Annex VII.2: Commonly used Variables in Financial Stability Analysis

Sectors	Measures	Frequency	What do they measure	Signaling properties
1	2	3	4	5
Real Economy	GDP growth	Q or A	Indicative of the strength of the macro-economy, GDP is key measures especially used in conjunction with measures such as credit expansion, fiscal deficit.	Negative, or low positive values would indicate a slowdown, excessively high values may show unsustainable growth.
	Fiscal position of Government	A, Q or M	Ability of Government to find financing, vulnerability of sovereign debtor to unavailability of financing	High deficit values relative to GDP can mean unsustainable Government indebtedness and vulnerability of the sovereign debtor.
	Inflation	M or A	Rate of increase of various price indices	High levels of inflation would signal structural weakness in the economy and increased levels of indebtedness, potentially leading to a tightening of monetary conditions. Conversely, low levels of inflation could potentially increase the risk appetite in the financial markets.
Corporate sector	Total debt to equity	Q or A	Corporations' leverage	Excessively high levels may signal difficulties in meeting debt obligations.
	Earnings to interest and principal expenses	Q or A	Corporations' ability to meet payment obligations relying on internal resources	Excessively low levels of liquidity may signal inability to meet debt obligations.
	Net foreign exchange exposure to equity	Q or A	Currency mismatch	High levels of this ratio may signal difficulties in the corporate sector arising from adverse currency moves.
	Corporate defaults	Q or A	Insolvencies in the corporate sector	High values can signal future problems in the banking sector, if insufficiently provisioned.
Household sector	Household assets (financial, real estate)	A, Q or M	Assets and debt can be used to compute net household assets	Net household assets and disposable income can measure households' ability to weather (unexpected) economic downturns.
	Household debt	A, Q or M		
	Household income (labour income, savings income)	A, Q or M	Income, consumption and debt services payments can be combined to compute net disposable income	
	Household consumption	A, Q or M		
	Household debt service and principal payments	A, Q or M		

Annex VII.2: Commonly used Variables in Financial Stability Analysis *(Contd.)*

Sectors	Measures	Frequency	What do they measure	Signaling properties
1	2	3	4	5
External Sector	(Real) exchange rate	D	Over/undervaluation of a currency.	Over or undervaluation of currency can trigger a crisis (capital outflows, massive inflows or loss of export competitiveness).
	Foreign exchange reserves	D	Ability of country to resist external shocks.	Reserves below short-term foreign debt, or below three months' worth of exports can signal problems.
	Current account/ capital flows	A, Q or M	Trade position of country.	Significant trade deficits require large capital inflows in order to be financed; this raises sustainability issues about such inflows.
	Maturity/currency mismatches	A, Q or M	Disparity in the currency/ maturity composition of assets and liabilities.	Maturity and Currency mismatches can expose the economy to adverse shocks in case of adverse currency movements or sudden reversals of capital inflows.
Financial Sector	Monetary aggregates	M	Transaction, saving, credit.	Excessive growth can signal inflation pressures.
	(Real) interest rates	D	Cost of credit, ability to attract deposits sustainability of debt.	Real interest rates above a threshold likely to exceed the trend rate of economic growth, making debt/ GDP ratios explosive; negative real rates may mean banks will struggle to attract deposits
	Growth in bank credit bank leverages ratios, NPLs Risk Premia (CDS); credit risk components of 3 month LIBOR - OIS spreads	M Q or A Q or A D	Riskiness of the banking sector.	Very rapid loan growth has often accompanied declining loan standards/ greater risk. Excessively high loan losses, leverage ratios and risk premia can foreshadow a banking crisis. Loan losses/GDP can measure cost of a banking crisis for economy.
	Capital adequacy	Q or A	Banks' capital cushion size to address expected or unexpected losses.	Excessively low levels of this ratio points to potential defaults and can be a forerunner of a banking crisis.
	Liquidity ratio	Q or A	Ratio of banks' readily available short-term resources that can be used to meet short-term obligations.	Excessively low levels of this ratio can lead to a systemic crisis.
	Standalone bank credit ratings	Irregular	Individual strength of banks, after the effect of Government or other guarantees has been taken into account.	Possible coincident indicator of banks' condition, likely to influence their future funding costs.
	Sector/ regional concentration, systemic focus	Q or A	Concentration of diversification of banks' lending strategy	Can proxy for speed of propagation of shocks in the economy.

Annex VII.2: Commonly used Variables in Financial Stability Analysis *(Concld.)*

Sectors	Measures	Frequency	What do they measure	Signaling properties
1	2	3	4	5
Financial markets	Change in Equity Indices	D	Net worth of present value of future cash-flows of firms comprising the index.	Above-trend growth in index, or very high levels of market to book value can be indicative of an equity price bubble.
	Corporate bond spreads	D	Riskiness of debt compared to risk-free instruments.	Spikes in spreads can suggest higher levels of risk, changes in risk appetite, and changes in the incorporation of news into prices by the market.
	Market liquidity (Government bonds, liquidity risk component of 3m LIBOR - OIS spreads)	D	Price attached by the market to the ease with which liquid instruments can be traded.	Spikes in these premia can reflect disruptions in market liquidity.
	Volatility	D	Intensity of price movements on markets Ease of trade on the market.	Low volatility can be indicative of a calm market, but also of failings in the price discovery process. High volatility can mirror a disruption of market liquidity.
	House prices	Q, A or M		House price bubble, consumption boom fuelled by equity withdrawals, potential losses to financial sector in case of downturn in prices.

A : Annual.   Q : Quarterly.   M : Monthly.   D : Daily.

Note : Data available with a high frequency may sometimes be used with a lower frequency of FS monitoring.

Source : Blaise Gadanecz and Kaushik Jayaram (2009), Measures of financial stability – a review, BIS.