Ukraine's Vulnerability to a Financial Crisis

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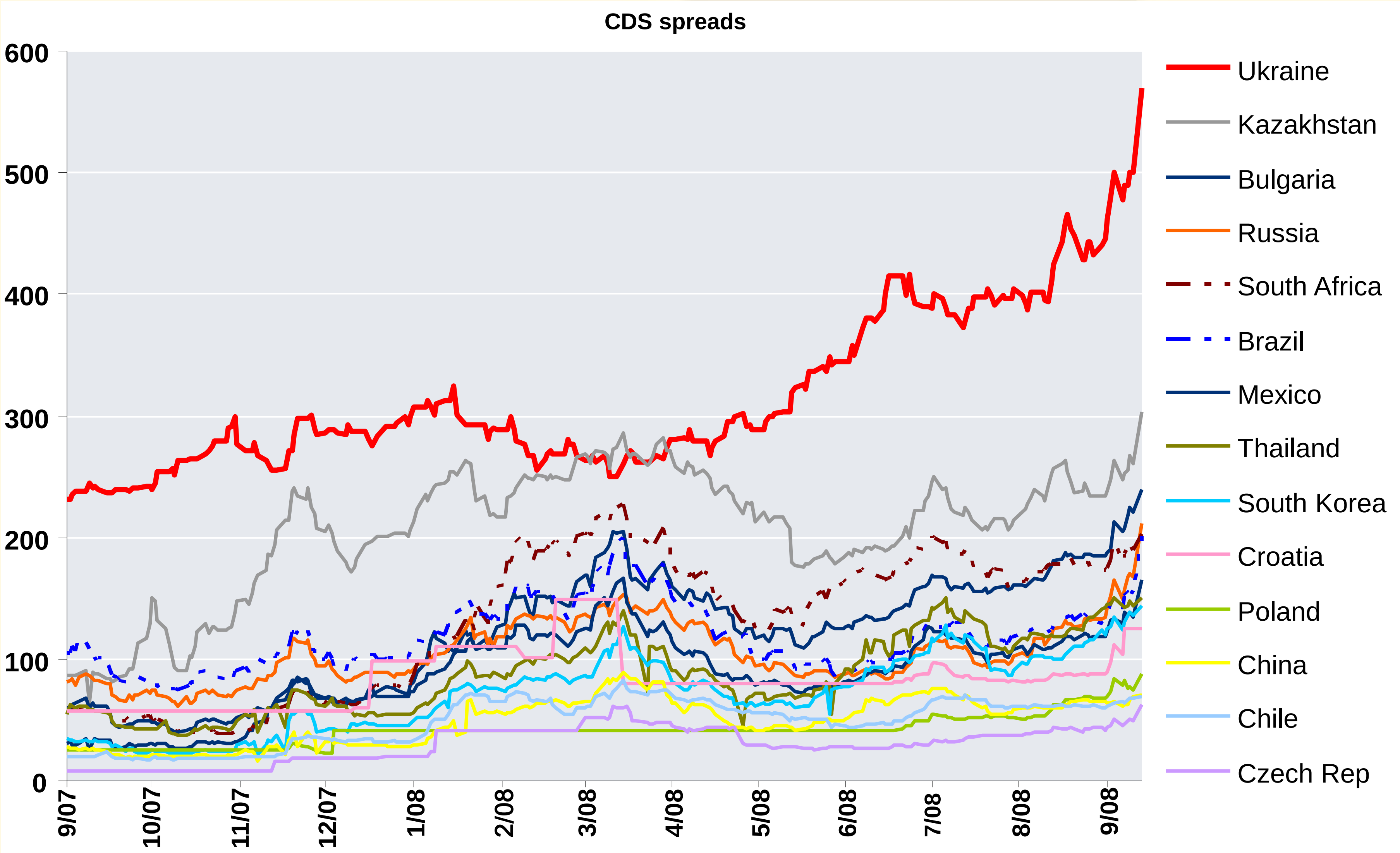
International Measures of Default Risk

- One of the most common indicators used by investors of the risk of default of a bond is the premium on its Credit Default Swaps (CDS).
- A CDS is an insurance-like contract that promises to cover losses on a bond in the event of default by the bond issuer.
- The buyer of the CDS insurance pays a premium over a period of time in return for the coverage of losses if a default happens.
- Created in 1994, the CDS market today amounts to $45 trillion.
- Studies have shown that CDS premiums identify default risks earlier than bond spreads or bond ratings: it is a better leading indicator for defaults.
- For 5-year bonds issued by emerging country governments, currently the CDS premium is from 50 to 200 basis points/year.
- A premium of more that 500 basis points is an indication that investors do expect the bond to be in default. This makes it hard for the issuer to sell new bonds or to renew its existing debt.
- A few days before their collapses, CDS premiums reached 740 basis points for Bear Stearns and 724 basis points for Lehman Brothers.

Credit-Default Swaps (CDS) Spreads for Selected Countries



Opinions of International Experts about Ukraine's Vulnerability

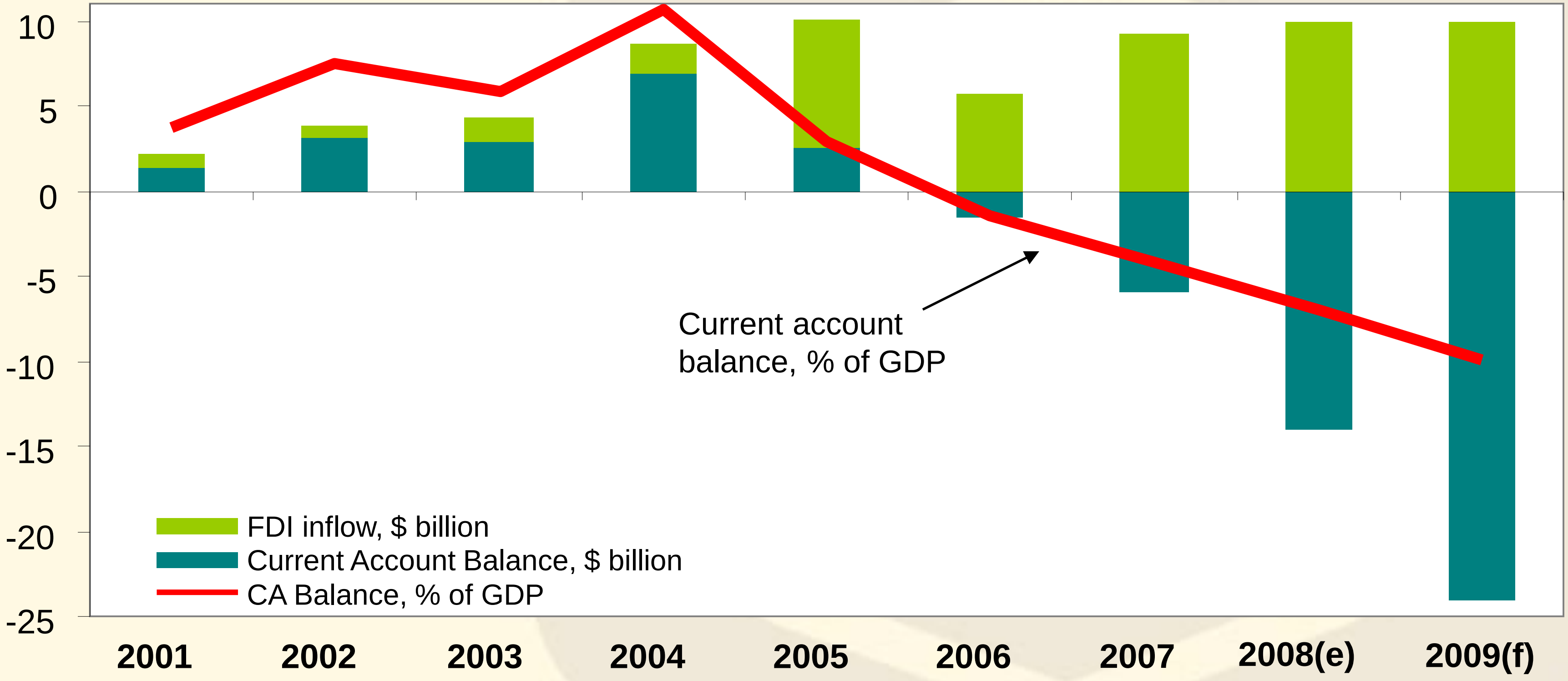
- High Level Citibank Officer: 80% probability that Ukraine will face a financial crisis in 2009.
- High Level J.P.Morgan Officer: 90% probability that Ukraine will face a financial crisis in 2009.
- Goldman Sachs Economists: A financial crisis in Ukraine is imminent.
- Fitch Assessment of Vulnerability to Macroeconomic Volatility: Out of 73 countries analyzed in May 2008, Ukraine was ranked as the second most vulnerable country.
- Standards and Poor's September 2008 Review of Ukraine's Banking sector: Ukraine's banking sector is in high risk and is listed in Category 10, which is the category for the world's weakest and most vulnerable banking sectors (along with Bolivia and Venezuela).
- US Treasury's Quarterly Assessment of Financial Risks, September 2008 (Ukraine was placed among the 10 top financial risks in the world): Ukraine …. risks a sharp balance of payments adjustment or crisis within the next one or two years.

Three Major Reasons Why the Ukrainian Economy is Vulnerable:

- 1. Large Current Account Deficits
- 2. External Debt Burden
- 3. Banking Sector Weaknesses

1. Large Current Account Deficits

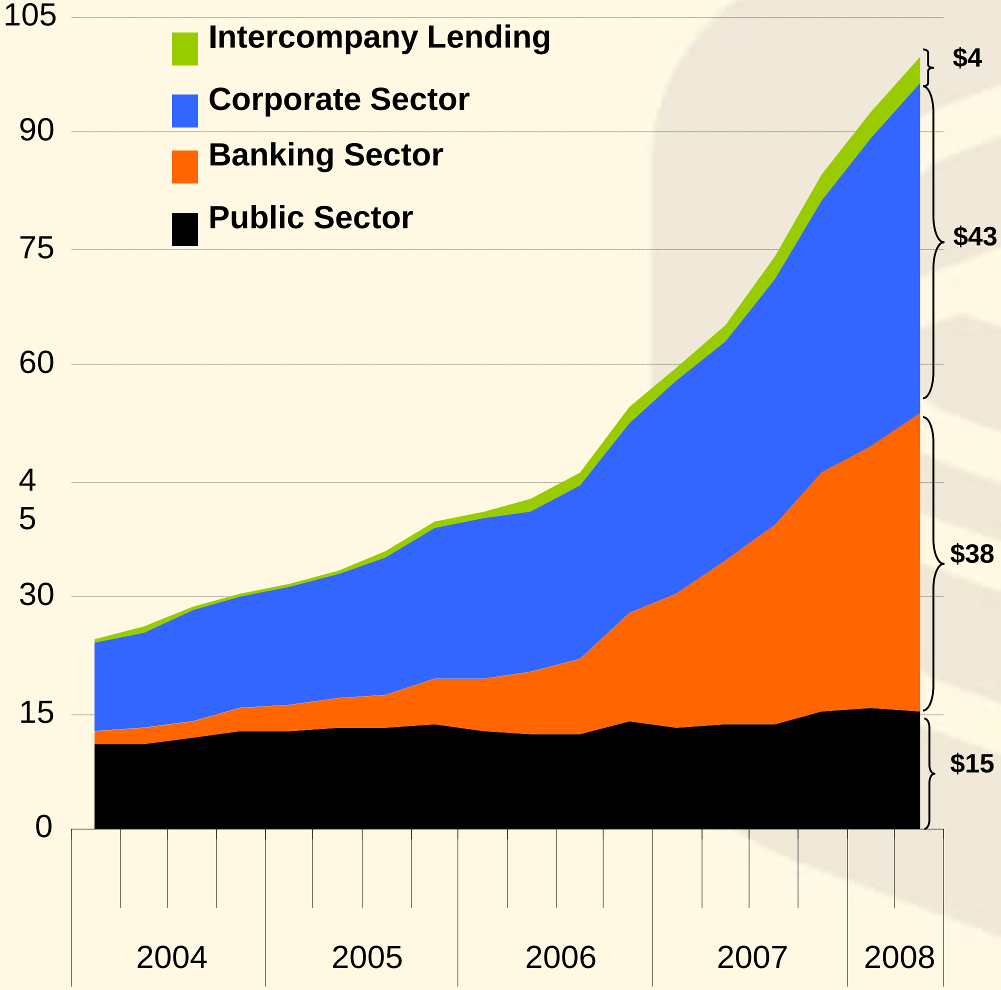
Current Account Balance and FDI Inflow, $ billion, and CA Balance, % of GDP



- In 2009, the current account deficit is likely to widen to $24 billion, which corresponds to 10% of forecasted GDP. This amount will require foreign financing.
- Of this CA gap, about $10 billion reflect the likely increase in imported gas price.

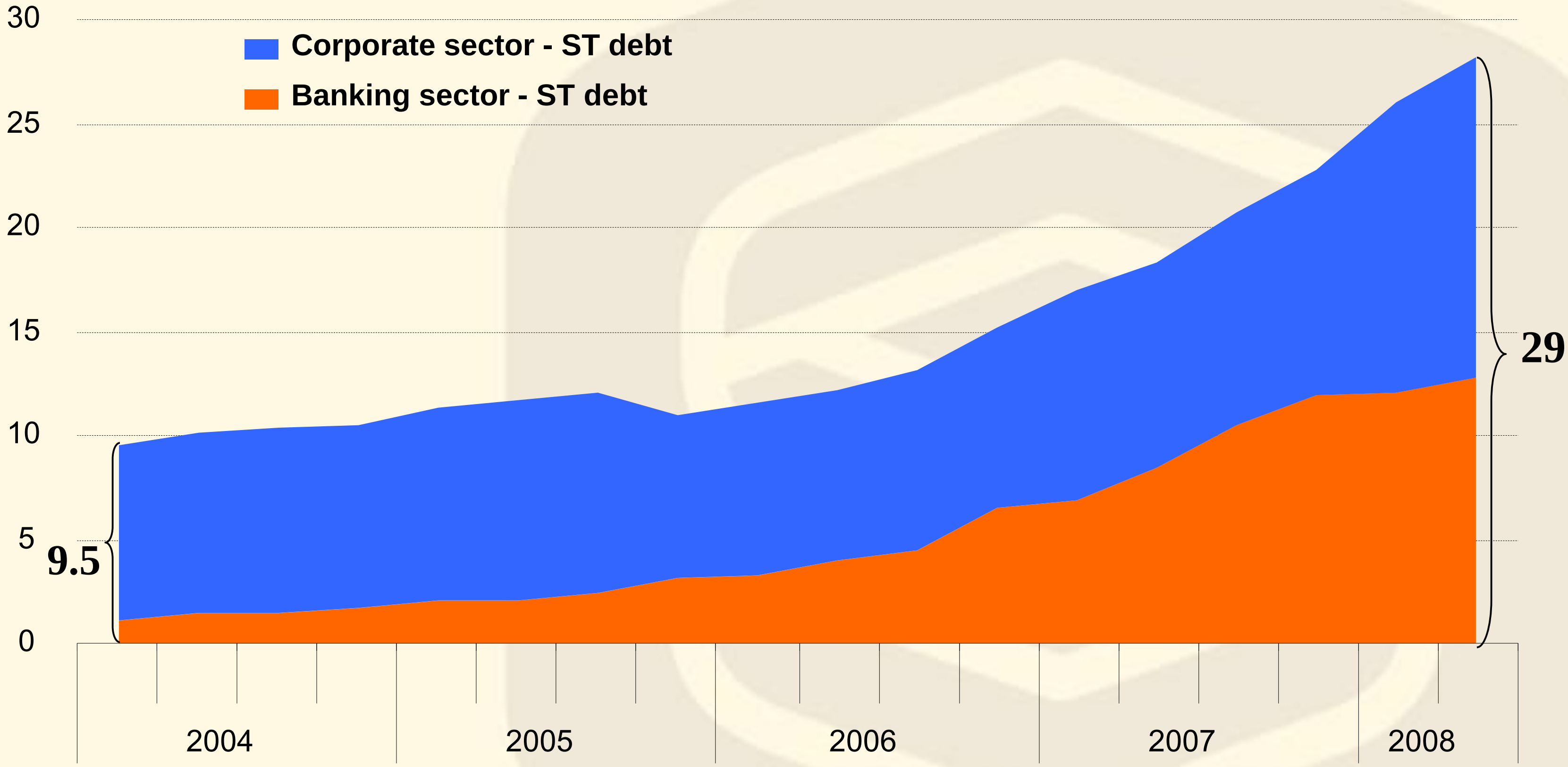
2. External Debt Burden

2a. Gross External Debt, by Sectors, $ Billion



- In the last two years total external debt grew 45% pa to $100 billion.
- External private debt grew to $85 billion, $29 billion of which is short-term (classified by original maturity).
- Ukraine's external debt is now above the median value of countries in similar credit rating categories:
  - At **60%** of GDP, Ukraine's external debt/GDP is above the 40% median value of similarly rated countries.
  - At **120%** of current account receipts, its ratio of external debt/CA receipts is also above the 84% median value for similarly rated countries.

2b. Sort-term Component of Gross External Debt, by Original Maturity Breakdown, $ Billion



- The actual short-term debt may be much higher than the official number of $29 billion, if we include the short-term part of the medium/long-term debt.
- The likely short-term portion of M&LT private debt is estimated at $10-15 billion, which could bring the total short-term debt to $39 - 45 billion.

2c. Ukraine's External Financing Requirements in 2009 (in $ billion)

	2009
Sort-term private debt repayments*	-29
Likely short-term portion of medium-term debt	-10
Public sector external borrowing needs**	-2
Forecasted current account deficit	-24
Likely external financing requirements	-65
Likely FDI inflow	10
Likely external debt requirements	-55

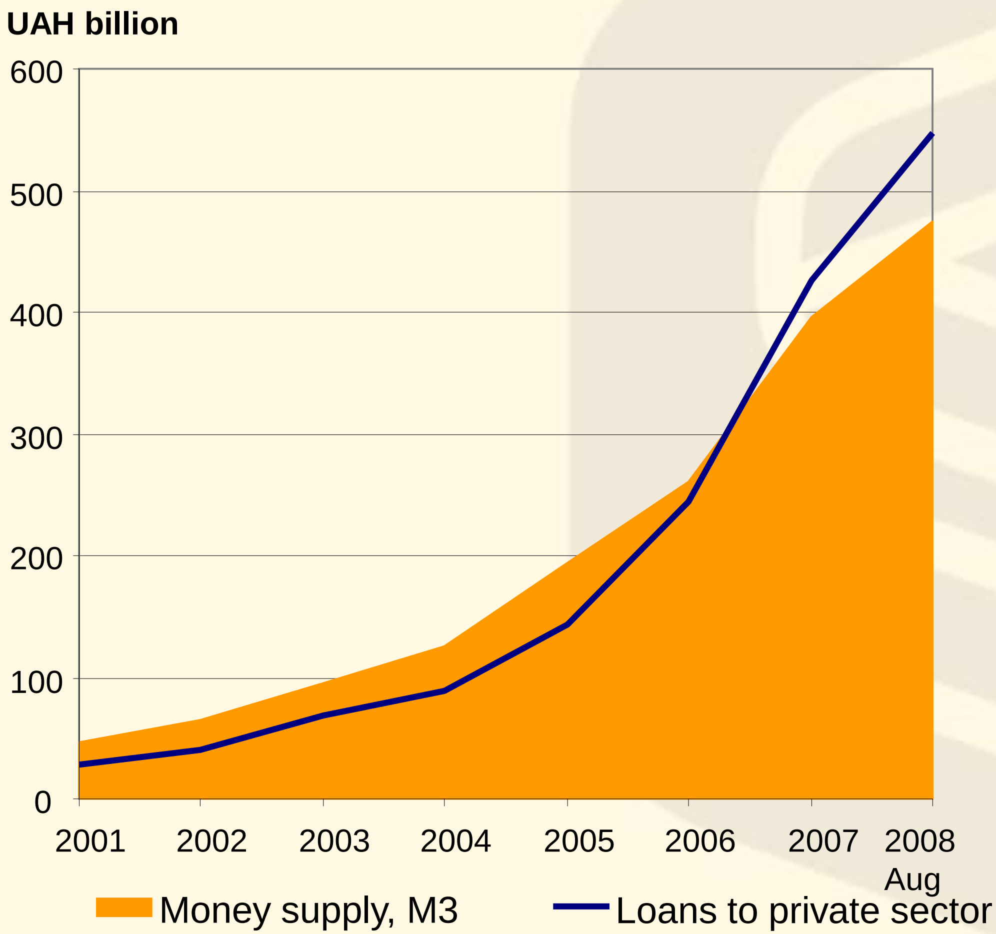
Available NBU reserves	38

** not including the short-term part of M&LT private debt*

*** according to 2009 Draft Budget Law*

3. Banking Sector Weaknesses

3a. Money Supply and Banking Sector Credits, UAH billion, 2001-2008

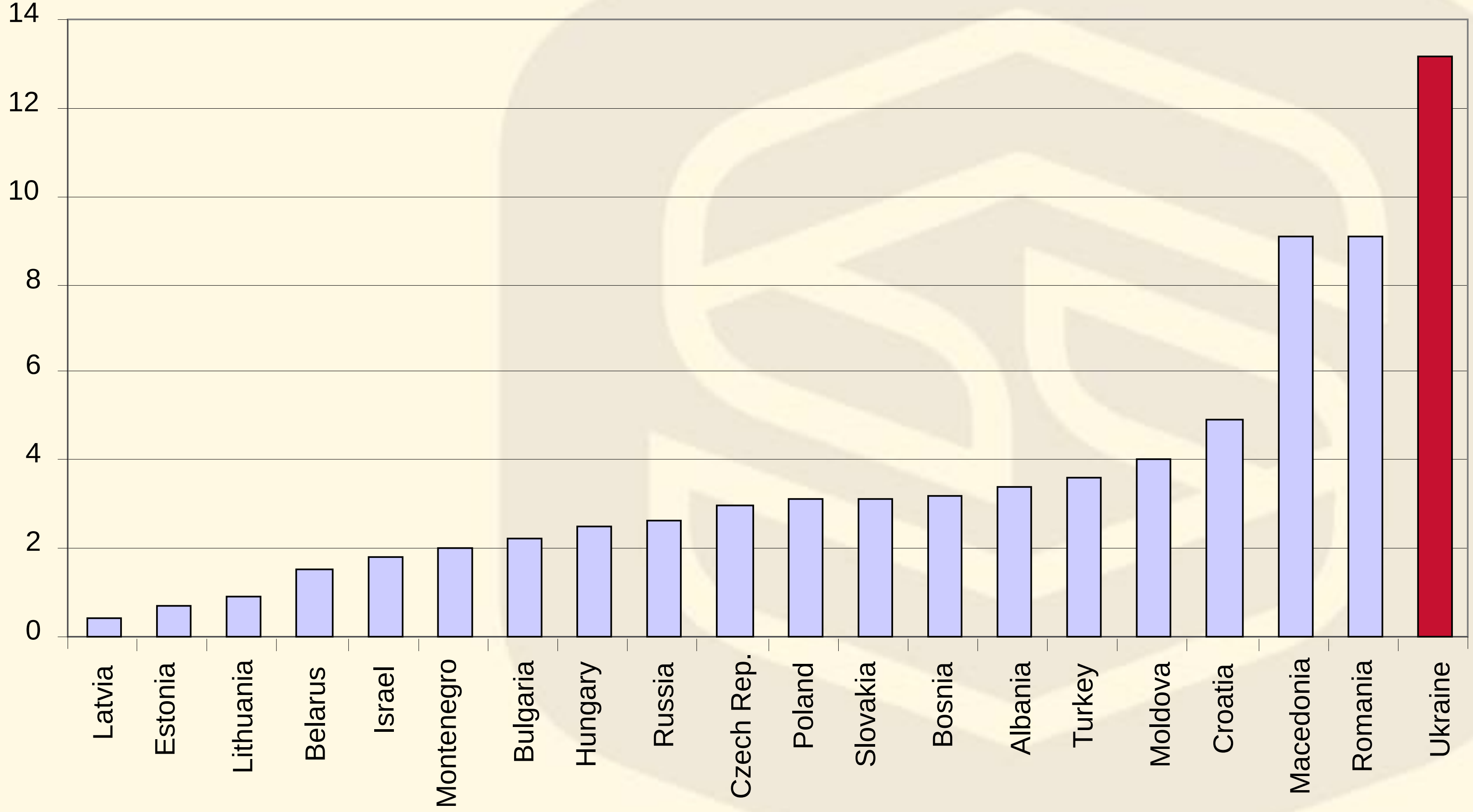


- Many studies in EMs have shown that high rates of credit growth lead to high levels of non-performing assets.
- In Ukraine, bank credit growth has been high over the last 5 years: 60% pa.
- Credit growth was supported by large increases in money supply (M3) of 44% pa and by external debt.

3b. Commercial Banks Credit Quality: Non-Performing Loans

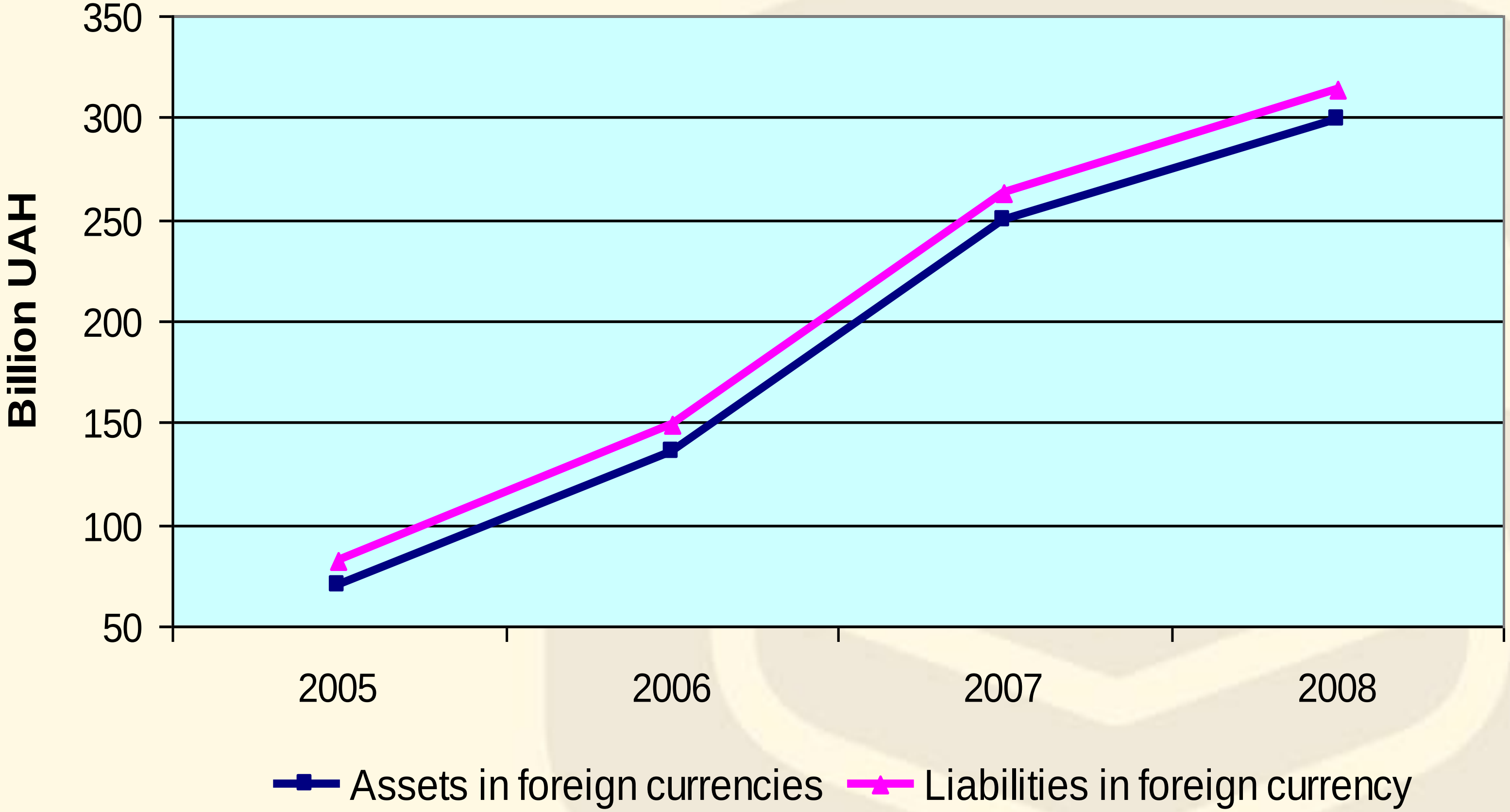
Source: NBU Financial Soundness Indicator Database, NBU Annual Banking Supervision Reports for 2006-2007.

Non-performing Loans in Selected Emerging Markets as % of Total Loans, 2007



Source: IMF Global Financial Stability Report, Jan 2008

3b. Banking Sector Assets & Liabilities in Foreign Exchange



Source: NBU Financial Soundness Indicator Database.

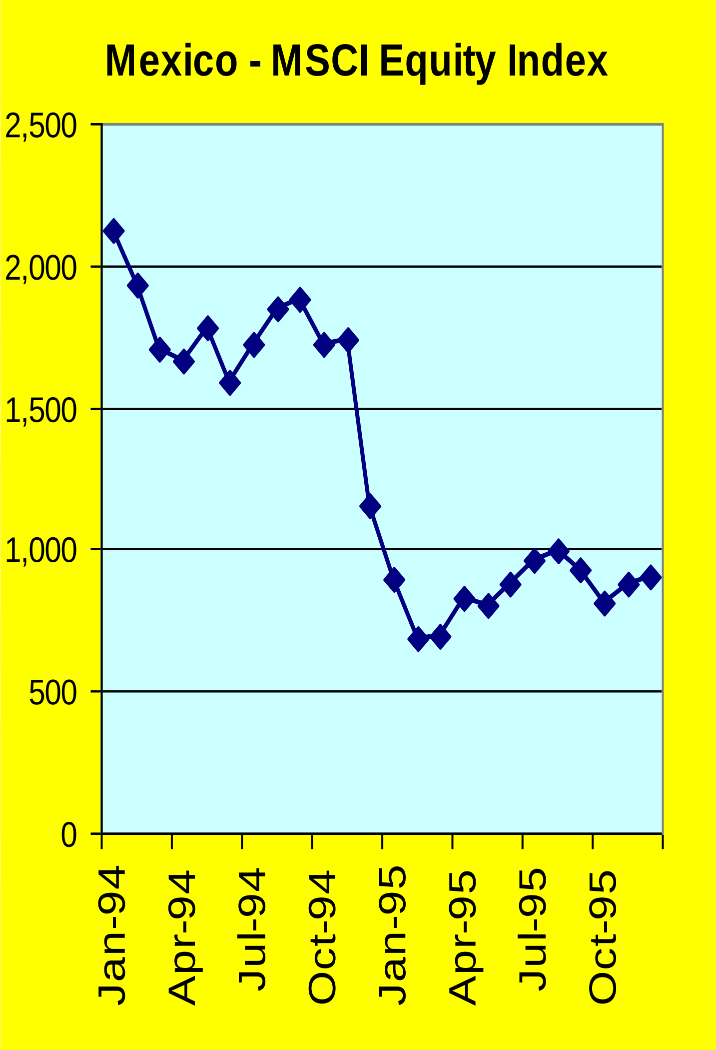
- **Data for year 2008 is as of June 2008**
- **As of mid-2008, Foreign Liabilities represented 51% of Total Liabilities.**

Could there be a financial crisis in Ukraine?

- Ukraine is vulnerable due to a combination of large short term debt repayments, high current account deficits, fast expansion of consumer credits and high foreign currency bank liabilities.
- Reflecting these vulnerabilities, since mid-2007 the premiums for Ukrainian Credit Default Swaps have risen from about 250 basis points to about 550 basis points, which is a larger increase than in other countries.
- Furthermore, there has been a decline in portfolio capital inflows to Ukraine: the inflow of portfolio capital declined from US$3.3 billion in the first half of 2007 to only $350 million in the same period of 2008.
- Partly as a result, the PFTS index has declined by 65% year-to-date (as of September 19, 2008), one of the largest declines in the world.
- These vulnerabilities do not mean that a crisis will occur but only that the probabilities are now substantial.
- Any negative event can trigger a crisis.
- This event could be the realization of a major increase in gas prices, or it could be the failure of a single large bank, or it could be a crisis in a neighboring country.

What Could Happen if there is a Crisis: The Mexican 1994 Financial Crisis

	1993	1994	1995
Exchange Rate (Ps/$)	3.1	5.3	7.6
Intern'l Reserves ($bn)	25	6	17
Consumer Prices (%pa)	10	7	35
Fiscal Deficit (%GDP)	+0.3	-0.7	-0.8
Real GDP Growth	1.9	4.4	-6.2
Current Account ($bn)	-24	-21	-1
(%GDP)	-5.6	-5.9	-0.4
Financial Account ($bn)	34	15	-10
Ext. Pub. Debt($bn)	78	97	100
(%GDP)	18	42	36
Ext. Priv. Debt	46	51	47
(%GDP)	11	18	17



Lessons from the Mexico and East Asian Crisis.

1. The Current Account Deficit is a key variable that should not get out of line, even if this deficit is due to overspending by the private sector and the Government has a balanced fiscal budget.
2. The composition of large capital inflows into a country -- short-term versus direct investments or long term -- is very important for the vulnerability of the country.
3. The use of proceeds of foreign investments (for consumption versus productive investments is important for its sustainability.
4. There is an inherent danger in using fixed or pegged exchange rates as a stabilization device. It is hard to have a "soft-landing"
5. Weaknesses in the domestic banking sector can increase the risk of poor lending that can precipitate the crisis.
6. The possibility of a financial crisis can be foreseen based on major imbalances in economic fundamentals. But it is difficult to predict the timing of the crisis, the depth of it, and its spillover effects.
7. If a country enters a financial crisis, the only way to bring back confidence is with a very strong fiscal, monetary and economic adjustment program, backed up by significant financial resources from abroad.

What Could Happen to Ukraine if there is a Financial Crisis?

1. Foreign capital inflows would disappear.
2. The level of international reserves of the NBU will drop rapidly, depending on the extend of NBU's intervention/support policy.
3. The Hryvnia exchange rate would depreciate dramatically, overshooting by 50% to 100%, depending on the depth of the crises.
4. GDP would decline and may have negative growth.
5. The PFTS and other equity indexes would drop.
6. Asset prices in general (including real estate) will decline.

What can Ukraine Do?

- **Before the Crisis:**
  1. Build Confidence.
  2. Develop an early warning system which may indicate whether the probabilities of a crisis are increasing or fading away.
  3. Monitor closely the amounts of external private sector debt (banking and non-banking) that is maturing each month over the next 12 months and compare it with debt repayment capacities.
- **After the Crisis:**
  1. Agree on Organizational Arrangements to confront the crisis:
     a. Enter a Memoranda of Understanding among government agencies (NBU, Cabinet, Ministry of Finance, Ministry of Economy, etc) to clarify responsibilities and actions to address the crisis.
     b. Enter a Memoranda of Understanding with other Central Banks whose countries have a large banking presence in Ukraine, such as the ECB, Austria, Sweden, etc on matters of coordination, exchange of information and possible financing.

What can Ukraine Do (Cont.)

2. Agree and implement **Emergency Crisis Containment Measures**, which may include a deposit freeze, bank holiday, blanket deposit guarantees, initial liquidity support, lowering reserve requirements.
3. Agree and implement **Crisis Resolution Measures** (to rebuild balance-sheets), including:
    a. Consider the desirability of a Bank Regulatory Forbearance to permit banks to operate with lower capital requirements.
    b. Require all domestic banks to prepare contingency financing plans, identifying the various sources of financing that could be tapped and developing the necessary contingency arrangements to facilitate this financing quickly.
    c. Developing Bank Resolution Options identifying the corrective actions that the government could take for different types of banks (such as closure, merger, restructuring), depending on their size, whether the problem is related to liquidity, related to solvency, related to bad management, capacity to raise equity, etc.

What can Ukraine Do (Cont.)

d. Consider the desirability of creating a government-owned Asset Recovery Company (similar to the RTC of the US) to buy and resolve some of the distressed assets of the banks.

e. Help banks to develop measures to address their distressed loans, including simplified legal and judiciary procedures for foreclosures of delinquent loans.

f. Consider modifications to the current Deposit Insurance to raise confidence and avoid bank runs, while avoiding moral hazards.

g. Adjust fiscal, monetary and foreign exchange rate policies to build confidence that the current issues (CA deficits, short term debt and banking sector weaknesses are addressed).

h. Implement a comprehensive program of economic reforms to improve Ukraine's investment climate and revive growth.

4. Develop possible confidence-enhancements measures such as road-shows, etc. to convince foreign banks and investors that the situation is under control.