

Monthly Seasonal Factors of Selected Economic Time Series*

Analysis of seasonal behaviour of economic time series is considered important by the policy makers, as it enables them to differentiate from those behaviours, which are long-run in nature. This article presents the estimated monthly seasonal factors of selected 99 economic/financial time series taken from broad sectors, namely, Monetary and Banking; Price; Industrial Production; External Trade and Services sector, covering the period 2002-03 to 2011-12. The estimated seasonal factors and the variation over the time revealed that seasonal variations of M_3 , Currency in circulation and M_1 declined gradually. However, the seasonal variations of Reserve Money (RM) increased in recent years. For Scheduled Commercial Banks, the seasonal variation of Non-Food Credit and Investments exhibited upward movement in the recent years, but the seasonal variation of Aggregate Deposits decreased. Within Aggregate Deposits, Demand Deposits exhibited higher seasonal fluctuations than Time Deposits. Among the price related series, seasonal variation for WPI-All Commodities remained low and exhibited steady decline in recent years. The variation in seasonality for WPI-Primary Articles was much higher than that of WPI-Manufactured Products. For WPI-Fuel and Power group, no significant seasonality was observed. However, the subgroup of freely priced product (excluding petrol) showed significant seasonal variations. Seasonal variation of CPI-IW was stable in the recent years but consistently higher than in WPI-All Commodities and marginally lower than CPI-AL and CPI-RL. With respect to production data, seasonal variation of IIP-General Index has been increasing steadily over the time. The seasonal peak of IIP-General, sectoral and use-based group indices occurred in March every year. The seasonal trough, however, occurred in different months. Among the use-based classification of IIP, 'Capital Goods' and 'Intermediate Goods' showed the highest and lowest seasonal variations, respectively. During 2011-12, 45 out of 99 select series

had registered their seasonal peak in March. In terms of seasonal variations, over the last five years, the top five series are 'IIP-Office, accounting and computing machinery', 'IIP-Food products and beverages', 'Coal Production', 'WPI-Potatoes', and 'WPI-Onions'; and bottom five series are 'WPI- Manufactured Products', 'WPI-All Commodities', 'WPI-Non Food Manufactured Products', 'WPI-Food Products', and 'WPI-Milk'.

1. Introduction

1.1 Economic time series, when measured at an interval of less than a year, exhibit seasonal fluctuations around its annual trend path. Such repetitive seasonal variations can result from climatic conditions, production cycle characteristics, seasonal nature of economic activity, festivals, vacation practices, etc. While the seasonal variations occur regularly, yet they may vary in magnitude from year to year. Analysis of the direction and magnitude of seasonal fluctuations is useful in interpretation of movements in economic variables over time. Seasonal adjustment, *i.e.*, removal of seasonal effects from a time series, helps to differentiate between the seasonal changes and long-run changes in the variable and therefore, is useful from the policy perspective in understanding the underlying economic phenomenon. Moreover, understanding about the predictable recurring of seasonal fluctuations also allows the economic agents to set up policies or measurements to attenuate the impact. Thus, seasonal ups and downs of some series have significant implications for an economic agent to stabilise the economic activities during the year. Therefore, analysis of seasonal factors of high frequency data has, over the years, become essential for policy design. In this backdrop, monthly seasonal factors for selected economic and financial time series of the Indian economy are regularly published in the Reserve Bank of India Bulletin from 1980 onwards¹.

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¹ Previous article in this series was published in September 2011 issue of the Reserve Bank of India Bulletin.

2. Data Coverage and Methodology

2.1 For estimating and analysing the seasonal factors, 99 monthly economic/financial time series covering broad sectors, namely, Monetary and Banking; Price; Industrial Production; External Trade and Services Sector have been considered in this article as compared with 95 series covered in the previous article published in September 2011 issue of the RBI Bulletin. The variables are categorised as follows (figures in brackets indicate the selected number of series):

- A. Monetary and Banking Indicators (20 series);
- B. Wholesale Price Index (WPI) (29 series);
- C. Consumer Price Index (CPI) (3 series);
- D. Industrial Production (37 series);
- E. Services Sector Indicators (8 series);
- F. External Trade (2 series).

The coverage of the series has changed due to addition of two new series in WPI, one new series in Industrial Production, and six new series relating to Service Sector Indicators, along with the reduction of two series in Monetary and Banking Indicators, two series in Index of Industrial Production (IIP) and one series in External Trade. The list of selected economic/financial time series for various categories of variables along with sources and selected models used for estimating their seasonal factors are given in Annex. The new IIP (base: 2004-05=100) starts from April 2005; hence, linking factor was used to compute back series for the period April 1994 to March 2005 for overall IIP, sectoral and use-based IIP classes. Also, the seasonal factors for five production series of core infrastructure industry sector (the subsector of industrial production, *viz.*, Cement, Steel, Coal, Crude Oil and Petroleum Refinery), along with 'Production of Commercial Motor Vehicles' and 'Production of Passenger Vehicles' have been estimated since April 1994. However, the two series relating to core infrastructure industries, *viz.*, Natural Gas and Fertilizers; and 18 industries based on 2-digit NIC classification in the IIP series were analysed since April 2005 onwards. It may be noted that the seasonal factors for the short series, whose reference period is less than ten years, are likely to get revised in

the later years on account of the changes in the model and recognition of previously undetected breaks².

2.2 Among the price related series, two new series, *viz.*, 'WPI-Non-Food Manufactured Products' and 'WPI-Non-Food Non-Fuel' along with other 27 series belonging to WPI group (with base year 2004-05) were analysed for the period April 1994 to March 2012. Further, the seasonal variations in three CPI series *viz.*, 'CPI-Agricultural Labourers' (base: 1986-87=100), 'CPI-Rural Labourers' (base: 1986-87=100) and 'CPI-Industrial Workers' (base: 2001=100) were also analysed. From the external trade category, two series, *viz.*, Exports and Imports, in US dollar terms were analysed.

2.3 The seasonal factors have been estimated using 'Auto-model' utility function in the X-12-ARIMA software package, developed by the US Bureau of Census³, taking care of major festivals/national holidays as well as trading day effects. The seasonality of the series is further subjected to parametric and non-parametric statistical test procedures for their statistical significance. The monthly seasonal factors (a) for the year 2011-12, (b) the average over the ten years period, for long series; and reference period for short series, as described in para 2.1 and (c) the forecasts for 2012-13, along with the peak and trough values of the seasonal factors and their respective months of occurrence are presented in Table 1. Annual estimates of dispersion in seasonal factors, in terms of range (difference between peak and trough values), over the time, are presented in Table 2. The peak/trough months and classification of variables as per range observed in the seasonal factors during 2011-12, are provided in Table 3 and Table 4, respectively. The list of top-twenty and bottom-twenty series based on the average range of monthly seasonal factors, during the last five years (*i.e.*, 2007-08 to 2011-12), and the corresponding peak and trough months are presented in Table 5. The salient features of observed seasonal factors and their variation over the reference period for some selected series

² Reference: "Guide to Seasonal Adjustment with X-12-ARIMA", Office of National Statistics (ONS), UK.

³ <http://www.census.gov/srd/www/x12a/>

during the last ten years in general, and for 2011-12 in particular, are briefly discussed in the following sections.

3. Salient Features

3.1 Monetary and Banking Aggregates

As part of Monetary and Banking aggregates, 20 important indicators were selected for analysis of the intra-year seasonal variations over the reference period (Table 1).

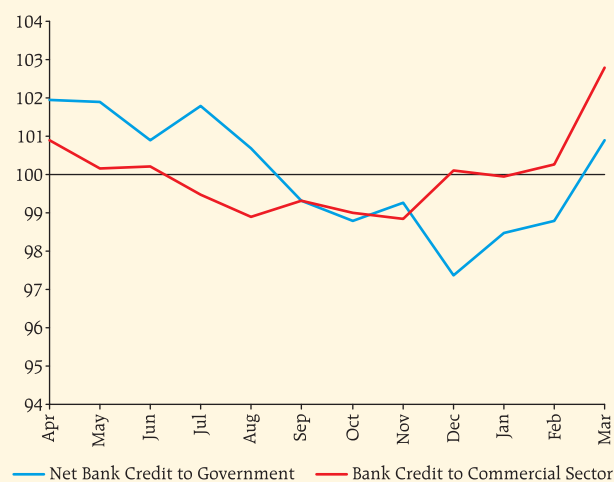
3.1.1 Seasonal Factors during 2011-12

3.1.1.1 The seasonal factors of Reserve Money (RM) and Narrow Money (M_1) had their peak in March, whereas, Broad Money (M_3) had peak in April. The trough of RM, M_1 and M_3 occurred in September, August and November, respectively. The seasonal variation of RM was higher as compared to M_1 and M_3 (Table 1 and Chart 1).

3.1.1.2 Among the sources side of M_3 , Net Bank Credit to Government exhibited seasonal peak and trough in April and December, respectively, whereas, Bank Credit to Commercial Sector had peak and trough in March and November, respectively (Table 1 and Chart 2).

3.1.1.3 During 2011-12, the seasonal factors of 'Currency with the Public', 'Currency in Circulation' and 'Notes

Chart 2: Seasonal Factors of Net Bank Credit to Government and Bank Credit to Commercial Sector for 2011-12



in Circulation' showed similar movements with seasonal peak and trough occurring in May and September, respectively (Table 1 and Chart 3).

3.1.1.4 During 2011-12, the peak of Aggregate Deposits and Non-Food Credit of Scheduled Commercial Banks (SCBs) occurred during April and March, respectively, whereas, the trough occurred during December and November, respectively (Table 1 and Chart 4). The seasonal peak and trough of Investments (SCBs) occurred during August and March, respectively.

Chart 1: Seasonal Factors of Broad Money (M_3), Narrow Money (M_1) and Reserve Money (RM) for 2011-12

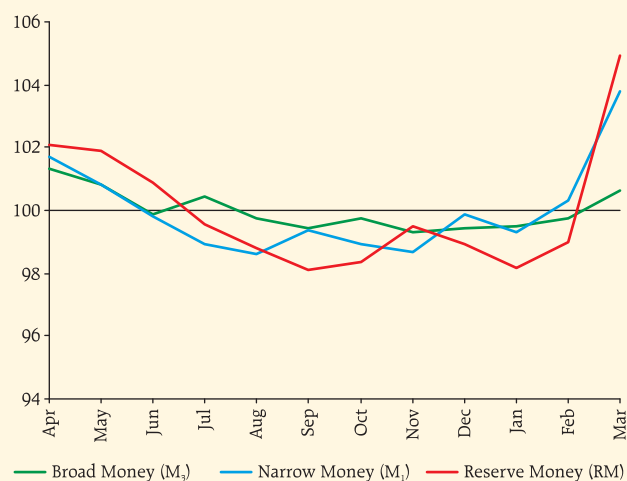


Chart 3: Seasonal Factors of Currency in Circulation, Currency with the Public, and Notes in Circulation for 2011-12

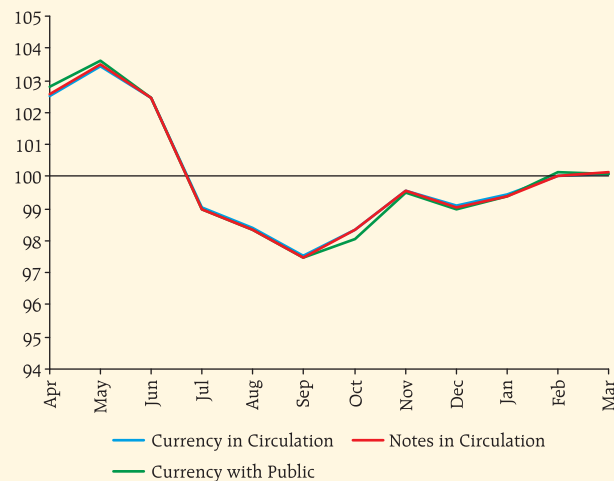
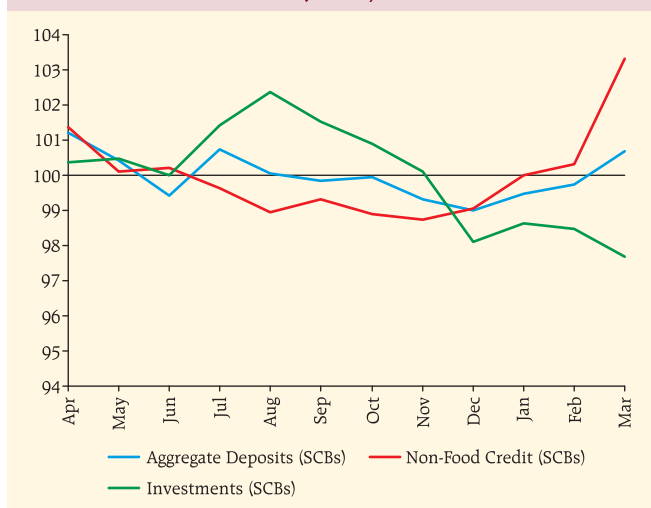


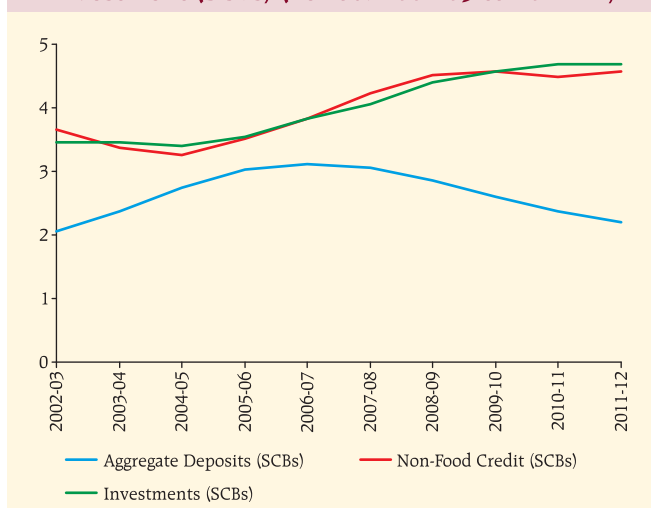
Chart 4: Seasonal Factors of Aggregate Deposits (SCBs), Non-Food Credit (SCBs) and Investments (SCBs) for 2011-12



3.1.2 Seasonal Variation during Last Ten Years (2002-03 to 2011-12)

3.1.2.1 Over the years, the intra-year seasonal variations, measured in terms of range, *i.e.*, the difference between peak and trough values of seasonal factors, of Non-Food Credit (SCBs) and Investments (SCBs) exhibited similar movements; having reached a low during 2004-05, and an upward movement thereafter. However, the seasonal variation of Aggregate Deposits (SCBs) decreased since 2007-08 (Table 2 and Chart 5). The seasonal variation

Chart 5: Ranges of Seasonal Factors of Aggregate Deposits (SCBs), Non-Food Credit (SCBs) and Investment (SCBs) (Period: 2002-03 to 2011-12)



in Aggregate Deposits (SCBs) was lower as compared with those in Non-Food Credit (SCBs) and Investments (SCBs) during the reference period.

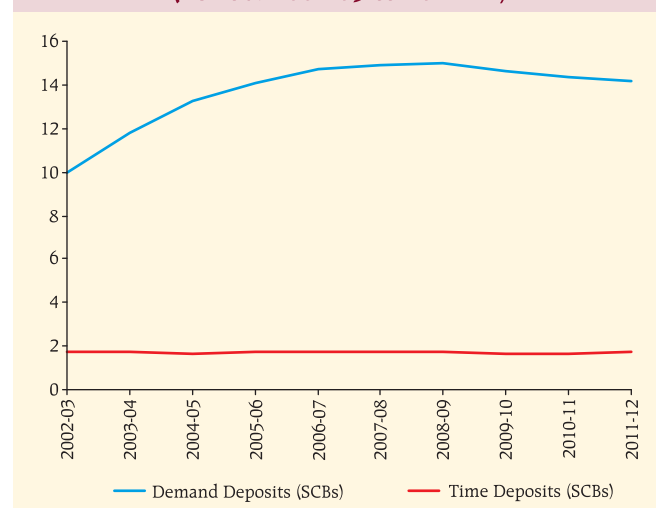
3.1.2.2 Seasonal variation in M_3 has been observed to be lower than that for Currency in circulation, M_1 and RM over the years. After showing an upward movement till 2006-07, the seasonal variations of M_3 and M_1 declined gradually; while RM tended to increase after a dip in 2007-08. The average range of seasonal factors in Aggregate Deposits (SCBs) was relatively lower, as compared with M_3 (Table 2).

3.1.2.3 During 2002-03 to 2011-12, Demand Deposits of SCBs have shown higher seasonal fluctuations than that of Time Deposits, which remain stable within the narrow band of 1.6 to 1.8 (Table 2 and Chart 6). The seasonal factors of Demand Deposits rose gradually till 2008-09 and started declining steadily thereafter.

3.2 Price Indices

3.2.1 In order to investigate the seasonal movements of the price indices over the reference period, both Wholesale Price Indices (WPI) and Consumer Price Indices (CPI) were considered. From WPI (base: 2004-05) group, 29 important series (commodities) were selected including food articles like cereals, wheat, rice and pulses. Seasonal factors for major groups like Primary Articles, Manufactured Products and Non-Food

Chart 6: Ranges of Seasonal Factors of Demand Deposits (SCBs) and Time Deposits (SCBs) (Period: 2002-03 to 2011-12)



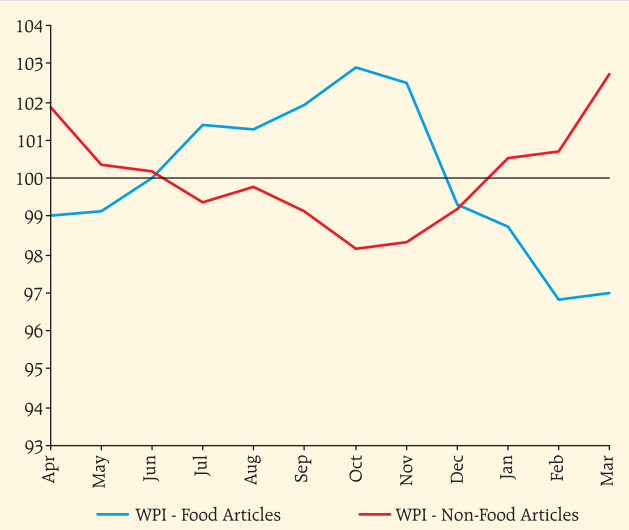
Manufactured Products were also estimated. As regards CPI measure, three series based on occupations, viz., CPI-Agricultural Labourers (CPI-AL), CPI-Rural Labourers (CPI-RL) and CPI-Industrial Workers (CPI-IW) were selected. The new series on CPI-Urban, CPI-Rural and All India CPI could not be considered due to non-availability of long time series data.

3.2.2 Seasonal Factors during 2011-12

3.2.2.1 The seasonal factors of WPI All Commodities (base: 2004-05=100) registered peak in April and trough in February. In case of the two main groups viz., 'Manufactured Products' and 'Primary Articles', the peak occurred in April and November, respectively, whereas the trough occurred during December and February, respectively. The seasonal variation in 'Manufactured Products' prices was relatively much lower, as compared to 'Primary Articles'. The WPI Non-Food Manufactured Products showed similar seasonal movement as that of WPI-Manufactured Products, but displayed higher seasonality than WPI-Manufactured Products during February and March. The seasonal peak and trough of WPI-Non-Food Manufactured Products occurred in April and December, respectively (Table 1 and Chart 7).

3.2.2.2 Within the WPI-Primary Articles group, the seasonal peak of the prices for Food Articles and Non-Food Articles occurred during October and March,

Chart 8: Seasonal Factors of WPI of Food Articles and Non-Food Articles for 2011-12



respectively, whereas, the trough occurred in February and October respectively (Table 1 and Chart 8). During July to November, the seasonal factors of WPI-Non Food Articles were observed to be lower than that of WPI-Food Articles. The seasonal variation of WPI-Food Articles was higher than that of WPI-Non-Food Articles during the year.

3.2.2.3 Among the selected protein group in the WPI basket (comprising pulses, milk, egg, meat and fish), the seasonal peak and trough of 'WPI-Milk' occurred in July and March, respectively. In case of 'WPI-Egg,

Chart 7: Seasonal Factors of WPI All Commodities, Primary Articles, Manufactured Products and Non-Food Manufactured Products for 2011-12

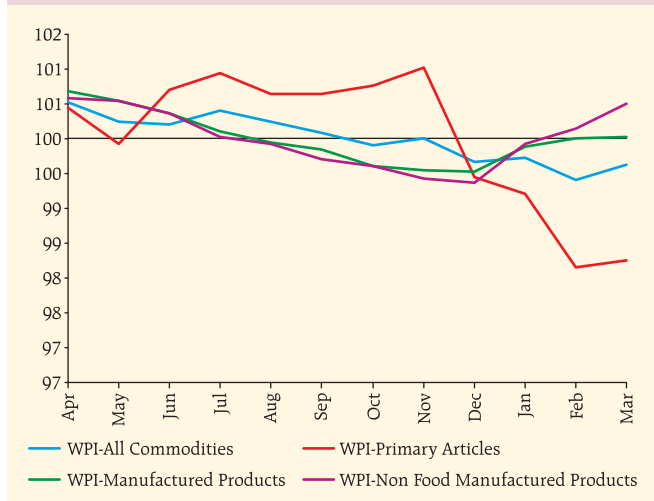


Chart 9: Seasonal Factors of WPI of Milk and 'Egg, Meat and Fish' for 2011-12

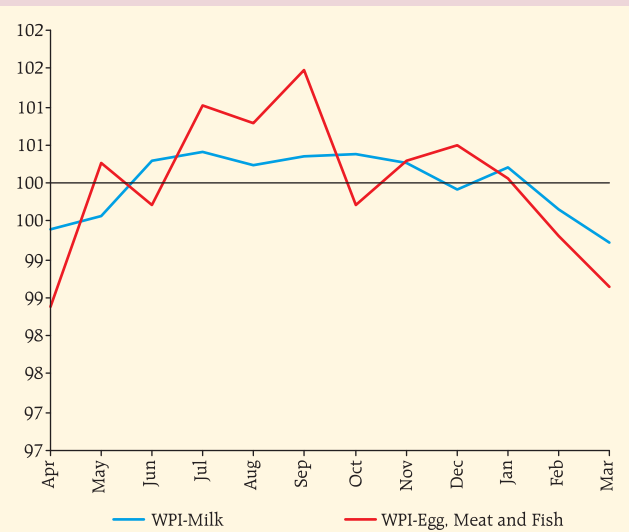
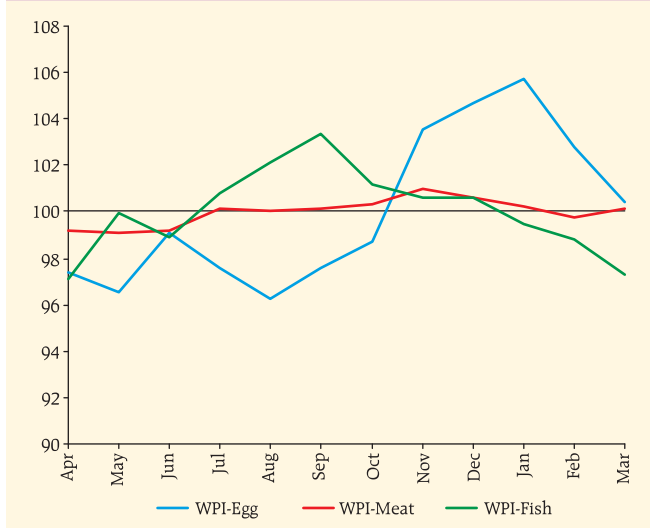


Chart 10: Seasonal Factors of WPI of Egg, Meat and Fish for 2011-12



Meat and Fish', the peak and trough were observed in September and April, respectively (Table 1 and Chart 9).

3.2.2.4 Within the protein items of 'WPI-Egg, Meat and Fish' group, the prices of Egg and Fish revealed opposite seasonal movements. The seasonal peak of WPI-Egg and WPI-Fish occurred in January and September, respectively, whereas, the trough occurred in August and April, respectively. WPI-Meat had the seasonal peak and trough in November and May, respectively (Table 1 and Chart 10).

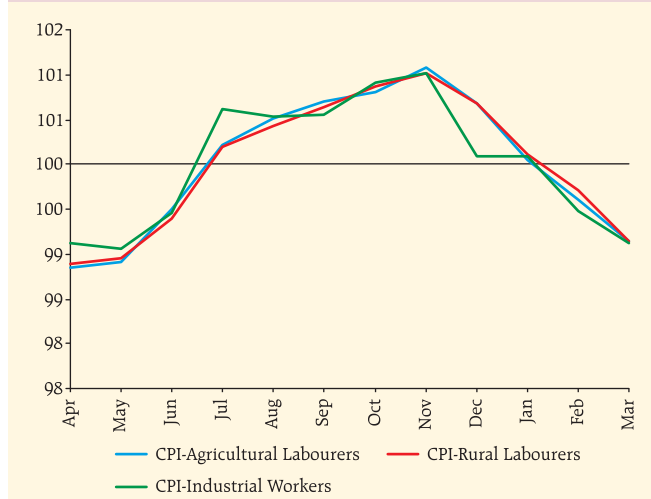
3.2.2.5 During 2011-12, the Consumer Price Index (CPI) for both Agricultural and Rural Labourers observed similar pattern of seasonal movements. CPI-AL, CPI-RL and CPI-IW had seasonal peak in November, whereas, the trough for CPI-AL and CPI-RL occurred in April and for CPI-IW in May (Table 1 and Chart 11).

3.2.3 Seasonal Variation during Last Ten Years (2002-03 to 2011-12)

3.2.3.1 The range (*i.e.*, difference between peak and trough values) of seasonal factors of WPI-All Commodities increased from 1.1 in 2002-03 to 1.5 in 2007-08, and thereafter, witnessed a steady decline to 1.1 again in 2011-12 (Table 2).

3.2.3.2 Between the two broad groups of WPI-All Commodities, *viz.*, WPI-Primary Articles and WPI-

Chart 11: Seasonal Factors of CPI for Agricultural labourers, Rural Labourers and Industrial Workers for 2011-12



Manufactured Products, the range of seasonal factors for Primary Articles prices was more than double the seasonal fluctuations in the WPI-Manufactured Products. However, the intra-year seasonal variation in these two price series had narrowed down substantially during the last three years (Table 2 and Chart 12). Seasonal variation in WPI-Manufactured Products group was low but has been showing an increasing trend due to seasonal behavior of WPI-Food products. For WPI-Fuel and Power group, no significant seasonality was observed. However, the subgroup of freely priced

Chart 12: Ranges of Seasonal Factors of WPI of Primary Articles and Manufactured Products (Period: 2002-03 to 2011-12)

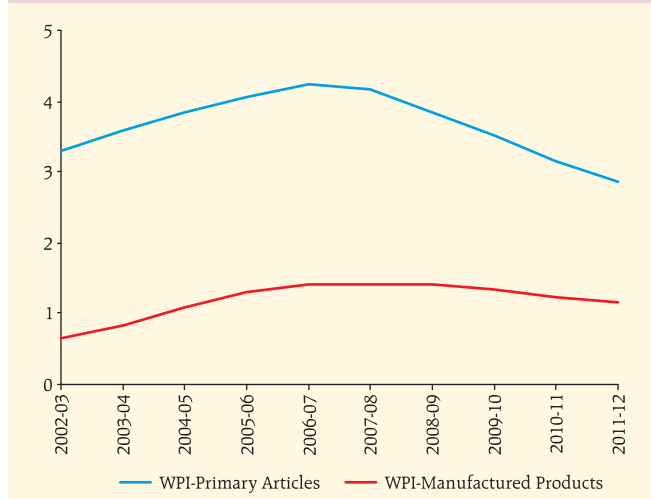
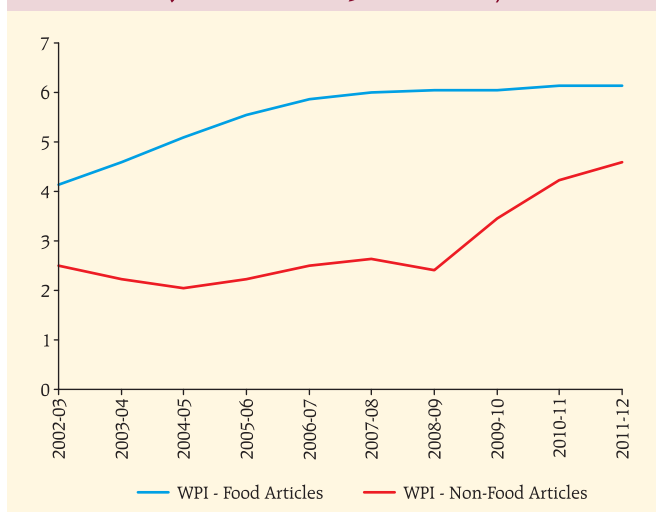


Chart 13: Ranges of Seasonal Factors of WPI of Food Articles and Non-Food Articles (Period: 2002-03 to 2011-12)



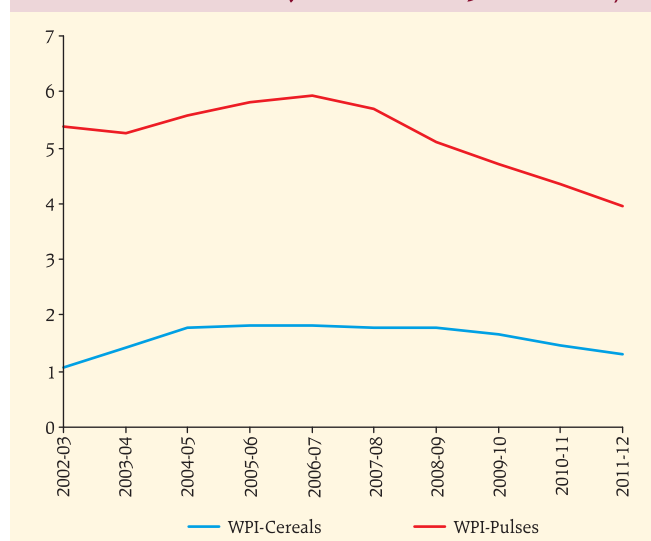
product (ex-petrol) showed significant seasonal variations.

3.2.3.3 Within the Primary Articles group, the intra-year seasonal variation in WPI of 'Food Articles' over the period 2002-03 to 2011-12 have increased from 4.1 in 2002-03 to 6.1 in 2011-12. Though the seasonal variation of WPI-Non Food Article was lower than that of Food Article over the reference period, the difference has narrowed since 2008-09 (Table 2 and Chart 13).

3.2.3.4 Within the Food Articles, the Pulses group displayed more seasonal variation than the Cereals group. From 2009-10 onwards, the WPI-Cereals showed marginal decline in seasonal variation after remaining stable at around 1.8 during 2004-05 to 2008-09. However WPI-Pulses showed declining trend from 2007-08 onwards (Table 2 and Chart 14).

3.2.3.5 Among the Food Articles group, the prices of 'Fruits and Vegetables' group exhibited high seasonal variation, with the average range of 18.3 during the last ten years period. The seasonal variation of 'WPI-Fruits and Vegetables' declined from 19.4 in 2005-06 to 17.5 in 2011-12. Among the 'Fruits and Vegetables' group, the seasonal variation of 'Potatoes' prices showed an increasing trend till 2008-09 and declined steadily thereafter. In the case of 'Onions' price, the seasonal variation increased steadily from 2006-07 and exceeded the variation in 'Potatoes' in the last two years (Table 2 and Chart 15).

Chart 14: Ranges of Seasonal Factors of WPI of Cereals and Pulses (Period: 2002-03 to 2011-12)



3.2.3.6 In the case of CPI for Agricultural and Rural labourers, similar movement in seasonal variations was observed during the last ten years with CPI-Agricultural labourers having slightly higher variation than the CPI-Rural Labourers. The seasonal variation of CPI-IW was consistently higher than that of WPI-All Commodities. The difference between the seasonal variations of the two series had however, widened during the period 2009-10 to 2011-12. Among the four price series, the seasonal variation in CPI-AL was observed to be the

Chart 15: Ranges of Seasonal Factors of WPI of Potatoes and Onions (Period: 2002-03 to 2011-12)

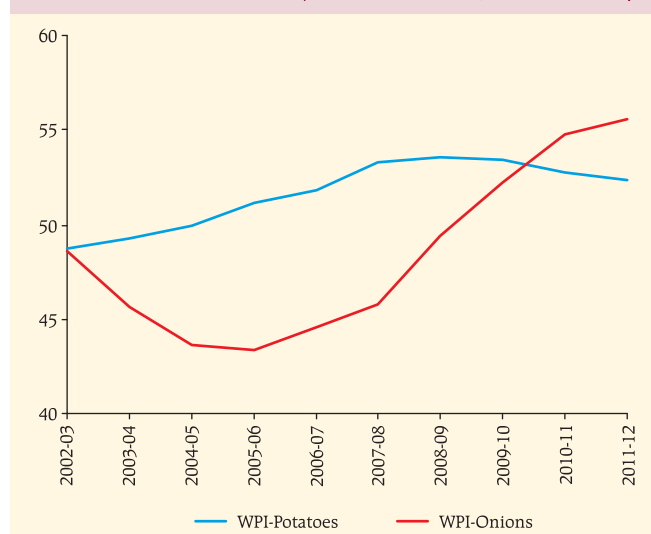
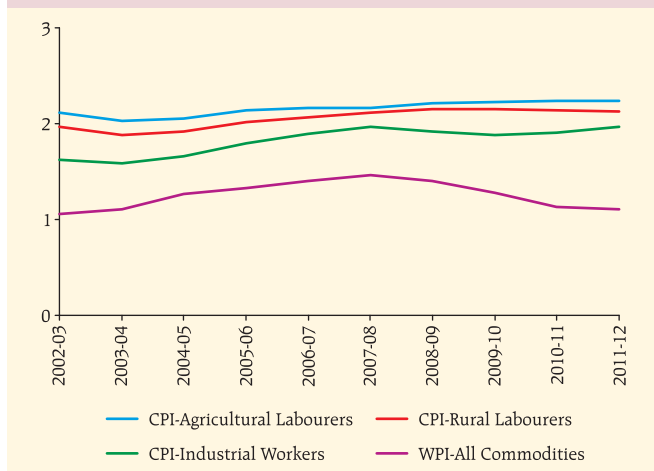


Chart 16: Ranges of Seasonal Factors of CPI for Agricultural Labourers (AL), Rural Labourers (RL), Industrial Workers (IW) and WPI-All Commodities (Period: 2002-03 to 2011-12)



highest and WPI-All Commodities the lowest (Table 2 and Chart 16).

3.3 Index of Industrial Production (IIP)

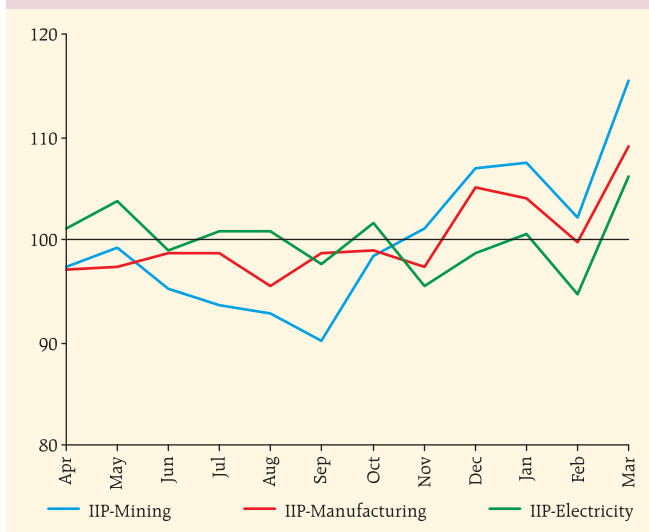
3.3.1 In the case of IIP (base: 2004-05=100), both sectoral and use-based classifications were considered for analyzing the intra-year seasonal variation for the period 'April 2002 to March 2012'. Among the 22 manufacturing industry groups of sectoral classification of IIP, 18 industry groups, exhibited significant seasonality during the reference period.

3.3.2 Seasonal Factors during 2011-12

3.3.2.1 The seasonal factors for IIP-General Index had observed its peak in March and trough in August during 2011-12 (Table 1). The seasonal peak of most of the industrial production series occurred in March, whereas the seasonal trough varied over February, May, August and September. Manufacturing sector, the major component of IIP, exhibited its seasonal peak in March during 2011-12, and trough in August (Table 1 and Chart 17). The other two sectors, viz., Mining and Electricity, exhibited peak in March and trough in September and February, respectively.

3.3.2.2 In respect of use-based classification, IIP of Basic Goods, Capital Goods and Intermediate Goods industries exhibited peak in March but these industries exhibited trough in the months of September, May,

Chart 17: Seasonal Factors of IIP- Mining, Manufacturing and Electricity for 2011-12



and February, respectively (Table 1 and Chart 18). Among these three industrial groups, the seasonal fluctuation was highest in respect of Capital Goods.

3.3.2.3 The peak of IIP Consumer Durable and Consumer Non-Durable Goods occurred in March and December, respectively, whereas, trough occurred in August and October, respectively (Table 1 and Chart 19).

3.3.2.4 During 2011-12, Cement and Steel production exhibited high degree of seasonal fluctuations. The

Chart 18: Seasonal Factors of IIP Basic Goods, Capital Goods and Intermediate Goods for 2011-12

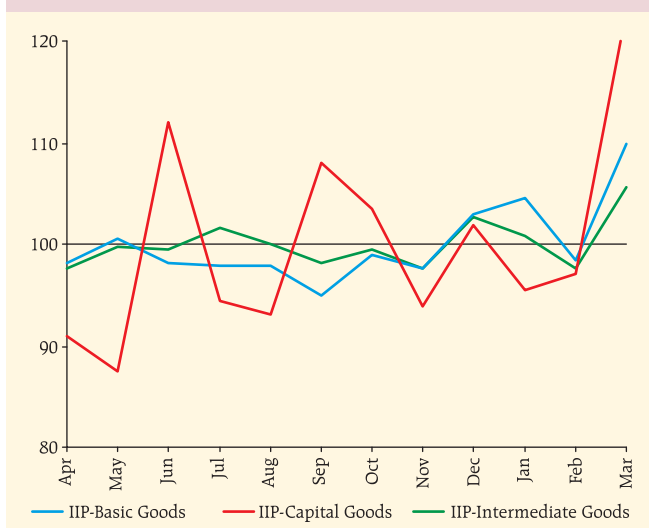
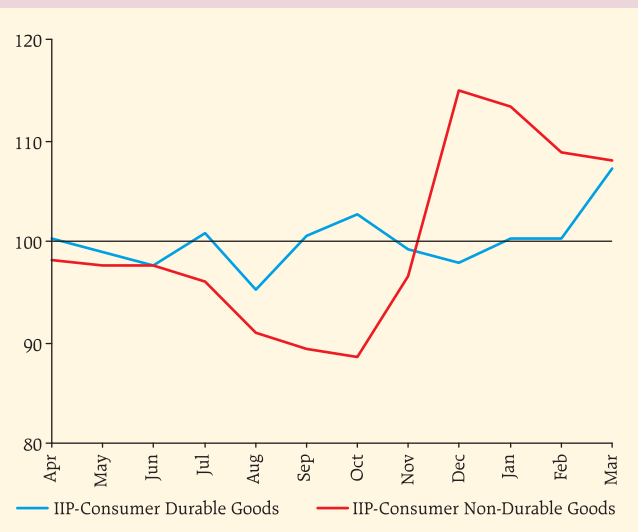


Chart 19: Seasonal Factors of IIP Consumer Durable and Non-Durable Goods for 2011-12

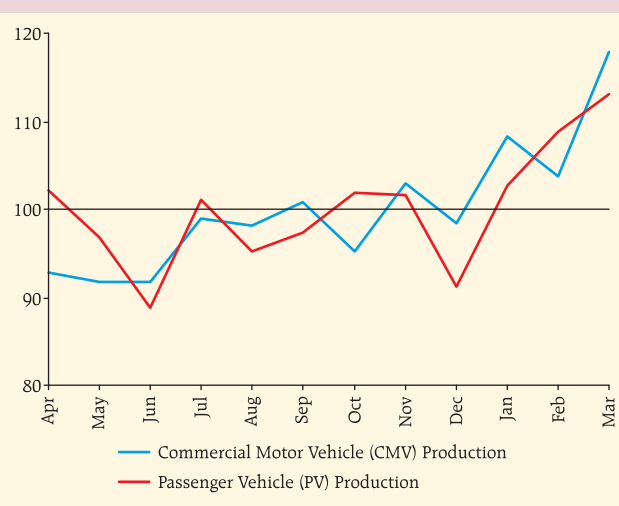


seasonal peak of both the series occurred in March, whereas, the trough occurred in September and April, respectively (Table 1 and Chart 20).

3.3.2.5 The seasonal peak of 'Commercial Motor Vehicle Production' and 'Passenger Vehicle Production' occurred in March, whereas, the trough occurred in May and June, respectively. The seasonal factors of both the series exhibited increasing trend during December to March months (Table 1 and Chart 21)

3.3.2.6 During 2011-12, the seasonal factors of Coal Production and Petroleum Refinery Production had

Chart 21: Seasonal Factors of Productions of 'Commercial Motor Vehicles' and 'Passenger Vehicles' for 2011-12



their seasonal peak and trough in March and September, respectively; whereas, for Crude Oil Production the seasonal peak and trough occurred in December and February, respectively. Crude Oil Production and Petroleum Refinery Production revealed similar pattern of seasonal movements and the seasonal variation of Coal Production was higher than that of the other two series (Table 1 and Chart 22).

3.3.2.7 The seasonal movement of Fertiliser Production exhibited peak and trough in December and April, respectively. In case of Natural Gas Production, the

Chart 20: Seasonal Factors of Productions of 'Cement', and 'Steel' for 2011-12

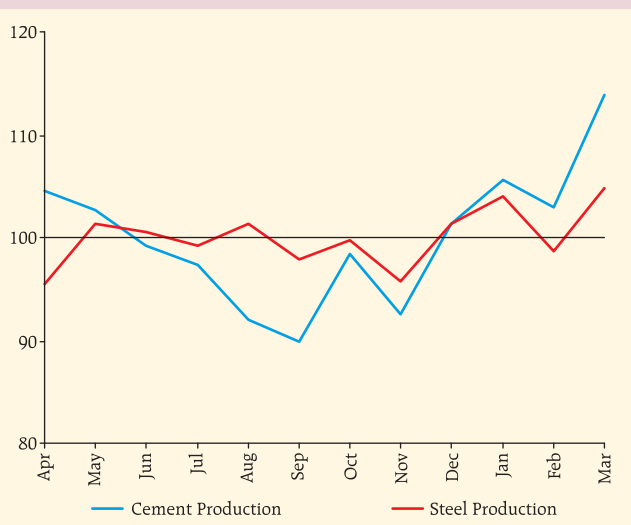


Chart 22: Seasonal Factors of Productions of 'Coal', 'Crude Oil' and 'Petroleum Refinery Products' for 2011-12

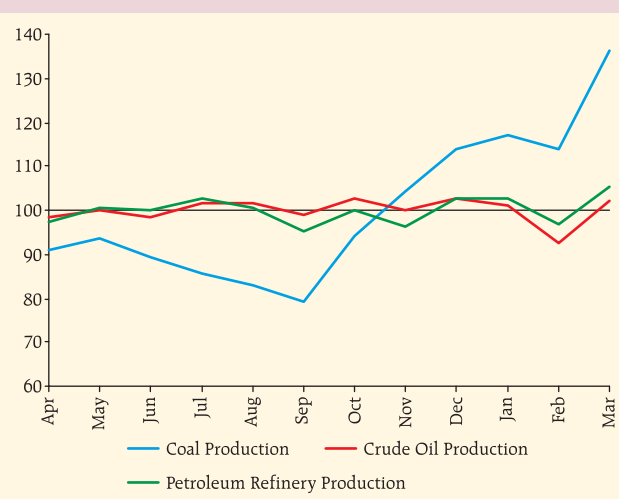
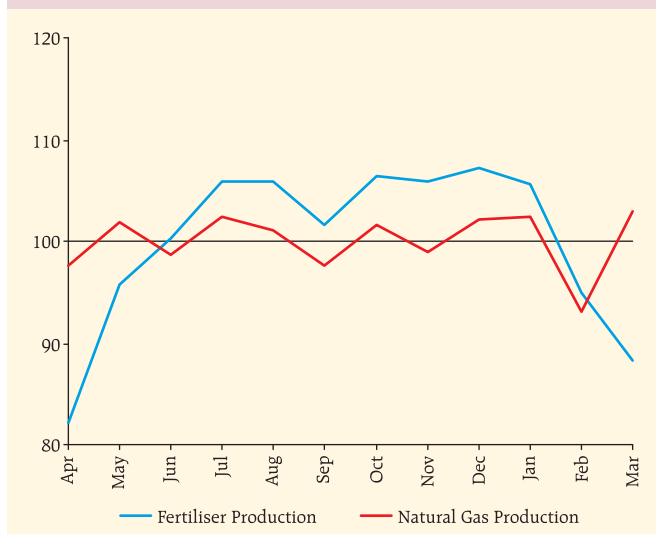


Chart 23: Seasonal Factors of Productions of 'Fertiliser' and 'Natural Gas' for 2011-12



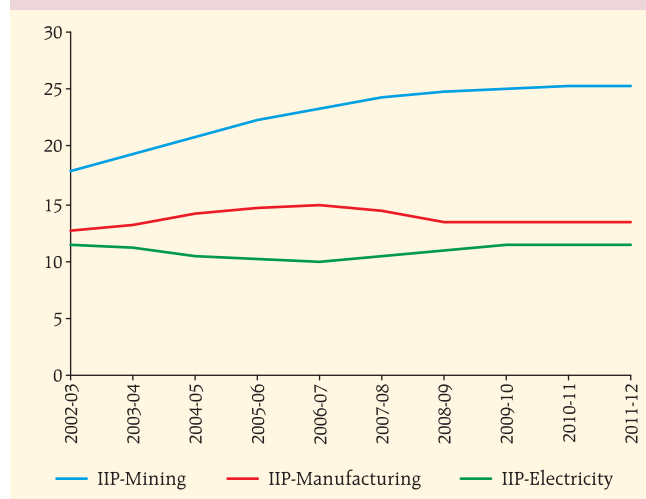
seasonal peak and trough occurred in March and February, respectively (Table 1 and Chart 23). The seasonal factors of Fertiliser Production were higher than that of Natural Gas Production except during the months of March to May.

3.3.3 Seasonal Variation during Last Ten Years (2002-03 to 2011-12)

3.3.3.1 Seasonal variation of IIP-General Index exhibited upward movement during the reference period. During the last five years *i.e.*, from 2007-08 to 2011-12, the range of seasonal variation varied within a narrow band of 13.8 to 14.0. Among the three major sectors of IIP, *viz.*, Mining, Manufacturing and Electricity, IIP-Mining exhibited the highest seasonal variation, whereas, IIP-Electricity exhibited the lowest (Table 2 and Chart 24). During the period 2002-03 to 2007-08, the seasonal variation of IIP-Mining increased marginally and remained stable thereafter. However, the seasonal variations of IIP-Manufacturing industries had shown moderate decline during the last five years.

3.3.3.2 Among the use-based classification of industries, 'Intermediate Goods' experienced the lowest seasonal variations throughout the reference period, sans for 2008-09. In contrast, IIP-Capital Goods exhibited the highest seasonal variations in all the years under reference (Table 2 and Chart 25). Seasonal variations

Chart 24: Ranges of Seasonal factors of IIP Mining, Manufacturing and Electricity (Period: 2002-03 to 2011-12)



in IIP for Basic goods, Capital goods and Consumer goods (including both Durable and Non-durable) increased in recent years.

3.3.3.3 The seasonal variations of production of 'Cement' and 'Steel' exhibited opposite movements, during 2002-03 to 2011-12 with higher magnitude of seasonality in Cement than in Steel (Table 2 and Chart 26). The widening of gap between the seasonal variations of the two series during the last five years was also evident.

Chart 25: Ranges of Seasonal Factors of IIP – Use-based Classification of Industries (Period: 2002-03 to 2011-12)

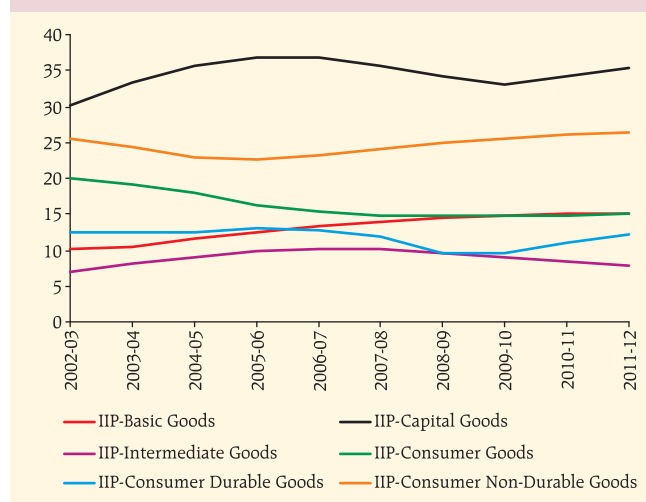


Chart 26: Ranges of Seasonal Factors for Productions of 'Cement' and 'Steel' (Period: 2002-03 to 2011-12)

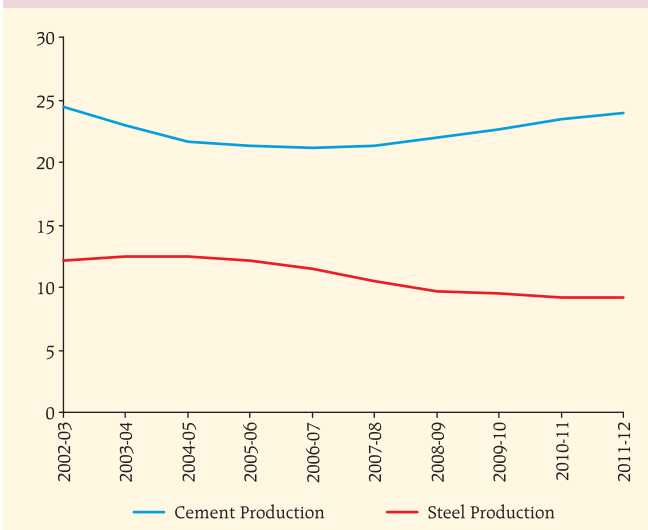
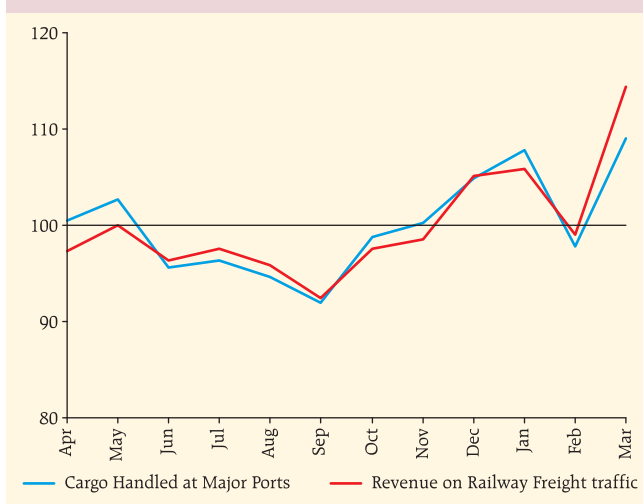


Chart 28: Seasonal Factors of 'Cargo Handled at Major Ports' and 'Revenue on Railway Freight Traffic' for 2011-12



3.3.3.4 The seasonal variations in 'Production of Commercial Motor Vehicles', decreased consistently over the reference period, whereas, the seasonal variation of 'Production of Passenger Vehicles' which was decreasing since 2006-07 showed marginal increase in 2011-12 (Table 2 and Chart 27).

3.4 Services Sector Indicators

3.4.1 Eight Services Sector indicators were considered for analyzing the intra-year seasonal variation for the period 'April 2002 to March 2012'.

3.4.2 Seasonal Factors during 2011-12

3.4.2.1 Seasonal factors in respect of two Services Sector indicators, viz., 'Cargo Handled at Major Ports' and 'Revenue on Railway Freight Traffic' exhibited peak in March, whereas the trough occurred in September (Table 1 and Chart 28).

3.4.2.2 The seasonal peak of sales of 'Commercial Motor Vehicle' and 'Passenger Vehicle' occurred in March; whereas the trough occurred in April and December, respectively (Table 1 and Chart 29). The seasonal

Chart 27: Ranges of Seasonal Factors for Productions of 'Commercial Motor Vehicles' and 'Passenger Vehicles' (Period: 2002-03 to 2011-12)

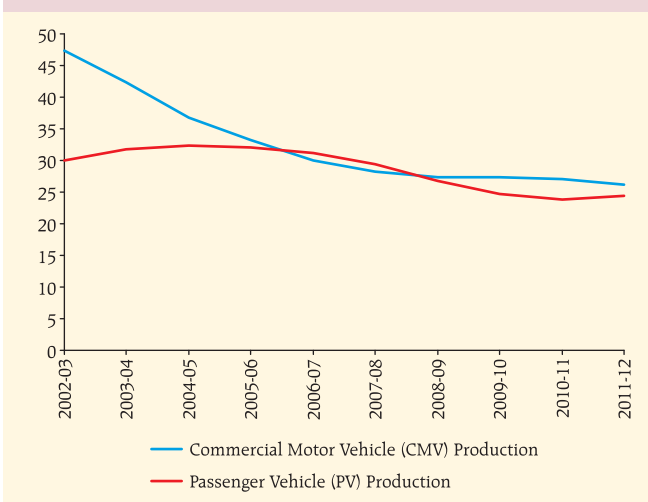


Chart 29: Seasonal Factors of Sales of 'Commercial Motor Vehicles (CMV)' and 'Passenger Vehicles (PV)' for 2011-12

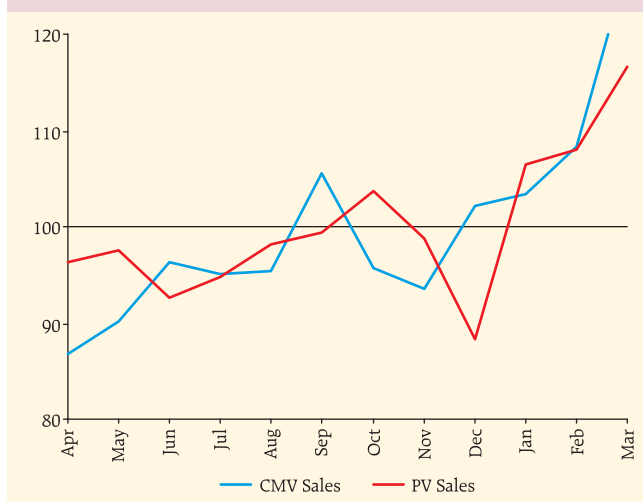
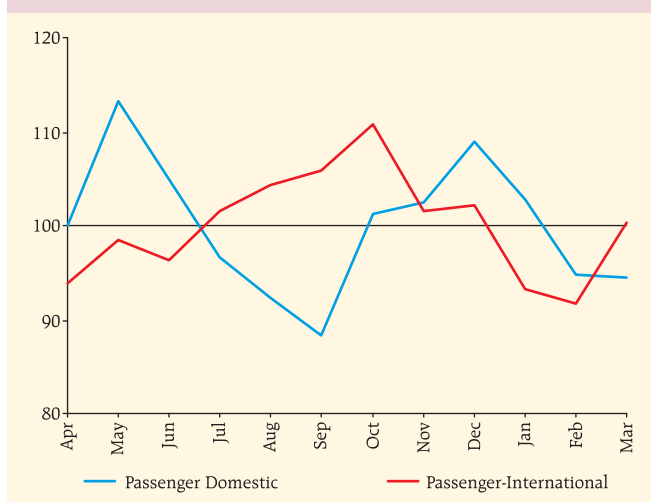


Chart 30: Seasonal Factors of 'Passenger flown Domestic' and 'Passenger flown International' for 2011-12

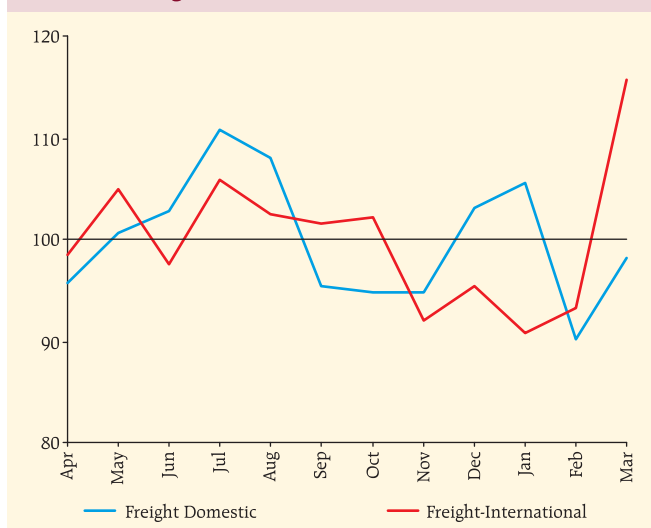


variation of Commercial Motor Vehicle sales was higher than that of Passenger Vehicle sales.

3.4.2.3 The seasonal factors of Passenger flown Domestic and International exhibited high degree of fluctuation in 2011-12. The seasonal peak of Passenger flown Domestic and International occurred in May and October, respectively; while trough occurred in September and February, respectively (Table 1 and Chart 30).

3.4.2.4 The Domestic and International air freight exhibited seasonal peak in July and March, respectively;

Chart 31: Seasonal Factors of Air 'Freight Domestic' and 'Freight International' traffic for 2011-12



whereas, trough occurred in February and January, respectively (Table 1 and Chart 31). The seasonal variation of International freight was relatively higher than that of Domestic freight during 2011-12.

3.4.3 Seasonal Variation during Last Ten Years (2002-03 to 2011-12)

3.4.3.1 Over the reference period, the seasonal variation, in terms of range of seasonal factors, for 'Revenue on Railway Freight Traffic' was higher as compared to that of 'Cargo Handled at Major Ports' (Table 2 and Chart 32). Seasonal variations of 'Cargo Handled at Major Ports' declined since 2006-07. The range of seasonal factors of 'Revenue on Railway Freight Traffic' remained high and stable from 2007-08 onwards.

3.4.3.2 The seasonal variation of Commercial Motor Vehicle and Passenger Vehicle sales decreased during the last ten years. Although, the range of seasonal factors of Commercial Motor Vehicle sales remained higher than Passenger Vehicle sales, the gap has narrowed down in the recent years (Table 2 and Chart 33).

3.4.3.3 The seasonal variation of passenger flown in Domestic and International exhibited increasing trend since 2005-06. However, range of seasonal factors

Chart 32: Ranges of Seasonal Factors of 'Cargo Handled at Major Ports' and 'Revenue on Railway Freight Traffic' (Period: 2002-03 to 2011-12)

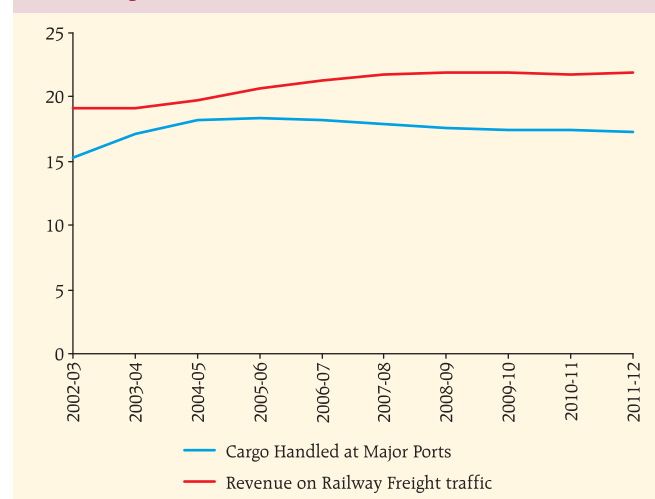


Chart 33: Ranges of Seasonal Factors of 'Commercial Motor Vehicles (CMV)' and 'Passenger Vehicles (PV)' Sales (Period: 2002-03 to 2011-12)

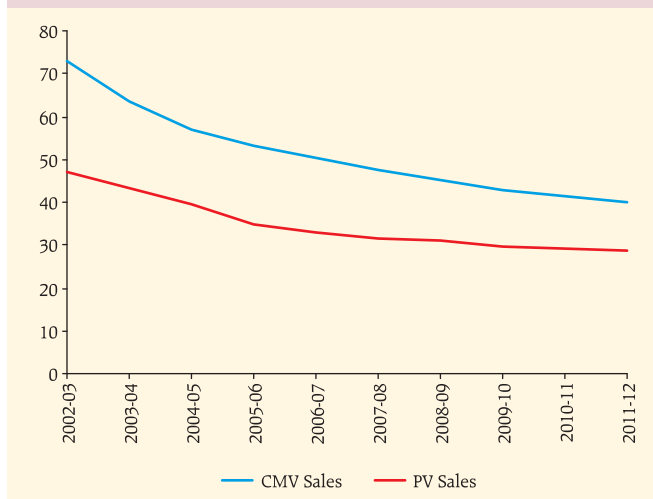
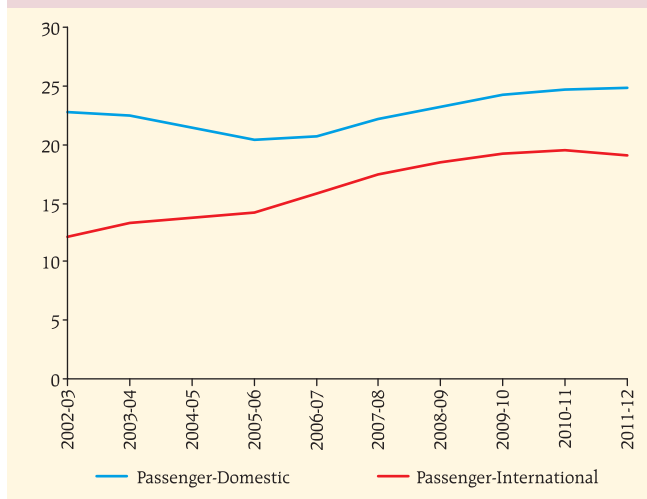


Chart 34: Ranges of Seasonal Factors of 'Passenger flown Domestic' and 'Passenger flown International' (Period: 2002-03 to 2011-12)



for passenger flow in Domestic was higher than that of passenger flown International (Table 2 and Chart 34).

3.4.3.4 The range of seasonal factors of International air freight exhibited declining trend in the last four years after steady increase till 2007-08. However, in the case of Domestic freight, the scenario was opposite. The seasonal variation of International freight remained

higher than that of Domestic freight (Table 2 and Chart 35).

3.5 External Trade

3.5.1 Seasonal Factors during 2011-12

3.5.1.1 The peak of Exports and Imports occurred in March and May, whereas the trough occurred in November and February, respectively (Table 1 and Chart 36).

Chart 35: Ranges of Seasonal Factors of Air 'Freight Domestic' and 'Freight International' (Period: 2002-03 to 2011-12)

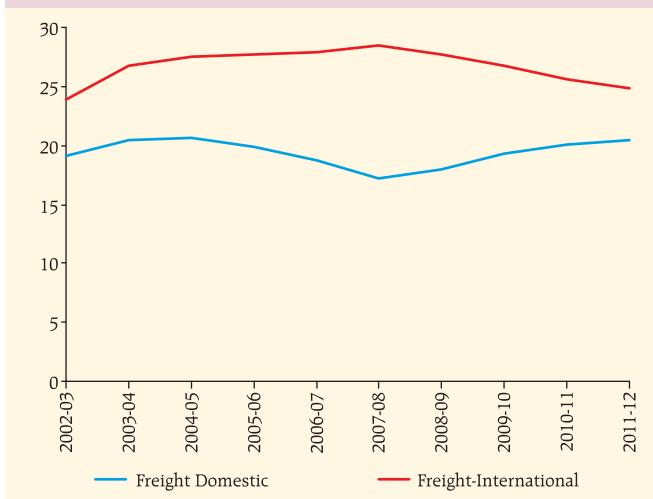
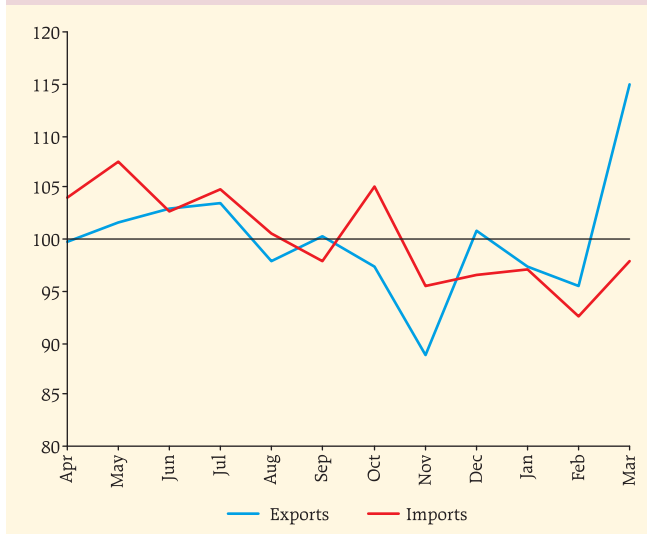


Chart 36: Seasonal Factors of Exports and Imports for 2011-12



3.5.2 Seasonal Variation during Last Ten Years (2002-03 to 2011-12)

3.5.2.1 Over the reference period, Exports exhibited higher seasonal variations than Imports. The movement in seasonal variation of the two series showed mirror image of one another (Table 2 and Chart 37). From 2008-09 onwards, the divergence between the seasonal variations of Exports and Imports has been more pronounced.

3.6 Inter-Sectoral Comparison of Seasonal Factors

3.6.1 Apart from the evaluation of the salient features (in terms of magnitude and direction) of seasonal factors for the selected series, a comparative analysis on the inter-sectoral performance among monetary and banking sectors, prices, industrial production and external sectors in terms of the movements of range of seasonal factors during the reference period, revealed the following.

3.6.2 The ranges of seasonal factors in M_3 and WPI-All Commodities revealed broadly similar movements (Table 2 and Chart 38). However, the seasonal variation of M_3 which was higher than that of WPI-All Commodities, has been declining gradually from 2007-08 onwards. At the same time, the variation has remained almost stable in case of WPI-All Commodities.

Chart 37: Ranges of Seasonal Factors of Exports and Imports (Period: 2002-03 to 2011-12)

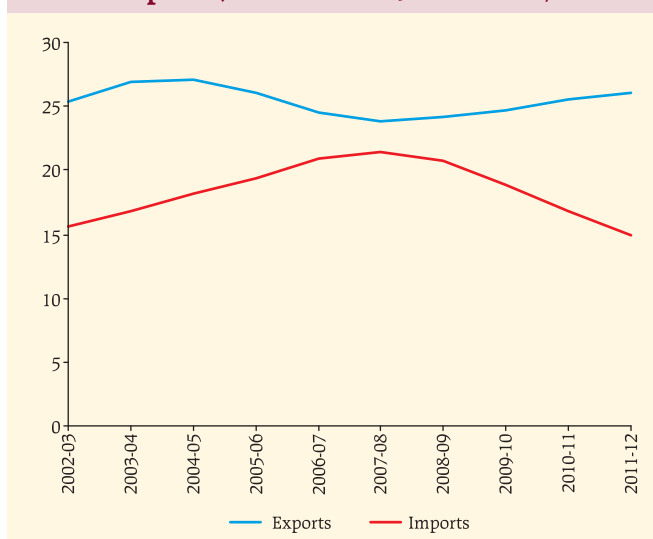
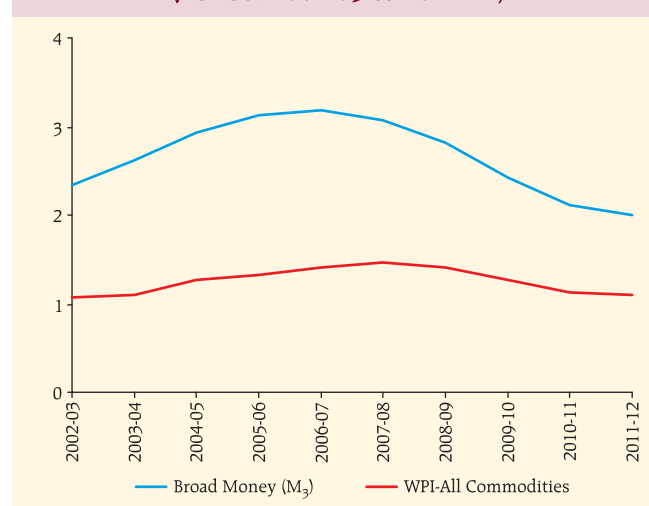


Chart 38: Ranges of Seasonal Factors of Broad Money (M_3) and WPI-All Commodities (Period: 2002-03 to 2011-12)



3.6.3 The ranges of seasonal factors of Non-Food Credit (SCBs) and Index of Industrial Production broadly exhibited similar movements (Table 2 and Chart 39). Further, Index of Industrial Production had higher seasonal variation than that of Non-Food Credit (SCBs).

3.6.4 The seasonal variations in Exports declined during the period 2004-05 to 2006-07, and thereafter, increased steadily. In case of IIP-General Index, the seasonal variation has remained stable over the ten years period, while for Imports, the seasonal variation has been declining since 2008-09. Among the three series,

Chart 39: Ranges of Seasonal Factors of Non-Food Credit (SCBs) and Index of Industrial Production (Period: 2002-03 to 2011-12)

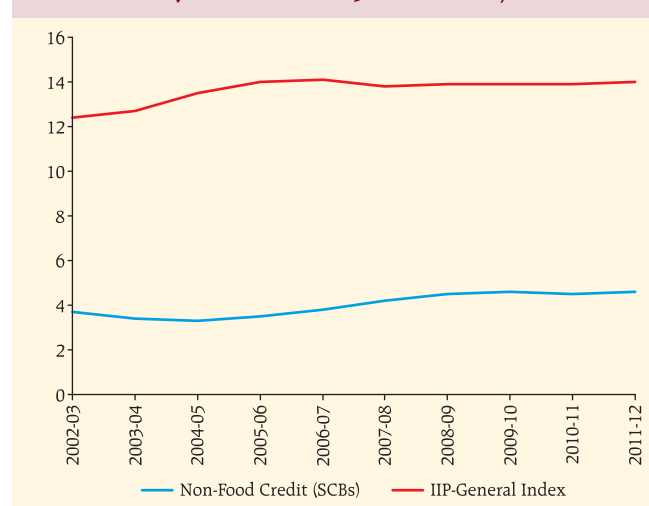
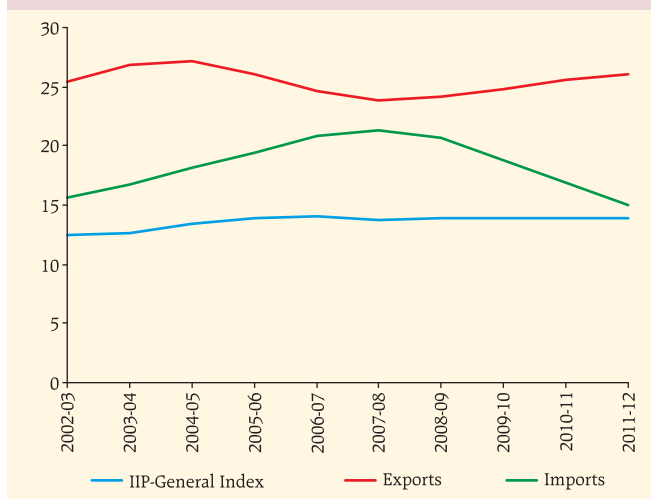


Chart 40: Ranges of Seasonal Factors of IIP-General Index, Exports and Imports (Period: 2002-03 to 2011-12)



Exports exhibited the highest seasonal variations, while IIP-General Index the lowest variation (Table 2 and Chart 40).

3.7 High and Low Seasonal Variation

3.7.1 The selected macroeconomic variables have also been classified on the basis of average seasonal variations during the last five years (*viz.*, 2007-08 to 2011-12). The 'Top twenty' and 'Bottom twenty' series; and the corresponding peak and trough months are reported in Table 5.

3.7.2 Among the 37 series of IIP and its subgroups, 14 are classified under the 'Top Twenty' category. In

particular, 'IIP-Office, accounting and computing machinery', 'IIP-Food products and beverages', 'Coal production' and 'IIP-Fabricated metal products except machinery and equipment' showed average seasonal variation of more than 50.

3.7.3 Among 29 series of WPI group, only two series, *viz.*, 'WPI-Potatoes' and 'WPI-Onions' appeared in 'Top twenty' in terms of average seasonal variation over the last five years.

3.7.4 Among 8 series of Services Sector Indicators, three series, *viz.*, 'Sales of Commercial Motor Vehicles', 'Sales of Passenger Vehicles', and 'Freight Tonne Km flown International' appeared in 'Top twenty' class of high seasonal variation.

3.7.5 In the case of 'Bottom Twenty' group of variables having low seasonal variations of less than 3.0, 14 series are from WPI group. All the three CPI series and three series from Money and Banking indicators, *viz.*, Aggregate Deposits (SCBs), Broad Money (M_3) and Time Deposits (SCBs) were also found to be in 'Bottom Twenty' group. However, no series from Industrial Production group was found among the 'Bottom Twenty' in terms of seasonal variation.

3.7.6 During the period 2007-08 to 2011-12, the average seasonal peak of most of the series in 'Top twenty' items group occurred in March (14 out of 20 series). Out of 14 series of Industrial Production in 'Top twenty', 10 series showed average peak in March.

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March)

	Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	1	2	3	4	5	6	7	8	9
A.1.1 Broad Money (M₃)									
	2011-12	101.3	100.8	99.9	100.4	99.8	99.4	99.7	99.3
	Average	101.6	101.0	100.3	100.1	99.8	99.7	99.6	99.2
	2012-13	101.3	100.8	99.8	100.5	99.8	99.4	99.7	99.3
A.1.1.1 Net Bank Credit to Government									
	2011-12	101.9	101.9	100.9	101.8	100.7	99.3	98.8	99.3
	Average	101.9	101.6	101.0	101.7	100.7	99.5	99.2	99.6
	2012-13	101.9	101.8	100.8	101.8	100.7	99.3	98.9	99.2
A.1.1.2 Bank Credit to Commercial Sector									
	2011-12	100.9	100.1	100.2	99.5	98.9	99.3	99.0	98.8
	Average	101.3	100.1	99.8	99.0	98.8	100.0	99.3	99.2
	2012-13	100.9	100.2	100.3	99.6	98.9	99.2	99.0	98.8
A.1.2 Narrow Money (M₁)									
	2011-12	101.7	100.8	99.8	98.9	98.6	99.3	98.9	98.7
	Average	102.9	101.5	100.6	98.8	98.3	99.3	98.6	98.3
	2012-13	101.6	100.7	99.9	98.9	98.6	99.2	99.0	98.8
A.1.2.1 Currency with the Public									
	2011-12	102.8	103.6	102.5	99.0	98.4	97.5	98.1	99.5
	Average	103.2	103.6	102.1	99.4	98.2	96.9	98.3	99.2
	2012-13	102.7	103.6	102.5	99.0	98.4	97.6	98.0	99.6
A.1.3 Reserve Money (RM)									
	2011-12	102.1	101.9	100.9	99.6	98.8	98.1	98.3	99.5
	Average	103.5	102.1	101.2	99.6	98.8	97.4	98.5	99.2
	2012-13	101.9	101.9	100.8	99.5	98.9	98.0	98.4	99.6
A.1.3.1 Currency in Circulation									
	2011-12	102.5	103.5	102.4	99.0	98.4	97.5	98.4	99.6
	Average	103.0	103.6	102.2	99.4	98.3	96.8	98.5	99.2
	2012-13	102.5	103.5	102.5	99.0	98.4	97.6	98.3	99.6
A.1.3.1.1 Notes in Circulation									
	2011-12	102.6	103.5	102.5	99.0	98.4	97.5	98.3	99.6
	Average	103.1	103.6	102.3	99.2	98.2	96.8	98.4	99.4
	2012-13	102.5	103.5	102.5	99.0	98.4	97.6	98.3	99.6
A.2.1 Deposits (Banking Department)									
	2011-12	99.5	97.8	94.4	98.3	96.9	107.9	102.6	100.4
	Average	99.4	95.0	96.7	101.5	97.4	107.2	101.1	99.0
	2012-13	99.5	98.0	94.5	98.4	96.3	107.7	102.3	101.1
A.2.2 Liabilities to the Banking System (SCBs)									
	2011-12	104.3	97.5	102.7	100.4	98.3	97.6	96.4	94.5
	Average	103.9	100.3	101.9	99.0	97.7	97.9	98.5	97.1
	2012-13	104.8	97.4	103.2	100.5	98.3	97.7	95.9	94.3

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Dec	Jan	Feb	Mar	Peak Month	Peak Value	Trough Month	Trough Value
	1	10	11	12	13	14	15	16	17
A.1.1 Broad Money (M₂)									
	2011-12	99.5	99.5	99.8	100.6	Apr	101.3	Nov	99.3
	Average	99.0	99.2	99.6	101.0	Apr	101.6	Dec	99.0
	2012-13	99.6	99.5	99.7	100.5	Apr	101.3	Nov	99.3
A.1.1.1 Net Bank Credit to Government									
	2011-12	97.4	98.5	98.8	100.9	Apr	101.9	Dec	97.4
	Average	97.2	98.7	98.7	100.3	Apr	101.9	Dec	97.2
	2012-13	97.5	98.4	98.9	100.9	Apr	101.9	Dec	97.5
A.1.1.2 Bank Credit to Commercial Sector									
	2011-12	100.1	99.9	100.2	102.8	Mar	102.8	Nov	98.8
	Average	100.0	99.8	100.2	102.7	Mar	102.7	Aug	98.8
	2012-13	100.2	100.0	100.3	102.7	Mar	102.7	Nov	98.8
A.1.2 Narrow Money (M₁)									
	2011-12	99.9	99.3	100.3	103.8	Mar	103.8	Aug	98.6
	Average	99.1	99.0	100.0	103.9	Mar	103.9	Aug	98.3
	2012-13	100.1	99.3	100.4	103.7	Mar	103.7	Aug	98.6
A.1.2.1 Currency with the Public									
	2011-12	99.0	99.4	100.1	100.1	May	103.6	Sep	97.5
	Average	99.1	99.6	100.3	100.2	May	103.6	Sep	96.9
	2012-13	98.9	99.4	100.1	100.0	May	103.6	Sep	97.6
A.1.3 Reserve Money (RM)									
	2011-12	98.9	98.2	99.0	104.9	Mar	104.9	Sep	98.1
	Average	98.4	98.6	98.9	103.9	Mar	103.9	Sep	97.4
	2012-13	98.9	98.2	99.0	104.9	Mar	104.9	Sep	98.0
A.1.3.1 Currency in Circulation									
	2011-12	99.1	99.4	100.0	100.1	May	103.5	Sep	97.5
	Average	99.2	99.5	100.1	100.4	May	103.6	Sep	96.8
	2012-13	99.0	99.5	100.0	100.0	May	103.5	Sep	97.6
A.1.3.1.1 Notes in Circulation									
	2011-12	99.0	99.4	100.0	100.1	May	103.5	Sep	97.5
	Average	99.1	99.5	100.1	100.4	May	103.6	Sep	96.8
	2012-13	99.0	99.4	100.0	100.1	May	103.5	Sep	97.6
A.2.1 Deposits (Banking Department)									
	2011-12	104.6	100.1	93.6	103.9	Sep	107.9	Feb	93.6
	Average	102.6	98.0	96.4	106.0	Sep	107.2	May	95.0
	2012-13	104.8	100.7	93.1	103.8	Sep	107.7	Feb	93.1
A.2.2 Liabilities to the Banking System (SCBs)									
	2011-12	101.7	98.8	100.8	106.3	Mar	106.3	Nov	94.5
	Average	100.0	98.3	98.8	106.9	Mar	106.9	Nov	97.1
	2012-13	101.8	99.0	100.5	106.5	Mar	106.5	Nov	94.3

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	1	2	3	4	5	6	7	8	9
A.2.3 Aggregate Deposits (SCBs)									
	2011-12	101.2	100.4	99.4	100.7	100.1	99.8	100.0	99.3
	Average	101.4	100.6	99.9	100.3	100.1	100.1	99.9	99.4
	2012-13	101.2	100.4	99.4	100.8	100.1	99.8	100.0	99.3
A.2.3.1 Demand Deposits (SCBs)									
	2011-12	100.5	98.0	95.5	98.8	98.5	100.7	99.8	97.1
	Average	102.0	99.0	98.1	97.7	98.1	102.4	99.2	97.4
	2012-13	100.4	97.8	95.4	99.0	98.3	100.3	99.9	97.2
A.2.3.2 Time Deposits (SCBs)									
	2011-12	101.1	100.6	99.8	100.7	100.1	99.4	100.3	99.6
	Average	100.8	100.6	100.0	100.6	100.3	99.9	100.2	99.9
	2012-13	101.1	100.6	99.8	100.8	100.1	99.4	100.2	99.5
A.3.1 Cash in Hand and Balances with RBI (SCBs)									
	2011-12	101.9	100.7	99.4	102.5	101.6	100.7	99.7	100.6
	Average	106.4	99.4	101.0	101.4	101.6	101.0	99.5	100.4
	2012-13	101.6	100.9	99.4	102.7	101.7	100.3	99.8	100.6
A.3.2 Assets with the Banking System (SCBs)									
	2011-12	102.7	98.4	102.1	99.0	98.1	100.0	96.4	92.4
	Average	101.9	100.0	100.9	97.6	99.8	101.2	98.9	94.7
	2012-13	103.0	98.1	102.3	99.3	97.9	99.9	96.0	92.2
A.3.3 Bank Credit (SCBs)									
	2011-12	101.1	100.2	100.3	99.5	98.9	99.4	98.9	98.7
	Average	101.4	100.2	99.9	99.2	98.9	99.8	99.2	99.1
	2012-13	101.1	100.3	100.4	99.5	98.9	99.2	98.8	98.6
A.3.3.1 Loans, Cash, Credits and Overdrafts (SCBs)									
	2011-12	100.6	99.8	100.3	99.0	98.3	100.4	99.5	98.9
	Average	100.7	99.9	99.8	98.9	98.5	100.6	99.5	99.3
	2012-13	100.7	99.8	100.3	99.1	98.3	100.4	99.5	98.8
A.3.3.2 Food Credit (SCBs)									
	2011-12	98.8	102.9	111.2	100.6	96.8	92.0	88.6	98.8
	Average	97.7	106.2	110.2	101.6	97.4	92.5	92.4	98.3
	2012-13	98.9	102.5	110.9	100.7	96.9	92.1	88.0	99.1
A.3.3.3 Non-Food Credit (SCBs)									
	2011-12	101.4	100.1	100.2	99.7	98.9	99.3	98.9	98.7
	Average	101.6	99.9	99.6	99.3	98.9	99.7	99.3	99.1
	2012-13	101.5	100.3	100.3	99.6	99.0	99.2	98.8	98.7
A.3.4 Investments (SCBs)									
	2011-12	100.4	100.5	100.0	101.4	102.3	101.5	100.9	100.1
	Average	100.7	100.9	100.1	101.3	101.7	100.9	100.8	100.2
	2012-13	100.3	100.4	100.0	101.5	102.5	101.6	100.9	100.1

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Dec	Jan	Feb	Mar	Peak Month	Peak Value	Trough Month	Trough Value
	1	10	11	12	13	14	15	16	17
A.2.3 Aggregate Deposits (SCBs)									
	2011-12	99.0	99.5	99.7	100.7	Apr	101.2	Dec	99.0
	Average	98.7	99.2	99.5	100.9	Apr	101.4	Dec	98.7
	2012-13	99.1	99.5	99.7	100.6	Apr	101.2	Dec	99.1
A.2.3.1 Demand Deposits (SCBs)									
	2011-12	97.7	101.6	102.5	109.7	Mar	109.7	Jun	95.5
	Average	97.9	98.6	100.3	110.1	Mar	110.1	Nov	97.4
	2012-13	97.9	101.7	102.7	109.5	Mar	109.5	Jun	95.4
A.2.3.2 Time Deposits (SCBs)									
	2011-12	99.6	99.4	99.6	99.7	Apr	101.1	Sep	99.4
	Average	99.2	99.6	99.5	99.5	Apr	100.8	Dec	99.2
	2012-13	99.7	99.4	99.5	99.7	Apr	101.1	Jan	99.4
A.3.1 Cash in Hand and Balances with RBI (SCBs)									
	2011-12	99.7	96.3	97.9	98.9	Jul	102.5	Jan	96.3
	Average	97.4	97.3	97.3	97.9	Apr	106.4	Jan	97.3
	2012-13	99.9	96.6	97.8	98.3	Jul	102.7	Jan	96.6
A.3.2 Assets with the Banking System (SCBs)									
	2011-12	98.5	97.3	101.4	113.6	Mar	113.6	Nov	92.4
	Average	97.8	96.7	99.9	110.9	Mar	110.9	Nov	94.7
	2012-13	99.1	97.5	101.0	113.8	Mar	113.8	Nov	92.2
A.3.3 Bank Credit (SCBs)									
	2011-12	100.1	99.8	100.1	103.0	Mar	103.0	Nov	98.7
	Average	99.8	99.7	100.1	102.7	Mar	102.7	Aug	98.9
	2012-13	100.2	99.9	100.2	102.9	Mar	102.9	Nov	98.6
A.3.3.1 Loans, Cash, Credits and Overdrafts (SCBs)									
	2011-12	100.5	99.8	100.0	102.7	Mar	102.7	Aug	98.3
	Average	100.4	99.9	100.2	102.4	Mar	102.4	Aug	98.5
	2012-13	100.6	99.8	100.1	102.7	Mar	102.7	Aug	98.3
A.3.3.2 Food Credit (SCBs)									
	2011-12	106.1	99.8	103.4	101.2	Jun	111.2	Oct	88.6
	Average	102.3	97.7	102.1	102.4	Jun	110.2	Oct	92.4
	2012-13	106.4	100.3	103.5	100.8	Jun	110.9	Oct	88.0
A.3.3.3 Non-Food Credit (SCBs)									
	2011-12	99.0	100.0	100.3	103.3	Mar	103.3	Nov	98.7
	Average	99.6	99.8	100.3	102.9	Mar	102.9	Aug	98.9
	2012-13	99.1	100.0	100.3	103.3	Mar	103.3	Nov	98.7
A.3.4 Investments (SCBs)									
	2011-12	98.1	98.6	98.5	97.7	Aug	102.3	Mar	97.7
	Average	98.4	98.4	98.8	97.8	Aug	101.7	Mar	97.8
	2012-13	98.1	98.6	98.4	97.8	Aug	102.5	Mar	97.8

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	1	2	3	4	5	6	7	8	9
B. WPI (base: 2004-05=100) All Commodities									
	2011-12	100.5	100.2	100.2	100.4	100.3	100.1	99.9	100.0
	Average	100.3	100.2	100.2	100.4	100.4	100.3	100.2	100.2
	2012-13	100.5	100.2	100.2	100.4	100.2	100.1	99.9	100.0
B.1 WPI - Primary Articles									
	2011-12	100.5	99.9	100.7	100.9	100.6	100.6	100.8	101.0
	Average	99.5	99.8	100.8	101.1	101.4	101.0	101.4	101.2
	2012-13	100.5	99.9	100.6	100.9	100.6	100.7	100.7	101.0
B.1.1 WPI - Food Articles									
	2011-12	99.0	99.1	100.0	101.4	101.3	101.9	102.9	102.5
	Average	99.3	99.3	99.8	100.8	101.4	101.5	102.8	102.3
	2012-13	99.0	99.1	100.1	101.4	101.3	102.0	102.9	102.4
B.1.1.1 WPI - Food Grains (Cereals+Pulses)									
	2011-12	99.4	99.3	99.4	99.6	99.8	99.9	100.8	100.8
	Average	99.3	99.3	99.3	99.7	100.1	100.0	100.8	100.9
	2012-13	99.4	99.4	99.4	99.7	99.9	100.0	100.7	100.7
B.1.1.1.1 WPI - Cereals									
	2011-12	99.5	99.6	99.5	99.5	99.8	99.8	100.3	100.5
	Average	99.6	99.5	99.4	99.6	99.7	99.8	100.3	100.5
	2012-13	99.4	99.5	99.6	99.6	99.9	99.9	100.2	100.4
B.1.1.1.1.1 WPI - Wheat									
	2011-12	99.0	98.2	98.7	99.0	99.7	99.3	98.4	100.3
	Average	98.7	97.6	98.0	98.6	99.1	99.3	99.3	101.1
	2012-13	99.0	98.2	98.8	99.0	99.8	99.3	98.4	100.2
B.1.1.1.1.2 WPI - Rice									
	2011-12	99.4	99.4	99.1	99.3	99.8	100.2	101.1	101.2
	Average	99.5	99.7	99.7	100.0	100.4	100.6	101.0	100.6
	2012-13	99.4	99.3	99.1	99.3	99.8	100.2	101.2	101.3
B.1.1.1.2 WPI - Pulses									
	2011-12	98.7	98.3	98.6	99.8	100.4	100.6	102.2	101.9
	Average	98.3	98.1	98.7	100.3	101.3	101.1	102.6	102.6
	2012-13	98.7	98.4	98.7	99.7	100.1	100.5	102.2	101.8
B.1.1.2 WPI - Fruits & Vegetables									
	2011-12	100.8	98.6	100.2	104.5	103.0	104.0	106.6	107.6
	Average	98.6	97.7	99.7	102.1	104.2	105.6	109.1	108.4
	2012-13	101.1	98.6	100.3	104.5	102.9	104.2	106.5	107.5
B.1.1.2.1 WPI - Potatoes									
	2011-12	82.8	91.7	100.3	111.3	114.9	119.9	126.2	122.6
	Average	85.5	95.8	104.6	111.7	113.3	117.4	124.1	120.3
	2012-13	82.8	91.8	100.6	111.4	115.2	119.7	126.0	122.0

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Dec	Jan	Feb	Mar	Peak Month	Peak Value	Trough Month	Trough Value
	1	10	11	12	13	14	15	16	17
B. WPI (base: 2004-05=100) All Commodities									
	2011-12	99.7	99.7	99.4	99.6	Apr	100.5	Feb	99.4
	Average	99.5	99.6	99.3	99.4	Aug	100.4	Feb	99.3
	2012-13	99.7	99.7	99.4	99.7	Apr	100.5	Feb	99.4
B.1 WPI - Primary Articles									
	2011-12	99.5	99.2	98.2	98.2	Nov	101.0	Feb	98.2
	Average	99.2	98.7	97.9	98.0	Aug	101.4	Feb	97.9
	2012-13	99.5	99.2	98.3	98.3	Nov	101.0	Feb	98.3
B.1.1 WPI - Food Articles									
	2011-12	99.3	98.7	96.8	97.0	Oct	102.9	Feb	96.8
	Average	99.2	98.8	97.5	97.2	Oct	102.8	Mar	97.2
	2012-13	99.3	98.6	96.8	97.0	Oct	102.9	Feb	96.8
B.1.1.1 WPI - Food Grains (Cereals+Pulses)									
	2011-12	100.6	100.6	100.1	99.6	Oct	100.8	May	99.3
	Average	100.5	100.4	100.4	99.6	Nov	100.9	May	99.3
	2012-13	100.6	100.5	100.1	99.6	Oct	100.7	May	99.4
B.1.1.1.1 WPI - Cereals									
	2011-12	100.5	100.8	100.5	99.8	Jan	100.8	Apr	99.5
	Average	100.2	100.6	100.8	100.0	Feb	100.8	Jun	99.4
	2012-13	100.4	100.8	100.5	99.8	Jan	100.8	Apr	99.4
B.1.1.1.1.1 WPI - Wheat									
	2011-12	101.2	102.4	102.6	101.2	Feb	102.6	May	98.2
	Average	101.7	102.5	102.5	101.4	Feb	102.5	May	97.6
	2012-13	101.2	102.4	102.6	101.3	Feb	102.6	May	98.2
B.1.1.1.1.2 WPI - Rice									
	2011-12	100.8	100.2	100.0	99.6	Nov	101.2	Jun	99.1
	Average	99.9	99.6	99.7	99.5	Oct	101.0	Mar	99.5
	2012-13	100.8	100.2	99.9	99.5	Nov	101.3	Jun	99.1
B.1.1.1.2 WPI - Pulses									
	2011-12	101.4	100.1	99.1	99.1	Oct	102.2	May	98.3
	Average	101.5	99.5	98.5	97.7	Oct	102.6	Mar	97.7
	2012-13	101.3	100.2	99.2	99.3	Oct	102.2	May	98.4
B.1.1.2 WPI - Fruits & Vegetables									
	2011-12	98.5	95.2	90.5	90.2	Nov	107.6	Mar	90.2
	Average	97.6	94.5	91.1	91.2	Oct	109.1	Feb	91.1
	2012-13	98.4	95.0	90.5	90.5	Nov	107.5	Mar	90.5
B.1.1.2.1 WPI - Potatoes									
	2011-12	97.9	79.6	73.9	78.8	Oct	126.2	Feb	73.9
	Average	97.2	80.5	72.5	78.3	Oct	124.1	Feb	72.5
	2012-13	97.6	79.6	74.4	79.0	Oct	126.0	Feb	74.4

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	1	2	3	4	5	6	7	8	9
B.1.1.2.2 WPI - Onions									
	2011-12	74.1	74.0	82.4	89.7	100.4	107.3	119.6	129.6
	Average	78.9	77.7	83.8	91.2	100.2	110.3	121.8	125.6
	2012-13	73.4	74.0	82.6	90.1	100.9	108.4	120.0	130.4
B.1.1.3 WPI - Milk									
	2011-12	99.4	99.6	100.3	100.4	100.2	100.4	100.4	100.3
	Average	100.0	100.0	100.3	100.2	100.3	100.2	100.1	100.0
	2012-13	99.3	99.5	100.3	100.5	100.3	100.4	100.4	100.2
B.1.1.4 WPI - Egg, Meat and Fish									
	2011-12	98.4	100.3	99.7	101.0	100.8	101.5	99.7	100.3
	Average	98.8	101.3	101.2	102.0	101.0	99.8	98.3	99.9
	2012-13	98.3	100.1	99.7	101.0	100.8	101.6	99.8	100.2
B.1.1.4.1 WPI - Egg									
	2011-12	97.4	96.6	99.1	97.6	96.3	97.6	98.7	103.5
	Average	95.2	95.4	97.8	97.9	97.0	98.8	100.4	104.4
	2012-13	97.1	96.3	99.1	97.7	96.3	97.4	98.7	103.6
B.1.1.4.2 WPI - Meat									
	2011-12	99.2	99.1	99.2	100.2	100.0	100.1	100.3	101.0
	Average	98.6	99.7	100.3	100.3	99.7	98.8	98.9	100.3
	2012-13	99.1	99.2	99.3	100.3	100.1	100.1	100.3	101.0
B.1.1.4.3 WPI - Fish									
	2011-12	97.1	99.9	98.9	100.8	102.1	103.4	101.2	100.6
	Average	99.2	102.3	101.6	102.7	102.8	100.9	98.8	99.5
	2012-13	97.0	99.6	98.9	100.6	102.1	103.6	101.3	100.6
B.1.1.5 WPI - Protein Items (viz., Pulses, Milk, Egg, Meat and Fish) Group									
	2011-12	99.0	99.8	99.7	100.9	100.9	101.3	100.6	99.9
	Average	99.4	100.3	100.3	100.8	100.8	100.5	100.0	100.1
	2012-13	98.9	99.7	99.7	100.9	100.9	101.4	100.6	99.9
B.1.2 WPI - Non-Food Articles									
	2011-12	101.9	100.4	100.2	99.4	99.8	99.1	98.2	98.3
	Average	100.2	100.1	100.5	100.6	100.9	100.4	99.1	99.2
	2012-13	102.1	100.3	100.0	99.2	99.5	98.9	98.2	98.2
B.1.2.1 WPI - Fibres									
	2011-12	100.0	99.8	100.3	100.2	99.2	99.1	99.1	99.3
	Average	99.3	99.7	100.6	101.8	101.5	100.5	99.8	99.6
	2012-13	100.3	99.8	100.1	99.8	98.7	98.9	99.0	99.4
B.1.2.1.1 WPI - Raw Cotton									
	2011-12	100.5	100.1	101.0	100.7	99.4	99.5	98.3	99.0
	Average	99.1	99.6	100.9	102.7	102.5	101.4	99.9	99.6
	2012-13	100.8	100.1	100.7	100.1	98.7	99.1	98.3	99.2

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Dec	Jan	Feb	Mar	Peak Month	Peak Value	Trough Month	Trough Value
	1	10	11	12	13	14	15	16	17
B.1.1.2.2 WPI - Onions									
	2011-12	125.0	119.3	97.2	80.6	Nov	129.6	May	74.0
	Average	115.2	115.2	95.9	86.0	Nov	125.6	May	77.7
	2012-13	124.9	118.2	96.2	79.5	Nov	130.4	Apr	73.4
B.1.1.3 WPI - Milk									
	2011-12	99.9	100.2	99.7	99.2	Jul	100.4	Mar	99.2
	Average	99.6	99.8	99.8	99.8	Aug	100.3	Dec	99.6
	2012-13	99.9	100.2	99.6	99.1	Jul	100.5	Mar	99.1
B.1.1.4 WPI - Egg, Meat and Fish									
	2011-12	100.5	100.1	99.3	98.6	Sep	101.5	Apr	98.4
	Average	99.6	100.1	99.9	98.4	Jul	102.0	Oct	98.3
	2012-13	100.5	100.1	99.3	98.6	Sep	101.6	Apr	98.3
B.1.1.4.1 WPI - Egg									
	2011-12	104.6	105.7	102.8	100.4	Jan	105.7	Aug	96.3
	Average	105.2	106.0	102.5	98.9	Jan	106.0	Apr	95.2
	2012-13	104.8	105.9	102.9	100.2	Jan	105.9	Aug	96.3
B.1.1.4.2 WPI - Meat									
	2011-12	100.6	100.2	99.7	100.1	Nov	101.0	May	99.1
	Average	100.5	101.7	101.1	100.1	Jan	101.7	Apr	98.6
	2012-13	100.6	100.2	99.6	100.2	Nov	101.0	Apr	99.1
B.1.1.4.3 WPI - Fish									
	2011-12	100.6	99.5	98.8	97.3	Sep	103.4	Apr	97.1
	Average	98.7	98.3	97.9	97.8	Aug	102.8	Mar	97.8
	2012-13	100.7	99.5	98.8	97.3	Sep	103.6	Apr	97.0
B.1.1.5 WPI - Protein Items (viz., Pulses, Milk, Egg, Meat and Fish) Group									
	2011-12	99.8	100.0	99.5	98.8	Sep	101.3	Mar	98.8
	Average	99.6	99.6	99.7	99.0	Jul	100.8	Mar	99.0
	2012-13	99.9	100.0	99.5	98.8	Sep	101.4	Mar	98.8
B.1.2 WPI - Non-Food Articles									
	2011-12	99.2	100.5	100.7	102.7	Mar	102.7	Oct	98.2
	Average	99.5	99.8	99.3	100.5	Aug	100.9	Oct	99.1
	2012-13	99.3	100.6	101.0	102.9	Mar	102.9	Oct	98.2
B.1.2.1 WPI - Fibres									
	2011-12	100.3	101.3	101.0	100.9	Jan	101.3	Oct	99.1
	Average	99.3	100.2	99.1	99.0	Jul	101.8	Mar	99.0
	2012-13	100.4	101.4	101.4	101.1	Jan	101.4	Aug	98.7
B.1.2.1.1 WPI - Raw Cotton									
	2011-12	99.5	100.9	100.9	101.1	Mar	101.1	Oct	98.3
	Average	98.5	99.7	98.3	98.2	Jul	102.7	Mar	98.2
	2012-13	99.7	101.0	101.3	101.5	Mar	101.5	Oct	98.3

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	1	2	3	4	5	6	7	8	9
B.1.2.2 WPI - Oil Seeds									
	2011-12	101.0	101.1	101.8	101.2	101.2	100.6	97.8	97.3
	Average	100.1	100.6	101.6	101.7	101.4	100.8	98.3	98.0
	2012-13	101.1	101.1	101.6	101.1	101.1	100.7	97.8	97.2
B.2 WPI - Manufactured Products									
	2011-12	100.7	100.5	100.4	100.1	100.0	99.9	99.6	99.5
	Average	100.5	100.5	100.4	100.3	100.2	100.1	99.8	99.6
	2012-13	100.7	100.5	100.3	100.1	99.9	99.8	99.6	99.6
B.2.1 WPI - Food Products									
	2011-12	99.7	99.6	99.3	99.9	99.9	100.2	100.0	100.3
	Average	100.0	99.9	100.0	100.4	100.5	100.5	100.0	99.9
	2012-13	99.7	99.6	99.2	99.9	99.9	100.2	100.0	100.4
B.2.1.1 WPI - Grain Mill Products									
	2011-12	99.6	98.5	98.7	99.2	99.3	99.6	100.2	100.7
	Average	98.6	97.8	98.2	99.1	99.4	100.1	100.6	101.1
	2012-13	99.6	98.5	98.7	99.2	99.4	99.6	100.1	100.6
B.2.1.2 WPI - Sugar									
	2011-12	99.7	99.2	99.0	99.8	99.2	98.9	99.5	100.8
	Average	99.6	99.3	99.5	100.0	100.2	100.2	100.5	100.8
	2012-13	99.8	99.2	98.9	99.8	99.1	98.9	99.4	100.9
B.2.1.3 WPI - Edible Oils									
	2011-12	100.0	100.4	100.4	100.2	100.5	100.1	99.2	99.1
	Average	99.7	100.2	100.0	100.6	101.1	100.4	99.7	99.6
	2012-13	100.0	100.3	100.3	100.2	100.4	100.1	99.2	99.1
B.3 WPI - Freely Priced Petroleum Products (ex-Petrol Group)									
	2011-12	101.0	102.2	100.2	101.0	100.0	99.6	98.1	98.6
	Average	99.6	100.9	100.4	101.7	101.8	101.6	99.9	99.6
	2012-13	101.2	102.4	100.1	100.7	99.8	99.2	98.0	98.5
B.4 WPI - Non Food Manufactured Products									
	2011-12	100.6	100.5	100.4	100.0	99.9	99.7	99.6	99.4
	Average	100.4	100.4	100.3	100.2	100.1	99.9	99.9	99.6
	2012-13	100.6	100.5	100.4	100.0	99.9	99.7	99.6	99.4
B.5 WPI - Non Food Non-Fuel									
	2011-12	101.3	100.9	100.8	100.1	99.8	99.6	99.3	99.2
	Average	100.7	100.7	100.6	100.3	100.3	100.0	99.8	99.5
	2012-13	101.4	100.9	100.7	100.0	99.7	99.6	99.3	99.3
C.1 Consumer Price Index for Industrial Workers (base: 2001=100)									
	2011-12	99.1	99.1	99.5	100.6	100.5	100.6	100.9	101.0
	Average	99.3	99.4	99.7	100.7	100.6	100.5	100.9	100.8
	2012-13	99.1	99.0	99.5	100.6	100.5	100.6	100.9	101.0

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Dec	Jan	Feb	Mar	Peak Month	Peak Value	Trough Month	Trough Value
	1	10	11	12	13	14	15	16	17
B.1.2.2 WPI - Oil Seeds									
	2011-12	98.3	99.8	100.0	100.2	Jun	101.8	Nov	97.3
	Average	98.6	99.8	99.6	99.4	Jul	101.7	Nov	98.0
	2012-13	98.2	99.8	100.0	100.4	Jun	101.6	Nov	97.2
B.2 WPI - Manufactured Products									
	2011-12	99.5	99.9	100.0	100.0	Apr	100.7	Dec	99.5
	Average	99.4	99.7	99.7	99.8	Apr	100.5	Dec	99.4
	2012-13	99.6	99.9	100.0	100.0	Apr	100.7	Nov	99.6
B.2.1 WPI - Food Products									
	2011-12	100.6	100.7	100.2	99.6	Jan	100.7	Jun	99.3
	Average	99.6	100.0	99.9	99.5	Sep	100.5	Mar	99.5
	2012-13	100.7	100.6	100.2	99.6	Dec	100.7	Jun	99.2
B.2.1.1 WPI - Grain Mill Products									
	2011-12	100.5	101.5	101.4	100.8	Jan	101.5	May	98.5
	Average	101.1	101.7	101.7	100.3	Jan	101.7	May	97.8
	2012-13	100.5	101.5	101.4	100.8	Jan	101.5	May	98.5
B.2.1.2 WPI - Sugar									
	2011-12	101.5	101.6	100.5	100.5	Jan	101.6	Sep	98.9
	Average	100.6	100.3	99.5	99.8	Nov	100.8	May	99.3
	2012-13	101.5	101.7	100.7	100.5	Jan	101.7	Sep	98.9
B.2.1.3 WPI - Edible Oils									
	2011-12	100.0	100.6	99.9	99.9	Jan	100.6	Nov	99.1
	Average	100.1	99.9	99.5	99.3	Aug	101.1	Mar	99.3
	2012-13	99.9	100.6	99.9	100.0	Jan	100.6	Nov	99.1
B.3 WPI - Freely Priced Petroleum Products (ex-Petrol Group)									
	2011-12	99.6	99.8	99.3	101.0	May	102.2	Oct	98.1
	Average	99.4	98.4	98.0	99.0	Aug	101.8	Feb	98.0
	2012-13	99.7	100.0	99.4	101.3	May	102.4	Oct	98.0
B.4 WPI - Non Food Manufactured Products									
	2011-12	99.4	99.9	100.1	100.5	Apr	100.6	Dec	99.4
	Average	99.4	99.8	99.9	100.2	Apr	100.4	Dec	99.4
	2012-13	99.4	100.0	100.2	100.5	Apr	100.6	Dec	99.4
B.5 WPI - Non Food Non-Fuel									
	2011-12	99.2	99.6	99.9	100.4	Apr	101.3	Dec	99.2
	Average	99.3	99.4	99.5	99.9	Apr	100.7	Dec	99.3
	2012-13	99.2	99.7	100.0	100.5	Apr	101.4	Dec	99.2
C.1 Consumer Price Index for Industrial Workers (base: 2001=100)									
	2011-12	100.1	100.1	99.5	99.1	Nov	101.0	May	99.1
	Average	99.9	99.9	99.4	99.1	Oct	100.9	Mar	99.1
	2012-13	100.1	100.1	99.5	99.2	Nov	101.0	May	99.0

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	1	2	3	4	5	6	7	8	9
C.2 Consumer Price Index for Agricultural Labourers (base: 1986-87=100)									
	2011-12	98.8	98.9	99.5	100.2	100.5	100.7	100.8	101.1
	Average	98.9	99.1	99.7	100.3	100.6	100.8	101.0	101.0
	2012-13	98.8	98.9	99.5	100.2	100.5	100.7	100.8	101.1
C.3 Consumer Price Index for Rural Labourers (base: 1986-87=100)									
	2011-12	98.9	99.0	99.4	100.2	100.4	100.6	100.9	101.0
	Average	99.0	99.2	99.6	100.3	100.6	100.7	101.0	101.0
	2012-13	98.9	98.9	99.4	100.2	100.4	100.6	100.8	101.0
D. IIP (base: 2004-05 = 100) General Index									
	2011-12	97.4	98.2	99.1	98.3	95.5	97.4	99.0	97.5
	Average	96.4	98.5	98.0	98.0	96.3	97.6	98.7	98.4
	2012-13	97.5	98.1	99.0	98.4	95.5	97.2	99.0	97.5
D.1.1 IIP - Basic Goods Industries									
	2011-12	98.3	100.6	98.2	98.0	97.7	94.9	99.0	97.6
	Average	97.9	100.6	98.0	98.7	97.8	95.5	99.8	98.2
	2012-13	98.3	100.6	98.1	98.0	97.6	94.8	98.9	97.7
D.1.2 IIP - Capital Goods Industries									
	2011-12	91.0	87.5	112.1	94.4	93.0	107.9	103.4	93.8
	Average	89.1	91.5	102.3	96.0	95.9	106.4	100.4	96.2
	2012-13	91.2	87.2	112.7	94.1	92.7	107.2	103.5	93.8
D.1.3 IIP - Intermediate Goods Industries									
	2011-12	97.6	99.7	99.4	101.5	99.9	98.2	99.3	97.7
	Average	96.3	100.2	99.4	101.8	100.6	99.1	99.2	98.0
	2012-13	97.8	99.7	99.3	101.4	99.8	98.0	99.3	97.8
D.1.4 IIP - Consumer Goods Industries									
	2011-12	99.7	98.6	97.9	98.5	92.8	94.7	94.5	96.2
	Average	98.5	97.8	95.5	96.8	93.5	95.1	95.6	97.1
	2012-13	99.8	98.3	97.9	98.5	92.6	94.6	94.2	96.3
D.1.4.1 IIP - Consumer Durable Goods Industries									
	2011-12	100.1	98.8	97.7	100.8	95.1	100.6	102.7	99.2
	Average	97.2	101.4	97.5	99.7	97.4	102.1	105.3	100.8
	2012-13	100.2	98.2	97.5	101.0	94.8	100.8	102.4	99.1
D.1.4.2 IIP - Consumer Non-Durable Goods Industries									
	2011-12	98.3	97.7	97.5	95.9	90.8	89.4	88.6	96.5
	Average	98.8	96.0	94.1	94.6	91.1	90.8	90.3	97.3
	2012-13	98.3	97.7	97.7	95.9	90.9	89.4	88.4	96.3
D.2.1 IIP - Mining									
	2011-12	97.4	99.1	95.2	93.7	92.9	90.1	98.5	101.0
	Average	96.8	99.5	95.5	95.1	93.4	91.7	98.8	100.2
	2012-13	97.5	99.2	95.1	93.7	92.9	90.0	98.4	101.1

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Dec	Jan	Feb	Mar	Peak Month	Peak Value	Trough Month	Trough Value
	1	10	11	12	13	14	15	16	17
C.2 Consumer Price Index for Agricultural Labourers (base: 1986-87=100)									
	2011-12	100.7	100.0	99.6	99.1	Nov	101.1	Apr	98.8
	Average	100.4	99.8	99.4	99.1	Nov	101.0	Apr	98.9
	2012-13	100.7	100.0	99.6	99.2	Nov	101.1	Apr	98.8
C.3 Consumer Price Index for Rural Labourers (base: 1986-87=100)									
	2011-12	100.7	100.1	99.7	99.1	Nov	101.0	Apr	98.9
	Average	100.4	99.8	99.5	99.1	Nov	101.0	Apr	99.0
	2012-13	100.7	100.1	99.7	99.2	Nov	101.0	Apr	98.9
D. IIP (base: 2004-05 = 100) General Index									
	2011-12	104.7	104.1	99.3	109.5	Mar	109.5	Aug	95.5
	Average	104.8	104.3	99.4	109.4	Mar	109.4	Aug	96.3
	2012-13	104.6	104.1	99.4	109.5	Mar	109.5	Aug	95.5
D.1.1 IIP - Basic Goods Industries									
	2011-12	102.8	104.6	98.5	110.0	Mar	110.0	Sep	94.9
	Average	103.1	104.3	97.5	108.6	Mar	108.6	Sep	95.5
	2012-13	103.0	104.7	98.4	110.0	Mar	110.0	Sep	94.8
D.1.2 IIP - Capital Goods Industries									
	2011-12	101.8	95.4	97.1	122.8	Mar	122.8	May	87.5
	Average	102.9	97.5	98.4	123.1	Mar	123.1	Apr	89.1
	2012-13	101.9	95.6	97.5	122.9	Mar	122.9	May	87.2
D.1.3 IIP - Intermediate Goods Industries									
	2011-12	102.8	100.9	97.5	105.5	Mar	105.5	Feb	97.5
	Average	103.1	100.6	96.6	105.2	Mar	105.2	Apr	96.3
	2012-13	102.9	101.0	97.6	105.3	Mar	105.3	Feb	97.6
D.1.4 IIP - Consumer Goods Industries									
	2011-12	107.1	107.9	104.5	108.0	Mar	108.0	Aug	92.8
	Average	107.3	109.4	104.4	108.2	Jan	109.4	Aug	93.5
	2012-13	107.2	108.1	104.8	108.2	Mar	108.2	Aug	92.6
D.1.4.1 IIP - Consumer Durable Goods Industries									
	2011-12	97.9	100.4	100.3	107.3	Mar	107.3	Aug	95.1
	Average	95.7	100.0	97.6	105.0	Oct	105.3	Dec	95.7
	2012-13	98.2	100.3	100.4	107.7	Mar	107.7	Aug	94.8
D.1.4.2 IIP - Consumer Non-Durable Goods Industries									
	2011-12	114.9	113.4	108.9	108.1	Dec	114.9	Oct	88.6
	Average	114.2	113.9	108.5	109.6	Dec	114.2	Oct	90.3
	2012-13	114.7	113.4	109.2	108.1	Dec	114.7	Oct	88.4
D.2.1 IIP - Mining									
	2011-12	107.0	107.5	102.1	115.5	Mar	115.5	Sep	90.1
	Average	106.3	107.3	101.3	114.5	Mar	114.5	Sep	91.7
	2012-13	107.0	107.6	102.1	115.5	Mar	115.5	Sep	90.0

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	1	2	3	4	5	6	7	8	9
D.2.2 IIP - Manufacturing									
	2011-12	97.0	97.4	98.7	98.6	95.6	98.6	98.8	97.4
	Average	95.8	97.8	97.8	98.2	96.5	98.4	98.3	98.3
	2012-13	97.1	97.2	98.6	98.7	95.6	98.5	98.9	97.3
D.2.2.1 IIP - Food products and beverages									
	2011-12	99.7	92.9	93.4	84.8	73.8	70.1	75.7	96.5
	Average	98.9	90.8	88.2	81.9	72.8	70.6	76.7	97.5
	2012-13	99.6	93.2	94.3	85.3	73.9	69.9	75.2	96.2
D.2.2.2 IIP - Textiles									
	2011-12	98.6	97.7	97.3	101.3	102.9	100.9	102.2	99.2
	Average	98.4	99.2	98.5	101.5	102.2	100.0	101.6	99.9
	2012-13	98.6	97.5	97.0	101.2	103.1	101.1	102.0	99.0
D.2.2.3 IIP - Wearing apparel; dressing and dyeing of fur									
	2011-12	101.1	101.8	95.0	97.4	88.3	87.6	89.2	87.9
	Average	101.3	99.2	98.1	101.1	89.3	90.6	88.3	88.4
	2012-13	100.9	102.5	94.5	96.8	88.2	87.5	89.5	87.5
D.2.2.4 IIP - Wood and products of wood & cork except furniture; articles of straw & plating materials									
	2011-12	90.8	102.7	97.5	100.0	98.6	93.1	95.4	99.4
	Average	89.1	103.4	98.6	100.8	99.5	94.0	97.2	99.3
	2012-13	90.8	102.7	97.1	99.7	98.7	92.9	95.1	99.3
D.2.2.5 IIP - Paper and paper products									
	2011-12	97.0	101.0	98.4	101.9	102.5	99.1	100.3	98.4
	Average	97.3	101.3	99.1	102.5	102.7	99.6	99.8	97.8
	2012-13	96.8	101.1	98.2	101.9	102.5	98.9	100.4	98.6
D.2.2.6 IIP - Publishing, printing & reproduction of recorded media									
	2011-12	98.8	102.0	98.0	101.8	100.4	97.1	105.7	99.1
	Average	98.9	101.5	98.6	102.6	101.3	98.2	104.8	99.0
	2012-13	98.9	101.9	97.9	101.6	100.3	97.0	105.8	99.1
D.2.2.7 IIP - Coke, refined petroleum products & nuclear fuel									
	2011-12	96.0	98.6	100.9	102.0	100.5	95.8	100.6	96.9
	Average	95.0	98.6	100.7	102.5	100.5	96.6	100.8	97.1
	2012-13	96.1	98.6	101.0	101.9	100.6	95.5	100.6	96.7
D.2.2.8 IIP - Chemicals and chemical products									
	2011-12	97.3	102.0	102.6	104.3	101.8	102.2	97.9	97.1
	Average	95.9	101.3	102.9	104.3	102.2	102.4	99.6	97.8
	2012-13	97.4	101.8	102.5	104.1	101.7	102.2	97.7	97.1
D.2.2.9 IIP - Rubber and plastics products									
	2011-12	99.0	102.4	102.4	100.4	95.8	96.9	98.0	98.8
	Average	99.1	102.7	102.0	100.5	96.1	97.5	98.1	98.9
	2012-13	99.1	102.2	102.3	100.3	95.7	96.8	98.0	98.8

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Dec	Jan	Feb	Mar	Peak Month	Peak Value	Trough Month	Trough Value
	1	10	11	12	13	14	15	16	17
D.2.2 IIP - Manufacturing									
	2011-12	105.1	103.9	99.8	109.1	Mar	109.1	Aug	95.6
	Average	105.2	104.2	100.0	109.2	Mar	109.2	Apr	95.8
	2012-13	105.1	104.0	99.9	109.1	Mar	109.1	Aug	95.6
D.2.2.1 IIP - Food products and beverages									
	2011-12	132.7	131.8	124.5	123.3	Dec	132.7	Sep	70.1
	Average	135.8	134.8	125.7	124.3	Dec	135.8	Sep	70.6
	2012-13	132.1	131.5	125.0	123.9	Dec	132.1	Sep	69.9
D.2.2.2 IIP - Textiles									
	2011-12	101.3	102.4	96.8	99.7	Aug	102.9	Feb	96.8
	Average	101.5	101.7	95.2	100.5	Aug	102.2	Feb	95.2
	2012-13	101.3	102.6	97.0	99.7	Aug	103.1	Jun	97.0
D.2.2.3 IIP - Wearing apparel; dressing and dyeing of fur									
	2011-12	117.0	113.2	109.5	112.5	Dec	117.0	Sep	87.6
	Average	112.0	110.7	108.5	113.3	Mar	113.3	Oct	88.3
	2012-13	117.1	113.4	109.6	112.8	Dec	117.1	Sep	87.5
D.2.2.4 IIP - Wood and products of wood & cork except furniture; articles of straw & plating materials									
	2011-12	109.6	102.4	104.2	106.9	Dec	109.6	Apr	90.8
	Average	109.3	101.6	103.1	104.6	Dec	109.3	Apr	89.1
	2012-13	109.7	102.9	104.4	107.1	Dec	109.7	Apr	90.8
D.2.2.5 IIP - Paper and paper products									
	2011-12	100.2	99.9	95.9	105.6	Mar	105.6	Feb	95.9
	Average	100.3	99.5	95.0	105.5	Mar	105.5	Feb	95.0
	2012-13	100.3	99.9	96.0	105.5	Mar	105.5	Feb	96.0
D.2.2.6 IIP - Publishing, printing & reproduction of recorded media									
	2011-12	102.3	100.1	95.4	99.4	Oct	105.7	Feb	95.4
	Average	101.7	99.6	94.9	99.4	Oct	104.8	Feb	94.9
	2012-13	102.4	100.1	95.6	99.5	Oct	105.8	Feb	95.6
D.2.2.7 IIP - Coke, refined petroleum products & nuclear fuel									
	2011-12	102.2	103.6	98.0	104.7	Mar	104.7	Sep	95.8
	Average	101.7	103.7	97.5	105.1	Mar	105.1	Apr	95.0
	2012-13	102.5	103.7	98.0	104.7	Mar	104.7	Sep	95.5
D.2.2.8 IIP - Chemicals and chemical products									
	2011-12	100.5	99.2	94.6	100.9	Jul	104.3	Feb	94.6
	Average	100.3	98.8	93.8	100.6	Jul	104.3	Feb	93.8
	2012-13	100.5	99.3	94.8	101.1	Jul	104.1	Feb	94.8
D.2.2.9 IIP - Rubber and plastics products									
	2011-12	101.6	100.8	97.3	106.8	Mar	106.8	Aug	95.8
	Average	101.3	101.3	96.9	105.9	Mar	105.9	Aug	96.1
	2012-13	101.7	100.8	97.3	107.0	Mar	107.0	Aug	95.7

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	1	2	3	4	5	6	7	8	9
D.2.2.10 IIP - Other non-metallic mineral products									
	2011-12	101.5	100.6	97.1	99.9	94.9	93.3	101.3	94.9
	Average	101.0	101.4	98.1	98.9	95.2	93.9	100.7	95.7
	2012-13	101.5	100.6	96.9	99.8	94.9	93.2	101.3	95.0
D.2.2.11 IIP - Basic metals									
	2011-12	96.6	99.5	98.7	99.7	99.7	98.4	100.4	97.6
	Average	98.5	100.2	98.5	99.3	100.5	98.0	101.1	97.7
	2012-13	96.5	99.4	98.8	99.6	99.5	98.4	100.4	97.6
D.2.2.12 IIP - Fabricated metal products, except machinery & equipment									
	2011-12	83.0	88.6	96.7	94.9	94.4	102.3	95.1	97.2
	Average	84.9	91.5	97.9	95.0	94.4	102.3	96.0	98.6
	2012-13	82.9	88.1	96.4	94.9	94.2	102.3	94.8	97.2
D.2.2.13 IIP - Machinery and equipment n.e.c.									
	2011-12	98.5	102.8	95.8	89.6	88.9	99.0	91.5	88.5
	Average	97.1	101.9	97.6	90.9	90.3	99.3	92.7	90.1
	2012-13	98.7	102.5	95.3	89.2	88.7	98.8	91.3	88.6
D.2.2.14 IIP - Office, accounting and computing machinery									
	2011-12	85.4	87.7	114.9	78.1	101.2	118.8	85.9	94.8
	Average	82.7	92.3	113.3	81.1	101.0	122.1	88.1	94.2
	2012-13	86.4	86.7	114.9	76.9	101.1	118.9	85.7	94.7
D.2.2.15 IIP - Radio, TV and communication equipment & apparatus									
	2011-12	92.1	91.2	98.7	105.2	99.4	104.3	106.2	105.2
	Average	94.0	94.1	99.1	103.6	100.7	101.4	109.2	105.0
	2012-13	91.8	90.7	98.4	106.0	99.3	104.8	106.3	105.3
D.2.2.16 IIP - Medical, precision and optical instruments, watches and clocks									
	2011-12	83.8	95.2	100.2	98.5	95.7	100.8	97.2	93.1
	Average	82.5	97.4	103.1	101.0	98.2	101.1	96.5	90.4
	2012-13	83.6	94.8	100.0	97.9	95.5	100.6	97.5	93.8
D.2.2.17 IIP - Motor vehicles, trailers & semi-trailers									
	2011-12	99.7	95.3	91.5	99.4	96.4	98.4	94.5	100.3
	Average	95.9	97.9	91.3	99.5	97.6	97.8	98.3	101.1
	2012-13	100.3	94.9	91.4	99.2	96.0	98.5	93.8	100.6
D.2.2.18 IIP - Other transport equipment									
	2011-12	91.8	94.1	94.5	99.6	101.0	103.2	109.4	103.8
	Average	91.2	96.0	94.9	97.3	100.2	105.1	110.4	106.4
	2012-13	92.2	93.8	94.4	99.8	100.9	102.9	109.7	103.2
D.2.3 IIP - Electricity									
	2011-12	101.1	103.8	99.1	100.8	100.7	97.5	101.5	95.4
	Average	100.2	103.5	98.3	99.8	100.1	98.4	101.6	96.4
	2012-13	101.2	103.9	99.0	100.8	100.8	97.3	101.4	95.4

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Dec	Jan	Feb	Mar	Peak Month	Peak Value	Trough Month	Trough Value
	1	10	11	12	13	14	15	16	17
D.2.2.10 IIP - Other non-metallic mineral products									
	2011-12	102.6	103.2	99.9	111.0	Mar	111.0	Sep	93.3
	Average	102.4	102.8	99.1	110.9	Mar	110.9	Sep	93.9
	2012-13	102.6	103.3	100.0	111.0	Mar	111.0	Sep	93.2
D.2.2.11 IIP - Basic metals									
	2011-12	100.8	103.6	97.3	107.9	Mar	107.9	Apr	96.6
	Average	100.8	102.0	96.5	107.5	Mar	107.5	Feb	96.5
	2012-13	101.0	103.6	97.3	107.8	Mar	107.8	Apr	96.5
D.2.2.12 IIP - Fabricated metal products, except machinery & equipment									
	2011-12	106.9	100.6	102.1	139.2	Mar	139.2	Apr	83.0
	Average	106.1	100.4	101.2	133.2	Mar	133.2	Apr	84.9
	2012-13	107.2	100.6	102.3	139.6	Mar	139.6	Apr	82.9
D.2.2.13 IIP - Machinery and equipment n.e.c.									
	2011-12	97.2	99.7	109.1	140.6	Mar	140.6	Nov	88.5
	Average	98.9	98.4	105.2	138.2	Mar	138.2	Nov	90.1
	2012-13	97.4	100.0	109.6	140.5	Mar	140.5	Nov	88.6
D.2.2.14 IIP - Office, accounting and computing machinery									
	2011-12	112.3	75.3	86.8	159.5	Mar	159.5	Jan	75.3
	Average	108.9	77.0	85.3	155.0	Mar	155.0	Jan	77.0
	2012-13	113.0	75.5	86.9	159.8	Mar	159.8	Jan	75.5
D.2.2.15 IIP - Radio, TV and communication equipment & apparatus									
	2011-12	108.2	104.7	93.2	91.7	Dec	108.2	May	91.2
	Average	102.3	103.4	94.1	93.7	Oct	109.2	Mar	93.7
	2012-13	108.2	104.4	93.2	91.5	Dec	108.2	May	90.7
D.2.2.16 IIP - Medical, precision and optical instruments, watches and clocks									
	2011-12	110.2	100.9	95.8	129.7	Mar	129.7	Apr	83.8
	Average	111.2	98.0	94.5	127.3	Mar	127.3	Apr	82.5
	2012-13	109.8	101.1	96.1	129.6	Mar	129.6	Apr	83.6
D.2.2.17 IIP - Motor vehicles, trailers & semi-trailers									
	2011-12	95.6	104.6	107.8	116.8	Mar	116.8	Jun	91.5
	Average	93.2	104.0	106.2	117.3	Mar	117.3	Jun	91.3
	2012-13	95.7	104.9	108.0	116.5	Mar	116.5	Jun	91.4
D.2.2.18 IIP - Other transport equipment									
	2011-12	97.6	98.5	95.3	111.4	Mar	111.4	Apr	91.8
	Average	95.6	100.2	94.7	108.3	Oct	110.4	Apr	91.2
	2012-13	97.9	98.1	95.6	111.7	Mar	111.7	Apr	92.2
D.2.3 IIP - Electricity									
	2011-12	98.7	100.5	94.7	106.2	Mar	106.2	Feb	94.7
	Average	100.3	101.7	94.2	105.0	Mar	105.0	Feb	94.2
	2012-13	98.7	100.5	94.8	106.1	Mar	106.1	Feb	94.8

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	1	2	3	4	5	6	7	8	9
D.3 Cement Production									
	2011-12	104.5	102.7	99.2	97.4	92.1	89.9	98.3	92.5
	Average	104.7	104.8	101.4	96.9	91.0	90.9	98.0	93.8
	2012-13	104.4	102.6	98.9	97.3	92.2	89.7	98.4	92.4
D.4 Steel Production									
	2011-12	95.6	101.3	100.5	99.2	101.3	97.8	99.8	95.9
	Average	96.0	99.0	98.2	98.7	100.1	97.8	101.1	98.2
	2012-13	95.4	101.2	100.7	99.2	101.4	97.7	99.8	95.9
D.5 Coal Production									
	2011-12	90.7	93.6	89.1	85.5	83.1	79.3	94.1	104.0
	Average	91.3	93.3	89.3	87.5	85.9	84.5	97.0	103.1
	2012-13	90.5	93.7	88.9	85.7	82.2	78.7	93.2	104.5
D.6 Crude Oil Production									
	2011-12	98.2	100.1	98.3	101.6	101.6	99.0	102.5	99.8
	Average	98.3	100.6	98.9	101.4	101.0	98.4	102.4	99.2
	2012-13	98.1	100.1	98.2	101.9	101.7	98.9	102.4	99.8
D.7 Petroleum Refinery Production									
	2011-12	97.2	100.7	100.0	102.4	100.4	95.3	100.1	96.5
	Average	96.0	100.7	100.4	101.6	100.5	97.2	99.7	97.6
	2012-13	97.3	100.9	100.0	102.4	100.3	94.9	99.9	96.4
D.8 Fertiliser Production									
	2011-12	82.2	95.8	100.4	105.8	105.9	101.7	106.5	106.0
	Average	81.8	95.2	98.8	105.3	105.4	102.8	107.9	107.1
	2012-13	82.5	95.9	100.5	105.9	106.0	101.3	106.4	105.6
D.9 Natural Gas Production									
	2011-12	97.6	101.8	98.7	102.4	101.1	97.7	101.6	98.9
	Average	97.3	101.6	98.2	102.1	100.4	97.8	103.0	99.7
	2012-13	97.7	101.5	98.8	102.4	100.8	97.6	101.4	98.8
D.10 Production of Commercial Motor Vehicles									
	2011-12	92.7	91.7	91.9	98.8	98.1	100.8	95.3	102.9
	Average	86.4	92.7	92.2	97.1	95.0	99.8	100.8	105.5
	2012-13	92.8	91.3	92.1	98.8	97.6	101.1	94.7	102.8
D.11 Production of Passenger Vehicles									
	2011-12	102.2	96.9	88.7	101.1	95.2	97.3	101.8	101.6
	Average	97.2	100.6	89.4	103.9	97.8	99.7	101.4	100.7
	2012-13	102.6	96.6	88.3	101.0	95.1	97.1	101.3	101.8
E.1 Cargo handled at Major Ports									
	2011-12	100.5	102.8	95.5	96.3	94.7	91.9	98.8	100.3
	Average	99.0	102.1	94.6	97.3	95.6	92.7	100.6	100.2
	2012-13	100.3	102.8	95.7	96.1	94.4	91.9	98.9	100.3

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Dec	Jan	Feb	Mar	Peak Month	Peak Value	Trough Month	Trough Value
	1	10	11	12	13	14	15	16	17
D.3 Cement Production									
	2011-12	101.5	105.5	103.0	113.9	Mar	113.9	Sep	89.9
	Average	101.6	104.3	100.2	112.9	Mar	112.9	Sep	90.9
	2012-13	101.3	105.6	103.2	114.0	Mar	114.0	Sep	89.7
D.4 Steel Production									
	2011-12	101.3	103.9	98.7	104.8	Mar	104.8	Apr	95.6
	Average	101.6	103.7	98.2	106.9	Mar	106.9	Apr	96.0
	2012-13	101.5	103.9	98.6	104.6	Mar	104.6	Apr	95.4
D.5 Coal Production									
	2011-12	113.8	117.3	114.1	136.3	Mar	136.3	Sep	79.3
	Average	112.3	115.5	110.3	131.2	Mar	131.2	Sep	84.5
	2012-13	114.5	117.5	114.7	136.1	Mar	136.1	Sep	78.7
D.6 Crude Oil Production									
	2011-12	102.7	101.3	92.6	102.3	Dec	102.7	Feb	92.6
	Average	102.0	102.0	92.8	102.8	Mar	102.8	Feb	92.8
	2012-13	102.6	101.2	92.6	102.2	Dec	102.6	Feb	92.6
D.7 Petroleum Refinery Production									
	2011-12	102.7	102.9	96.6	105.3	Mar	105.3	Sep	95.3
	Average	101.5	103.5	96.7	104.7	Mar	104.7	Apr	96.0
	2012-13	103.0	102.9	96.6	105.3	Mar	105.3	Sep	94.9
D.8 Fertiliser Production									
	2011-12	107.1	105.5	94.8	88.2	Dec	107.1	Apr	82.2
	Average	109.0	104.3	93.7	88.4	Dec	109.0	Apr	81.8
	2012-13	106.9	105.7	95.1	88.3	Dec	106.9	Apr	82.5
D.9 Natural Gas Production									
	2011-12	102.1	102.3	93.2	103.0	Mar	103.0	Feb	93.2
	Average	102.5	102.0	92.5	102.7	Oct	103.0	Feb	92.5
	2012-13	102.1	102.4	93.5	103.1	Mar	103.1	Feb	93.5
D.10 Production of Commercial Motor Vehicles									
	2011-12	98.3	108.2	103.9	117.8	Mar	117.8	May	91.7
	Average	98.1	107.7	104.2	118.6	Mar	118.6	Apr	86.4
	2012-13	99.0	108.4	104.3	117.2	Mar	117.2	May	91.3
D.11 Production of Passenger Vehicles									
	2011-12	91.1	102.8	108.7	113.1	Mar	113.1	Jun	88.7
	Average	85.3	105.6	105.1	113.6	Mar	113.6	Dec	85.3
	2012-13	91.4	102.8	109.2	113.0	Mar	113.0	Jun	88.3
E.1 Cargo handled at Major Ports									
	2011-12	104.9	107.7	97.7	109.1	Mar	109.1	Sep	91.9
	Average	103.9	105.8	98.0	110.2	Mar	110.2	Sep	92.7
	2012-13	105.0	107.9	97.6	109.1	Mar	109.1	Sep	91.9

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 Monthly Seasonal Factors of Selected
Economic Time Series

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Contd.)

	Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	1	2	3	4	5	6	7	8	9
E.2 Revenue on Railway Freight Traffic									
	2011-12	97.4	99.9	96.3	97.6	95.9	92.5	97.6	98.5
	Average	97.2	100.9	96.8	97.3	95.4	93.0	97.9	98.6
	2012-13	97.3	99.9	96.3	97.6	96.0	92.4	97.7	98.7
E.3 Sales of Commercial Motor Vehicles									
	2011-12	86.9	90.2	96.3	95.2	95.5	105.6	95.6	93.5
	Average	80.1	88.7	95.4	89.7	94.2	106.0	100.1	96.2
	2012-13	87.2	90.4	95.8	95.6	95.5	105.8	95.2	93.5
E.4 Sales of Passenger Vehicles									
	2011-12	96.4	97.6	92.6	94.7	98.3	99.3	103.6	98.7
	Average	89.7	98.0	94.7	95.6	99.9	101.3	103.6	98.0
	2012-13	96.9	97.3	92.0	94.7	98.0	99.2	103.1	98.7
E.5 Passenger flown (Km) - Domestic									
	2011-12	100.1	113.2	105.0	96.7	92.4	88.3	101.3	102.4
	Average	99.4	111.0	102.9	95.5	93.3	89.6	100.1	101.8
	2012-13	99.8	112.9	105.3	96.8	92.2	88.2	101.4	102.7
E.6 Passenger flown (Km) - International									
	2011-12	93.9	98.5	96.4	101.4	104.2	105.8	110.8	101.6
	Average	94.6	99.5	96.2	100.1	102.2	103.9	108.1	101.6
	2012-13	93.8	98.3	96.4	101.6	104.5	105.9	110.5	101.4
E.7 Freight Tonne Km flown - Domestic									
	2011-12	95.6	100.5	102.7	110.8	108.0	95.4	94.7	94.8
	Average	95.1	99.6	102.7	108.8	107.8	93.6	92.0	94.3
	2012-13	95.8	100.8	103.1	110.9	107.8	95.6	94.9	94.7
E.8 Freight Tonne Km flown - International									
	2011-12	98.6	105.0	97.5	105.9	102.4	101.6	102.3	92.0
	Average	101.3	102.7	97.5	102.2	99.9	103.2	103.8	95.9
	2012-13	98.6	105.6	97.4	105.7	101.8	100.9	102.5	91.5
F.1 Exports*									
	2011-12	99.7	101.6	102.8	103.4	97.9	100.3	97.3	88.9
	Average	97.0	100.2	99.8	100.1	98.2	100.7	99.9	91.0
	2012-13	99.5	101.8	102.5	103.5	97.7	100.4	96.8	89.1
F.2 Imports*									
	2011-12	104.0	107.4	102.8	104.9	100.5	97.8	105.0	95.5
	Average	100.6	107.4	100.3	103.0	100.9	102.2	104.2	96.7
	2012-13	103.4	107.5	102.5	104.4	99.7	97.0	105.3	94.9

* Valued in US Dollar

Table 1: Monthly Seasonal Factors of Selected Economic Time Series (April - March) (Concl'd.)

	Year	Dec	Jan	Feb	Mar	Peak Month	Peak Value	Trough Month	Trough Value
	1	10	11	12	13	14	15	16	17
E.2 Revenue on Railway Freight Traffic									
	2011-12	105.0	105.7	99.1	114.4	Mar	114.4	Sep	92.5
	Average	104.5	105.7	98.9	114.0	Mar	114.0	Sep	93.0
	2012-13	105.1	105.7	99.1	114.3	Mar	114.3	Sep	92.4
E.3 Sales of Commercial Motor Vehicles									
	2011-12	102.2	103.4	108.2	126.9	Mar	126.9	Apr	86.9
	Average	101.1	106.4	108.1	131.6	Mar	131.6	Apr	80.1
	2012-13	102.8	103.4	107.9	126.8	Mar	126.8	Apr	87.2
E.4 Sales of Passenger Vehicles									
	2011-12	88.2	106.5	107.9	116.7	Mar	116.7	Dec	88.2
	Average	87.2	106.9	103.2	121.2	Mar	121.2	Dec	87.2
	2012-13	88.6	107.0	108.1	116.6	Mar	116.6	Dec	88.6
E.5 Passenger flow (Km) - Domestic									
	2011-12	108.8	102.6	94.8	94.6	May	113.2	Sep	88.3
	Average	109.9	104.5	96.1	95.2	May	111.0	Sep	89.6
	2012-13	109.0	102.5	94.7	94.6	May	112.9	Sep	88.2
E.6 Passenger flow (Km) - International									
	2011-12	102.1	93.4	91.7	100.4	Oct	110.8	Feb	91.7
	Average	103.4	94.6	92.1	103.5	Oct	108.1	Feb	92.1
	2012-13	102.2	93.1	92.0	100.6	Oct	110.5	Feb	92.0
E.7 Freight Tonne Km flown - Domestic									
	2011-12	103.0	105.5	90.3	98.0	Jul	110.8	Feb	90.3
	Average	105.8	108.7	92.7	98.3	Jul	108.8	Oct	92.0
	2012-13	102.7	105.2	90.4	98.0	Jul	110.9	Feb	90.4
E.8 Freight Tonne Km flown - International									
	2011-12	95.4	90.8	93.2	115.7	Mar	115.7	Jan	90.8
	Average	97.5	88.7	91.9	115.4	Mar	115.4	Jan	88.7
	2012-13	95.8	91.7	93.3	115.3	Mar	115.3	Nov	91.5
F.1 Exports*									
	2011-12	100.7	97.4	95.6	114.9	Mar	114.9	Nov	88.9
	Average	99.3	100.4	96.0	116.4	Mar	116.4	Nov	91.0
	2012-13	100.7	97.3	95.7	115.4	Mar	115.4	Nov	89.1
F.2 Imports*									
	2011-12	96.6	97.1	92.5	97.8	May	107.4	Feb	92.5
	Average	96.6	97.7	89.1	100.1	May	107.4	Feb	89.1
	2012-13	96.8	97.9	93.5	98.0	May	107.5	Feb	93.5

* Valued in US Dollar

Note: 1. Average Figures relate to the reference period 2002-03 to 2011-12

2. Figures for 2012-13 are the forecasts of seasonal factors

Table 2: Range (Difference Between Peak and Trough) of Seasonal Factors

Year	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	Average Range	
	1	2	3	4	5	6	7	8	9	10	11	
A.1.1	Broad Money (M_3)	2.3	2.6	2.9	3.1	3.2	3.1	2.8	2.4	2.1	2.0	2.7
A.1.1.1	Net Bank Credit to Government	4.0	4.1	4.3	4.8	5.2	5.4	5.4	5.1	4.8	4.6	4.8
A.1.1.2	Bank Credit to Commercial Sector	3.4	3.5	3.7	4.0	4.2	4.2	4.2	4.1	4.0	3.9	3.9
A.1.2	Narrow Money (M_1)	5.6	5.5	5.6	5.9	6.3	6.4	6.2	5.8	5.5	5.2	5.8
A.1.2.1	Currency with the Public	7.3	7.0	6.9	6.9	6.9	6.8	6.7	6.5	6.3	6.1	6.7
A.1.3	Reserve Money (RM)	6.6	7.1	7.5	7.5	7.0	6.4	6.6	6.8	6.9	6.9	6.9
A.1.3.1	Currency in Circulation	7.4	7.2	7.0	6.9	6.9	6.8	6.6	6.4	6.1	5.9	6.7
A.1.3.1.1	Notes in Circulation	7.6	7.3	7.2	7.1	7.0	6.9	6.7	6.5	6.2	6.1	6.8
A.2.1	Deposits (Banking Department)	12.5	13.4	14.4	14.8	13.8	13.2	13.0	13.5	13.7	14.3	13.7
A.2.2	Liabilities to the Banking System (SCBs)	7.4	8.4	10.3	11.1	12.0	11.8	11.9	11.6	11.6	11.7	10.8
A.2.3	Aggregate Deposits (SCBs)	2.1	2.4	2.7	3.0	3.1	3.0	2.9	2.6	2.4	2.2	2.6
A.2.3.1	Demand Deposits (SCBs)	10.0	11.8	13.3	14.0	14.7	14.9	15.0	14.7	14.4	14.2	13.7
A.2.3.2	Time Deposits (SCBs)	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.7	1.7
A.3.1	Cash in Hand and Balances with RBI (SCBs)	15.3	15.4	14.0	13.8	12.8	11.4	10.2	8.3	6.7	6.2	11.4
A.3.2	Assets with the Banking System (SCBs)	10.9	11.7	13.1	14.2	16.1	17.7	18.5	19.2	20.3	21.2	16.3
A.3.3	Bank Credit (SCBs)	3.4	3.5	3.6	3.7	3.9	4.0	4.1	4.1	4.2	4.3	3.9
A.3.3.1	Loans, Cash, Credits and Overdrafts (SCBs)	2.9	3.0	3.3	3.6	4.0	4.3	4.4	4.4	4.4	4.4	3.9
A.3.3.2	Food Credit (SCBs)	15.8	15.8	16.3	17.0	17.7	18.3	19.2	20.7	22.0	22.7	18.6
A.3.3.3	Non-Food Credit (SCBs)	3.7	3.4	3.3	3.5	3.8	4.2	4.5	4.6	4.5	4.6	4.0
A.3.4	Investments (SCBs)	3.5	3.5	3.4	3.6	3.8	4.1	4.4	4.6	4.7	4.7	4.0
B.	WPI (base: 2004-05=100) All Commodities	1.1	1.1	1.3	1.3	1.4	1.5	1.4	1.3	1.1	1.1	1.3
B.1	WPI - Primary Articles	3.3	3.6	3.9	4.1	4.2	4.2	3.8	3.5	3.2	2.9	3.7
B.1.1	WPI - Food Articles	4.1	4.6	5.1	5.6	5.9	6.0	6.1	6.1	6.1	6.1	5.6
B.1.1.1	WPI - Food Grains (Cereals+Pulses)	1.5	1.4	1.5	1.8	2.1	2.3	2.3	2.0	1.7	1.4	1.8
B.1.1.1.1	WPI - Cereals	1.1	1.4	1.8	1.8	1.8	1.8	1.8	1.7	1.5	1.3	1.6
B.1.1.1.1.1	WPI - Wheat	5.1	5.4	5.6	5.7	5.6	5.1	4.7	4.3	4.3	2.1	4.8
B.1.1.1.1.2	WPI - Rice	2.9	2.4	2.0	1.7	1.4	1.3	1.4	1.7	2.0	2.1	1.9
B.1.1.1.2	WPI - Pulses	5.4	5.2	5.6	5.8	5.9	5.7	5.1	4.7	4.3	3.9	5.2
B.1.1.2	WPI - Fruits & Vegetables	18.6	18.9	19.1	19.4	19.0	18.2	17.5	17.5	17.6	17.5	18.3
B.1.1.2.1	WPI - Potatoes	48.7	49.3	49.9	51.1	51.8	53.3	53.5	53.4	52.8	52.3	51.6
B.1.1.2.2	WPI - Onions	48.6	45.6	43.6	43.4	44.5	45.7	49.4	52.3	54.8	55.6	48.3
B.1.1.3	WPI - Milk	1.7	1.3	1.2	1.0	0.7	0.5	0.4	0.7	0.9	1.2	0.9
B.1.1.4	WPI - Egg, Meat and Fish	5.3	5.1	5.2	5.1	4.6	3.9	3.1	2.6	2.7	3.1	4.1

Table 2: Range (Difference Between Peak and Trough) of Seasonal Factors (Contd.)

Year	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	Average Range
	1	2	3	4	5	6	7	8	9	10	11
B.1.1.4.1 WPI - Egg	16.2	15.4	13.9	12.3	10.6	9.1	8.1	7.9	8.9	9.4	11.2
B.1.1.4.2 WPI - Meat	5.0	5.4	5.2	4.7	3.8	2.9	2.0	1.6	1.8	1.9	3.4
B.1.1.4.3 WPI - Fish	8.1	7.1	7.0	7.3	6.8	5.5	5.2	4.9	5.6	6.2	6.4
B.1.1.5 WPI - Protein Items (viz., Pulses, Milk, Egg, Meat and Fish) Group	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.1	2.3	2.5	2.0
B.1.2 WPI - Non-Food Articles	2.5	2.2	2.0	2.2	2.5	2.6	2.4	3.5	4.2	4.6	2.9
B.1.2.1 WPI - Fibres	4.4	4.1	3.9	4.2	4.7	4.4	3.3	2.5	2.0	2.3	3.6
B.1.2.1.1 WPI - Raw Cotton	5.7	5.7	6.0	7.0	7.6	7.1	5.2	3.9	3.2	2.8	5.4
B.1.2.2 WPI - Oil Seeds	4.5	4.0	3.5	3.2	3.2	3.4	3.9	4.2	4.4	4.4	3.9
B.2 WPI - Manufactured Products	0.6	0.8	1.1	1.3	1.4	1.4	1.4	1.3	1.2	1.2	1.2
B.2.1 WPI - Food Products	2.0	2.1	1.9	1.6	1.2	1.0	0.9	1.1	1.3	1.4	1.5
B.2.1.1 WPI - Grain Mill Products	6.0	5.5	4.9	4.3	3.7	3.3	3.1	3.0	3.0	3.0	4.0
B.2.1.2 WPI - Sugar	2.6	2.4	2.0	1.6	1.5	1.6	1.8	2.0	2.3	2.6	2.1
B.2.1.3 WPI - Edible Oils	3.0	2.6	2.2	2.1	2.1	2.0	1.9	1.8	1.6	1.5	2.1
B.3 WPI - Freely Priced Petroleum Products (ex- Petrol Group)			6.0	5.8	5.4	4.8	4.3	3.4	3.5	4.2	4.7
B.4 WPI - Non Food Manufactured Products	0.4	0.5	0.8	0.9	1.1	1.2	1.2	1.2	1.2	1.2	1.0
B.5 WPI - Non Food Non-Fuel	0.8	0.9	1.2	1.5	1.6	1.8	1.9	1.9	2.0	2.1	1.6
C.1 Consumer Price Index for Industrial Workers (base: 2001=100)	1.6	1.6	1.7	1.8	1.9	2.0	1.9	1.9	1.9	2.0	1.8
C.2 Consumer Price Index for Agricultural Labourers (base: 1986-87=100)	2.1	2.0	2.0	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2
C.3 Consumer Price Index for Rural Labourers (base: 1986-87=100)	2.0	1.9	1.9	2.0	2.1	2.1	2.2	2.1	2.1	2.1	2.1
D. IIP (base: 2004-05 = 100) General Index	12.4	12.7	13.5	14.0	14.1	13.8	13.9	13.9	13.9	14.0	13.6
D.1.1 IIP - Basic Goods Industries	10.2	10.6	11.5	12.4	13.2	13.8	14.4	14.7	15.0	15.1	13.1
D.1.2 IIP - Capital Goods Industries	30.2	33.2	35.8	36.8	36.8	35.8	34.3	32.9	34.2	35.3	34.5
D.1.3 IIP - Intermediate Goods Industries	7.0	8.0	9.0	9.7	10.1	10.1	9.6	8.9	8.3	8.0	8.9
D.1.4 IIP - Consumer Goods Industries	20.0	19.3	17.9	16.1	15.3	14.7	14.6	14.8	14.9	15.2	16.3
D.1.4.1 IIP - Consumer Durable Goods Industries	12.6	12.6	12.4	13.1	12.8	11.8	9.4	9.5	11.0	12.2	11.7
D.1.4.2 IIP - Consumer Non- Durable Goods Industries	25.5	24.3	23.0	22.6	23.2	23.9	24.9	25.5	26.2	26.3	24.5

ARTICLE

Monthly Seasonal Factors of Selected Economic Time Series

Table 2: Range (Difference Between Peak and Trough) of Seasonal Factors (Contd.)

Year	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	Average Range	
	1	2	3	4	5	6	7	8	9	10	11	
D.2.1	IIP - Mining	17.9	19.2	20.8	22.2	23.3	24.3	24.8	25.1	25.2	25.4	22.8
D.2.2	IIP - Manufacturing	12.6	13.1	14.2	14.7	14.8	14.3	13.5	13.3	13.4	13.5	13.7
D.2.2.1	IIP - Food products and beverages				67.9	67.6	66.4	65.1	64.0	63.3	62.5	65.3
D.2.2.2	IIP - Textiles				8.0	7.8	7.5	7.2	6.7	6.3	6.1	7.1
D.2.2.3	IIP - Wearing apparel; dressing and dyeing of fur				26.9	26.1	25.7	25.3	26.2	28.0	29.4	26.8
D.2.2.4	IIP - Wood and products of wood & cork except furniture; articles of straw & plating materials				22.5	22.0	20.9	19.7	18.9	18.7	18.8	20.2
D.2.2.5	IIP - Paper and paper products				10.9	11.0	10.9	10.6	10.2	9.9	9.7	10.5
D.2.2.6	IIP - Publishing, printing & reproduction of recorded media				9.5	9.6	9.7	9.9	10.0	10.2	10.2	9.9
D.2.2.7	IIP - Coke, refined petroleum products & nuclear fuel				11.3	10.8	10.3	9.9	9.9	9.1	8.9	10.0
D.2.2.8	IIP - Chemicals and chemical products				10.1	10.4	10.8	11.0	10.8	10.3	9.7	10.5
D.2.2.9	IIP - Rubber and plastics products				8.6	9.1	9.4	9.8	9.9	10.6	11.0	9.8
D.2.2.10	IIP - Other non-metallic mineral products				16.3	16.4	16.6	17.0	17.2	17.6	17.7	17.0
D.2.2.11	IIP - Basic metals				11.3	11.3	11.3	11.0	10.8	10.8	11.3	11.1
D.2.2.12	IIP - Fabricated metal products, except machinery & equipment				40.8	42.2	44.7	48.0	51.7	54.4	56.2	48.3
D.2.2.13	IIP - Machinery and equipment n.e.c.				44.9	45.2	46.5	48.2	50.2	51.4	52.1	48.3
D.2.2.14	IIP - Office, accounting and computing machinery				70.2	71.7	74.5	78.8	82.2	84.3	84.3	78.0
D.2.2.15	IIP - Radio, TV and communication equipment & apparatus				17.8	16.8	15.9	15.3	14.7	15.8	17.1	16.2
D.2.2.16	IIP - Medical, precision and optical instruments, watches and clocks				44.5	44.4	44.5	44.2	44.9	45.2	45.9	44.8
D.2.2.17	IIP - Motor vehicles, trailers & semi-trailers				26.2	26.1	26.2	26.3	26.2	25.8	25.3	26.0
D.2.2.18	IIP - Other transport equipment				20.7	20.4	19.9	19.2	18.6	19.2	19.6	19.7
D.2.3	IIP - Electricity	11.4	11.1	10.4	10.0	10.0	10.5	10.8	11.3	11.5	11.5	10.8
D.3	Cement Production	24.4	22.9	21.7	21.2	21.1	21.3	22.0	22.7	23.5	24.0	22.5
D.4	Steel Production	12.2	12.5	12.5	12.1	11.6	10.5	9.7	9.4	9.1	9.2	10.9

Table 2: Range (Difference Between Peak and Trough) of Seasonal Factors (Concl.)

Year	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	Average Range	
	1	2	3	4	5	6	7	8	9	10	11	
D.5	Coal Production	35.0	36.4	39.2	42.7	46.7	49.5	51.3	53.5	55.5	57.0	46.7
D.6	Crude Oil Production	10.0	10.3	10.1	10.1	10.0	10.0	9.9	10.0	10.1	10.1	10.0
D.7	Petroleum Refinery Production	9.5	9.7	9.5	9.2	8.8	8.6	8.1	8.3	9.1	10.0	9.1
D.8	Fertiliser Production			28.5	28.5	28.4	28.0	27.3	26.4	25.6	24.9	27.2
D.9	Natural Gas Production			10.8	11.1	11.5	11.6	11.1	10.4	10.0	9.9	10.8
D.10	Production of Commercial Motor Vehicles	47.3	42.3	36.8	33.2	30.1	28.4	27.4	27.3	26.9	26.1	32.6
D.11	Production of Passenger Vehicles	30.0	31.6	32.5	32.2	31.2	29.4	26.8	24.6	23.7	24.4	28.6
E.1	Cargo handled at Major Ports	15.3	17.1	18.1	18.4	18.3	17.9	17.6	17.4	17.4	17.3	17.5
E.2	Revenue on Railway Freight Traffic	19.2	19.2	19.8	20.7	21.3	21.8	21.9	21.9	21.8	21.9	20.9
E.3	Sales of Commercial Motor Vehicles	73.0	63.4	57.2	53.2	50.5	47.7	45.2	43.0	41.2	40.1	51.4
E.4	Sales of Passenger Vehicles	46.9	43.4	39.3	35.0	32.9	31.7	30.8	29.8	29.3	28.5	34.8
E.5	Passenger flown (Km) - Domestic	22.7	22.5	21.5	20.4	20.7	22.1	23.2	24.3	24.7	24.8	22.7
E.6	Passenger flown (Km) - International	12.2	13.3	13.7	14.2	15.8	17.4	18.5	19.2	19.5	19.1	16.3
E.7	Freight Tonne Km flown - Domestic	19.1	20.5	20.7	19.9	18.8	17.2	17.9	19.3	20.1	20.5	19.4
E.8	Freight Tonne Km flown - International	23.9	26.7	27.5	27.7	27.9	28.5	27.7	26.8	25.7	24.9	26.7
F.1	Exports*	25.5	26.8	27.1	26.0	24.6	23.8	24.2	24.8	25.5	26.0	25.4
F.2	Imports*	15.6	16.7	18.2	19.4	20.9	21.4	20.7	18.8	16.9	14.9	18.4

* Valued in US Dollar

ARTICLE
**Monthly Seasonal Factors of Selected
Economic Time Series**
Table 3: Peak/Trough month during 2011-12

Name of Variable	Peak/Trough											
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
	1	2	3	4	5	6	7	8	9	10	11	12
A. Monetary and Banking Aggregates												
A.1.1 Broad Money (M ₃)	P							T				
A.1.1.1 Net Bank Credit to Government	P								T			
A.1.1.2 Bank Credit to Commercial Sector								T				P
A.1.2 Narrow Money (M ₁)					T							P
A.1.2.1 Currency with the Public		P				T						
A.1.3 Reserve Money (RM)						T						P
A.1.3.1 Currency in Circulation		P				T						
A.1.3.1.1 Notes in Circulation		P				T						
A.2.1 Deposits (Banking Department)						P					T	
A.2.2 Liabilities to the Banking System (SCBs)								T				P
A.2.3 Aggregate Deposits (SCBs)	P								T			
A.2.3.1 Demand Deposits (SCBs)			T									P
A.2.3.2 Time Deposits (SCBs)	P					T						
A.3.1 Cash in Hand and Balances with RBI (SCBs)				P			T					
A.3.2 Assets with the Banking System (SCBs)								T				P
A.3.3 Bank Credit (SCBs)								T				P
A.3.3.1 Loans, Cash, Credits and Overdrafts (SCBs)					T							P
A.3.3.2 Food Credit (SCBs)			P				T					
A.3.3.3 Non-Food Credit (SCBs)								T				P
A.3.4 Investments (SCBs)					P							T
B. WPI (base: 2004-05=100) All Commodities	P										T	
B.1 WPI - Primary Article								P			T	
B.1.1 WPI - Food Articles							P				T	
B.1.1.1 WPI - Food Grains (Cereals+Pulses)		T					P					
B.1.1.1.1 WPI - Cereals	T								P			
B.1.1.1.1.1 WPI - Wheat		T								P		
B.1.1.1.1.2 WPI - Rice			T					P				
B.1.1.1.2 WPI - Pulses		T					P					
B.1.1.2 WPI - Fruits & Vegetables								P				T
B.1.1.2.1 WPI - Potatoes							P				T	
B.1.1.2.2 WPI - Onions		T						P				
B.1.1.3 WPI - Milk				P								T
B.1.1.4 WPI - Egg, Meat and Fish	T					P						
B.1.1.4.1 WPI - Egg					T					P		
B.1.1.4.2 WPI - Meat		T						P				
B.1.1.4.3 WPI - Fish	T					P						
B.1.1.5 WPI - Protein Items (viz., Pulses, Milk, Egg, Meat and Fish) Group						P						T
B.1.2 WPI - Non-Food Articles							T					P

Table 3: Peak/Trough month during 2011-12 (Contd.)

Name of Variable	Peak/Trough											
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
	1	2	3	4	5	6	7	8	9	10	11	12
B.1.2.1 WPI - Fibres							T			P		
B.1.2.1.1 WPI - Raw Cotton							T					P
B.1.2.2 WPI - Oil Seeds			P					T				
B.2 WPI - Manufactured Products	P								T			
B.2.1 WPI - Food Products			T							P		
B.2.1.1 WPI - Grain Mill Products		T								P		
B.2.1.2 WPI - Sugar						T				P		
B.2.1.3 WPI - Edible Oils								T		P		
B.3 WPI - Freely Priced Petroleum Products (ex-Petrol Group)		P					T					
B.4 WPI - Non Food Manufactured Products	P								T			
B.5 WPI - Non Food Non-Fuel	P								T			
C.1 Consumer Price Index for Industrial Workers (base: 2001=100)		T							P			
C.2 Consumer Price Index for Agricultural Labourers (base: 1986-87=100)	T								P			
C.3 Consumer Price Index for Rural Labourers (base: 1986-87=100)	T								P			
D. IIP (base: 2004-05=100) General Index					T							P
D.1.1 IIP - Basic Goods Industries						T						P
D.1.2 IIP - Capital Goods Industries		T										P
D.1.3 IIP - Intermediate Goods Industries											T	P
D.1.4 IIP - Consumer Goods Industries					T							P
D.1.4.1 IIP - Consumer Durable Goods Industries					T							P
D.1.4.2 IIP - Consumer Non-Durable Goods Industries							T		P			
D.2.1 IIP - Mining						T						P
D.2.2 IIP - Manufacturing					T							P
D.2.2.1 IIP - Food products and beverages						T			P			
D.2.2.2 IIP - Textiles						T			P			
D.2.2.3 IIP - Wearing apparel; dressing and dyeing of fur							T					P
D.2.2.4 IIP - Wood and products of wood & cork except furniture; articles of straw & plating materials	T								P			
D.2.2.5 IIP - Paper and paper products											T	P
D.2.2.6 IIP - Publishing, printing & reproduction of recorded media							P				T	
D.2.2.7 IIP - Coke, refined petroleum products & nuclear fuel						T						P
D.2.2.8 IIP - Chemicals and chemical products				P							T	
D.2.2.9 IIP - Rubber and plastics products					T							P
D.2.2.10 IIP - Other non-metallic mineral products						T						P

ARTICLE
**Monthly Seasonal Factors of Selected
Economic Time Series**
Table 3: Peak/Trough month during 2011-12 (Concl'd.)

Name of Variable	Peak/Trough											
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
	1	2	3	4	5	6	7	8	9	10	11	12
D.2.2.11 IIP - Basic metals	T											P
D.2.2.12 IIP - Fabricated metal products, except machinery & equipment	T											P
D.2.2.13 IIP - Machinery and equipment n.e.c.								T				P
D.2.2.14 IIP - Office, accounting and computing machinery										T		P
D.2.2.15 IIP - Radio, TV and communication equipment & apparatus		T							P			
D.2.2.16 IIP - Medical, precision and optical instruments, watches and clocks	T											P
D.2.2.17 IIP - Motor vehicles, trailers & semi-trailers			T									P
D.2.2.18 IIP - Other transport equipment	T											P
D.2.3 IIP - Electricity											T	P
D.3 Cement Production						T						P
D.4 Steel Production	T											P
D.5 Coal Production						T						P
D.6 Crude Oil Production									P		T	
D.7 Petroleum Refinery Production						T						P
D.8 Fertiliser Production	T								P			
D.9 Natural Gas Production											T	P
D.10 Production of Commercial Motor Vehicles		T										P
D.11 Production of Passenger Vehicles			T									P
E.1 Cargo handled at Major Ports						T						P
E.2 Revenue on Railway Freight Traffic						T						P
E.3 Sales of Commercial Motor Vehicles	T											P
E.4 Sales of Passenger Vehicles									T			P
E.5 Passenger flown (Km) - Domestic		P				T						
E.6 Passenger flown (Km) - International							P				T	
E.7 Freight Tonne Km flown - Domestic				P							T	
E.8 Freight Tonne Km flown - International										T		P
F. External Trade												
F.1 Exports								T				P
F.2 Imports		P									T	
Total Counts												
Peak	8	6	2	4	1	4	6	8	7	7	1	45
Trough	13	10	5	0	8	18	8	10	6	2	15	4
P- Peak Month T - Trough Month												

Table 4: Classification of Variables as per seasonal variation in 2011-12 (Range) and change in seasonal variation in 2011-12 *vis-à-vis* last 5-years (2006-07 to 2010-11)

Name of Variable	Range Value - 2011-12					Average Range of Monthly Seasonal Factors for the last 5-years (2006-07 to 2010-11)	Change
	0-5	5-10	10-20	20-30	>30		
	1	2	3	4	5		
A. Monetary and Banking Aggregates							
A.1.1 Broad Money (M ₃)	2.0					2.7	-0.7
A.1.1.1 Net Bank Credit to Government	4.6					5.2	-0.6
A.1.1.2 Bank Credit to Commercial Sector	3.9					4.1	-0.2
A.1.2 Narrow Money (M ₁)		5.2				6.0	-0.8
A.1.2.1 Currency with the Public		6.1				6.6	-0.5
A.1.3 Reserve Money (RM)		6.9				6.6	0.2
A.1.3.1 Currency in Circulation		5.9				6.6	-0.6
A.1.3.1.1 Notes in Circulation		6.1				6.7	-0.6
A.2.1 Deposits (Banking Department)			14.3			12.5	1.9
A.2.2 Liabilities to the Banking System (SCBs)			11.7			11.4	0.3
A.2.3 Aggregate Deposits (SCBs)	2.2					2.8	-0.6
A.2.3.1 Demand Deposits (SCBs)			14.2			14.6	-0.4
A.2.3.2 Time Deposits (SCBs)	1.7					1.7	0.0
A.3.1 Cash in Hand and Balances with RBI (SCBs)		6.2				9.6	-3.4
A.3.2 Assets with the Banking System (SCBs)				21.2		18.2	3.0
A.3.3 Bank Credit (SCBs)	4.3					4.0	0.3
A.3.3.1 Loans, Cash, Credits and Overdrafts (SCBs)	4.4					4.3	0.1
A.3.3.2 Food Credit (SCBs)				22.7		19.0	3.6
A.3.3.3 Non-Food Credit (SCBs)	4.6					4.3	0.3
A.3.4 Investments (SCBs)	4.7					4.3	0.4
B. WPI (base: 2004-05=100) All Commodities	1.1					1.3	-0.2
B.1 WPI - Primary Articles	2.9					3.7	-0.8
B.1.1 WPI - Food Articles		6.1				6.0	0.1
B.1.1.1 WPI - Food Grains (Cereals+Pulses)	1.4					2.1	-0.7
B.1.1.1.1 WPI - Cereals	1.3					1.6	-0.3
B.1.1.1.1.1 WPI - Wheat	4.3					4.8	-0.5
B.1.1.1.1.2 WPI - Rice	2.1					1.5	0.6
B.1.1.1.2 WPI - Pulses	3.9					4.9	-1.0
B.1.1.2 WPI - Fruits & Vegetables			17.5			17.7	-0.2
B.1.1.2.1 WPI - Potatoes				52.3		53.0	-0.7
B.1.1.2.2 WPI - Onions				55.6		49.1	6.5
B.1.1.3 WPI - Milk	1.2					0.4	0.8
B.1.1.4 WPI - Egg, Meat and Fish	3.1					3.3	-0.2
B.1.1.4.1 WPI - Egg		9.4				8.7	0.8
B.1.1.4.2 WPI - Meat	1.9					2.2	-0.3
B.1.1.4.3 WPI - Fish		6.2				5.2	1.0
B.1.1.5 WPI - Protein Items (<i>viz.</i> , Pulses, Milk, Egg, Meat and Fish) Group	2.5					2.0	0.6

Table 4: Classification of Variables as per seasonal variation in 2011-12 (Range) and change in seasonal variation in 2011-12 vis-à-vis last 5-years (2006-07 to 2010-11) (Contd.)

Name of Variable		Range Value - 2011-12					Average Range of Monthly Seasonal Factors for the last 5-years (2006-07 to 2010-11)	Change
		0-5	5-10	10-20	20-30	>30		
		1	2	3	4	5		
B.1.2	WPI - Non-Food Articles	4.6					2.3	2.3
B.1.2.1	WPI - Fibres	2.3					2.7	-0.4
B.1.2.1.1	WPI - Raw Cotton	2.8					4.5	-1.7
B.1.2.2	WPI - Oil Seeds	4.4					3.8	0.6
B.2	WPI - Manufactured Products	1.2					1.4	-0.2
B.2.1	WPI - Food Products	1.4					0.9	0.5
B.2.1.1	WPI - Grain Mill Products	3.0					3.2	-0.3
B.2.1.2	WPI - Sugar	2.6					1.7	1.0
B.2.1.3	WPI - Edible Oils	1.5					1.7	-0.2
B.3	WPI - Freely Priced Petroleum Products (ex-Petrol Group)	4.2					3.9	0.3
B.4	WPI - Non Food Manufactured Products	1.2					1.2	0.0
B.5	WPI - Non Food Non-Fuel	2.1					1.8	0.3
C.1	Consumer Price Index for Industrial Workers (base: 2001=100)	2.0					1.9	0.1
C.2	Consumer Price Index for Agricultural Labourers (base: 1986-87=100)	2.2					2.2	0.1
C.3	Consumer Price Index for Rural Labourers (base: 1986-87=100)	2.1					2.1	0.0
D.	IIP (base: 2004-05 = 100) General Index			14.0			13.8	0.2
D.1.1	IIP - Basic Goods Industries			15.1			14.2	0.9
D.1.2	IIP - Capital Goods Industries					35.3	34.4	0.9
D.1.3	IIP - Intermediate Goods Industries		8.0				9.4	-1.4
D.1.4	IIP - Consumer Goods Industries			15.2			14.8	0.4
D.1.4.1	IIP - Consumer Durable Goods Industries			12.2			9.4	2.7
D.1.4.2	IIP - Consumer Non-Durable Goods Industries				26.3		24.7	1.6
D.2.1	IIP - Mining				25.4		24.5	0.8
D.2.2	IIP - Manufacturing			13.5			13.5	-0.1
D.2.2.1	IIP - Food products and beverages					62.5	65.3	-2.7
D.2.2.2	IIP - Textiles		6.1				7.1	-1.0
D.2.2.3	IIP - Wearing apparel, dressing and dyeing of fur				29.4		25.1	4.3
D.2.2.4	IIP - Wood and products of wood & cork except furniture; articles of straw & plating materials			18.8			20.1	-1.2
D.2.2.5	IIP - Paper and paper products		9.7				10.5	-0.8
D.2.2.6	IIP - Publishing, printing & reproduction of recorded media			10.2			9.9	0.3
D.2.2.7	IIP - Coke, refined petroleum products & nuclear fuel		8.9				10.0	-1.1
D.2.2.8	IIP - Chemicals and chemical products		9.7				10.7	-1.0

Table 4: Classification of Variables as per seasonal variation in 2011-12 (Range) and change in seasonal variation in 2011-12 vis-à-vis last 5-years (2006-07 to 2010-11) (Concl'd.)

Name of Variable	Range Value - 2011-12					Average Range of Monthly Seasonal Factors for the last 5-years (2006-07 to 2010-11)	Change
	0-5	5-10	10-20	20-30	>30		
	1	2	3	4	5		
D.2.2.9 IIP - Rubber and plastics products			11.0			9.7	1.3
D.2.2.10 IIP - Other non-metallic mineral products			17.7			17.0	0.7
D.2.2.11 IIP - Basic metals			11.3			11.0	0.3
D.2.2.12 IIP - Fabricated metal products, except machinery & equipment					56.2	48.2	8.0
D.2.2.13 IIP - Machinery and equipment n.e.c.					52.1	48.2	3.9
D.2.2.14 IIP - Office, accounting and computing machinery					84.3	78.3	6.0
D.2.2.15 IIP - Radio, TV and communication equipment & apparatus			17.1			15.4	1.7
D.2.2.16 IIP - Medical, precision and optical instruments, watches and clocks					45.9	44.6	1.2
D.2.2.17 IIP - Motor vehicles, trailers & semi-trailers				25.3		26.1	-0.8
D.2.2.18 IIP - Other transport equipment			19.6			19.2	0.3
D.2.3 IIP - Electricity			11.5			10.8	0.7
D.3 Cement Production				24.0		21.9	2.0
D.4 Steel Production		9.2				10.0	-0.8
D.5 Coal Production					57.0	51.3	5.7
D.6 Crude Oil Production			10.1			9.9	0.2
D.7 Petroleum Refinery Production		10.0				8.2	1.8
D.8 Fertiliser Production				24.9		27.1	-2.3
D.9 Natural Gas Production		9.9				10.7	-0.9
D.10 Production of Commercial Motor Vehicles				26.1		27.4	-1.3
D.11 Production of Passenger Vehicles				24.4		26.9	-2.6
E.1 Cargo handled at Major Ports			17.3			17.7	-0.4
E.2 Revenue on Railway Freight Traffic				21.9		21.7	0.1
E.3 Sales of Commercial Motor Vehicles					40.1	45.5	-5.5
E.4 Sales of Passenger Vehicles				28.5		30.9	-2.4
E.5 Passenger flown (Km) - Domestic				24.8		23.0	1.8
E.6 Passenger flown (Km) - International			19.1			18.1	1.1
E.7 Freight Tonne Km flown - Domestic				20.5		17.7	2.9
E.8 Freight Tonne Km flown - International				24.9		27.3	-2.4
F. External Trade							
F.1 Exports				26.0		24.6	1.4
F.2 Imports			14.9			19.7	-4.8
Total	35	17	21	16	10		D: 44 U: 52 NC: 3

D - Downward Change.
U - Upward Change
NC - No Change

Table 5: List of Top-Twenty and Bottom-Twenty Series based on Average Range of Monthly Seasonal Factors during Last Five Years (2007-08 to 2011-12) and corresponding Peak and Trough Months

Name of Top-Twenty Series	Average Range	Peak Month	Trough Month	Name of Bottom-Twenty Series	Average Range	Peak Month	Trough Month
	1	2	3		4	5	6
D.2.2.14 IIP - Office, accounting and computing machinery	80.8	Mar	Jan	A.2.3 Aggregate Deposits (SCBs)	2.6	Apr	Dec
D.2.2.1 IIP - Food products and beverages	64.3	Dec	Sep	A.1.1 Broad Money (M ₃)	2.5	Apr	Dec
D.5 Coal Production	53.4	Mar	Sep	C.2 Consumer Price Index for Agricultural Labourers (base: 1986-87=100)	2.2	Nov	Apr
B.1.1.2.1 WPI - Potatoes	53.1	Oct	Feb	C.3 Consumer Price Index for Rural Labourers (base: 1986-87=100)	2.1	Nov	Apr
B.1.1.2.2 WPI - Onions	51.6	Nov	May	B.1.2.1 WPI - Fibres	2.1	Jul	Nov
D.2.2.12 IIP - Fabricated metal products, except machinery & equipment	51.0	Mar	Apr	B.1.1.5 WPI - Protein Items (viz., Pulses, Milk, Egg, Meat and Fish) Group	2.0	Sep	Mar
D.2.2.13 IIP - Machinery and equipment n.e.c.	49.7	Mar	Nov	B.1.1.1 WPI - Food Grains (Cereals+Pulses)	1.9	Nov	Jun
D.2.2.16 IIP - Medical, precision and optical instruments, watches and clocks	44.9	Mar	Apr	B.2.1.2 WPI - Sugar	1.9	Dec	May
E.3 Sales of Commercial Motor Vehicles	43.4	Mar	Apr	C.1 Consumer Price Index for Industrial Workers (base: 2001=100)	1.9	Oct	Mar
D.1.2 IIP - Capital Goods Industries	33.4	Mar	Apr	B.5 WPI - Non Food Non Fuel	1.8	Apr	Dec
E.4 Sales of Passenger Vehicles	30.0	Mar	Dec	B.2.1.3 WPI - Edible Oils	1.7	Aug	Nov
D.10 Production of Commercial Motor Vehicles	26.9	Mar	Jun	B.1.1.4.2 WPI - Meat	1.7	Nov	Apr
E.8 Freight Tonne Km flown - International	26.7	Mar	Jan	B.1.1.1.1.2 WPI - Rice	1.6	Oct	Jun
D.8 Fertiliser Production	26.4	Dec	Apr	A.2.3.2 Time Deposits (SCBs)	1.6	Apr	Dec
D.2.2.17 IIP - Motor vehicles, trailers & semi-trailers	26.0	Mar	Jun	B.1.1.1.1 WPI - Cereals	1.6	Jan	Jul
D.2.2.3 IIP - Wearing apparel; dressing and dyeing of fur	25.6	Dec	Oct	B.2 WPI - Manufactured Products	1.3	Apr	Dec
D.1.4.2 IIP - Consumer Non-Durable Goods Industries	25.3	Dec	Oct	B. WPI (base: 2004-05=100) All Commodities	1.3	Jul	Feb
D.11 Production of Passenger Vehicles	25.1	Mar	Dec	B.4 WPI - Non Food Manufactured Products	1.2	May	Dec
D.2.1 IIP - Mining	24.9	Mar	Sep	B.2.1 WPI - Food Products	1.0	Jan	Mar
E.1 Exports*	24.9	Mar	Nov	B.1.1.3 WPI - Milk	0.6	Nov	Mar

* Valued in US Dollar

Annex			
Sl. No.	Name of the Series (Sources)	ARIMA Model Selected# (pdq)(PDQ) _{s=12}	
		2011	2012
Monetary and Banking Aggregates (RBI Bulletin)			
1	Broad Money (M ₃)	(110)(011)	(111)(101)
2	Net Bank Credit to Government	(112)(011)	(112)(011)
3	Bank Credit to Commercial Sector	(010)(111)	(010)(101)
4	Narrow Money (M ₁)	(011)(011)	(311)(011)
5	Currency with the Public	(311)(011)	(311)(011)
6	Reserve Money (RM)	(211)(011)	(211)(011)
7	Currency in Circulation	(311)(011)	(010)(011)
8	Notes in Circulation	(010)(011)	(010)(011)
9	Deposits (Banking Department)	(311)(011)	(211)(011)
10	Liabilities to the Banking System (SCBs)	(110)(011)	(111)(011)
11	Aggregate Deposits (SCBs)	(011)(100)	(111)(100)
12	Demand Deposits (SCBs)	(311)(011)	(311)(011)
13	Time Deposits (SCBs)	(111)(100)	(111)(100)
14	Cash in Hand and Balances with RBI (SCBs)	(011)(100)	(011)(100)
15	Assets with Banking System (SCBs)	(011)(011)	(011)(011)
16	Bank Credit (SCBs)	(111)(100)	(111)(100)
17	Loans, Cash, Credits and Overdrafts (SCBs)	(010)(111)	(311)(011)
18	Food Credit (SCBs)	(010)(011)	(010)(011)
19	Non-Food Credit (SCBs)	(111)(100)	(010)(101)
20	Investments (SCBs)	(010)(011)	(010)(011)
Wholesale Price Index (MCI)			
21	WPI (base: 2004-05=100) All Commodities	(212)(011)	(110)(011)
22	WPI - Primary Article	(022)(011)	(011)(011)
23	WPI - Food Articles	(022)(011)	(010)(011)
24	WPI - Food Grains (Cereals+Pulses)	(212)(011)	(112)(000)
25	WPI - Cereals	(212)(011)	(112)(000)
26	WPI - Wheat	(011)(011)	(011)(011)
27	WPI - Rice	(210)(011)	(011)(011)
28	WPI - Pulses	(011)(011)	(011)(000)
29	WPI - Fruits & Vegetables	(012)(011)	(311)(011)
30	WPI - Potatoes	(011)(011)	(300)(011)
31	WPI - Onions	(212)(011)	(211)(000)
32	WPI - Milk	(210)(011)	(011)(011)
33	WPI - Egg, Meat and Fish	(212)(011)	(011)(011)
34	WPI - Egg	(012)(011)	(010)(011)
35	WPI - Meat	(011)(011)	(011)(011)
36	WPI - Fish	(011)(011)	(011)(011)

ARTICLE

 Monthly Seasonal Factors of Selected
Economic Time Series

Annex (Contd.)			
Sl. No.	Name of the Series (<i>Sources</i>)	ARIMA Model Selected# (pdq)(PDQ) _{S=12}	
		2011	2012
37	WPI - Protein Items (<i>viz.</i> , Pulses, Milk, Egg, Meat and Fish) Group	(011)(011)	(110)(101)
38	WPI - Non-Food Articles	(110)(000)	(110)(000)
39	WPI - Fibres	(011)(000)	(011)(000)
40	WPI - Raw Cotton	(011)(000)	(011)(000)
41	WPI - Oil Seeds	(110)(011)	(110)(011)
42	WPI - Manufactured Products	(021)(011)	(011)(011)
43	WPI - Food Products	(011)(011)	(011)(011)
44	WPI - Grain Mill Products	(011)(011)	(011)(011)
45	WPI - Sugar	(011)(000)	(011)(000)
46	WPI - Edible Oils	(011)(000)	(011)(000)
47	WPI - Freely Priced Petroleum Products (ex-Petrol Group)	(010)(000)	(010)(011)
48	WPI - Non Food Manufactured Products**	(021)(011)	(110)(011)
49	WPI - Non Food Non Fuel**	(111)(011)	(111)(011)
Consumer Price Index (Labour Bureau, Government of India)			
50	Consumer Price Index for Industrial Workers (base: 2001=100)	(011)(011)	(011)(011)
51	Consumer Price Index for Agricultural Labourers (base: 1986-87=100)	(110)(011)	(011)(011)
52	Consumer Price Index for Rural Labourers (base: 1986-87=100)	(110)(101)	(011)(011)
Industrial Production (MOSPI, MCI, and CMIE)			
53	IIP (base: 2004-05=100) General Index	(011)(011)	(011)(011)
54	IIP - Basic Goods Industries	(111)(011)	(311)(011)
55	IIP - Capital Goods Industries	(011)(011)	(011)(011)
56	IIP - Intermediate Goods Industries	(011)(011)	(011)(011)
57	IIP - Consumer Goods Industries	(011)(011)	(011)(011)
58	IIP - Consumer Durable Goods Industries	(011)(011)	(011)(011)
59	IIP - Consumer Non-Durable Goods Industries	(111)(011)	(111)(011)
60	IIP - Mining	(011)(011)	(011)(011)
61	IIP - Manufacturing	(011)(011)	(011)(011)
62	IIP - Food products and beverages	(011)(011)	(011)(011)
63	IIP - Textiles	(011)(011)	(011)(100)
64	IIP - Wearing apparel; dressing and dyeing of fur	(110)(110)	(011)(011)
65	IIP - Wood and products of wood & cork except furniture; articles of straw & plating materials	(011)(011)	(011)(011)
66	IIP - Paper and paper products	(011)(011)	(011)(011)
67	IIP - Publishing, printing & reproduction of recorded media	(011)(011)	(012)(011)
68	IIP - Coke, refined petroleum products & nuclear fuel	(100)(011)	(011)(011)
69	IIP - Chemicals and chemical products	(011)(011)	(011)(011)
70	IIP - Rubber and plastics products	(011)(011)	(011)(011)
71	IIP - Other non-metallic mineral products	(011)(011)	(011)(011)

Annex (Concl'd.)			
Sl. No.	Name of the Series (Sources)	ARIMA Model Selected# (pdq)(PDQ)_{s=12}	
		2011	2012
72	IIP - Basic metals	(110)(011)	(011)(011)
73	IIP - Fabricated metal products, except machinery & equipment	(011)(011)	(011)(011)
74	IIP - Machinery and equipment n.e.c.	(010)(011)	(011)(011)
75	IIP - Office, accounting and computing machinery	(011)(011)	(011)(011)
76	IIP - Radio, TV and communication equipment & apparatus	(110)(001)	(010)(001)
77	IIP - Medical, precision and optical instruments, watches and clocks	(011)(011)	(110)(011)
78	IIP - Motor vehicles, trailers & semi-trailers	(011)(011)	(110)(100)
79	IIP - Other transport equipment	(010)(011)	(011)(011)
80	IIP - Electricity	(111)(011)	(111)(011)
81	Cement Production	(011)(011)	(011)(011)
82	Steel Production	(012)(011)	(111)(011)
83	Coal Production	(201)(011)	(201)(011)
84	Crude Oil Production	(100)(011)	(011)(011)
85	Petroleum Refinery Production	(011)(011)	(011)(011)
86	Fertiliser Production	(101)(011)	(011)(011)
87	Natural Gas Production	(010)(011)	(011)(011)
88	Production of Commercial Motor Vehicles	(011)(011)	(011)(011)
89	Production of Passenger Vehicles**	(011)(011)	(011)(011)
Services Sector Indicators (CMIE)			
90	Cargo handled at Major Ports	(011)(011)	(011)(011)
91	Revenue on Railway Freight Traffic	(011)(011)	(111)(011)
92	Sales of Commercial Motor Vehicles**	(011)(011)	(011)(011)
93	Sales of Passenger Vehicles**	(011)(110)	(011)(110)
94	Passenger flown (Km) - Domestic**	(011)(011)	(011)(011)
95	Passenger flown (Km) - International**	(111)(011)	(111)(011)
96	Freight Tonne Km flown - Domestic**	(011)(011)	(011)(011)
97	Freight Tonne Km flown - International**	(011)(011)	(011)(011)
External Trade (MCI)			
98	Exports*	(011)(011)	(011)(011)
99	Imports*	(110)(101)	(110)(101)
* Valued in US Dollar			
** New Series Added			
# using 'Auto-model' utility of X-12-ARIMA package			
MCI: Ministry of Commerce and Industries			
MOSPI: Ministry of Statistics and Programme Implementation			
CMIE: Centre for Monitoring Indian Economy			