ADB Asia Bond Monitor 2008

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The *Asia Bond Monitor* (ABM) reviews recent developments in East Asian local currency bond markets along with the outlook, risks, and policy options. The ABM covers the 10 Association of Southeast Asian Nations member countries plus the People's Republic of China; Hong Kong, China; and the Republic of Korea.

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Emerging East Asian Local Currency Bond Markets: A Regional Update

Highlights

Recent Bond Market Developments

- During the first half of 2008, emerging East Asia's local currency bond markets grew slower from end-2007; bonds outstanding-to-GDP fell marginally—trends that continued into the second half.
- Government bond issuance continues to dominate the market, driven by deficit financing and monetary sterilization, while corporate bond market activity slowed as borrowing costs increased and credit dried up.
- Government bond yield movements in emerging East Asia went through three distinct phases in 2008:
  - — most yield curves shifted up during the first half as many central banks raised interest rates to fight inflation;
  - — yield curves shifted downward from July to early September as the severity of the global credit crisis deepened and inflationary expectations peaked;
  - — global credit markets seized-up in September and the combination of an investor "flight-to-quality" and emergency measures drove yields in government bonds lower.
- Returns on local currency bonds were lackluster in 2008 as investors reduced exposure to high-risk assets amid tightening global liquidity and increased market volatility.
- Foreign holdings of local currency government bonds rose as investors shed riskier assets, a sign of growing confidence in emerging East Asia's bond markets.
- In the first half, market liberalization, product innovation, and diversification continued despite simmering global market turmoil; but most were placed on standby as the crisis deepened.

Outlook, Risks, and Policy Challenges

- Contagion from the US credit turmoil rapidly hit global financial markets, with significant spillover into the real economy.
- Concern over rising inflation, which dominated policy discussions in emerging East Asia in the first half of 2008, have given way to policies addressing deteriorating economic growth.

Continued overleaf

- Against this backdrop and the need to stabilize troubled financial markets, monetary policy has shifted to a more accommodative stance in most countries, a trend likely to continue into 2009.
- The acceleration of capital outflows, coupled with tightened credit could choke off funds for investment and raise financing costs.
- Tight dollar liquidity, deleveraging, and weakening regional currencies may dampen foreign investor interest in local currency corporate bonds.
- Given the expected slowdown in global and regional growth, economies which have relatively comfortable fiscal balances and public debt are likely to introduce fiscal stimulus packages, boosting government bond issuance.
- Apart from immediate market stabilization measures, lessons from the current crisis can be applied to future policies to strengthen the development of local currency bond markets:
  - — Strengthen international supervisory and regulatory coordination, cooperation, convergence, and surveillance;
  - — Strengthen risk assessment and risk management;
  - — Promote consistent standards and mutual recognition;
  - — Improve transparency by better valuation and accounting of off-balance sheet instruments;
  - — Prudently liberalize cross-border financial services and capital accounts;
  - — Devise countercyclical policies for the financial sector;
  - — Strengthen or expand existing regional initiatives such as the Asian Bond Markets Initiative and Asian Bond Fund.

Acronyms, Abbreviations, and Notes

1H08	First half, 2008
1H07	First half, 2007
ABF	Asian Bond Fund
ABM	Asia Bond Monitor
ABS	asset-backed securities
ABMI	Asian Bond Markets Initiative
ACN	Asia Currency Note
ADB	Asian Development Bank
ALBI	Asian Local Bond Index (HSBC)
ASEAN	Association of Southeast Asian Nations
BI	Bank Indonesia
BIDS	Bond Information and Dissemination System
BNM	Bank Negara Malaysia
BNMN	Bank Negara Monetary Notes
BOK	Bank of Korea
BOT	Bank of Thailand
BSP	Bangko Sentral ng Pilipinas
Btr	Bureau of the Treasury (Philiipines)
CBO	Collateralized bond obligation
CDO	Collateralized Debt Obligation
CDS	credit default swap
CGIM	credit guarantee and investment mechanism
CHIBOR	China Interbank Offered Rate
CLO	Collateralized loan obligations
CP	Commercial Paper
CSS	Contractual Savings Sectors
CSV	Contractual Savings Vehicles
CTB	Chamber of Thrift Banks
DvP	delivery versus payment
EB	exchangeable bond
ECB	European Central Bank
EFBN	Exchange Fund Bills and Notes
EMEAP	Executives Meeting of East Asia-Pacific Central Banks
ETP	Electronic trading platform
EU	European Union
FAST	Fully Automated System for Issuing/ Tendering
FSC	Financial Supervisory Commission
G7	Group of Seven industrialized nations
GDP	gross domestic product
GOCC	government-owned and controlled corporations or GOCCS
HKMA	Hong Kong Monetary Authority
IMF	International Monetary Fund
ITC	Investment trust companies
Korea	Republic of Korea
KORIBOR	Korea Interbank Offered Rate
KOSPI	Korea Composite Stock Price Index
KTB	Korea Treasury Bond
KTBi	Korea Treasury Bond (inflation linked)
LCY	local currency
MAS	Monetary Authority of Singapore
MBS	mortgage-backed securities
MGS	Malaysian Government Security
MOF	Ministry of Finance
MOFE	Ministry of Finance and Economy
MPC	Monetary Policy Committee
MSB	Monetary Stabilization Bond
MTM	mark-to-market
NPL	nonperforming loans
OECD	Organisation for Economic Co-operation and Development
OREI	Office of Regional Economic Integration
OTC	over–the-counter
PBIF	Pan Asian Bond Index Fund
PBOC	People’s Bank of China
PDEx	Philippine Dealing and Exchange Corp.
PDMO	Public Debt Management Office
PRC	People’s Republic of China
REIT	real estate investment trust
RENTAS	Reduction of Real Time Electronic Transfer of Funds
repo	repurchase agreement
RTB	retail treasury bond
S$NEER	Singapore dollar nominal effective exchange rate
SBI	Sertifikat Bank Indonesia
SBV	State Bank of Viet Nam
SC	Malaysia Securities Commission
SDA	special deposit accounts
SEC	Securities and Exchange Commission (Philippines)
SGS	Singapore Government Securities
SGX	Singapore Exchange
SRO	self-regulating organization
TF	task force
ThaiBMA	Thai Bond Market Association
UK	United Kingdom
US	United States
US Fed	United States Federal Reserve
y-o-y	year-on-year
YTD	year-to-date

bp = basis points

Note: To conform with market practice, the *Asia Bond Monitor* uses two-letter official ISO Country Codes and three-letter currency codes rather than ADB’s standard symbols.

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Emerging East Asian Local Currency Bond Markets at a Glance

1: Size of Emerging East Asian Local Currency Bond Markets

	1H08	Growth Rate (%)	
	Amount (USD billion)	Y-o-Y 1H08	YTD 1H08
China, People's Rep. of	2,004.22	31.86	11.41
Hong Kong, China	92.64	(6.85)	(5.47)
Indonesia	82.88	(2.65)	(4.48)
Korea, Rep. of	985.91	7.91	3.88
Malaysia	187.49	27.19	12.76
Philippines	56.67	10.59	6.22
Singapore	138.58	15.36	7.66
Thailand	150.23	16.16	7.13
Viet Nam	11.90	75.49	27.76
Total Emerging East Asia	3,710.53	20.74	8.15
Government	2,690.20	22.16	9.13
Corporate	1,020.33	17.17	5.67

Sources: People's Republic of China (ChinaBond); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Indonesia Stock Exchange and Bank Indonesia); Republic of Korea (KoreaBondWeb); Malaysia (Bank Negara Malaysia); Philippines (Bureau of the Treasury); Singapore (Monetary Authority of Singapore); Thailand (Bank of Thailand); and Viet Nam (Bloomberg).

Total bonds outstanding grew more slowly in the first half of 2008 than in 2007. New government issuance continues to dominate.

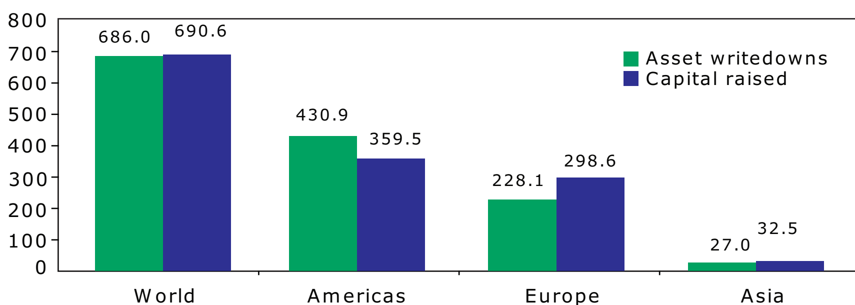
2: 10-Year Selected LCY Government Bond Yields

Markets	basis points change 1 Jan 08–31 Oct 08	1-Jan-08 Closing
US	-7.01	4.023
EU	-43.00	4.330
Japan	-3.40	1.510
PRC	-135.00	4.460
Hong Kong, China	-105.90	3.441
Indonesia	728.30	10.018
Malaysia	15.50	4.142
Korea, Rep. of	-21.00	5.700
Philippines	289.42	6.583
Singapore	27.00	2.680
Thailand	-118.40	4.955
Viet Nam	592.50	9.075

Source: Based on data from Bloomberg.

Yield curves shift downward as inflation eases and fear of economic slowdown increases.

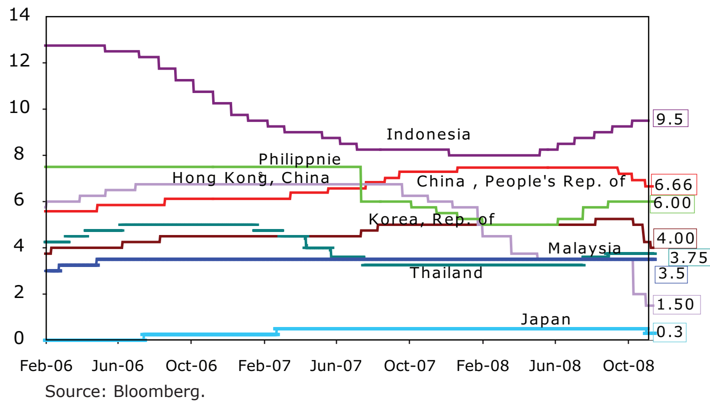
3: Writedowns and capital raised by major banks since the third quarter of 2007
(USD billions)



Source: Bloomberg, October 2008.

Asia is less exposed to global financial contagion.

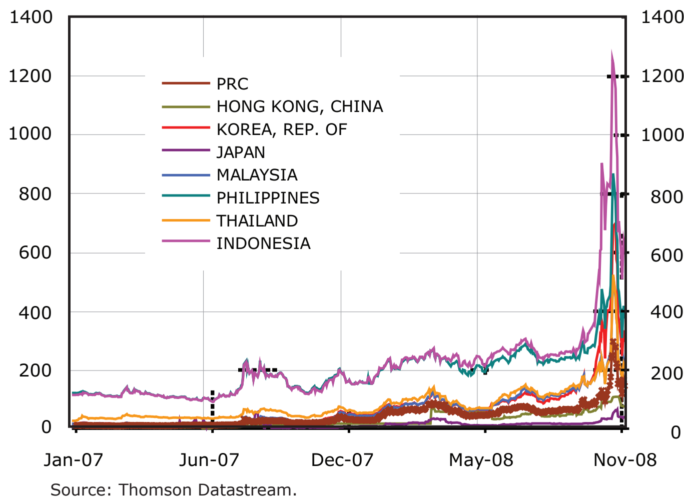
4: Policy Rates (% per annum)



Source: Bloomberg.

Bias shifting toward looser monetary policies as inflation eases and oil prices slide.

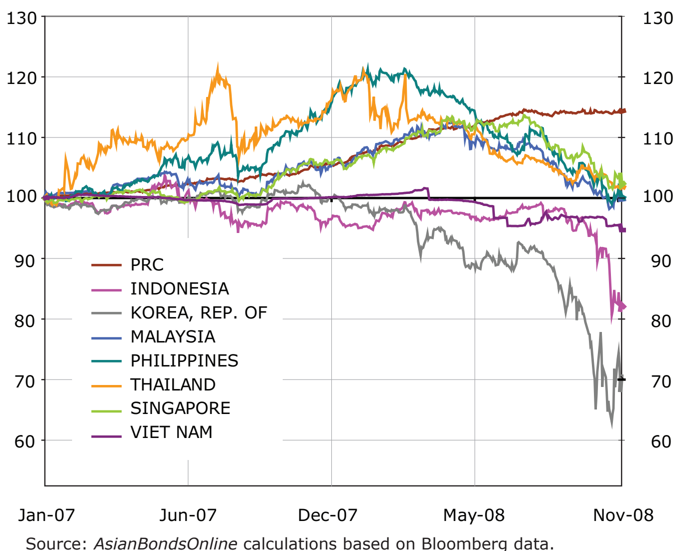
5: Credit Default Swap Spreads—Senior 5-year
(Mid spread in basis points)



Source: Thomson Datastream.

Risk premium remains elevated, more so for lower-rated sovereigns and high-risk corporates.

6: Exchange Rate Indexes
(against USD 2 January 2007=100)



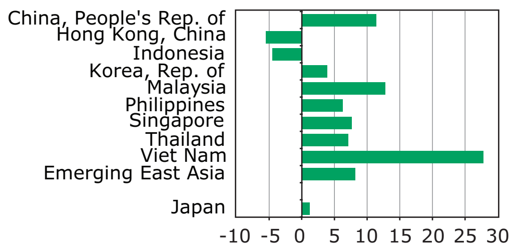
Source: *AsianBondsOnline* calculations based on Bloomberg data.

Tighter dollar liquidity has weakened Asian currencies and may dampen foreign investor interest in local currency corporate bonds.

Emerging East Asian Local Currency Bond Markets: A Regional Update

Recent Bond Market Developments

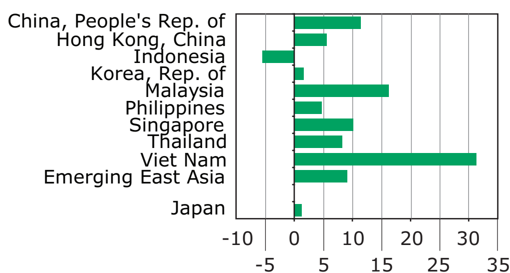
Figure 1: **Growth of Emerging East Asian Local Currency Bond Markets in 1H08** (YTD %)



Notes:
1. Calculated using data from national sources.
2. Growth rates are calculated from LCY base and do not include currency effects.
3. Total emerging East Asia growth figure is based on end-June 2008 currency exchange rates and do not include currency effects.

Sources: People's Republic of China (ChinaBond); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Indonesia Stock Exchange and Bank Indonesia); Republic of Korea (KoreaBondWeb); Malaysia (Bank Negara Malaysia); Philippines (Bureau of the Treasury and Bloomberg); Singapore (Monetary Authority of Singapore); Thailand (Bank of Thailand); Viet Nam (Bloomberg); and Japan (Japan Securities Dealers Association).

Figure 2: **Growth of Emerging East Asian Local Currency Government Bond Markets in 1H08** (YTD %)



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Size and Composition

During the first half of 2008, emerging East Asia's local currency bond markets grew at a slower pace than the same period of 2007, while bonds outstanding-to-GDP edged down from end-2007 levels—trends that continued into the second half.

The value of local currency bonds (LCY) for emerging East Asia[3] reached USD3.7 trillion at the end of 1H08, up 8.1% from USD3.5 trillion outstanding at the end of last year and 20.7% from the end of June 2007 **(Table 1)**. Viet Nam's bond market grew the fastest on a year-to-date basis in the first half of 2008 (27.8%); followed by Malaysia (12.8%); People's Republic of China (PRC) (11.4%); Singapore (7.7%); Thailand (7.1%); Philippines (6.2%); and Republic of Korea (Korea) (3.9%). Indonesia and Hong Kong, China, posted a decline of 4.5% and 5.5%, respectively **(Figure 1)**. The ratio of LCY bonds outstanding to GDP in emerging East Asia eased marginally to 57.6% at end-June 2008 from 58.5% at end-2007 **(Table 2)**, mainly due to subdued activity in local currency corporate bond markets. The ratio of Japan's LCY bonds to GDP was largely unchanged at about 168%.

Government bond issuance continues to dominate the market, driven by deficit financing and monetary sterilization.

Emerging East Asia's LCY government bond markets—defined to include the liabilities of monetary authorities—grew 9.1% to USD2.7 trillion at the end of June 2008 from USD2.4 trillion at end-2007 **(Figure 2)**. The year-on-year (y-o-y) rate of growth in 1H08 was slightly lower than the y-o-y 23.8% growth rate for 2007. Government issuance was driven by three major factors:

[1] In this report, emerging East Asia is defined as People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea (Korea); Malaysia; Philippines; Singapore; Thailand; and Viet Nam.

Table 1**: Size and Composition of Emerging East Asian Local Currency Bond Markets** (in USD billions)

	2006		**1H07** (1 Jan–30 Jun)		**2007**		**1H08** (1 Jan–30 Jun)		**Growth Rate** (%)					
	Amount (USD billion)	% share	Amount (USD billion)	% share	Amount (USD billion)	% share	Amount (USD billion)	% share	2005	2006	Y-o-Y 1H 2007	2007	Y-o-Y 1H08	YTD 1H08
China, People's Rep. of														
Total	1,184.12	100.00	1,368.42	100.00	1,689.83	100.00	2,004.22	100.00	40.57	27.35	23.79	33.42	31.86	11.41
Government	1,078.57	91.09	1,250.79	91.40	1,533.12	90.73	1,818.82	90.75	35.85	24.90	23.62	32.89	30.92	11.44
Corporate	105.55	8.91	117.63	8.60	156.71	9.27	185.40	9.25	157.13	59.35	25.54	38.80	41.90	11.13
Hong Kong, China														
Total	96.17	100.00	99.19	100.00	97.98	100.00	92.64	100.00	9.18	12.72	10.44	2.15	(6.85)	(5.47)
Government	16.94	17.62	17.20	17.34	17.52	17.88	18.51	19.98	3.37	4.01	4.02	3.69	7.33	5.60
Corporate	79.23	82.38	82.00	82.66	80.46	82.12	74.14	80.02	10.65	14.77	11.89	1.82	(9.82)	(7.88)
Indonesia														
Total	76.72	100.00	87.23	100.00	85.23	100.00	82.88	100.00	(5.28)	29.64	23.64	16.02	(2.65)	(4.48)
Government	69.88	91.09	78.73	90.25	76.81	90.12	73.94	89.21	(5.69)	32.46	23.30	14.80	(3.78)	(5.45)
Corporate	6.84	8.91	8.51	9.75	8.42	9.88	8.95	10.79	(1.75)	6.48	26.88	28.55	7.75	4.38
Korea, Rep. of														
Total	958.97	100.00	1,036.96	100.00	1,061.79	100.00	985.91	100.00	10.80	9.75	10.47	11.44	7.91	3.88
Government	469.13	48.92	486.19	46.89	470.07	44.27	427.12	43.32	16.95	6.89	3.63	0.85	(0.29)	1.65
Corporate	489.84	51.08	550.77	53.11	591.73	55.73	558.79	56.68	5.20	12.63	17.31	21.58	15.15	5.65
Malaysia														
Total	123.00	100.00	139.51	100.00	164.30	100.00	187.49	100.00	9.67	7.61	17.44	25.20	27.19	12.76
Government	62.14	50.52	76.52	54.85	88.61	53.93	104.23	55.59	8.04	11.01	29.70	33.66	28.92	16.23
Corporate	60.86	49.48	62.99	45.15	75.69	46.07	83.26	44.41	11.27	4.34	5.34	16.56	25.10	8.70
Philippines														
Total	47.19	100.00	49.78	100.00	58.02	100.00	56.67	100.00	10.17	3.41	2.84	3.45	10.59	6.22
Government	43.50	92.18	45.41	91.23	52.84	91.07	50.86	89.75	8.30	(0.11)	(1.98)	2.21	8.79	4.68
Corporate	3.69	7.82	4.36	8.77	5.18	8.93	5.81	10.25	72.59	76.92	110.87	18.02	29.27	21.94
Singapore														
Total	99.39	100.00	106.84	100.00	121.81	100.00	138.58	100.00	5.90	10.35	13.92	14.89	15.36	7.66
Government	55.92	56.26	60.90	57.00	68.21	55.99	79.35	57.26	8.03	10.00	11.88	14.34	15.88	10.09
Corporate	43.47	43.74	45.94	43.00	53.60	44.01	59.23	42.74	3.26	10.80	16.73	15.59	14.67	4.56
Thailand														
Total	109.57	100.00	136.42	100.00	158.25	100.00	150.23	100.00	24.93	21.97	21.33	18.69	16.16	7.13
Government	73.28	66.88	93.12	68.26	111.56	70.50	107.04	71.25	29.01	18.69	20.82	25.12	21.25	8.27
Corporate	36.29	33.12	43.30	31.74	46.69	29.50	43.19	28.75	16.82	29.18	22.45	5.71	5.21	4.41
Viet Nam														
Total	4.93	100.00	7.08	100.00	9.79	100.00	11.90	100.00	14.52	15.57	82.30	98.11	75.49	27.76
Government	4.50	91.28	6.41	90.57	8.28	84.54	10.34	86.85	12.24	8.17	74.16	83.48	68.29	31.26
Corporate	0.43	8.72	0.67	9.43	1.51	15.46	1.56	13.15	466.67	306.16	230.99	251.33	144.60	8.62
Total Emerging East Asia														
Total	2,700.06	100.00	3,031.42	100.00	3,447.02	100.00	3,710.53	100.00	22.11	18.56	23.92	22.96	20.74	8.14
Government	1,873.85	69.40	2,115.26	69.78	2,427.03	70.41	2,690.20	72.50	25.55	18.74	22.23	23.82	22.16	9.13
Corporate	826.21	30.60	916.16	30.22	1,019.99	29.59	1,020.33	27.50	14.35	18.11	28.43	20.82	17.17	5.67
Japan														
Total	7,096.10	100.00	6,838.01	100.00	7,646.96	100.00	8,148.90	100.00	8.55	1.83	0.94	1.17	2.67	1.23
Government	6,389.17	90.04	6,150.07	89.94	6,873.88	89.89	7,325.40	89.89	10.29	2.51	1.17	1.01	2.62	1.23
Corporate	706.93	9.96	687.95	10.06	773.08	10.11	823.50	10.11	(4.23)	(3.90)	(1.08)	2.67	3.13	1.19

Notes:
1. Calculated using data from national sources.
2. Corporate bonds include issues by financial institutions.
3. Bloomberg end-of-period LCY/USD rates are used.
4. Growth rates are calculated from LCY base and do not include currency effects.
5. Total emerging East Asia growth figures are based on end-June 2008 currency exchange rates and do not include currency effects.

Sources:People's Republic of China (ChinaBond); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Indonesia Stock Exchange and Bank Indonesia); Republic of Korea (KoreaBondWeb); Malaysia (Bank Negara Malaysia); Philippines (Bureau of the Treasury and Bloomberg); Singapore (Monetary Authority of Singapore); Thailand (Bank of Thailand); Viet Nam (Bloomberg); and Japan (Japan Securities Dealers Association).

Table 2**: Size and Composition of Emerging East Asian Local Currency Bond Markets** (% of GDP)

	Amount Outstanding				
	2005	**2006**	**1H07** (1 Jan–30 Jun)	**2007**	**1H08** (1 Jan–30 Jun)
China, People's Rep. of					
Total	39.61	43.61	45.85	49.42	50.65
Government	36.79	39.72	41.91	44.83	45.96
Corporate	2.82	3.89	3.94	4.58	4.69
Hong Kong, China					
Total	48.01	50.69	50.70	47.28	43.08
Government	9.16	8.93	8.79	8.45	8.61
Corporate	38.84	41.76	41.91	38.83	34.48
Indonesia					
Total	19.19	20.66	21.66	20.23	17.27
Government	17.10	18.82	19.55	18.23	15.41
Corporate	2.08	1.84	2.11	2.00	1.86
Korea, Rep. of					
Total	100.26	105.16	109.81	110.28	110.47
Government	50.36	51.45	51.49	48.82	47.86
Corporate	49.90	53.72	58.32	61.46	62.61
Malaysia					
Total	77.19	75.63	80.83	84.64	86.70
Government	37.80	38.21	44.33	45.65	48.20
Corporate	39.39	37.43	36.50	38.99	38.50
Philippines					
Total	41.13	38.34	36.28	35.98	36.26
Government	39.25	35.34	33.10	32.77	32.55
Corporate	1.88	3.00	3.18	3.21	3.72
Singapore					
Total	69.32	70.28	71.50	72.05	74.13
Government	39.12	39.54	40.76	40.34	42.45
Corporate	30.19	30.74	30.74	31.71	31.68
Thailand					
Total	45.68	50.49	53.38	55.40	56.44
Government	31.39	33.76	36.44	39.06	40.21
Corporate	14.29	16.72	16.95	16.34	16.23
Viet Nam					
Total	8.18	8.13	10.97	13.72	15.71
Government	7.97	7.42	9.94	11.60	13.65
Corporate	0.20	0.71	1.04	2.12	2.07
Total Emerging East Asia					
Total	52.41	55.18	57.12	58.50	57.56
Government	36.46	38.30	39.86	41.19	41.73
Corporate	15.95	16.89	17.26	17.31	15.83
Japan					
Total	165.37	166.02	164.04	165.84	168.35
Government	147.91	149.48	147.54	149.07	158.86
Corporate	17.46	16.54	16.50	16.77	17.86

Sources: People's Republic of China (ChinaBonds.com), Hong Kong, China (Hong Kong Monetary Authority), Indonesia (Indonesia Stock Exchange and Bank Indonesia), Republic of Korea (KoreaBondWeb), Malaysia (Bank Negara Malaysia), Philippines (Bureau of the Treasury and Bloomberg), Singapore (Monetary Authority of Singapore), Thailand (Bank of Thailand), Viet Nam (Bloomberg) for outstanding bonds; and CEIC for GDP.

Box 1: Flight-to-Quality Increases Local Currency Government Bonds

Total issuance in emerging East Asia grew 18% (US dollar equivalent) in 1H08 compared with 1H07. Government bonds—defined to include issuance from monetary authorities—rose 20.3%, slightly below growth for total government debt stocks. The growth rate for corporate bond issuance was much lower at 1.3%, reflecting very large reductions in total issuance year-on-year in local currency or US dollar equivalent terms in Hong Kong, China; Indonesia; Malaysia; and Viet Nam; as well as a modest decline of corporate bond issuance—in US dollar equivalent terms—in the Republic of Korea (Korea). The decline in corporate issuance in Hong Kong, China was in large part explained by the 10% decline of corporate bonds outstanding.

The only governments to report a significant decline in issuance (US dollar equivalent) in 1H08 were Indonesia (down 17.4%) and the Philippines (down 23%). The stock of Indonesian government debt fell 4%, while the stock of Philippine government debt rose only 8.8% in 1H08.

Government issuance in Korea and Viet Nam (defined to include the liabilities of central banks) rose 17.4% and 16%, respectively, in local currency terms in 1H08, and by 3.4% and 15.7%, respectively, in US dollar equivalent. The growth rate for the stock of Korean government debt in 1H08 was negligible, while the stock of Vietnamese debt was still growing at a very rapid rate.

In other emerging East Asian countries government bond issuance in US dollar terms rose more dramatically in 1H08, ranging from 21.4% in the PRC to 65.5% in Malaysia and 79.2% in Thailand. In Thailand, the sudden rise in total government sector issuance was driven largely by a sharp 117% rise (expressed in Thai baht terms) in

Table B1-1: **Local Currency-denominated Bond Issuance** (Gross)

	Local currency billion		**USD billion**		**1H08 Growth Rate** (%)	
	1H08	% share	1H08	% share	Y-o-Y in LCY Terms	Y-o-Y in USD terms
China, People's Rep. of						
Total	3,994	100.0	582.7	100.0	10.3	22.5
Government	3,686	92.3	537.8	92.3	9.3	21.4
Corporate	308	7.7	44.9	7.7	22.7	36.3
Hong Kong, China						
Total	824	100.0	105.6	100.0	36.3	36.6
Government	747	90.7	95.9	90.8	59.7	60.2
Corporate	76	9.3	9.8	9.2	(44.2)	(44.0)
Indonesia						
Total	1,383,420	100.0	150.0	100.0	(15.5)	(17.5)
Government	1,368,820	98.9	148.4	98.9	(15.3)	(17.4)
Corporate	14,600	1.1	1.6	1.1	(26.4)	(28.2)
Korea, Rep. of						
Total	155,493	100.0	148.5	100.0	14.5	0.9
Government	117,163	75.3	111.9	75.4	17.4	3.4
Corporate	38,330	24.7	36.6	24.6	6.5	(6.2)
Malaysia						
Total	196	100.0	60.1	100.0	21.9	28.8
Government	146	74.1	44.5	74.1	56.6	65.5
Corporate	51	25.9	15.6	25.9	(25.4)	(21.2)
Philippines						
Total	308	100.0	6.9	100.0	(20.1)	(17.7)
Government	265	86.0	5.9	86.0	(25.2)	(23.0)
Corporate	43	14.0	1.0	14.0	38.1	41.2
Singapore						
Total	73	100.0	53.7	100.0	15.8	30.2
Government	68	93.0	50.0	93.0	18.3	33.0
Corporate	5	7.0	3.8	7.0	(9.1)	2.2
Thailand						
Total	5,234	100.0	156.4	100.0	78.2	68.9
Government	4,487	85.7	134.1	85.7	89.1	79.2
Corporate	747	14.3	22.3	14.3	32.6	25.7
Viet Nam						
Total	41,605	100.0	2.5	100.0	1.2	(3.1)
Government	40,605	97.6	2.4	97.6	15.7	10.6
Corporate	1,000	2.4	0.1	2.4	(83.3)	(83.8)
Total Emerging East Asia						
Total			1,266.4	100.0		18.0
Government			1,130.9	89.3		20.3
Corporate			135.5	10.7		1.3

Sources: Bloomberg LP, ChinaBond, Hong Kong Monetary Authority, Bank of Korea, and Bank of Thailand.

Table B1-2: **Market Size and Issuance for Emerging East Asian LCY Bond Markets**

	2007	1H08	1H08	1H08	1H08	1H08
	Bonds Outstanding (USD billion)	Bonds Outstanding (USD billion)	Gross Issuance (USD billion)	Gross Iss./ Bonds Outst. (%)	Net Issuance (USD billion)	Amortization (USD billion)
China, People's Rep. of						
Total	1,689.8	2,004.2	582.7	29.1	314.4	268.3
Government	1,533.1	1,818.8	537.8	29.6	285.7	252.1
Corporate	156.7	185.4	44.9	24.2	28.7	16.2
Hong Kong, China						
Total	98.0	92.6	105.6	114.0	(5.3)	111.0
Government	17.5	18.5	95.9	518.0	1.0	94.9
Corporate	80.5	74.1	9.8	13.2	(6.3)	16.1
Indonesia						
Total	85.2	82.9	150.0	180.9	(2.3)	152.3
Government	76.8	73.9	148.4	200.7	(2.9)	151.2
Corporate	8.4	8.9	1.6	17.7	0.5	1.1
Korea, Rep. of						
Total	1,061.8	985.9	148.5	15.1	(75.9)	224.4
Government	470.1	427.1	111.9	26.2	(43.0)	154.8
Corporate	591.7	558.8	36.6	6.5	(32.9)	69.5
Malaysia						
Total	164.3	187.5	60.1	32.1	23.2	36.9
Government	88.6	104.2	44.5	42.7	15.6	28.9
Corporate	75.7	83.3	15.6	18.7	7.6	8.0
Philippines						
Total	58.0	56.7	6.9	12.1	(1.4)	8.2
Government	52.8	50.9	5.9	11.6	(2.0)	7.9
Corporate	5.2	5.8	1.0	16.5	0.6	0.3
Singapore						
Total	121.8	138.6	53.7	38.8	16.8	36.9
Government	68.2	79.4	50.0	63.0	11.1	38.8
Corporate	53.6	59.2	3.8	6.3	5.6	(1.9)
Thailand						
Total	158.3	150.2	156.4	104.1	(8.0)	164.4
Government	111.6	107.0	134.1	125.3	(4.5)	138.6
Corporate	46.7	43.2	22.3	51.7	(3.5)	25.8
Viet Nam						
Total	9.8	11.9	2.5	20.8	2.1	0.4
Government	8.3	10.3	2.4	23.3	2.1	0.4
Corporate	1.5	1.6	0.1	3.8	0.0	0.0
Total Emerging East Asia						
Total	3,430.8	3,710.5	1,266.4	34.1	279.8	986.6
Government	2,465.1	2,690.2	1,130.9	42.0	225.1	905.8
Corporate	965.6	1,020.3	135.5	13.3	54.7	80.8
Less PRC:						
Total	1,740.9	1,706.3	683.7	40.1	(34.6)	718.3
Government	932.0	871.4	593.0	68.1	(60.6)	653.7
Corporate	808.9	834.9	90.6	10.9	26.0	64.6

Note:

Total emerging East Asia size and growth figures are based on end-June 2008 currency exchange rates and do not include currency effects.

Sources: People's Republic of China (ChinaBond); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Indonesia Stock Exchange and Bank Indonesia); Republic of Korea (KoreaBondWeb); Malaysia (Bank Negara Malaysia); Philippines (Bureau of the Treasury and Bloomberg LP); Singapore (Monetary Authority of Singapore); Thailand (Bank of Thailand); Viet Nam (Bloomberg).

issuance by the Bank of Thailand (BOT) for the purpose of funding a somewhat larger 135% increase in BOT securities maturing in 1H08. The rise in total Malaysian government sector issuance was also explained by a 93% rise in issuance by Bank Negara Malaysia (BNM). However, maturities for BNM securities coming due in 1H08 were almost identical to those maturing in 1H07. Thus, most of BNM's increased issuance for 1H08 would appear to be for monetary sterilization purposes.

The significance of issuance data for gross issuance can be better understood when compared with (i) the stock of debt outstanding for each country; (ii) net issuance for each economy, defined as the year-on-year changes for each economy's debt stock**;** and (iii) net amortization (not scheduled—but actual—debt repayment).

Gross issuance in 1H08 amounted to about one-third of total bonds outstanding as of 1H08. The ratio of gross issuance/total bonds outstanding, however, varied immensely from economy to economy, ranging from a high of 181% in Indonesia to a low of 12.1% in the Philippines. The ratio of government sector issuance to government bonds outstanding varied by an even larger amount, ranging from a high of 518% in Hong Kong, China to a low of 11.6% in the Philippines. Other economies with a high ratio of government issuance to bonds outstanding included Indonesia (200.7%) and Thailand (125.3%). The main reason for such large issuance amounts were, in the case of Hong Kong, China, large amounts of short-term securities issued by the Hong Kong Exchange Fund, and shorter-dated securities issued by central banks, issued in large part for sterilization purposes (see market summaries, page 58). While Malaysia and the PRC have a relatively moderate ratio of total bonds outstanding/gross issuance., a large volume of issuance by their central banks in 1H08 was offset by relatively modest issuance by their central governments.

Corporate issuance in 1H08 as a percentage of bonds outstanding was much more subdued—ranging from a high of 52% in Thailand to a low of 3.8% in Viet Nam. Corporate bonds, however, are a relatively small proportion of total local currency bonds outstanding in most Asian countries. Only in Korea and Hong Kong, China, do corporate bonds outstanding exceed government sector debt outstanding. If the PRC is excluded from total figures for emerging East Asia, the ratio of gross issuance to bonds outstanding rises to 40%, and the ratio of government sector issuance to government bonds outstanding rises to 68%.

Of the total gross issuance of USD1.3 trillion for emerging East Asia, USD987 billion was used to pay off existing debt, or net amortization. Net issuance—net of amortization—was a mere USD280 billion. Furthermore, most net issuance was for government bonds, and PRC government bonds in particular. Corporate net issuance was negligible, reflecting large pay-downs of corporate bonds outstanding in Hong Kong, China; Korea; and Thailand. Net corporate issuance was at best modestly positive only in Malaysia and Singapore

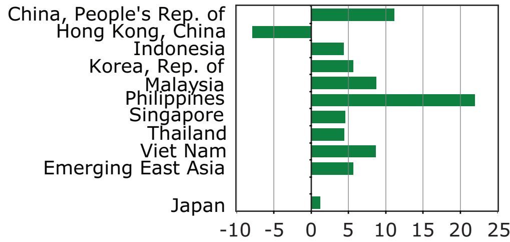
Excluding PRC gross issuance—as well as net issuance and net amortization—from the totals for each category reduces gross issuance in emerging East Asia by half, and leaves total net issuance for the rest of the region negative, and produces net amortization figures of USD718 billion, or USD35 billion larger than gross issuance.

(i) issuance of more debt to fund rising fiscal deficits as global crude oil and food prices soared;

(ii) increased public expenditure to boost domestic demand and offset anticipated slowdowns in global and regional economic growth; and

(iii) accelerated issuance by monetary authorities in several markets, primarily to sterilize excess net capital inflows, particularly in the 1H08.

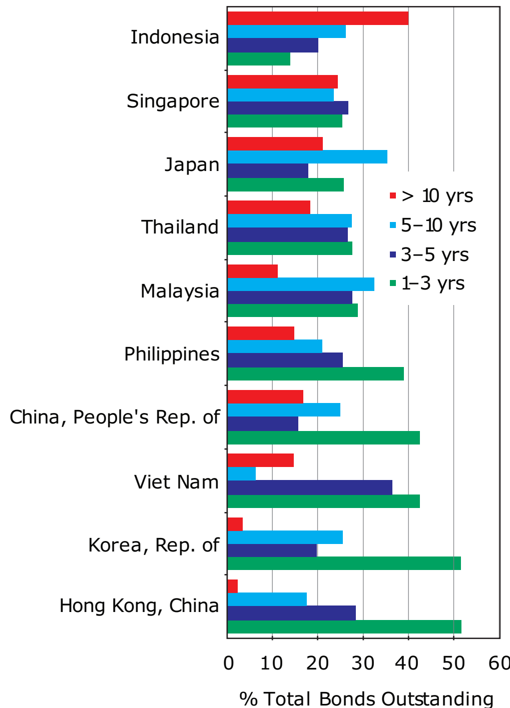
Figure 3: **Growth of Emerging East Asian Local Currency Corporate Bond Markets in 1H 2008** (YTD %)



Notes:
1. Calculated using data from national sources.
2. Corporate bonds include issues by financial institutions.
3. Growth rates are calculated from LCY base and do not include currency effects.
4. Total emerging East Asia growth figure is based on end-June 2008 currency exchange rates and do not include currency effects.

Sources: People's Republic of China (ChinaBond); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Indonesia Stock Exchange); Republic of Korea (KoreaBondWeb); Malaysia (Bank Negara Malaysia); Philippines (Bloomberg); Singapore (Monetary Authority of Singapore); Thailand (Bank of Thailand); Viet Nam (Bloomberg); and Japan (Japan Securities Dealers Association).

Figure 4: **Asian Government Bonds: Maturity Profiles—June 2008**



Source: *AsianBondsOnline calculations.*

Corporate bond market issuance in emerging East Asia slowed as borrowing costs increased and credit dried up.

As a response to tighter global credit conditions, some credit rationing also occurred in local markets, particularly among lower-rated corporations. The corporate bond market for emerging East Asia grew 6% year-to-date to June 2008, compared with robust 21% growth for all of 2007 **(Figure 3)**. The bulk of corporate issuance was in PRC local currency markets. Despite the muted growth there was some evidence of highly-rated, locally-based corporations tapping the LCY markets in preference to international debt markets as global credit risk premiums spiked in response to the global credit crisis.

The PRC local currency bond market continues to expand and accounts for most of the growth in the region's local currency bond markets.

The PRC local currency bond market now accounts for about 54% of total bonds outstanding in emerging East Asia. In contrast, PRC stock markets accounted for roughly 44% of the market capitalization of emerging East Asia as of October 2008. Excluding PRC growth in outstanding bonds, emerging East Asian bond markets expanded at just 4.5% year-to-date ending June 2008 **(Box 1)**. A more in-depth analysis of the market-specific factors of bond market growth, as well as local regulatory reforms, is included in the market-specific chapters.

Maturity Structure

The maturity structure in most emerging East Asian bond markets favors the shorter end of the profile.

In emerging East Asia's government bond markets, most liquidity is at the shorter end of the maturity profile **(Figure 4)**, especially in PRC; Hong Kong, China; and Korea. The shorter end has been more stable than either the intermediate or longer end of the curve, likely reflecting risk aversion as financial markets have become increasingly volatile in 2008. The growing tendency for monetary authorities to sterilize excess liquidity has also contributed to the rise in the proportion of shorter-term issuance, particularly in 1H08. Bonds issued by monetary authorities tend to have a shorter maturity structure than issues for fiscal purposes.

Box 2: How to Increase Bond Market Liquidity—an *AsianBondsOnline* Survey

Previous editions of the *Asian Bond Monitor* have published an *AsianBondsOnline* survey of the various measures of market liquidity across the region. This survey was updated in August and September 2008, just before the collapse of Lehman Brothers and the global financial crisis. Over 40 fund managers, traders, analysts, and operations experts in Asia, Europe, and the United States (US) responded to questions about specific markets. Respondents were asked to make qualitative judgments on the effectiveness of certain initiatives in raising liquidity for government and corporate bond markets. Participants were also surveyed on their usage of derivative markets and repurchase agreement markets. They were asked to respond using a scoring system ranging from 4 ("very important" to 0 ("don't know", "not applicable"). A score approaching 4 means that most of the participants felt attention is needed. A lower score means that market participants assign less importance. In the data for 2006 and 2007 collected from previous surveys (See *Asia Bond Monitor*—April 2008), there was little overall change for most categories of questions regarding measures for improving market liquidity.

On questions concerning government bond market reforms, there was little difference between responses for 2007 and 2008 for four out of the six questions we asked. However, there was a distinct drop in importance given to the questions regarding (i) increased availability of hedging products, and (ii) mandatory bid-ask spreads by market makers. The rating for the first—increased availability of hedging products—dropped in importance from 3.5 in 2007 to 3.0 in 2008. The rating for the second question—mandatory bid-ask spreads by market makers—fell from 2.5 to 2.0, suggesting that respondents were largely indifferent to the importance of requiring mandatory bid-ask spreads by market makers for government bonds. Growing volatility and more recently, outright deterioration of market conditions was likely behind the indifference.

More surprising, however, were responses on corporate bonds. Scores dropped by as much as a full point on some questions—the importance of increasing investor diversity, increased availability of hedging products, importance of increasing tax incentives, and the importance of greater multilateral issuance. This likely reflects the fact that

Table B2-1: **What Market Players Want Improved—*AsianBondsOnline* Survey**

	Average Score		
Government Bond Market Reforms	**2008**	**2007**	**2006**
Increasing diversity of investors	3.3	3.5	3.6
Increased availability of hedging products	3.0	3.5	3.2
Increasing intraday price transparency	3.0	3.1	2.8
Improving repo markets	2.8	2.9	3.2
Improvements to clearing and settlement	2.5	2.7	2.6
Mandatory bid-ask spreads by marketmakers	2.0	2.5	2.8
Corporate Bond Market Reforms	**2008**	**2007**	**2006**
Increasing diversity of investors	2.4	3.4	3.5
Increased availability of hedging products	1.9	3.1	3.1
Greater access to credit derivatives	2.4	3.1	3.1
More consistent secondary market pricing	2.3	3.1	3.2
Increasing tax incentives	1.6	2.9	2.8
Credit rating harmonization	2.0	2.8	2.7
Introducing pricing agencies	2.2	2.7	2.6
Greater access to guarantees	1.8	2.6	2.4
Greater multilateral issuance	1.7	2.6	2.3

Legend: 4 = very important, 3 = important, 2 = somewhat important, 1 = not important at all, 0 = Don't know
Source: *AsianBondsOnline*.

Government bonds with maturities of 1–3 years now account for 40–50% of bonds outstanding in PRC; Hong Kong, China; Korea; Philippines; and Viet Nam. There is only limited government bond issuance at the long end of the curve in most emerging East Asian markets, with the exception of Indonesia, where bonds with maturities in excess of 10 years account for almost 40% of total bonds outstanding. In other emerging East Asian government

Table B2-2: **Local Currency Bond Bid-Ask Spreads** (Survey)

	Government bonds (in basis points)					Corporate bonds (in basis points)				
	2004	2006	2007	2008e	2008m	2004	2006	2007	2008e	2008m
China, People's Rep. of	32.5	7.6	20.0	20.0	15.0	107.5	10.8	96.3	50.0	50.0
Hong Kong, China	3.0	3.0	8.0	4.0	4.0	10.0	6.3	30.0	25.0	25.0
Indonesia	140.8	16.9	42.0	19.7	24.5	227.5	68.8	170.8	66.8	70.0
Korea, Republic of	4.8	1.4	4.5	1.2	1.7	na	3.0	na	na	na
Malaysia	3.5	2.3	1.5	6.7	12.2	20.0	18.8	15.0	5.0	5.0
Philippines	25.0	25.3	10.0	15.8	19.8	57.5	30.0	40.6	38.0	37.5
Singapore	5.5	2.7	3.4	20.0	20.0	20.0	5.5	15.0	na	na
Thailand	7.3	3.0	6.3	14.2	9.8	17.5	10.8	15.0	16.7	16.7
Viet Nam	na	na	20.6	22.5	75.0	25.0	14.9	61.3	68.8	156.3
Japan	0.8	0.6	0.8	3.5	3.5	6.3	6.0	6.3	10.0	10.0

Note: e = early 2008, m = mid-2008
Source: *AsianBondsOnline.*

many segments of the corporate bond market have become largely illiquid.

Bond Bid-Ask Spread

These results show that the government bond market is less liquid this year than previously, as bid-ask spreads widened in most emerging East Asian markets. PRC; Hong Kong, China; and Indonesia were notable exceptions. Corporate bond bid-ask spreads, on the other hand, contracted this year compared with previous years for all except Viet Nam and Thailand. The collapse of market liquidity for corporate bonds was mainly due to fear of rising inflation in the early part of 2008 (2008e) and outright financial panic in the middle of the year and later (2008m).

Table B2-3: **Government Bond Spreads—Deviation from Average Range** (Survey)

	2004	**2006**	**2007**	**2008**
China, People's Rep. of	na	0-3	>3-10	3-10
Hong Kong, China	0-3	0-3	over 10	3-10
Indonesia	over 10	>3-10	over 10	3-10
Korea, Rep. of	0-3	>3-10	>3-10	na
Malaysia	over 10	>3-10	>3-10	over 10
Philippines	na	over 10	>3-10	3-10
Singapore	0-3	0-3	0-3	over 10
Thailand	>3-10	>3-10	>3-10	3-10
Viet Nam	na	0-3	over 10	3-10
Japan	na			na

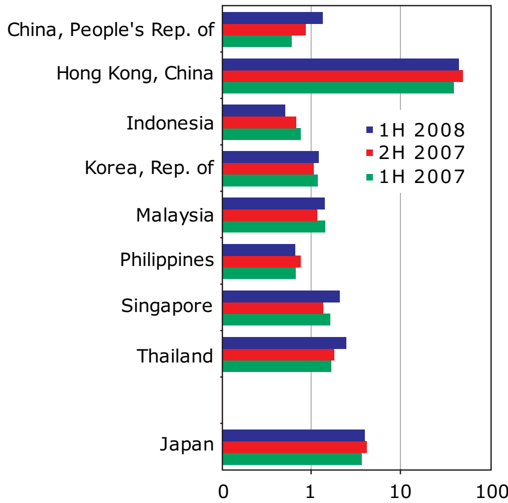
Source: *AsianBondsOnline*

The deviation in government bond bid-ask spread from its average range during the first half of 2008 was also measured in the survey. Spread deviation among most markets held steady with levels of 3–10 times per quarter as compared with 2007 results.

Notable exceptions were Singapore and Malaysia. Both countries had an increase in spread deviation from 0–3 and 3–10 times to more than 10 times per quarter for Singapore and Malaysia, respectively.

bond markets, bonds with maturities in excess of 10 years account for less than 5% of the total in Korea and Hong Kong, China, and between 12% and 18% for PRC, Malaysia, Philippines, and Viet Nam. Only in Japan, Singapore, and Thailand is the proportion of short- and long-term issuance more balanced. The maturity structure in Viet Nam stands out for having issued a significantly smaller amount of government bonds in the 5–10 year segment

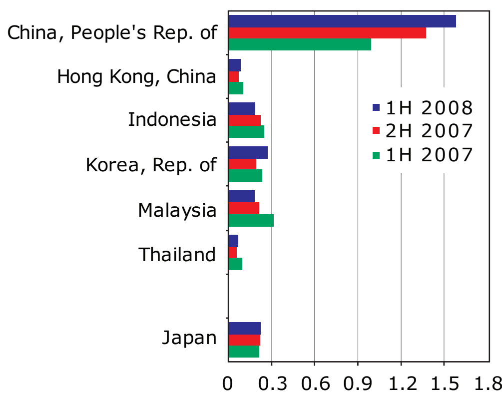
Figure 5: **Government Bond Turnover Ratios**[1]



[1]Calculated as LCY trading volume (sales amount only) divided by average LCY value of outstanding bonds during each 6-month period.

Sources: PRC (ChinaBond.com); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Indonesia Stock Exchange); Korea (KoreaBondWeb); Malaysia (Bank Negara Malaysia); Philippines (Bureau of the Treasury); Singapore (Monetary Authority of Singapore and Singapore Government Securities); Thailand (Thai Bond Market Association); and Japan (Japan Securities Dealers Association).

Figure 6: **Corporate Bond Turnover Ratios**[1]



[1]Calculated as LCY trading volume (sales amount only) divided by average LCY value of outstanding bonds during each 6-month period.

Sources: PRC (ChinaBond.com); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Indonesia Stock Exchange); Korea (KoreaBondWeb); Malaysia (Bank Negara Malaysia); Thailand (Thai Bond Market Association) and Japan (Japan Securities Dealers Association).

of its curve than either short- or long-term issuance. It should not be surprising that, while the Vietnamese government bond curve overall shifted downward in early June, this movement was most pronounced at the shorter- and longer-ends of the curve, with little or no movement in the middle, presumably due to a lack of issuance in this intermediate segment.

Turnover

As a measure of market liquidity, turnover was decidedly mixed across emerging East Asia in the first half of 2008.

Turnover for government bonds was generally higher than corporate bonds, except for the in PRC. In fact, turnover ratios for government bonds rose modestly in most markets except Indonesia during the first half of 2008 **(Figure 5)**. Turnover for corporate Asian bonds remained much lower **(Figure 6)**, ranging from around 0.3 times total bonds outstanding compared with over 1.0 for most government bond markets in the region. Even in the context of reduced liquidity in global credit markets, East Asian local currency bond markets remain less liquid than other international debt markets. In the first half of 2008, corporate bond turnover rose in just two countries—the PRC and Korea—compared with 1H07 **(Box 2)**.

Bond Yields

Yields in emerging East Asia's bond markets have gone through three distinctive phases so far this year: (i) most yield curves shifted up during the first half as many central banks raised interest rates to fight inflation.

Most government bond yield curves in the region shifted upward in the first half of 2008 as consumer and producer prices spiked and central banks raised interest rates—to stave off inflationary expectations and keep second-round inflationary effects from seeping through regional economies **(Figure 7a)**. An aggressive policy stance to combat inflation in the early part of the year saw Bank Indonesia (BI) and the Bangko Sentral Ng Pilipinas (BSP) raise policy rates to 9.25% and 6.0% respectively, while the State Bank of Viet Nam also raised its policy rate, to 14% in mid-June.

These moves created market confidence that inflation was likely to be contained. Even in markets where governments do not use target policy interest rates as the focal point of their monetary policy—such as Singapore and Hong Kong, China—yields rose at the longer end of the curve. Long-dated bond yields also rose slightly in the PRC.

(ii) Yield curves shifted downward from July to early September as the severity of the global credit crisis deepened and inflationary expectations peaked with food and fuel prices beginning to ease.

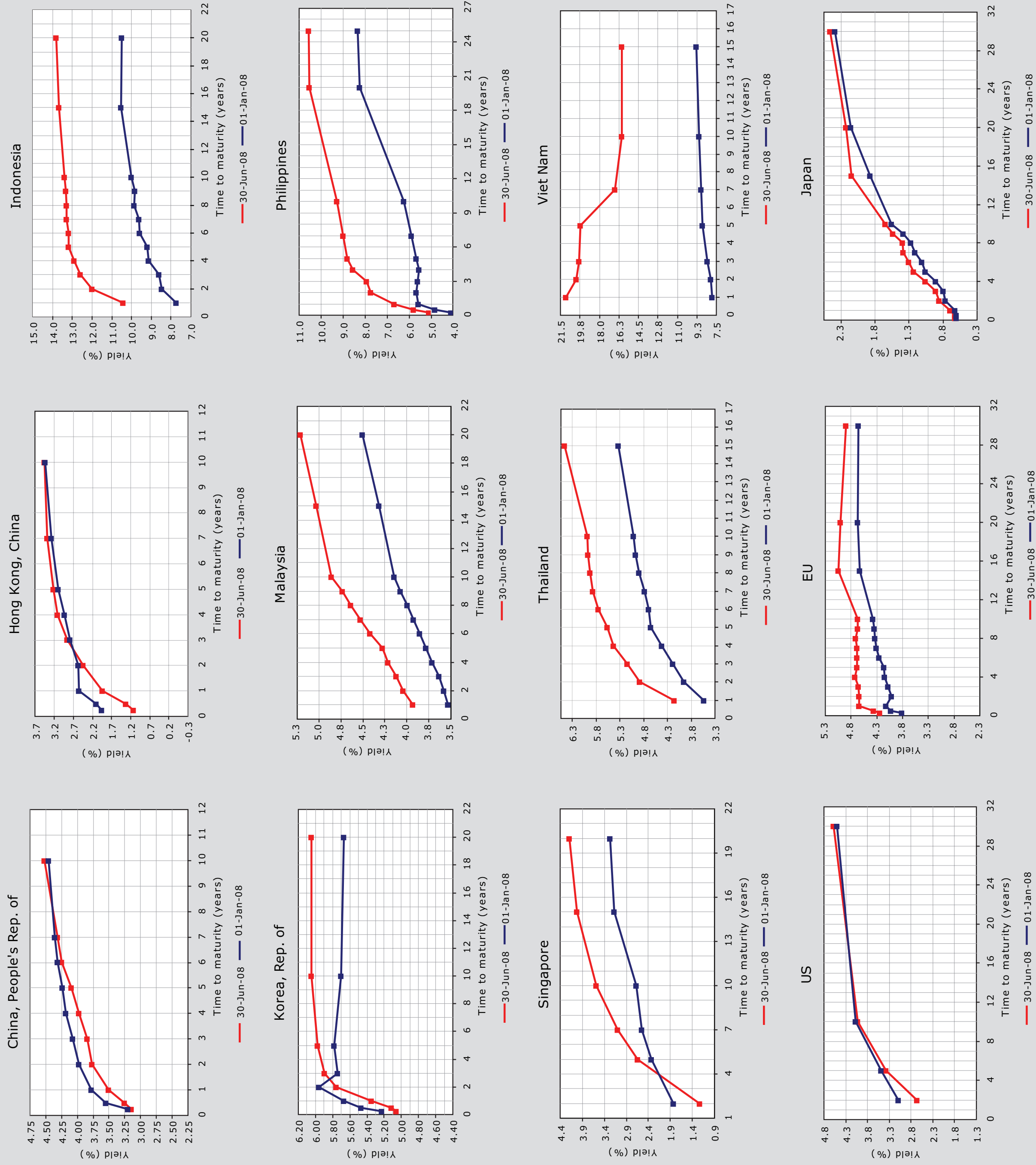
From the end of June through early September, debt market participants changed focus from concerns over inflation to concerns about a worldwide growth slowdown as the impact of the credit crisis deepened and began to be felt in the real economy. Government bond yield curves in most emerging East Asian markets started shifting downward as oil and food prices eased on expectations that inflation would peak in the second half as global demand moderated **(Figure 7b)**. This trend was evident particularly in economies where central banks sharply raised interest rates early on to douse inflationary flames. Government bond yield curves in some markets—Indonesia, Philippines, and Viet Nam—shifted downward faster than others. Yields in the PRC also edged down as the central bank kept its 1-year lending rate unchanged at 7.47%. The yield curves of Singapore and Hong Kong, China also shifted downward.

In other markets, government bond yield curves flattened despite some upward shifts in policy rates. The Bank of Korea (BOK) raised its policy rate 50 basis points (bp) to 5.25% in early August. And in Thailand, simmering political uncertainty spurred a flight-to-quality to government securities, despite the BOT raising its policy rate to 3.75% in late August.

(iii) Global credit markets seized up in September, and the combination of a dramatic investor "flight-to-quality" and government emergency policy measures drove yields on government bonds lower.

By October, severe write-offs as a result of the international credit crisis meant that many banks and financial intermediaries ceased lending to each other and financial markets internationally entered a state of deep distress. Concerns that the contraction of

Figure 7a: **Benchmark Yield Curves - Local Currency Bonds**



Source: Based on data from Bloomberg.

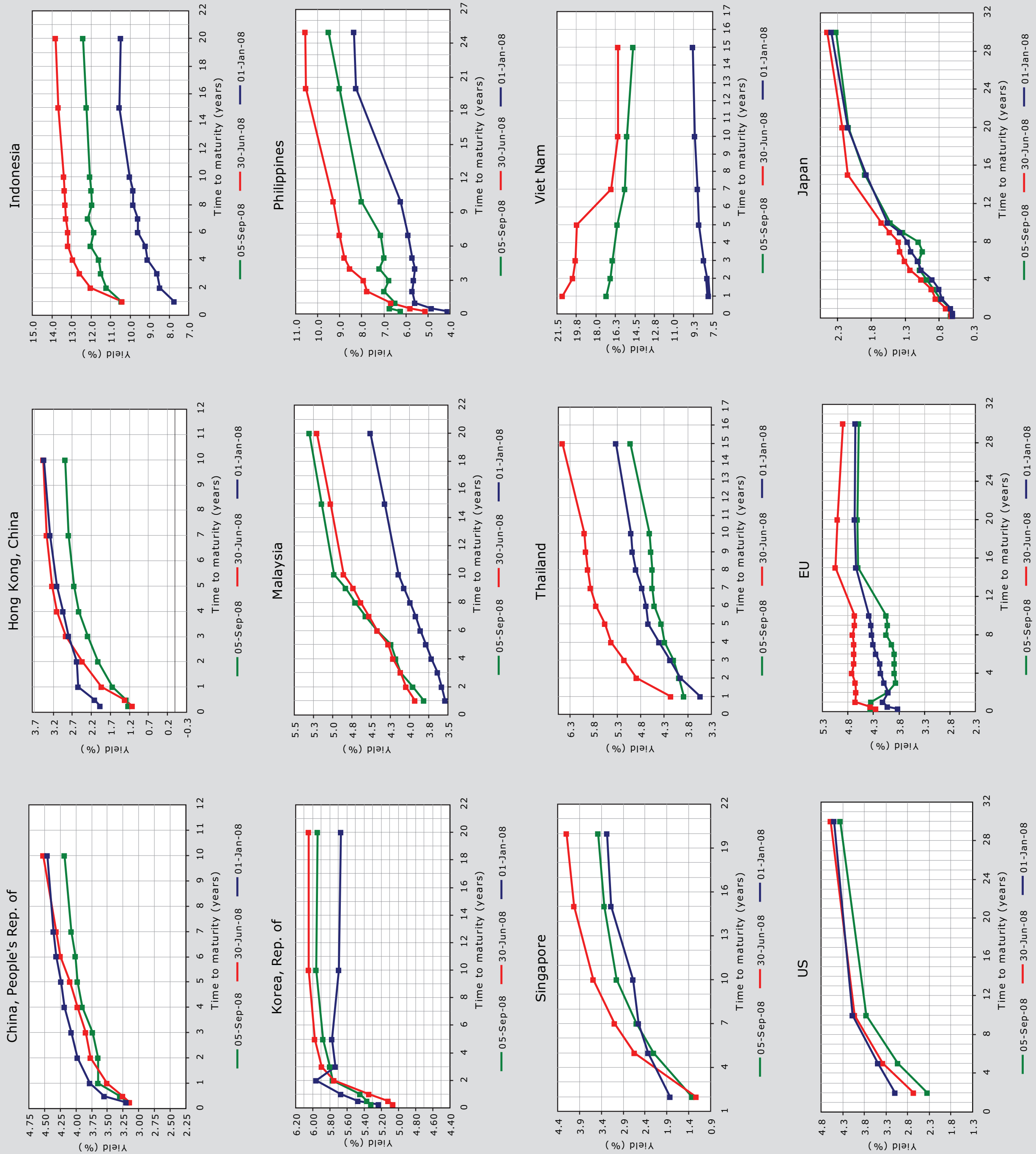
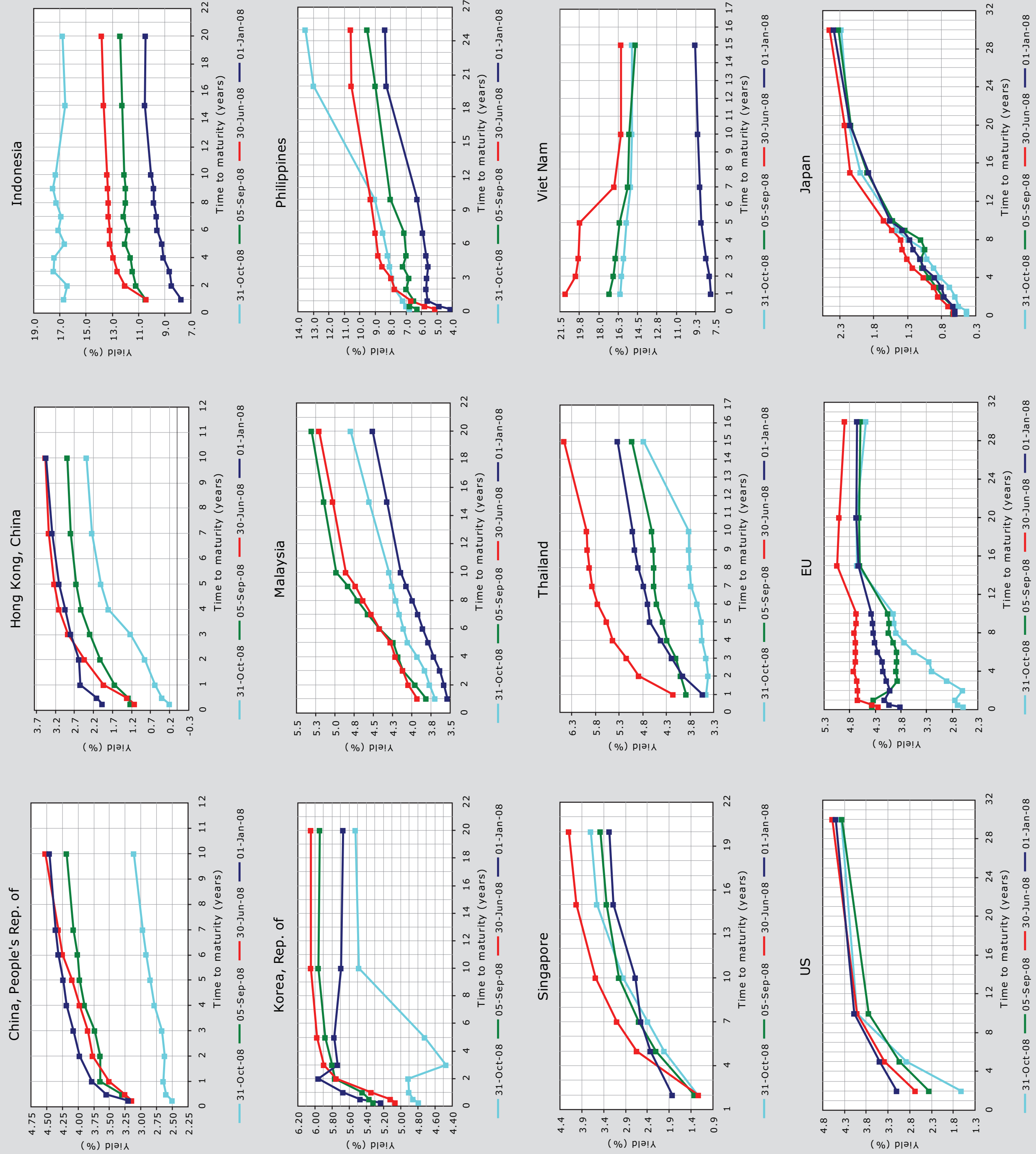


Figure 7b: **Benchmark Yield Curves - Local Currency Bonds**

Source: Based on data from Bloomberg.

Figure 7c: **Benchmark Yield Curves - Local Currency Bonds**



Source: Based on data from Bloomberg.

credit would generate a severe economic slowdown throughout Asia gripped the region. The flight-to-quality escalated, and continues as investors shun riskier assets for government bonds or investment grade assets, resulting in a major downward shift of most government bond yield curves in the region **(Figure 7c).** The shift has been most pronounced in the short end of the government bond curve out to 5 years as short-term government assets became highly sought after because of their liquidity.

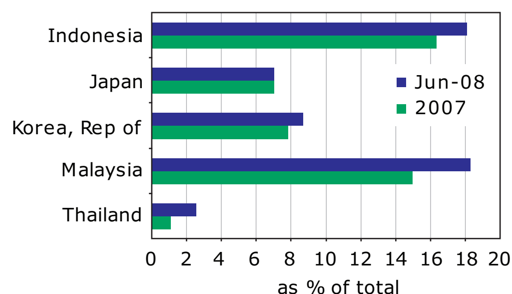
- These downward shifts are driven—at least in part—by a series of economic stimulus measures announced by several emerging East Asian governments and easing of monetary policy by central banks in Korea, the PRC, and Hong Kong, China in the last weeks of October. (See market summaries on actions of individual governments in the last section.)

- The severity of the impact of the credit crisis on the region's growth prospects were reinforced by the coordinated rate cuts by major central banks in late October and the simultaneous announcement of the US Federal Reserve's (US Fed) USD30 billion currency swap facilities each for Brazil, Korea, Mexico, and Singapore through 30 April 2009.

Most government yield curves have shifted downward from their peaks at the end of June, with the exception of Indonesia. There has also been an upward shift in the Philippine curve, especially at the longer end.

Government bond yield curves for the PRC; Hong Kong, China; Korea; and Thailand have shifted to levels below those of January 2008.

Figure 8: **Foreign Holdings of LCY Government Bonds**



Sources: Indonesia (Directorate of Government Securities Management); Japan (Ministry of Finance); Korea, Rep of (Bank of Korea); Malaysia (Bank Negara Malaysia); Thailand (Bank of Thailand).

Foreign holdings of local government bonds are up as investors shed riskier assets.

As uncertainties in global markets spiked, foreign investors began to increase their exposure to Asian local currency government bonds, in stark contrast to the wholesale repatriation of foreign investor capital during the 1997/98 Asian financial crisis. This reflects growing confidence in these markets, which will only be further enhanced by continued reforms of LCY bond markets (**Figure 8**).

In recent months Asian governments have been working in cooperation with US and European authorities to stabilize their markets.

Some of the most recent actions took place at the end of October, when the US Fed and several Asian central banks announced coordinated policy rate cuts. The US Fed lowered its Federal Funds Target Rate 50 bp to 1.0% and agreed to provide temporary liquidity swap facilities mentioned above to Brazil, Mexico, Korea, and Singapore. Asian central banks that have announced rate cuts include:

- the PBOC cut its interest rates 30 October for the third time in 2 months. The 1-year benchmark deposit rate was lowered from 3.87% to 3.60%, and the 1-year loan rate from 6.93% to 6.66%, both by 27 bp;

- the Hong Kong Monetary Authority (HKMA) lowered the Base Rate, also on 30 October, cutting it 50 bp to 1.5%;

- the BOK on 27 October lowered its Base Rate 75 bp, from 5.0% to 4.25%, the second reduction in less than 3 weeks; and

- the Bank of Japan cut its uncollateralized overnight call rate to 0.30% from 0.50% on 31 October, following the US Fed cut.

The picture in the corporate bond markets is not as clear cut. Liquidity in East Asia's local currency corporate bond markets is low and some investors have been unwilling or unable to sell portfolios of corporate securities. Selling small percentages of portfolios is not a realistic option because investors would then be required to mark-to-market the remaining holdings of debt securities at the new "mark". Because of these factors, transactions are more illiquid and trading in sub-investment grade securities has virtually ceased.

Bond Index Returns

Local currency bond returns fell as investors reduced their exposure to high risk assets as yields rose amid tightening global liquidity and rising financial market volatility.

The ABF Pan Asian Bond Index lost 3.9% between the end of December 2007 and the end of October 2008. Most of the losses occurred during September and October (**Table 3**). This compares with a 7.2% decline (on a US dollar unhedged basis) for HSBC's Asian Local Bond Index (ALBI). The ALBI contains some highly-rated corporate issues and the losses on these securities accounts for the larger losses in the ALBI. The ABF indexes contain only government debt and government guaranteed debt obligations. International investors also repatriated a percentage of their investments away from emerging markets—one factor in the depreciation of regional currencies against the US dollar. Within the index, PRC bonds delivered the highest returns—about 15.2%

Table 3: **iBoxx ABF Index Family Returns**

Market	**Modified Duration** (years)	**2007 Returns** (%)		**2008 YTD Returns** (%)	
		Local Currency Bond Index	USD Unhedged Total Return Index	Local Currency Bond Index	USD Unhedged Total Return Index
China, People's Rep. of	4.00	(2.12)	4.54	8.58	15.15
Hong Kong, China	3.52	5.91	5.61	6.73	7.34
Indonesia	3.57	9.84	5.51	(22.07)	(39.16)
Korea, Republic of	3.51	2.36	1.73	6.04	(26.08)
Malaysia	4.67	3.05	9.37	1.88	(5.46)
Philippines	3.69	6.21	23.41	(5.51)	(22.50)
Singapore	5.00	5.05	11.46	2.03	(1.15)
Thailand	5.29	6.66	13.44	9.04	5.05
Pan-Asian Index	4.15	NA	8.03	NA	(3.93)
HSBC ALBI	6.09		7.85		(7.20)
US Govt 1–10 years	3.69		8.59		5.21

Notes:
1. Market bond indexes are from iBoxx ABF Index Family. 2008 YTD is year-to-date returns as of 31 October 2008.
2. Annual return is computed for each year using natural logarithm of year-to-date index value/ beginning year index value.
3. Duration is as at 31 October 2008.

Sources: *AsianBondsOnline*, Bloomberg/EFFAS for US Government Bond Index.

Table 4: **MSCI Index Returns**

Market	2007 Returns (%)		2008 YTD Returns (%)	
	Local Currency terms	USD terms	Local Currency terms	USD terms
China, People's Rep. of	63.52	63.10	(58.55)	(58.30)
Hong Kong, China	37.83	37.48	(54.26)	(53.98)
Indonesia	57.50	50.81	(55.10)	(61.31)
Korea, Republic of	30.80	29.95	(38.82)	(55.64)
Malaysia	32.68	41.55	(41.64)	(45.65)
Philippines	16.26	38.04	(44.20)	(52.92)
Singapore	16.25	23.91	(49.43)	(50.95)
Thailand	31.33	40.94	(52.61)	(54.48)
Far East ex-Japan Index	32.39	33.38	(49.59)	(53.73)
MSCI USA		4.09		(34.14)

Notes:

1. Market indexes are from MSCI country indexes. 2008 YTD is year-to-date returns as of 31 October 2008.
2. Far East ex-Japan Index includes PRC; Hong Kong, China; Indonesia; Korea, Rep. of; Malaysia; Philippines; Singapore; Taipei,China; and Thailand.

Source: *AsianBondsOnline*, Bloomberg LP.

for the end-December to end-October period—followed by Hong Kong, China (7.3%) and Thailand (5.0%). Returns on Singapore bonds at end-October were down 1.2%. Local currency bond returns in Malaysia, Philippines, Korea, and Indonesia fell by 5.5%, 22.5%, 26.1%, and 39.2% respectively. The LCY bond returns, however, outperformed most emerging East Asian equity markets. The MSCI index fell 53.7% year-to-date at end-October for its Far Eastern ex-Japan Index **(Table 4)**. The index has plunged by about 45–61% in the key stock markets in emerging East Asia.

Regulatory Developments

In the first half of the year, market liberalization, product innovation, and diversification continued despite simmering global market turmoil; but much has been placed on standby as the crisis has deepened.

Regulatory and supervisory reform across emerging East Asia makes bond markets more transparent, provides more accurate valuations, and reduces credit and liquidity risk. Reforms are centered on providing more investor choice and raising transaction

volumes in markets. Credit crisis management and the task of stimulating growth in Asia in the face of a global recession may have temporarily deflected some policymaker's attention from developing markets. Nevertheless, there is a growing appreciation among governments that Asian debt markets need to integrate and develop further if they are to provide an efficient alternative financing source to international markets and the banking sector:

- Cross-border issuance of local currency bonds increased during the first half of 2008 with some governments—such as Malaysia—streamlining issuance procedures to promote cross-border transactions. Issuers from Korea actively sold ringgit-denominated bonds in the Malaysian debt market, while the Indonesian finance ministry said it was looking to offer Samurai debt (yen-denominated bonds) in 2009.

- In response to regional inflation concerns, several economies in the region—including Thailand and Japan—are looking to issue inflation-linked bonds in the next fiscal year to retail and institutional investors. The bonds will help investors hedge against pricing risks and promote capital market development.

- The Financial Services Commission of Korea said it will lower barriers to allow banks to issue covered bonds and also let financial firms sell high-yield debt—including junk bonds—to breathe life into Korea's sluggish debt markets.

- The PRC issued new rules on debt issuance in the interbank market by nonfinancial enterprises. It also launched delivery versus payment (DVP) settlement to cover all participants in interbank bond market.

- And Viet Nam unveiled a draft regulation that requires any local enterprise planning to tap global markets to have a minimum issue size of USD200 million.

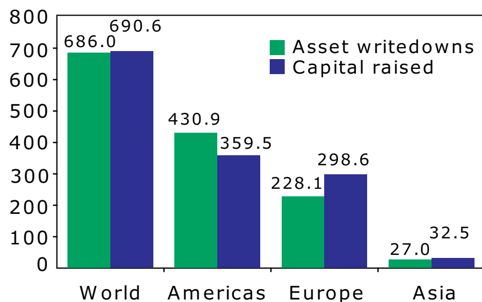
Outlook, Risks, and Policy Challenges

External Market Environment

As the US subprime housing crisis metastasized into a global financial crisis, financial authorities acted on several fronts to calm financial markets and rebuild battered financial systems.

The interactive downward spiral of troubled assets, capital inadequacy, and funding illiquidity intensified dramatically from September 2008, spreading turmoil across developed market economies and beyond. Worries over financial system solvency triggered a cascading series of bankruptcies, forced mergers, and public interventions in the US and Western Europe. Financial institutions continue to encounter problems that are key to transmitting the crisis to both other financial institutions and to the real economy. The result has been the start of a drastic reshaping of the global financial architecture. Since the beginning of the year, banks in the US and Europe have raised substantial amounts of capital—about USD658 billion—while writing down nearly USD659 billion. This compares with loss estimates of around USD700 billion for banks and about USD1.3 trillion for the entire global financial system **(Figure 9)**.[3] In recent months raising capital has become increasingly difficult as (i) both existing shareholders and new investors in distressed institutions were hit by additional heavy losses as the crisis spread across asset classes; (ii) and as economic growth weakened and house prices continued to fall, dashing investors' hopes that the turmoil would be short-lived. This resulted in bank share prices falling substantially, reducing investors' incentives to provide fresh capital. Several rights issues in Europe were heavily undersubscribed. While issuing banks received needed capital, substantial amounts were left with the underwriters, which created an overhang of shares that depressed prices further. In general, bank and corporate borrowers across the globe that rely on international credit markets became stressed due to heightened risk aversion among international investors. Central banks and governments responded with unprecedented liquidity injections, recapitalizations, monetary policy adjustments, and credit guarantees in order to provide sufficient liquidity, stabilize

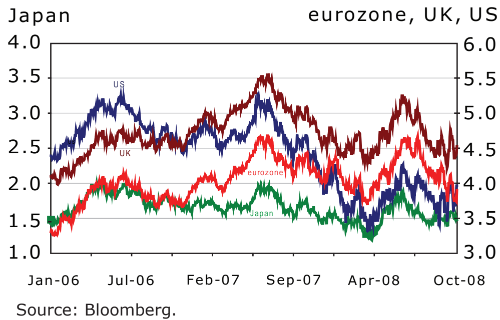
Figure 9: **Bank write downs and capital raisings by banks since the third quarter of 2007**



Source: Bloomberg, October 2008.

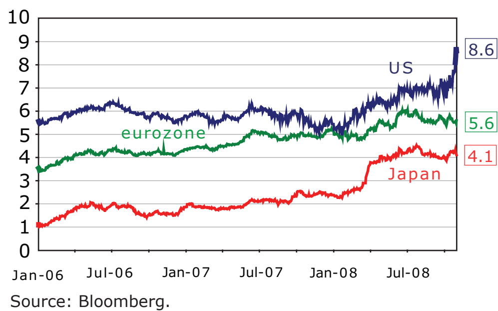
[2] Institute of International Finance, *Capital Market Monitor*, October 2008.

Figure 10: **10-year government bond yields** (% per annum)



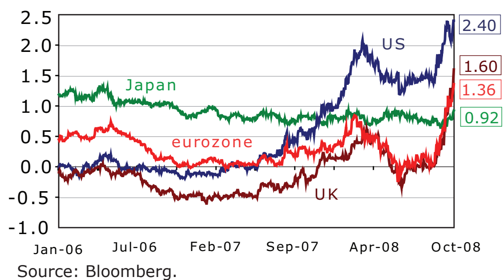
Source: Bloomberg.

Figure 11: **Corporate bond yields** (% per annum)



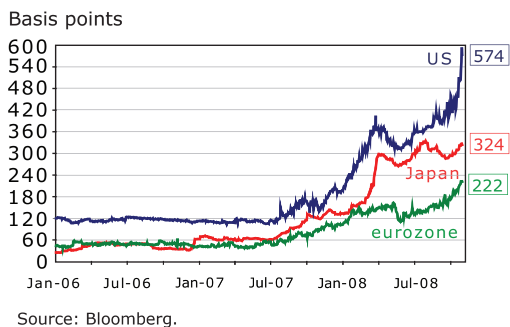
Source: Bloomberg.

Figure 12: **10-year and 2-year government bond yield spreads** (% per annum)



Source: Bloomberg.

Figure 13: **Corporate bond spreads** (% per annum)



Source: Bloomberg.

markets, and begin the process of rebuilding public confidence in the global financial system.

Despite write-downs, capital raisings, and substantial liquidity injections by central banks, the vast pool of troubled assets remains a concern.

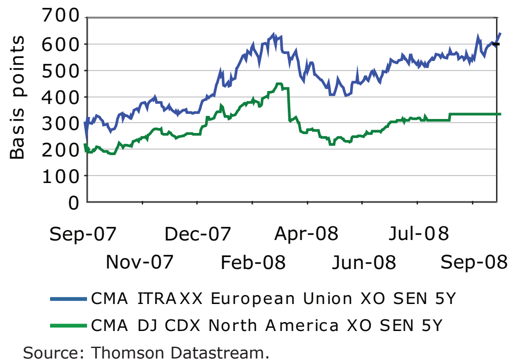
Troubled assets—including US subprime mortgages, alt-A mortgages, and related products—are estimated at a face value of more than USD3 trillion. In addition there are large credit default swaps and synthetic collateralized debt obligations (CDOs) linked to those instruments.[3] Other corporate and consumer credit portfolios are also likely to suffer losses as the global economy slows and delinquencies rise. Despite the substantial mark-to-market losses already reported, investors fear more losses will materialize as confidence erodes in securities previously regarded as safe and liquid. These concerns undermine the capital of many financial institutions perceived by markets as having large exposure to any or all of these assets classes.

Deteriorating credit conditions are reflected in widening spreads and shrinking market liquidity.

Strains on term-funding reflect not only liquidity risks but also credit risks and counterparty concerns. The tightening of financial conditions is likely to continue to add pressure on already highly indebted consumers. Government bond yields in the US, eurozone, and Japan have fallen due to a flight to quality and the need for liquid assets, while corporate credit spreads continue to widen (**Figures 10, 11**). Credit quality remains under pressure amid the weaker outlook for corporate earnings and the slowing global economy. Elevated credit risks reflect the ongoing pressures on bank balance sheets, as well as signs of wider credit deterioration, particularly in areas exposed to the US mortgage and commercial real estate markets (**Figures 12, 13**). Spreads in many other credit markets, including consumer credit, commercial mortgage-backed securities (MBS), and corporate high-grade credit have widened more moderately and turnover has contracted significantly.

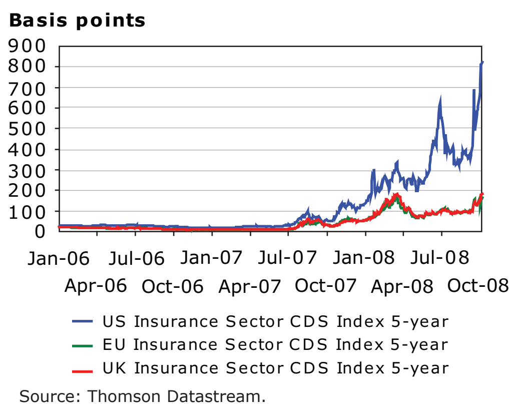
[3] Although it makes for a good news headline, estimates of outstanding credit default swap (CDS) contracts of USD700 trillion are misleading as these refer to the notional face value of contracts traded. Many of these contracts will offset each other—either within the CDS holder's portfolio or at settlement.

Figure 14: **Credit Default Swap Spreads** (5-year, basis points)



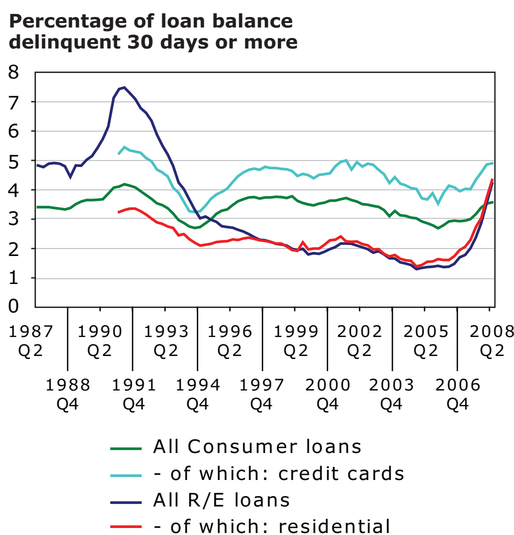
Source: Thomson Datastream.

Figure 15: **Credit Default Swap Spreads for Insurance companies, 5 year Credit Default Swap spread** (basis points)



Source: Thomson Datastream.

Figure 16**: Loan Delinquency Rate at US Banks** (in % of loan balance)



Source: Unites States Federal Reserve.

The costs of protecting debt instruments from default continue to increase with exceptionally high spreads in the US insurance sector.

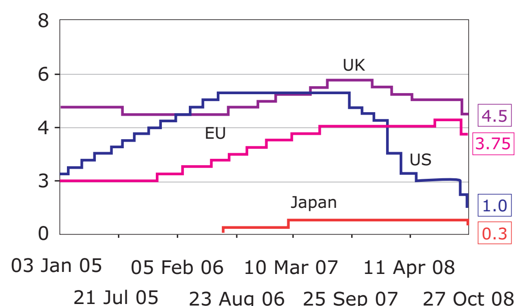
Credit default swaps (CDS)—which are single-name contract, over-the-counter, credit derivatives—provide default insurance.[4] The participation from commercial banks, insurance companies, and hedge funds has fueled a rapid expansion of the CDS market over the past decade. However, CDS spreads have widened due to (i) the forced sale of risky assets at distressed values due to the insolvency of the holder; (ii) increasing overnight interbank rates raising funding costs on leveraged instruments; (iii) heightened overall implied dollar funding costs due to a lack of liquidity in hedging instruments (such as interest rate swap spreads); (v) increasing default probabilities; and (vi) reductions in the underlying liquidity of the CDS instrument itself as traders leave the market (**Figure 14**). In particular, CDS spreads on financial guarantors (monolines) and US insurance companies have widened as the expectation of further losses for US insurers drives up their cost of credit protection (**Figure 15**). There are growing signs that rates of default and foreclosures may rise considerably well beyond the subprime sector. There are concerns, for example, over increasing defaults on consumer and automobile credit (**Figure 16**).

Financial authorities have acted on several fronts to calm financial markets and rebuild battered financial systems, but uncertainty and high volatility across global financial markets continues.

Financial authorities around the globe have acted to counter the impact of credit rationing on the banking sector and real economy. The unprecedented coordination and cooperation between central banks and governments during the crisis has been a positive—perhaps crucial—factor in avoiding a complete financial meltdown. Policy rates have been lowered in both developing and emerging market economies. Cuts in US policy rates have been designed to limit the impact of the cost of resets for subprime loans and to mitigate the impact of rising spreads on risky short-term bonds, supporting banks' lending margins **(Figure 17)**. Some

[4] The payout to the buyer of protection covers up to notional losses in the event of default of a reference entity. The buyer of protection pays a quarterly premium, quoted as an annualized percentage of the notional value, and in return receives the payout from the seller of protection should a credit problem arise.

Figure 17: **Global Policy Rates** (%)



Source: Bloomberg.

governments have also tried to stem the tide of malfunctioning money and credit markets by backing bank lending and taking equity stakes in banks where the market could not or would not provide equity finance. Others are containing systemic risks by organizing rescues to prevent the failure of troubled institutions and increasing deposit insurance thresholds to calm nervous depositors. US authorities have also acted directly in the mortgage market by allowing loan modifications and loosening capital requirements for government-sponsored enterprises, enabling them to buy more mortgage-backed securities. A number of other initiatives are pending. In response to concerns that short selling was frustrating efforts by financial firms to raise capital—and that it also aggravated the effects of false reports and unfounded rumors in the marketplace—regulators in several mature and emerging market economies temporarily banned short sales of certain stocks. They also applied permanent measures to broadly discourage "naked" short selling and raise disclosure requirements for short selling.

Rising inflation, which dominated policy discussions in the first half of 2008, have given way to concerns of deteriorating economic growth in the wake of the global financial crisis.

As 2008 draws to a close, virtually all economic growth forecasts for both industrialized and emerging countries are being lowered. The International Monetary Fund (IMF) projects global growth to contract significantly—from 5.0% in 2007 to 3.7% in 2008 and 2.2% in 2009.[5] The US economy is forecast to grow at 1.4% this year, decelerating to -0.7% in 2009. There are considerable downside risks suggesting a more protracted slowdown could be on the horizon. Consumption could be further dampened should oil, food, and other commodity prices rise again and credit conditions remain tight. Bank balance sheet adjustments due to the global credit crisis are also likely to have a significant impact on US growth through a negative supply shock to credit. Also, Eurozone growth is expected to slow, reflecting softening demand in some member states, weaker US demand, and the stronger euro. In Japan, a stronger yen and weakening global demand, together with continued uncertainties about the strength of consumer spending as the temporary effect of tax cuts fades, dim the outlook for 2008 growth.

[5] International Monetary Fund, *World Economic Update*, October and November 2008 issues.

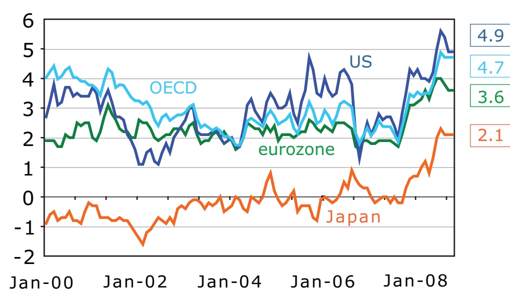
Housing market values—the epicenter of the credit crisis—continue to decline and are spreading outside the US.

A key trigger to recent global financial market turmoil has been a relatively abrupt deterioration in US housing market conditions. House prices began to fall in 2006, pushing up loan-to-value ratios while higher adjustable rate mortgage resets raised the cost of finance to the residential sector. The added pressure on already overstretched household balance sheets caused rising delinquency rates. Over the past year, for all but a few Organisation for Economic Co-operation and Development (OECD) countries, real house prices have been decelerating. The extent of any future fall in global house prices remains uncertain. Until a base is found, it is likely that economic growth will remain muted and financial markets unsettled.

Volatile energy and commodity prices are also raising economic uncertainty.

Food and fuel prices have recently eased but remain above levels at the onset of the price surges. Oil demand in several developed economies has leveled off, but high economic growth in emerging markets—where fuel consumption is often subsidized—has offset some of this slackening in demand. Price hikes for food continue—reflecting expanding demand in emerging markets, rising energy costs as a percentage of output, and adverse weather conditions. US headline inflation reached 4.9% in September; EU reached 3.6%; and Japan 2.1%—all driven by rising food prices. For all OECD countries, inflation was 4.5% **(Figure 18)**.

Figure 18: **Inflation: Global, OECD, US, EU, Japan** (y-o-y %)



Source: OREI staff calculations based on CEIC data.

Regional Economic Trends and Outlook for 2009

Economic growth in emerging East Asia slowed this year and is expected to slow further in 2009.

In 2007, 9% average growth in emerging East Asia was the highest in recent years. However, while the region may skirt the worst effects of the current financial turmoil, growth has already slowed this year and is expected to slow further in 2009, with recovery likely to be more gradual than originally expected. But slower growth, together with the recent stabilization of oil and other commodity prices, is expected to keep a lid on inflation

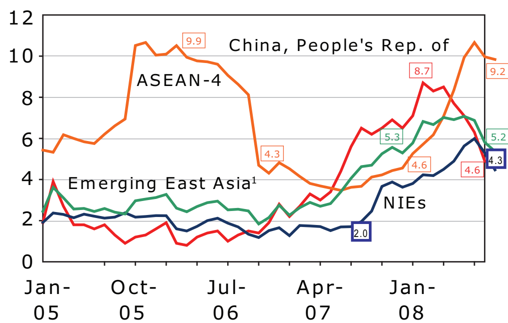
and leave several emerging Asian economies with more scope for monetary and fiscal stiumulus.

Countries which have relatively comfortable fiscal balances and public debt positions are introducing expansionary fiscal policies, which will likely boost government bond issuance.

Fiscal stimulus packages have been announced in several economies—including PRC, Japan, and Korea. The stimulus is expected to be financed by a combination of sources—and bond issuance is likely to be the most important one. The Korean package will, for example, be funded by surplus revenues raised this year in addition to bond issuance, as well as from 2007 budget surpluses. While there are no details on how the PRC package will be financed, a combination of central and local governments, the private sector, and bond issuance will likely provide funding. Other economies with relatively large external financing needs may also face challenges to raise funds—both domestically and externally.

Regional headline inflation is receding.

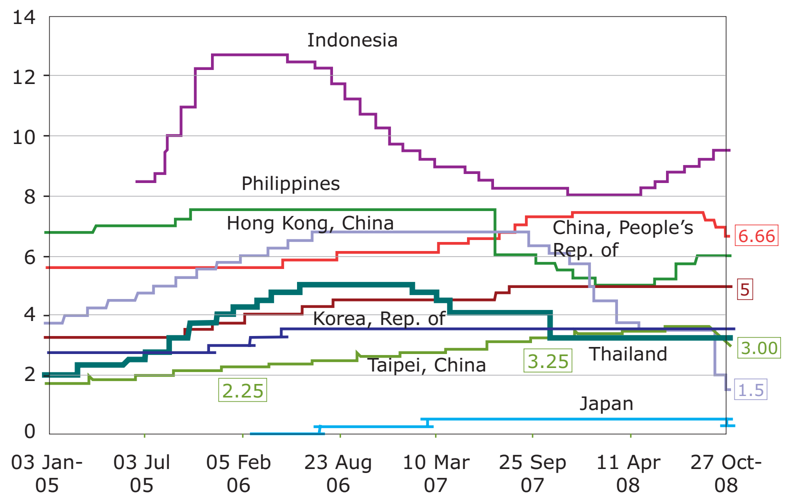
Figure 19: **Regional Inflation—Headline Rates** (y-o-y %)



Source: OREI staff calculations based on CEIC data.

Driven by food and energy prices, headline inflation reached multi-year highs in many regional economies in the middle of the year. Since then, inflationary pressures have receded on the back of declining oil and other commodity prices, along with weakening demand (**Figure 19**). World oil prices fell below USD60 per barrel in November after reaching nearly USD150 per barrel only a few months earlier. With the global financial crisis tightening credit conditions, demand will likely weaken and price pressures subside. The disinflationary effect of weaker demand and falling commodity prices—together with a liquidity squeeze leading to a de facto tightening in monetary conditions in some economies—could provide some maneuverability for the region's authorities amid the deteriorating external environment and financial instability. For economies where inflation remains in double digits, the scope of policy discretion is limited and monetary authorities will need to remain vigilant.

Figure 20: **Policy Rates** (% per annum)



Note: Hong Kong base rate (Hong Kong, China); overnight call rate (Korea); official discount rate (Taipei,China), 1-year lending rate (PRC).
Source: Bloomberg.

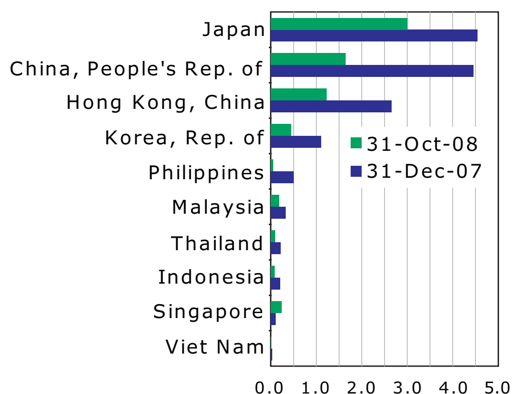
Monetary policy has shifted to a more accommodative stance in most countries with efforts to stabilize troubled financial markets.

Several emerging East Asian monetary authorities have cut rates following concerted efforts by the US and several other developed economies to calm financial markets. Indonesia and the Philippines have, however, raised rates to contain persistent inflation and curb capital outflows. Ultimately, however, a low interest rate environment can complicate decisions on savings, investment, and production and, over time, weigh down capital flows and exchange rate movements **(Figure 20)**.

Capital has flowed out of emerging East Asian equity markets.

Capital outflows from emerging East Asian markets have helped stabilize mature markets. Notable examples are the large injections of funds into major G7 banks from several Asian-based sovereign wealth funds, which initially helped stabilize share prices in several banks. But as the global financial crisis spreads further malaise, heightened anxiety threatens to trigger a sharp withdrawal of financial flows from the region. So far this year—January to mid-October—foreign portfolio investment in equities

Figure 21: **Emerging East Asia Equity Market Capitalization** (USD trillion)



Source: Bloomberg LP.

has fallen by nearly USD80 billion **(Figure 21)**.[3] The pronounced reduction in investor risk appetite has sharply reduced short-term capital flows to emerging East Asian markets, exerting pressure on local markets, and raising the costs of financing in the private sector—in both local currency debt and equity markets. Together with slowing global growth, this has become a very challenging environment for policymakers.

The financial crisis has spread losses beyond banking sectors to markets across the globe; but direct exposure in emerging East Asia to US subprime instruments is limited.

Emerging East Asian banking sectors and local currency debt capital markets have remained largely insulated from the worst of the financial crisis. This is no guarantee that it will not affect Asian financial institutions. A few have subprime-related losses—albeit small compared with the institutions' total asset size. Losses have been reported in several economies in the region[4]—most notably PRC, Japan, and Korea **(Box 3)**.[5] Nevertheless, the limited impact so far on East Asia's banking and debt capital markets can be attributed to several factors:

- While the Asian banking sector is partially exposed to global sentiment through its international investor base, use of wholesale funding markets is limited—a major differentiating factor for most Asian banking systems that have a strong retail base due to Asia's energetic savings habits.

- Lack of investor demand for complex structured products has left limited credit exposures to distressed instruments. Many emerging market investors were reluctant to invest in securitized products, either because they did not understand or feel comfortable with the product, or could not invest due to restrictive regulations. Asian-originated structured credit

[3] Foreign portfolio investment in equities in Indonesia, Japan, Korea, Philippines, Thailand, and Viet Nam. Source: Bloomberg.

[4] *Asia Economic Monitor,* July 2008.

[5] There has been an increase in dollar funding costs for Korean banks. However, as indicated by the relative magnitude of CDS spreads, the scale of the problem appears relatively limited. Cross-border sovereign and private sector debt issuance has fallen off sharply.

Box 3: The "Crisis Factor" in Korean bond market development

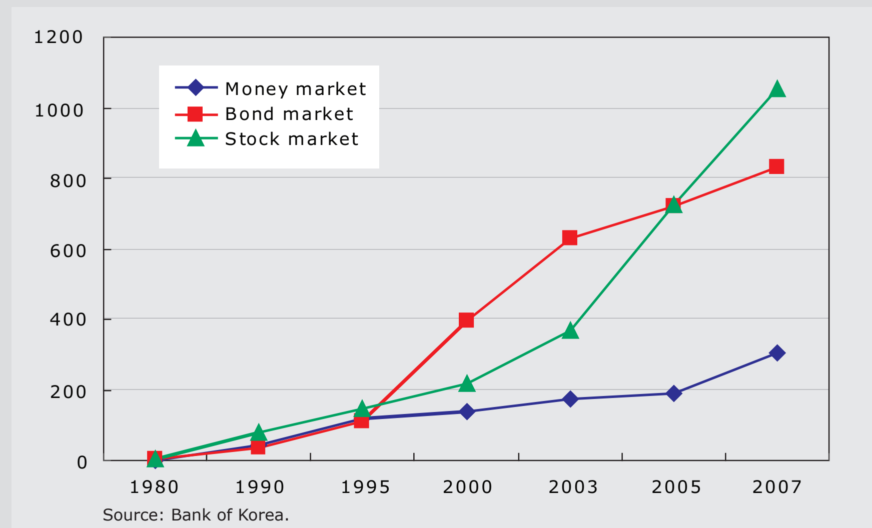
The 1997 Asian financial crisis, the Daewoo Group debacle in 1999, the credit crunch in 2000, and the credit card crisis in 2003 all sparked government responses aimed at reforming bond markets **(Table B3-1)**. It is likely that lessons learned from the current credit crisis will also have a major impact upon future bond market reform.

In the decade since the 1997/98 Asian financial crisis, Republic of Korea (Korea) bond markets have grown dramatically, not only in size but in diversity. Total outstanding local currency bonds grew from USD153 billion (equivalent) in 1997 to USD1,062 billion in 2007, or 110% of Korean GDP.[1] Bond market growth exceeded growth in money markets **(Figure B3-1)**.[2] Government bonds grew most impressively—by a factor of nearly seven in 10 years **(Figure B3-2)**. Growth of nonbank corporate bond markets was more limited, especially since 2002 as corporate funding needs diminished.[3] Agency bond markets, mostly composed of bonds issued by the Korea Deposit Insurance Corporation and the Korea Asset management Corporation—which played major roles in Korea's financial restructuring process—grew after the financial crisis in 1997, only to level off in 2002 as restructuring needs diminished. The recent spike in bank bonds reflects the tightening of market liquidity.

Table B3-1: **Summary of government initiatives in reaction to financial market crises**

Crisis Event	Government Initiatives
Year 1997 Financial Crisis Year 1999 Debacle of Deawoo Group	● Government bond market reforms ● Enactment of ABS law ● Enforcement of mark to market accounting standard to ITCs ● Reduction of entry barrier to a credit rating agency industry ● Reporting requirement to bond dealers of their secondary market trading ● Measures to improve transparency of CP markets
Year 2000 Maturity Concentration	● Development of primary CBO and CLO structure ● Credit enhancement by providing credit guarantee to CBO and CLO
Year 2003 Crisis by Credit Card Companies	● Emergency measures to stabilize the market ● Development of 'self regulatory guidelines' of ABS market participants ● Development of financial market monitoring and early warning system

Figure B3-1: **Rapid Growth of Korean Bond Markets**



Source: Bank of Korea.

The 1997 financial market crisis sparked massive and intense financial restructuring of banks and corporations. In the restructuring process, the Korean government injected huge amounts of capital into banks and corporations, mostly funded by government bonds. As a result, government bond markets started to grow rapidly.[4] To minimize funding costs, the government initiated various institution-building reforms, including (i) a primary dealer system; (ii) government bond futures; (iii) a reopening system; and (iv) trading

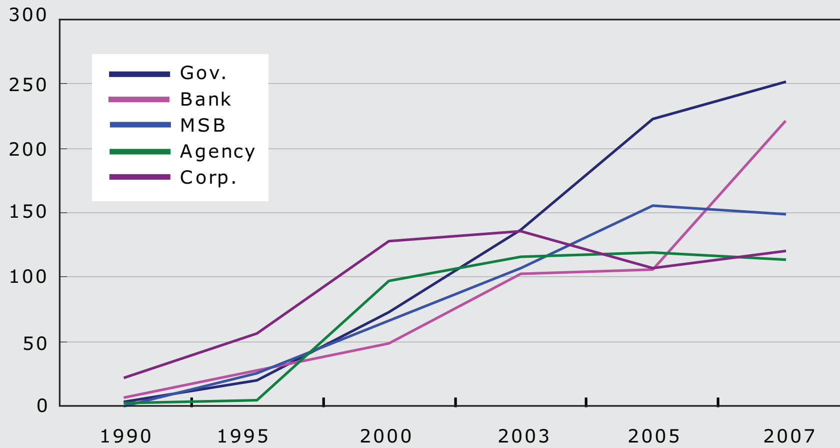
[1] *AsianBondsOnline*.

[2] Bond market is composed of bonds issued by government, government agencies, Bank of Korea, Banks, and non-bank corporations. Money markets are markets for CD, CP, REPO, and Call.

[3] There are various reasons for the limited growth of corporate bond markets including diminished investor confidence due to lack of credit rating agency discipline, and inappropriate bond covenants to protect investors, which caused investors risk appetite for high-yield bonds to diminish. For further discussions on bond covenants, please see "Designing a governance structure for corporate bonds in Korea: Empirical study on bond indentures," *Journal of Economic Research* Vol. 10, No.1 2005 by Shin, Rhee, and Yoon.

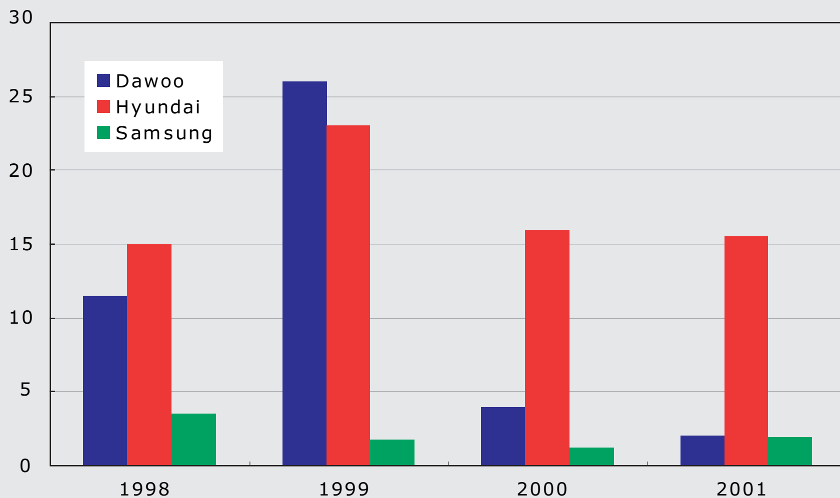
[4] Before the crisis, government bond markets were inactive due to a lack of supply.

Figure B3-2: **Growth of Korean Bond Markets by Segment**



Source: Bank of Korea.

Figure B3-3: **Amount of CPs issued by Chaebols**



Source: Financial Supervisory Service.

requirements for benchmark issues on the Korea Exchange. More recently, Separate Trading of Registered Interest and Principal (STRIPS) bonds and inflation-indexed bonds have been introduced. These reforms have helped make government bond markets liquid.

In 1998, the Korean government enacted a special law, the Asset-Backed Securities Act to help government agencies and banks dispose nonperforming loans (NPLs). The act clarified (i) true sale requirements; (ii) conferred tax benefits; and (iii) streamlined securitization processes to minimize transaction costs.

As bank credit tightened—due to banking sector restructuring—corporations switched their funding sources from banks to bond markets. Investment trust companies (ITCs), which at the time were not subject to regulatory supervision, were the main purchasers of higher-yielding corporate bonds. The ITCs assumed credit risk with little discipline—22% of the corporate bonds issued during the period immediately following the crisis until 1999 defaulted.

The 1999 Daewoo Group debacle prompted mark-to-market accounting.

A street wisdom is "too big to fail." While also true in Korea, in 1998 the Korean government decided not to bail out the second largest chaebol—the Daewoo group. ITCs were severely hit. The most significant reform in response to the Daewoo crisis was applying the mark-to-market (MTM) accounting standard to ITCs. The objective was to strengthen market discipline among investors and issuers. To ensure effective implementation of MTM rules, the government licensed several bond pricing agencies to provide fair values of all existing bonds. The entry barrier for credit rating agencies was also lowered to attract international rating agencies into Korean markets. To improve bond market transparency, bond market dealers have to file reports within 15 minutes of a trade.

In 1999, the outstanding balance of commercial paper (CP) by Daewoo group spiked in comparison with other chaebol groups such as Samsung and Hyundai **(Figure B3-3)**.[5] Unfortunately, at the time CP markets were not properly monitored.[6] To

[5] For detailed discussion on Korean CP markets, see "Commercial paper market in Korea: How to improve its issuance Registration System," Korean Economic Journal, December 2006 by Shin, Rhee, and Lee.

[6] Lack of transparency in CP markets became an issue again in the 2003 crisis because of the huge amount of ABCPs issued by credit card companies.

improve the transparency of CP markets, several measures were initiated such as development of infrastructures for CP markets like the US money market instrument system.

Maturity Concentration of Corporate Bonds Empowered Securitization.

Most corporate bonds issued in 1998 were scheduled to mature in 2000 or 2001. However, unlike in 1998, ITCs were reluctant to purchase corporate bonds for two reasons. First, they became more disciplined with credit risks after the Daewoo debacle, and second, they were concerned about the possibility of MTM losses. Most corporations could not rollover their maturing bonds.[7] The innovation that saved the day was primary collateralized bond obligations (CBO) and collateralized loan obligations (CLO) structures. Whereas traditional CBO (CLO) uses existing bonds (loans) as collateral, primary CBO (CLO) use newly-issued bonds (loans) as collateral. By pooling corporate bonds (loans) and structuring them into senior and subordinated tranches, corporations could sell senior tranches to the market. To better facilitate these sales, the Korean government provided a credit guarantee to senior tranches. This allowed the asset-backed securities (ABS) market to accelerate. However, the ABS markets quickly became overextended in 2003 as they were not subject to supervision and credit card companies made excessive use of this market to fund the rapid business expansion.

The 2003 Credit Card Crisis: Counterattack from overextended securitization

Credit card companies rapidly expanded in 2001 and 2002 as the government supported consumer spending. Their expansion was mainly financed by securitization of receivables. By early 2003, the total outstanding balance of bonds (debenture, CP, ABS, and ABCP) issued by credit card companies was KRW89 trillion—about 14% of GDP.[8] This was large enough to threaten the stability of Korean financial market. From 2002, the credit quality of these receivables deteriorated rapidly.[10] By March 2003, bonds issued by credit card companies ceased trading, triggering a run on money market funds, freezing the entire Korean financial system. To overcome the systemic crisis, the government initiated a series of emergency measures: (i) credit card companies were forced to increase capital, (ii) institutional investors were persuaded to rollover maturing bonds by credit card companies; and (iii) selected banks were asked to establish a bridge loan fund worth KRW5 trillion. In the process of resolving the crisis, ABS investors found they were not properly protected by bond covenants, which ruined the credibility of ABS markets. In 2005, to restore ABS markets, self-regulatory guidelines for ABS market participants were developed. The guidelines (i) clarified the roles and responsibilities of ABS-related counterparties; (ii) established a surveillance system for ABS-related parties; and (iii) strengthened ABS-related disclosure requirements.

At the time, measures were taken to develop previously rudimentary financial market risk monitoring and early warning systems. The monitoring and early warning systems are composed of three parts: (i) indexes for individual credit risks developed by credit bureaus; (ii) indexes for risks of financial intermediaries developed by Financial Supervisory Service; and (iii) indexes for bond market risks developed by Korea Securities Dealers Association. A back-tested index graph based on individual credit scores over the entire population in credit panel data indicates that individual's credit risk standing has been improving since steadily since early 2006 **(Figure B3-4)**. On the other hand, consumer credit risk concentrated in the credit card industry has risen as indicated by falling credit scores **(Figure B3-5)**.[10] Financial sector risk indexes were also developed as well as nine leading indexes for industries based on combinations of financial soundness indicators recommended by the international Monetary Fund (IMF) and those developed in-house. Finally, three kinds of bond market risk indexes were developed—(i) concentration index; (ii) credit spread index; and (iii) bond market survey index.[12] It is possible that had adequate bond market risk indexes been in place in the US, the US government could have been able to initiate proactive policies to avoid or mitigate its subprime problems.

The 2000/2001 maturity concentration crisis and the 2003 credit card crisis show that securitization is a double-edged sword. When properly used, it can help corporations to fund and banks to manage risks. However, when misused—as it was in the run-up to the current global financial crisis—securitization can severely hurt financial markets.

Challenges for further development of bond markets in Korea

Corporate bond market development remains a major challenge in Korea, as it does throughout much of emerging

[7] Corporations were not able to refinance through the banking sector. Banks were still being restructured and as a condition of this process corporations were not eligible to borrow from banks.

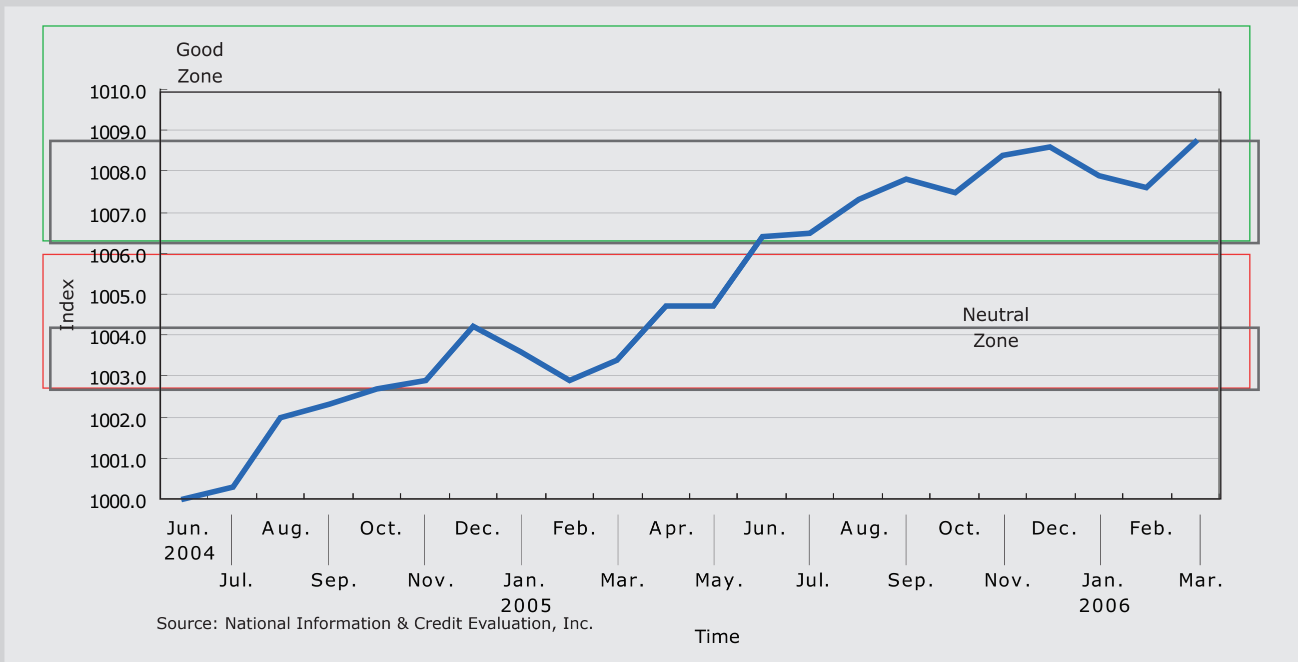
[8] Data source: FSS and BOK.

[9] According to the data from FSS, on a managed asset base, the percentage of loans and receivables in arrears for more than 30 days rose from 2.9% in March of 2002 to 10.4% in February of 2003.

[10] Unlike Figure B3-4, higher risk index means higher risk in Figure B3-5.

[11] Concentration and credit spread indices are available by bond type as well as by industry, and bond market survey indexes are on various items such as future movements of benchmark yield, call rate, and trade surplus.

Figure B3-4: **Back-tested consumer risk index**



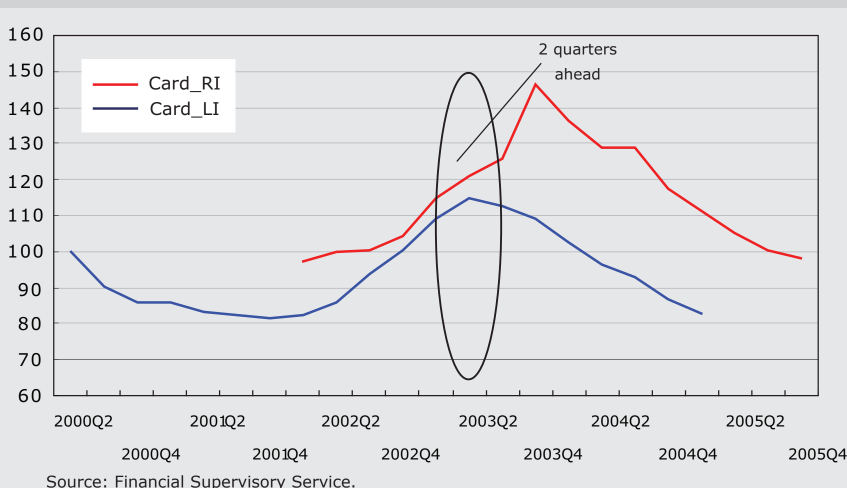
Source: National Information & Credit Evaluation, Inc.

East Asia. Specifically, development of high-yield bond markets and long-term corporate bond markets is a main priority. Several measures are being taken: (i) a review of developing collateralized bond markets to help less credit worthy corporations issue bonds at attractive rates for longer term periods; (ii) a review of the legal framework to encourage the development of covered bond markets to help banks fund at lower cost by putting their mortgage assets as collateral; and (iii) the enforcement of stronger discipline for credit rating agencies so as not to repeat the case of the LG card in the 2003 credit card crisis.[12]

The development of the repurchase (REPO) market is also crucial for Korean bond market development. The REPO market is largely inactive mainly due to the more well-developed and competing and unsecured call market. The REPO market is preferred to the call market from the point of financial stability, since the transaction is secured by collateral and various measures are under consideration to improve competitiveness of the REPO market.

Finally, the importance of the government's financial market risk management capability cannot be overemphasized. The current financial market risk monitoring and early warning system needs to be developed further.

Figure B3-5: **Back-tested credit card risk index and leading index**



Source: Financial Supervisory Service.

[12] Rating agencies maintained the credit rating of many credit card securitization entities such as LG card at AA- even though the delinquency ratio on underlying consumer credit cards spiked from 2.9% to 10.4% in 2002–2003. LG card's credit rating was still AA- when it entered financial restructuring in early 2003.

products—both in US dollars and local currency—never reached the significant percentages of bonds outstanding that they did in Europe and the US. Also, international investors bought the limited supply of Asian structured credits for diversification and yield play. Subsequently, few of these products were owned outside advanced economies.

- East Asian banks are not as capital-constrained as banks in developed economies. Thus they do not have the same regulatory incentive to securitize mortgage-backed obligations. Taking mortgage securities off balance sheets was not an urgent priority—in some cases the asset would have been difficult to replace due to limited demand for borrowings—so the US-style of "originate, bundle, and securitize" was not as developed in East Asian domestic capital markets.

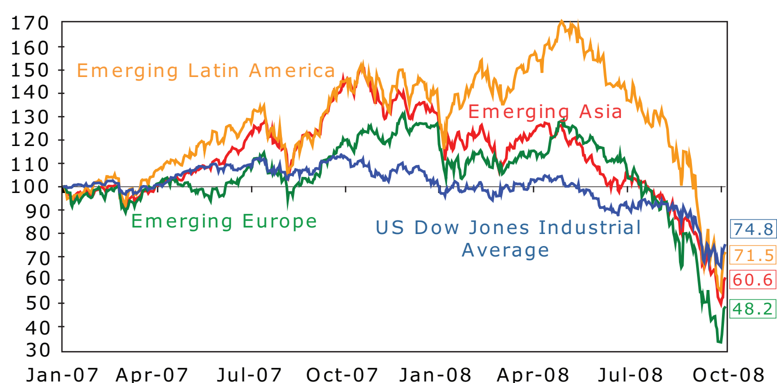
- Attractive domestic profit opportunities in certain East Asian markets have created less need among emerging market banks to seek leveraged structured finance products to help boost yields.

Sound fundamentals, abundant reserves, and strong growth have also helped sustain flows into emerging market assets. However, investors continue to incur losses on structured credit and credit derivatives, and their appetite to take on new credit exposure has declined. Banks' ability to distribute credit risk has suffered, as has their willingness to originate new loans or underwrite bonds. Continued banking and financial stability in East Asia should not be taken for granted.

Emerging East Asian equity markets remain exposed to investor sentiment and have declined more sharply than their developed market counterparts.

Emerging East Asian equity markets have declined more sharply than their developed market counterparts **(Figure 22)**. In general, these markets are moving in tandem with those in emerging Europe and emerging Latin America. The decline comes from several factors, including (i) liquidation of portfolio holdings by foreign financial institutions; (ii) global re-allocation of investments by asset managers away from emerging markets, and (iii) the remittance of venture and investment capital

Figure 22: **MSCI Indexes** (January 07 = 100)



[1]Includes China, People's Rep. of; India; Indonesia; the Republic of Korea; Malaysia; Pakistan; Philippines; Taipei,China; and Thailand.
Sources: Morgan Stanley Capital International (MSCI) Barra and Bloomberg.

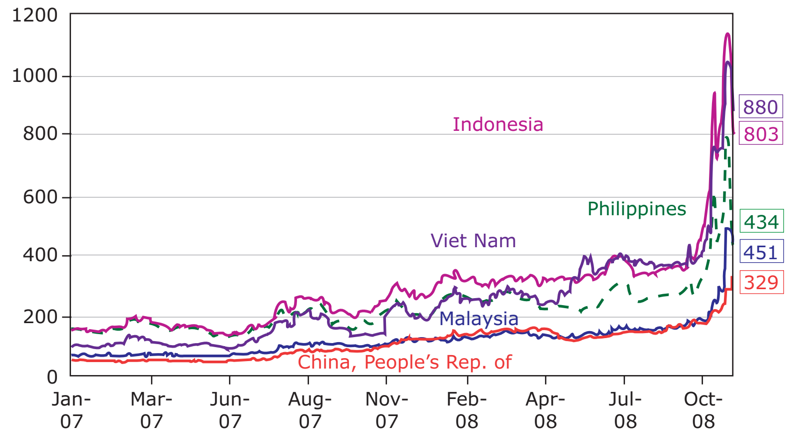
back to home markets.[9] Global market uncertainty has also motivated local investors to move from equities into cash and local currency government bonds, resulting in a more realistic risk valuation of global financial markets as a whole. There has also been an adjustment in the required returns from underlying investments—as global uncertainty increased more investors are concentrating on preserving capital than chasing returns. Domestic credit—supported by ample domestic savings—continues to provide resources for investment even as portfolio equity and international bond flows taper off. This further reinforces the view that the equity market sell-off is more highly correlated to global movements than local currency debt markets.

While the direct impact of the crisis has so far been limited on emerging East Asian local currency debt markets, there are increasingly wider spreads, a drop in new issuance, and higher volatility.

It remains premature to fully assess the effects of the financial crisis on the region's debt markets. But rising risk aversion among investors has reduced availability of funding, and weakening growth prospects are affecting most markets:

[9] Investor home bias tends to increase during times of volatility and uncertainty.

Figure 23: **JP Morgan EMBI Sovereign Stripped Spreads** (long-term foreign currency)



Source: Bloomberg.

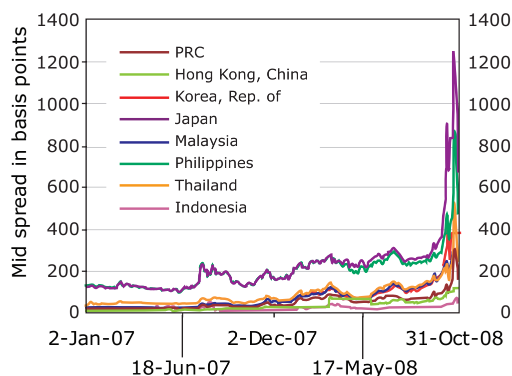
- **Heightened risk perception has raised funding costs**

While government bond yields in key East Asian markets have declined in recent months on prospects of weaker growth and investor flight-to-quality, corporate bond financing costs in many emerging East Asian markets have risen. This is true particularly in the nongovernment-guaranteed corporate debt sector where growing concerns about creditworthiness in many of the regions markets have contributed to a sharp increase in yield spreads **(Figure 23)**. Credit growth could be substantially squeezed, reducing the availability of funding to emerging markets and raising costs—especially if funding markets remain restricted—forcing banks to deleverage and hold more capital to support their balance sheets. Banks may also see profits under pressure, in part because fee-earning sources, such as through-securitization and originate–to-distribute pipelines, shrink. If local banks use local currency debt markets to recapitalize—in the light of more expensive capital raising costs in equity markets—they will also put greater strain on credit spreads in domestic markets.

- **Foreign funding for Asian issuers has dried up in recent months**

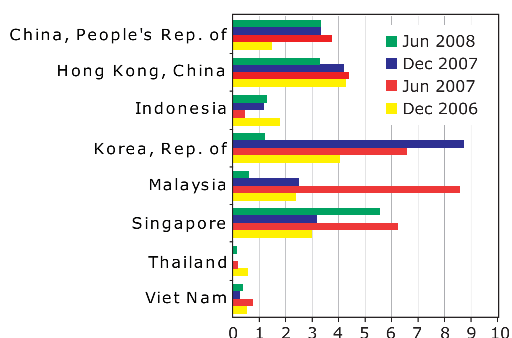
Asian G3 bond volumes—sales of bonds denominated in US dollars, euro, or yen—fell 43.8% to USD23.7 billion in the first 9 months of 2008 as rising credit costs kept issuers away from

Figure 24: **Credit Default Swap Spreads –Senior 5-year ***



*In USD and based on sovereign bonds.
Source: Thomson DataStream.

Figure 25: **Syndicated Loan Volumes in Emerging East Asia** (USD billion)



Source: Bank for International Settlements.

the market.[10] New corporate eurobond issuance from emerging East Asia suffered as global credit markets froze. Instead, local currency bond markets offered issuers an alternative supply of funds in the face of the global credit market storm—provided issuers were highly-rated and well known in those markets. Sovereign eurobond issuance from the region gained traction in the first half as some economies raised funds to finance their fiscal deficits, pushed higher by rising oil and food prices. Indonesia sold USD4.25 billion of bonds and the Philippines tapped the market to sell USD500 million. However, in the past few months volatile market conditions and tightening liquidity has forced many sovereign issuers like Korea, Indonesia, and Philippines to put new eurobond sales on hold and to access the local markets instead.

- **Volatility in CDS spreads has increased**

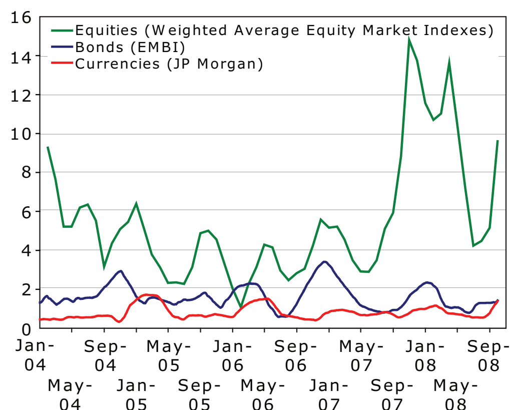
Spreads for emerging East Asian credit default swaps have widened substantially over the past year, especially in October **(Figure 24)**. CDS spreads for emerging East Asia at end-October fell into three main groups: (i) relatively narrow spreads ranging between 100 bp to 165 bp for Hong Kong, China and the PRC; (ii) Korea, Malaysia, and Thailand with spreads ranging between 235 bp and 370 bp; and (iii) Indonesia and the Philippines with spreads ranging between 450 bp to just over 700 bp. CDS for the Philippines moved with the rest of the market by the end of October, while Indonesian CDS continued to widen, finishing the month at 707 bp.

- **Syndicated loan volumes drop**

Emerging market corporate access to international markets has become more restrained as well as costly. Syndicated loan volumes dropped from last year **(Figure 25)**. Demand largely vanished for borrowers from less highly rated markets. And issuance plans have been delayed. Should emerging market corporate funding costs increase further, credit demand may be pushed into domestic banking systems, increasing pressures for domestic funding. Local-currency denominated issuance in most emerging East Asian markets is increasing—primarily in the government sector—but a global slowdown or sharp drop in capital flows to emerging markets could force a more painful adjustment.

[10] Source: *Debt Capital Markets Review*, Third Quarter 2008 (Thomson Reuters).

Figure 26: **Regional Volatility** (% of mean return)



Source: Bloomberg LP.

- **Volatility has increased in debt and equity markets**

Financial markets may have to adjust to new conditions that reflect reduced availability of cheap credit and to higher volatility in debt and equity markets. The ongoing fallout from the credit tightening and the uncertainty over the size of any potential demand shock on regional exports to the US—on top of further expected cuts in US dollar interest rates—reflects investor concern over further write-downs. Financial markets can come under further pressure if investors decide to that assets—previously regarded as safe—are forced from their portfolios, pressuring the credit tightening further **(Figure 26)**.

Risks to the Outlook

While emerging East Asian debt markets have been fairly resilient during the evolving global credit crisis, they still face great risks.

Despite forceful policy responses to financial market turbulence and encouraging progress toward bank recapitalization, markets remain fragile and recent events have further underscored the vulnerability of emerging East Asia to imported crises in advanced markets. Despite aggressive policy actions aimed at alleviating liquidity constraints and preventing systemic infection, markets remain severely stressed. Emerging market economies have seen a reversal in capital flows—particularly in equity markets—which in turn have severely restricted US dollar funding for companies relying on foreign currency finance. This is particularly worrisome if funding from local-currency debt markets and bank credit contract further. (East Asian corporations with lower credit standings or those without government guarantees are particularly vulnerable—while new local currency issuance has not stopped, it remains largely government issuance.) The channels through which the credit crisis can spread to emerging markets go beyond re-pricing risk and access to international markets. With large export-to-GDP ratios, most emerging East Asian economies remain highly dependent on exports—increasing the impact of a recession in the US, Europe, and Japan.

Regional financial markets may yet prove vulnerable to financial contagion through exposure to subprime or other structured credit products, or from financial stress in other emerging economies.

While most exposure to subprime-related securities has been factored into markets, credit concerns could spread beyond the US mortgage market—to US commercial real estate or municipal financing, for example—leading to further bank losses. Contagion can come not only from the obvious spread of malaise from the US and other advanced economies, but also from other emerging economies under severe stress—such as, Hungary, Pakistan, and Ukraine, which have all sought IMF assistance. A more significant slowdown in emerging East Asia could also aggravate a decline in economic activity in large importing economies such as the US.

Credit tightening can reduce funding for investments, raise funding costs, and induce financial stress in regional markets.

The extension of new credit has been constrained by the need to repair balance sheets. Risk aversion has increased and investors have begun to flock to safe-haven instruments such as US Treasuries. So long as financial conditions remain volatile, credit conditions are expected to remain tight in the US, the eurozone, and in the United Kingdom (UK)—as well as in many emerging markets heavily dependent on foreign capital. Tighter corporate funding is also worrisome because the dedicated investor base for corporations in emerging East Asian markets is generally narrower than for government and sovereign debt. Prospects for raising capital remain uncertain, particularly in light of the large losses suffered by equity holders and continuing uncertainty over valuations.

A further rise in emerging East Asian corporate credit risk may lead foreign investors out of local currency bond markets.

Debt spreads in emerging East Asian debt markets have widened and both local currency and USD-denominated primary market corporate bond issuance has fallen as market conditions have deteriorated. Foreign investors have been moving some capital from emerging markets into liquid instruments such as US Treasuries—contributing to the strengthening US dollar against

the region's currencies. The unwinding of credit markets and the flight to quality away from emerging East Asian economies could cause further reduction in available local credit, higher borrowing costs, and accelerated reversals in capital flows.

Capital outflows might accelerate.

Until recently, improved fundamentals, large accumulations of capital reserves, and rapid economic expansion have helped sustain large capital inflows to emerging East Asia. But capital outflows have been growing in recent months. Major global financial institutions with severely weakened balance sheets may further pare back funding to subsidiaries located in emerging market economies. Moreover, the need to rebuild capital bases is constraining funding available to institutions in emerging markets that rely on US dollar and euro funding. Volatility in the movement of foreign portfolio investments—short-term funds placed in stocks, bonds, and banks' overseas borrowing—is also a significant risk. Asset price volatility in the region is already showing signs of stress along with rising risk premiums in offshore funding markets. Contagion could affect the region's financial markets more seriously if tightening credit conditions and financial instability weigh down broader economic activity.

Policy Challenges

The multifaceted crisis makes policymaking a significant challenge—future financial market development hinges on a durable solution that balances international and regional cooperation in regulating best practices.

Emerging East Asia's financial markets face significant challenges. The financial market crisis underlines the urgent need for central banks and regulators to assess the underlying causes and construct a comprehensive and proactive international plan of action to recover and preserve global, regional, and national financial stability. Reactive, creative, and ad hoc responses may be necessary to avert a meltdown, but they will hardly be able to seal the cracks that threaten the foundations of financial stability. The overarching task for well-functioning, stable financial markets is to draw lessons from the crisis and forge a structure that balances financial innovation with financial stability. This

requires the design of mutually reinforcing policies that will restore financial systems and support economic activity while keeping inflation at bay and striking the right balance between safeguarding present financial stability and limiting future moral hazard. There is a need to enhance coordinated efforts to set national, regional, and global financial markets on a steady path to financial market stability.

Financial market participants need appropriate contingency plans in place to protect their corporations and stabilize markets.

In periods of acute financial market distress, one of the most important measures is to maintain liquidity and restore confidence in financial markets—without delay. Market participants—monetary authorities, banks, investors, regulators, supervisors and credit rating agencies—need to take decisive action to keep financial intermediation functioning. It is critical that formal and informal financial players have contingency plans that manage liquidity, reallocate liquid resources by mobilizing savings from institutions and individuals, and transform them into credit for productive investment.

- There are several short-term measures monetary authorities have used that have been effective: (i) guarantees for interbank lending; (ii) relief programs for managing troubled assets; (iii) government capital injections; and (iv) adjustments to deposit insurance guarantees. In identifying immediate gaps in the overall financial market system, monetary authorities may also be prompted to coordinate emergency efforts with other countries in order to effectively quell financial market turbulence in a concerted way, thus establishing momentum for longer-term, more coordinated financial market reform.

- Financial institutions need to restore confidence—including raising additional capital and strengthening business practices to rebuild the integrity of financial institutions and markets. This needs to be accompanied by clear and definitive disclosure of restructuring policies and asset sales. Bank resistance to go to the markets to recapitalize in early 2007—to avoid dilution of share capital—may have contributed to the weakened financial system.

- Macroeconomic policies will need to support immediate market-stabilizing measures within a broad framework consistent with medium-term objectives of renewed growth with price stability.

Once markets have stabilized, there is a need to differentiate short-term emergency measures from longer-term sustainable policies that accurately reflect risk and reward fundamentals.

A key element of the financial rescue package is the breadth of initiatives adopted to ensure that battered confidence does not dissolve into bank runs (as occurred during previous crises and during the Great Depression). The withdrawal of retail savings would have catastrophic ramifications for the financial system. Policies such as expanded deposit insurance schemes and government-guaranteed interbank lending are necessary to shore up confidence. However, their long-term retention creates an environment where depositors and investors lose sight of risk-reward fundamentals. If held indefinitely, the belief that any financial product holds no risk because it is implicitly guaranteed can also create moral hazard that could lead to financial instability. Because of this, policies such as expanded deposit insurance for a fixed term—such as in Australia—could provide an alternative regulatory solution to policies of an indeterminate term. Other policies such as restricting short selling should also be temporary. Despite the sullied and somewhat unjust reputations of short sellers, they provide valuable price support in appreciating markets as well as forming the basis for hedging option trades and relative value trading—where well-run institutions can be bought against their not-so-well-run competitors. In normal times these are invaluable tools for determining valuation. Their long-term prohibition would probably hurt market development—indeed some argue that absence of liquidity provided by short sellers might be contributing to the present aggressive daily upward and downward swings in equity markets. Nevertheless, there are bound to be some regulatory restrictions on the leverage underpinning such transactions.

Medium- to long-term efforts to develop efficient and stable financial markets must be adjusted to reflect new financial architecture.

The current financial crisis is centered on advanced economies but the unease caused is global. Despite actions taken by financial authorities—including the unprecedented levels of international cooperation among central banks—ad hoc policy responses to deal with the many affected institutions clearly show that there is presently no global framework to guide policymakers in countering potential systemic risk while protecting taxpayer interests when a critical institution gets into trouble. This includes globally coordinated processes for handling the large quantity of "toxic" assets on international financial institutions' balance sheets.

Several common policies, apart from immediate market stabilization measures, can be taken to strengthen emerging East Asia's local currency bond markets.

In broader terms, there is a need to strengthen regulation, supervision, and surveillance of financial systems. In the postcrisis environment, there will be an immediate move toward re-regulation and a better definition of self-regulatory responsibilities and accountability. A major challenge is to ensure that well-meaning re-regulation does not produce unintended consequences, such as those that fuel irresponsible behavior or encourages market participants to act outside of the regulatory framework. Another challenge is to ensure that market liquidity is not compromised by regulatory efforts—since the illiquidity of US-style mortgage-backed securities and credit-linked notes—was one of the root causes of the crisis. Other areas that need strengthening include the need to strengthen assessment risk management practices; promote consistent standards and mutual recognition; improve transparency; prudently liberalize cross-border financial services and capital accounts; and devise countercyclical policies to benefit the financial sector. There is also a need to continue the process of developing deep and liquid bond markets as an alternative source of financing when access to bank credit tightens.

- **Strengthen international supervisory and regulatory coordination, cooperation, convergence, and surveillance to address gaps and weaknesses.**

For financial institutions involved in subprime lending—and the large, complex, and globally active financial institutions that became intertwined in the crisis—regulatory and supervisory gaps and weaknesses must be filled. Policymakers must recognize the need to strengthen national financial supervisory and regulatory frameworks, but more importantly, to work toward greater international supervisory and regulatory coordination, cooperation, and convergence. Cooperative agreements to share supervisory data are also essential for resolving large cross-border institutions and weaknesses in the cross-border crisis management framework. The crisis also underscores the importance of enhanced surveillance. Within ASEAN+3, for example, the Economic Review and Policy Dialogue process encourages greater macroeconomic cooperation. A new, high-level "Asian Financial Stability Dialogue"—including finance ministries, central banks, and other financial regulators and supervisors—could coordinate supervisory and regulatory development. The dialogue process would be effective in monitoring potential financial vulnerabilities through the use of objective early warning systems and other mechanisms. It could also engage the private sector in financial market development. A complementary approach would be to systematically introduce a macroprudential approach to the regulatory framework. Such a system-wide approach would focus regulatory attention on the way financial incentives and constraints affect risk-taking behavior throughout the credit cycle and weigh against the inherent pro-cyclicality of credit creation.

- **Strengthen risk assessment and risk management.**

From the perspective of crisis prevention, there is a need to strengthen risk assessment and risk management among financial institutions, regulators, and credit-rating agencies. The complexity of many securitization arrangements left regulators and the institutions themselves perplexed as to who actually held how much risk. Best practices need to be established for handling liquidity shortages or ensuring effective financial sector safety nets. And existing arrangements need to be more flexible to resolve weak assets "on" or "off" financial institutions' balance sheets. In theory, it is up to investors to conduct due diligence

on the structures and underlying assets before buying complex instruments. In reality, however, markets are essentially driven by external independent assessors and rating agencies. Because many investors had become to dependent upon these agencies, a loss of confidence in the validity of credit ratings contributed to a sharp decline in product demand. Investors need to have the capacity to clearly analyze product risks and establish appropriate internal risk-monitoring systems over the lifecycle of the investments. Regulators need to renew efforts to test the capacity of their regulated institutions to manage the risks they assume, and to explore the dynamics and sensitivities of the assets they hold. They need to better understand the collateral's character and the tranching structure, particularly if instruments are difficult to value or have illiquid secondary markets. Regulators should also be able to better audit the risk management systems used by these institutions, to verify that they are appropriately tailored to individual risks. Credit rating agencies can help bolster the growth of corporate bond markets by contributing to the market debate on issuers' credit quality and in helping investors make appropriate decisions on credit risk and pricing spreads of corporate bonds. They also must remain free from political, issuer, or dealer influence in calculating ratings. This requires a well-capitalized base and a diverse range of income sources, thus ensuring financial independence.

- **Promote consistent standards and mutual recognition.**

Cooperation, coordination, and convergence of the supervisory and regulatory environment—together with harmonizing prudential indicators and establishing standards for governance and transparency—is probably the best solution to promote both domestic and international investment. Consistent standards and mutual recognition will make it easier for investments across the region, building confidence and stability in financial systems. Guidelines for best practices and a set of minimum standards may be practical for a small group of relatively advanced economies first, but could be expanded later to a wider set of countries when they are ready to join. Compliance with the International Organization for Securities Commission principles for securities regulation can help contribute to the development of capital markets and protect investors. Consistent governance structures that enforce contracts and resolve disputes in a reliable and speedy manner will also help increase investor confidence in domestic and regional bond markets.

- **Improve transparency by better valuation and accounting of off-balance sheet instruments to improve liquidity in local currency bond markets.**

The subprime credit crisis has shown the difficulty of valuations in markets where poor liquidity of financial instruments makes referencing of assets problematic. The problem is exacerbated if there are no valuation "marks" or the instrument needs to be modeled using valuation inputs from several underlying instruments. In emerging East Asian bond markets liquidity has remained a recurrent problem. Recent discussions about shrinking transactions volume being destructive for valuation in the international financial system are particularly relevant to emerging East Asian bond markets where liquidity—as evidenced by the bond turnover ratio—has never approached that of developed markets. It is hard to arrive at a clear and consistent valuation of assets in such conditions. It is perhaps fortunate that corporate bond investment in the region is buy-and-hold and that investors have not found it necessary to force sell their holdings at distressed values as there are very limited number of speculative buyers of Asian local corporate debt prepared to buy bonds due to the absence of active hedging instruments in most markets **(Box 4)**. The establishment of bond pricing agencies in many markets has been generally positive for transparency but the relationship between improved valuation information and improved liquidity is a complex one and East Asia still has much to do if it is to improve liquidity in local currency bond markets.

- **Prudently liberalize cross-border financial services and capital accounts**

Long term easy access to credit in many countries contributed to unsustainable development. The imbalances are being corrected, but the adjustments will take time. To help sustain the region's high economic growth, current financial market developments have highlighted the urgent need for the region's financial markets to be more effective in allowing investors in emerging East Asia to invest in other markets within the region. Channeling finances from economies with surplus savings to those short of capital through the efficient financial intermediation is essential for market development. By prudently liberalizing cross-border financial services and capital accounts, emerging East Asia can expose its national financial markets to greater international competition. The prudent liberalization of cross-border financial

services and capital accounts must, however, be done in a measured way based on the stage of financial sector development in individual economies to ensure market stability.

- **Devise countercyclical policies for the financial sector.**

Some of the blame for the depth of the current financial crisis lies in putting too much faith in the concept of market discipline and self regulation. A hard lesson learned from the current turmoil is that market discipline is not a substitute for regulation. In response it has been suggested that countercyclical measures be devised to temper the market's potentially irrational ways. There is little doubt that episodes of exceptionally rapid economic expansion assisted by efficient finance systems can bring greater prosperity than expansions where finance plays a more passive role. But expansion of this type is also susceptible to creating asset bubbles and producing deeper recessions or longer periods of stagnation that can result in considerable waste of resources. These problems are particularly serious in emerging economies given their limited scope to pursue effective countercyclical macroeconomic policies. Few governments generally resort to countercyclical tightening of capital accounts in times of capital surges for fear of adverse market reaction. This makes it all the more important to begin countercyclical policies during expansions. The aim is to manage surges in capital inflows to prevent macroeconomic imbalances and exposure to a reversal of capital flows. Countercyclical measures can ensure flow of adequate liquidity and help in better pricing of risks in the bond markets at different phases of economic cycles.

- **Develop deep and liquid bond markets to provide an alternative source of financing when access to bank credit tightens.**

Emerging East Asian bond markets have shown robust growth over the past decade and have taken significant steps to strengthen themselves. But equity or bank loans still dominate domestic financing and domestic bond markets remain at diverse stages of development. As a result, regional savings are not effectively channeled to investment needs. For the region to further advance the development of domestic and regional bond markets, several measures will need to be taken to enhance certainty and increase investor confidence in local currency bonds. In addition to developing bond market related infrastructure, measures

Box 4: Broadening the Investor Base

Recent global financial developments underscore the importance of cultivating strong, resilient financial markets.

The need to develop deep and liquid local currency bond markets as an alternative financing source to bank funding and international credit markets gained new impetus with the onset of the current global credit crisis. Markets with underdeveloped domestic debt markets have proved less resilient to stresses from credit rationing from international capital markets and the banking sector—especially where undeveloped local currency debt markets encourage an over reliance on foreign currency bank borrowing. Emerging East Asia is not immune to global contagion, but the lessons learned from the 1997/98 Asian financial crisis and the significant work done to develop domestic debt markets resulted in more diverse financial systems that are more resistant to external shocks.

Efforts largely focused on encouraging domestic issuance in local currency bonds using institutional reforms as incentives and removing national impediments that compromise capital flows—the Asian Bond Markets Initiative has been a major driver of much of the effort at the regional level. However, attempts to broaden the investor base have been less successful—as highlighted in consecutive *AsianBondsOnline* surveys, where market participants point to the lack of investor diversity in local currency bond markets as being the single most important impediment to deepening local currency debt markets.

A broad, diversified and mature investor base can play a key role in reducing volatility in capital flows to emerging markets and in stimulating sustainable domestic growth.

Developing Asia still relies less on bond markets than on equity or bank financing. Part of the problem may lie in the limited investor base. A broader investor base with different investment views and time horizons can (i) provide an important source of stability and liquidity to financial markets, (ii) promote the efficiency of price discovery, (iii) play a key role in reducing volatility in capital flows to emerging markets, and (iv) stimulate sustainable economic growth. Today, investors in emerging East Asian local currency bond markets are dominated by largely government-controlled contractual savings sectors (CSS). Strong growth in contributions outstrip the availability of new local currency debt assets and the CSS are frequently restricted in their investment guidelines—in some cases there are restrictions on investing offshore or in higher-risk assets, requirements on pension funds to guarantee minimum returns and a disproportionate allocation to investments in fixed-income securities. The combination of forced investment, lack of available debt assets and the absence of new high-quality domestic issuers create a "crowding in" effect—whereby CSS buy much of the available debt stock, resulting in compressed credit risk margins. This leaves investors subsidizing domestic borrowers. It also discourages discretionary investment allocation into Asian fixed-income markets, as tight credit margins are considered too low to justify the underlying credit risk. The result is debt markets that lack liquidity as well as investor diversity.

Local currency bond markets benefit from investor diversification

A range of intermediaries with differing portfolio preferences mean markets are less dependent on a dominant investor group whose investment decisions could destabilize markets. Diversification implies a broader range of market participants by type of intermediary, risk preferences, product usage, form of prudential regulation, ownership criteria, and by domicile. A corollary to this is that no amount of investor diversity can completely insulate a market in extraordinary market conditions—as the recent turmoil shows. The recent credit seizure may also suggest that a security-based model or a system encouraging an environment of unsupervised credit risk transfer is no longer what emerging markets should aim for. Nevertheless, a diverse investor base within a prudently regulated environment significantly reduces the risk of one-way portfolio flows and volatility. Also, all participants in debt markets

(savers and borrowers) benefit from having distinct choices available in intermediation channels, assuming they have the most transparent means to evaluate those alternatives.

To broaden the investor base, financial markets need to be more effective in pooling surplus savings and allocating them to the most productive investments.

Investor participation—particularly foreign investors—remain constrained by capital controls, taxation policies, lack of access to local funding and hedging, as well as a general lack of product choice. To improve financial market effectiveness, several steps can be taken:

- Allow greater choice to existing nonbank intermediaries—including government-owned contractual savings vehicles (CSV). Some CSV's in the region are presently required to invest up to 70% of their assets in local fixed-income instruments. In an environment where the growth of contributions outstrips the growth in local currency bond markets, this can lead to excess demand for assets regardless of compressed risk premiums.

- Permit more freely transnational issuance and investment in Asia's capital markets. Supply and demand elements need to be addressed together to encourage a more diverse investor base with markets priced to reflect credit fundamentals. Greater supply of local currency debt securities widens investment choices away from traditional investors of local currency debt. It can also lead to increased borrowing costs that might more adequately reflect risk in the corporate sector. Allowing increased foreign ownership of securities adds much needed balance to the demand function. Some caution needs to be exercised to ensure that markets are not overly reliant on a single investment group—either foreign or domestic.

- Encourage participation of retail investors, primarily through mutual funds that can act as a counterbalance to buy-and-hold investors. Mutual funds tend to be actively managed and therefore sensitive to short-term interest rate changes.[1]

- Broaden the local institutional investor base by establishing funded pension schemes and a domestic insurance sector. Increased demand from institutional investors has the potential to become a driver of local currency bond markets—and capital markets more generally—as investment regulations and liberalization of asset allocation restrictions gain more traction. A broadening of the institutional investor base can also create demand for long-term financial instruments.

- Be open to all investor-types. Ensuring a level playing field, including entry requirements and taxation for local and foreign entities can help expand investor participation. Addressing impediments such as capital controls, and fostering development of hedging and financing instruments, can also help. More openness can lead to higher sensitivity of capital flows and volatility of exchange rates, which requires proactive risk monitoring by regulator authorities.

- Develop a coherent policy framework and effective regulation to foster development of nonbank financial institutions—especially in the areas of regulation, enforcement, competition, taxes, skills, and investor education.

- Develop a broader array of financial instruments and supporting infrastructure—including government repurchase markets, securities lending, and derivatives markets. Extension of the yield curve in sovereign and corporate fixed-income securities could also promote more diverse local financial products.

[1]Some caution needs to be exercised in promoting exclusive retail bond investment channels as it can limit supply of tradable debt and encourage further buy-and-hold investment.

include the need to further (i) strengthen clearing and settlement infrastructure; (ii) establish a regional credit guarantee agency; (iii) remove impediments to market entry and investment, particularly those on capital and exchange controls; (iii) adopt measures that stimulate liquidity and demand for fixed-income markets; (iv) improve transparency; (v) increase the significance of bond markets to economic development; and (vi) improve existing data and develop a database that covers gaps in data. To this end, initiatives including the Asian Bond Markets Initiative (ABMI), and the Asian Bond Fund (ABF) can play an instrumental role in strengthening Asian bond markets across the region over the medium term (**Box 5**).

— **Strengthen clearing and settlement to address rising Herstatt risks as the volume for cross-border transactions increase.** Clearing and settlement infrastructure in most domestic bond markets has improved significantly in the past decade. However, as cross-border bond transactions increase, there is an absence of a planned infrastructure at the regional level. For cross-border bond transactions, Asia has the disadvantage of being in earlier time zones than the rest of the world when using existing clearing and settlement infrastructure. This increases regional investors' exposure to settlement risks—or "Herstatt" risks. However, as the volume for cross-border transaction is low, the issue of Herstatt risk is currently not a serious concern. Asia's bond markets continue to grow and the potential volume for cross-border bond transactions increase. ASEAN+3 is working with ADB on the possibility of establishing a regional settlement and clearing system to minimize foreign exchange and settlement risk.

— **Establish a regional credit guarantee and investment mechanism (CGIM).** A feasibility study is being conducted by ASEAN+3 and ADB on creating a CGIM to provide credit guarantees for companies with investment grade ratings seeking to gain access to the local currency bond markets. Moreover, it will make it possible for issuers to lengthen maturities of their debt instruments—up to 10 to 15 years. Finally, with its guarantees, CGIM will also make it possible for companies to issue bonds outside their own markets.

— **Remove impediments to market entry, investment, and to cross-border issuers and investors to help promote greater demand for local currency bonds.** Policymakers

need to make continued efforts to remove or limit capital and exchange controls, remove discriminatory taxes such as transaction taxes to make trading of local currency bonds less costly, as well as withholding taxes on interest and taxes on capital gains earned by foreign investors. Improving the regulatory environment and lowering cross-border transaction barriers can greatly encourage the participation of international financial intermediaries and foreign investors in regional bond markets.

— **Adopt measures that stimulate liquidity and create stable demand in domestic bond markets in the region.** In the new era of regulation and monitoring, there is a strong case for developing exchange-based futures contracts that allow hedging local currency interest rate exposures. The ad hoc policy of licensing over-the-counter derivatives in some markets has created a patchwork quilt of derivative products that are also difficult to monitor in a timely manner. It is also almost impossible to assess system risks in the current environment. The investor base in emerging East Asia continues to be extremely narrow and dominated by government-controlled institutional investors—such as provident funds and insurance companies—who tend to operate relatively passive portfolio strategies. This is a significant impediment for the development of corporate bond markets as a viable financing alternative. The expansion of the investor base can only be achieved in an environment of increased regulation through the availability of hedging mechanisms. Derivatives that are capable of being monitored on a real-time basis also enhance the financial stability monitoring of regulators[11] and thus satisfy both aims concurrently.

— **Improve transparency—an important influence on the price discovery process and market liquidity.** Regulators and market participants need to assess how transparency can be instituted across markets, especially for relatively new or illiquid instruments, to reduce uncertainty. This can be done by (i) providing greater clarity linking various investment

[11] One of the issues with OTC derivatives has been that there is a clear time delay in monitoring the market—in some cases regulators did not have a clear idea of the volume of outstanding contracts. Most banks tended to report open positions at the end of a reporting period. An efficient futures market assists regulators monitor exposures with a much shorter time delay.

Box 5: Initiatives to Develop Local Currency Bond Markets

Asian policymakers have worked hard in recent years to develop and deepen local currency bond markets within emerging East Asia and to develop the beginnings of a regional market. Prominent among the regional efforts is the Asian Bond Markets Initiative (ABMI), which was endorsed by the finance ministers of the Association of Southeast Asian Nations (ASEAN) and the People's Republic of China (PRC), Japan, and Republic of Korea (Korea)—collectively known as ASEAN+3—in August 2003. Another is the Asian Bond Fund (ABF), launched by Asian central banks through the Executives Meeting of East Asia-Pacific Central Banks (EMEAP) in June 2003.

The 1997/98 Asian financial crisis clearly demonstrated the need for the region to develop deep, diversified, and well-functioning local-currency bond markets as an alternative source of funding to bank loans.

Prior to the crisis, financial institutions and corporations in the region relied on foreign currency loans for funding. With inadequate hedging, however, this made them vulnerable to foreign exchange risks. In addition, much of the borrowing was short-term for the financing of long-term investment. With poor corporate governance at both corporations and financial institutions together with poor supervision of financial institutions, credit was poorly allocated contributing to the weaknesses of banks' balance sheets. These factors combined triggered a financial crisis.

To address some of the root causes of the crisis, ASEAN+3 members undertook massive financial sector reform, including restructuring of balance sheets (disposing nonperforming loans); an overhaul in bank ownership; privatization of many state-owned institutions; major upgrading of macroprudential oversight (via revamped regulations and supervision); and new products and businesses were introduced.

At the same time authorities sought to ensure that long-term domestic currency funding was made available (to prevent maturity and currency mismatches). Policymakers reached a consensus on the need to promote the development of the region's bond markets with a view to develop bonds markets the Asian Bond Markets Initiative (ABMI) was thus launched to foster the development of the regional bond markets to help strengthen the regional financial stability.

To develop both primary and secondary bond markets in emerging East Asia, while widening the issuer base and available products for investors, require several prerequisites: (i) building sufficient sovereign bond issuance to establish market benchmarks; (ii) constructing an effective regulatory environment for the region's financial institutions to issue bonds to meet their financing requirements; (iii) creating markets for asset-backed securities and other relatively new products; (iv) increasing issuance by multilateral development banks and government agencies; (v) promoting issuance for funding foreign investment, particularly in infrastructure; and (vi) expanding local currency bonds and introducing currency-basket bonds.

ASEAN+3 also agreed that there must be an environment conducive to active participation by both issuers and investors to develop deep and well-functioning domestic and regional bond markets. To do this, bond market infrastructure needed development in six areas:.

(i) providing credit guarantees through the active use of existing guarantors, and the possible establishment of Asian Regional Guarantee Facility;

(ii) strengthening domestic rating agencies and the possible establishment of an Asian Credit Rating Board;

(iii) creating a system for disseminating information on issuers and credit rating agencies;

(iv) facilitating foreign exchange transactions and addressing settlement issues on cross-border transactions;

(v) conducting market research and technical assistance programs to promote policy dialogue and training for regulators, supervisors and market participants; and

(vi) strengthening legal and institutional infrastructure governing corporations, securities transactions, and tax laws.

As such, ASEAN+3 subsequently agreed to focus activities in four priority areas, viewed as the basic, essential building blocks for developing bond markets: (i) the creation of new securitized debt instruments; (ii) the establishment of a credit guarantee and investment mechanism; (iii) the establishment of a regional settlement and clearance system; and (iv) the enhancement of credit rating. The purpose is to create larger volumes of new bond issuance denominated in Asian currencies by the private sector, improve credit information on debt issuers in the region to facilitate investment decisions, and take steps to build market infrastructure to support cross-border issuance and investment. To complete activities supported under ABMI, Japan has also provided technical assistance to member countries to address constraints that impede the development of the bond markets in selected members.

ABMI remains a work in progress. It will take time and continued support

to develop liquid and well-functioning bond markets in the region that can effectively channel savings for productive investment. Given the complexity of the issues and tasks involved, the large number of countries involved, and the development diversity of each economy, this should not be unexpected. Nevertheless, significant progress has been made in advancing ABMI:

- Local bond markets in ASEAN+3 have grown by a factor of three to June 2008, with total outstanding bonds issued in emerging East Asian currencies totaling USD3.7 trillion;
- Several markets—Indonesia, Philippines, and Viet Nam—instituted new rules aimed at bolstering bond issuance from revenue-generating sectors such as local government public utilities;
- Thailand also allowed foreign governments and financial institutions to issue baht bonds onshore and adopted new policies to cut after-tax interest and simplify registration to encourage more Thai corporations to enter the bond market;
- All domestic rating agencies in emerging East Asia have been trained on international best rating practices and a handbook was written to help harmonize rating practices;
- A group of experts has also been established to further study the possibility of establishing regional settlement and clearance system.

To demonstrate their renewed and strong commitment to further develop the bond markets, ASEAN+3 worked with ADB to develop a new medium-term road map to accelerate the development of the regional bond market. The new road map is consistent with the G8 action plan to support the development of local currency bond markets. It is built on the progress under ABMI achieved to date and reforms undertaken by member countries to promote bond market development. The road map expands from measures to build basic and essential foundation of the markets to include those required for improving the efficiency, transparency, liquidity of the markets.

In particular, the new road map focuses on four key areas:

(i) promoting issuance of local currency-denominated bonds;

(ii) facilitating the demand of local currency-denominated bonds;

(iii) improving the regulatory framework; and

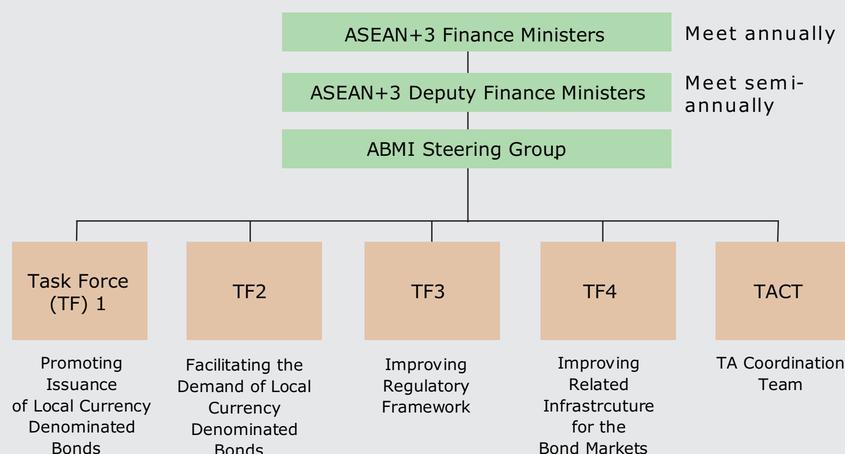
(iv) improving related infrastructure for the bond markets.

Activities under each key area are undertaken by a task force and a steering group has been established to monitor and coordinate the activities of all four task forces in charge of their respective areas.

The new road map entails, among other things, ASEAN+3 and ADB support to develop derivatives, swap, and repo markets, broaden the investor base, address policy impediments to cross border transactions, strengthen legal and regulatory framework for bond markets, improve transparency in the markets, and develop professional services to further support the development of the bond markets. ASEAN+3 will also take concrete steps to improve cross-border transactions with the establishment of a regional credit guarantee facility to improve access to debt markets by issuers and establish RSI to cross-border settlement and clearance.

To further advance the development of the regional bond market in a concerted manner, each member of ASEAN+3 will make periodic self-assessment of its own progress in developing the bond market, in line with the objectives of ABMI. Lastly, given the importance of the private sector in developing bond markets, ASEAN+3 has welcomed and will continue to encourage the private

New ABMI Roadmap



sector participation in the policy discussion relating to cross-border bond transactions and settlement issues.

ADB has also issued local currency-denominated bonds since 2003 in the PRC; Hong Kong, China; India; Malaysia; Philippines; Singapore; Thailand and Taipei,China. Total local currency bond issuance from 2003 to present has amounted to approximately USD2.1 billion. Local currency bond issuance by ADB and other international financial institutions, is particularly important not only because it has helped increase the supply of high quality domestic currency bonds but also because it has significant developmental impact on the domestic bond markets such as the development of a benchmark yield curve and the introduction of best-market practices.

ADB has actively issued local currency bonds in member countries not only to help increase the supply of high quality domestic currency bonds but to also introduce issue standards according to best practice. In September 2006 ADB also launched a USD10 billion Asian Currency Note (ACN) Programme in Hong Kong, China; Malaysia; and Singapore and is expected to expand its ACN program to Korea, Thailand, and Taipei,China in the near future. The ACN is important because it requires participating member countries to adopt common disclosure standards and terms and conditions governed by English law and thereby initiating the harmonization of these standards among participating countries.

To disseminate and promote greater awareness of bond market development in the region, ADB launched *AsianBondsOnline* in 2004 as a one-stop information site.

The Asian Bond Fund (ABF) promotes the development of national and regional bond markets by directly creating bond funds.

In June 2003, the EMEAP central banks launched the first fund, ABF1, pooling USD1 billion in international reserves from the 11 EMEAP central banks and monetary authorities and invested these in dollar-denominated sovereign and quasi-sovereign bonds issued by eight countries—PRC; Hong Kong, China; Indonesia; Korea; Malaysia; Philippines; Singapore; and Thailand. In June 2006, EMEAP central banks launched the second set of funds, collectively known ABF2, comprising USD2 billion of pooled central-bank reserves. ABF2 is actually nine separate funds: eight single-market funds and the Pan-Asian Bond Index Fund (PAIF). The eight single-market funds purchase the respective local currency bonds in the eight EMEAP markets. The PAIF is a single-index bond fund investing in local-currency sovereign and quasi-sovereign bonds from the same eight EMEAP economies. Unlike its predecessor, ABF2 was designed to be listed in individual markets and opened up to private investors. Most of the ABF2 funds have already been listed or have become open-ended funds, with the total size increasing by some 60% to USD3.2 billion as of December 2007.

The ABF2 framework has helped develop deeper and more liquid local currency bond markets. The use of passively-managed funds has provided a low-cost and convenient way for investors to invest in Asian bonds. The PAIF is designed to allow institutional and retail investors to get access to local bond markers in a simple and transparent way. As a listed open-indexed fund, the PAIF would help broaden both investment menu and investor base. In addition, the implementation of the ABF program has allowed policymakers and regulators a deeper understanding of the practical impact of market impediments, which usually come in the form of capital controls, withholding taxes, regulatory hurdles, and weak infrastructure.[1] It has already been effective in promoting regulatory and tax reforms of local bond markets—for instance, prompting some national governments such as Malaysia and the PRC to loosen capital controls and others including Thailand and Korea to offer withholding tax exemptions on investment income to nonresident investors.

[1] See Ma Guonan and Eli Remolona, "Learning by doing in market reform: lessons from ABF2," mimeo. The Bank for International Settlements, 2008.

entities and institutions; (ii) assessing contingency lines on funding channels that occur and the risks of credit exposure; (iii) determining whether capital charges on standby credit lines are sufficient; and (iv) defining accounting adequacy and legal parameters for guaranteeing adequate risk control. Because of lack of transparency in some economies, it is difficult for regulators and investors alike to assess the vulnerability of financial institutions. In such an environment there is an increased likelihood for rumors and innuendo to take the place of sound risk assessment to the detriment of all participants.

— **Increase significance of creating liquid bond markets to economic development.** By shifting the focus of bond markets to tapping the region's vast savings to meet its long-term financing needs in infrastructure—areas such as roads, ports, power generation—bond markets can be better tied to development goals. The challenge is not to create a large inventory of illiquid bonds. The current environment for securitization is very uncertain as bonds created by the process are extremely illiquid and reliant on a fixed pool of assets as collateral, sometimes with uncertain cash flows. While the underlying premise of securitization is sound, governments in the region might look to alternative financing that encourage more liquid instruments—such as European style covered-bond systems for mortgages in an effort to create a more liquid pool of corporate securities.

— **Improve existing data and develop a database that covers gaps in data**. Filling data gaps such as those on the composition of foreign capital flows and currency and maturity structures of debt outstanding—can help identify underlying weaknesses and risks in individual bond markets. While initiatives have been taken by international financial institutions, local bond markets are also encouraged to improve the quality, comparability and consistency of local bond market data. Limited availability of aggregated data, particularly post trade, in emerging East Asian bond markets hampers the analysis of the local currency bond markets in the key areas of liquidity and transparency.

Market Summaries

People's Republic of China—2008 Update

Yield Movements

In early 2008, the People's Bank of China (PBOC) reaffirmed a tight monetary policy as it addressed a resurgence in fixed asset investment, excessive supply of money and credit, and considerable inflationary pressure. It became more aggressive in its open market operations, hiking the reserve requirement ratio 5 times, taking it to a record high of 17.5%. The yield curve shifted up in response (Figure 1). With liquidity support at the short-end, the yield spread widened to 75 bp by the end of the first half, slightly steepening the curve.

But as the international financial turmoil worsened, the threat of a global and PRC economic slowdown became apparent. The PBOC eased its monetary stance for the second half of the year to support growth. It has since lowered its one-year RMB benchmark lending rate 81 bp to 6.66%, its one-year benchmark deposit rate 54 bp to 3.60%, and the deposit reserve requirement ratio by 150 bp to 16%. The government bond yield curve tightened and the yield spread declined to 35 bp. Tax cancellations, government equity share purchases, and planned A-shares margin trading and short selling schemes provided support to credit and equity markets.

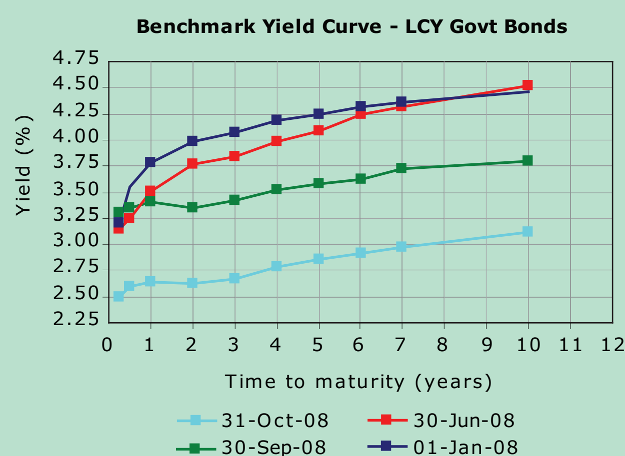
In late October, the State Council announced adjustments to the fourth-quarter national economic development framework, as well as regulatory and fiscal support measures for key sectors of the economy. The government also announced an array of measures to help support the property market and priority segments of the export sector.

Size and Composition

The PRC's LCY bond market (in CNY terms) grew 31.9% year-on-year in the first half of 2008 down slightly from 33.4% for 2007 as a whole, largely as government bond issuance slowed. But bonds issued by the PBOC were up 20.4% year-to-date for 1H08, from 9.5% on a year-on-year basis. The stock of bonds issued by the central government in 1H08 (excluding PBOC issuance) was up just 2.1% on a year-to-date basis, from 58.1% on a year-to-year basis. Corporate bonds increased, growing 41.9% year-on-year, as the government promoted private bond issuance (Table 1). On a year-to-date basis, however, 1H08 growth fell to 11.1%.

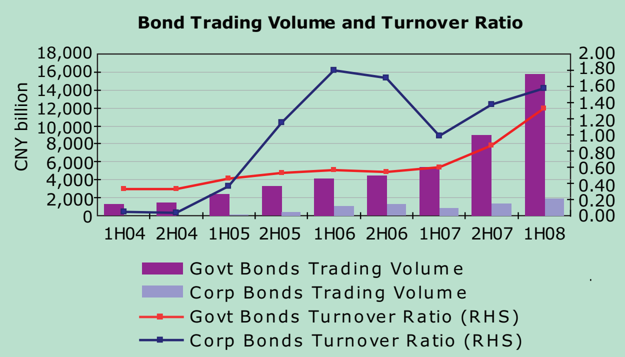
In the first half of 2008, a total of CNY1.05 trillion bonds (excluding central bank bills) was issued on the inter-bank market, up 6.96% year-on-year, mainly on issuance by policy banks.

Figure 1.



Source: Bloomberg LP.

Figure 2.



Source: ChinaBond.

In US dollar equivalent terms, however, all growth in rates in 1H08 were higher, reflecting the appreciation of the yuan against the US dollar.

Turnover

In the first half of 2008, the turnover of spot bond trading on the inter-bank market rose 184.07% year-on-year. Government bond turnover rose 193.53% to a ratio of 1.33. In line with the increased issuance of short-term financing bills and medium-term notes—amounting to CNY172.02 billion and CNY73.5 billion respectively—corporate bond turnover increased 124.32% to a turnover ratio of 1.58 for first half 2008 (Figure 2).

PRC Size and Composition of Local Currency Bond Market

	2005	2006	Jun-07	2007	Jun-08	
(LCY billion)						
Total	7,257	9,242	10,418	12,331	13,738	
Government	6,740	8,418	9,523	11,187	12,467	
Treasury Bonds	2,707	2,905	3,004	4,650	4,750	
Central Bank Bonds	2,263	3,230	4,023	3,659	4,405	
Policy Bank Bonds	1,770	2,284	2,496	2,878	3,312	
Corporate	517	824	896	1,144	1,271	
(USD billion)						
Total	899	1,184	1,368	1,690	2,004	
Government	835	1,079	1,251	1,533	1,819	
Treasury Bonds	335	372	395	637	693	
Central Bank Bonds	280	414	528	501	643	
Policy Bank Bonds	219	293	328	394	483	
Corporate	64	106	118	157	185	
	2005	**2006**	**Jun-07**	**2007**	**Jun-08**	
			Y-o-Y		Y-o-Y	YTD
(Growth Rate (%) - LCY terms)						
Total	40.6	27.4	23.8	33.4	31.9	11.4
Government	35.8	24.9	23.6	32.9	30.9	11.4
Treasury Bonds	12.0	7.3	13.0	60.1	58.1	2.1
Central Bank Bonds	93.3	42.7	29.3	13.3	9.5	20.4
Policy Bank Bonds	28.9	29.0	29.1	26.0	32.7	15.1
Corporate	157.1	59.3	25.5	38.8	41.9	11.1
(Growth Rate (%) - USD terms)						
Total	44.2	31.7	30.0	42.7	46.5	18.6
Government	39.3	29.1	29.8	42.1	45.4	18.6
Treasury Bonds	14.8	10.9	18.7	71.2	75.6	8.7
Central Bank Bonds	98.2	47.6	35.8	21.2	21.6	28.2
Policy Bank Bonds	32.2	33.4	35.6	34.8	47.4	22.5
Corporate	163.7	64.8	31.8	48.5	57.6	18.3
	2005	2006	Jun-07	2007	Jun-08	
(% of GDP)						
Total	39.5	43.6	45.8	49.4	50.6	
Government	36.7	39.7	41.9	44.8	46.0	
Corporate	2.8	3.9	3.9	4.6	4.7	

Sources: ChinaBond, Bloomberg LP.

Institutional and Regulatory Developments

Government Makes Regulatory Changes to Encourage Funding in Capital Markets.

The PBOC published new rules on debt issuance in the inter-bank market by non-financial enterprises. The rules, which came into effect 15 April 2008, replaced previous guidelines governing underwriting, information disclosure, and issuance of short-term financing bills on the inter-bank market.

The PBOC announced, effective 1 August 2008, the launch of DVP (Delivery Versus Payment) settlement to cover all participants on the inter-bank bond market.

On 6 August the State Council approved revisions to its foreign exchange management rules that will better support the country's trade and investment flows, and better balance the flow of international payments in general.

On 19 October the China Securities Regulatory Commission released official rules to allow shareholders of listed companies to issue exchangeable bonds (EB). They enable a bond's investor to transfer the bonds into other company's shares held by the issuer according to a previously stipulated time limit and conditions. The elements of the EB are similar to convertible bonds, including coupon rate, term, equity swap price and ratio, as well as equity swap term. One difference between the EB and the convertible bonds is the bond issuance and repayment subjects: the former is the listed company's shareholders, while the latter is the listed company. Another difference is the equity source: the former is from other company's equity held by the issuer, and the latter is from the issuer's to-be-issued new equity. The convertible bonds' equity transfer should enlarge the issuer's total issued shares, while the EB's equity swap has no influence on the underlying company's total issued shares.

Hong Kong, China—2008 Update

Yield Movements

The Exchange Fund Bills and Notes (EFBN) yield curve shifted upward in the first half as inflation pressures built and liquidity tightened. (Figure 1). Aggressive monetary contraction in the People's Republic of China spilled over into the local market, causing it to tighten somewhat. The EFBN curve also steepened 45 bp, roughly in line with a 47 bp steepening at the long end of the US yield curve.

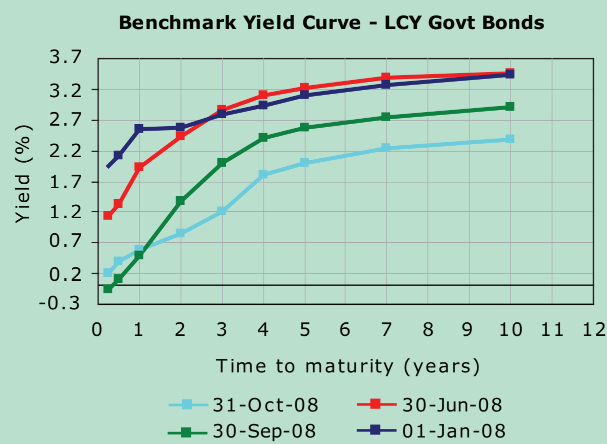
But as global financial turmoil in the third quarter put major pressure on the capital and money markets, the EFBN curve tightened. Local inter-bank lending was severely strained and authorized financial institutions flocked to the safe haven of EFBNs. Exchange Fund Bill yields declined 128 bp on average, with the three-month bill at times carrying a negative yield.

To ease liquidity pressure and support banks, the Hong Kong Monetary Authority (HKMA) expanded eligible collateral securities for borrowings through the Discount Window and extended term lending for licensed banks. It also revised its formula for computing the Discount Window base rate, offered guarantees to both HKD and FCY deposits with authorized institutions, and expanded the EFBN programmed issuance to improve banks' liquidity management.

Size and Composition

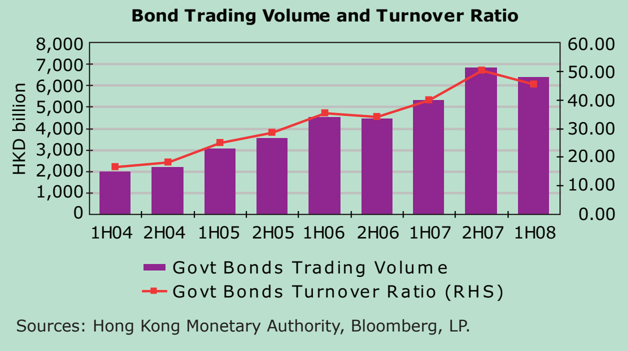
The volatility and weakness of the global financial markets did not spare Hong Kong, China. Corporate bonds outstanding declined 9.8% compared to the first half 2007. New issuance of medium-term floating rate corporate paper was just HKD400 million, down 95.6% from 2007. Foreign borrowers that regularly tap the HKD-denominated bond market significantly cut back issuance, while the virtual cessation of activity in asset-backed securities further aggravated the situation.

Figure 1.



Source: Bloomberg LP.

Figure 2.



Sources: Hong Kong Monetary Authority, Bloomberg, LP.

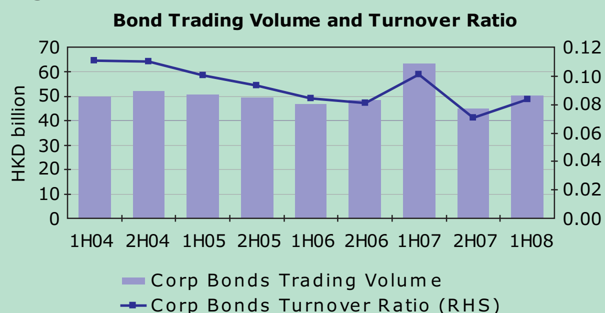
The HKMA's EFBN, on the other hand, grew a steady 7.3% year-on-year in 1H08, supported by the decision to supply additional Exchange Fund paper via a tap facility in mid-January to meet heightened market demand arising from banks' intraday liquidity needs. HKMA launched an ad hoc issue of short-dated Exchange Fund paper totaling HKD6 billion.

Turnover

EFBN trading volume rose 20.3% year on year to HKD6.4 trillion in the first half of 2008. Demand increased for short-dated Exchange Fund paper for intraday liquidity to meet settlement obligations—through the Real Time Gross Settlement system.

The volume of intraday repos of Exchange Fund paper rose, and sometimes exceeded 80% of the Exchange Fund paper held by banks. Strong demand is reflected in part in the widened spread for short-dated Exchange Fund paper against local inter-bank interest rates—at one point exceeding 400 bp.

The government bond turnover ratio correspondingly increased to 45.56, from 39.97 in the first half of 2007 (Figure 2).



Sources: Hong Kong Monetary Authority, Bloomberg, LP.

In corporate bonds—primarily held by institutional investors and less liquid than EFBNs—the turnover ratio declined to 0.083, from 0.101 in the first half of 2007 (Figure 3).

Institutional and Regulatory Developments

HKMA Promotes Islamic Finance

Furthering Hong Kong, China's role as an international financial center, the HKMA and the Islamic Financial Services Board jointly organized seminars on Islamic Finance to promote discussion of the development of a Islamic financial platform in Hong Kong, China.

In addition, the HKMA and the Dubai International Financial Centre Authority signed a memorandum of understanding to foster cooperation in the development of Sharia-compliant financial products and financial infrastructure in their jurisdictions.

HK Size and Composition of Local Currency Bond Market

	2005	2006	Jun-07	2007	Jun-08	
(LCY billion)						
Total	663.7	748.1	775.5	764.2	722.4	
Government	126.7	131.8	134.4	136.6	144.3	
Corporate	537.0	616.4	641.1	627.6	578.1	
(USD billion)						
Total	85.6	96.2	99.2	98.0	92.6	
Government	16.3	16.9	17.2	17.5	18.5	
Corporate	69.3	79.2	82.0	80.5	74.1	
	2005	**2006**	**Jun-07**	**2007**	**Jun-08**	
			(Y-o-Y)		Y-o-Y	YTD
(Growth Rate (%) - LCY terms)						
Total	9.2	12.7	10.4	2.1	-6.8	-5.5
Government	3.4	4.0	4.0	3.7	7.3	5.6
Corporate	10.7	14.8	11.9	1.8	-9.8	-7.9
(Growth Rate (%) - USD terms)						
Total	9.5	12.3	9.7	1.9	-6.6	-5.5
Government	3.6	3.7	3.3	3.4	7.6	5.6
Corporate	10.9	14.4	11.2	1.6	-9.6	-7.9
	2005	2006	Jun-07	2007	Jun-08	
(% of GDP)						
Total	48.0	50.7	50.7	47.3	43.1	
Government	9.2	8.9	8.8	8.5	8.6	
Corporate	38.8	41.8	41.9	38.8	34.5	

Sources: Hong Kong Monetary Authority, Bloomberg LP.

Indonesia—2008 Update

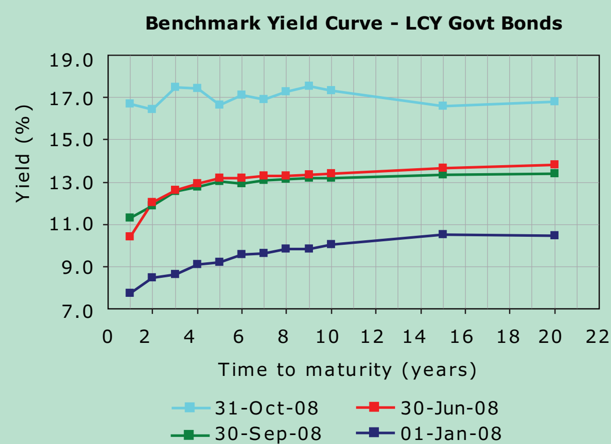
Yield Movements

Indonesian government bond yields have risen since the start of the year amid fears of an economic slowdown, coupled with rising domestic inflation (10.4% in May and 12.1% in September). Bank Indonesia (BI) has raised its benchmark rate six times since May, its last hike brought the rate to 9.5% on 7 October, even as other central banks in the region cut policy rates.

Bond yields across all tenors shifted upward in October as aversion to emerging market bonds grew. By end-October, one-, 3-, and 4-year yields were up more than 800 bp since the start of 2008, while 15- and 20-year yields were up more than 600 bp. The Finance Ministry cancelled all LCY bond auctions for the rest of the year due to volatile market conditions, saying it would only resume once conditions had stabilized.

Bank Indonesia has implemented several measures in response to the liquidity squeeze, including lowering the reserve requirement for foreign exchange deposits to 1%, extending foreign currency swap terms up to a maximum of one month, and simplifying calculations and reducing to 7.5% the minimum reserve requirement for IDR deposits. The government has also raised its guarantees on bank deposits to IDR2 billion, from IDR100 million previously.

Figure 1.



Source: Bloomberg LP.

Size and Composition

Government Bonds

Outstanding government bonds (treasury/recap bonds plus Sertifikat Bank Indonesia (SBIs) fell 5.5% (expressed in IDR terms) in the first half of 2008, compared with end-2007. This reflected a 9.6% year-to-date rise in the stock of treasury/recap bonds, while SBIs fell by 34.2% year-to-date by the end of June 2008, despite the increased frequency of auctions of the 3-month tenor, and additional new instruments (6-month SBI, 9-month SBI, and Shari'a SBI). The new SBIs failed to attract significant interest.

Major government issues:

- The government successfully raised USD2 billion from a US dollar sovereign issue at the start of the year. The bonds were issued in dual tranches (Indo 18 – 10Y, 6.95% and Indo 38 – 30Y, 7.74%). This was followed by another global bond offering of USD2.2 billion in mid-June, the biggest issue to date.

- The government undertook a debt swap of IDR146 billion in February, followed by another debt swap of IDR4.425 trillion in July. The latter swap entailed an exchange of short- to medium-term debt for 14-year paper. The new bonds issued carried a coupon of 12.9%.

- Indonesia offered its fourth retail bond issue in March, raising IDR13.46 trillion. The retail bond carried a coupon of 9.5% and will mature on March 2012 (4-year).

- In April, the government bought back IDR2.007 trillion worth of state bonds.

Corporate Bonds

Corporate bonds posted a 4.4% growth rate in the first half of 2008. While several companies announced plans for new debt issuance, quite a number also decided to hold off on their bond offerings. This was especially true for banks, reflecting uncertainties in the global markets. According to Bank Indonesia (BI), no bank issued foreign currency bonds in the first half of the year.

In March, BI took steps to make the corporate bond market more attractive for investment by commercial banks. It issued a ruling concerning the calculation of risk weighted assets for corporate bonds, allowing commercial banks to assign a lower risk weighting to corporate bonds, depending

ID Size and Composition of Local Currency Bond Market

	2005	2006	Jun-07	2007	Jun-08	
(LCY billion)						
Total	532,255	690,013	785,518	800,569	764,688	
Government	474,493	628,507	708,920	721,504	682,156	
Bonds/Recap	399,859	418,751	450,918	473,578	519,053	
SBIs	74,634	209,756	258,002	247,926	163,103	
Corporate	57,762	61,505	76,598	79,065	82,532	
(USD billion)						
Total	54	77	87	85	83	
Government	48	70	79	77	74	
Bonds/Recap	41	47	50	50	56	
SBIs	8	23	29	26	18	
Corporate	6	7	9	8	9	
	2005	**2006**	**Jun-07**	**2007**	**Jun-08**	
			Y-o-Y		Y-o-Y	YTD
(Growth Rate (%) - LCY terms)						
Total	(5.3)	29.6	23.6	16.0	(2.7)	(4.5)
Government	(5.7)	32.5	23.3	14.8	(3.8)	(5.5)
Bonds/Recap	0.1	4.7	10.7	13.1	15.1	9.6
SBIs	(28.1)	181.0	53.9	18.2	(36.8)	(34.2)
Corporate	(1.8)	6.5	26.9	28.5	7.7	4.4
(Growth Rate (%) - USD terms)						
Total	(10.6)	41.8	27.2	11.1	(5.0)	(2.8)
Government	(11.0)	44.9	26.8	9.9	(6.1)	(3.7)
Bonds/Recap	(5.5)	14.6	13.9	8.3	12.4	11.6
SBIs	(32.2)	207.5	58.3	13.2	(38.3)	(33.0)
Corporate	(7.3)	16.5	30.5	23.1	5.2	6.3
	2005	**2006**	**Jun-07**	**2007**	**Jun-08**	
(% of GDP)						
Total	19.2	20.7	21.7	20.2	17.3	
Government	17.1	18.8	19.5	18.2	15.4	
Corporate	2.1	1.8	2.1	2.0	1.9	

Sources:
1. For Bonds Outstanding - Indonesia Stock Exchange and Bank Indonesia for government; Indonesia Stock Exchange for corporate.
2. For Exchange Rates – Bloomberg LP
3. For GDP - CEIC

on the bonds' credit rating. Previously banks had a 100% capital provisioning for all corporate bonds held. The new regulation included certain stipulations to qualify for a lower capital risk weighting.

Turnover

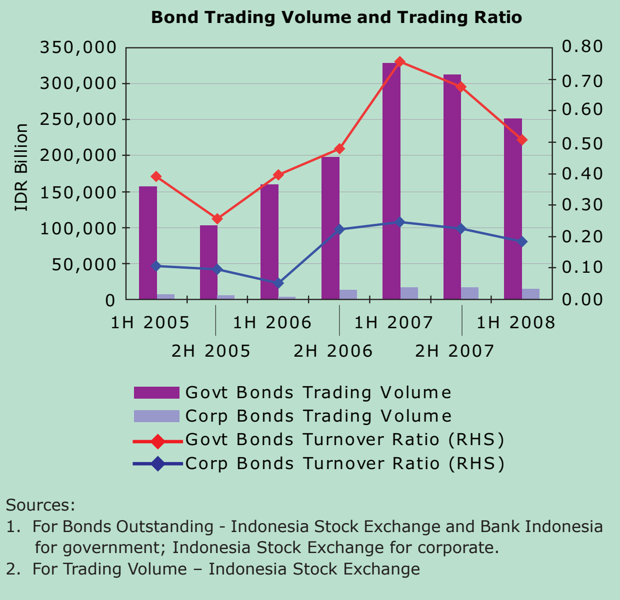
Government bond turnover fell 25% to 0.51 of the average value of bonds outstanding for the first half of 2008. Turnover for corporate bonds declined 18% to 0.18 during the six-month period. Indonesian corporate bonds are generally illiquid as most investors choose to hold the bonds until maturity.

Institutional and Regulatory Developments

Shari'a Debt Bill Passed

In April, the Islamic Shari'a Debt Bill was passed, paving the way for the government to sell Islamic bonds and allowing it to tap a wider investor base (Middle Eastern). The government raised IDR4.699 trillion from the sale of its first Islamic bonds, lower than its target of IDR5 trillion. A global Islamic bond issue (USD1 billion) scheduled for November may be delayed, said the Finance Ministry, due to current market developments.

Figure 2.



Sources:
1. For Bonds Outstanding - Indonesia Stock Exchange and Bank Indonesia for government; Indonesia Stock Exchange for corporate.
2. For Trading Volume – Indonesia Stock Exchange

BI Launches Shari'a Promissory Note

Bank Indonesia launched its first shari'a promissory note or shari'a SBI in April. The SBI replaced the previous instrument, wadiah certificates. Existing wadiah certificates will remain effective until their maturity date. The new Shari'a SBI tenors are offered from one to 12 months tenors and follow the scheme of ju'alah (payment fees or commission for rendering a service).

BI Changes Policy Framework

In June, BI introduced changes to its policy framework to better manage liquidity by adopting the inter-bank overnight rate as its operating target rate. Under the new policy, the central bank will use various policy instruments to influence the overnight rate to align it more closely with the BI rate. As part of this policy change, BI will no longer peg the one-month Bank Indonesia Certificate (SBI) rate to the BI rate. Instead, the SBI rate will be determined by a monthly auction.

Bond Pricing Agency Formed

To improve transparency in the bond market, a bond pricing agency was formed in July and is expected to be in full operation within the year. The bond pricing agency will provide daily reference prices for government and corporate bonds, including conventional and Islamic debt issues. Currently, there is no available reference bond price aside from those provided by brokerage firms.

Possible Samurai Debt

The Finance Ministry in August said it may offer Samurai debt (yen-denominated bonds) next year. The government also plans to sell Islamic retail bonds in the first half of 2009.

Govt Raises Funds In Retail Issue

In September, the government raised IDR2.7 trillion from the sale of retail bonds with 5-year maturity and a coupon of 11.45%. The bond sale was lower than the target of IDR6.225 trillion. This was Indonesia's fifth retail treasury bond issue.

Republic of Korea—2008 Update

Yield Movements

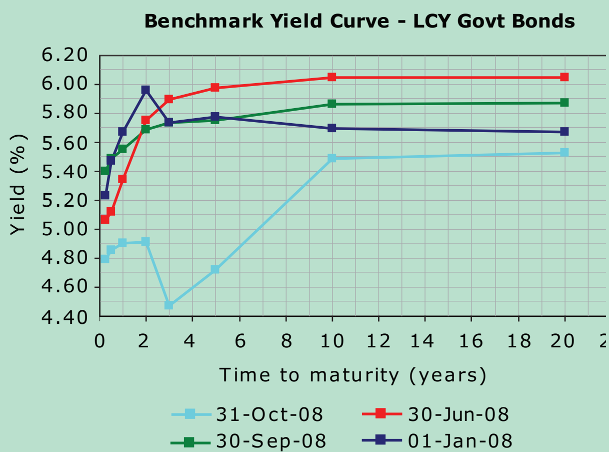
The Korean government yield curve for the 3- to 20-year tenors shifted up between January and June, while the 3-month to 1-year tenors remained below levels at the beginning of the year, reflecting growing inflationary concerns. But the curve has shifted dramatically lower since the end of June as fear of a severe economic downturn replaced inflation concerns, and the Bank of Korea (BOK) aggressively cut interest rates in October and November.

The BOK had raised its policy rate 25 bp to 5.25% in August after inflation reached 5.9% in July, nearly a ten-year high. Inflation edged down to 5.1% in September.

Since then, global market uncertainty and fear of a severe economic downturn have trumped inflation concerns. The won fell to a 10-year low against the US dollar during the first week of October, and the BOK reversed course, lowering its policy rate in two cuts to 4.25% by the end of October. The BOK cut again on 7 November, bringing its policy rate to 4.0%. The Financial Supervisory Commission (FSC) also announced it would inject liquidity up to KRW4.3 trillion to small companies affected by the currency. Foreign exchange liberalization steps were also suspended.

On 19 October, the government announced it would provide up to USD100 billion of guarantees on Korean banks' foreign currency debt accumulated up to the end of June 2009, and inject an additional USD30 billion into the banking system. These measures have been followed up with guarantees for all foreign currency deposits of Korean domestic banks. Korea has also been included in the US Federal Reserve Bank's currency swap program announced on 30 October.

Figure 1.



Source: Bloomberg LP.

Size and Composition

Total government bonds outstanding fell 9.1% year to date (in US dollar terms) after only negligible growth in 2007. Total non-financial public sector debt (which includes Korea Treasury bonds, Monetary Stabilization Bonds (MSB), bonds issued by government owned and controlled corporations or GOCCs, and other public sector debt) increased 1.76% during the first half, after increasing almost 3% by end 2007 from end 2006 (see Table 2). The outstanding MSBs issued to absorb excess liquidity decreased slightly to KRW142 billion in the first half from KRW147 billion at end-2007(Table 2).

Corporate bond growth declined to 5.57% as companies borrowed from banks instead of raising capital through issuing bonds. Loans by domestic financial institutions hit a record high of more than KRW80 trillion in the first half. Lending by commercial banks and non-banking financial institutions amounted to nearly KRW1,140 trillion at the end of June, up more than 7.5% from end-2007.

Turnover

The government bond turnover ratio rose to 1.21 for the first half of 2008 from 1.18 during 1H07. Corporate bond turnover rose slightly during the first half of 2008 to 0.27 from 0.24 in 1H07. Total trading volume for both government and corporate bonds remained roughly unchanged.

Institutional and Regulatory Developments

Deregulation to Revitalize Bond Market

In July, the FSC lowered barriers to allow banks to issue covered bonds for fund raising. The FSC is also allowing financial firms to issue high-yield bonds, including junk bonds to activate the sluggish debt-securities market. The deregulatory moves were welcomed as they allow banks to issue a variety of bonds for raising capital. These restrictions on borrowing and bond issuance have been in place since the Asian financial crisis when a lack of experience at Korean financial firms in bond issuance and inactivity of domestic credit agencies led the regulator to maintain its

Table 1. **Korea Size and Composition of Local Currency Bond Market**

	2005	2006	Jun-07	2007	Jun-08	
(LCY billion)						
Total	812,644	891,842	956,699	993,838	1,032,396	
Govt	408,185	436,291	448,560	439,983	447,255	
Corp	404,459	455,551	508,139	553,855	585,140	
(USD billion)						
Total	805	959	1,037	1,062	986	
Govt	404	469	486	470	427	
Corp	400	490	551	592	559	
	2005	**2006**	**Jun-07**	**2007**	**Jun-08**	
			Y-o-Y		Y-o-Y	YTD
(Growth Rate (%) - LCY terms)						
Total	10.8	9.7	10.5	11.4	7.9	3.9
Govt	17.0	6.9	3.6	0.8	-0.3	1.7
Corp	5.2	12.6	17.3	21.6	15.2	5.6
(Growth Rate (%) - USD terms)						
Total	13.6	19.2	13.6	10.7	-4.9	-7.1
Govt	19.9	16.1	6.6	0.2	-12.2	-9.1
Corp	7.8	22.3	20.6	20.8	1.5	-5.6
	2005	**2006**	**Jun-07**	**2007**	**Jun-08**	
(% of GDP)						
Total	100.3	105.2	109.8	110.3	110.5	
Govt	50.4	51.4	51.5	48.8	47.9	
Corp	49.9	53.7	58.3	61.5	62.6	

Source: KoreaBondWeb

close scrutiny of the debt market. Nevertheless, this relatively strict regulatory environment would appear to be a factor that has limited Korean bank exposure to the fallout from the collapse of a number of US financial institutions.

Adjusting of real-estate taxes

In September, the Ministry of Finance and Economy (MOFE) announced plans to readjust its rules on real-estate holding tax system as part of the government's economic stimulus package

- The minimum tax base for homes from the current KRW600 million will be raised to KRW900 million.
- Tax rates will also be revised downward from 1-3% to 0.5-1%. An additional cut of 10-30% will be given to single house owners who are over 60 years old.
- Tax on business-purpose properties will also be scrapped.

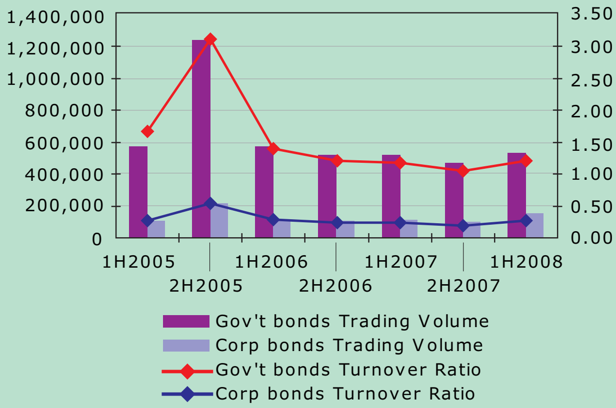
These tax adjustment measures aim to boost corporate competitiveness and ease business tax burdens. MOFE estimates that these moves will provide households and businesses a total of KRW2.23 trillion in tax savings by end-2010.

Table 2. **Selected Sectors - in LCY billion**

	KTBs	MSBs	GOCCs Sector	Other Pub Pub Sec	Total Non-fin Deb	Finl Sec Corps.	Non-finl
6-Dec	217,386	158,390	107,774	60,514	544,064	187,905	159,872
7-Jun	231,360	158,240	116,807	58,960	565,367	215,437	175,895
7-Dec	235,950	147,350	120,262	56,683	560,245	241,521	192,072
8-Jun	244,510	142,440	128,068	60,305	575,324	252,517	204,555
	KTBs	**MSBs**	**GOCCs Sector**	**Other Pub Pub Sec**	**Total Non-fin Deb**	**Finl Sec Corps.**	**Non-finl**
07-Dec YOY	8.5	-7.0	11.6	-6.3	3.0	28.5	20.1
08-Jun YTD	5.7	-10.0	9.6	2.3	1.76	17.2	16.3

Source: KoreaBondWeb
Total Non-financial Public Sector includes Treasury Bonds (Korea Treasury Bonds and Inflation linked Korea Treasury Bonds or KTBi), Monetary Stabilization bonds, Government Owned Corporations, Other Public Sector bonds (composed of Foreign Exchange Stabilization bonds, Grain Securities Bonds, National Housing Bonds and Municipal bonds. Corporate Bonds include Financial Sector Debentures and guaranteed and non-guaranteed corporate bonds.

Figure 2.



Source: *KoreaBondWeb*.

Government actions to stabilize the KRW, stock market

The KRW hit a 5-year low in September. The Finance Ministry then announced that it would inject USD10 billion in the local KRW-USD swap market in September and October. Despite these actions, the won hit a 10-year low in the second week of October. The KOSPI also continued to fall to its lowest level this year, hitting the 1,200 mark on the same week. The Finance Ministry announced it will monitor speculative forces in the currency market. The government will also soon release measures on stabilizing the stock market, such as providing tax deductions on long term investment funds. But the spotlight has been on the government's more aggressive market support measures, such as its USD100 billion guarantee program for foreign currency debt of Korean banks as well as guarantees for the foreign currency deposits of Korean banks, as mentioned above

Malaysia—2008 Update

Malaysian benchmark government bond yields shifted upward through the first half of the year on rising concern about inflation. Inflation breached the 2% mark in November last year, rose further to 8.5% in July, and remained at 8.4% in August. Despite this sharp increase, the Monetary Policy Committee (MPC) of Bank Negara Malaysia (BNM) left the policy rate unchanged at 3.5%, and continues to do so. BNM is optimistic that inflation will taper off in the second half to within its revised annual forecast between 5.5% and 6%.

Government bond yields began falling in September (and through October). And the government shifted its focus to stimulating economic growth, including plans for liberalizing the services sector. It is also increasing investment efforts in the Middle East (announcing issuance of more Islamic fund licenses as early as August), and Asian countries with surplus funds.

BNM, meanwhile, pre-emptively guaranteed all its regulated MYR and FCY deposits through the Malaysian Deposit Insurance Corporation and extended these liquidity facilities to all regulated insurance and *takaful* operators, effective 16 October 2008.

Size and Composition

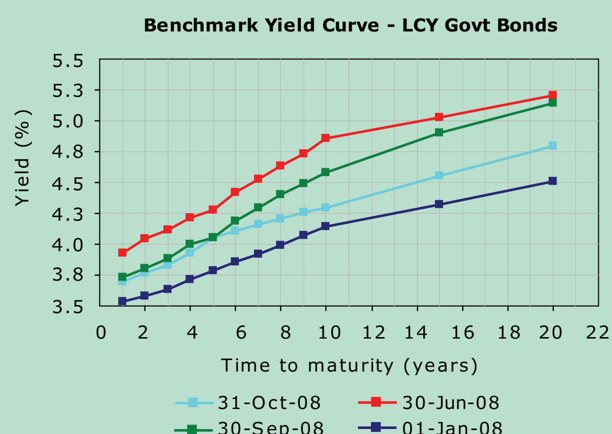
BNM issued substantial amounts of Bank Negara Monetary Notes (BNMNs) in 1H078 to absorb excess liquidity. As of June 2008, BNMN bonds (BNMNs and BNM *Sukuk*) outstanding had risen 59.5% year-on-year, primarily for the purpose of funding Bank Negara's sterilization activities.

Table 1. **Malaysia Size and Composition of Local Currency Bond Market**

	2005	**2006**	**Jun-07**	**2007**	**Jun-08**	
(LCY billion)						
Total	403.26	433.94	481.64	543.30	612.62	
Pub Sect	197.47	219.22	264.17	293.02	340.57	
Corp 205.79	214.72	217.47	250.28	272.05		
(USD billion)						
Total	106.70	123.00	139.51	164.30	187.49	
Pub Sect	52.25	62.14	76.52	88.61	104.23	
Corp	54.45	60.86	62.99	75.69	83.26	
	2005	2006	Jun-07	2007	Jun-08	
			Y-o-Y		Y-o-Y	YTD
(Growth Rate (%) - LCY terms)						
Total	9.67	7.61	17.44	25.20	27.19	12.76
Pub Sect	8.04	11.01	29.70	33.66	28.92	16.23
Corp	11.27	4.34	5.34	16.56	25.10	8.70
(Growth Rate (%) - USD terms)						
Total	10.26	15.28	24.99	33.58	34.40	14.11
Pub Sect	8.63	18.93	38.05	42.61	36.22	17.62
Corp	11.88	11.78	12.11	24.36	32.18	10.00
	2005	2006	Jun-07	2007	Jun-08	
(% of GDP)						
Total	77.19	75.63	80.83	84.64	86.70	
Pub Sect	37.80	38.21	44.33	45.65	48.20	
Corp	39.39	37.43	36.50	38.99	38.50	

Source: Fully Automated System for Issuing/Tendering (FAST under BNM)

Figure 1.



Source: Bloomberg, LP.

Total federal government debt (which excludes BNMNs and *Sukuk Bank Negara Malaysia Ijarah*) grew 9.3% year-to-date, during the first half. Malaysian Government Securities (MGS) issues grew 9%, while other government debt—primarily Government Investment Issues—grew 10.8% to fund the government's development expenditure under the Ninth Malaysian Plan, expected to rollout in the next two years. The government has increased the allocation for the Plan by MYR30 billion to MYR230 billion.

The outstanding volume of corporate bonds grew a moderate 8.7% during the first half of the year (year-to-date) compared to 25.1% on a year-on-year basis. Market issuance was

Table 2. **Selected Sectors** - LCY billions

Date	Central Bank Debt	MGS	Other Fed Gov't Debt	Total Fed Gov't Debt	Total Public Sector Debt	Corp Debt	**GRAND TOTAL**
Jun-07	60.0	175.4	28.8	204.2	264.2	217.5	**481.6**
Dec-07	69.0	191.7	32.3	224.0	293.0	250.3	**543.3**
Jun-08	95.7	209.1	35.8	244.9	340.6	272.1	**612.6**
Growth Rate							
Date	Central Bank Debt	MGS	Other Fed Gov't Debt	Total Fed Gov't Debt	Total Public Sector Debt	Corp Debt	**GRAND TOTAL**
YOY	59.5	19.2	24.3	19.9	28.9	25.1	**27.2**
YTD	38.7	9.1	10.8	9.3	16.2	8.7	**12.8**

Central Bank Debt: BNMNs and BNM *Sukuk.*
Total Federal Government Debt:Malaysian Treasury Bills and Islamic Malaysian Treasury Bills, MGS and GIIs.
Total Public Sector Debt: Central Bank Debt and Total Federal Govt Debt.
Corp includes Khazanah bonds, Cagamas bonds, commercial papers, medium-term notes, asset-backed securities as well as bond issued by private corporations.

Source: Fully Automated System for Issuing/Tendering (FAST under BNM).

driven mainly by foreign issuers and demand for *sukuk* issues.

Islamic securities comprise 58% of corporate bonds outstanding amid ongoing government effort to lure Middle Eastern investment. Notable debt facilities for the period included the MYR1 billion AAA-rated bond issue by Gulf Investment Corporation (GIC), a diversified financial institution jointly owned by the six-member nations of the Gulf Cooperation Council. Another noteworthy issue was the MYR1 billion *Sukuk Ijarah* by Menara ABS Bhd- a real estate-backed transaction involving the securitization of over MYR1 billion of properties (Malaysia's largest securitization of property assets to date).

Korean banks have been energetic issuers in the Malaysia debt market. The Export-Import Bank of Korea issued MYR1billion of bonds in March, becoming the first Korean debt issuance in the market. The Industrial bank of Korea followed with MYR1 billion of bonds in April.

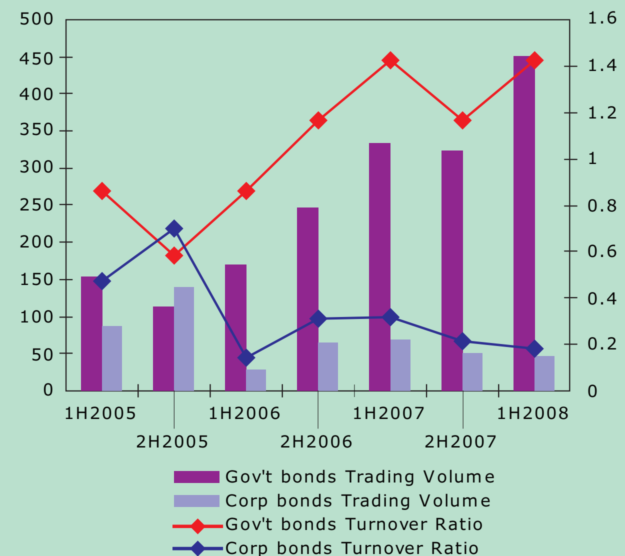
Turnover

Total bond turnover fell from 1.74 during the first half of 2007 to 0.86 for 1H08. Much of the total trading activity still comes from government bonds.

Government turnover was stagnant at 1.43 during the first half of the year (the same as 1H07). The market appears to have absorbed the ever-increasing issuance of BNMNs, at the expense of trading existing bonds on the secondary market. With the exception of SBNMIs—*Sukuk* Bank Negara Malaysia *Ijarah*—trading in all government securities fell for the first half of the year compared to end 2007.

Corporate bond turnover continued to decline, from 0.31 in 1H07 to 0.18, in the first half. Because of the continued issuance of new Islamic products (exchangeable Islamic bonds, equity-linked structured products, Islamic funds, and others) trading has been muted. Trading volume fell significantly for bonds by the national mortgage corp.

Figure 2.



Source: Fully Automated System for Issuing/Tendering (FAST) under BNM
*exactly the same types of bonds used in obtaining outstanding bonds are used in obtaining trading volume

Cagamas (-86%), asset-backed securities (-71%), and corporate bonds (-70%).

In March, the Bond Information and Dissemination System (BIDS) was rolled into the Electronic Trading Platform (ETP). BIDS was a centralized database on Malaysian debt securities that is integrated with the Fully Automated System for Issuing/Tendering (FAST). It provides information on terms of issue, real-time prices, details of trades done, and supplies relevant news on debt securities issued by both the government and the private sector. ETP carries out electronic secondary market trading as well as reporting.

Institutional and Regulatory Developments

Bursa Malaysia Introduces Automated Settlement System

In March, Bursa Malaysia Securities Clearing Berhad introduced the central matching facility, an automated settlement system which allows clearing participants (comprised of stockbroking companies and custodian banks) to electronically match trade and settlement details which were previously done manually.

Proposals to Boost Non-MYR bonds

Last March 26, the government proposed to issue more non-MYR denominated debt by liberalizing the bond market approval framework. This would involve the extension of the "deemed approved" process to all domestic or foreign issuers rated AAA by domestic rating agencies or a minimum BBB by foreign agencies. This "deemed approved" process would also be extended for the issuance of non-MYR bonds by domestic and foreign issuers with a minimum BBB rating by foreign agencies. Those accorded with deemed approved status would be exempted from trust deed and trustee requirements.

Reduction of Real Time Electronic Transfer of Funds (RENTAS) Transaction Fee for Third Party Payments

On July 15, the transaction fee imposed on member banks for third party payments (or payments made by the member banks on behalf of their customers) was reduced from MYR2.50 to MYR1.50. There was also a MYR1.00 reduction in bank charges imposed by member banks on their customers for RENTAS. Reduction of the fees should ease burdens on bond issuers and allow for more liquidity in the secondary market.

All private debt and Islamic securities are issued using RENTAS. RENTAS listing is required for private and debt securities which are not listed in any Malaysian stock exchange for securities allotment, fund transfers, and secondary trading facilitation.

Securities Commission plans to issue more Islamic fund management licenses

The Malaysia Securities Commission (SC) announced in August that it plans to issue more Islamic fund management licenses. Under the plan, international fund management companies will be given flexibility to own up to a 100% equity stake in these companies. The SC will not limit the number of Islamic fund management companies since they want bigger players to enter and the SC will also hasten the approval process for new licenses.

SC introduces new measures to boost growth of REITs

The Securities Commission's Real Estate Investment Trust (REIT) guidelines now allow up to 70% foreign shareholding in REIT management companies, up from 49% since 2005. The revised guideline also provides greater flexibility for REIT managers in handling their portfolio mix. For example, they will have more freedom to invest in foreign real estates, and the guideline allows a portion of the portfolio to consist of real estate not fully owned by the REIT.

Philippines—2008 Update

Yield Movements

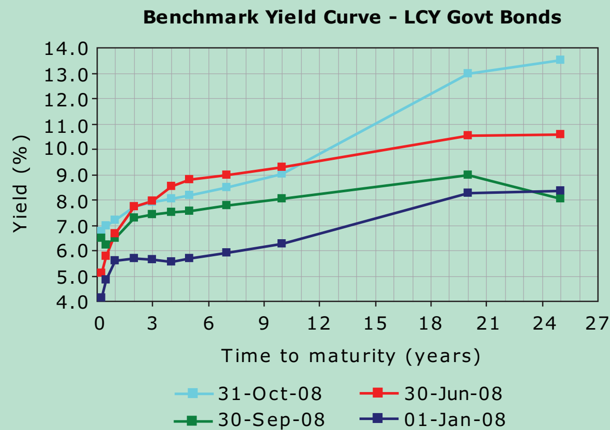
The government yield curve has shifted upwards since the beginning of the year as inflation rose to double-digit levels and the central bank tightened policy in response. The Bangko Sentral ng Pilipinas (BSP) raised rates three times (June 25 bp, July 50 bp, August 25 bp), signaling its serious concern. Since June, the short-end of the curve has benefited from global uncertainties as investors moved out of more risky investments and into more liquid short-term government debt.

But inflation has eased somewhat, reaching 11.8% in September (from a peak of 12.5% in August). And the BSP has held steady: the overnight borrowing rate has been set at 6.0% and overnight lending at 8% since August.

Yields in the longer maturities have risen throughout the year. The 20-year tenor rose 400 bp between the end of September and the end of October, and the 25-year maturity rose 546 bp during this period. Investors favor shorter-term instruments liquid securities to minimize risk. Renewed credit concerns have resulted in tightness in US dollar supply in the domestic market, with some banks choosing to liquidate their debt holdings to boost dollar supply.

The BSP has recently implemented several measures to ease liquidity problems, including a US dollar repurchase (repo) facility on 17 October; and the enhancement of existing lending windows (peso repo facility) for banks.

Figure 1.



Source: Bloomberg LP.

Size and Composition

Government Bonds

The outstanding stock of government bonds rose 4.68% in the first half of 2008 from end-December 2007. While several auctions for treasury bills were rejected in the first quarter, most of the growth in government securities came from treasury bills (+20.72%), especially 364-day bills (+47.26%), after the Bureau of the Treasury cancelled the 91- and 182-day tenors for the whole of the second quarter. Banks were seeking higher yields for bills due to pressure on the currency as well as rising inflation. Growth in t-bill issuance may have been even higher except that BSP special deposit accounts (SDAs), with higher returns, were competing with treasury bills.

Major government issues:

A planned Euro-currency denominated sovereign issue did not materialize, so the government pushed through a USD500 million global bond late in January. The government has still not decided whether to proceed with a planned sovereign debt issue of up to USD750 million, given global market volatility.

In late February, the government sold 2 million bond warrants covering USD2 billion of foreign currency debt. The warrants were priced at USD7.50. Another tranche of debt exchange warrants were sold in June, to cover USD2.25 billion of foreign currency debt. The warrants for the second tranche were priced at USD10.50. The warrants would allow holders of foreign currency debt paper (ROP) to convert into peso-denominated bonds in the event of default.

In July, the government raised PHP70 billion in retail treasury bonds (RTB), boosting the government's cash position and replacing some PHP33 billion worth of maturing RTBs in the same month.

Corporate Bonds

Corporate bonds grew 21.94% in the first half of 2008 from end-December. Amid tight credit conditions on international debt markets corporations opted to finance through the peso market. New issues of peso-denominated corporate bonds for the first half of 2008 reached PHP43.1 billion, representing about 17% of total corporate bonds outstanding. Most of these issues were 5–10 year subordinated offerings from banks, as they worked to beef-up their capital base.

PH Size and Composition of Local Currency Bond Market

	2005	2006	Jun-07	2007	Jun-08	
(LCY billion)						
Total	2,236.41	2,312.62	2,297.90	2,392.31	2,541.22	
Government	2,134.15	2,131.70	2,096.48	2,178.79	2,280.85	
Corporate	102.26	180.92	201.42	213.52	260.37	
(USD billion)						
Total	42.13	47.19	49.78	58.02	56.67	
Government	40.20	43.50	45.41	52.84	50.86	
Corporate	1.93	3.69	4.36	5.18	5.81	
	2005	**2006**	**Jun-07**	**2007**	**Jun-08**	
			Y-o-Y		Y-o-Y	YTD
(Growth Rate (%) - LCY terms)						
Total	10.17	3.41	2.84	3.45	10.59	6.22
Government	8.30	(0.11)	(1.98)	2.21	8.79	4.68
Corporate	72.59	76.92	110.87	18.02	29.27	21.94
(Growth Rate (%) - USD terms)						
Total	16.48	12.01	18.37	22.97	13.84	(2.34)
Government	14.50	8.19	12.81	21.50	12.00	(3.75)
Corporate	82.47	91.63	142.71	40.29	33.07	12.11
	2005	**2006**	**Jun-07**	**2007**	**Jun-08**	
(% of GDP)						
Total	41.13	38.34	36.28	35.98	36.26	
Government	39.25	35.34	33.10	32.77	32.55	
Corporate	1.88	3.00	3.18	3.21	3.72	

Sources:

1. For Bonds Outstanding - Bureau of the Treasury for government and Bloomberg LP for corporate.
2. For Exchange Rates – Bloomberg LP.
3. For GDP – CEIC.

Major corporate issues:

In May, Banco de Oro raised PHP10 billion through the issuance of subordinated debt, the bank's second offering of tier 2 notes. Four other banks issued debt paper in the first half—Philippine National Bank, Allied Bank, Landbank and RCBC.

In February, National Food Authority, a government agency completed a PHP8 billion 10-year bond offering.

In August, Ayala Land Inc. raised PHP4 billion worth of five-year fixed rate bonds with a coupon of 8.75%.

Two local firms issued US-denominated debt. In February, First Gen Corporation issued USD260 million of five-year convertible bonds with a coupon of 2.5%; In July, SM Investments Corporation issued USD350 million of five-year bonds at a fixed rate of 6.75%.

Turnover

Government bond turnover fell 13.5% to 0.66 in the first half of the year. Philippine government bonds are less liquid as most investors hold them until maturity.

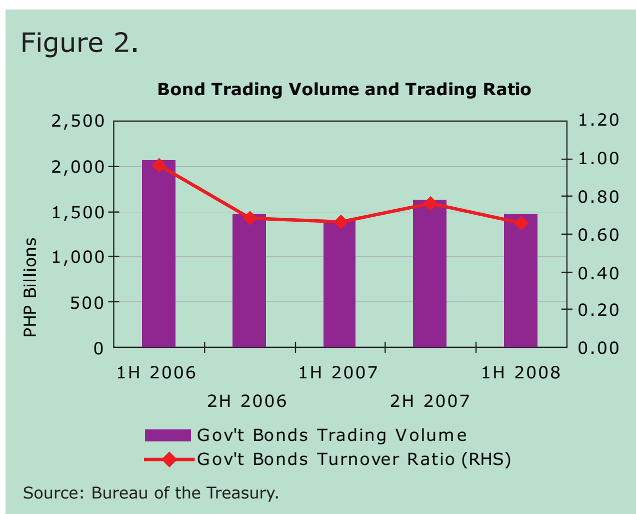
Data for corporate bond turnover is not available.

Institutional and Regulatory Developments

New OTC Rule Comes Into Effect

At the start of the year, the Over-the-Counter (OTC) rule came into full effect and the Securities and Exchange Commission (SEC) granted the Philippine Dealing and Exchange Corp (PDEx) a self-regulating organization status. This allowed its member brokers and dealers to engage in OTC transactions. Only brokers and dealers who are members of a Self Regulatory Organization (SRO) are allowed to engage in secondary market transactions. This

Figure 2.



Source: Bureau of the Treasury.

was met by opposition from the Chamber of Thrift Banks (CTB), citing the high transaction fees charged by PDEx. Despite opposition from the CTB and a government probe (through a House Committee), the SEC advised the CTB to organize into an SRO and be accredited, if it wishes to sell securities to the public.

Treasury Proposes Negotiation with Banks for Bills and Bonds

After failed auctions of government securities in the first two months of the year, the Bureau of Treasury (BTr) proposed rate negotiation for treasury bills and bonds with banks. The BTr also opened a facility through which government-owned or controlled corporations may purchase T-bills and bonds over the counter. But this was met with opposition by bond traders concerned with transparency in the pricing of government paper and the proposal was cancelled.

Treasury bill auctions for short-dated tenors (91-days and 182-days) were dropped from the auction calendar in the second quarter of 2008. The BTr had been unable to compete with the rates offered by the central bank's SDAs. After the BSP adjusted the rate and restricted SDA tenors, the BTr resumed t-bill auctions in the third quarter. For the fourth quarter, the government's scheduled borrowing is PHP61 billion—PHP31 billion from treasury bills, and PHP30 billion from treasury bonds.

BSP Finalizes Withholding Tax, Approves Reclassification of Financial Assets

In August, the BSP issued a new regulation imposing a 20% final withholding tax on overnight reverse repurchase transactions with effect from January of this year. This new regulation makes investments in government securities more attractive compared with parking funds in overnight placements.

In October, the BSP approved a regulation allowing financial institutions to reclassify their financial assets (investments in both bonds and equities) from categories measured at fair value to those measured at amortized cost. The new regulation allows financial institutions to reclassify their debt and equity investments to the following categories—Held for Trading or Available for Sale (Mark to Market) to the Held to Maturity or Unquoted Debt Securities Classified as Loans—until yearend. Reclassifications done before 01 November 2008 may be based on 01 July 2008 Marked–to-Market fair values. Reclassifications done on or after 01 November 2008 shall be based on fair values as of the date of the reclassification. The BSP expects the new regulation to release some liquidity into the system.

Possible Islamic Bond

The government may tap the Middle East market through as much as USD1 billion of sukuk or Islamic bonds to fund the Metro Railway Transit in early 2009. A five-year tenor is expected.

PDEX Inter-Professional Repurchase Agreement Program

In August, the Philippine Dealing and Exchange Corp. (PDEX) soft-launched a repurchase agreement program—limited to dealer participants and qualified investor participants of the exchange—to help support the secondary market for debt securities.

Singapore—2008 Update

Yield Movements

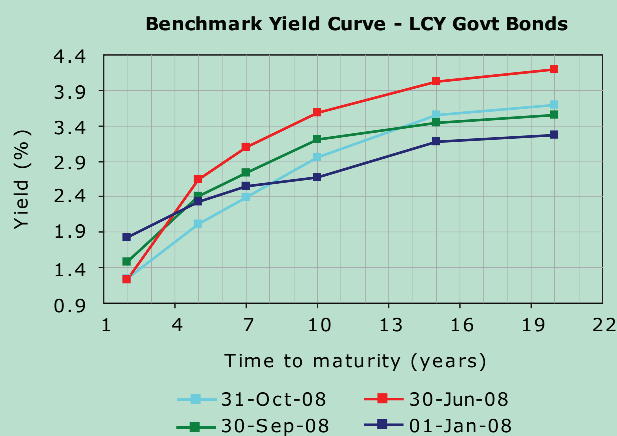
In the first half of 2008, longer-term Singapore government bond yields rose as inflation accelerated. As of June 30, the yield on the Singapore 10-year bond had soared 91 basis points to 3.59%, from 2.68% at the beginning of 2008, and the two-year note yield dropped 59 basis points to 1.23%. Since June, the yield curve has shifted downward in response to global concerns about economic growth and Monetary Authority of Singapore (MAS) measures to add liquidity to the domestic banking system.

The MAS tightened monetary policy in April 2008 to address the sharp rise in inflation, which had held at a 26-year high of 7.5% in April through June, easing to 6.7% in September. The rate move helped push the Singapore dollar to an all-time high at SGD1.3810/USD.

But the central bank reversed course on 10 October 2008, loosening monetary policy as inflation eased and domestic growth slowed. It also shifted its policy stance to zero-percent appreciation of the Singapore dollar nominal effective exchange rate (S$NEER).

The Singapore banking system has remained sound and resilient despite unsettled global financial markets. Nonetheless, the Singapore government took the precaution to provide guarantees to all Singapore dollar and foreign currency deposits of individual and non-bank customers in banks, finance companies, and merchant banks licensed by the MAS. The guarantee is backed by SGD150 billion of the Singapore government reserves and will remain in effect until December 31, 2010. Singapore has also announced that it is participating in the currency swap program with the US Federal Reserve Bank.

Figure 1.



Source: Bloomberg, LP.

Size and Composition

Government bonds

The volume of Singapore government bonds outstanding continued to grow in the first half of 2008, reaching SGD108 billion (USD79.35 billion), up 10.1% since December 2007. In March 2008, the government re-opened its first 20-year Singapore Government Securities (SGS) issuance in February 2007, worth SGD1.3 billion (USD94 million). In 2008, the government has issued a total of SGD5.1 billion (USD3.75 billion) worth of bonds through re-openings. New issues of five-year and one-year bonds were issued in April and in May, respectively.

Corporate bonds

The Singapore corporate bond market grew at a more subdued rate than the government bond market in 1H08. The growth rate in Singapore dollar terms was 4.6%, which was only one-third of the corporate bond growth rate for 2007. Corporate bond issuance reflected a still substantial–although much reduced–volume of property-related debt issuance. There has also been a noted increase in the number of REITs tapping the SGD bond market.

Singapore's CapitaLand issued SGD1.3 billion (USD918 million) of 10-year convertible bonds, the biggest bond issuance for the first half of the year. Banks remained the other main issuers of 3-year and 5-year bonds in the first half of 2008.

Turnover

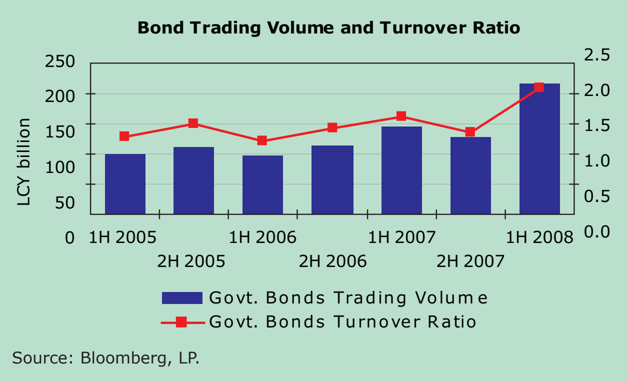
The Singapore government bonds turnover ratio rose 56% to 2.09 for the first half of 2008. Investors welcomed the increased issuance of Singapore t-bills and t-bonds, reflecting the higher turnover for the period. SGS average daily turnover ranged between SGD3 and SGD5 billion for this period, while the range in 2007 was between SGD1 and SGD2.5 billion.

SG Size and Composition of Local Currency Bond Market

	2005	2006	Jun-07	2007	Jun-08	
(LCY billion)						
Total	138.20	152.50	163.50	175.20	188.61	
Government	78.00	85.80	93.20	98.10	108.00	
Corporate	60.20	66.70	70.30	77.10	80.61	
(USD billion)						
Total	83.12	99.39	106.84	121.81	138.58	
Government	46.91	55.92	60.90	68.21	79.35	
Corporate	36.21	43.47	45.94	53.60	59.23	
	2005	2006	Jun-07	2007	Jun-08	
			Y-o-Y		Y-o-Y	YTD
(Growth Rate (%) - LCY terms)						
Total	5.90	10.35	13.92	14.89	15.36	7.66
Government	8.03	10.00	11.88	14.34	15.88	10.09
Corporate	3.26	10.80	16.73	15.59	14.67	4.56
(Growth Rate (%) - USD terms)						
Total	4.00	19.57	17.86	22.56	29.72	13.77
Government	6.10	19.20	15.76	21.98	30.30	16.34
Corporate	1.41	20.06	20.77	23.32	28.94	10.49
	2005	2006	Jun-07	2007	Jun-08	
(% of GDP)						
Total	69.32	70.28	71.50	72.05	74.13	
Government	39.12	39.54	40.76	40.34	42.45	
Corporate	30.19	30.74	30.74	31.71	31.68	

Sources:
1. Monetary Authority of Singapore – local currency bonds outstanding
2. Bloomberg – end-of-period SGD/USD exchange rates
3. CEIC – nominal GDP

Figure 2.



Source: Bloomberg, LP.

Institutional and Regulatory Developments

Government Encourages Islamic Finance

In May, the MAS began to develop a facility for sovereign-rated sukuks to help promote the growth of Islamic finance and to meet the needs of financial institutions conducting Shariah-compliant activities in Singapore. The SGD sukuk instrument will be initially benchmarked against the SGS market so that pricing of the sukuks will be more transparent.

Exchange Admits banks As Clearing Members

In June, the Singapore Exchange (SGX) admitted banks in Singapore as clearing members of its securities market beginning 1 July 2008. Under the new rule, banks no longer need to incorporate a separate company to apply for SGX clearing membership as long as they satisfy SGX's admission criteria. This should streamline the process for trading exchange listed derivative and futures contracts.

Indian Commodoties Bourse Plans Launch of Singapore Exchange

The Operator of India's top commodities bourse, Financial Technologies Group, in July announced plans to launch Singapore Mercantile Exchange next year. A platform for futures and options trading on precious metals, base metals, energy, agricultural commodities, currency pairs, carbon credits, and commodity indices will be available. This could pave the way for commodity linked fixed income market products.

MAS Proposes Changes to Securities and Futures Act

The MAS, in July, also proposed amendments to the Securities and Futures Act and the Financial Advisers Act to improve corporate governance, market conduct, and the liquidity risk management of banks.

Thailand—2008 Update

Yield Movements

Thai government bond yields rose significantly from January to June, reflecting expectations the Bank of Thailand (BoT) would raise short-term interest rates to control inflation. Yield curves rose in June as inflation hit 8.9% (9.2% in July). And the monetary policy committee (MPC) duly responded, raising the 1-day repurchase rate 25 basis points (bp) in July to 3.5% and again in August to 3.75%.

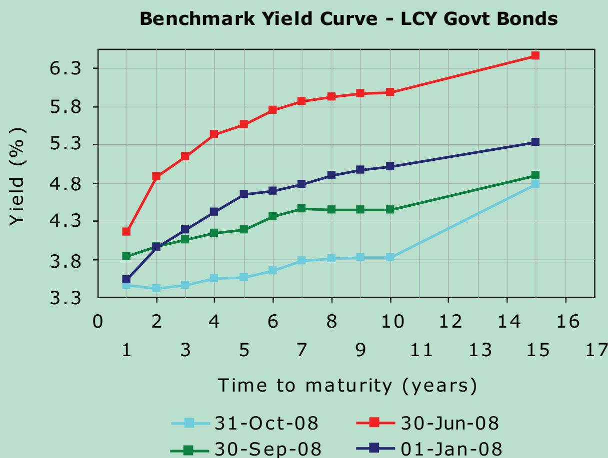
Inflation has since eased (to 6.4% in August and 6% in September) and economic growth has slowed, weighed down by domestic political uncertainties and the impact of the global financial crisis. The MPC has kept the policy rate at 3.75%, and yield curves have come further off the late-June highs.

To cushion the impact of the crisis, the Thai government on 13 October issued a package of economic measures. This followed a THB40 billion stimulus package in March.

Size and Composition

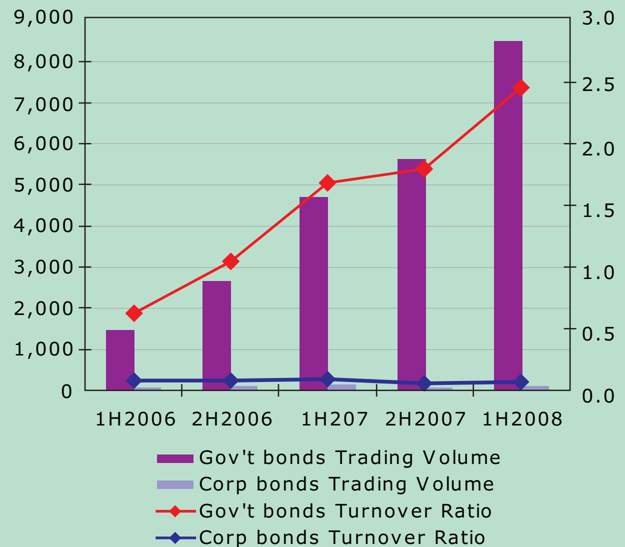
The stock of outstanding government bonds increased 8.27% in 1H08 year-to-date, and 21.3% on a year-on-year basis. After successful launch of government savings bonds last year, the Private Debt Management Office issued THB6 billion of the bonds every month until the end of fiscal year 2008 (in September).

Figure 1.



Source: Bloomberg, LP.

Figure 2.



Source: Bank of Thailand (BOT)

But the large increase in government bonds outstanding is mostly due to the 44.4% year-on-year increase in BoT bonds (11.5% year-to-date). The central bank issued these bonds for funding maturities in the first half of 2008, as well as for ongoing sterilization needs.

The growth rate for corporate bonds outstanding in the first half was a modest 4.41% (year-to-date in June), lower than for the full year 2007. Corporations were reluctant to issue at the higher yields and margins demanded by the market.

Turnover

Government bond market turnover rose to 2.46 at 1H08, from 1.68 at the end of 1H07. Large issues of savings bonds in the fiscal year—primarily held to maturity and generally illiquid—added illiquid instruments to the stock of bonds, and reduced turnover.

But corporate turnover fell, hitting 0.07 in the first half, from 0.09 during 1H07. Compared to the total corporate turnover for 2007 (0.15), total trading value in the corporate sector was down 53%. Slowing corporate bond issuance and higher interest rates, as well as credit concerns, have reduced the incentive for investors to actively trade or switch their portfolios. According to the Thai Bond Market

Table 1. **Size and Composition of Local Currency Bond Market**

	2005	2006	Jun-07	2007	Jun-08	
(LCY billion)						
Total	3,241.05	3,953.27	4,327.39	4,692.16	5,026.66	
Govt	2,227.38	2,643.78	2,953.76	3,307.90	3,581.42	
Corp	1,013.67	1,309.49	1,373.63	1,384.26	1,445.25	
(USD billion)						
Total	79.03	109.57	136.42	158.25	150.23	
Govt	54.31	73.28	93.12	111.56	107.04	
Corp	24.72	36.29	43.30	46.69	43.19	
	2005	2006	Jun-07	2007	Jun-08	
			Y-o-Y		Y-o-Y	YTD
(Growth Rate (%) - LCY terms)						
Total	24.93	21.97	21.33	18.69	16.16	7.13
Govt	29.01	18.69	20.82	25.12	21.25	8.27
Corp	16.82	29.18	22.45	5.71	5.21	4.41
(Growth Rate (%) - USD terms)						
Total	18.51	38.64	45.97	44.43	10.12	-5.07
Govt	22.37	34.91	45.35	52.25	14.94	-4.06
Corp	10.81	46.83	47.31	28.63	-0.26	-7.48
	2005	2006	Jun-07	2007	Jun-08	
(% of GDP)						
Total	45.68	50.49	53.38	55.40	56.44	
Govt	31.39	33.76	36.44	39.06	40.21	
Corp	14.29	16.72	16.95	16.34	16.23	

Source: Bank of Thailand (BoT)
Government bonds include bonds issued by the Government, Treasury bills, Bank of Thailand Bonds and Specialized Organization Bonds. Corporate bonds include, State Enterprise Bonds and Debentures.

Association (ThaiBMA), foreign investors had been net buyers of THB40 billion during the first four months of the year.

Institutional and Regulatory Developments

Government Borrowing Plans In Fiscal 2009

The Public Debt Management Office (PDMO) plans to borrow THB550 billion (with bonds maturing in 3-, 5-, 10-, 15-, 20- and 30-years) from the market in fiscal 2009, which started in October:

- New borrowings will include bond issues of THB249 billion to cover the 2009 budget deficit and THB201.9 billion for debt restructuring. The budget deficit for fiscal 2008 is THB165 billion.
- State enterprise borrowing has been set at THB11 billion.
- Public savings bonds will account for THB60 billion, promissory notes another THB43.19 billion and treasury bills 63.5 billion. The PDMO is considering issuing inflation-linked bonds.

ADB Helps With Capital Markets Plan

The Asian Development Bank is helping the Capital Markets Committee prepare a new capital markets master plan. The focus will be on debt markets and stock market demutualization.

Table 2. **Selected Sectors** (in LCY billion)

	Govt Bonds	T-Bills	Specialized Org.	State Enterprise Bonds	Bank of Thailand Bonds	Federal Gov't Debt	Private Corp (Corp Debentures)	Total
Jun-07	1,687	149	18	450	1,101	2,303.08	923.71	4,327.39
Dec-07	1,760	114	9	450	1,425	2,332.64	934.32	4,692.16
Jun-08	1,843	140	9	473	1,590	2,464.34	972.74	5,026.66
Growth Rate								
	Govt Bonds	**T-Bills**	**Specialized Org.**	**State Enterprise Bonds**	**Bank of Thailand Bonds**	**Federal Gov't Debt**	**Private Corp (Corp Debentures)**	**Total**
YOY	9.28	-6.04	-50.00	5.02	44.43	7.00	5.31	16.16
YTD	4.72	22.81	0.00	5.02	11.53	5.65	4.11	7.13

Source: Bank of Thailand.
Federal Government Debt includes Government Bonds, T-bills, Specialized Orgs. and State Enterprise bonds. Private Corp consists of Corporate debentures issued by private corporations.

Viet Nam—2008 Update

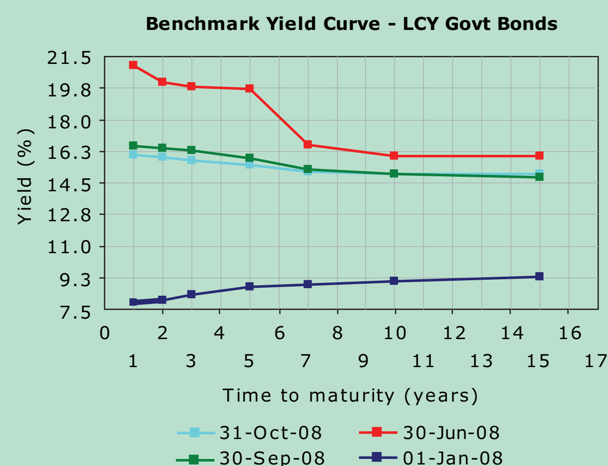
Yield Movements

Government bond yields have risen sharply since the beginning of 2008, after the government took steps to tame its worst inflation in 16 years, including interest rate hikes and heightened reserve requirements through the issue of compulsory government bonds to commercial banks.

On January 30, 2008, the State Bank of Viet Nam (SBV) increased its benchmark interest rates for the first time since December 2005, followed by further rate hikes in May and June, which raised its basic interest rate from 8.25% to 14%; the refinancing rate from 6.5% to 15%; and the discount rate from 4.5% to 13%. In March 2008, the SBV issued 364-day compulsory bonds to 41 commercial banks worth VND20.3 trillion, although the offered rate was raised to 13% from the previous 7.8% offer.

In May, the Viet Nam State Treasury failed for the sixth time in a row, to sell government bonds because bidders sought higher yields. Banks—frequent buyers of government bonds—have been struggling to raise dong funds after the central bank tightened monetary policy. Commercial banks raised long-term deposit interest rates to around 18.5% per year, in an attempt to attract new deposits. With short-term deposit rates at around 17.5%, and persistently high inflation, most depositors shied away from long-term savings.

Figure 1.



Source: Bloomberg, LP.

Government bond yields were up sharply in June from early 2008. The yield on the ten-year bond increased 693 basis points to 16%, as of June 30, while the yield on the benchmark five-year note jumped 1,098 basis points to 19.7%, inverting the yield curve.

But after many months of tightening, and in response to the global credit crisis and prospects for slower growth, the SBV on 20 October 2008 loosened policy: it cut the basic interest rate to 13%, the refinancing rate to 14% and the discount rate to 12%. The central bank has also increased interest rates for compulsory reserves from 5% to 10% and decided to redeem compulsory bonds issued in March 2008 before maturity, in order to increase market liquidity and cushion the impact of the global financial crisis on the economy. The yield curve has fallen significantly since June, but remains slightly inverted.

Size and Composition

Government bonds

The Viet Nam bond market is largely dominated by government issues used to fund large transportation and irrigation projects. For the first half of 2008, the volume of government bonds outstanding continued to grow, reaching VND174.08 trillion (USD10.34 billion), up 31.3% since December 2007. To date, the SBV's 364-day compulsory bonds—with a face value of VND20.3 trillion (USD1.26 billion)—is the biggest issue.

Corporate bonds

The volume of corporate bonds outstanding rose by 8.6% in 2H 2008 amounting to VND26.3 trillion (USD1.56 billion). This is mainly due to Vinpearl Trading and Tourist Joint Stock Company's issuance of VND1 trillion worth of 3-year and 5-year bonds, with coupon rates of 15% and 16% respectively.

Institutional and Regulatory Developments

SBV Widens Dong Band

In June the SBV released Decision 1436 widening the Viet Nam Dong's daily trading band from 1% to 2%, aiming to strengthen its currency, encourage trading, and curb surging inflation.

VN Size and Composition of Local Currency Bond Market

	2005	2006	Jun-07	2007	Jun-08	
(LCY billion)						
Total	68,519.00	79,186.03	114,211.99	156,877.69	200,425.69	
Government	66,819.00	72,281.38	103,439.53	132,619.74	174,076.24	
Corporate	1,700.00	6,904.65	10,772.46	24,257.95	26,349.45	
(USD billion)						
Total	4.30	4.93	7.08	9.79	11.90	
Government	4.20	4.50	6.41	8.28	10.34	
Corporate	0.11	0.43	0.67	1.51	1.56	
	2005	**2006**	**Jun-07**	**2007**	**Jun-08**	
			Y-o-Y		Y-o-Y	YTD
(Growth Rate (%) - LCY terms)						
Total	14.52	15.57	82.30	98.11	75.49	27.76
Government	12.24	8.17	74.16	83.48	68.29	31.26
Corporate	466.67	306.16	230.99	251.33	144.60	8.62
(Growth Rate (%) - USD terms)						
Total	13.47	14.57	80.79	98.60	68.07	21.50
Government	11.22	7.24	72.71	83.93	61.17	24.83
Corporate	461.50	302.65	228.24	252.19	134.26	3.30
	2005	**2006**	**Jun-07**	**2007**	**Jun-08**	
(% of GDP)						
Total	8.18	8.13	10.97	13.72	15.71	
Government	7.97	7.42	9.94	11.60	13.65	
Corporate	0.20	0.71	1.04	2.12	2.07	

Sources:
1. Bloomberg – local currency bonds outstanding and end-of-period VND/USD exchange rates
2. CEIC – nominal GDP

MOF Provides Framework for Bond Trading

In July, the Ministry of Finance issued a regulation providing Hanoi Securities Trading Centre a legal framework to undertake the management of government bond trading.

Rating Agencies Cut Rating

In May and June 2008, Standard & Poor's, Fitch Ratings and Moody's Investors Service cut Viet Nam's sovereign bond rating outlook from stable to negative, due to policy shortcomings in addressing inflation.

About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries substantially reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two thirds of the world's poor. Nearly 1.7 billion people in the region live on $2 or less a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance. In 2007, it approved $10.1 billion of loans, $673 million of grant projects, and technical assistance amounting to $243 million.

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