

# The Emergence of China in the Global Financial Markets

*Ralph Y. Liu*

*Chairman/CEO*

*Advanced e-Financial Technologies, Inc.*



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# Presenter Bio

**Ralph Yiehmin Liu is currently the Chairman/CEO of California-based AeFT (Advanced e-Financial Technologies, Inc. - <http://www.InvestorsAlly.com> ). AeFT pioneers in the development of an exchange as well as an OTC market for real estate index futures, swaps and options. It also conducts the OTC derivatives trading/market making activities through joint ventures with local banks in emerging markets such as China. Previously he was the Chief Investment Officer of China Everbright Bank based in Beijing where he brought the first CNY-denominated interest rate swap to the domestic Chinese banking world. He also designed and launched the long term fixed rate bank loans for the bank to both individual and corporate borrowers in the country. Ralph built and ran a successful Singapore-based derivatives trading/risk management consulting company in the 90's called ARMS (Advanced Risk Management Solutions, Pte. Ltd.). In his earlier years as a derivatives banker in Asia, he was a Vice President with UBS based in Singapore as well as the Managing Director of Chase Manhattan Asia Limited based in Hong Kong. Ralph acquired his earlier training in financial derivatives and capital markets sales and trading through working at many prestigious Wall Street institutions such as Morgan Stanley, Chemical Bank and Equitable Life, all based in New York. Ralph received his MBA in 1987 from the Wharton Business School after completed many other graduate degrees in science and engineering from many top American universities (Penn, Michigan, Rice). Ralph was born in Taiwan but currently holds US and EU citizenships as well as a PR in Australia, Singapore and Hong Kong. He lives in Rancho de Liu in Southern California with his wife, daughter, son & Arabian horses.**



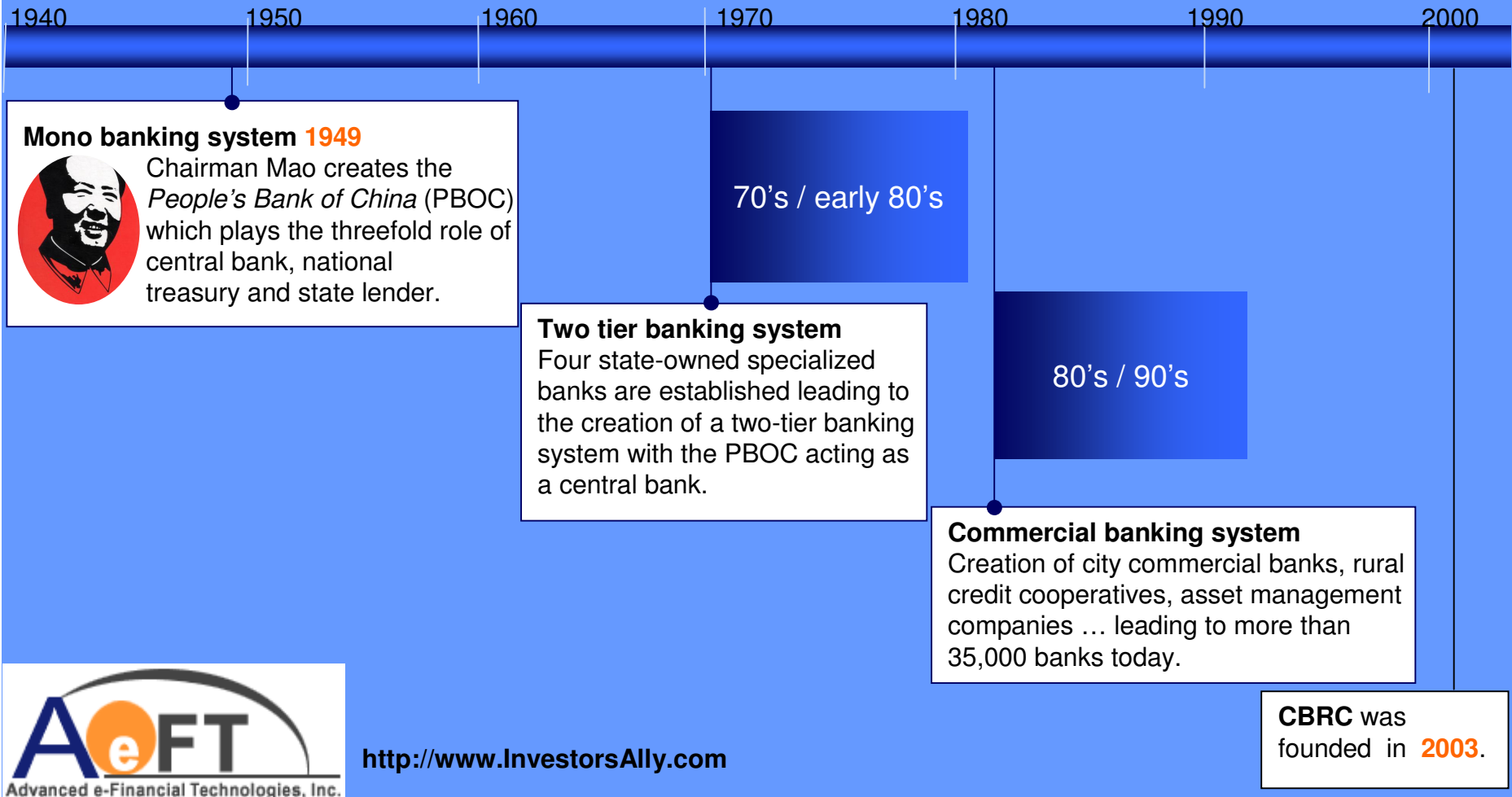
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# *China calling.....*



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# The Evolution of the Banking Industry in China



# Recent Investments in Chinese Banks by Foreign Entities

Chinese Banks	Foreign Investments	When
CCB	BOA, Temasek	Sep, 2005
BOC	RBS, Temasek, UBS, ADB	Aug, 2005
ICBC	GS, Allianz, American Express	Jan, 2006
HXB	DB	Oct, 2006
SDB	New Bridge Capital, GE	Sep, 2005
SPDB	Citibank	2003
GDB	Citibank, Carlyle Group	Pending
NJCB	BNP	Oct, 2005
NBCB	OCBC	Jan, 2006



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# On-shore Foreign Currency Derivatives Activities

- **Investment Plans (Retail Deposit-based Investment Funds)**
  - RMB Size: 25 Billion RMB (CEB)
  - USD Size: 1.2 Billion USD (CEB)
- **Foreign Currency Debt Risk Management**
  - 2005 Derivatives Transaction Notional Amount ~ 20 Billion USD
  - 2005 End of Year Foreign Debt Balance ~ 10 Billion USD
- **FX Options, IRS/CCS, Structured Credit Products & Equity-Linked Notes**



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# Domestic Interest Rate Markets

## ➤ **Banking Book**

Rates on all loans & deposits are controlled by PBOC.

## ➤ **Trading Book**

Rates are determined by close to a market mechanism.

## ➤ **Arbitrage Opportunities**



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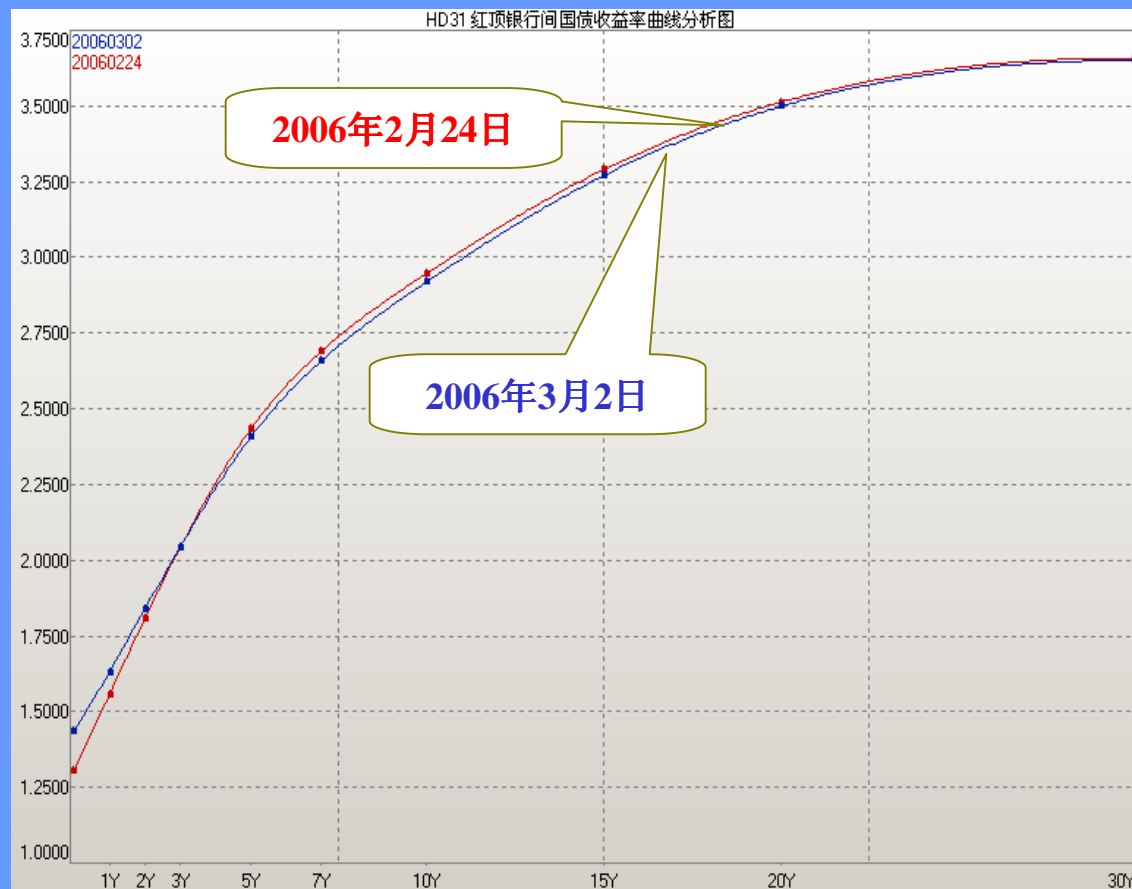
# RMB Interest Rates

Change Country			CHINA - TSY & MONEY MARKETS						16:23:01		
<b>CHIBOR</b>			<b>SSE Repo Rates</b>			<b>Lending Rates</b>		<b>NDF Swaps</b>		<b>SPOT FOREX</b>	
1D	1.5210	0.1756	1D	1.2000	-2.2200	6M	5.2200	1Y	0.9000	EUR	1.202
7D	1.6042	-0.0878	3D	1.6200	-0.3800	12M	5.5800	2Y	1.4000	JPY	116.360
14D	1.4700	-0.4300	4D	2.0250	-0.0850	1-3Y	5.7600	3Y	1.8500	GBP	1.751
21D	1.5724	-0.0776	7D	1.4800	-0.0200	3-5Y	5.8500	4Y	2.1250	CAD	1.133
1M	1.8000	-0.1000	14D	1.5850	-0.0250	5+Y	6.1200	5Y	2.2750	<b>STOCK INDICES</b>	
2M	1.9167	0.3167	28D	1.6350	-0.0150	<b>PBOC Loans to FI</b>		7Y	2.7000	DJIA	11025.510
3M	2.1269	-0.0731	91D	1.8200	0.0200	<20D	3.3300	10Y	3.0500	SPX	1289.140
4M	2.2000	-0.4400	182D	2.0000	0.1000	<3M	3.6000	<b>Onshore Forward</b>		UKX	5840.000
<b>Deposits</b>			<b>Interbank Repo Rates</b>			<b>PBOC Repurchase</b>		O/N	0.7200	NKY	15663.340
Demand	0.7200		O/N	1.3700	0.0200	28D Rate	1.70	3M	3.4650	HSI	15802.000
3M	1.7100		1W	1.4100	0.0100	28D Vol	10000.00	6M	3.8250	<b>METALS</b>	
6M	2.0700		2W	1.4300	0.0000	91D Rate	1.06	1Y	4.0050	GCA	570.800
1Y	2.2500		3W	1.5200	-0.0200	91D Vol	20000.00	2Y	4.2300	SIA	10.240
2Y	2.7000		1M	1.6000	0.0000	<b>Rediscount Rate</b>		3Y	4.5000	HGA	227.000
3Y	3.2400		2M	1.9800	0.4600			5Y	4.7250		
5Y	3.6000		3M	0.0000	0.1000						
			4M	0.0000	0.0000						



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# Chinese RMB Treasury Yield Curve

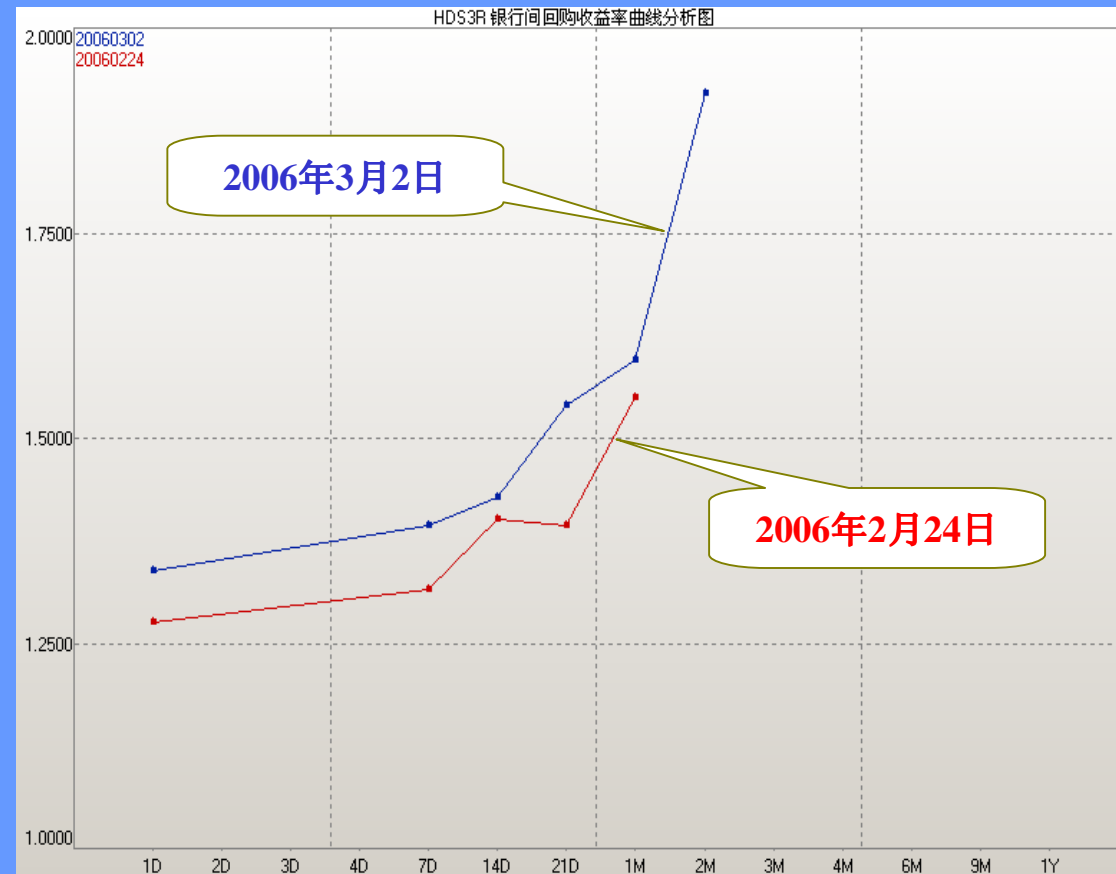


Maturity	02032006	24022006
1Y	1.6283	1.5558
2Y	1.8345	1.8042
3Y	2.0399	2.0383
5Y	2.4050	2.4319
7Y	2.6585	2.6902
10Y	2.9197	2.9474
15Y	3.2696	3.2899
20Y	3.4979	3.5119



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# Chinese RMB Repo Rates



Maturity	02032006	20060224
1D	1.3392	1.275
2D	-	-
3D	-	-
4D	-	-
7D	1.3939	1.3157
14D	1.4279	1.4004
21D	1.539	1.393
1M	1.5956	1.55
2M	1.92	-
3M	-	-
4M	-	-
6M	-	-
9M	-	-
1Y	-	-



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# Domestic Debt Issuance

## ➤ Treasury (MOF)

- 2005 Issued Amount: **504.20** Billion RMB
- 2006 Planned Issuance: **710** Billion RMB

## ➤ Financial Bonds

(China Development Bank, China EXIM Bank, Agricultural Development Bank)

- 2005 Issued Amount: **590.17** Billion RMB

	CDB	EXIM	ADB
Volume	325 bn RMB & 1.13 bn USD	40 bn RMB	200.17 bn RMB & 0.5 bn USD

## ➤ Commercial Paper Market

- 2005 Issued Amount: **135** Billion RMB
- 2006 Planned Issuance: **400** Billion RMB



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# Mortgage Markets and State of MBS/ABS in China

## ➤ Residential Mortgage Loans

- Loan rates are published by PBOC periodically.
- Starting from Mar 17<sup>th</sup>, 2005, loan rates are controlled only by lower limits.

## ➤ JianYuan MBS 0501: 15<sup>th</sup> Dec, 2005, China Construction Bank

- Issued Amount: 3,016,638,183 Yuan RMB
- Tranches: A, B, C & S (90,500,638 Yuan RMB, Private Placement)
- 

## ➤ KaiYuan ABS 0501: 15<sup>th</sup> Dec, 2005, China Development Bank

- Issued Amount: 2,924,089,000 Yuan RMB
- Tranches: A, B & Secondary Tranche (250,636,200 Yuan RMB, Private Placement)



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# Bringing Risks to the Chinese Banking World

## ➤ RMB Fixed Rate Loans

- Individual Residential Loans: 5-yr 5.94%, 10-yr **6.18%**
- Commercial Mortgage Loans: 5-yr 6.18%, 10-yr 6.42%

## ➤ RMB Interest Rate Swaps

- For Bank's Asset/Liability Management
- Notional Amount: 5 Billion RMB
- Tenor: 10 Years
- CEB pays fixed rate: **2.95%**
- CDB pays floating reference index rate: One Year Deposit Rate (currently 2.25%)



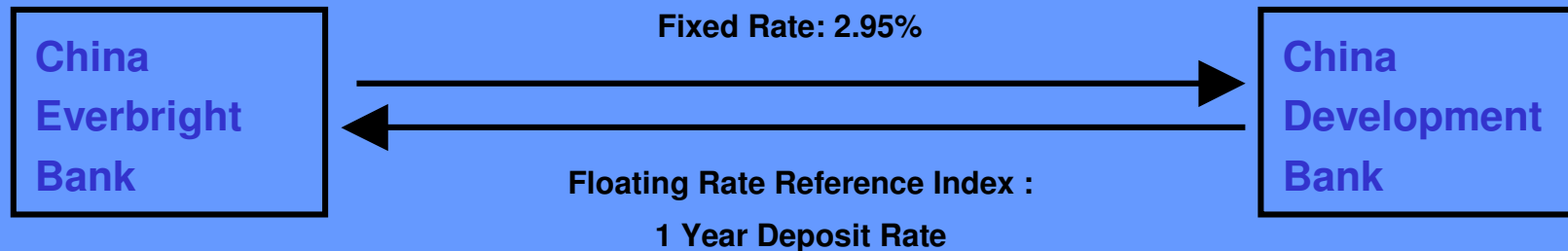
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# The Swap

## ➤ Benchmark Bonds

- CDB 10-yr Fixed Rate Bond: 3.20%
- CDB 10-yr Floating Rate Bond: 1-yr Deposit Rate + 45 b.p.

## ➤ 10-yr, 5 Billion RMB



## ➤ Hedges

- CDB 050223      3 Billion 3.6000% 15-yr
- CDB 050214      1 Billion 3.4154% 10-yr
- CEXIMB 050302 1 Billion 2.8510% 10-yr (Remaining Maturity: 7-yr)



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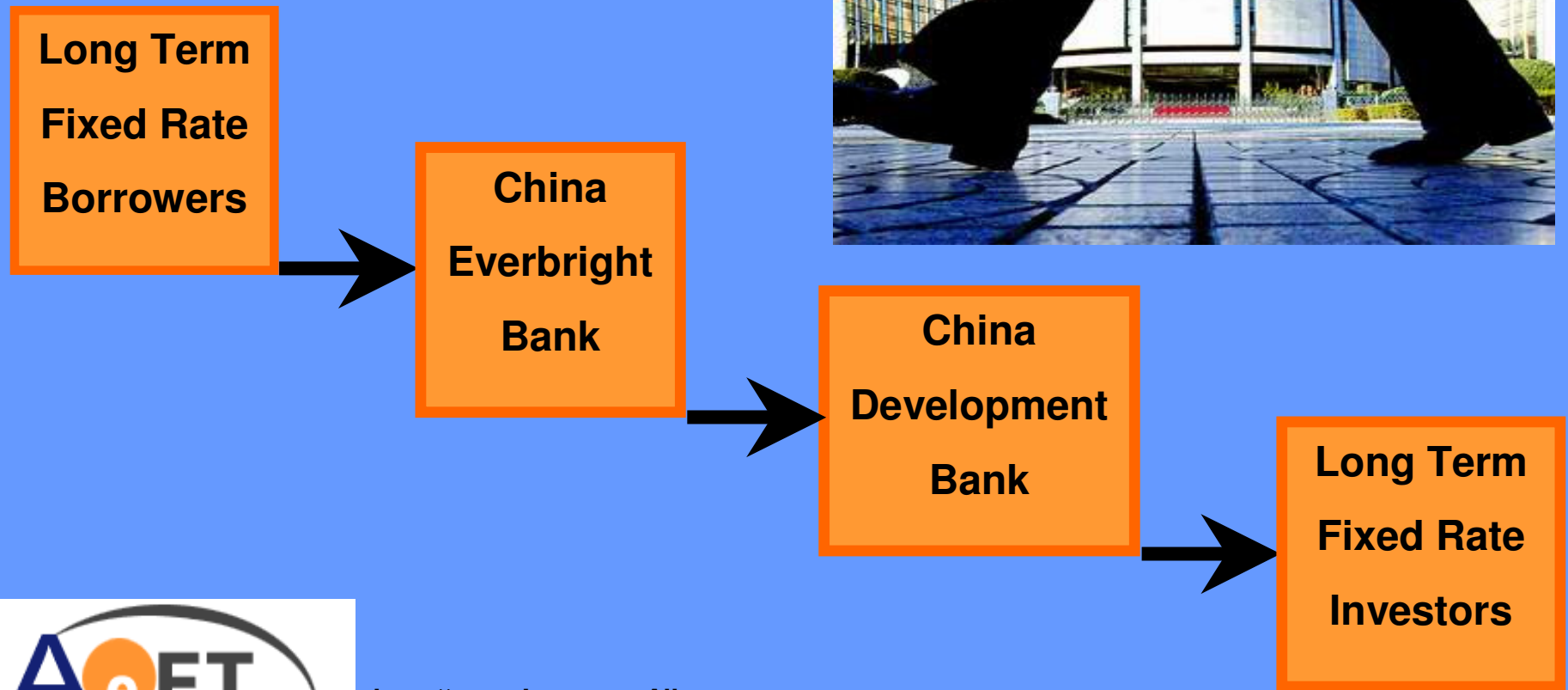
# Which Floating Rate Reference Index to Use

- **1-yr Depo : The One Year Deposit Rate**
  - Banks, Corporates
- **R007 : The 7-day Repo Rate**
  - Fixed Income Fund Managers, Securities Companies
- **1-yr CP : The One Year Commercial Paper Rate**
  - Corporates



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# How the Interest Rate Risk Is Transferred



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# Historical RMB Loan/Depo Interest Rates

## One - Year Deposit Rates

Date	Rate	Date	Rate
1989	8.64	1997	9.18
1989	11.34	1997	7.47
1990	10.08	1997	5.67
1991	8.64	1998	5.22
1991	7.56	1999	4.77
1994	9.18	1998	3.78
1994	10.98	2000	2.25
1995	10.98	2002	1.98
1996	10.98	2004	2.25

## One - Year Lending Rates

Date	Rate	Date	Rate
1989	9	1997	10.98
1989	11.34	1997	10.98
1990	10.08	1997	8.64
1991	9.36	1998	7.92
1991	8.64	1999	6.93
1994	9.36	1998	6.39
1994	10.98	2000	5.85
1995	10.98	2002	5.31
1996	12.06	2004	5.58



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# Historical RMB Loan/Depo Interest Rates

## One to Three - Year Lending Rate

Date	Rate	Date	Rate
1989	9	1997	13.14
1989	12.78	1997	10.98
1990	10.8	1997	9.36
1991	10.08	1998	9
1991	9	1999	7.11
1994	10.8	1998	6.66
1994	12.24	2000	5.94
1995	12.96	2002	5.49
1996	13.5	2004	5.76

## Five - Year Lending Rate

Date	Rate	Date	Rate
1989	13.32	1997	15.12
1989	19.26	1997	12.42
1990	11.88	1997	10.53
1991	11.16	1998	10.35
1991	9.72	1999	8.01
1994	12.24	1998	7.56
1994	14.04	2000	6.21
1995	14.76	2002	5.76
1996	15.3	2004	6.12



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# Financial Market Innovations in 2005

- **Mar 21th, 2005: PBOC Officially Grants Permission for Trial Issuance of ABS/MBS.**
- **Apr 21th, 2005: < Experimental Administrative Rules on Assets Backed Securities >**
- **May 21th, 2005: Bond Forwards Transaction**
  - <Administrative Rules on Bond Forwards Transactions in the National Inter-Bank Bond Market>
- **May 23th, 2005: Issuance of Commercial Papers**
  - <Administrative Rules for the Issuance of Commercial Paper in the National Inter-Bank Bond Market>
- **Jul 21th, 2005: Formation of A New RMB Currency Regime**
- **Aug 2th, 2005: RMB FX Forwards & Swaps against Foreign Currencies**



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# Chinese “Won” ?



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# Currency Manipulator?



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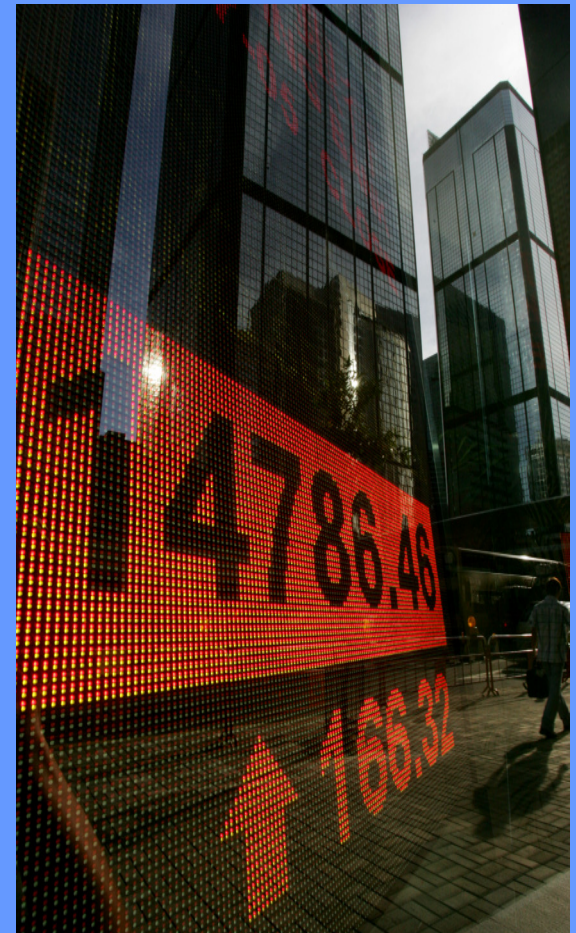
# Trends in 2006 and Beyond

➤ **Foreign Exchange: from Fixed to Floating**

- FX Forwards
- FX Swaps
- FX Options

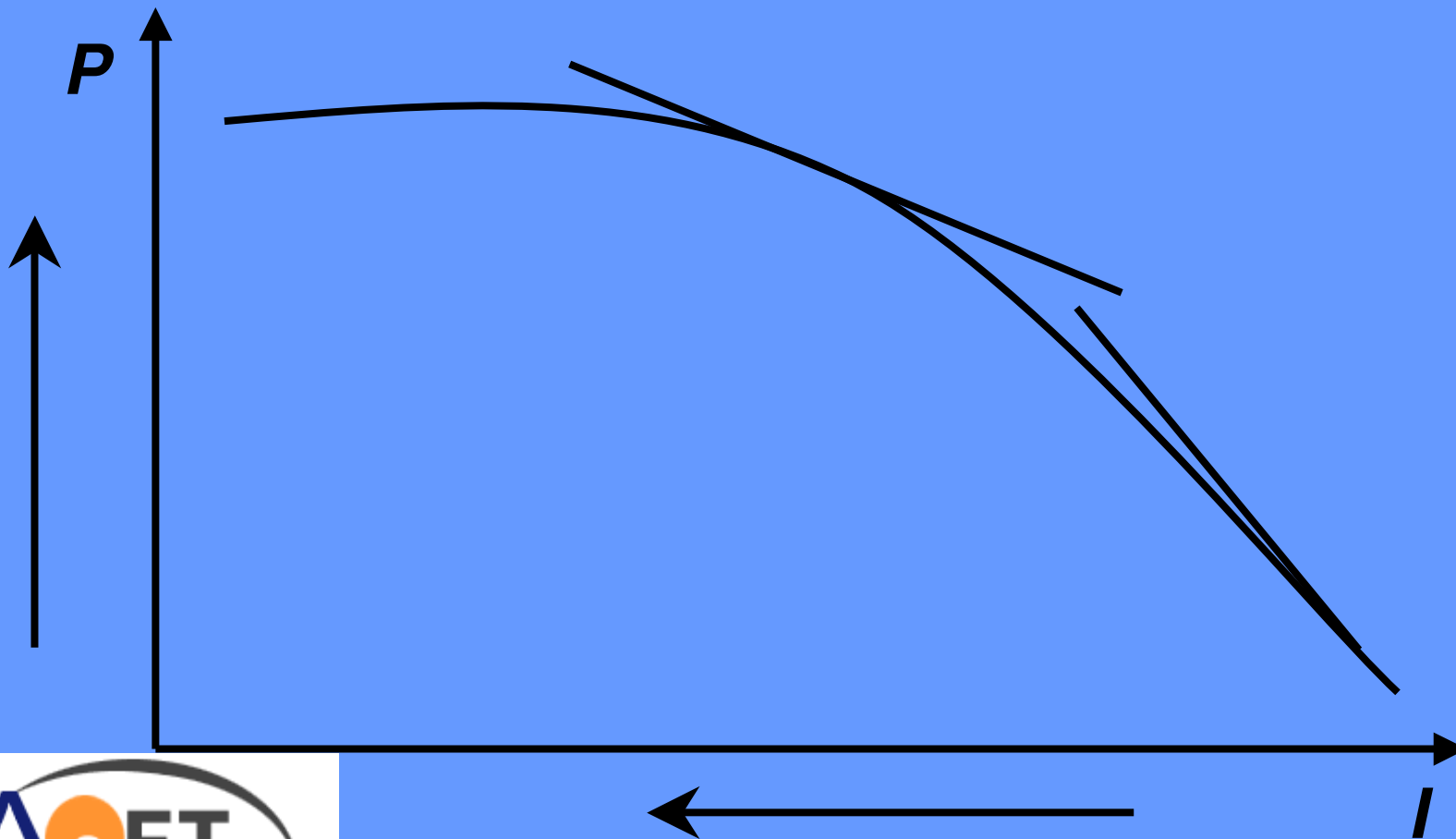
➤ **Interest Rates: from Floating to Fixed**

- Interest Rate Swaps
- Caps/Floors



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# Pre-payment Risk - Negative Convexity



***“Risk is not necessarily a bad thing.”***

*“Where there is a duration (long term fixed interest rate risk) mismatch, there will be a need for IRS for the banks!”*

*“Where there is prepayment risk on the asset book, banks will have more motivation for MBS issuance”*



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# Next Chapter

- **The New Shanghai-based Financial Derivatives Exchange**
  - Stock Index Futures
  - Bond Futures
  - Currency Futures
- **RMB Derivatives Trading/Market-Making Joint Venture**
  - First AAA-rated Swapco in China
- **Real Estate Derivatives?**



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# Real Estate Derivatives

## ➤ Background

- The real estate market is currently the world's largest financial market.
- The homeowners everywhere still can not hedge the equity value in their homes.

## ➤ AeFT's REIFO (Real Estate Index Futures & Options) Exchange – A US Properties Market Example

- To facilitate the buying and selling of futures contracts by both homeowners and institutional traders/investors based on real estate valuation per square foot for each zip code area.
- 3, 6, 9, 12, 15, 18, 21, 24 ... 60 - month contracts based on existing popular per square foot median price indexes published by industry data providers for each zip code region throughout the country.

## ➤ OTC Transactions Opportunities

- AeFT's Residential Real Estate Index Swaps & Options (REIDeX)
- NCREIF Index Swap on Commercial Properties Done on Feb 24<sup>th</sup> by CS.



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# Presenter Note

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**Ralph Y. Liu**

[ralph.liu.wg87@wharton.upenn.edu](mailto:ralph.liu.wg87@wharton.upenn.edu)



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