

**Third International Seminar on Early Warning and Business Cycle
Indicators
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Data Template of High Frequency Indicators

Annex 1. Data template of High Frequency Indicators

Indicator description	Tier	Periodicity	Methodological guidance*
Set 1 National accounts			
1.1 Quarterly national accounts: Flash GDP estimate	Tier 1	Quarterly	v
1.2 Quarterly national accounts: GDP full release			O
1.2.1 by expenditure	Tier 1	Quarterly	v
1.2.2 by production	Tier 1	Quarterly	
1.2.3 by income	Tier 2	Quarterly	
1.3 Quarterly sector accounts	Tier 3	Quarterly	O
Set 2 Production and turnover			
2.1 Production index for industry, by major division (mining, manufacturing, electricity, water, etc.)	Tier 1	Monthly	v
2.2 Production index for construction	Tier 2	Monthly	x
2.3 Turnover index for retail trade by major division	Tier 2	Monthly	v
2.4 Turnover index for industry by major division	Tier 2	Monthly	x
2.5 Turnover index for other services by major division (excluding financial services and non-commercial services)	Tier 2	Monthly	x
2.6 New orders index for industry by major ISIC division (for those that work on order)	Tier 3	Monthly	x
2.7 New orders index for construction (building permits or housing starts)	Tier 2	Monthly	x
2.8 Commodity production (as relevant at country level data on commodity productions and other indicators of economic activity)	Tier 3	Monthly	x
Agricultural products			
Minerals			
New car registrations/sales			
New commercial vehicle registrations/sales			
Tourist arrivals			
Set 3: Price Indicators			
3.1 Consumer price index	Tier 1	Monthly	v
3.2 Producer price index	Tier 1	Monthly	v

	Indicator description	Tier	Periodicity	Methodological guidance*
3.3	Import price index	Tier 1	Monthly	v
3.4	Export price index	Tier 1	Monthly	v
	Set 4: Labour market indicators			v
4.1	Unemployment	Tier 1	Quarterly	
4.2	Unemployment rate	Tier 1	Quarterly	
4.3	Employment total and by economic activity	Tier 1	Quarterly	
4.4	Hourly wage rate	Tier 2	Quarterly	
4.5	Hours of work	Tier 2	Quarterly	
	Set 5: External sector indicators			v
5.1	Exports and imports (of goods and services)	Tier 1	Monthly	
5.2	International investment position (IIP), specify balances and components	Tier 2	Quarterly	
5.3	Official reserve assets	Tier 1	Monthly	
5.4	External debt (by sector, maturity and foreign currency)	Tier 1	Quarterly	
	Set 6: Financial sector indicators			v
6.1	Central Bank net foreign assets	Tier 1	Monthly	
6.2	Central Bank domestic lending	Tier 1	Monthly	
6.3	Central Bank reserve money	Tier 1	Monthly	
6.4	Depository corporations net foreign assets	Tier 1	Monthly	
6.5	Depository corporations domestic lending	Tier 1	Monthly	
6.6	Depository corporations broad money liabilities	Tier 1	Monthly	
6.7	Other financial corporations balance sheet, assets and liabilities by sector.	Tier 2	Monthly	
6.8	Financial corporate profits	Tier 2	Quarterly	
6.9	Financial corporate debt	Tier 2	Monthly	
6.10	Others as relevant: nonperforming loans of depository corporations, capital adequacy ratios, other financial stability indicators, etc.			
	Set 7: General government sector indicators			v
7.1	Revenue	Tier 1	Monthly	
7.2	Expense	Tier 1	Monthly	
7.3	Net operating balance (= Revenue – Expense)	Tier 1	Monthly	

	Indicator description	Tier	Periodicity	Methodological guidance*
7.4	Net acquisition of non-financial assets	Tier 2	Quarterly	
7.5	Expenditure	Tier 2	Quarterly	
7.6	Net lending/net borrowing (= Revenue - Expenditure)	Tier 2	Quarterly	
7.7	Gross debt	Tier 2	Quarterly	
	Set 8: Household sector indicators			v
8.1	Household disposable income	Tier 2	Quarterly	
8.2	Household saving	Tier 2	Quarterly	
8.3	Household debt	Tier 2	Quarterly	
8.4	Other as relevant: disposable income, debt service and principal payments, household debt, etc.			
	Set 9: Non-financial corporations sector indicators			v
9.1	Non-financial corporate profits	Tier 3	Quarterly	
9.2	Non-financial corporate debt	Tier 3	Quarterly	
9.3	Other as relevant.			
	Set 10: Financial market indicators			v
10.1	Interest rates, as relevant short and long term money and bond market rates	Tier 1	Monthly	
10.2	Exchange rates, as relevant spot and forward markets	Tier 1	Monthly	
10.3	Nominal and real effective exchange rate	Tier 1	Monthly	
10.4	Stock market indicators	Tier 1	Monthly	
10.5	Others as relevant : spreads between lending and deposit rates, highest-lowest interbank rate; etc.			
	Set 11: Real estate market indicators			
11.1	Residential property price index	Tier 2	Quarterly	O
11.2	New house sales	Tier 3	Monthly	X
11.3	Existing house sales	Tier 3	Monthly	X
	Set 12: Economic sentiment			O
12.1	Consumer confidence	Tier 2	Monthly	
12.2	Business confidence	Tier 2	Monthly	
12.3	Composite Business Cycle Indicators			
12.3.1	Leading Indicator	Tier 3	Monthly	

	Indicator description	Tier	Periodicity	Methodological guidance*
12.3.2	Coincident Indicator	Tier 3	Monthly	
12.3.3	Lagging Indicator	Tier 3	Monthly	

* The symbols in this column indicate availability of methodological guidance √; drafting of methodological guidance in progress ○; no guidance available X

Annex II

Detailed Description of the Statistical Dissemination Framework for Economic and Financial Statistics

The statistical dissemination framework identifies 12 major data categories of high frequency statistics which follow logically from the consolidation and rearrangement of the standards of the IMF and European Commission. These standards have been extended for data categories on the household and the non-financial corporate sector, and the financial and real estate markets to address some the immediate data needs arising from the causes of the financial and economic crisis.

The details of the data categories and the underlying high frequency statistics (for higher order aggregates) have been made explicit to facilitate a better understanding of the data categories and demonstrate the analytical usefulness and policy relevance of the data categories. Many data categories include an “other” to facilitate country specific needs.

The summary presentation of the High Frequency Indicator data set in Annex I refer also to periodicity and timeliness of the indicators. They are based on existing dissemination practices and periodicity of the underlying source data.

The description of the each of the main data category and the underlying statistics is presented in turn. The description contains three parts: scope and coverage, analytical framework and statistical framework. The scope and coverage provide a summary of the statistics in scope and the reference to the relevant comprehensive statistical standard while the statistical framework elaborates on the periodicity and timeliness dimensions and the reference to the source data. The analytical framework has been added to highlight the analytical use and policy relevance of the High Frequency Indicator data set for monitoring and reporting of economic and financial developments. These descriptions of the data categories could be further refined to serve a dual purpose of guiding the drafting of commentaries on the observed trends in the data and the promotion of the policy relevance of the statistical dissemination framework.

National accounts

Scope and coverage: This category covers the quarterly national accounts and may include the first accelerated estimate of GDP and its subsequent releases with more breakdown by expenditure components, income and output components by industries and the quarterly institutional sector accounts covering the full sequence of accounts and balance sheets. The first estimate of GDP pertains to the accelerated release of the quarterly GDP as an aggregate measure of production. The quarterly GDP and its breakdown are made available in current prices and volume measures.

Analytical framework: The main analytical purpose of quarterly national accounts time series (QNA) is to offer an overview of recent economic and financial trends that is timelier than annual national accounts and more comprehensive than individual short-term indicators. These time series meet the analytical need to study dynamic relationships between macroeconomic aggregates in a coherent SNA framework. In particular, quarterly national accounts meet the basic data needs for business cycle analysis and for econometric modelling, whereby business

cycle analysis focuses on the identification of turning points through trend-cycle analyses and the analysis of dynamic relationships between economic and financial variables such as coincidences, leads and lags and econometric modelling extends to forecasting of variables in future reference periods.

Short term indicators as we will observe in the next category of high frequency statistics are often available on a monthly basis shortly after the reference period. Although each short term indicators provides an important insight in a specific aspect of the real and financial economy, it is through their integration in a coherent and comprehensive analytical and statistical framework that these indicators are able to provide information on the dynamic relations of cause and effect.

Statistical framework: Quarterly national accounts are built on a foundation of timely and accurate quarterly source data that directly cover a high proportion of the totals. From the first to the subsequent releases of GDP and sector accounts, it is encouraged to maintain the same collection and compilation methodology to minimize unnecessary revisions. The use of econometric methods and indirect behavioural relationships should not be considered as a substitute for data collection and are out of scope of quarterly national accounts compilation.

Production and turnover indicators

Scope and coverage: This category covers indexes of industrial production, industrial new orders, construction, industrial turnover, retail trade and repair turnover, services turnover and production indexes of major commodities (as relevant). Several of the indicators, such as turnover and new orders can be subdivided between domestic and non-domestic. This distinction is extremely useful for analytical purposes as it provides valuable information on the short-term development of distinct markets, especially close to turning points.

Analytical framework: The production and turnover indicators are used for monitoring economic trends. They are generally released with a monthly frequency and cast light on recent developments in production and sales in industry, construction, trade and other services. Whereas the production index provides information on trends in actual monthly production output (irrespective of what happens in sales), turnover is used to assess current trends in sales and thus demand.

Some high frequency statistics, such as new orders, have a forward looking property useful for assessing future movement of the economy through leading indicators.

Also at more disaggregated level of ISIC, the production and turnover indexes render further insights in the dynamic relationship between different industries and types of products these industries produce, such as intermediate, consumption and capital goods.

While each of the production and turnover indicators and their breakdowns provide valuable information on the performance of the real economy, it is with their integration in a comprehensive and coherent framework of the national accounts that the dynamic relation between these high frequency indicators is understood and used in the compilation of macroeconomic statistics, such as the quarterly national accounts.

Statistical framework: Production, turnover and new order indicators are often built on a foundation of timely and accurate monthly source data that directly cover a high proportion of the totals. Ideally, the periodicity of production indexes is monthly with a timeliness of the first estimate at 30 days after the reference period. With these indexes being an important input for the GDP first estimate, the acceleration of the GDP estimate depends critically on the acceleration of the release of the production indexes.

Prices

Scope and coverage: The consumer price index (CPI) is deliberately focused on household consumption of goods and services. Practices differ whether the imputed rents for the flows of housing services provided by owner-occupied dwellings is included in the overall index. The index provides a general measure of changes in prices of consumer goods and services acquired, used or purchased by household. The operational target for most CPIs is to measure the change over time in the total value of some specified basket of consumption goods and services purchased or acquired by households in some specified period of time.

The producer price index (PPI) may include all domestic goods- and service-producing establishments. Traditionally, the PPI has been compiled as a measure of price change for the goods producing sectors of the domestic economy. These include agriculture, forestry, and fishing; mining; manufacturing; and public utilities. The services sectors that are in scope for a PPI vary across countries. Many countries are interested in creating a corporate services price index. This restricts coverage to business services, including professional services, finance, insurance, real estate, accommodation and food, information, communications, and the transportation of goods. A more expansive definition could include all services transactions that are in intermediate demand.

The producer price indices can refer to indices related to inputs or outputs of the production process. The PPI measures for outputs pertain to the average change over time in the selling prices received by domestic producers for their output. The prices included in the PPI are from the first commercial transaction for many products and some services. these are often called 'factory gate prices' The PPI measures for inputs pertain to the average change over time in the purchasers' prices paid by domestic producers for their intermediate inputs, which can be differentiated between the domestic products and imported products..

The import price index (IPI) is an economic indicator that measures change in the prices of goods and materials imported. This index can be completed by the export price index that measures change in the prices of goods and materials exported.

Analytical framework: The CPI is an important economic indicator of price changes. The index is used in many ways by the government, businesses, and society in general. The index can affect interest rates, tax allowances, wages, state benefits, pensions, maintenance, contracts and many other payments. It also shows the impact of inflation on family budgets. The index is also used as one of the key variables for monetary policy in defining price stability and targeting an inflation rate.

The PPI is used in monitoring and measuring inflation at different stages of production. Moreover, many detailed PPIs are used in price variation clauses in trading contracts, or for internal current cost accounting. Some PPIs are compiled for stocks and fixed assets held by various industries. These PPIs assist company accountants to revalue assets from historic to replacement cost terms. The producer prices index for corporate services is a relatively new development and provides a reliable means of measuring and monitoring inflation for business-to-business services.

Statistical framework: In many countries, both the all item CPI and PPI as an aggregate are prepared on a monthly basis and released within a short period after the reference month. These indexes can be presented as year-to-year changes, month-to-month, as annual indices and annual change rates.

Some countries prepare accelerated first estimates for the CPI based on early price information relating to the reference month. The first estimation procedure combines historical information with partial information on price developments in the most recent months to give a total index for all items without further breakdown.

Labour market indicators

Scope and coverage: This data category contains unemployment rate, employment and labour cost index. The employment statistics can refer to the number of persons employed but may be approximated on a temporary basis by using the number of employees. The main difference between the number of persons employed and the number of employees results from the number of unpaid persons employed who are included in the first indicator but not in the second. The number of persons employed is defined as the total number of persons who work in the enterprise (factory, shop, office, etc.) as well as persons who work outside the unit who belong to it and are paid by it. It includes persons absent for a short period and also those on strike, but not those absent for an indefinite period. It also includes part-time workers who are regarded as such by the laws of the country concerned and who are on the payroll, as well as seasonal workers, apprentices and home workers on the payroll. The number of persons employed excludes manpower supplied to the unit by other enterprises, persons carrying out repair and maintenance work in the observation unit on behalf of other enterprises, as well as those on compulsory military service.

The cost pressure arising from the employed labour is measured through Labour Cost Index (LCI). The data covered in the LCI relate to total average labour costs based on the cost categories compensation of employees and mixed income, and employers' social security contributions, and taxes paid minus subsidies received by the employer on labour.

Increasing the labour market developments are monitored through additional indicators such as job vacancies.

Analytical framework: Labour market data comprise a key set of indicators for the assessment of the cyclical situation and for macroeconomic and social policy making. Both the employment and labour cost indices play an essential role in the compilation of key indicators for the analysis of long-term economic equilibria and the movements around it, such as the NAIRU (non

accelerating inflation rate of unemployment) and Phillips curve (the relationship between inflation and unemployment).

Unemployment as an indicator is a lagging indicator in the business cycle of economic activity, which could be further broken down in structural and short-term unemployed. It is closely watched because the indicator signals the build up of fiscal pressures in the near and long term.

Statistical framework: Employment data is broken down by sex and age. Data may be presented in thousand of persons and by rate (unemployment rate). Moreover percentage changes to show the evolution of this aggregate are presented. Data is disseminated on a monthly basis either non-seasonally or seasonally adjusted.

The labour cost index is disseminated on a quarterly basis. It is broken down by cost items and by economic activity. Preferably, the data is computed on the basis of the chained Laspeyres formula and presented against a reference year. Data maybe provided both in nominal and real terms and in percentage changes.

External sector indicators

Scope and coverage: The monitoring of the transactions and positions held vis-a-vis the rest of the world is guided by the international accounts represented by the balance and payments and the international investment position.

The balance of payments is a statistical statement that summarizes transactions between residents and nonresidents during a period. It consists of the goods and services account, the primary income account, the secondary income account, the capital account, and the financial account. The international investment position (IIP) is a statement that shows at a point in time the value of financial assets of residents of an economy and the liabilities of residents of an economy to nonresidents.

These two comprehensive statements are complemented by more detailed account of transactions and positions in official international reserves and external debt

Analytical framework: The international accounts provide an integrated framework for the analysis of an economy's international relationships for monitoring its international economic and financial performance, exchange rate policy, reserves and external debt management. With the emerging interconnected product and financial markets, the timely monitoring and reporting of the real and financial transactions and positions with sufficient detail by counterpart sector, foreign currency and maturity composition have become indispensable tools in assessing the external vulnerability at the national and global level.

On the current account of the balance of payments, the components and their summary measures are of critical importance for the monitoring of exports and imports of goods and services and the returns on the movement of labor and financial resources through the measurement of remittances, interest, dividend and reinvested earnings. Together with the official flows of international assistance through grants, the trends of these flows provide a timely monitor of the transmission mechanisms and vulnerabilities for the global product, labor and capital markets.

The understanding of the financial transmission mechanisms and vulnerabilities are determined by the assets and liabilities of the international investment position either presented in a financial instruments split like monetary gold, currency and deposits, debt securities, loans, etc. or by functional categories like direct investment, portfolio investment, financial derivatives, other investment and reserve assets. Tracking direct investment relationships assists in understanding the developments and exposures in production, trade and finance through external control and influence. In contrast to direct investors, portfolio investors typically have fewer roles in the decision-making of the enterprise with potentially important implications for future flows, and for the volatility of the price and volume of positions. Portfolio investment differs from other investment in that it provides a direct way to access financial markets, and so can provide liquidity and flexibility. It is associated with financial markets, and with associated service providers such as exchanges, dealers, and regulators. The nature of financial derivatives as instruments, through which risk is traded in its own right in financial markets, sets them apart from other types of investment. The monitoring of the details for the international reserve assets have the distinct motive to meet balance of payments financing needs and ability to undertake market interventions to influence the exchange rate.

By consolidating the financial liabilities except for shares, other equity and financial derivatives, gross external debt renders a summary measure of external exposure to outstanding amount of actual liabilities that require payment(s) of principal and/or interest. For analytical purposes, the external debt is reported for public and publicly guaranteed debt and private debt by original short-term and long-term maturity and by remaining-maturity. The latter elaboration provides an indication when payments will fall due, and therefore of potential liquidity risks facing the economy.

Particularly important is the debt schedule of payments with further attention for those payments due in the near term. A debt-service payment schedule projects payments on the outstanding gross external debt position at the reference date. This schedule assists in the assessment of liquidity risk from bunching of payments regardless of the original maturity of the debt instruments. Early warning of such bunching might allow countervailing action to be taken.

The monitoring of merchandise trade data serves as yet another real time tracking category for the external trade in terms of the cross border physical movement of the goods. As such another frequent and more detailed indicator of developments in the current account of the balance of payments.

Statistical framework: The quarterly release of balance of payments with a timeliness of one quarter after the reference period is encouraged. For the international investment position also a quarterly release is preferred with a timeliness of one quarter after the reference period. For countries with less developed statistical system, these recommendations might not be met but they should be encouraged to pursue a periodicity on annual basis within a release 6 to 9 months after the reference period.

The official reserve assets and the template on international reserves can follow monthly periodicity with a timeliness of one month after the reference period because of the availability of

monthly source data from the central bank survey. Both the periodicity and timeliness of the official reserve assets and the template on international reserves can be increased to weeks for those countries that compile and report the central bank data at higher frequency.

With respect to the external debt data category, the dissemination of quarterly data with a one-quarter lag, covering four sectors (general government, monetary authorities, the banking sector, and other) becomes feasible with the improved monitoring of debt. Furthermore, for analytical purposes these quarterly data are to be disaggregated by original maturity—short- and long-term—by financial instrument and by private and public and publicly guaranteed debt.

Progressively countries disseminate supplementary information on future debt-service payments, in which the principal and interest components are separately identified, for instance twice yearly for the first four quarters and the following two semesters ahead, with a lag of one quarter. The data could be further broken down into sector—general government, monetary authorities, the banking sector, and other sectors. The dissemination of a domestic/foreign currency breakdown of external debt with quarterly periodicity and timeliness is also encouraged.

Total merchandise imports and total merchandise export data be disseminated within the monthly periodicity and timeliness. Dissemination of disaggregated components of imports and those of exports by major categories is encouraged, even with a slightly longer lag if needed.

Financial sector indicators

Scope and coverage: The financial sector is described by the monetary and financial statistics. The monetary statistics monitor the positions and transactions of the financial and non-financial assets and liabilities of an economy's financial corporate sector. For the dissemination of high frequency statistics, its most detailed presentation in sector balance sheet is consolidated in a survey presentation whereby the balance sheets of the central bank, other depository corporations and other financial corporations are combined and assets and liabilities aggregated to obtain meaningful monetary aggregates for the money base and broad money.

Financial statistics consist of sectoral balance sheets of all sectors of the economy with a comprehensive set of stock and flow data on the financial assets and liabilities of all sectors of an economy. The financial statistics are organized and presented in a format designed to show financial flows among the sectors of an economy and corresponding financial asset and liability positions.

The framework for monetary statistics includes the central bank survey, the depository corporations survey and the financial corporations survey. The framework classifies all financial corporations that issue liabilities included in the national definition of broad money as depository corporations and recommends the compilation of a depository corporations sectors showing, in a balance sheet format, broad-money liabilities of the depository corporations and the asset counterparts to those liabilities.

The consolidated presentation of the financial corporations sector survey provides the stock and flow data for analyzing claims on and liabilities to all other sectors of the economy and nonresidents, at the level of the entire financial corporations sector. In particular, the financial corporations survey shows a comprehensive measure of credit extended by financial corporations to other sectors. Credit measures may cover all or only a subset of financial assets that constitute forms of credit.

Analytical framework: For many countries, the depository corporations survey will constitute the principal set of monetary aggregates for macroeconomic policy related to money and credit. These monetary aggregates define the balance sheet identity with the financial liabilities of the components of national definition of broad money matching the financial assets that determine domestic credit and the net foreign assets.

The depository corporations survey aggregates the central bank survey with the survey of other depository corporations whereby the central bank survey determined the monetary base held in the form of central bank's liabilities in the form of national currency and reserve deposits held at the central bank. The monetary base is a critical monetary aggregate for monetary policy because its changes usually lead to increases in money and credit that are larger than the changes in the monetary base.

Credit measures may cover all or only a subset of financial assets that constitute forms of credit. Narrow credit measures cover claims in the form of loans, securities other than shares, and trade credit and advances. Such measures exclude deposits, shares and other equity, financial derivatives, claims on life insurance corporations and pension funds in the form of insurance technical reserves, and other accounts receivable that are not part of trade credit.

Credit measures that are important for the formulation and implementation of monetary and other macroeconomic policy are the central bank credit and the central government credit. Central bank credit may be extended to (i) provide liquidity to fund ongoing operations of other depository corporations, (ii) enable other depository corporations to respond to seasonal credit demand, (iii) influence national financial conditions and the amount of broad money, or (4) provide emergency assistance. Central governments supply credit to financial corporations by extending loans or by providing deposits that are intended to be used for credit expansion by the financial corporations. Governments also often provide credit to non financial sectors to foster public policy goals such as development of specific industries or regions or to provide emergency aid. Credit from governmental units is often granted at subsidized (i.e., below-market) interest rates. Comprehensive measures of government credit include lending by the central government and other levels of government

The analytical benefit of the financial statistics is the understanding of the interrelations between the financial corporate sub-sectors and between the financial sector and the other sectors of the economy and the non-residents. Data on loans and capital market instruments such as securities show the extent to which countries use the financial institutions and capital markets to obtain funds to finance economic activity. The data offer means for assessing the relative importance of various types of financing and for monitoring the changes in the sources of financing over time. The data indicate the sources of funds to financial corporate sector and other sectors. Forms of financial-asset accumulation, deposits, pension and life-insurance reserves, securities, and the

like, are also identified. Financial statistics provide a means for examining the contribution of domestic and foreign sources of financing to a country's current expenditures, capital formation and investments in financial instruments. Policymakers use financial statistics to analyze economic and financial developments within countries and to compare economic and financial development among countries. For example, financial statistics are an important input to the balance sheet approach to analyzing a country's vulnerability to external or internal shocks. The financial account shows the flow of funds from net saving sectors to net borrowing sectors, channelled through intermediation in the financial sector or, to a lesser extent, through direct lending between the non financial sectors.

Statistical framework: Most countries have longstanding experience with the compilation and dissemination of balance-sheet (stock) data for the central bank and other depository corporations on a monthly basis. Some countries presently compile and report balance-sheet data for some or all categories of other financial corporations on a quarterly or annual basis or, for more advanced countries, on a monthly basis. These practices are the basis for the periodicity and timeliness dimensions identified for dissemination on a monthly basis for the central bank and other depository corporations.

Countries may experience difficulties with the development of quarterly data reporting for other financial corporations on a timely basis, given that insurance corporations, pension funds, and financial auxiliaries often report only annual data and only with lengthy reporting lags. Such data are often reported to supervisory authorities or other government agencies that have to be involved with the reporting of source data for monetary or financial statistics. For these countries, quarterly data reporting for the other financial corporations may need to be developed over the medium term, possibly entailing the establishment of direct reporting of data from other financial corporations to the compilers of the monetary statistics. Compilation of the financial statistics on a quarterly basis is applicable to countries that already have quarterly data for the current account and capital account of their national accounts statistics, or are currently working on migration from annual to quarterly national accounts statistics.

Government sector indicators

Scope and coverage: For the government sector indicators, general government operations are in-scope. In its most comprehensive statistical framework for government finance statistics, the indicators cover central, state or provincial and local government. It might be further extended with public enterprises to constitute the public sector. The statistics relate to revenue, expenditure, balance, and where relevant/feasible, domestic (with a bank/non-bank breakdown) and foreign financing.

For more frequent and timely indicators on the fiscal overview of general government operations, central government operations are used. This covers budgetary accounts and other central government units (social security and extra-budgetary units and accounts) only.

With the availability of data on central government operations on a monthly basis, most countries are encouraged to meet the monthly periodicity and timeliness. For government debt of the central government, quarterly dissemination dimensions are recommended when source data are not made available earlier.

Analytical framework: The government finance statistics framework is designed to provide statistics that enable policymakers and analysts to study developments in the financial operations, financial position, and liquidity situation of the general government sector or the public sector in a consistent and systematic manner. The framework can be used to analyze the operations of a specific level of government and transactions between levels of government as well as the entire general government or public sector. One method used in the framework to produce summary information on the overall performance and financial position of the general government or public sector is through the use of a set of balancing items, such as the net operating balance, primary operating balance, net lending/borrowing, government deficit/surplus, and the change in net worth. These balancing items measured on accrual principles are complemented by the cash surplus/deficit as a summary measure of the government operations measured on a cash basis.

Net operating balance, primary operating balance, net lending/borrowing and government deficit/surplus are summary measures of the ongoing sustainability of government operations. Net lending/borrowing is a summary measure indicating the extent to which government is either putting financial resources at the disposal of other sectors in the economy or utilizing the financial resources generated by other sectors. Government deficit/surplus is an interesting measure because it differs from the net lending/borrowing for those transactions recognized and classified as transactions in assets and liabilities for public policy purposes such as purchases of equity or provisions of loans. These latter financial transactions have become increasingly relevant in the fiscal policy responses of the government during the present crisis

While the aforementioned mentioned balances as analytical summary statistics are obtained through the recording of flows and stocks on an accrual basis, information on the sources and uses of cash is important for assessing the liquidity of the general government sector. The summary measure for liquidity is obtained from the cash balance: cash surplus/deficit. This summary measure shows the total amount of cash inflows from current operations and net cash outflows from transactions in non financial assets. These summary measures based on the transactions of the governments should be complemented by summary statistics based on the stock of financial liabilities and assets.

Statistical framework: Increasingly fiscal data are required at higher frequency than annually or quarterly to obtain the ability to detect early on, issues of solvency and liquidity and other analytical perspectives on fiscal operations and positions. The business sector and the monetary authority benefit from an early release of this fiscal stance to anticipate potential fiscal policy shocks. Countries are meeting these demand for fiscal data by disseminating monthly summary measures of budget balances for central government operations and quarterly central government debt statistics. Others have extended the scope to quarterly general government accounts with a 30 days delay.

Household sector indicators

Scope and coverage: This data category contains statistics on total disposable income, total debt, debt-services and principal payments and other statistics as relevant like defaults on home mortgages, credit card debt and car loans.

Analytical framework: With the household consumer being identified as one of the major drivers of growth, the development of household disposable income as a determinant of provide household consumption as become an important variable in socio-economic policy meeting. Also this income variable determined the present and future capacity to meet debt service payments against outstanding debt. With a significant amount of household debt determined by house mortgages, consumer credit and car loans are specific early warning signal about the present capacity to pay to meet the debt payments.

Statistical framework: The measure of household disposable income at national level has to be obtained from household surveys that are representative for the nation. The frequency of these source data has to meet the measurement of this income at quarterly periodicity. Total debt can in part be obtained from depository surveys which have a traditionally a monthly or quarterly frequency. These surveys have to be extended to other financial corporations if a large share of credit has been extended by those institutions.

Non financial sector indicators

Scope and coverage: This data category contains statistics on total operating income before tax, total debt, debt service and principal payments and other statistics as relevant such net foreign exchange exposure, number of applications for protections from creditors.

Analytical framework: Total operating income before tax is a measure of profitability of the corporate sector that can be obtained from administrative and survey data. This and other profitability indicators can assess the vulnerability and sustainability of the corporate sector in meeting their debt obligations. Further breakdown of the debt by foreign currency show the exposure to currency risks. The number of applications for protection from creditors is an early warning signal for a deterioration of the quality of the outstanding liabilities in the capital market.

Statistical framework: The frequency and coverage of the source data from surveys and administrative data for the corporate sector should be aligned with the periodicity and timeliness of the indicators. Increasingly with the use of administrative data, the segment of “large” corporations could be representatively covered. The surveys of the financial sector in combination with the external debt systems should cover the domestic and external debt and its debt servicing.

Financial market indicators

Scope and coverage: This data category contains interest rates, exchange rates, nominal and real effective exchange rate, stock market index, stock market capitalization, long term government bond rate and other indicators as relevant such as spreads between interest rates. Whether the countries are able to report on those statistics depends on whether the markets for those rates exist.

The interest rates refer the different types of interest rate as relevant such as the monthly averages of day-to-day money market interest rates of national series or the monthly averages for the 3-month interest rates of national series. Other representative interest rate might be the monthly average of the bond yields at maturities of three and six-month treasury bills.

The exchange rates refer to spot market and forward exchange rates for major currencies with respect to the national currency (bilateral exchange rates) based on monthly average and end-month rates for a range of currencies. Nominal and real effective exchange rates are calculated as average trade-weighted effective rates. For the real effective rate, consumer prices are used as deflator.

The stock market index refers to the monthly average indices for national major stock markets and the stock market capitalization refers to end-month position expressed in national currency.

Long-term government bond rate is defined as long-term interest rate calculated as the monthly average of central government bond yields with around 10 years' residual maturity.

Central bank interest rates are key reference rates set by national central banks as the policy rate at which the central bank lends to other depository corporations.

Spreads between interest rates are the difference in percentage points between interest earned and interest paid, lending and borrowing rates, or the differences between a lending rate and a yield of a bond rate, e.g. overnight lending rate and the long term government bond rate.

Analytical framework: The analysis of interest rates and the spreads between interest rates are used to develop yield curves which provide early warning signals through their forward looking property upon which the central bank and government determine their macroeconomic policies. More often than not the yield curve is upward sloping, and thus the interest rate spread is positive, meaning that yields increase as time to maturity increases. This shape of the yield curve demonstrate the higher yield on longer-term bonds explained by the compensation for investors for greater exposure to the risk of changes in future interest rates. Occasionally the yield curve becomes downward-sloping or inverted, and thus the interest rate spread is negative. This inverted relationship occurs if investors anticipate a recession in the near future. This anticipation will lead them to sell their short-term bonds and buy longer-term bonds to carry them through the recession. The sell off of short-term bonds will lower their price, and thus raise their yields, while the buying-up of long-term bonds will raise their price and thus lower their yield. If these two effects are sufficiently strong, the interest rate spread can invert, or become negative.

The exchange rate movements are near term signals of international competitiveness which are closely guarded by the monetary authorities. They are in a position to use their foreign exchange reserves to influence the market price through either buying or selling foreign currency. The effective exchange rate is an indicator to understand international competitiveness in terms of the foreign exchange rates of major trading partners that cannot be understood by examining only individual exchange rates.

The stock market index and market capitalization are important real time tracking indicators of the overall health of the economy. Its movement is indicative of the expected future profitability of the listed companies in return to their investments and innovations. Deviations from trend developments are to be monitored carefully because the second round effect of the value fluctuations might have considerable impact on macroeconomic stability of production, consumption and accumulation.

Statistical framework: The periodicity and timeliness of most of the financial markets indicators are available on a daily basis from commercial resources. It is recommended that monthly averages or month-end measures are prepared and released quickly after the reference month.

Real estate market indicators

Scope and coverage: This data category contains house sales, building permits and residential property price index, commercial real estate price index and other indicators such as residential real estate loans, commercial real estate loans and home foreclosures, as relevant.

The building permits as an indicator refers to either number of dwellings or useful floor area in m². The objective of the number of dwelling building permit index is to signal the future development of construction activity in terms of unit numbers, while the objective of the useful floor area building permit index is to show the future development of construction activity in terms of volume.

The residential property and commercial real estate price index are only developed for a limited set of countries. These indicators pertain to underlying price data such as transaction prices, appraisal values, judgments by market experts, offer prices, the geographical coverage (urban areas or major cities) and types of dwellings (new , existing dwellings), etc.

The house sales indicator comprises the number of residential dwellings sold as well as the transaction values

Other indicators are relevant such as on loans and advances on property loans obtainable from the depository and financial corporations surveys and home foreclosures.

Analytical framework: A building permit is an authorization to commence work on a construction project and signals the final stage before construction begins. This indicator signals expected performance of the construction sector's activity in the near future. It is noted that this indicator should be used with caution because the construction based on those permits might be delayed or the permits might remain unused or are withdrawn. In most cases, the data is not adjusted for the withdrawal of permits. Moreover, double counting may occur if the same construction project remains idle and reinitiated with the issuance of a new permit since the pervious permit has expired.

With the housing market and the property markets being identified as one of the major causes of macroeconomic and financial instability, the demand for these indicators have intensified. The property price indices aim to reflect changes in prices and, therefore, correct for the different

characteristics property have over time. The transaction values reflect the expenditure on purchasing a residential or commercial property.

Statistical framework: Building permits statistics to quality as a high frequency statistics are recommended to be available on a quarterly basis with a recommended timeliness of one quarter after the reference period. Residential and commercial price indexes, property transaction data, in number and value, for house sales have a similar quarterly periodicity and timeliness to assess the dynamics of housing market activities.

Economic sentiments

Scope and coverage: This data category contains consumer confidence and business confidence indicators.

Analytical framework: Business and consumer surveys provide essential information for economic surveillance, short term forecasting and economic research. Moreover, they are widely used to detect turning points in the economic cycle.

Statistical framework: The business confidence indicators are based on business surveys which can cover a single economic activity like manufacturing or with a broader sector coverage including construction, retail trade and financial services. The consumer confidence surveys are based on household surveys. Nearly all the questions are of a qualitative nature. Answers obtained from the surveys are aggregated in the form of “balances”. Balances are constructed as the difference between the percentages of respondents giving positive and negative replies. The balance series are then used to build composite indicators. Based on the frequency of the survey, the indicators can be produced on a monthly or quarterly frequency.

By way of illustration, business surveys contain main questions with reference to an assessment of recent trends in production, of the current levels of order books and stocks, as well as expectations about production, selling prices and employment. The consumer survey collects information on households’ spending and savings intentions, and to assess their perception of the factors influencing these decisions.