

Monetary and Capital Markets Department Global Markets Monitoring and Analysis Division

### **Financial Market Update**

Financial stability risks have evolved largely as foreseen in the April 2007 Global Financial Stability Report (GFSR). The accompanying Financial Market Update highlights the rise in credit and market risks, although continued strong macroeconomic performance continues to underpin overall financial stability. Furthermore, systemically-important global financial institutions have been able to strengthen their capital bases during the past few years of strong economic performance.

The clearest area for which risks have risen is credit, where the weakening of credit discipline identified in the last GFSR has resulted in rising difficulties in the U.S. subprime market and leverage loan market. Delinquencies, defaults, and foreclosures have continued to rise, especially in the 2006 vintages of subprime lending. Materialization of the risks is set to continue as rising mortgage rates will translate into higher resets on adjustable-rate mortgages. Evidence of the effects of the previous weakening of credit discipline is also visible in the leveraged loan market associated with leveraged buyout activity. While the degree of leverage has continued to rise, some investors are becoming reticent to accept so-called "covenant lite" loans where creditor protections have been loosened.

The recent recognition of credit risk has begun to translate into higher market risk, notably on products based on U.S. subprime mortgages and leverage loans. Spreads on indices representing the riskiest segment of these products have widened considerably and have caused distress for hedge funds with exposure to these securities. The sizable pipeline of financing for leveraged buyout transactions resulting from muted investor interest could also pose challenges for the banks that are involved in underwriting and syndication, which could add to market pressures.

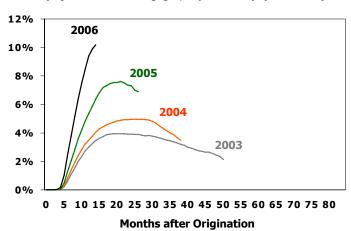
We continue to see improved fundamentals in emerging market countries and positive developments in their local capital markets, although financial vulnerabilities persist in some countries. Banks and corporations in some emerging market countries have tapped foreign capital markets leading to overly rapid borrowing, which is further complicated by their foreign currency exposures.

In sum, risks have increased and credit markets could remain volatile in the period ahead with a further repricing of some credit products. However, so far, our assessment is that this risk is likely to remain largely contained. Importantly, markets are discriminating on the strength of underlying fundamentals, and recent corrections have been concentrated in subprime, leveraged loan and lower quality corporate bonds. The ongoing adjustments in the structured credit and leveraged finance markets should help bolster credit discipline while the capacity of market participants to discriminate according to fundamentals will be important going forward.

Note: The Financial Market Update is an online bulletin that covers developments in both mature and emerging markets. It complements the IMF's Global Financial Stability Report (GFSR), a print publication that is published twice a year. It is produced by the staff of the Monetary and Capital Markets Department (MCM). It reflects MCM's interpretation and analysis of market views and developments, which should not be attributed to the Executive Directors, their national authorities, or the IMF.

### **Rising Credit Risks**

Subprime 60-Day Delinquencies by Mortgage Vintage Year (adjustable rate mortgages, in percent of payments due)



Source: JPMorgan Chase & Co.

There has been substantial credit deterioration in the U.S. subprime mortgage market in more recent vintages, especially 2006 ...

#### **Underwriting Standards in Subprime Home-Purchase Loans**

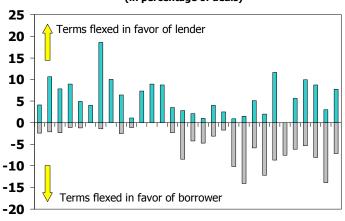
	ARM Share	Interest-Only ARM Share	Low- No- Doc Share	Debt Payments-to- Income Ratio	Average Loan-to- Value Ratio				
2001	73.8%	0.0%	28.5%	39.7	84.04				
2002	80.0%	2.3%	38.6%	40.1	84.42				
2003	80.1%	8.6%	42.8%	40.5	86.09				
2004	89.4%	27.2%	45.2%	41.2	84.86				
2005	93.3%	37.8%	50.7%	41.8	83.24				
2006	91.3%	22.8%	50.8%	42.4	83.35				

Source: Freddie Mac.

... due to a relaxation of credit standards, particularly in issuance of interest-only adjustable rate mortgages and mortgages with little documentation.

## Rising Credit Risks ...

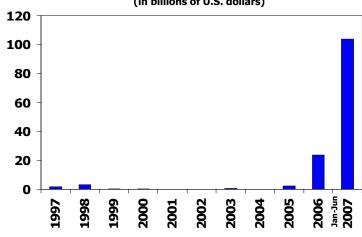
# Flex and Reverse Flex Deals (in percentage of deals)



2000 2001 2002 2003 2004 2005 2006 2007

Source: Standard & Poor's.

#### Volume of 'Covenant-Lite' Loans (in billions of U.S. dollars)



... a sharp increase in the use of lighter loan covenants ...

There has been a parallel

borrowers ...

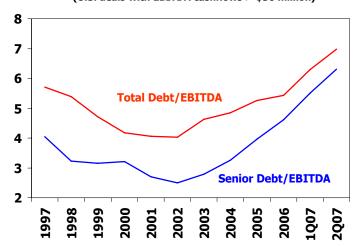
weakening of credit discipline in

corporate credit markets, seen in

the "flexing" of deals in favor of

Source: Standard & Poor's.

# Debt Multiples on Private Equity LBO Deals (U.S. deals with EBITDA cashflows > \$50 million)

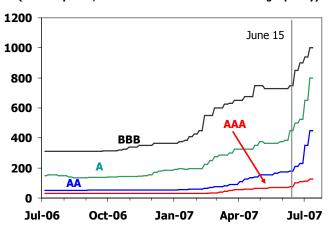


... as well as rising leverage in LBO deals.

Source: Standard & Poor's.

### ... Lead to Credit Market Turbulence

# Primary Market Spreads of Mezzanine CDO Tranches over LIBOR (in basis points, CDOs with collateral of BBB average quality)



Rising credit risk in U.S. subprime mortgages translated into market turbulence when troubles at hedge funds managed by Bear Stearns were revealed on June 15. This led to an accelerated pace of spread widening on collateralized debt obligations (CDOs) backed by lower quality mortgage-related collateral...

Source: JPMorgan Chase & Co.

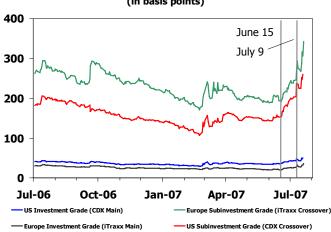
## Cost of Insurance against Default by U.S. Financial Institutions (5-year coverage)



...and to a widening of credit insurance spreads of financial institutions involved in the subprime market. Concerns intensified after ratings agencies began to downgrade subprime mortgage-related securities on July 9.

Note: Annual cost of coverage for \$10 mn face value of senior debt, in thousands Source: Bloomberg L.P.

## Corporate Credit Default Swap Spreads (in basis points)

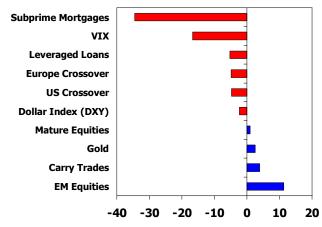


Spreads also widened on corporate securities more broadly.

Source: JPMorgan Chase & Co.

### **Broader Markets Remain Resilient**

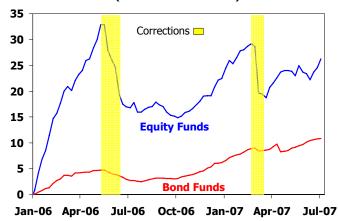
#### Selected Asset Class Returns (In Percent, May 31 – July 19)



Turbulence was mainly confined to credit markets ...

Sources: Bloomberg L.P.; and JPMorgan Chase & Co.

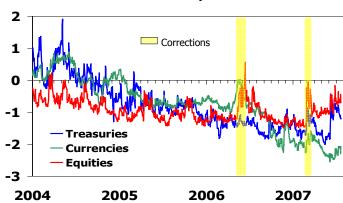
## Cumulative Net Flows to Emerging Market Funds (in billions of U.S. dollars)



... and flows to emerging market mutual funds, traditionally considered among the riskier asset classes, saw little impact.

Source: Emerging Portfolio Fund Research, Inc.

#### **Market Volatility Indices**



long-term averages.

Implied volatility has picked up

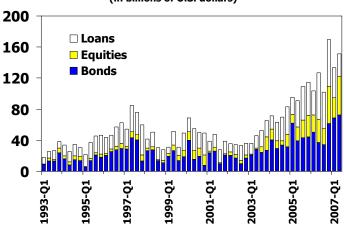
since June, but remains below

Note: Data represent an average z-score of the implied volatility derived from options from stock market indices, interest, and exchange rates. A value of 0 indicates the average implied volatility across asset classes is in line with the period average (from 12/31/98 or where data is available). Values of +/-1 indicate average implied volatility is one standard deviation above or below the period average.

Sources: Bloomberg L.P.; and IMF staff estimates.

### Strong Flows to Emerging Markets – Especially to Eastern Europe

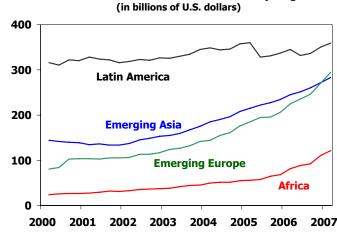




Financing flows to emerging markets have continued to grow...

Source: Dealogic.

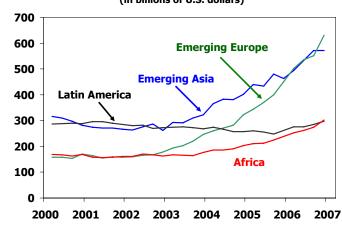
### Issuance of International Securities by Region



... with flows to emerging Europe picking up sharply ...

Source: IMF, International Financial Statistics.

# International Bank Lending by Region (in billions of U.S. dollars)

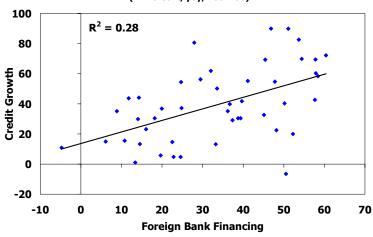


... particularly banking flows.

Source: IMF, International Financial Statistics.

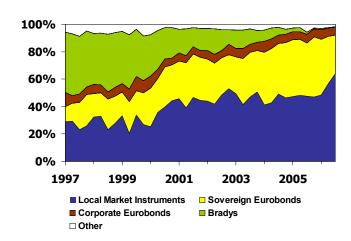
### Strong Flows to Emerging Markets - Especially to Eastern Europe

#### Correlation of Credit Growth with Foreign Bank Financing (In Percent, yoy, 2004-06)



Heavy borrowing by banks helped foster rapid rates of private sector credit growth in some countries in emerging Europe.

#### **Emerging Market Debt Trading Market Share by Instrument**



Trading volume in emerging debt markets continues to shift toward local market instruments.

Source: EMTA.

## **Emerging Market External Financing**

### **Emerging Market External Financing**

		2002	2003	2004	2005	2006	2006			2007						
							1st qtr.	2nd	3rd	4th		2nd qtr.	Apr.	May	Jun.	Year-to- date
	2001							qtr.	qtr.	qtr.						
				•04 •												
GROSS ISSUANCE BY ASSET	162.1	135.6	199.8	286.7	410.0	501.7	103.5	126.7	101.9	169.6	133.3	151.0	44.8	53.6	30.2	284.3
Bonds	89.0 11.2	61.6 16.4	99.8 27.8	135.1 45.4	189.2 78.2	182.9 120.6	50.4 22.3	37.0 30.3	34.1 20.7	61.5 47.4	68.6 26.0	72.7 48.9	18.8 13.8	10.3 16.3	10.9 5.6	141.3 75.0
Equities Loans	61.9	57.6	72.2	106.2	142.5	198.2	30.8	59.5	47.1	60.7	38.6	29.4	12.2	27.1	13.8	68.0
GROSS ISSUANCE BY REGION	162.1	135.6	199.8	286.7	410.0	501.7	103.5	126.7	101.9	169.6	133.3	151.0	44.8	53.6	30.2	284.3
Asia	67.5	53.9	88.8	123.3	151.3	195.3	38.5	47.3	35.5	73.9	38.5	63.3	23.9	22.7	11.7	101.8
Latin America	53.9	33.4	43.3	54.3	85.9	68.7	17.1	15.4	15.8	20.4	32.8	16.8	6.1	4.7	5.3	49.6
Europe, Middle East, Africa	40.8	48.3	67.7	109.1	172.7	237.8	48.0	64.0	50.6	75.2	62.0	70.9	14.8	26.3	13.2	132.9 0.0
AMORTIZATION BY ASSET	147.0	128.4	119.5	128.1	111.2	105.5	22.1	29.6	28.9	25.0	26.2	30.4	9.5	7.4	12.8	56.6
Bonds	59.0	58.9	57.1	69.6	68.7	62.7	13.3	18.9	12.6	17.9	19.7	20.5	6.0	5.5	6.4	40.2
Equities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Loans	88.0	69.5	62.4	58.5	42.6	42.8	8.8	10.7	16.3	7.0	6.5	10.0	3.5	1.9	6.4	16.4
AMORTIZATION BY REGION	147.0	128.4	119.5	128.1	111.2	105.5	22.1	29.6	28.9	25.0	26.2	30.4	9.5	7.4	12.8	56.6
Asia	66.0	55.6	45.5	49.8	39.0	44.1	10.5	11.4	12.2	10.1	10.6	11.5	3.1	4.0	4.1	22.1
Latin America	45.6	40.8	40.4	46.7	38.6	27.3	7.9	7.8	5.4	6.2	9.5	6.6	2.8	1.9	3.5	16.1
Europe, Middle East, Africa	35.3	32.0	33.6	31.6	33.5	34.2	3.7	10.5	11.3	8.7	6.1	12.3	3.6	1.5	5.3	18.4
NET ISSUANCE BY ASSET	15.2	7.3	80.3	158.6	298.7	396.2	81.4	97.1	73.0	144.6	107.1	120.6	35.3	46.2	17.4	227.7
Bonds	30.1	2.7	42.7	65.5	120.6	120.2	37.1	18.1	21.5	43.6	48.9	52.2	12.8	4.8	4.4	101.2
Equities	11.2	16.4	27.8	45.4	78.2	120.6	22.3	30.3	20.7	47.4	26.0	48.9	13.8	16.3	5.6	75.0
Loans	-26.1	-11.8	9.8	47.7	100.0	155.4	22.0	48.8	30.9	53.7	32.1	19.4	8.7	25.2	7.4	51.6
NET ISSUANCE BY REGION	15.2	7.3	80.3	158.6	298.7	396.2	81.4	97.1	73.0	144.6	107.1	120.6	35.3	46.2	17.4	227.7
Asia	1.5	-1.7	43.3	73.5	112.3	151.2	28.0	36.0	23.3	63.8	27.9	51.8	20.8	18.7	7.7	79.7
Latin America	8.3	-7.4	2.9	7.6	47.3	41.4	9.1	7.6	10.4	14.2	23.3	10.2	3.3	2.8	1.9	33.5
Europe, Middle East, Africa	5.5	16.3	34.0	77.4	139.2	203.6	44.3	53.5	39.3	66.5	55.9	58.6	11.2	24.7	7.9	114.5
SECONDARY MARKETS Bonds:																
EMBI Global (spread in bps)	728	725	403	347	237	171	191	218	208	171	170	181	167	155	181	181
Merrill Lynch high yield (spread in bps)	795	871	418	310	371	289	313	335	344	289	285	298	274	246	298	298
Merrill Lynch high grade (spread in bps)	162	184	93	83	92	91	90	97	98	91	95	100	94	94	100	100
US 10 yr. treasury yield (yield in %)	5.05	3.82	4.25	4.22	4.39	4.70	4.85	5.14	4.63	4.70	4.65	5.03	4.62	4.89	5.03	5.03
Equity:																
DOW	-7.1	-16.8	25.0	3.1	-0.6	16.3	3.7	0.4	4.7	6.7	-0.9	8.5	5.7	4.3	-1.6	7.6
NASDAQ	-21.1	-31.5	50.5	8.6	1.4	9.5	6.1	-7.2	4.0	6.9	0.3	7.5	4.3	3.1	0.0	7.8
MSCI Emerging Markets index	-4.9	-8.0	51.2	22.4	30.3	29.2	11.5	-5.1	4.1	17.3	1.8	14.1	4.4	4.6	4.4	16.1
Asia	4.2	-6.2	46.1	12.2	23.5	29.8	9.0	-2.6	6.3	15.0	-0.4	17.7	4.7	6.3	5.7	17.3
Latin America	-4.3	-24.8	66.7	34.8	44.9	39.3	14.9	-4.1	4.4	21.1	5.6	18.7	5.0	10.1	2.6	25.3
EMEA	-20.9	4.7	51.9	35.8	34.9	21.3	14.1	-10.5	-0.1	19.0	3.2	4.1	3.4	-2.4	3.1	7.4

Sources: Bloomberg L.P.; Capital Data; JPMorgan Chase; Morgan Stanley Capital International; and IMF staff estimates.

1/ Issuance data (net of US trust facility issuance) are as of June 30, 2006 close-of-business London Secondary markets data are as of noon, June 30, 2006 cob New York.