Recent developments on business surveys: Central Bank of Sri Lanka

8th Annual Conference on Central Bank Business Surveys and Liaison Programs
November 27-29, 2017 | Federal Reserve Bank of Atlanta

Rohana Wijesekera | Director Statistics

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

An overview of data collection efforts and analysis

refinements

future developments

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

An overview of data collection Efforts and analysis

2013
- Mainly relied on solid statistics for forecasting

2014
- Introduction of forward looking indicators that capture sentiments of economic agents

2015
- Sri Lanka became a SDDS country

2017
- Moving towards flexible inflation targeting where such forward looking sentiment indicators are becoming paramount

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

Business Conditions

Business Outlook
Purchasing Managers' Survey
-Manufacturing
-Services
-Construction

Credit Conditions

Credit Demand
Credit Supply

Price and labor Conditions

Inflation expectations
Public Sector WRI
Informal sector WRI

12 REAL SECTOR SURVEYS

Real Estate Conditions

Residential Property Prices
Land Price Index

Countrywide Data Collection

CWDCS (Retail and Producer Prices, Wages)
EWS (Production Trends)

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

Business Outlook Survey – Since 2014

Planning

Survey frequency : Quarterly
Sampling frame: EPF list

Sample design: Stratified Judgemental Sampling with 50% of units being repeated

Target Population : Large scale enterprises

Stratification →
Agriculture
Industry
Services

Sample allocated based on respective GDP weights

Conducting

Sample Selection

Sample Size of Minimum 100 firms

Data Collection within 3 weeks

Face to Face and Telephone interviews

Data coding, editing & tabulation

Reporting

Compile Business Sentiment Indices
- Business condition
- Profitability
- Skilled labour availability
- Demand
- Sales
- Capacity Utilization
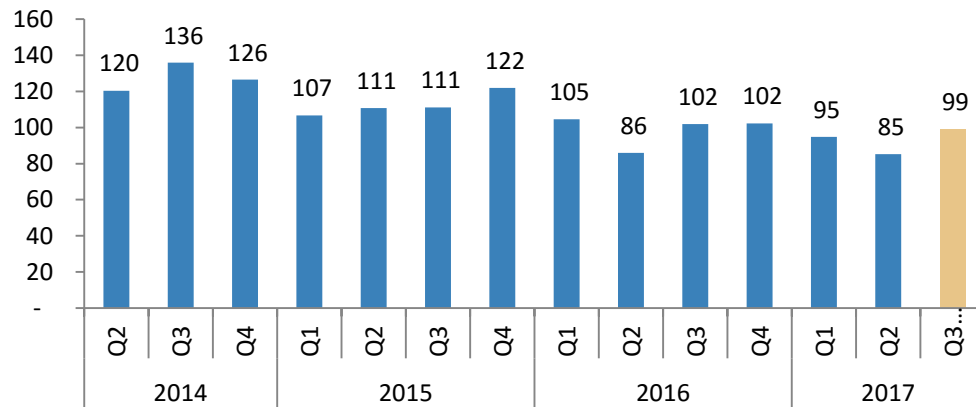including Anecdotes, Suggestions

Quarterly Report to MPC

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

Developments Indicated in BOS-2017 Q2

- The balance of opinion on business outlook continued to remain in the negative territory for the second consecutive quarter in 2017 driven mainly by the decline in profitability. The prospects for the third quarter suggest an improvement of the business outlook but still remain below the neutral 100 threshold mark.

- Respondents emphasised their concerns regarding the extreme weather conditions, continuing uncertainty related to policy decisions, upward movement in interest rates and weakening of local currency as possible drawbacks for recovery in economic activities.

Business Condition

	2014			2015				2016				2017		
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3…
	120	136	126	107	111	111	122	105	86	102	102	95	85	99

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

MACROECONOMIC LINKAGES OF BUSINESS OUTLOOK SURVEY INDICES

Business Condition Index vs. GDP Growth

GDP (Y-o-Y) — — Business Condition

BOS Indices and Trade Index

Export Sales Index(BOS) — ● — Export Value Index
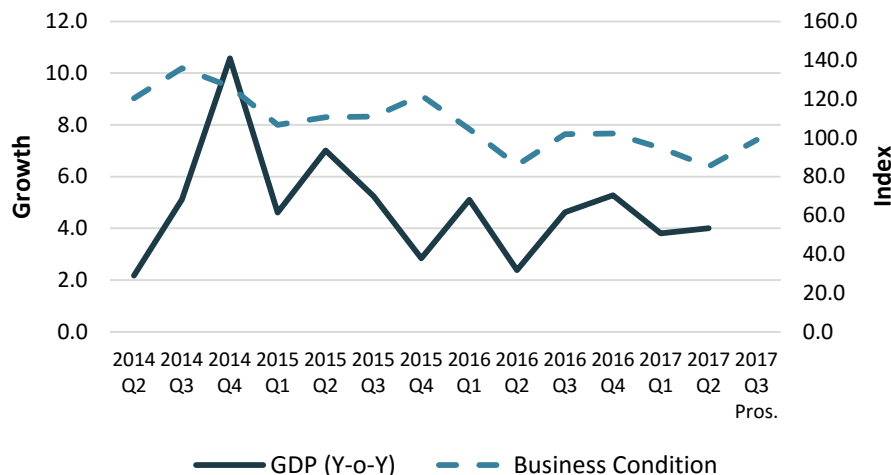
Business condition index can be used as a leading indicator in predicting the trend in GDP growth rate as it started to move in line after 2016 Q1
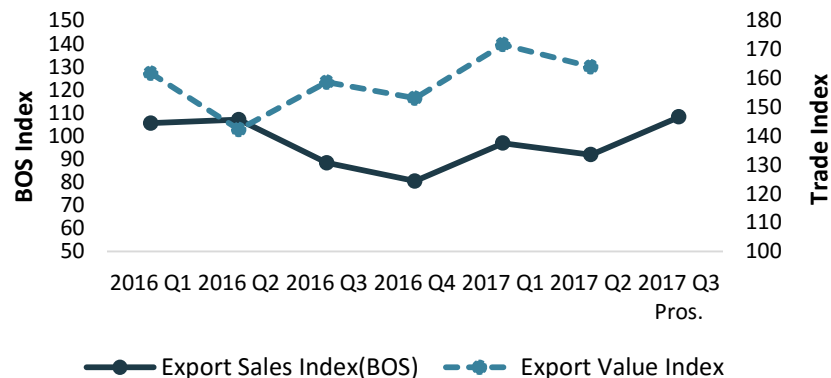
Export sales index derived through BOS can be used as a leading indicator in predicting trends in exports

Purchasing Managers' Index Survey — Since 2015

Manufacturing

Services

Construction

Monthly Survey
Approximately 100
respondents
5 sub indices
Expectations are also
included

Monthly Survey
Approximately 100
respondents
5 sub indices
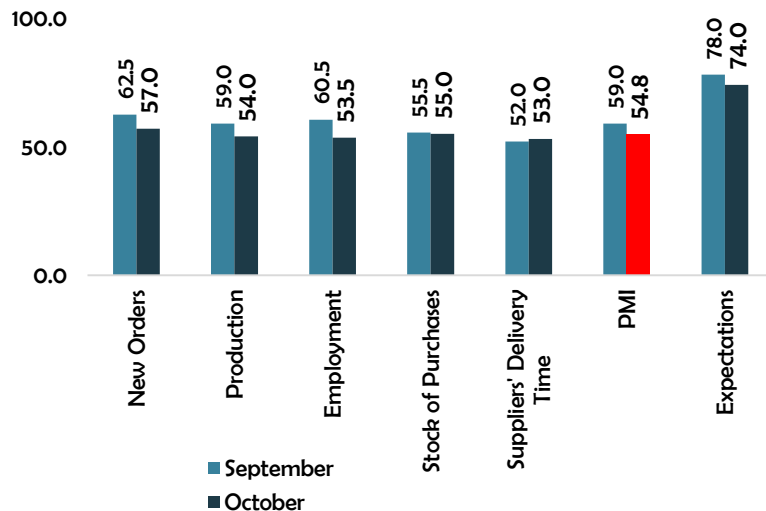Expectations are also
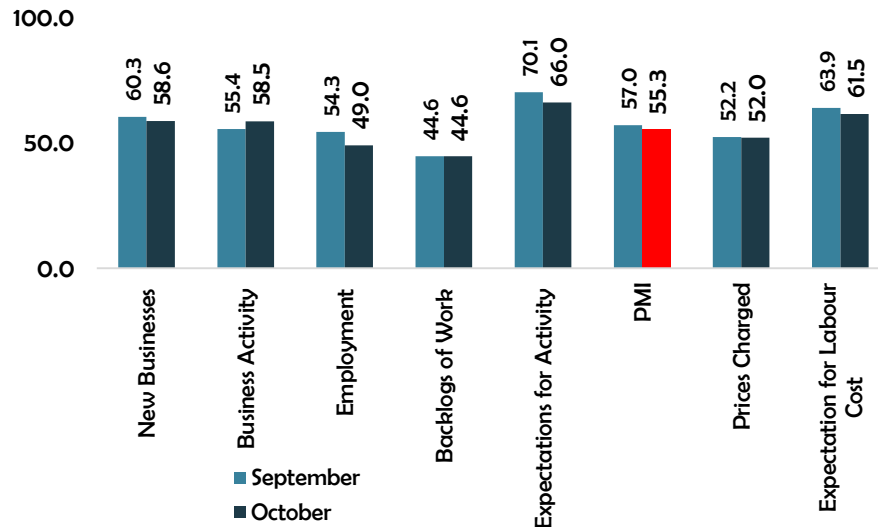included

Monthly Survey
Approximately 25
respondents

Manufacturing and Services Sector PMI in October 2017

Manufacturing PMI and Sub Indices

Index	September	October
New Orders	62.5	57.0
Production	59.0	54.0
Employment	60.5	53.5
Stock of Purchases	55.5	55.0
Suppliers' Delivery Time	52.0	53.0
PMI	59.0	54.8
Expectations	78.0	74.0

Services PMI and Sub-Indices

| Index	September	October
New Businesses	60.3	58.6
Business Activity	55.4	58.5
Employment	54.3	49.0
Backlogs of Work	44.6	44.6
Expectations for Activity	70.1	66.0
PMI	57.0	55.3
Prices Charged	52.2	52.0
Expectation for Labour Cost	63.9	61.5

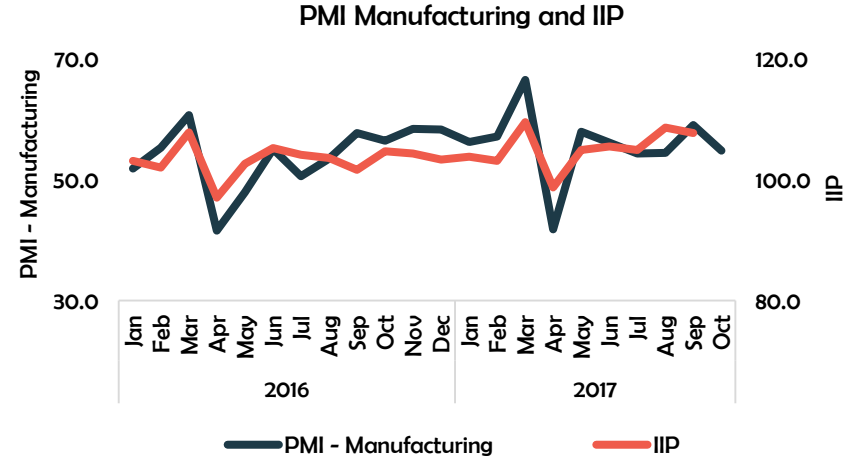(a) PMI takes values between 0 to 100. => PMI=50; neutral | PMI >50; expanding | PMI<50; declining

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

Combined PMI Index closely portrays the GDP growth trend
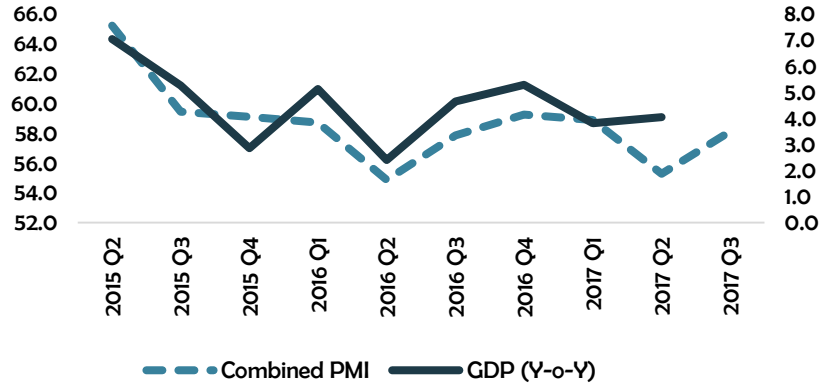
Combined PMI of services and manufacturing sectors can be used as a leading indicator in predicting the trend in GDP growth rate as it started to move in line after 2016 Q1
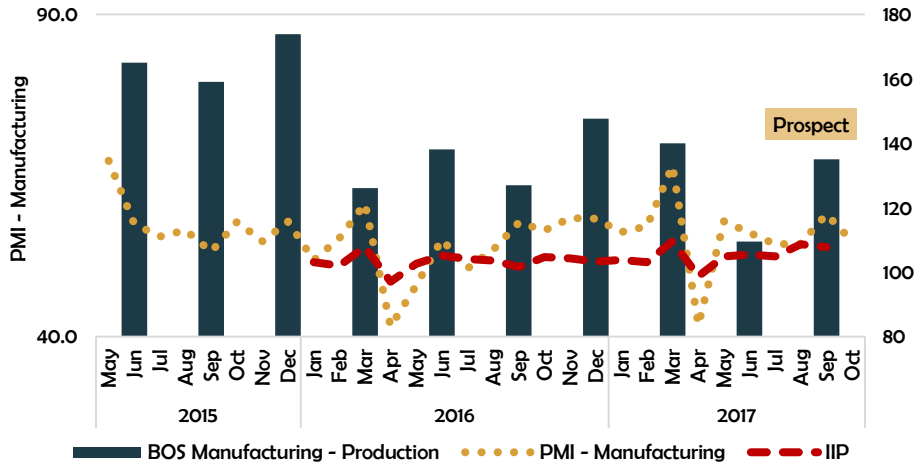
PMI manufacturing moves in line with IIP. Thus, can be used in predicting IIP which is released with a considerable lag of around 1.5 months.

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

BOS-Manufacturing, PMI and IIP

Direction of BOS, PMI and IIP

Production index computed using manufacturing sector companies in BOS also gives an indication of the trend in IIP. Hence, can be used as an early indicator of IIP.
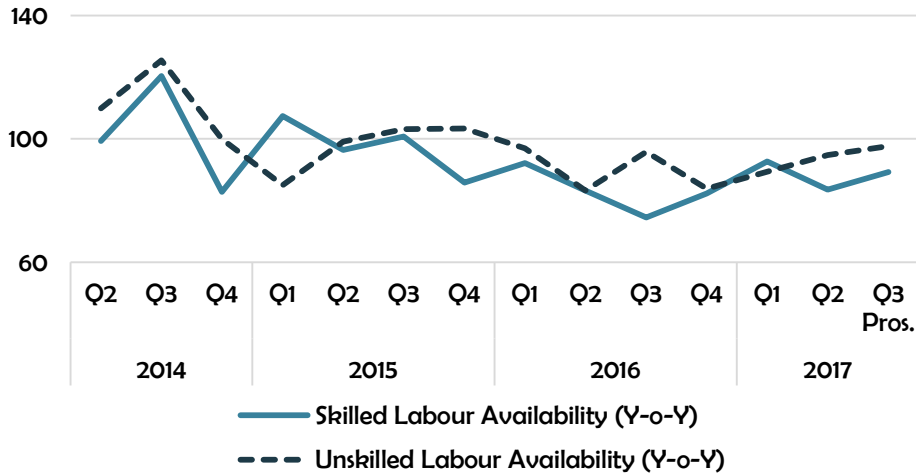
Value added of the food related agriculture activities has a close link with manufacturing of food, beverages and tobacco products with approximately one quarter lag which also moves in line with PMI of the manufacturing of food and beverages.

Man. F&B, Agri F&B related & PMI of Man. of F&B

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

LABOUR CONDITIONS

Labour Availability of Industry Activities - BOS

Skilled Labour Availability (Y-o-Y)

Unskilled Labour Availability (Y-o-Y)

labour shortage has been identified as an obstacle to meet the increasing demand which is reflected by the series of index of Skilled and unskilled labour Availability which have generally recorded values below 100 threshold throughout the survey period

Employment Index - PMI

Manufacturing   Services

Seasonal drops in Employment could be observed through PMI Manufacturing in the month of April. Apart from this Employment records an overall growth.

ශ්‍රී ලංකා මහ බැංකුව
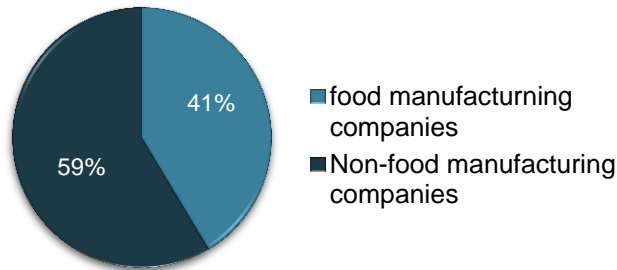இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA
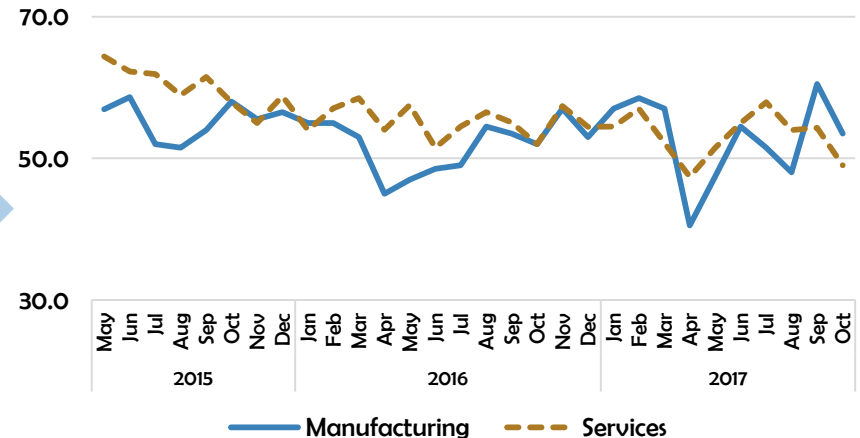
Flood impact on manufacturing sector industries - PMI

Impact of Recent Floods
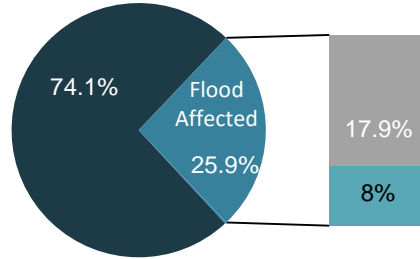
- No impact from flood
- Affected - impact quantified
- Affected - impact not quantified

Flood Affected Companies

- food manufacturning companies
- Non-food manufacturing companies

Percentage of Flood Impact on Business Activities	(Out of Flood affected Quantified companies) Percentage of Companies Affected
Impact ≤ 5%	25%
5% < Impact ≤ 15%	30%
15% < Impact ≤ 25%	25%
Impact ≥ 25%	20%

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

Anticipated gain from regaining GSP+ over the next six months

Business Outlook Survey – Exporting Companies
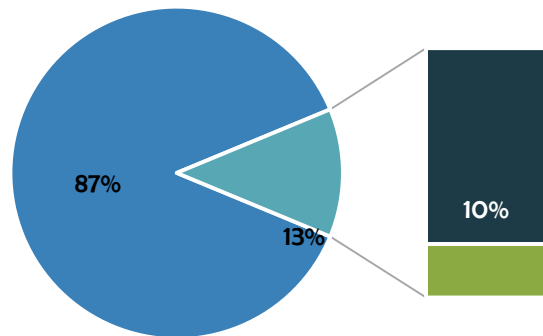### GSP+ impact in next 6 months

76% | 24% | 21%
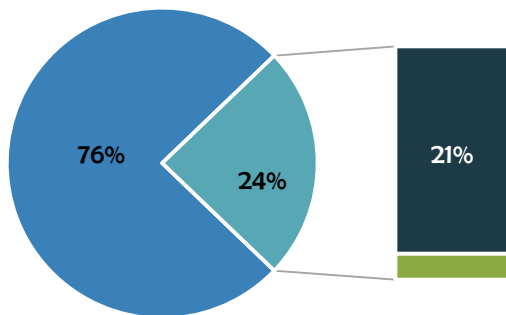
- No/Not Relevant
- Yes. Not Quantified
- Yes. Quantified

Industries that anticipate gain from GSP+
- Textiles and wearing apparel
- Rubber products
- Food and beverages
- Tobacco products

PMI Manufacturing
GSP+ impact in next 6 months

87% | 13% | 10%

- No/Not Relevant
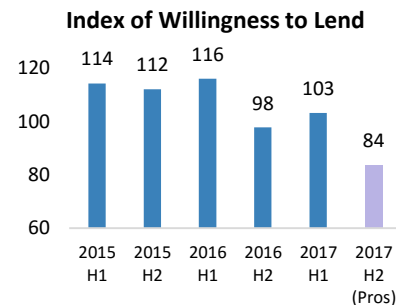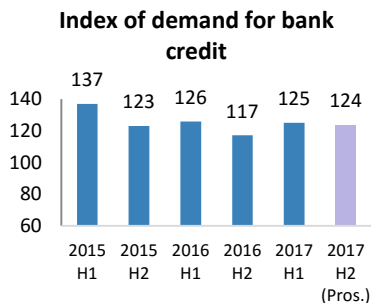- Yes. Not Quantified
- Yes. Quantified

Issues Highlighted
- Capacity constraints to expand the business in order to cater the new orders
- Some industries may affect if the labour shifts towards the emerging industries due to GSP+

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

CREDIT CONDITIONS SURVEYS

Index of demand for bank credit

Year	Value
2015 H1	137
2015 H2	123
2016 H1	126
2016 H2	117
2017 H1	125
2017 H2 (Pros.)	124

Credit Demand

Credit Supply

Index of Willingness to Lend

Year	Value
2015 H1	114
2015 H2	112
2016 H1	116
2016 H2	98
2017 H1	103
2017 H2 (Pros)	84

Information related to the developments in the demand for credit and prospects covering all island

Semi- Annual Survey
Of 215 Small (Employee count in between 5- 24) and 195 Medium enterprises (Employee count in between25-150)

Stratified random sampling- Stratified based on provinces and sample allocated based on number of SMEs

To identify the trends in credit supply and prospects

Semi- Annual Survey
Of 25 LCBs and 7 LSBs

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

CWDCS (Country Wide Data Collection System) (Since 1978)

Collects **island wide data** on retail prices, producer prices and informal sector labor wages from 106 teacher investigators

Collected information are used to compile the **Price and Informal sector Wage Indices** and to accommodate many internal and external data requests

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

Price and Labour Conditions

Informal Sector Wage Rate Index

Monthly basis
To gauge nominal and real wage movements of the
informal private sector Data collected from the
Country Wide Data Collection System.
Base period is 2012

Public Sector Wage Rate Index

Monthly basis

To gauge nominal and real wage
movements of the public sector

Data obtained from Public
Administration Salary Circulars

Base period is 2012

Inflation Expectations Survey

Monthly basis for the Corporate Sector;

Household Sector; and Academia

To observe the trend of expected inflation
over the next 12 months.

Conducted since 2007

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

DEVELOPMENTS IN WAGES

However, with a real wage erosion in the Public and Formal Private sectors, the growth in the weighted average wage rate index has also declined in the recent months, signaling an upward pressure on wages in the future.

Real Wage Rate Indices (2012=100)

Change in Weighted Average Wage Rate Index

Weighted Average Real Wage Rate Index

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA
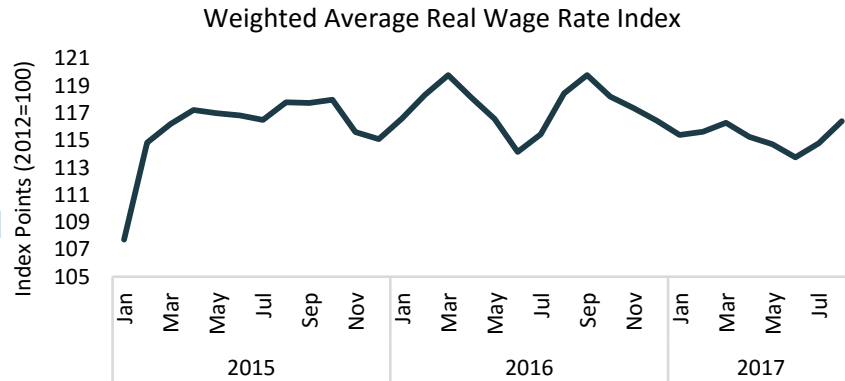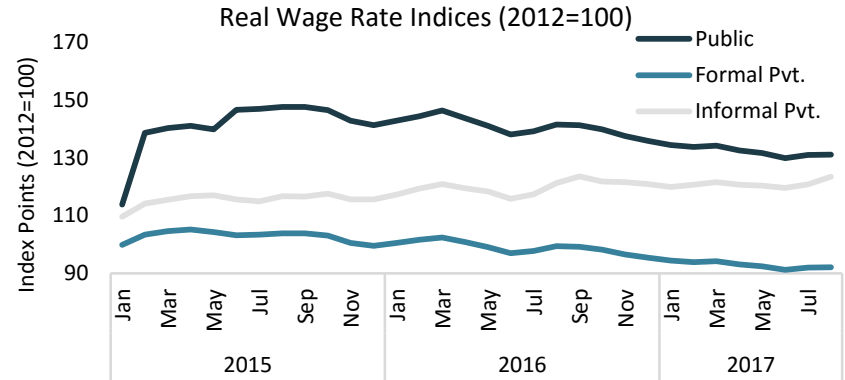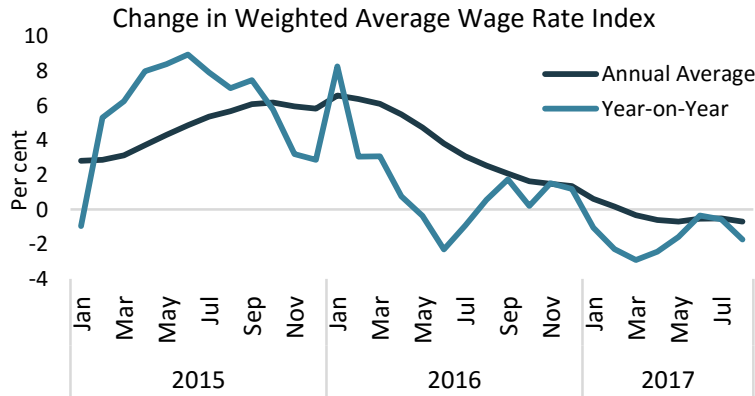
INFLATION EXPECTATIONS

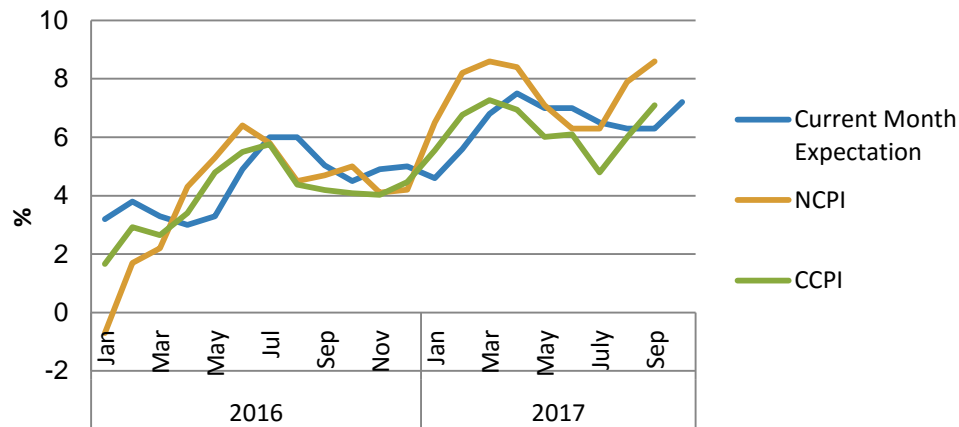| Month	Expected Inflation Rate (As per October 2017 Survey)	
	Corporate Sector	Household Sector
Oct-17	7.2	7.5
Jan-18	7.0	8.7
Apr-18	6.9	10.0
Oct-18	6.8	10.7

NCPI &CCPI Movements and Current Month Expectation

Reasons for Inflation Expectations

Corporate Sector: Responses are collected through e-mails from LCBs and LSBs, Finance Companies, Primary Dealers, Insurance Companies, Member Companies of the Ceylon Chamber of Commerce and Companies listed in the Colombo Stock Exchange.

Household Sector: Responses are collected through group interviews by visiting of randomly selected Public Sector Institutions and by interviewing persons visiting the EPF department.

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

REAL ESTATE CONDITIONS

Land Price Index

Semi-annual
covering Colombo District Data from
the Valuation Department.
Covers Residential, Commercial and
Industrial categories
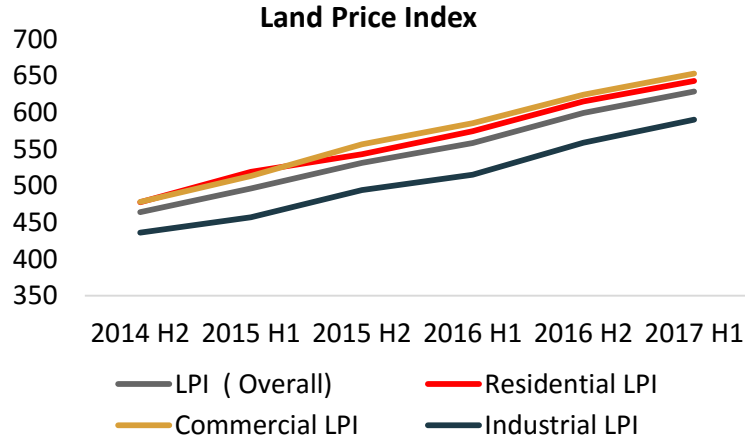Compiled since 1998
(base period is 1998)

Property Price Index

Monthly
publicly available information
(Advertisements).
Covers Condominiums in Colombo District
Hedonic Double Imputation Fisher Price Index
Compiled since January 2017
(base period is January 2017)

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
**CENTRAL BANK OF SRI LANKA**

Property Price Indices

Land Price Index (LPI) covering Residential, Commercial and Industrial lands in five Divisional Secretariat divisions in Colombo District

Land Price Index

Y-O-Y increase -2017H1	
Residential LPI	11.9%
Commercial LPI	11.6%
Industrial LPI	14.6%
Overall LPI	12.6%

Source: Colombo District Secretariat

Residential Property Price Index (RPPI) covering condominiums in Colombo District

Residential Property Price Index
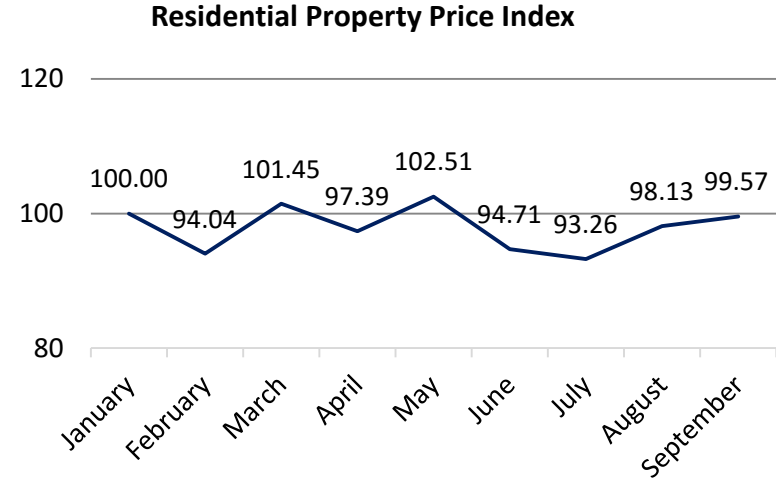
The RPPI is a Hedonic Double Imputation Fisher type price index, calculated following international best practices. The index is compiled using data obtained by web advertisements on condominium property sales, using convenient sampling.

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

Refinements

IES Refinements (sample and questionnaire)

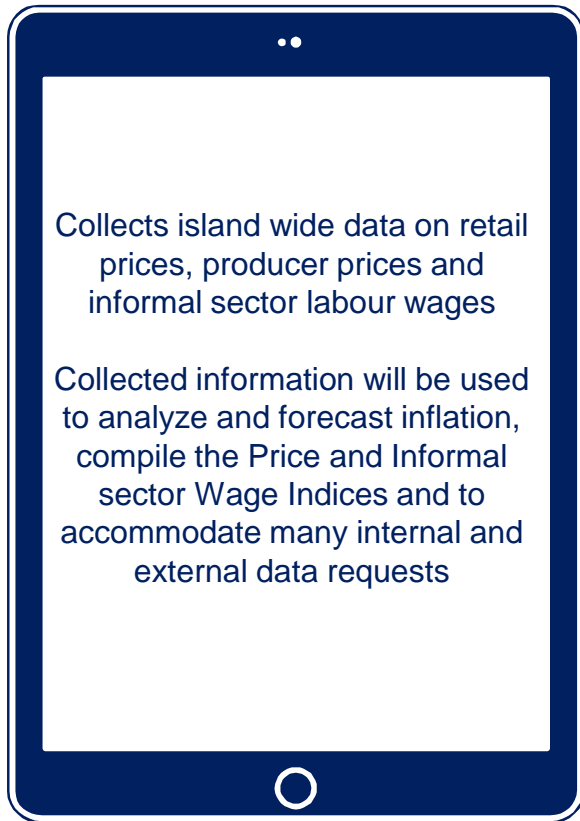| Sector	Past Practices	Current Practice
Corporate Sector	Fixed outdated sample of companies who responded continuously. Sample was biased towards financial sector organizations	1. Sample is a Stratified Random Sample of the corporate sector 2. Sample frame is revised from time to time to incorporate new additions
Household Sector	1. Visit small business holders in Pettah area 2. Visit Private Sector Organizations and collect responses through group interviews 3. Email corporate sector group to request employees to respond	Sample consists of • Public Sector Employees (surveyed through group interviews by visiting the institutions) • Private Sector Employees who visit the Employees' Provident Fund
Academia		Newly added category. University lecturers in Economics, Management and Commerce streams are considered.

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

Refinements to the CWDCS

Existing System

WPI   CPI
WRI   PGDP
SLPI

STATISTICS DEPARTMENT DATABASE

NCPI Forecasting
WRI   PGDP
SLPI

Revamped System

Existing System	
Retail Prices	Twice a Month / Monthly / Quarterly
Producer Prices	Monthly
Informal Sector Wages	Monthly

Manually

106 Teacher Investigators

3-5 centers from each district

Revamped System	
Retail Prices	Weekly / Monthly / Quarterly
Producer Prices	Monthly
Informal Sector Wages	Monthly

Via Tablet Computers

53 Teacher Investigators

2-3 centers from each district

CWDCS TABLET PROJECT

Collects island wide data on retail prices, producer prices and informal sector labour wages

Collected information will be used to analyze and forecast inflation, compile the Price and Informal sector Wage Indices and to accommodate many internal and external data requests

53
Teacher
Investigators

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

PROPERTY PRICE INDICES REVOLUTION

Land Price Index

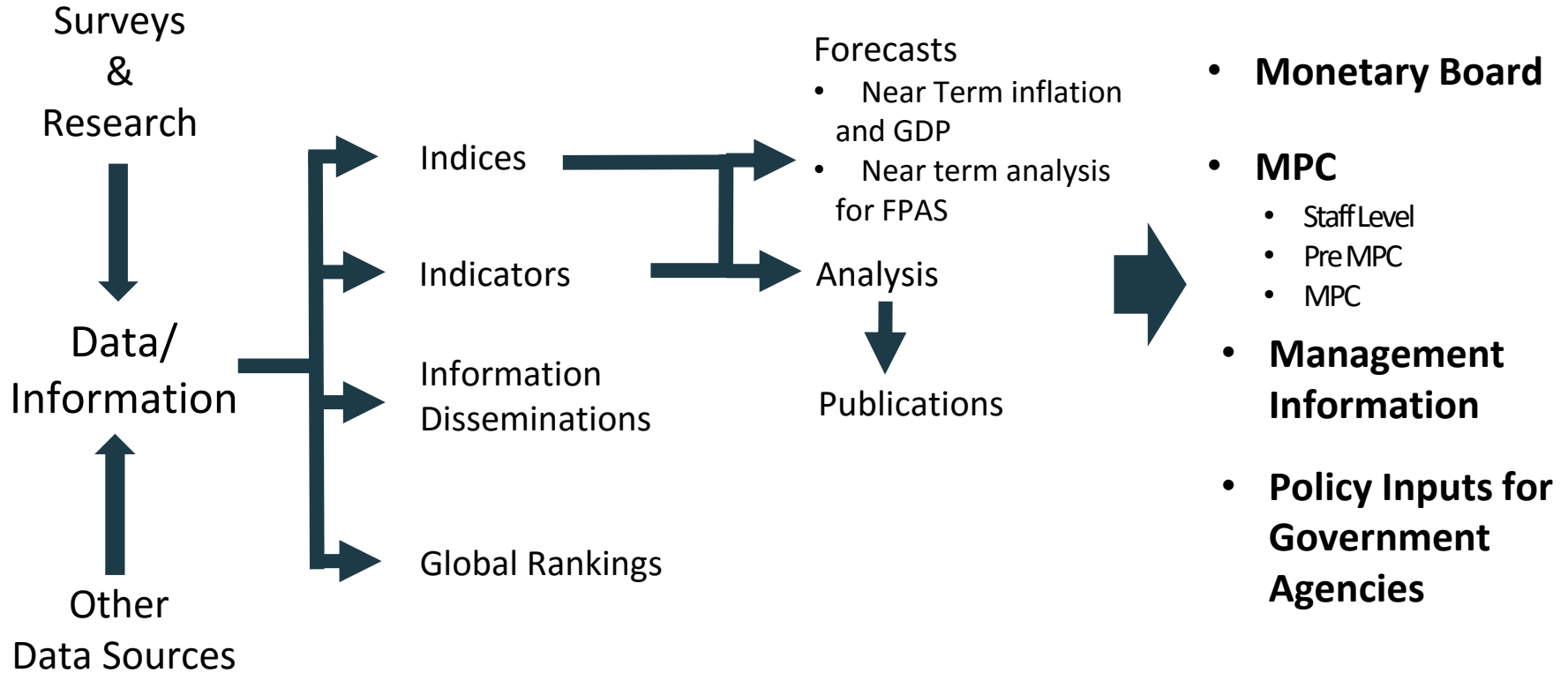|	Initiated Method	Current Status	Future Developments
Data Source	· Valuation Department	· Valuation Department	· Valuation Department · Land Registry
Coverage	· 5 out of 13 Divisional Secretariats of Colombo District	· Liaising with Valuation Department to obtain data for all Divisional Secretariats of Colombo District	· All Districts
Compilation of Indices	· Laspeyres Price Index Consider 1998 as the base period	· Laspeyres Price Index Rebasing arrangements to consider 2016 1st half as the base period	· Hedonic Regression based Price Index
Frequency	· Bi-annually	· Bi-annually	· Monthly

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

Residential Property Price Index

	Initiated Method	Current Status	Future Developments
Data Source	• Publicly Available Information	• Publicly Available Information • Survey with Condominium Property Developers	• Survey with Condominium Property Developers • Land Registry • Condominium Management Authority
Coverage	• Colombo District	• Colombo District	• All Districts
Compilation of Indices	• Hedonic Characteristic based Laspeyres Price Index	• Hedonic Double Imputation Fisher Price Index	• Hedonic Double Imputation Fisher Price Index
Frequency	• Monthly	• Monthly	• Monthly

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

Role of the Statistics Department

Surveys & Research

→ Data/Information

Other Data Sources

- Indices
- Indicators
- Information Disseminations
- Global Rankings

Forecasts
- Near Term inflation and GDP
- Near term analysis for FPAS

Analysis

Publications

- **Monetary Board**

- **MPC**
  - Staff Level
  - Pre MPC
  - MPC

- **Management Information**

- **Policy Inputs for Government Agencies**

ශ්‍රී ලංකා මහ බැංකුව
இலங்கை மத்திய வங்கி
CENTRAL BANK OF SRI LANKA

Future developments

FORECAST KEY MACROECONOMIC VARIABLES

NEW INDEX ON PRIVATE SECTOR HEALTH SERVICES

Conduct the quarterly survey to capture the monthly trends in activities in private sector health services

NEW INDEX TO CAPTURE DEVELOPMENTS IN RETAIL SECTOR

Develop a supermarket retail sales index on a quarterly basis in order to track the developments in economic activities in the retail sector

UPGRADE/IMPROVE EXISTING METHODOLOGIES

Develop a Dynamic Factor model to forecast short term GDP

Forecast price trends using data from revamped CWDCS

Improve the existing methodology of inflation forecasting

COMPILE INDICES, BUSINESS SENTIMENTS AND PROVINCIAL STATISTICS

ENHANCE THE PROCESS OF COMPILATION OF WAGE RATE INDICES

New Wage Rate Indices for the Formal Private Sector and Semi Government Sector

Analysis of PMI and BOS wage related sub-indices as alternatives to monitor wage movements

NEW FORMAL PRIVATE SECTOR EMPLOYMENT INDEX

New index to monitor formal private sector employment trends using EPF data

Analysis of PMI and BOS employment related sub-indices as alternatives to monitor employment trends

COMPILE INDICES, BUSINESS SENTIMENTS AND PROVINCIAL STATISTICS

COMPILE A WEEKLY SUPER MARKET PRICE INDEX

A new super market price index to be constructed to monitor price trends on a weekly basis

Compile an imported goods price index using the data from super markets

COMPILE PRODUCTION SENTIMENT INDICES FOR VOLATILE FOOD ITEMS

Compile indices that reflect month-on-month production level changes using data from the revamped Early Warning System

IMPROVE/INTRODUCE REAL ESTATE PROPERTY PRICE INDICES

Launch a condominium market survey on a quarterly basis

Develop a RPPI based on actual transactions

Rebase/Improve the existing LPI

COLLECT THE DATA/INFORMATION WITH TIMELINESS, ADEQUATE COVERAGE AND QUALITY

IMPROVE INFLATION EXPECTATION SURVEY

IES respondent base coverage will be expanded to peripheries to improve the representativeness and precision of the household sector expectations

INTRODUCE A PMI SURVEY TO MONITOR THE DEVELOPMENTS IN IT/BPO INDUSTRY

Design and launch a IT/BPO PMI Survey on a quarterly basis

Compile the indices based on survey findings and build-up the database

Thank You