Collecting data: new information sources

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1 This presentation was prepared for the meeting. The views expressed are those of the author and do not necessarily reflect the views of the BIS, the IFC or the central banks and other institutions represented at the meeting.
Session 1 : Collecting data
New Information Sources

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Data is one of the strategic assets and can make large benefits to an organization. Right acquisition process and right data are crucial steps to reap the benefits of the data evolutions for achieving sustainable growth, stability, and development.

**1. Data Revolution and Implications**

- **Structured Data**
  - Excel
  - Time Series Data
  - Sales
  - Financial Statement

- **Unstructured Data**
  - Chat
  - Customer/Member Transactions
  - Notes & Text Fields
  - Email
  - Voice Transcriptions
  - Social Media
  - Online Communities

- **Technology**
  - cloudera
  - hadoop
  - API

- **Tools**
  - EViews
  - STATA
  - Tableau
  - Excel
  - R

- **Analysis**
  - Analysis Using Micro Level Data
  - Prediction
  - Clustering
  - Text Mining
  - Network Analysis
2. Response to the Data Revolution: Data Acquisition (1)

Seeking to acquire new sources and new types of (micro / unconventional) data and analytic methods, under the good “Data Governance”, we need to understand the new business model and policy objectives.
2. Response to the Data Revolution:

**Big data: from macro towards micro data and from conventional to unconventional data** (2)

### Regulatory Data
- Financial Institution Data (FI): business loan, mortgage loan
- Financial Market Data (FM): FX transaction, securities
- Payment Data: interbank bulk payment + Transactional data

### Collaborative Data
- Government Ministries/Agencies: Among Regulators, Min. of Finance, NESDC,….
- NSO: Household Socio-Economic Survey (SES) Labor Force Survey (LFS)

### Other Data
- Public data: financial statement
- Purchase: Sales Nielsen’s FMCG, News

### BOT’s Internal Data/Survey
- Payment data e.g. Data from BATHNET system
- BOT’s Survey: Business sentiment survey, International Investment position, external debt, (external) Trade credit etc.
- BOT’ Human Resource data

### Next Gen Data
- Big Data: IoT, social listening, Web Scraping

### Administrative data under MOU
- Electricity consumption + other utilities
- Social Security Payment (Min. of labour)
- Import-export + Tourism
- Credit Information (National Credit Bureau)

### Public Data
- Financial statement

### Other Data
- Sales Nielsen’s FMCG, News

### Big Data:
- From macro towards micro data
- From conventional to unconventional data
2. Response to the Data Revolution:

Data Governance leading to appropriate and lawful data management (3)

Coverage

- All data and information (electronics and non-electronic format)
- Employees and related persons

Involved parties / Roles and Accountabilities

- Data Governance Committee
- Data Controller
- Data Administrator
- Data User
- Data Protection Officer
- Data Lawyer: Personal Data Protection Act (PDPA)
- Data Subject

Data Management (thru Information Life Cycle)

- Acquisition/Collection
- Processing
- Storage
- Usage and Sharing
- Archive and Disposal

Data Quality

Data Security and Privacy

Auditing and Monitoring

Data Leak Prevention (DLP)
3. Challenges in Data Revolution (Collections and Uses)

1. Change in business model related to economic and financial transformation: ➔ New economy
   - Demand for and Supply of data: Content analysis, what needed, what data do we have or need more
   - Data cost rationalization
   - Data literacy

2. Data quality assurance / trade-off in Big data
   - Accuracy, Accessibility, Comprehensiveness, Consistency, Currency, Definition, Granularity, Precision, Relevancy and Timeliness
   - Regulatory vs. Statistical data, Small amount vs. Large amount

3. Legal binding: Data Protection / security and privacy plus stakeholder engagement

4. Data flooding / Drowning: Manage and Use of data issues
   - People: skills and awareness
   - Process: Management system and Governance conduct
   - Technologies: Tools and Platform

5. Data sharing/Data inclusion: Open central bank data and Linked data
   - Scope and details / To whom / Benefits / Access Channel
   - Data standard and Masking (encryption)

6. Leverage (Big) data for improved decision-making: aware of the difference between correlation and causation, a potentially dangerous pitfall for decision-making
Thank you

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