

# U.S. KEY ECONOMIC INDICATORS

## 1 Auto and Truck Sales

- 2 **Importance (A-F):** This release merits a **C-**.
- 2 **Source:** Individual auto manufacturers, seasonal factors by the Commerce Department.
- 3 **Release Time:** Varies by auto maker from the first business day to the third business day of the month (data for month prior).

### In Brief

Auto and Truck Sales measure the monthly sales of all domestically produced vehicles. They are considered an important indicator of consumer demand, accounting for roughly 25% of total retail sales. Demand for big ticket items such as autos and trucks tends to be interest rate sensitive, making the motor vehicle sector a leading indicator of business cycles.

Each auto maker reports sales individually. The reports are typically released over the course of the first three business days of the month. Using the individual reports, a total annual sales pace can be calculated after applying Commerce Department seasonal factors. It is this annual sales pace that the market refers to when discussing auto and truck sales for the month.

### In Depth

Vehicle sales figures rarely grab the attention of the market probably for two reasons. First, though the specifics of the data are not terribly difficult to understand, their implications are a little hard to trace. Second, unlike many economic releases, vehicle sales are not released all at once and at the same time every month. This makes it difficult for the market to quickly interpret what the numbers mean for the overall consumption picture and to react accordingly.

This is what happens in terms of vehicle sales during the course of any given month:

1. The individual vehicle manufacturers report their sales results during the first three or four days of the month.
2. A day after the last manufacturer reports the Bureau of Economic Analysis releases its estimate of unit auto sales.
3. About a week after that the BEA releases its estimate of unit truck sales.
4. The Census Bureau releases its retail sales report, including a measure of sales at automotive dealers, usually around the 13th of the month.
5. Roughly two weeks after that the BEA releases its personal income and outlays release, including a measure of spending on motor vehicles and parts.

Each item in this list warrants a more detailed discussion.

### Manufacturers

Most vehicle manufacturers usually always report sales results on the first business day of the month; Ford does not report until the third business day. As these individual results trickle out over the news wires throughout the day, diligent economists and market analysts are busy calculating running totals and applying seasonal factors to them--the BEA supplies factors for the coming six months in advance--in order to come up with approximations for auto and truck sales rates. These figures are some of the first hard spending data for any given month; comparing these derived rates to those from months and years prior is a big help when it comes to formulating a consumption forecast for the month.

### Unit Sales

Once economists and analysts have translated individual sales results into annual rates, they turn to the BEA to provide "official" unit sales rates. Unfortunately, though the BEA is using the same seasonal factors as the rest of us, more often than not it produces unit rates that are modestly different than the ones that market previously had in mind. Thankfully, however, these differences usually pop up in the individual sales categories--domestic car sales, import car sales, domestic truck sales, and import truck sales--but wash out when all the vehicle types are aggregated.

### **Retail Sales**

With unit sales rates in hand we can proceed to forecast the auto sales contribution to the retail sales figure. And this link is important. In fact, autos often prove to be such a significant swing factor that retail sales are scrutinised on both a total and an excluding-autos basis. It is also worth remembering that the auto term in the retail report is notoriously difficult to estimate; it is not at all rare to see it decline (increase) during a month when unit auto sales rise (fall). Still, by the time the retail sales report rolls around, a few other preliminary spending gauges can be used in conjunction with the unit auto data to get a pretty good read on whether retail consumption rose or fell for the month.

### **Personal Consumption Expenditure**

With unit sales rates and retail auto spending data in hand analysts can hone their estimates for the auto category in the personal consumption release. Many analysts place relatively more emphasis on the retail auto figures to sharpen their PCE estimates, but the unit auto numbers typically have better predictive power for that series. Besides, it is not commonly known that the BEA does not rely at all on the retail sales data to produce its consumption estimates. Thus, as an important component of the monthly consumption figures that go directly into the quarterly GDP calculation, the PCE auto data are most important to economic forecasters.

## **2 Business Inventories**

- 1 **Importance (A-F):** This release merits a **C-**.
- 2 **Source:** The Census Bureau of the Department of Commerce.
- 3 **Release Time:** 08:30 ET around the 15th of the month (data for two months prior).
- 4 **Raw Data Available At:** <http://www.census.gov/svsd/www/mtistext.html>.

The business inventories report includes sales and inventory statistics from all three stages of the manufacturing process (manufacturing, wholesale, and retail). But by the time it is released all three of its sales components and two of its inventory components have already been reported. Because retail inventory is the only new piece of information it contains, the market usually ignores the business inventories report.

However, sometimes retail inventories swing enough to change the aggregate inventory profile. This may affect the GDP outlook. When it does, the report can elicit a small market reaction.

The aggregate sales figures are dated and they say little about personal consumption. They are actually a good coincident indicator, but the market is far more interested in forward-looking statistics.

The inventory-to-sales (I/S) ratio measures the number of months it would take to deplete existing inventory at current sales rates. A relatively low (high) I/S ratio may mean that manufacturers will have to build up (draw down) inventory levels. Depending on the strength of final demand and the degree to which recent inventory changes have been intended or unintended, this can have an effect on the industrial production outlook. Note that this information is much more useful to market economists than it is to other market participants.

## **3 Chicago PMI**

**Importance (A-F):** The Chicago PMI merits a **B**.

**Source:** Chicago Purchasing Managers Association.

**Release Time:** Last business day of the month at 10 ET for the current month.

**In Brief**

There are many regional manufacturing surveys, and they tend to be ranked in order of timeliness and the importance of the region. The Philadelphia Fed's survey is first each month, actually coming out during the third week of the month for which it is reporting. Several smaller surveys are then released before the Chicago purchasing managers' report on the last day of each month. A few, such as the Atlanta and Richmond Fed surveys, are released after the NAPM and are of little value. The purchasing managers' reports are measured like the national NAPM - 50% marks the breakeven line between an expanding and contracting manufacturing sector. For the

Philadelphia and Atlanta Fed indices, 0 is the breakeven mark.

These surveys can be of some help in forecasting the national NAPM - particularly the Philadelphia and Chicago surveys which are more closely watched due to their timeliness and the fact that these regions represent a reasonable cross section of national manufacturing activities.

### In Depth

The market has been bombarded with a bevy of surveys purporting to measure manufacturing activity in every nook and cranny of the country. First it was Philadelphia, then Chicago, and Detroit, Milwaukee, New York, Cincinnati, Richmond, Atlanta, Boston, and there might as well have been a Nome survey. This hodge-podge of releases is begging for someone - namely us - to come along and cut this group down to a more manageable size, say....two. And the winners are...

### Nuts and Bolts

Not so fast. We need a build-up before we cut to the proverbial chase. Let's start with the issue of what these manufacturing surveys are trying to measure and how they go about doing it. The leader of this pack of regional surveys is the NAPM - National Association of Purchasing Managers - index. It has been around since 1931 (1948 on an uninterrupted basis), it is national, and it is one of the most timely measures of manufacturing activity available. In other words, it sets the standards by which its progeny are measured.

The NAPM index is actually a composite of five sub-indices - new orders, production, supplier deliveries, inventories, and employment. In surveying over 300 companies each month, the NAPM asks for positive, negative, or unchanged readings on each of these indicators. The positive responses are added to one half of the unchanged responses to produce the diffusion index. For example, if 50% of respondents reported stronger orders, 40% reported weaker, and 10% unchanged, the diffusion index for orders would be 55%, the 50% positive plus half of the 10% unchanged. To calculate the total index, the NAPM uses weights for the five indicators, which are as follows: 30% new orders, 25% production, 20% employment, 15% supplier deliveries, and 10% inventories.

### The Selection Criteria

Since this methodology has made the NAPM index one of the better leading indicators of economic activity over the years, we will measure the usefulness of the regional indices based on their ability to help in forecasting the national index. In our effort to arrive at the two most important regional index, these criteria make eliminating most of the candidates easy for one simple reason - they are released after the national index. While regional economic developments are of interest to those who live in the region, they are not particularly important to the Treasury market. If a region cannot help in forecasting national trends, then its data are not particularly useful. So say adios to Atlanta, Richmond, Kansas City, and who knows how many others which have cropped up in recent years.

### And the Winners Are...

Let's focus on the regional surveys which precede the release of the national index on the first business day of each month (with data for the prior month). The contestants are Philadelphia, Chicago, Milwaukee, Detroit, New York, and the most recent

addition to the bunch - the APICS survey. We looked at the correlation of all of these indices to the national NAPM and found substantial differences in their forecasting ability. The winners are...drum roll please...Chicago and Philadelphia, in that order.

The Chicago NAPM index, which is released on the last business day of the month (with data for the same month), has an impressive 91% correlation with the national NAPM. The Philadelphia Fed index, which is released on the third Thursday of the month (with data for the same month), was a distant second at 76%. Philly Fed's performance improved slightly to 78% when Briefing measured its results using the NAPM methodology. The Philly index as released is not a composite of its sub indices, as the NAPM is. Instead, the Philly Fed survey asks many questions, but the total index is based on the general question "are business conditions better or worse than last month." It is often the case that a weighted measure of the individual questions on specifics such as new orders and production moves in a different direction than the index based on the general question.

The rest of the regional indices fared poorly, ranging from correlations as poor as 55% (APICS) to 73% (Milwaukee). Chicago was the clear winner, but the Philly Fed index definitely deserves recognition, particularly since it is released so much earlier than the rest. In the future, then, we would recommend setting aside most of the regional manufacturing surveys and focussing on just Philly and Chicago, which offer the best hope of predicting the national index. And when you look at the Philly index, improve your chances by looking at the Philly numbers calculated on an NAPM basis, which Briefing will be happy to provide.

## 4 Conference Board Consumer Confidence

- 1 **Importance (A-F):** This release merits a **B-**.
- 2 **Source:** The Conference Board.
- 3 **Release Time:** 10:00 ET on the last Tuesday of the month (data for current month).
- 4 **Raw Data Available At:** <http://www.tcb-indicators.org/>.

The Conference Board conducts a monthly survey of 5000 households to ascertain the level of consumer confidence. The report can occasionally be helpful in predicting sudden shifts in consumption patterns, though most small changes in the index are just noise. Only index changes of at least five points should be considered significant.

The index consists of two sub indices - consumers' appraisal of current conditions and their expectations for the future. Expectations make up 60% of the total index, with current conditions accounting for the other 40%. The expectations index is typically seen as having better leading indicator qualities than the current conditions index.

## 5 Construction Spending

- 1 **Importance (A-F):** This release merits a **D**.
- 2 **Source:** The Census Bureau of the Department of Commerce.
- 3 **Release Time:** 10:00 ET on the first business day of the month (data for two months prior).
- 4 **Raw Data Available At:** <http://www.census.gov/prod/1/constr/c30/c30.html>.

The construction spending report is broken down between residential, non-residential, and public expenditures on new construction. The monthly changes are both volatile and subject to huge revisions, so this report rarely has any market impact. Only trends extending over three

months or more can be viewed as significant.

The spending figures are in both nominal and real (inflation adjusted) dollars. The real figures for residential and non-residential spending are used by economists to forecast the investment component of quarterly GDP. The annualised percent changes between the quarterly averages of these two components match up well with residential investment and commercial structure changes in the GDP accounts.

## 6 Consumer Credit

- 1 **Importance (A-F):** This release merits a **D-**.
- 2 **Source:** Federal Reserve.
- 3 **Release Time:** 15:00 ET on the fifth business day of the month (data for two months prior).
- 4 **Raw Data Available At:** <http://www.federalreserve.gov/releases/G19/Current/>.

This monthly measure of consumer debt is volatile and subject to massive revisions. It is also released well after every other consumer spending indicator, including weekly chain store sales, auto sales, consumer confidence, retail sales, and personal consumption. For these reasons, the market almost never reacts to the consumer credit report.

Consumer credit is broken down into three categories: auto, revolving (i.e., credit card), and other. Since we already have indications on total consumer spending well before this release, there is little to be gained from learning what portion of spending was financed through acquisition of debt. Periods of strong spending can be accompanied by relatively weak credit growth and vice versa, so this measure fails even as a coincident or lagging indicator.

## 7 CPI: Consumer Price Index

Importance (A-F): This release merits a **B+**.

Source: Bureau of Labour statistics, U.S. Department of Labour.

Release Time: 8:30 ET, about the 13th of each month for the prior month.

Raw Data Available At: <http://stats.bls.gov/news.release/cpi.toc.htm>.

The Consumer Price Index is a measure of the price level of a fixed market basket of goods and services purchased by consumers. CPI is the most widely cited inflation indicator, and it is used to calculate cost of living adjustments for government programs and it is the basis of COLAs for many private labour agreements as well. It has been criticized for overstating inflation, because it does not adjust for substitution effects and because the fixed basket does not reflect price changes in new technology goods which are often declining in price. Despite these criticisms, it remains the benchmark inflation index.

CPI can be greatly influenced in any given month by a movement in volatile food and energy prices. Therefore, it is important to look at CPI excluding food and energy, commonly called the "core rate" of inflation. Within the core rate, some of the more volatile and closely watched components are apparel, tobacco, airfares, and new cars. In addition to tracking the month/month changes in core CPI, the year/year change in core CPI is seen by most economists as the best measure of the underlying inflation rate.

## 8 Durable Goods Orders

- 1 **Importance (A-F):** This release merits a **B**.
- 2 **Source:** The Census Bureau of the Department of Commerce.

3 **Release Time:** 8:30 ET around the 26th of the month (data for month prior).

4 **Raw Data Available At:**  
<http://www.census.gov/ftp/pub/indicator/www/m3/index.htm>.

The **durable orders** release measures the dollar volume of orders, shipments, and unfilled orders of durable goods (defined as goods whose intended lifespan is three years or more). Orders are considered a leading indicator of manufacturing activity, and the market often moves on this report despite the volatility and large revisions that make it a less than perfect indicator. These problems can be minimized by looking at the breakdown of orders. The total number is often skewed by huge increases in aircraft and defence orders. An increase based solely on strength in one sector tends to be discounted, while the market is more impressed with broad based increases in orders.

Also notable in this report is the narrow category of non defence capital goods. These goods mirror the **GDP** category producers' durable equipment (PDE) -- the largest component of business investment. Shipments of non defense capital goods are a good proxy for PDE in the current quarter, while nondefense capital goods orders provide an indication of PDE growth in the quarters ahead

## 9 Employment Cost Index

Importance (A-F): This release merits a **B+**.

Source: U.S. Department of Labour, Bureau of Labour Statistics

Release Time: 8:30 ET, near the end of the first month of the quarter for the prior quarter.

Raw Data Available At: <http://stats.bls.gov/news.release/eci.toc.htm>.

In Brief

Since the employment cost index was mentioned by Fed Chairman Greenspan in July 1996, it has risen into the upper echelon of economic reports in the eyes of the bond market. Its lagging nature still leaves it as a less timely indicator of employment cost trends than the monthly hourly earnings data in the employment report. But the ECI does add something to this picture: an adjustment for shifting employment between industries, and a look at benefit costs. These additions are interesting, but typically do not alter the view of the employment cost picture which was left by hourly earnings. ECI will be much less closely watched during periods when wage inflation is not a serious market concern.

The market focuses on the quarter/quarter and year/year changes in each of three categories: total employment costs, wages and salaries, and benefit costs. The figures are sometimes skewed by large year-end bonuses in the financial industry; analysts often exclude the sales commission component of wages and salaries to adjust for this factor.

In Depth

Purpose

The Employment Cost Index (ECI) is designed to measure the change in the cost of labour.

Composition

The ECI compensation series includes wages and salaries and employer costs for employee benefits. The sum of the change in these two components equals the change in total compensation.

### Usefulness

The Federal Reserve Bank of Cleveland aptly describes this aspect of the employment cost index thus: "The ECI is the best measure of compensation (wages and benefits) growth available." Briefing.com adds this extension: The usefulness of the ECI lies in its ability to tell us whether wage and/or benefit-cost growth appears excessive and whether compensation is growing faster than inflation.

### Importance

Since Fed Chairman Alan Greenspan mentioned the ECI in July 1996 it has risen into the upper echelon of economic reports in the eyes of the market. Prior to 1996 it did not stand out on the economic calendar, and when it was released only market economists and labour analysts were there to greet it. It is most important during the latter stages of the business cycle and, not surprisingly, it takes on a much less prominent role when wage inflation is not a serious market concern.

### Timeliness

The ECI, which is released on a quarterly basis, is a less timely indicator of employment cost trends than the hourly earnings data in the monthly employment report. Hourly earnings figures for any given month are available during the first week of the next month, while ECI numbers for any given quarter are not available until a month after the quarter ends.

### Advantages

The ECI has two advantages over the hourly earnings series.

It includes benefits, the non-wage component of employment costs.

It is free from employment shifts among occupations and industries.

#### Benefits

covered by the ECI include paid leave, insurance benefits, and retirement and saving benefits. Because these account for roughly 30% of total employment costs, their absence in the monthly earnings series leaves us with an incomplete picture.

To illustrate the second advantage we will lift another description from the Cleveland Fed: "Like the consumer price index (CPI), the ECI relies on a fixed basket of items-- in this case, occupations. This prevents shifts in the occupational composition of the workforce from appearing as wage gains, as they do in average hourly earnings data. Because the ECI includes overtime payments as a fixed increment to wages, short-term increases in overtime will not alter the index."

In simpler English this means that within the ECI framework a) a rise in the number of high-wage workers (miners, say) at the expense of low-wage workers (retail clerks, say) will not appear as an increase in aggregate wages, and b) a temporary increase in overtime pay in a certain sector (manufacturing, say) will not appear as an increase in aggregate wages. Both of those forces would show up as an increase in the hourly earnings series, however, and that is why Alan Greenspan and other Fed members consider it an inferior measure of wage growth.

## 10 Existing Home Sales

- 1 **Importance (A-F):** This release merits a **C**.

- 2 **Source:** The National Association of Realtors.
- 3 **Release Time:** 10:00 ET around the 25th of the month (data for month prior).
- 4 **Raw Data Available At:** <http://nar.realtor.com/news/releases.htm>

The name speaks for itself - this report provides a measure of the level of sales of existing home sales. The report is considered a decent indicator of activity in the housing sector. Housing starts precede this report each month, but starts are a supply rather than demand-side indicator. Existing home sales precede the other key demand-side indicator of housing - new home sales - thus boosting the visibility of this report. Sales are highly dependent on mortgage rates, and will tend to react with a few months lag to changes in rates. Sales are also determined by the level of pent-up demand for housing - immediately after a recession, sales are typically quite strong due to the demand which accumulated through the recession.

The survey sample for existing home sales is larger than that of new home sales, making it somewhat less susceptible to large revisions. Both reports can see huge month-to-month swings in winter, when bad weather can significantly affect sales.

Aside from total sales, two other indicators are worth watching in this report -- the inventory of homes for sale and the median price. The inventory of homes for sale at the current sales pace is the inventory/sales ratio of the housing sector. For example, a 5.0 figure for inventory/sales indicates that the supply of homes for sale would be depleted within five months at the current sales pace. The lower this figure goes, the greater the need for new housing starts. The year/year change in the median price provides a good indication of inflation in home prices.

## 11 Export/Import Prices

- 1 **Importance (A-F):** This release merits an **D**.
- 2 **Source:** Bureau of Labour Statistics, U.S. Department of Labour.
- 3 **Release Time:** Typically in the second week of the month at 8:30 ET for the prior month

Though not a market-moving release, export/import prices are a useful indication of inflation pressures created by changes in foreign exchange rates. For example, when the dollar is strong, import prices tend to be under downward pressure. If an item in Japan costs 500 yen and the exchange rate is 100 yen to the dollar, the US\$ price \$5. If the dollar then strengthens to Y120, the US\$ price falls to \$4.17. Because US exports must compete with foreign goods, there is also downward pressure on export prices when the dollar is strong.

Economists typically look at import prices excluding oil and export prices excluding agricultural. In each case, the category in question is excluded because prices for those items are volatile and the swings are unrelated to foreign exchange rates. Oil prices tend to swing in response to **OPEC** decisions, and agricultural prices are often affected by weather, neither of which say much about long-term trends in traded goods prices.

## 12 Factory Orders

- 1 **Importance (A-F):** This release merits a **D+**.
- 2 **Source:** The Census Bureau of the Department of Commerce.
- 3 **Release Time:** 10:00 ET around the first business day of the month (data for two months prior).
- 4 **Raw Data Available At:** <http://www.census.gov/ftp/pub/indicator/www/m3/index.htm>

**Factory orders** consist of the earlier announced durable goods report plus non-durable goods orders. The report is very predictable with non durables the only new component. Non durables consist of such items as food and tobacco products which grow at a fairly consistent monthly rate, so that market forecasts for this report are far more accurate than for the durable orders report. In addition to seeing non durables for the first time, the market also watches for revisions to the durable orders data, which can be significant. At present, durable goods orders sum to about 54% of total orders.

The final piece of new information in this report is factory inventories - the first glimpse at the inventory picture each month (wholesales inventories are typically released a week later, with



retail inventories released a few days after wholesale inventories). Though the inventory figure is not a market-mover, economists use this number to help forecast inventories in the quarterly **GDP** report.

## 13 GDP: Gross Domestic Product

- 1 **Importance (A-F):** This release merits a **B+**.
- 2 **Source:** Bureau of Economic Analysis, U.S. Department of Commerce.
- 3 **Release Time:** Third or fourth week of the month at 8:30 ET for the prior quarter, with subsequent revisions released in the second and third months of the quarter.
- 4 **Raw Data Available At:** <http://www.bea.doc.gov/bea/dn1.htm>

**Gross Domestic Product (GDP)** is the broadest measure of economic activity. Annualised quarterly percent changes in GDP reflect the growth rate of total economic output. The figures can be quite volatile from quarter to quarter. Inventory and net export swings in particular can produce significant volatility in GDP. The final sales figure, which excludes inventories, can sometimes be helpful in identifying underlying growth trends as inventories represent unsold goods, and a large inventory increase will boost GDP but might be indicative of weakness rather than strength. The broad components of GDP are: consumption, investment, net exports, government purchases, and inventories. Consumption is by far the largest component, totalling roughly 2/3rds of GDP.

In addition to the GDP figures, there are GDP deflators, which measure the change in prices in total GDP and for each component. Though the consumer price index is a more closely watched inflation indicator, the GDP deflator is another key inflation measure. Unlike **CPI**, it has the advantage of not being a fixed basket of goods and services, so that changes in consumption patterns or the introduction of new goods and services will be reflected in the deflator.

With both GDP and the deflator, the market tends to focus on the quarter/quarter change. Year/year changes are also cited frequently, though they do not provide the most timely indications of economic activity or inflation. The bond market often reacts to GDP, though the price moves are typically small, as much of the GDP data is easily predicted using monthly economic releases such as personal consumption, durable goods shipments, construction spending, international trade, and inventories.

Quarterly GDP reports are broken down into three announcements: advance, preliminary, and final. After the final revision, **GDP** is not revised again until the annual benchmark revisions each July. These revisions can be quite large and usually affect the past five years of data.

## 14 Housing Starts and Building Permits

- 1 **Importance (A-F):** This release merits a **B-**.
- 2 **Source:** The Census Bureau of the Department of Commerce
- 3 **Release Time:** 8:30 ET around the 16th of the month (data for one month prior).
- 4 **Raw Data Available At:** <http://www.census.gov/ftp/pub/indicator/www/housing.html>.

**Housing Starts** are a measure of the number of residential units on which construction is begun each month. A start in construction is defined as the beginning of excavation of the foundation for the building and is comprised primarily of residential housing. Building permits are permits taken out in order to allow excavation. An increase in building permits and starts usually occurs a few months after a reduction in mortgage rates. Permits lead starts, but permits are not required in all regions of the country, and the level of permits therefore tends to be less than the level of starts over time.

The monthly national report is broken down by region: Northeast, Midwest, South, and West. Briefing recommends analysing the regional data because they are subject to a high degree of volatility. The high volatility can be attributed to weather changes and/or natural disasters. For example, an unexpectedly high level of rain in South could delay housing starts for the region.

## 15 Industrial Production

- 1 **Importance (A-F):** This release merits a **B-**.

- 2 **Source:** Federal Reserve.
- 3 **Release Time:** 9:15 ET around the 15th of the month (data for month prior).
- 4 **Raw Data Available At:** <http://www.federalreserve.gov/releases/G17/Current/>.

The index of **Industrial Production** is a fixed-weight measure of the physical output of the nation's factories, mines, and utilities. Manufacturing production, the largest component of the total, can be accurately predicted using total manufacturing hours worked from the employment report. One of the bigger wildcards in this report is utility production, which can be quite volatile due to swings in the weather. Severe hot or cold spells can boost production as increased heating/cooling needs drive utility production up.

In addition to production, this monthly report also provides a measure of capacity utilization. Though the rate of capacity utilization is seen as a critical gauge of the slack available in the economy, the market does not completely trust this measure. Capacity is very difficult to measure, and the Fed essentially assumes that growth in capacity in any given year follows a straight line. One can therefore predict the capacity utilization rate quite accurately based on the assumption for production growth. The 85% mark is seen as a key barrier over which inflationary pressures are generated, but given revisions to these data and the difficulties with capacity measurement, the 85% mark should be viewed cautiously. It would be appropriate to look for corroborating inflation indications from commodity prices and vendor deliveries.

## 16 Initial Claims

- 1 **Importance (A-F):** This release merits a **C+**.
- 2 **Source:** The Employment and Training Administration of the Department of Labour.
- 3 **Release Time:** 8:30 ET each Thursday (data for week ended prior Saturday).
- 4 **Raw Data Available At:** <http://www.dol.gov/dol/opa/public/media/press/eta/main.htm>

**Initial jobless claims** measure the number of filings for state jobless benefits. This report provides a timely, but often misleading, indicator of the direction of the economy, with increases (decreases) in claims potential signalling slowing (accelerating) job growth. On a week-to-week basis, claims are quite volatile, and many analysts therefore track a four week moving average to get a better sense of the underlying trend. It typically takes a sustained move of at least 30K in claims to signal a meaningful change in job growth.

There are two other statistics in this report -- the number of people receiving state benefits and the insured unemployment rate; neither is watched closely by the market. Some analysts track the number of people receiving state benefits from month to month as a guide for job growth, though this series has a poor track record in predicting the monthly employment report. The insured unemployment rate changes little on a weekly basis and is never a factor for the market.

## 17 International Trade

- 1 **Importance (A-F):** This release merits a **C+**.
- 2 **Source:** The Census Bureau and the Bureau of Economic Analysis of the Department of Commerce.
- 3 **Release Time:** 8:30 ET around the 20th of the month (data for two months prior).
- 4 **Raw Data Available At:** <http://www.census.gov/foreign-trade/www/press.html>

The trade report is most widely watched for trends in the overall trade balance. But trends in both exports and imports of goods and services bear watching as well. The export data in particular are important to watch for indications that a strengthening competitive position at home and/or strengthening economies overseas are boosting U.S. growth. Imports provide an indication of domestic demand, but given the severe lag of this report relative to other consumption indicators, it is not particularly valuable for this purpose.

The volatility in the monthly trade balance can play an important role in **GDP** forecasts. Net exports are a relatively volatile component of GDP, and the trade report provides the only early

clues to the net export performance each quarter.

## 18 Leading Indicators

- 1 **Importance (A-F):** This release merits a **C-**.
- 2 **Source:** The Conference Board.
- 3 **Release Time:** 8:30 ET around the third week of the month for the month prior.
- 4 **Raw Data Available At:** <http://www.tcb-indicators.org/>

### In Brief

The **Leading Indicators** report is, for the most part, a compendium of previously announced economic indicators: new orders, jobless claims, money supply, average workweek, building permits, and stock prices. Therefore, the report is extremely predictable and of very little interest to the market. Though this series does have some predictive qualities, it is a common criticism that it has predicted "nine of the last six" recessions.

The Commerce Department previously published the leading indicators series. The collection and publishing of these data is now done by the non-profit Conference Board, which also produces the Consumer Confidence index.

### In Depth

#### Purpose

The purpose of the leading index is straightforward: It is designed to signal turning points in the business cycle.

#### Composition

The index of leading indicators includes the ten economic statistics listed below.

1. The interest rate spread between 10-year Treasury notes and the federal funds rate.
2. The inflation-adjusted, **M2** measure of the money supply.
3. The average manufacturing workweek.
4. Manufacturers' new orders for consumer goods and materials.
5. The **S&P 500** measure of stock prices.
6. The vendor performance component of the **NAPM** index.
7. The average level of weekly initial claims for unemployment insurance.
8. Building permits.
9. The University of Michigan index of consumer expectations.
10. Manufacturers' new orders for nondefense capital goods.

The Conference Board, the organization that produces the leading index, standardizes these variables according to their individual weights in order to construct a composite leading index. Note that we have listed the components in order of importance. The difference between 10-year Treasuries and the fed funds rate carries the most weight; historically, this approximation of the slope of the yield curve has proven relatively more successful than other components at predicting future economic activity. Along those same lines, orders for nondefense capital goods carry the smallest weight because they have typically proven relatively poorer at pointing to changes in the direction of economic growth at large.

#### Performance

The leading index receives plenty of criticism. Indeed, sceptics often joke that it has correctly signalled nine of the last six recessions. Meanwhile, in its literature, The Conference Board cites the lead times with which the leading index has correctly predicted economic downturns. It is thus fair to ask whether the leading index is useless or priceless.

The answer lies somewhere in between. The charge that the index predicts recessions that do

not come to fruition--and fails to warn of those that do--is hardly a fair criticism. No forecaster, even armed with an arsenal of economic statistics, has a perfect track record when it comes to predicting recessions. It is therefore unreasonable to assume that a ten-component index can do any better. That said, the index does have some reliability problems. For example, it failed to turn down prior to the 1990-91 recession, and in 1995 it signalled a downturn that never came to pass.

### Usefulness

The leading index is more useful now that The Conference Board has taken control of it (the Department of Commerce stopped producing it at the end of 1996). Conference Board researchers quickly scrapped two of the old components--the change in sensitive materials prices and unfilled orders for durable goods--and added the interest-rate spread that appears in our list above. The index now lacks a wholesale price term, which some see as critical to determining future demand and inflation trends, but on net the new index emits less pronounced false signals and does a better job than it used to.

Briefing finds the leading index most helpful when we can make a statement like this: The leading index has decreased only once during the past year. Of course, even a strong trend like that does not guarantee that a recession will not form over the coming six to nine months. But we can get additional help from looking at the leading index with the coincident index, which is also published by The Conference Board, and alongside a couple of other leading indices published by Columbia University. Indeed, there exists much research that deals with the criteria for determining recession warnings (i.e., the leading index must fall during four of seven months and the coincident index must fall for three straight months).

## 19 Money Supply

- 1 **Importance (A-F):** This release merits an **F**.
- 2 **Source:** Federal Reserve Board.
- 3 **Release Time:** Every Thursday at 16:30 ET, data for the week ended two Mondays prior.
- 4 **Raw Data Available At:** <http://www.federalreserve.gov/releases/H6/Current/>

### In Brief

**Money supply** figures, and **M1** specifically, once were the most important release to watch in the Treasury market, as the Fed directly targeted M1 growth in the early 1980s. The focus on money supply has long since been abandoned, however. To the extent that money supply is still monitored by the market, M2 is the favoured monetary aggregate. The Fed still targets both M2 and M3 in a rhetorical sense, but these targets mean little when it comes to policy decisions. If the Fed misses its target, it is more likely to change the target than it is to change policy. In 2000, the Fed finally abandoned the targets altogether, thereby removing any remaining emphasis on this one-time star release.

### In Depth

Though money supply measures were long ago relegated to the bottom of the Fed's list of policy tools, they are still useful in providing clues regarding the strength of the economy. This article offers a refresher on just what the monetary aggregates are - how they are constructed, why they matter, and how much the Fed cares about each. Let's start with the strict definitions.

**M1**, the narrowest of the monetary aggregates, contains the following:

- 1 Currency, except that held by the **Fed**, Treasury, or banks/thrifts
- 2 Travellers checks
- 3 Demand deposits (non-interest bearing checking accounts), except those due to banks, the government, or foreign institutions
- 4 Other checkable deposits - most notably NOW (negotiable order of withdrawal) accounts

**M2**, the aggregate which the Fed watches most closely, contains the following:

- 1 M1

- 2 Savings deposits (including money market deposit accounts- MMDAs)
- 3 Time deposits (known commonly as CDs or certificates of deposit) in denominations of less than \$100,000
- 4 Balances in retail money market funds (retail funds have minimum initial investments of less than \$50,000)

Finally, **M3** - the broadest aggregate - contains:

- 1 M2
- 2 Time deposits in denominations of \$100,000 or more
- 3 Balances in institutional money market funds (minimum investments of more than \$50,000)
- 4 Overnight and term repurchase agreements
- 5 Overnight and term eurodollars held by U.S. residents

### **The Decline of M1**

In the early 1980s, M1 was directly targeted by the Federal Reserve, and its weekly release was of critical importance to the financial markets. Today, M1 is barely noticed, and its stock continues to decline. The reason for M1's demise as a useful indicator is financial deregulation, which enabled individuals to hold transaction balances in accounts such as MMDAs which were not included in M1. More recently, M1 has lost what little usefulness it had left as sweep accounts have undermined the narrow aggregate.

### **Sweeps-stakes**

Sweep accounts are a hybrid checking account/savings account. In a typical sweep account, banks will sweep part of a NOW account's balance into an MMDA. As funds are needed to cover checks written against the NOW account, the bank will periodically shift funds from the MMDA back into the NOW account. Since the legal maximum number of withdrawals from an MMDA is six per month, all funds will be shifted back to the NOW account on the sixth transaction of the month.

Sweep accounts benefit both banks and depositors. Banks benefit because MMDAs do not require any reserves to be held with the Fed, while NOW accounts are reservable. As these required reserves are non-interest bearing, banks benefit by reducing their level of required reserves. Depositors benefit because MMDAs carry higher interest rates, and thus earnings on checking balances are increased.

As NOW accounts are in M1 and MMDAs are in M2, M1 has been dramatically weakened by sweeps, while M2 has not been affected (since M2 already includes M1, a shift from a NOW account to an MMDA has no impact on M2).

### **The Rise and Fall and Rise of M2**

M2 is the most closely watched monetary aggregate - both by economists and the Federal Reserve. The 1978 Humphrey-Hawkins Act mandated that the Fed set annual targets for money supply and that the Fed Chairman report to Congress twice each year regarding these targets. The Fed used to take that responsibility quite seriously - setting point targets for M1 growth, and later setting target ranges for M2 and M3. Finally, in 2000, the Fed abandoned these money targeting altogether.

The reduced emphasis on M2 first became evident in the late 1980s but was sealed in the early 1990s. M2 is a useful indicator only so long as its velocity (the rate of turnover of a dollar of M2, or mathematically, nominal GDP divided by M2) is stable over the long term. Unfortunately, the long term stability of M2 velocity, which was at the core of monetarism, disappeared beginning in the late 1980s. Banks and thrifts, devastated by non performing assets, pulled back from their traditional lending business, with market financing sources picking up the slack. The result was a break from the long term trend in M2 velocity. Suddenly, one dollar of M2 could fund far more nominal GDP growth, as market financing increased the efficiency of the financial system.

Regardless of the hows and whys - which are still debated by economists - the bottom line was that M2 was no longer a reliable indicator.

It will take many years of predictable velocity before the Fed once again places much emphasis

on M2 in its policy deliberations. And it is safe to say that neither M2 nor any other monetary aggregate will occupy the top spot in policy making as M1 did in the early 1980s. The record of interest rate targeting has simply been much better than that of money targeting.

### **M3: Still Bringing Up the Rear**

M3 attracts more attention than it did previously, due largely to the demise of M1, but its inclusion of institutional accounts makes it less attractive than M2, which focuses on individual deposit accounts. The bottom line in determining which aggregate receives the most attention is the relative stability of its velocity. Even though M2 velocity went off course in the early 1990s, it has still been the most predictable of the three during the post-war period

## **20 NAPM: National Association of Purchasing Managers**

- 1 **Importance (A-F):** This release merits an **A-**.
- 2 **Source: National Association of Purchasing Managers.**
- 3 **Release Time:** 10:00 ET on the first business day of the month for the prior month.
- 4 **Raw Data Available At:** <http://www.napm.org>.

### **In Brief**

The **NAPM** report is a national survey of purchasing managers which covers such indicators as new orders, production, employment, inventories, delivery times, prices, export orders, and import orders. Diffusion indices are produced for each of these categories, with a reading over 50% indicating expansion relative to the prior month, and a sub-50% reading indicating contraction.

The total index is calculated based on a weighted average of the following five sub-indices, with weights in parentheses: new orders (30%), production (25%), employment (20%), deliveries (15%), and inventories (10%).

The NAPM is one of the first comprehensive economic releases of the month, typically preceding the employment report. Though it covers only the manufacturing sector, it can often provide accurate hints regarding the tone of subsequent releases. During periods of inflation concerns, the prices paid and vendor deliveries indices often determine the bond market's reaction to the report.

### **In Depth**

The **National Association of Purchasing Managers** monthly Report on Business is probably the most widely watched economic indicator produced by the private sector. There are two key reasons for the NAPM's prominence. First, its longevity - the report was first produced in 1931, and after a break during World War II, it has produced continuously since 1948. Second, its leading quality - the NAPM has been one of the better predictors of the business cycle over the years.

### **Who and What It Surveys**

The NAPM index is the result of a monthly survey of over 300 companies in 20 industries throughout the 50 states. The survey queries respondents on a number of monthly indicators, including orders, production, employment, inventories, delivery times, prices paid, export orders, and import orders. Respondents are asked to characterize each indicator as higher, lower, or unchanged for the month (or faster/slower in the case of delivery times). They are not asked for specific numbers - only a thumbs up or down.

### **Presenting the Numbers**

Based on these responses, the NAPM calculates diffusion indices for each of the components. These diffusion indices are calculated by adding the percentage of respondents answering "unchanged" to half of the percentage answering "higher" (or "slower" for deliveries). These diffusion indices do not yield estimates of specific magnitudes of strength or weakness, but the more respondents who are indicating trends in the same direction - the better the chance that the magnitude of that move is larger.

A diffusion index of 50% is the theoretical breakeven mark - with readings above indicating strength and below indicating weakness. The NAPM only provides the raw data - the Department of Commerce produces the seasonal factors which are used to provide more meaningful, seasonally adjusted indices.

The total index is not the result of a separate question regarding general business conditions (as is the case with the Philadelphia Fed index). Instead, the index is calculated using the weighted

sum of five of the sub indices. Orders account for 30% of the total; production - 25%; employment - 20%; deliveries - 15%; inventories - 10%. Prices, export orders, and import orders are not part of the total index.

### **Breakevens in Theory and Practice**

Though 50% is the breakeven mark in theory, different readings have proved to be breakeven in practice. For new orders, 50.3% is the level consistent with breakeven readings in factory orders. For production, 49.4% has been the breakeven mark in theory and practice. For employment, 47.5% has been consistent with a steady level of manufacturing employment. For inventories, 41.3% has been consistent with steady business inventory readings. And finally, the 42.7% mark on the total index marks the point below which the overall economy is believed to be in recession. Between 42.7-50%, the manufacturing sector may be in decline, but the total economy is only seeing slower growth.

### **No Services**

This observation highlights the important element which is missing from the NAPM index - the service sector. With the manufacturing sector making up an ever-shrinking percentage of the total economy - the NAPM might seem to be an indicator in decline. Not so, however - the manufacturing sector, while shrinking in relative terms, still tends to lead the total economy into and out of recessions. The NAPM therefore remains a closely watched indicator despite its manufacturing focus.

### **A Proven Performer**

The NAPM's leading quality has been proven over time. Its bottom during a recession has preceded the turning point for the business cycle by an average of four months, and its worst performance in leading the turning point was on two occasions when the NAPM trough occurred in the same month as the business cycle trough. The NAPM index is released on the first business day of each at 10:00 ET, with data for the prior calendar month.

## **21 New Home Sales**

- 1 **Importance (A-F):** This release merits a **C+**.
- 2 **Source:** The Census Bureau of the Department of Commerce.
- 3 **Release Time:** 10:00 ET around the last business day of the month (data for month prior).
- 4 **Raw Data Available At:** [http://www.census.gov/const/c25\\_curr.txt](http://www.census.gov/const/c25_curr.txt)

The report indicates the level of new privately owned one-family houses sold and for sale. New home sales usually have a lagged reaction to changing mortgage rates. They also tend to be stronger early in the business cycle when pent-up demand is strong, and they fade later in the cycle as the demand for housing is sated. In addition to home sales, the market monitors the number of homes for sale relative to the current sales pace. As this inventory measure falls (rises), housing starts tend to rise (fall). Finally, the median home price provides an indication of inflation in the housing sector, though only year/year changes provide any meaningful information.

The home sales report is quite volatile and subject to huge revisions, making any one month's reading very unreliable. The report rarely prompts a market reaction. The market prefers the existing home sales report, which has a sample data pool four times as large and is released earlier in the month

## **22 Non-Manufacturing NAPM**

- 1 **Importance (A-F):** This release merits an **D-**.
- 2 **Source:** National Association of Purchasing Managers.
- 3 **Release Time:** 10:00 ET on the third business day of the month for the prior month.
- 4 **Raw Data Available At:** <http://www.napm.org>.

### **In Brief**

The non-manufacturing NAPM report is a national survey of purchasing managers which covers new orders, employment, inventories, supplier delivery times, prices, backlog orders, export orders, and import orders. Diffusion indices are produced for each of these categories, with a

reading over 50% indicating expansion relative to the prior month, and a sub-50% reading indicating contraction.

The index should be far more indicative of the broader economy given its inclusion of service-producing as well as good-producing sectors outside of manufacturing. However, the short history of the index dates to only July 1997 and doesn't provide the insight of a longer period inclusive of varied economic climates. The seasonal adjustment of the index didn't begin until January 2001 with only 3 of the 9 components seasonally adjusted as of April 2001. The lack of historical data and lack of a tight correlation to the non-manufacturing economy leaves the relatively poor "D" rating compared to the "A-" rating of the well-respected manufacturing NAPM index.

### **In Depth**

The Non-Manufacturing NAPM Report on Business is a newcomer not yet closely followed by the private sector.

### **Who and What It Surveys**

The Non-Manufacturing NAPM index (sometimes referred to as the NAPM Service index) is the result of a monthly survey of over 370 companies. The survey queries respondents on a number of monthly indicators, including orders, employment, inventories, supplier delivery times, prices paid, order backlogs, export orders, and import orders. Respondents are asked to characterize each indicator as higher, lower, or unchanged for the month (or faster/slower in the case of delivery times). They are not asked for specific numbers - only a thumbs up or down.

### **Presenting the Numbers**

Based on these responses, the NAPM calculates diffusion indices for each of the components. These diffusion indices are calculated by adding the half of the percentage of respondents answering "unchanged" to the full percentage answering "higher" (or "slower" for deliveries). These diffusion indices do not yield estimates of specific magnitudes of strength or weakness, but the more respondents who are indicating trends in the same direction - the better the chance that the magnitude of that move is larger.

A diffusion index of 50% is the theoretical breakeven mark - with readings above indicating strength and below indicating weakness. The total index is seasonally adjusted but only 3 of the 9 components are currently adjusted for seasonality.

The total index is the result of a separate question regarding general business conditions (unlike the Manufacturing NAPM which is calculated from some of the components). The business index is calculated using the same diffusion calculation used in the components then adjusted for seasonality.

## **23 Personal Income and Consumption**

- 1 **Importance (A-F):** This release merits a **C+**.
- 2 **Source:** The Bureau of Economic Analysis of the Department of Commerce.
- 3 **Release Time:** 8:30 ET around the first business day of the month (data for two months prior).
- 4 **Raw Data Available At:** <http://www.bea.doc.gov/bea/rels.htm> -- see personal income release.

Personal income measures income from all sources. The largest component of total income is wages and salaries, a figure which can be estimated using payrolls and earnings data from the employment report. Beyond that, there are many other categories of income, including rental income, government subsidy payments, interest income, and dividend income. Personal income is a decent indicator of future consumer demand, but it is not perfect. Recessions usually occur when consumers stop spending, which then drives down income growth. Looking solely at income growth, one may therefore miss the turning point when consumers stop spending.

The income report also includes a section covering personal consumption expenditures, also known as PCE. PCE is comprised of three categories: durables, non durables, and services. The retail sales report will provide a good read on durable and non durable consumption, while service purchases tend to grow at a fairly steady pace, making this a relatively predictable report, and ranking it well below retail sales in terms of market importance.



## 24 Philadelphia Fed Index

- 1 **Importance (A-F):** The Philadelphia Fed Index merits a **B**.
- 2 **Source:** The Philadelphia Federal Reserve bank.
- 3 **Release Time:** Third Thursday of the month at 10 ET for the current month.

### In Brief

There are many regional manufacturing surveys, and they tend to be ranked in order of timeliness and the importance of the region. The Philadelphia Fed's survey is first each month, actually coming out during the third week of the month for which it is reporting. Several smaller surveys are then released before the Chicago purchasing managers' report on the last day of each month. A few, such as the **Atlanta and Richmond Fed** surveys, are released after the NAPM and are of little value. The purchasing managers' reports are measured like the national NAPM - 50% marks the breakeven line between an expanding and contracting manufacturing sector. For the Philadelphia and Atlanta Fed indices, 0 is the breakeven mark.

These surveys can be of some help in forecasting the national NAPM - particularly the Philadelphia and Chicago surveys which are more closely watched due to their timeliness and the fact that these regions represent a reasonable cross section of national manufacturing activities.

### In Depth

The market has been bombarded with a bevy of surveys purporting to measure manufacturing activity in every nook and cranny of the country. First it was Philadelphia, then Chicago, and Detroit, Milwaukee, New York, Cincinnati, Richmond, Atlanta, Boston, and there might as well have been a Nome survey. This hodge-podge of releases is begging for someone - namely us - to come along and cut this group down to a more manageable size, say....two. And the winners are...

### Nuts and Bolts

Not so fast. We need a build-up before we cut to the proverbial chase. Let's start with the issue of what these manufacturing surveys are trying to measure and how they go about doing it. The leader of this pack of regional surveys is the NAPM - National Association of Purchasing Managers - index. It has been around since 1931 (1948 on an uninterrupted basis), it is national, and it is one of the most timely measures of manufacturing activity available. In other words, it sets the standards by which its progeny are measured.

The **NAPM** index is actually a composite of five sub-indices - new orders, production, supplier deliveries, inventories, and employment. In surveying over 300 companies each month, the NAPM asks for positive, negative, or unchanged readings on each of these indicators. The positive responses are added to one half of the unchanged responses to produce the diffusion index. For example, if 50% of respondents reported stronger orders, 40% reported weaker, and 10% unchanged, the diffusion index for orders would be 55%, the 50% positive plus half of the 10% unchanged. To calculate the total index, the NAPM uses weights for the five indicators, which are as follows: 30% new orders, 25% production, 20% employment, 15% supplier deliveries, and 10% inventories.

### The Selection Criteria

Since this methodology has made the NAPM index one of the better leading indicators of economic activity over the years, we will measure the usefulness of the regional indices based on their ability to help in forecasting the national index. In our effort to arrive at the two most important regional index, these criteria make eliminating most of the candidates easy for one simple reason - they are released *after* the national index. While regional economic developments are of interest to those who live in the region, they are not particularly important to the Treasury market. If a region cannot help in forecasting national trends, then its data are not particularly useful. So say adios to Atlanta, Richmond, Kansas City, and who knows how many others which have cropped up in recent years.

### And the Winners Are...

Let's focus on the regional surveys which precede the release of the national index on the first business day of each month (with data for the prior month). The contestants are Philadelphia, Chicago, Milwaukee, Detroit, New York, and the most recent addition to the bunch - the APICS survey. We looked at the correlation of all of these indices to the national NAPM and found substantial differences in their forecasting ability. The winners are...drum roll please...Chicago and Philadelphia, in that order.

The Chicago NAPM index, which is released on the last business day of the month (with data for the same month), has an impressive 91% correlation with the national NAPM. The Philadelphia Fed index, which is released on the third Thursday of the month (with data for the same month), was a distant second at 76%. Philly Fed's performance improved slightly to 78% when Briefing measured its results using the NAPM methodology. The Philly index as released is not a composite of its sub indices, as the NAPM is. Instead, the Philly Fed survey asks many questions, but the total index is based on the general question "are business conditions better or worse than last month." It is often the case that a weighted measure of the individual questions on specifics such as new orders and production moves in a different direction than the index based on the general question.

The rest of the regional indices fared poorly, ranging from correlations as poor as 55% (APICS) to 73% (Milwaukee). Chicago was the clear winner, but the Philly Fed index definitely deserves recognition, particularly since it is released so much earlier than the rest. In the future, then, we would recommend setting aside most of the regional manufacturing surveys and focussing on just Philly and Chicago, which offer the best hope of predicting the national index. And when you look at the Philly index, improve your chances by looking at the Philly numbers calculated on an NAPM basis, which Briefing will be happy to provide.

## 25 PPI: Producer Price Index

- 1 **Importance (A-F):** This release merits a **B-**.
- 2 **Source:** Bureau of Labour statistics, U.S. Department of Labour.
- 3 **Release Time:** Around the 11th of each month at 8:30 ET for the prior month.
- 4 **Raw Data Available At:** <http://stats.bls.gov/news.release/ppi.toc.htm>

The **Producer Price Index** measures prices of goods at the wholesale level. There are three broad subcategories within PPI: crude, intermediate, and finished. The market tracks the finished goods index most closely, as it represents prices for goods that are ready for sale to the end user. Goods prices at the crude and intermediate stages of production often provide an indication of coming (dis)inflationary pressures, but the closer you get to crude goods, the more that these prices track commodity prices which are already available in traded indices such as the **CRB** (Commodity Research Bureau).

At all stages of production, the market places more emphasis on the index excluding food and energy, referred to as the core rate. Food and energy prices tend to be quite volatile and obscure trends in the underlying inflation rate. Though the market reaction is determined by the month/month changes, year/year changes are also noted by analysts. The index is not revised on a monthly basis, but annual revisions to seasonal adjustment factors can produce small adjustments to past releases.

## 26 Productivity and Costs

- 1 **Importance (A-F):** This release merits a **D+**.
- 2 **Source:** The Bureau of Labour Statistics of the Department of Labour.
- 3 **Release Time:** 8:30 ET around the 7th of the second month of the quarter (data for quarter prior).
- 4 **Raw Data Available At:** <http://stats.bls.gov/news.release/prod2.toc.htm>

Non farm productivity and costs provide measures of the productivity of workers and the costs associated with producing a unit of output. During times of inflationary concern, the unit labour cost index in this report can move the market. If productivity is falling, unit labour costs may be rising faster than hourly earnings and other labour cost measures. Because productivity can be quite volatile from one quarter to the next and because the previously released **GDP** report will give a good indication of productivity growth, this report seldom has a significant impact on the market.

In addition to the preliminary report, a revision to the productivity data is released in the third month of each quarter. As with the preliminary report, the GDP data released prior to the productivity data provide a clear indication of the direction of the productivity revision.

## 27 Regional Manufacturing Surveys

- 1 **Importance (A-F):** The Philadelphia Fed Index and Chicago PMI merit a **B**; the rest merit a **D**.
- 2 **Source:** Varies - Purchasing managers' organizations and Federal Reserve banks.
- 3 **Release Time:** Varies. Philadelphia Fed at 10 ET on the third Thursday of the month for the current month. Chicago PMI on the last business day of the month for the current month.

There are many regional manufacturing surveys, and they tend to be ranked in order of timeliness and the importance of the region. The **Philadelphia Fed's** survey is first each month, actually coming out during the third week of the month for which it is reporting. Several smaller surveys are then released before the Chicago purchasing managers' report on the last day of each month. A few, such as the Atlanta and Richmond Fed surveys, are released after the NAPM and are of little value. The purchasing managers' reports are measured like the national **NAPM** - 50% marks the breakeven line between an expanding and contracting manufacturing sector. For the Philadelphia and Atlanta Fed indices, 0 is the breakeven mark.

These surveys can be of some help in forecasting the national NAPM - particularly the Philadelphia and Chicago surveys which are more closely watched due to their timeliness and the fact that these regions represent a reasonable cross section of national manufacturing activities.

## 28 Retail Sales

- 1 **Importance (A-F):** This release merits an **A-**.
- 2 **Source:** The Census Bureau of the Department of Commerce.
- 3 **Release Time:** 8:30 ET around the 13th of the month (data for one month prior).
- 4 **Raw Data Available At:** <http://www.census.gov/svsd/www/advtable.html>

The retail sales report is a measure of the total receipts of retail stores. The changes in retail sales are widely followed as the most timely indicator of broad consumer spending patterns. Retail sales are often viewed ex-autos, as auto sales can move sharply from month-to-month. It is also important to keep an eye on the gas and food components, where changes in sales are often a result of price changes rather than shifting consumer demand.

Retail sales can be quite volatile and the advance reports are subject to rather large revisions. Retail sales do not include spending on services, which makes up over half of total consumption. Total personal consumption is not available until the personal income and consumption reports are released, typically two weeks after retail sales.

## 29 The Employment Report

- 1 **Importance (A-F):** This release merits an **A**.
- 2 **Source:** Bureau of Labour Statistics, U.S. Department of Labour.
- 3 **Release Time:** First Friday of the month at 8:30 ET for the prior month
- 4 **Raw Data Available At:** <http://stats.bls.gov/news.release/empsit.toc.htm>

### In Brief

The employment report is actually two separate reports which are the results of two separate surveys. The household survey is a survey of roughly 60,000 households. This survey produces the unemployment rate. The establishment survey is a survey of 375,000 businesses. This survey produces the non-farm payrolls, average workweek, and average hourly earnings figures, to name a few. Both surveys cover the payroll period which includes the 12th of each month.

The reports both measure employment levels, just from different angles. Due to the vastly different size of the survey samples (the establishment survey not only surveys more businesses, but each business employs many individuals), the measures of employment may differ markedly from month to month. The household survey is used only for the unemployment measure - the market focuses primarily on the more comprehensive establishment survey. Together, these two surveys make up the employment report, the most timely and broad

indicator of economic activity released each month.

Total payrolls are broken down into sectors such as manufacturing, mining, construction, services, and government. The markets follows these components closely as indicators of the trends in sectors of the economy; the manufacturing sector is watched the most closely as it often leads the business cycle. The data also include breakdowns of hours worked, overtime, and average hourly earnings.

The average workweek (also known as hours worked) is important for two reasons. First, it is a critical determinant of such monthly indicators as industrial production and personal income. Second, it is considered a useful indicator of labour market conditions: a rising workweek early in the business cycle may be the first indication that employers are preparing to boost their payrolls, while late in the cycle a rising workweek may indicate that employers are having difficulty finding qualified applicants for open positions. Average earnings are closely followed as an indicator of potential inflation. Like the price of any good or service, the price of labour reacts to an overly accommodative monetary policy. If the price of labour is rising sharply, it may be an indication that too much money is chasing too few goods, or in this case employees.

### **In Depth**

The employment report is really two reports - the household survey and the establishment survey. These two surveys contain a wealth of timely information which justify this report's status as the most important economic release of the month. This same wealth of information can nevertheless turn into a dearth of knowledge if it is not placed in the proper context.

### **Household and Establishment Surveys**

The household and establishment surveys differ due to the source of the data, as the names suggest. The household survey is a survey of households and the establishment survey is a survey of businesses. The establishment survey, which is sometimes referred to as the payrolls survey, is favoured by the market for a simple reason - it is far more comprehensive. Both surveys attempt to measure employment conditions at the roughly the same point in time - the household survey covers the calendar week which includes the 12th of the month while the establishment survey covers the pay period (be it a week, two weeks, or longer) which includes the 12th. But the establishment survey covers 390,000 businesses which employ 47 million people, while the household survey covers just 50,000 individuals. With a sample size which is 940 times larger than the household survey, it is hardly surprising that the market is more interested in the establishment survey.

Aside from the sample size, the surveys differ in other significant ways. The household survey counts farm workers, the self-employed, unpaid family workers, and private household workers as employed; the establishment survey does not. The household survey can only count one individual as employed once, even if that person holds two jobs. The establishment survey will double count an individual who appears on the payrolls of two companies. There are other, less significant differences, but let's turn now to the statistics produced by the two surveys.

### **The Establishment Survey**

#### **Non-farm Payrolls**

Without question, the single most important piece of data contained in the employment report generally and the establishment survey specifically is non-farm payrolls. As the name implies, non-farm payrolls measure the number of people on the payrolls of all non-agricultural businesses. The monthly changes in payrolls can be quite volatile, occasionally varying by better than 200K from one month to the next. Even with this volatility and the possibility of large revisions to past data, the payrolls figures offer the most timely and comprehensive snapshot of the economy.

#### **Average Workweek**

The workweek, also referred to as hours worked, is an often underrated indicator in the establishment survey. The average number of hours worked by employees on non farm payrolls is an important determinant of both industrial production and personal income in any given month. The workweek typically sees changes of a tenth or two each month, but can see much larger swings, such as the four tenth decline reported for October. To understand the importance of these changes in the workweek, note that a one tenth decline in the average workweek of 120 mln workers (roughly the current level of employment) results in 12 mln fewer hours worked. To create a similar dman-hoursn man-hours through a change in employment, payrolls would have to fall 340K. For the purposes of production and income calculations, a one tenth of an hour change in the workweek is equivalent to a 340K change in employment. Needless to say, the workweek data are therefore critical in judging the overall strength or weakness of the employment report.

### **Aggregate Hours Worked**

The aggregate hours worked index simply brings together the two series we just noted. By calculating an index which looks at both employment and the workweek, we get a complete picture of the total hours worked each month. This indicator is seen as a monthly proxy for GDP. By definition, the quarterly change in the amount of goods produced is equal to the change in man-hours plus the change in productivity. As productivity is somewhat predictable from quarter to quarter, the aggregate hours worked index provides a helpful monthly read on the overall economy.

### **Average Hourly Earnings**

The last indicator from the establishment survey which is worthy of close inspection is average hourly earnings, which is important for two reasons. Alongside total man hours, the average earnings figure gives us a good indication of personal income growth during the month. Second, the earnings figures are closely watched during periods of strong economic growth for evidence of increasing wage pressures. Such has certainly been the case over the past year, as the market's reaction to the employment data has often turned on the change in hourly earnings and its implications for the inflation outlook.

### **The Household Survey**

#### **The Unemployment Rate**

As we noted earlier, the household survey is not nearly as reliable as the establishment survey due to the small size of the survey sample. This survey nevertheless receives attention, primarily because it is responsible for the one figure which is guaranteed to lead the nightly news - the unemployment rate. The unemployment rate demands little explanation, though it is worth noting that the rate can occasionally see significant monthly changes which are due to flukes in the data. The rate is simply the result of dividing the number of people unemployed (labour force less employed) by the number of people in the labour force.

The problem is that the employment and labour force measures in the household survey are far more volatile than even non farm payrolls. The reason, of course, is the small survey sample size. It is therefore useful to look at the labour force and employment figures themselves to determine if changes in the unemployment rate are due to aberrant swings in one or both of these series.

Beyond the basics of tallying up the labour force and employment, the household survey breaks down these totals in every way imaginable - by gender, race, age, type of job, duration of unemployment, and on and on. These breakdowns seldom are of interest to the financial markets. Perhaps the only two exceptions are the discouraged worker and part-time worker measures.

#### **Discouraged Workers**

Discouraged workers are people who have dropped out of the labour force because they have become discouraged about their job prospects. During hard times, this statistic is often watched alongside the unemployment rate. If the job situation gets exceptionally bleak, it is possible to see the unemployment rate remaining stable not because people are finding jobs, but because they have given up looking and dropped out of the labour force.

#### **Part-Time Workers**

The issue of part time employment has arisen in recent years as many analysts have argued that strong payroll growth reflected the increase in the number of workers holding multiple part-time jobs. Since the payroll data do not differentiate between full and part-time workers, it is possible that a sudden surge in part-time employment which reflected poor full-time job prospects would actually boost payroll growth. In reality, it does not appear that this has happened, as part-time employment has been relatively steady in recent years. This figure nevertheless receives attention from time to time.

### **The Big Picture**

Given the wealth of data contained in the employment report, it is important to take all of these indicators into account when passing judgment on the report. Looking at payrolls along is often misleading, as the workweek, earnings, and household employment measures may be telling a different story. Taken together, however, and taken with the caveats concerning monthly volatility and revisions, the employment report offers the best monthly glimpse of the economy.

## **30 Treasury Budget**

- 1 **Importance (A-F):** This release merits a **D**.

- 2 **Source:** U.S. Treasury Department.
- 3 **Release Time:** 14:00 ET, about the third week of the month for the prior month.
- 4 **Raw Data Available At:** <http://www.fms.treas.gov/mts/index.html>

### **In Brief**

The monthly Treasury budget data follow strong seasonal patterns which produce huge month-to-month fluctuations in the deficit. These fluctuations tell us little about long term budget trends. To the extent that the market analyses the monthly Treasury data, the focus is on year/year changes in receipts and outlays, since the data are not seasonally adjusted. Only in April, the most important month for tax inflows to the Treasury, does the market pay any attention to this report. The data can be predicted with reasonable accuracy by using daily data in the Daily Treasury Statement.

### **In Depth**

#### **The President's Budget**

The annual budget process begins in late January or early February with the presentation of the President's budget for the coming fiscal year. The President's proposals serve as an outline for Congress, particularly when the White House and Congress are controlled by the same party. In the 1980s, the conflicting agendas of the President and Congress often resulted in a final budget which bore little resemblance to the President's budget. After a quiet budget year in 1994 when Democrats controlled Congress and the White House, the Republican takeover of the House and Senate has produced more contentious budget battles in 1995 and 1996.

One of the most common misperceptions about the budget process is that the annual budgeting actually covers all federal spending. Though the President's proposed budget will include projections for all federal government outlays, less than half of all spending is actually controlled by the annual budget legislation. Roughly 67% of federal outlays are mandated by "permanent" law. Unless these laws are changed, no legislative review of spending programs funded by permanent law is required in the appropriations process. The same is true of federal receipts, where permanent law does not require annual review of taxation.

Permanent law should not by any means be construed as suggesting true permanence. Permanent laws are changed frequently, with the 1990 and 1993 budget deals being the most recent examples. These recent efforts to reduce the deficit have incorporated both changes in discretionary spending and changes in permanent laws affecting taxes and spending. Such deficit reduction efforts are usually packaged into a so-called Omnibus Budget Reconciliation Act (OBRA). In the absence of these comprehensive deficit reduction efforts, the annual budget review will only deal with discretionary spending which makes up roughly 33% of the budget. It is perhaps one of the better kept secrets in Washington that the annual budget review which seems at the core of the democratic process does not in fact review even half of all federal spending.

#### **The Budget Resolution**

Once the President has submitted his budget to Congress, the legislative process begins. Within six weeks of the date that the President presents his budget, each Congressional committee must report to the House and Senate Budget Committees regarding budget estimates for programs overseen by their committee. The Budget Committees then approve a budget resolution based on these estimates. After full House and Senate approval of these resolutions, any differences between the House and Senate versions are worked out in conference committee and then a final resolution is approved by each house. This process is scheduled to be completed by April 15, but is often delayed, as was the case this year. As the budget resolution is only a blueprint for the budget and not actual legislation, it does not require presidential approval.

#### **Appropriations Bills**

The real job of budgeting begins after the budget resolution is adopted. The appropriations process is when actual budget authority for discretionary programs is legislated. We have already noted that annual budgeting only covers discretionary programs, which are responsible for just 33% of total spending. Even these discretionary programs are not bundled into one budget package. The annual budget for discretionary spending is actually comprised of 13 separate appropriations bills. The House and Senate Appropriations Committees each include 13 subcommittees which are responsible for the 13 bills. The 13 subcommittees are listed below.

#### **Subcommittees of the House and Senate Appropriations Committees**

|                      |                    |                          |
|----------------------|--------------------|--------------------------|
| Agriculture          | Foreign Operations | Military Construction    |
| Commerce, Justice    | Interior           | Transportation           |
| Defence              | Labour, Health     | Treasury, Postal Service |
| District of Columbia | Legislative        | Veterans, HUD, Agencies  |
| Energy, Water        |                    |                          |

As all tax and spending bills must originate in the House, the House Appropriations subcommittees will see the first action in the appropriations process. The 13 bills are crafted individually and do not work their way through the House and Senate on the same timetable. The goal is of course to complete legislation on all 13 bills by the beginning of the fiscal year on October 1. Yet these bills proceed and are approved of on their own, and are not packaged into one comprehensive bill known simply as the budget.

Once a House Appropriations subcommittee approves its bill, the legislation proceeds to the full Committee and then to the House floor. Approval by the House sets in motion the same process in the Senate. Upon approval by the full Senate, differences between the House and Senate versions of the bill are reconciled in conference committee and then a final version of the bill is sent back to the House and Senate floors. Presidential approval of each of the 13 appropriations bills completes the process. When work on the 13 bills is delayed past the start of the fiscal year, Congress and the President must approve of continuing resolutions which fund government programs at the prior year's level until the relevant appropriations bill is signed into law.

One final note about the appropriations process is that the appropriations bills do not set actual outlays for the coming fiscal year, but instead legislate "budget authority." The Office of Management and Budget (OMB) defines budget authority as "the authority to incur legally binding obligations of the Government that will result in immediate or future outlays." Actual outlays may exceed or fall short of budget authority in any given year depending on past budget authority and the duration of a program.

### **Omnibus Budget Reconciliation Act**

In years such as 1985, 1987, 1990, and 1993, Congress has enacted legislation aimed at long term deficit reduction. These legislative efforts occur separately from the annual appropriations process. They may change permanent laws and set caps which affect discretionary spending, but the regular budget process will nevertheless be unchanged. OBRA legislation affects permanent law and is not a substitute for annual budgets. OBRA legislation packages changes in permanent laws which will typically affect both taxation and mandatory spending. The legislative process for OBRA is completely different than the appropriations process. Legislation is still initiated in the House, but is not limited to work by the Appropriations Committee. The House Ways and Means Committee oversees tax law, and thus plays a critical role in OBRA legislation, as does its Senate counterpart, the Finance Committee. Legislation affecting entitlement programs also falls under the jurisdiction of committees other than Appropriations, i.e. proposed Medicare changes would be considered by a House Ways and Means subcommittee on health care.

### **Supplemental Appropriations**

The 13 appropriations bills are not necessarily the last word for the year on federal spending. Supplemental appropriations bills may be approved at any time to provide additional funding for government programs. Tight caps on discretionary spending set by the 1990 and 1993 budget acts require a pay-as-you-go approach to such funding, thus limiting the number of supplemental appropriations. "Emergency" spending circumvents the pay-as-you-go mandate, however, allowing for a variety of supplemental appropriations. Past "emergencies" have covered everything from the Gulf War to extended unemployment insurance to natural disaster relief.

## **31 University of Michigan Consumer Sentiment Index**

- 1 **Importance (A-F):** This release merits a **B-**.
- 2 **Source:** The University of Michigan.
- 3 **Release Time:** Preliminary: 10:00 ET on the second Friday of the month (data for current month); Final: 10:00 ET on the fourth Friday of the month (data for current month).

The Michigan index is almost identical to the Conference Board Consumer Confidence index, though there are two monthly releases, a preliminary and final reading. Like the Conference Board index, it has two sub indices - expectations and current conditions. The expectations index is a component of the Conference Board's Leading Indicators index.

### **➤ Weekly Chain Store Sales**

- 1 **Importance (A-F):** Both of these releases merit a **D+**.

- 2 **Source:** Bank of Tokyo-Mitsubishi and LJR Redbook
- 3 **Release Time:** Mitsubishi: 9:00 ET each Tuesday (data for week ended prior Saturday); Redbook: 14:55 ET each Tuesday (data in the form of a running monthly total for the week ended prior Saturday).

Note that the release times for these private surveys are the official embargo times. The releases are provided to subscribers much earlier and typically leaked to the rest of the market long before these official release times. Mitsubishi is typically leaked by 8:00 ET, and the Redbook survey is usually known in the market by 14:15 ET.

The Mitsubishi chain-store sales index is based on a representative sample of nine large retailers and measures sales on a weekly basis. The index is relatively volatile from week to week and therefore has little to say about broader consumption patterns. Mitsubishi also produces a monthly measure of sales, which does a better job of predicting a few pieces of the retail sales report (particularly the general merchandise and apparel components).

The LJR Redbook survey tracks 15 retail stores every week to determine the changes in sales. The report is month to date where: the first week of the month is compared to the previous month; the second week compares the first two weeks of the month to the previous month, and so on. The Redbook survey has a somewhat better track record for predicting chain store sales in the monthly retail sales report.

## ➤ Wholesale Trade

- 1 **Importance (A-F):** This release merits a **D-**.
- 2 **Source:** The Census Bureau of the Department of Commerce.
- 3 **Release Time:** 10:00 ET around the fifth business day of the month (data for two months prior).
- 4 **Raw Data Available At:** <http://www.census.gov/svsd/www/mwts.html>.

The wholesale trade report includes sales and inventory statistics from the second stage of the manufacturing process. The sales figures say close to nothing about personal consumption and therefore do not move the market.

Wholesale inventories sometimes swing enough to change the aggregate inventory profile (aggregate inventory is the sum of inventory at the manufacturing, wholesale, and retail levels), which may affect the GDP outlook. In that event they can elicit a small market reaction. More often than not, however, this release goes unnoticed except by market economists.