United Nations Economic and Social Commission for Western Asia

Technical Advisory Group on Economic Statistics (TAGES) in the Arab region
8-10 November 2016, Beirut Lebanon

PROPOSED CORE SET OF ECONOMIC INDICATORS FOR THE ARAB COUNTRIES

ESCWA prepared a publication\(^1\) on short-term economic indicators compiled monthly or quarterly and proposed core list of short term statistics for the Arab Countries. In the same publication, a number of economic indicators required for effective analyses of longer-term changes in national economies have been also proposed. These indicators are compiled less frequently, i.e. annually, 5-yearly or on an ad hoc basis. The inclusion of these indicators, listed below in table 1, introduces a longer term element into the Core Set of short-term indicators and includes series such as purchasing power parities, productivity, economy structure statistics, income and wealth, and statistics on natural resources and the environment. These indicators are derived from the UNESCAP publication Proposed Core Set of Economic Statistics for Asia and the Pacific. The scope, analytical framework and statistical framework for each indicator are provided as well.

Implementation of the proposed Core Set comprising both short-term and other economic indicators needs to be prioritised by each ESCWA member country on the basis of an effective strategic planning process that encompasses the entire national statistical system (NSS), and not just the national statistical organisation (NSO). These planning processes allow for the phased introduction of new economic indicators and/or improvements to existing indicators by overcoming institutional and technical statistical barriers.

A. PROSPECTS FOR THEIR USE IN THE ARAB REGION

The issues that impact on the use of the proposed Core Set of Economic Statistics by users in the Arab region have been discussed at numerous meetings, seminars and workshops organized by the ESCWA Secretariat over the last four years, especially those including the participation of key users in Government. The following outline reflects common themes that were raised at these meetings, many of which were reiterated at the High Level Meeting and Regional Seminar on the Implementation of 2008 SNA and Supporting Statistics in the Arab Region, held in Amman in June 2013.

Prospects for expanding the use of the Core Set indicators outlined below fall into two broad categories. This section covers demand side issues, which are primarily institutional. Supply side issues that centre on data quality and its dimensions was addressed in the publication.

Prospects for the use of the Core Set indicators depend largely on:

Whether or not decision makers make systematic and on-going use of statistics for the planning, monitoring and evaluation of economic (and social) policies. The Qatar NSDS notes the importance of statistics for decision-making (a culture of evidence-based policymaking and monitoring) needs to be promoted”\(^2\).

\(^1\) E/ESCWA/SD/2013/10 Study on Selected Methodological Issue in Economic Statistics: Short-Term Economic Indicators for The Arab Region

Whether sufficient funds are allocated by Government for the production of indicators that meet user needs. Insufficient funding and a high dependence on donor support, which can fluctuate widely from year to year, has a negative effect on data quality as a result of poor statistical infrastructure, lack of sufficient statistical personnel and an inadequate skill base.

Enhancing prospects for increased use of the proposed Core Set of Economic Statistics in the Arab region entails resolving a wide range of institutional issues raised by both producers and users of official statistics at meetings in recent years. These include:

Increasing the visibility of the NSS and obtaining more political support for the provision of adequate funding to improve the quality of statistics through more effective advocacy within key ministries of Government. Strong political support is also necessary for the provision of an effective legislative framework, as well as financial and human resources and capacity building;

Improving collaboration between producers of statistics and data users, for example, by improving the latter’s knowledge of and expertise in the use of official statistics. Improved collaboration with users also entails providing opportunities for their input on issues related to both the strategic evolution of the NSS and the development of new specific indicators or the revision of existing series. Such dialogue with users can take place within ongoing statistical advisory committees (which include experts from Government, central banks and representatives of the private sector), or on an ad hoc basis;

The Improving coordination between different data producing agencies within the NSS to improve the quality of statistics, in particular their coherence, and to enable access to administrative data of appropriate quality;

Improvements in these and other institutional areas are more likely when undertaken within the framework of a strategic planning process, such as an effective NSDS.

<table>
<thead>
<tr>
<th>Series for Core Economic indicator</th>
<th>Core Economic indicator Detail</th>
<th>Frequency</th>
<th>Current international guideline/ recommendation [AR – signifies availability in Arabic] Links to complete documents available below in References</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Economy structure statistics</td>
<td>Industry value-added by component series, needed to benchmark GDP;</td>
<td>5-yearly or at regular intervals</td>
<td>Periodic industry censuses / surveys provide the detailed structural data needed for a wide range of economic statistical outputs, including: Industry value-added by component series needed to benchmark GDP; Supply-Use</td>
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<tr>
<td>Supply-Use Tables and Industry / product weights for producer price indexes (assuming product breakdowns of gross output and intermediate consumption are also collected):</td>
<td>Tables and Industry / product weights for producer price indexes (assuming product breakdowns of gross output and intermediate consumption are also collected); Detailed financial data needed to analyse and monitor the economic performance of key or complex industries. Included in this category are results from censuses/surveys that collect either financial data (sales, costs, profits, investment, assets and liabilities) or non-financial data (such as surveys of agriculture production, forestry and fishing activity, mining etc.).</td>
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</table>

| 2. Demand and output | GDP (production) nominal and real | A Q | The national accounts provide the comprehensive statistical framework to study the relationships between key macroeconomic variables. |
| | GDP (expenditure) nominal and real (including implicit price indexes for GDP(E) and components) | A Q | Included here is quarterly GDP in nominal and volume terms, disaggregated by: i) Major expenditure components; and ii) By industry. The level of industry detail is not prescribed and is country specific. In place of a nominal GDP(P) by industry series, or in addition to it, countries are encouraged to produce quarterly value-added by income component, along with quarterly GNI and Saving series. The production of GDP(E) and its components in nominal and volume terms allows the calculation of the associated implicit price deflators. ICP requirements should be taken into account when determining the expenditure components of GDP to be produced. |
| | External trade - merchandise | A Q | Exports and imports of goods, in nominal values (national currency) and in volume terms (ie volume indexes). Commodity detail is country specific. The values, volume indexes and price indexes (refer above)/unit value indices for merchandise trade are to have consistent coverage and |
| | | | International Merchandise Trade Statistics: Concepts and Definitions (IMTS 2010) |
presentation, facilitating a comprehensive analysis of external trade. The merchandise trade data also provide a more timely indicator of developments in the current account of the balance of payments.

| External trade - services | Exports and imports of services analysed by product, in nominal values (national currency). While these aggregate series are required to compile the quarterly Balance of Payments, if trade-in services are important for the quarterly monitoring of an economy, it is recommended that detailed series be compiled. Product detail is country specific. | Manual on Statistics of International Trade in Services 2010 (MSITS 2010) |

| 3. Productivity | GDP per hour worked is recommended, although, if hours worked data is not available, then GDP per full-time equivalent employed person or job is an alternative | Included are labour productivity measures only. While Multifactor Productivity (MFP) measures are desired, they are not included in the core set recommendations. For an economy-wide labour productivity measure, GDP per hour worked is recommended, although, if hours worked data is not available, then GDP per full-time equivalent employed person or job is an alternative. While economy-wide measures are recommended, it is accepted that non-market measurement issues may need to restrict the scope to market industries and/or the business sector. | ICLS Resolution concerning the measurement of working time, 2008, ILO Measuring Capital : OECD Manual, 2nd edition 2009 Measuring Productivity : Measurement of Aggregate and Industry-Level Productivity Growth, OECD Manual, 2001 OECD Compendium of Productivity Indicators, 2008 |

| 4. Income and wealth | 4.1 Integrated national accounts for the whole economy | Included here is the sequence of accounts for the total economy excluding the Financial Account and Balance Sheet, but including a Rest of the World Account. This is the minimum set of accounts needed to measure GNI, saving and net lending with the rest of the world. These accounts also provide an annual GDP(I) measure to cross-check with the GDP(P) and GDP(E) series, for those countries not yet producing quarterly series of nominal value-added by income component. | System of National Accounts 1993 (European Commission et al) [AR] System of National Accounts 2008 (European Commission et al) [AR – prelim] -Quarterly National Accounts Manual: Concepts, data Sources and Compilation, 2001 (IMF) |

| 4.2 Institutional sector accounts | The same range of accounts listed above for the total economy but for the key institutional sectors. The sectors should, at a minimum, separately identify business |  |  |
enterprises, general government and households. For the sector accounts, it is highly recommended that financial accounts and balance sheets, along with the supporting revaluation and other volume change accounts, are also produced.

| 4.3 Income distribution | Periodic statistics on the income distribution of individuals / households, distinguishing between key groups of households as required for country-specific studies (e.g. between urban/rural households, by households grouped by source of income or by participation in the formal/informal economy). Alternative distribution studies that may include wealth along with income, and/or focus on consumption levels, may also be considered. More frequent income distribution studies are recommended, but it is recognised that, in most cases, they need to be tied in to the frequency of source data, such as a periodic Household Income and Expenditure Survey. | Handbook on Household Income Statistics 2nd edition, 2011, Final Report and Recommendations of the Canberra Group (2001) (UN) |
| 5. Purchasing Power Parities (PPPs) | The PPIs – and related commodity price indexes – can differ across countries in terms of industry and/or commodity coverage, and valuation point. What are required are indexes that track the prices of a wide range of market goods over time. Such indexes will cover intermediate and final goods and services, including fixed assets, and will facilitate: i) the monitoring of inflation at different stages of the product supply chain; ii) price changes of key export and import commodities; and iii) the deflation of national accounts variables, both industry outputs/inputs and final demand categories. The range of industry / commodity indexes chosen will be country specific, but their scope should cover the above uses. Efforts should be made to ensure that at the very least key services are covered. Consideration should also be given to producing residential and commercial property indexes given the key role such assets have in Global Purchasing Power Parities and Real Expenditures: 2005 International Comparison Program – Methodological Handbook, World Bank | Measuring the Real Size of the World Economy: The Framework, Methodology, and Results of the International Comparison Program—ICP, 2011, World Bank |
influencing investment and saving behaviour.

<table>
<thead>
<tr>
<th>6. Natural resources and the environment</th>
<th>A</th>
<th>Statistics that measure the discovery, depletion and degradation of those natural resources that fall within the SNA asset boundary. Natural assets to be covered will be determined by individual countries, but it is expected that key resources at risk will be included. Annual statistics on the volume and value of stock levels and the additions and deductions from stock levels are recommended.</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>System of National Accounts 2008 (European Commission et al) [AR – prelim]</td>
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<td></td>
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<td>System of Environmental–Economic Accounting (SEEA), 2012, UN</td>
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</tbody>
</table>

**Table 2. Priority Short-Term Statistics selected from a Proposed core SET for the Arab Region**

<table>
<thead>
<tr>
<th>Short-term economic indicator</th>
<th>Target Periodicity*</th>
<th>Included in IMF SDDS/GDDS</th>
<th>Current International guideline/recommendation [AR – signifies availability in Arabic]</th>
<th>Links to complete document available below in References</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. National accounts</strong></td>
<td></td>
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<tr>
<td>1.1 QNA: Flash GDP estimate</td>
<td>Q</td>
<td>SDDS GDDS</td>
<td>System of National Accounts 1993 (European Commission et al) [AR]</td>
<td></td>
</tr>
<tr>
<td>1.2 QNA: GDP full release</td>
<td>Q</td>
<td></td>
<td>System of National Accounts 2008 (European Commission et al) [AR – prelim]</td>
<td></td>
</tr>
<tr>
<td>1.2.1 By expenditure</td>
<td>Q</td>
<td></td>
<td>Quarterly National Accounts Manual: Concepts, data Sources and Compilation, 2001 (IMF)</td>
<td></td>
</tr>
<tr>
<td>1.2.2 By production</td>
<td>Q</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2.3 By income</td>
<td>Q</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. Production and turnover</strong></td>
<td>Q, M</td>
<td>SDDS GDDS</td>
<td>International Recommendations for the Index of Industrial Production, 2010 (UNSD)</td>
<td></td>
</tr>
<tr>
<td>2.1 Production index for industry, by major division (mining, manufacturing, electricity, water, etc)</td>
<td>Q, M</td>
<td>SDDS GDDS</td>
<td>Guidelines for compiling the monthly index of production in construction, 2011- Eurostat</td>
<td></td>
</tr>
<tr>
<td>2.2 Production index for construction</td>
<td>Q, M</td>
<td>GDDS</td>
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</tbody>
</table>

This list is derived from the United Nations Data Template for Short-term Economic Statistics and includes all of the Tier 1 indicators as well as higher priority Tier 2 indicators.

* D: Daily; M: Monthly; Q: Quarterly.
† List of Priority indicators identified by the countries participated in the ESCWA project “Strengthening the Statistical Capacity of ESCWA Member Countries in Producing and Disseminating Short-term Statistics for Sustainable Growth”, and adopted in the EGM on STS 16-18 Feb, Amman Jordan

++ Added after the publication of E/ESCWA/SD/2013/10 Study on Selected Methodological Issue in Economic Statistics: Short-Term Economic Indicators for The Arab Region
<table>
<thead>
<tr>
<th>Set</th>
<th>Indicator description</th>
<th>Detail</th>
<th>Target Periodicity*</th>
<th>Included in IMF SDDS/GDDS</th>
<th>Current international guideline/recommendation [AR – signifies availability in Arabic]</th>
<th>Links to complete document available below in References</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3</td>
<td>Turnover index for retail trade by major division</td>
<td>Q, M</td>
<td></td>
<td></td>
<td>International Recommendations for Distributive Trade Statistics 2008 (UNSD)</td>
<td></td>
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<tr>
<td>2.4</td>
<td>Turnover index for industry by major division</td>
<td>Q, M</td>
<td></td>
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<tr>
<td>3. Price indicators+</td>
<td>3.1 Consumer price index</td>
<td>M</td>
<td>SDDS GDDS</td>
<td></td>
<td>ILO Resolution concerning CPI (17th International Conference of Labour Statisticians, 2003 (ILO et al)</td>
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<tr>
<td></td>
<td>3.2 Producer price index</td>
<td>M</td>
<td>SDDS GDDS</td>
<td></td>
<td>Producer Price Index Manual – 2004 (IMF et al)</td>
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<td></td>
<td>3.3 Import price index</td>
<td>M</td>
<td></td>
<td></td>
<td>Export and Import Price Index Manual: Theory and Practice, 2009 (IMF)</td>
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<td></td>
<td>3.4 Export price index</td>
<td>M</td>
<td></td>
<td></td>
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<tr>
<td>4. Labour market indicators</td>
<td>4.1 Unemployment</td>
<td>Q</td>
<td>SDDS GDDS</td>
<td></td>
<td>ICLS Resolution concerning statistics of the economically active population, employment, unemployment and underemployment, 1982</td>
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<tr>
<td></td>
<td>4.2 Unemployment rate</td>
<td>Q</td>
<td></td>
<td></td>
<td>Survey of economically active population, employment and underemployment: An ILO manual on concepts and methods, ILO 1990 Resolution concerning the measurement of underemployment and inadequate employment situations (16th ICLS, 1998)</td>
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<tr>
<td></td>
<td>4.3 Employment total by economic activity*</td>
<td>Q</td>
<td>SDDS GDDS</td>
<td></td>
<td>Resolution concerning statistics of employment in the informal sector (15th ICLS, 1993)</td>
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<td>ILO Guidelines concerning a statistical definition of informal employment (17th ICLS, 2003)</td>
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<tr>
<td>5. External sector indicators</td>
<td>5.1 Exports and imports (of goods and services)</td>
<td>Q</td>
<td>SDDS GDDS</td>
<td></td>
<td>International Merchandise Trade Statistics: Concepts and Definitions, 2010 (UNSD)</td>
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<td>International Merchandise Trade Statistics: Compilers Manual, 2012 (UNSD)</td>
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<td>Manual on Statistics of International Trade in Services, 2010 (UNSD)</td>
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<tr>
<td>Set</td>
<td>Indicator description</td>
<td>Target Periodicity*</td>
<td>Included in IMF SDDS/GDDS</td>
<td>Current international guideline/recommendation</td>
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<tr>
<td>5.3</td>
<td>Official reserve assets</td>
<td>M</td>
<td>SDDS GDDS</td>
<td>International Reserves and Foreign Currency Liquidity: Guidelines for a Data Template (Pre-publication Draft, January 2012) – IMF</td>
<td></td>
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</tr>
<tr>
<td>5.4</td>
<td>External debt (by sector, maturity and foreign currency)</td>
<td>Q</td>
<td>SDDS GDDs</td>
<td>External Debt Statistics: Guide for Compilers and Users 2003 (IMF)</td>
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<tr>
<td>6. Financial sector indicators</td>
<td>6.1 Central bank net foreign assets</td>
<td>M</td>
<td></td>
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<td></td>
<td>6.2 Central bank domestic lending</td>
<td>M</td>
<td></td>
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<td>6.3 Central bank reserve money</td>
<td>M</td>
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<tr>
<td></td>
<td>6.4 Depository corporations net foreign assets</td>
<td>M</td>
<td></td>
<td>Monetary and Financial Statistics Manual 2000 (IMF)</td>
<td></td>
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<tr>
<td></td>
<td>6.6 Depository corporations broad money liabilities</td>
<td>M</td>
<td></td>
<td>Financial Soundness Indicators: Compilation Guide, 2006 (IMF)</td>
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<td></td>
<td>7.2 Expense</td>
<td>Q</td>
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<td></td>
<td>7.3 Net operating balance (= Revenue – Expense)</td>
<td>Q</td>
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<td></td>
<td>7.4 Net acquisition of non-financial assets</td>
<td>Q</td>
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<td>7.5 Expenditure</td>
<td>Q</td>
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<td></td>
<td>7.6 Net lending/net borrowing (= Revenue - Expenditure)</td>
<td>Q</td>
<td></td>
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<tr>
<td>8. Household sector indicators++</td>
<td>8.3 Household debt</td>
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<tr>
<td>Short-term economic indicator</td>
<td>Set</td>
<td>Indicator description</td>
<td>Target Periodicity*</td>
<td>Included in IMF SDDS/GDDS</td>
<td>Current international guideline/recommendation [AR – signifies availability in Arabic]</td>
<td>Links to complete document available below in References</td>
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<tr>
<td>10. Financial market indicators</td>
<td>10.1</td>
<td>Interest rates, as relevant short and long term money and bond market rates</td>
<td>D</td>
<td>SDDS GDDS</td>
<td>SDDS Guide, p.38</td>
<td></td>
</tr>
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<td></td>
<td>10.2</td>
<td>Exchange rates, as relevant spot and forward markets</td>
<td>D</td>
<td>SDDS GDDS</td>
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<td></td>
<td>10.3</td>
<td>Nominal and real effective exchange rates</td>
<td>M</td>
<td>(nominal) Q</td>
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<td></td>
<td>10.4</td>
<td>Stock market indicators</td>
<td>D</td>
<td>SDDS GDDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Real estate market indicators+</td>
<td>11.1</td>
<td>Residential property price index</td>
<td>Q</td>
<td>SDDS GDDS</td>
<td>Handbook on Residential Property Prices Indices (RPPI) 2013. Eurostat</td>
<td></td>
</tr>
<tr>
<td>12. Economic sentiment+</td>
<td>12.1</td>
<td>Consumer confidence</td>
<td>M</td>
<td>SDDS GDDS</td>
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<td></td>
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<td>Revised manual on economic sentiment surveys currently being developed by UNSD and Eurostat. Draft versions are expected late 2013, early 2014.</td>
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<td></td>
<td>12.3</td>
<td>Composite business cycle indicators</td>
<td>M</td>
<td>SDDS GDDS</td>
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<tr>
<td></td>
<td>12.3.1</td>
<td>Leading indicator</td>
<td>M</td>
<td>SDDS GDDS</td>
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<td></td>
<td>12.3.2</td>
<td>Coincident indicator</td>
<td>M</td>
<td>SDDS GDDS</td>
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<td></td>
<td>12.3.3</td>
<td>Lagging indicator</td>
<td>M</td>
<td>SDDS GDDS</td>
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**B. USES OF ECONOMIC INDICATORS**

**ANALYTICAL FRAMEWORK**

This part summarises the analytical use and policy relevance from a user perspective of each indicator in the proposed Core Set of Economic Indicators outlined in chapter I above. The summary on short-term economic indicators draws text directly from a paper prepared for the Third International Seminar on Early Warning and Business Cycle Indicators held in Moscow in November 2010. Much of this information foreshadows the United Nations publication, Guide on Short-term Economic Indicators, currently being prepared and due for release in early 2014.

Information on the limited number of other economic indicators included in the Core Set is derived

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4 UNSD, 2013.
directly from the UNESCAP publication Proposed Core Set of Economic Statistics for Asia and the Pacific,\(^5\) as well as other sources.

The summary comprises three parts: scope and coverage, analytical framework, and statistical framework. The scope and coverage provides a brief summary of the statistics in scope and reference to the relevant comprehensive statistical standard. The statistical framework elaborates on the periodicity and timeliness dimensions and the reference to the source data. The analytical framework highlights the analytical use and policy relevance of the indicator data set for monitoring and reporting of economic and financial developments. These descriptions could be further refined by national agencies to guide the drafting of commentaries on the observed trends in the data at the country level and the promotion of the policy relevance of the statistical dissemination framework.

### 1. Economy structure statistics

#### Scope and coverage
Included in these statistics are censuses and surveys that collect either detailed financial data (sales, costs, profits, investment, assets and liabilities) or non-financial data (such as surveys of agriculture production, forestry and fishing activity, mining etc.). Conducting the census or survey requires an up-to-date frame of business enterprises, appropriately classified.

Periodic industry censuses and surveys provide detailed structural data needed for a wide range of economic statistical outputs, including:

- Industry value-added by component series, needed to benchmark GDP;
- Supply-Use Tables and Industry / product weights for producer price indexes (assuming product breakdowns of gross output and intermediate consumption are also collected);
- Detailed financial data needed to analyse and monitor the economic performance of key or complex industries.

#### Analytical framework
Structural economic statistics can provide answers to questions on wealth creation (value added), investment and labour input for different economic activities. The data can be used to analyse structural shifts, for example from industry to services, country specialisations, sectoral productivity and profitability, as well as a range of other topics.

Because they are normally disaggregated by enterprise size class, structural economic statistics also enable detailed analyses of small and medium-sized enterprises (SMEs), of particular use to policymakers and analysts wishing to focus on entrepreneurship and the role of SMEs. Furthermore, structural business statistics provide useful background information on which to base an interpretation of short-term statistics and the business cycle.

#### Statistical framework
The coverage, frequency and type of census or survey are generally country-specific. Obtaining the economic data required for the above indicative uses can be obtained in a number of different ways using collection methods ranging from full censuses or sample surveys; economy-wide coverage to key industries only; annual, periodic or irregular frequency; collection of data via a questionnaire, use of administrative data or a combination of both; etc.

### 2. Demand and output

#### Scope and coverage
The national accounts provide the comprehensive statistical framework to study the relationships between key macroeconomic variables.

\(^5\) ESCAP, 2010.
Analytical framework

Included here is quarterly GDP in nominal and volume terms, disaggregated by: i) Major expenditure components; and ii) By industry. The level of industry detail is not prescribed and is country specific. In place of a nominal GDP(P) by industry series, or in addition to it, countries are encouraged to produce quarterly value-added by income component, along with quarterly GNI and Saving series. The production of GDP(E) and its components in nominal and volume terms allows the calculation of the associated implicit price deflators. ICP requirements should be taken into account when determining the expenditure components of GDP to be produced.

Exports and imports of goods, in nominal values (national currency) and in volume terms (ie volume indexes). Commodity detail is country specific. The values, volume indexes and price indexes (refer above)/unit value indices for merchandise trade are to have consistent coverage and presentation, facilitating a comprehensive analysis of external trade. The merchandise trade data also provide a more timely indicator of developments in the current account of the balance of payments.

Exports and imports of services analysed by product, in nominal values (national currency). While these aggregate series are required to compile the quarterly Balance of Payments, if trade-inservices are important for the quarterly monitoring of an economy, it is recommended that detailed series be compiled. Product detail is country specific.

Statistical framework

3. Productivity

Scope and coverage

Productivity is commonly defined as a ratio between the output volume and the volume of inputs. In other words, it measures how efficiently production inputs, such as labour and capital, are being used in an economy to produce a given level of output. There are different measures of productivity and the choice between them depends either on the purpose of the productivity measurement and/or data availability.

The Core Set only includes labour productivity measures. Labour productivity relates to the single most important factor of production and is a key determinant of living standards, measured as per capita income. From this perspective, it is of significant policy relevance. While Multifactor Productivity (MFP) measures are desired, they are not included in Core Set recommendations.

For an economy-wide labour productivity measure, GDP per hour worked is recommended, although, if hours worked data is not available, then GDP per full-time equivalent employed person or job is an alternative.

While economy-wide measures are recommended, it is accepted that issues with non-market measurements may dictate that the scope be restricted to market industries and/or the business sector.

Analytical framework

Productivity is considered a key source of economic growth and competitiveness and, as such, is basic statistical information for many international comparisons and country performance assessments. For example, productivity data are used to investigate the impact of product and labour market regulations on economic performance. Productivity growth constitutes an important element for modelling the productive capacity of economies. It also allows analysts to determine capacity utilisation, which in turn allows one to gauge the position of economies in the business cycle and to forecast economic growth. In addition, production capacity is used to assess demand and inflationary pressures.

Needed for deriving Sustainable Development Goal indicators.

Statistical framework

Labour productivity is equal to the ratio between a volume measure of output (gross domestic product or gross value added) and a measure of labour input (the total number of hours worked or total employment). Labour productivity can be measured in various ways.
The volume measure of output reflects the goods and services produced by the workforce. Numerator of the ratio of labour productivity, the volume measure of output is measured either by gross domestic product (GDP) or gross value added (GVA). There is a preference for value added, as taxes are excluded.

There are also different statistical sources for measures of labour input, including household-based labour force surveys and establishment or firm-based surveys, each with their strengths and weaknesses (refer to the 2008 ICLS Resolution concerning the measurement of working time).

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4. Income and wealth

Scope and coverage The Core Set includes the sequence of accounts for the total economy excluding the financial account and balance sheets, but including a ‘rest of the world’ account.

This is the minimum set of accounts needed to measure GNI, savings and net lending with the rest of the world. These accounts also provide an annual GDP(I) measure to cross-check with the GDP(P) and GDP(E) series for those countries not yet producing quarterly series of nominal value added by income component.

For institutional sector accounts, the same Core Set of accounts is applied to the key institutional sectors. The sectors should, at a minimum, separately identify business enterprises, households and the Government.

For the sector accounts, it is highly recommended that financial accounts and balance sheets, along with the supporting revaluation and other volume change accounts, are also produced.

Alternative distribution studies that may include wealth alongside income, and/or that focus on consumption levels, may also be considered.

Analytical framework Measuring the distribution of material well-being is important, and distribution statistics are included in the Core Set recommendations. Specifically, periodic statistics on the income distribution of individuals and households, distinguishing between key groups of households as required for country-specific studies (e.g., between urban and rural households, by households grouped by source of income or by participation in the formal or informal economy).

Also needed for deriving Sustainable Development Goal indicators.

Statistical framework Although the Core Set recommendation is for five-yearly indicators, frequent income distribution studies are desirable, but it is recognised that, in most cases, they need to be tied in to the frequency of source data, such as a periodic household income and expenditure survey.

5. Purchasing power parities (PPPs)

Scope and coverage A PPP is a form of conversion rate based on a comparison of prices between countries. The concept of purchasing power parity measurement is based on the law of one price stating that in the absence of additional charges such as transaction fees or custom charges, identical commodities will have the same price when converted to the same currency. However, the law of one price applies to one commodity at a time, whereas the PPP applies to a comprehensive basket of goods and services simultaneously and are compiled using relative prices for a very large number of comparable goods and services across different countries.

For PPPs compiled under the auspices of the International Comparison Project (ICP), the results are published at the end of every round of the International Comparison Programme (ICP). The last
ICP global report was published in 2008 including PPP results for the reference year 2005, and by the end of 2013, the 2011 ICP round will release the PPP results for the reference year 2011.

**Analytical framework**

PPPs are of particular interest to analysts as an unbiased means of measuring relative levels of development across countries and to provide policy advice related to structural adjustment and poverty alleviation. The ICP develops an alternative conversion rate that corrects for differences in prices and thus enables comparison of economic aggregates and size of markets based on real volumes of output price levels of basic consumption items or total consumption. These conversion rates are also used to assess the incidence of poverty and monitor the progress of policies targeting poverty alleviation.

The use of exchange rates for such analyses can be misleading as they do not measure differences in the relative price levels between countries. PPPs are more appropriate currency converters, because they correct for differences in prices and thus enable comparison of economic aggregates and size of markets based on real volumes of output.

PPP statistics are also used for deriving Sustainable Development Goal indicators. Comparisons on key development indicators become more significant with the availability of more robust PPPs at various levels of disaggregation. The use of PPP data in poverty analysis, particularly for estimating poverty incidence based on internationally comparable poverty lines, will be pivotal in estimating and assessing poverty in the region. PPPs can also contribute to improving the quality and accuracy of National Accounts Statistics and promoting regional and global data harmonization, by demonstrating rigorous compliance with international standards for statistical classifications, data collection, processing and reporting.

**Statistical framework**

Each country participating in the ICP provides national average prices for a list of more than 1,000 clearly specified goods and services weighted by importance in order to ensure comparability between priced items in different countries. Prices for household consumption items are collected on a quarterly basis during the reference year covering different districts and various types of markets and outlets to obtain the national annual average prices, whereas prices for other special surveys under government and capital formation are collected once or twice during the reference year. The PPPs at the lower level are first computed by obtaining average ratios of average prices for comparable items across countries, and are then aggregated to higher levels within the GDP structure through applying the expenditure weights to reach PPP estimates for the main GDP components and level.

While PPPs are not produced directly by national statistical organizations, it is strongly recommended that countries join the ICP. The task of providing price and expenditure data for the ICP may be reduced if these requirements are considered at the same time that related domestic statistical outputs are designed.

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**6. Natural resources and the environment**

**Scope and coverage**

Statistics that measure interrelationships between the economy and the environment are beyond the scope of the proposed Core Set. However, growing concerns about the sustainability of economic growth indicate that the Core Set needs to include a limited range of statistics that begin to address this issue.
Accordingly, it is recommended that the Core Set include statistics that measure the discovery, depletion and degradation of those natural resources that fall within the SNA asset boundary. The SNA records these changes in the ‘Other changes in assets’ account and, while they affect net wealth positions, they do not affect GDP.

Producing these statistics is consistent with the SNA coverage, yet also allows users to derive alternative GDP measures that may be considered to better account for depletion and discovery.

The choice of natural assets to be covered will be determined by individual countries, but it is expected that key resources at risk will be included. Annual statistics on the volume and value of stock levels and the additions and deductions from stock levels are recommended.

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**Core list of Short-term Statistics**

**Indicator set 1: National accounts**

*Scope and coverage*  
This set covers the quarterly national accounts (QNAs) and may include the first accelerated estimate of GDP and subsequent releases with more detailed breakdowns 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 relates to the accelerated release of the quarterly GDP as an aggregate measure of production. Quarterly GDP and its breakdowns are made available in current prices and volume measures.

*Analytical framework*  
The main analytical purpose of QNA time series is to offer an overview of recent economic and financial trends that is more timely than annual national accounts and more comprehensive than individual short-term economic indicators. These time series meet the analytical need to study dynamic relationships between macroeconomic aggregates in a coherent System of National Accounts (SNA) framework. In particular, QNAs meet the basic data needs for business cycle analysis and for econometric modelling. For business cycle analyses, there is a need to focus 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. In this context, econometric modelling also extends to forecasting of variables in future reference periods.

The short-term economic indicators described below in subsequent sets are often available on a monthly basis shortly after the reference period. Although each short-term indicator series provides an important insight into a specific aspect of the real and financial economy, it is through their integration in a coherent and comprehensive analytical and statistical framework such as the SNA that these indicators are able to provide information on the dynamic relations of cause and effect.

*Statistical framework*  
QNAs are compiled 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, the use by national agencies of the same collection and compilation methodology in the input series is strongly encouraged to minimize unnecessary revisions and inconsistencies. The use of econometric methods and indirect behavioural relationships should not be considered a substitute for data collection and are outside the scope of quarterly national accounts compilation.

**Indicator set 2: Production and turnover**
**Scope and coverage**

This set covers indexes of industrial production, 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, 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 in economic activity.

**Analytical framework**

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

At more disaggregated levels of the International Standard Industrial Classification (ISIC), production and turnover indexes provide further insights into the dynamic relationship between different industries and the types of products these industries produce, such as intermediate, consumption and capital goods.

While each of the production and turnover indicators and their disaggregations provide valuable information on the performance of the real economy, it is through their integration in the 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 QNAs.

**Statistical framework**

Production and turnover indicators are often compiled 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. As these indexes are key inputs to the compilation of the first GDP estimate, improvements in the timely availability of the GDP estimate is highly dependent on the acceleration of the release of production and turnover indexes.

**Indicator set 3: Price indicators**

**Scope and coverage**

The consumer price index (CPI) focuses on household consumption of goods and services. The index provides a general measure of changes to the 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. Practices between countries differ significantly with regards to the inclusion of imputed rents for the flows of housing services provided by owner-occupied dwellings in the overall index.

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 within the scope of the PPI vary significantly between countries. Some countries are interested in creating a corporate services price index, restricting 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.

PPIs can refer to indices related to inputs or outputs of the production process. PPI measures for outputs relate to the average change over time in the selling prices received by domestic producers for their output. Prices included in this PPI are from the first commercial
transaction for many products and some services, and are often referred to as ‘factory gate
prices’.

PPI measures for inputs relate to the average change over time in the purchasers’ prices paid
by domestic producers for their intermediate inputs, which can be differentiated between
domestic products and imported products.

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

*Analytical framework*

The CPI is an important economic indicator of price change. The index is used in many ways
by 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 shortly after the reference month. These
indices can be presented to users as year-to-year or month-to-month changes, as annual
indices, or as 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.

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**Indicator set 4: Labour market indicators**
Scope and coverage

This data set includes the employment and unemployment rates.

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 arises from the number of unpaid persons in employment, 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 an 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 labour 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 in compulsory military service.

Analytical framework

Labour market data comprise a key set of indicators for the assessment of the cyclical situation and for macroeconomic and social policymaking. These indicators play an essential role in the derivation of other key indicators for the analysis of long-term economic equilibrium 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 disaggregated into structural and short-term unemployed. This indicator is closely monitored by national users as it signals the build-up of fiscal pressures in the short and long term.

Statistical framework

Employment data is disaggregated by sex and age. Data may be presented in thousands of persons and by rate (unemployment rate). Percentage changes to show the evolution of this aggregate are also presented. Data is disseminated on a monthly basis, either non-seasonally or seasonally adjusted.

Indicator set 5: External sector indicators

Scope and coverage

The monitoring of the transactions and positions held by a country in relation to the rest of the world is guided by international accounts represented by the balance and payments and the international investment position (IIP). The balance of payments is a statistical statement that summarizes transactions between residents and non-residents during a given 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 IIP is a statement that shows, at a certain point in time, the value of financial assets of residents of an economy and the liabilities of residents of an economy to non-residents.

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

Analytical framework

International accounts provide an integrated framework for the analysis of an economy’s international relationships. This enables the monitoring of its international economic and financial performance, exchange rate policy, reserves and external debt management. Given the increasing interconnectedness of 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 external vulnerability at the national and global levels.
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 labour 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, labour and capital markets.

An understanding of the financial transmission mechanisms and vulnerabilities are determined by the assets and liabilities of the IIP position either presented in a financial instruments split such as monetary gold, currency and deposits, debt securities, loans, etc., or by functional categories such as direct investment, portfolio investment, financial derivatives, and 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 forms of 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 international reserve assets is often motivated by the need to meet balance of payment financing needs and the ability to undertake market interventions to influence the exchange rate.

By consolidating the financial liabilities, excepting shares, other equity and financial derivatives, gross external debt provides a summary measure of external exposure to outstanding amount(s) 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 gives an indication of when payments will fall due, and therefore of potential liquidity risks facing the economy.

The debt schedule of payments is particularly important, in particular for those payments due in the short 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 resulting from the 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 external trade in terms of the cross-border physical movement of the goods. As such, it is 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 within one quarter after the reference period is encouraged. A quarterly release is also preferred for the IIP with a timeliness of one quarter after the reference period. For countries with a less-developed national statistical system, these recommendations might not be met but they should be encouraged to pursue periodicity on an annual basis, with a release between six and nine 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 central bank surveys. Both the periodicity and timeliness of official reserve assets data and the template on international reserves can be increased to weeks for those countries that compile and report central bank data more frequently.

With respect to the external debt data, the dissemination of quarterly series 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 should be disaggregated by original maturity, both short- and long-term; financial instrument,; and private and public or publicly guaranteed debt.

More countries are now beginning to 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 by sector: general Government, monetary authorities, banks and other sectors. The dissemination of a domestic versus foreign currency breakdown of external debt with quarterly periodicity and timeliness is also encouraged.

Data on total imports and exports of merchandise should be disseminated in a timely fashion with monthly periodicity. Dissemination of disaggregated components of imports and exports by major categories is encouraged, even if a slightly greater lag is needed.

Indicator set 6: Financial sector indicators

Scope and coverage

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

Financial statistics comprise 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. Financial statistics are organized and presented in a format designed to show financial flows between the sectors of an economy and corresponding financial assets and liabilities.

The framework for monetary statistics includes central bank surveys, depository corporation surveys and financial corporation surveys. 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 sector 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 analysing claims on and liabilities to all other sectors of the economy and non-residents, at the level of the entire financial corporations sector. In particular, financial corporations surveys show 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 corporation survey aggregates the central bank survey with the survey of other depository corporations, with the central bank survey determining the monetary base held as liabilities of the central bank, in the form of national currency and reserve deposits. The monetary base is a critical aggregate for monetary policy; when it changes, it usually creates disproportionate increases in money and credit.

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

Credit measures of relevance to the formulation and implementation of monetary and other macroeconomic policy include central bank credit and 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 (iv) 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 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 government 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 use of financial statistics is derived from the understanding they provide of the interrelations between the financial corporate sub-sectors and between the financial sector and the other sectors of the economy and non-residents. Data on loans and capital market instruments such as securities show the extent to which countries use financial institutions and capital markets to obtain funds to finance economic activity. The data also offer means for assessing the relative importance of various types of financing and for monitoring changes in sources of financing over time.

The data indicate the sources of funds to the corporate financial sector and other sectors. Forms of financial asset accumulation, deposits, pensions and life insurance reserves and securities, are also identified. Financial statistics provide a means of 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 analyse economic and financial developments within countries and to compare economic and financial developments between countries. For example, financial statistics are an important input for the balance sheet approach to
Analysing 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 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 currently 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 only report data annually and with lengthy reporting lags. These 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 requiring the establishment of direct reporting of data from other financial corporations to the compilers of monetary statistics. Compilation of financial statistics on a quarterly basis is applicable to countries that already have quarterly data for the current and capital accounts of their national accounts statistics, or are currently working on migration from annual to quarterly national accounts statistics.

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**Indicator set 7: General government sector indicators**

**Scope and coverage**

General government operations fall within the scope of government sector indicators. In their most comprehensive statistical framework for government finance statistics, the indicators cover central, regional or provincial and local government. These indicators may be further extended to public enterprises to constitute the public sector.

The statistics relate to revenues, expenditures, balance and, wherever relevant and feasible, domestic and foreign financing (with a distinction drawn between bank and non-bank financing at the domestic level). 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.
Analytical framework

The government finance statistics framework is designed to provide statistics that enable policymakers and analysts to study developments in financial operations, financial position, and liquidity of the general government sector or the public sector in a consistent and systematic manner. The framework can be used to analyse the operations of a specific level of government and transactions between levels of government as well as the Government or public sector as a whole.

One method used in the framework to produce summary information on the overall performance and financial position of the Government or public sector is 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 or deficit as a summary measure of government operations calculated 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 the 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, as 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. The latter have become increasingly relevant to the fiscal policy responses of Governments in the region in the context of the ongoing financial crisis.

While the aforementioned 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 public sector. The summary measure for liquidity is obtained from the cash balance: cash surplus or 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 government transactions, should be complemented by summary statistics based on the stock of financial liabilities and assets.

Statistical framework

Increasingly, fiscal data are required on a more frequent basis than annually or quarterly, in order to facilitate early detection of solvency and liquidity issues and other analytical perspectives on fiscal operations and positions. The business sector and the monetary authority both benefit from the early release of these indicators to anticipate potential fiscal policy shocks. Countries often meet the demand for fiscal data by disseminating monthly summary measures of budget balances for central government operations and quarterly debt statistics. Others have extended the scope to quarterly government accounts with a 30 day delay.

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

Indicator set 10: Financial market indicators
Scope and coverage

This data set contains interest rates, exchange rates, nominal and real effective exchange rates, stock market indices, long term government bond rates and other indicators as relevant, such as spreads between interest rates. Whether the countries are able to report on all of these statistics depends on whether markets for these rates exist.

Interest rates refer to 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 three-month interest rates of national series. Other representative interest rates might be the monthly average of the bond yields at maturities of three- and six-month treasury bills.

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-of-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 the deflator.

The stock market index refers to the monthly average indices for major national stock markets.

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

Central bank interest rates are key reference rates set by central banks as the policy rate at which they lend 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 between a lending rate and the yield of a bond rate, for example, an overnight lending rate and a 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 slopes upwards, and thus the interest rate spread is positive, meaning that yields increase as time to maturity increases. This shape of the yield curve demonstrates the higher yield on longer-term bonds explained by the compensation to investors for greater exposure to the risk of changes in future interest rates.

Occasionally, the yield curve becomes downward-sloping or inverted, meaning that the interest rate spread is negative. This inverted relationship occurs if investors anticipate a recession in the near future, leading 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.

Exchange rate movements are near-term signals of international competitiveness which are closely monitored by 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 used to understand international competitiveness in terms of the foreign exchange rates of major trading partners that cannot be understood solely by examining 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 for their investments and innovations. Deviations from trend developments are monitored carefully because the second-round effect of value
fluctuations could 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 compiled and released shortly after the reference month.

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### Indicator set 11: Real estate market indicators

**Scope and coverage**

This data set contains the residential property price index.

The residential property and commercial real estate price indices are only developed by a limited number 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.

**Analytical framework**

With the housing and property markets being identified as one of the major causes of macroeconomic and financial instability, the demand for these indicators has intensified.

Property price indices aim to reflect changes in prices and, therefore, correct for the different characteristics property have over time. The transaction values reflect expenditure on the purchase of a residential property.

**Statistical framework**

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.

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### Indicator set 12: Economic sentiment indicators

**Scope and coverage**

This data set contains indicators of consumer and business confidence.

**Analytical framework**

Business and consumer surveys provide essential information for economic surveillance, short-term forecasting and economic research. They are also widely used to detect turning points in the economic cycle.

**Statistical framework**

Business confidence indicators are based on business surveys which can cover a single economic activity, such as manufacturing, or a broader cross section including construction, retail trade and financial services. Consumer confidence surveys are based on household surveys.

Nearly all the questions are qualitative in 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 basis.

By way of illustration, business surveys contain 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 household spending and savings intentions, and assessments of their perception of the factors influencing these decisions.