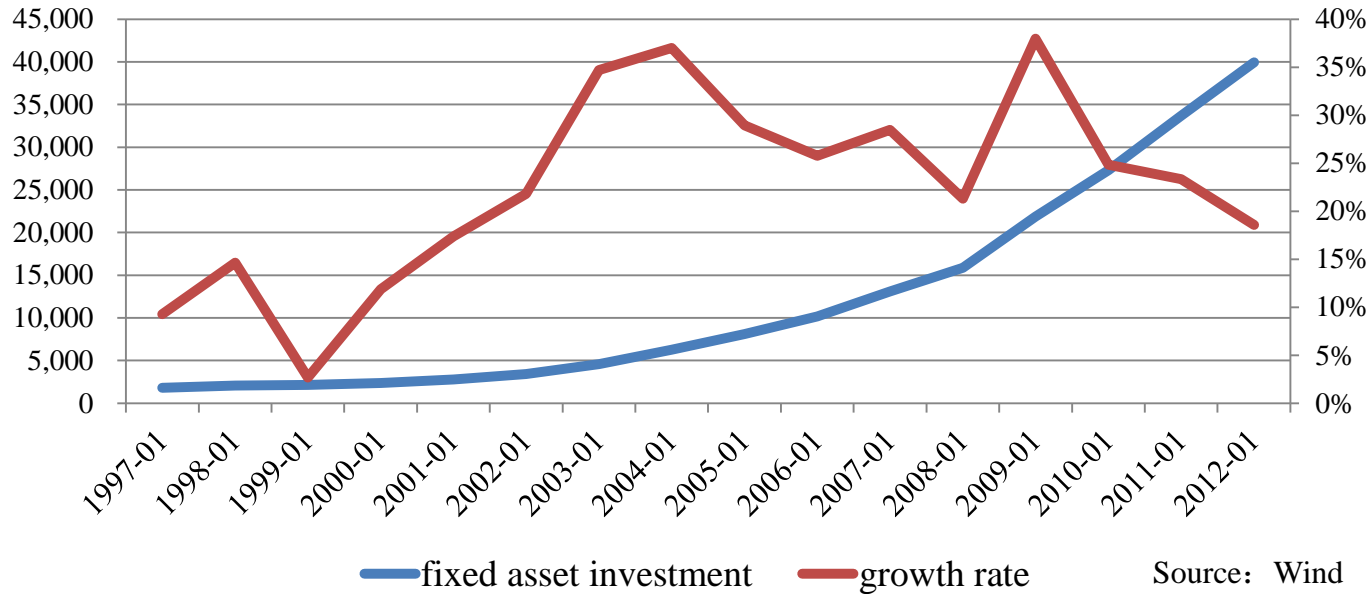
Breakdown of the RMB 4 trillion stimulus package (RMB)

Infrastructure	2.87
General Infrastructure	1.50
Reconstruction of Sichuan earthquake area	1.00
Rural area infrastructure	0.37
Technology & Environment	0.58
Technology & structural adjustment	0.37
Energy savings & emission reductions	0.21
Social Measures	0.55
Construction & renovation cheap houses	0.40
Social security & health	0.15

Source: NDRC 2009.

Economic Development and Financial Markets

Fixed asset investment (billion RMB) and growth rate

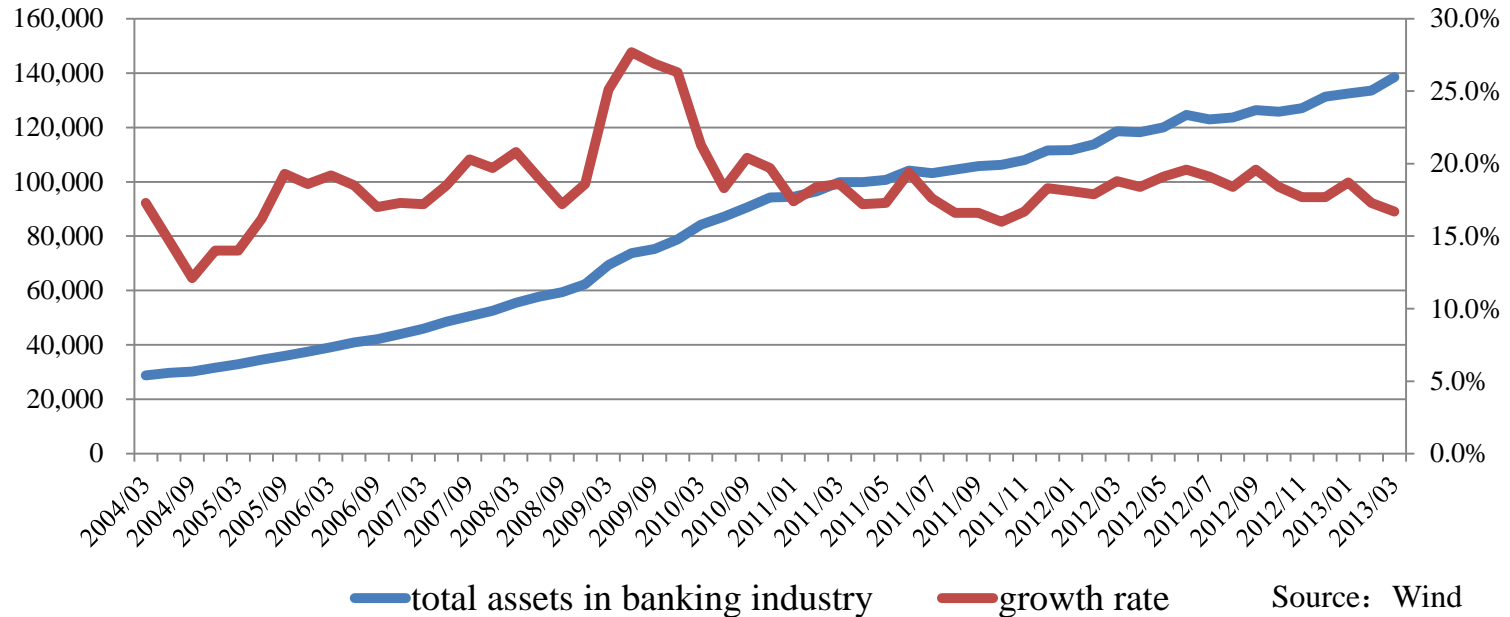


Funding mechanism

- ◆ The Central Government directly funded around RMB 1.2 trillion (30%) of the stimulus package. The remainder RMB 2.8 trillion (70%) of the fiscal stimulus was funded through borrowing by local governments, by setting up local government financing vehicles (LGFVs).
- ◆ Using land as collateral, LGFVs obtain loans from **banks** to finance infrastructure projects.

Economic Development and Financial Markets

Total assets in banking industry (billion RMB) and growth rate



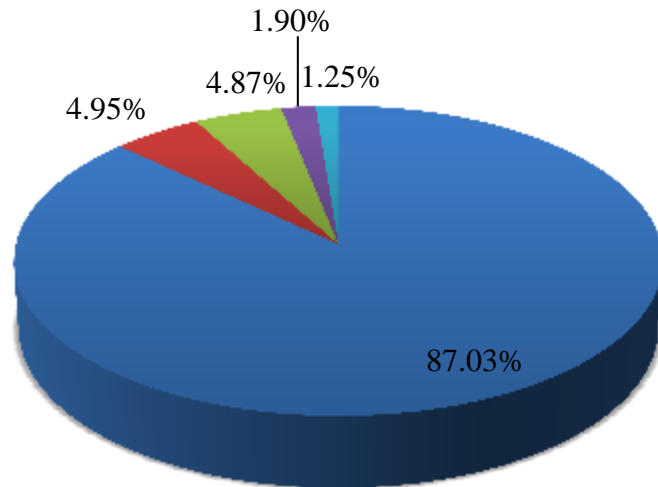
- ◆ With around two-thirds of the stimulus package funded through borrowing, expansion of credit was a critical element of the stimulus package. The most important means of expanding credit was the increase in new lending targets, from RMB 4.7 trillion in 2008 to RMB 10 trillion in 2009 (the actual amount of loans totaled RMB 9.6 trillion in 2009).
- ◆ During this period, RRRs were also significantly lowered, from 17.5% to 13.5% for smaller banks and 15.5% for larger banks. The lending interest rate was reduced from 7.47% to 5.31%. The deposit rate was reduced from 4.14% to 2.25%.
- ◆ Investment is most driven by bank loans rather than by the bond market. Local government debts are 80% banks loans. This is perhaps the reason that China can develop its economy rapidly without a developed financial market.

Economic Development and Financial Markets

Contribution of Consumption, Investments to GDP (2011)

	China	US
Household consumption rate	34.4%	71.6%
Gross capital formation rate	48.4%	14.9%

Proportion of assets managed in different financial institutions (end of 2012)



- Total assets in banking sector
- Total assets in trust sector
- Total assets in insurance industry
- Assets managed in funds
- Funds custodied in securities companies

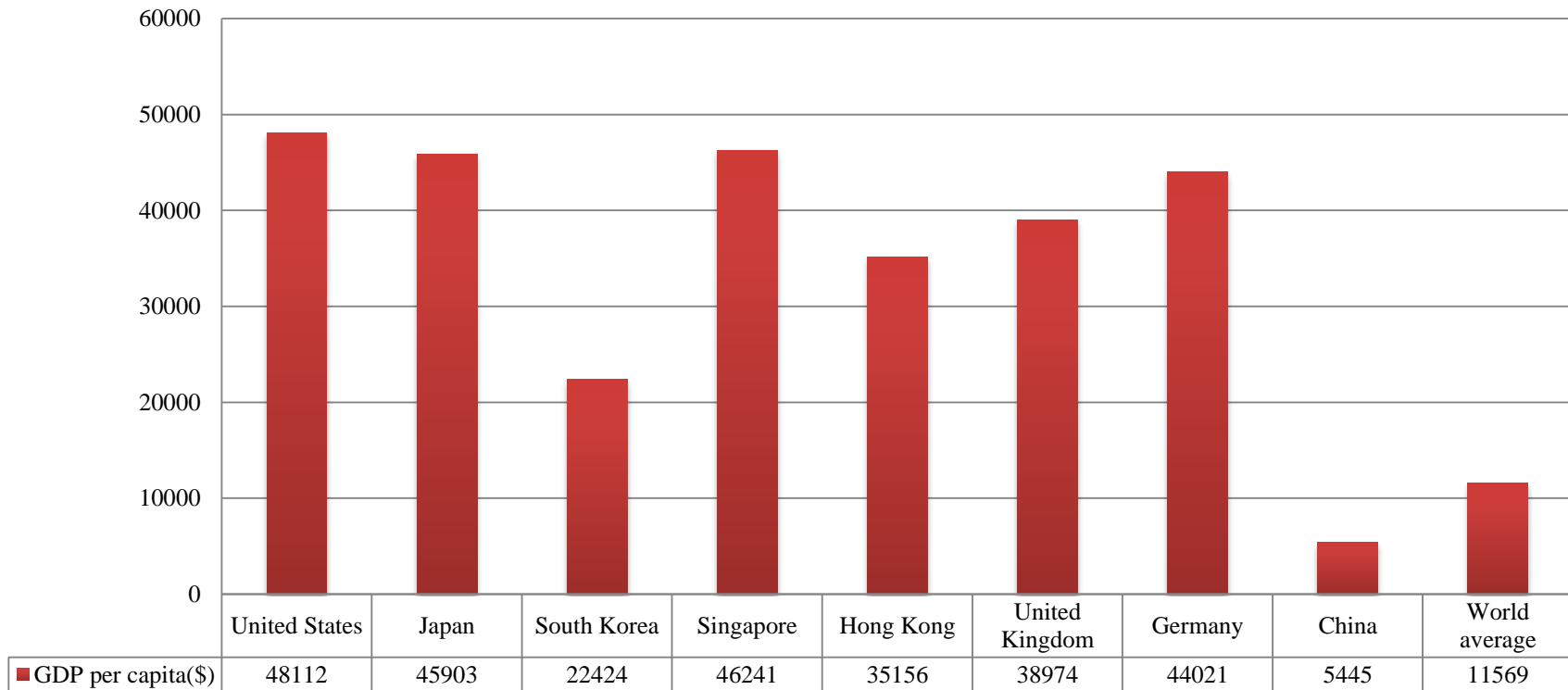
Source: Wind

- ◆ China's economy is heavily investment driven and needs to enhance its domestic consumption to rebalance the economy.
- ◆ At the end of 2012, there were RMB 131.27 trillion total assets in the banking sector, RMB 7.47 trillion in the trust sector, RMB 7.35 trillion in the insurance industry, RMB 2.86 trillion RMB in asset management funds, and RMB 1.89 trillion in securities companies.
- ◆ Chinese banks have accumulated huge amount of assets and have become a systematic risk, so China wants to diversify this risk. One possibility is to develop its bond/equity market.

Economic Development and Financial Markets

- ◆ Before the financial market of a country can develop, its GDP per capita has to grow to a high level. People would then have enough savings for investment and demand for more sophisticated financial products.

GDP per capita (2011)



Source: the World Bank

Conditions Required to Become an International Financial Center

A global financial center is a concentration of a wide variety of international financial businesses and transactions in one location.

London international financial center

- ◆ London supplanted Amsterdam as the world's leading financial center at the turn of the nineteenth century.
- ◆ The economy of England had been growing very quickly because of capitalism and the first industrial revolution.
- ◆ Largest colonialist country in 19th century
- ◆ Foreign trade had been increasingly frequent.

New York international financial center

- ◆ The Second World War broke out in Europe in the 1930s. The economy of UK was hard hit and the financial environment was very unstable.
- ◆ Bretton Woods system made USD the world first reserve currency.
- ◆ Science and technology revolution further consolidated the US economy and the status of global financial center.

Conditions to Become an International Financial Center

Economic conditions and economic freedom

	US	UK	Germany	France	Japan	Singapore	HK	South Korea	China
GDP growth rate (2011)	1.7%	0.76%	3.03%	1.70%	-0.7%	4.89%	4.89%	3.63%	9.3%
GDP per capita (current USD 2011) PPP	48111.97	38974.32	44021.22	42379.26	45902.67	46241.02	35156.39	22424.06	5444.79
GDP per capita growth rate (2011)	0.97%	-0.015%	3.00%	1.14%	-0.98%	2.72%	4.83%	2.87%	8.78%
Gross capital formation (% of GDP) (2011)	14.91%	14.89%	18.26%	20.64%	19.87%	22.44%	23.38%	29.45%	48.45%
Services(% of GDP) 2010	78.78%	77.66%	71.21%	--	71.46%	72.08%	92.84%	58.54%	43.19%
Trade(% of GDP)	31.73%	66.57%	95.27%	56.72%	31.36%	391.23%	447.00%	110.30%	58.68%

Conditions to Become an International Financial Center

Development level of financial markets

- ◆ Financial stock and flow
- ◆ Cluster degree of financial institutions
 - At the end of 2010, Singapore had 115 commercial banks, 52 investment banks, 91 asset management firms, 62 security companies, 49 financial consultancy firms, 34 futures companies and 8 money brokers.
 - In London, among the 500 banks, 470 were foreign banks, with more than 100 billion pounds asset; among the 800 insurance companies, more than 170 were foreign insurance company branches.
- ◆ Availability of high quality finance professionals
- ◆ A full range of financial infrastructure, including advanced communication networks, trading platforms, globally-oriented law firms, a trusted legal system
- ◆ Financial market transparency
- ◆ Financial market stability
- ◆ Internationalization of financial market

	US	UK	Germany	France	Japan	Singapore	HK	South Korea	China
Foreign direct investment, inflows (% of GDP)	1.72%	1.48%	1.08%	1.63%	0.0013%	26.70%	38.35%	0.42%	3.01%
Foreign direct investment, outflows (% of GDP)	2.95%	3.77%	1.46%	3.46%	2.00%	10.52%	38.58%	1.90%	1.38%
Stocks traded, total value (% of GDP)	205.12%	121.53%	48.83%	53.16%	70.91%	105.87%	624.12%	182.12%	104.82%

Conditions to Become an International Financial Center

Cost

- ◆ Taxation
- ◆ Operational costs (personnel, real estate, technology, local services, etc)

Rule of law

- ◆ Business cannot thrive unless there are predictable and reasonable rules under which it can operate.

Appropriate regulation

- ◆ Nurturing a global financial center requires the government to find a delicate balance between excessive regulation that makes it too expensive to operate and too light a level of regulation that leaves the center exposed to financial instability.

Political risks

Location

- ◆ Developed and convenient transportation system—favor international trade
- ◆ Close to fast-growing nations
- ◆ The economy of neighboring countries have sustainable growth to ensure steady demand for financial transactions and financial flows.

Favorable time zone

Recent Developments in China

Established on the Shenzhen Stock Exchange (SZSE) in October 2009, ChiNext was set up to list companies in high growth sectors.

China launched equity index futures (“CSI 300 Index”) in April 2010.

- ◆ Traded in China Financial Futures Exchange
- ◆ The size of CSI 300 Index futures grows steadily
- ◆ Index futures generate huge interest from retail investors. By the third day of trading, the traded value already exceeded the value of stocks traded on the SSE.
- ◆ The use of CSI 300 Index futures is highly speculative.
- ◆ The 2011 Rules on Index Future Trading for QFIIs allow for QFIIs’ participation in the domestic stock index futures.

China is expected to launch treasury bond futures later this year.

The ABS business is picking up quickly.

Potential Challenges

- ◆ RMB is not fully convertible
- ◆ Interest rates are not fully market driven
- ◆ Coordination among the regulators
- PBOC (People's Bank of China): China's central bank
 - Formulate and implement monetary policy; prevent and resolve financial risks; safeguard financial stability
- CSRC (China Securities Regulatory Commission)
 - Regulate China's securities and futures markets with an aim to ensure their orderly and legitimate operation
- CBRC (China Banking Regulatory Commission)
 - Formulate supervisory rules and regulations governing the banking institutions; conduct examination and surveillance of the banking institutions
- CIRC (China Insurance Regulatory Commission)
 - Conduct administration, supervision and regulation of the Chinese insurance market; ensure that the insurance industry operates stably in compliance with law
- NDRC (National Development and Reform Commission)
 - Coordinate economic and social development, plan the layout of key construction projects and productivity; push forward strategic economic restructuring

Potential Opportunities for Korean Investors

- ◆ China is Korea's biggest trade partner.
- ◆ Korea's total merchandise exports in 2011 is 555,214 million USD, in which China accounts for 24.2%.
- ◆ Korea's total merchandise imports in 2011 is 524,413 million USD, in which China accounts for 16.5%.

Main export destinations (2011)	million USD	Percentage	Main import destinations(2011)	million USD	Percentage
1. China	134,361.79	24.2%	1. China	86,528.15	16.5%
2. United States	56,631.83	10.2%	2. Japan	68,173.69	13%
3. European Union	56,076.61	10.1%	3. European Union	47,197.17	9%
4. Japan	39,420.19	7.1%	4. United States	44,575.11	8.5%
5. Hong Kong	31,091.98	5.6%	5. Saudi Arabia	37,233.32	7.1%

Source: WTO

- ◆ In Oct. 2011, PBOC signed an agreement with BOK to renew a bilateral local currency swap arrangement and to increase its size from 180 billion yuan/38 trillion won to **360 billion yuan/64 trillion won**. The effective period of the renewed arrangement will be 3 years.
 - To reduce negative impact that increasing uncertainties in global financial markets will have
 - To reduce the two countries' reliance on main settlement currency like USD in bilateral trades
 - To help push the internalization of both the yuan and the won.