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**Feature/Capital markets**

**MARKETNOMICS 101**

*What do the numbers mean?*

By Robert Fisher

PPI up .2% month over month. Core CPI flat year over year. Capacity Utilization running at 79% vs. forecast of 82%. 4<sup>th</sup> Quarter GDP up 1.1%, annual GDP up 3.2%.

Every month we are bombarded with a litany of economic statistics. Markets can react wildly to the announcement of these numbers. Why? Why are they so important? Who watches them? What do they mean?

This article, the first of a series, will define and explain the major economic releases in the U.S. and Canada. It will also explain the relationships between some of the numbers and why they cannot be viewed in isolation but rather have to be considered in the context of the overall economy and economic cycle. The intent of this article is not to make anyone an economist but merely to help give a very basic understanding to some pieces of information that seem to have such a big impact on the financial markets.

While it will discuss the important releases from both the U.S. and Canada, the article will focus on U.S. information. That information is much more important given the size and relevance of the U.S. economy compared to Canada.

Economic statistics can be grouped into three broad categories: Leading Indicators; Coincident Indicators; and Lagging Indicators.

Leading Indicators have shown over time to have a predictive nature. They tend to turn downward before the business cycle starts to slow and begin to turn upward before the rest of the economy begins to pick up pace. Examples of leading indicators include:

- Average Hourly Work Week;
- Building Permits for new housing;
- Consumer Expectations, and
- Initial Jobless Claims.

Coincident Indicators primarily confirm thoughts on what is going on at the moment. They act to confirm or deny that a growth phase or downturn is still ongoing. These indicators also help to confirm the effectiveness of past decisions on monetary and fiscal policy (i.e., are past interest rate cuts/increases working or is a tax decrease/increase having the desired impact?) Examples include:

- Industrial Production and
- Non-farm Payrolls.

Lagging Indicators, not surprisingly, lag the rest of the economy. They are backward looking and track activity that has occurred in the past. They can also help confirm that a recession or expansion is over or continuing. If these indicators continue to trend downward, then an economic downturn is still in place and vice versa. Additionally, they can further confirm the success or failure of past fiscal and monetary actions. Examples of lagging indicators are:

- Manufacturing sector wages and
- interest rates.

In addition to the individual statistics that are classified into these categories, the U.S. Conference Board publishes each month a composite index of Leading, Coincident and Lagging indicators. These help to confirm the information from the individual numbers but generally have little impact on the markets because in most cases the information in the index has already been released separately.

Importantly, revisions to prior months' figures can have as big an impact or bigger on the markets if there is a dramatic change to an earlier figure.

The following are the major economic statistics issued in the U.S.:

- **Gross Domestic Product:** This is the broadest measure of activity in the economy. It is comprised of personal consumption, gross private investment, government investment and net exports. Personal consumption is the largest component of GDP and carries approximately a 2/3 weight in the analysis. Both nominal and real GDP are tracked. Nominal GDP growth reflects growth in economic activity without taking into account price changes over time. Real GDP growth does take price changes into account and is a more accurate measure of the true growth or decline of economic activity. Historically, 2 quarters of declines of GDP growth have been considered to signal that the economy is in recession. At the same time, the GDP Deflator is released. This is a measure of the inflation or price change component of GDP. While it is not watched as closely as the Consumer Price Index or the Producer Price Index, it is still an important measure of price change in the economy.

- **Consumer Price Index:** This is a measure of the rate of inflation in consumer prices. Strong growth in inflation is considered to be detrimental to steady, long-term economic growth. That's because, as consumer prices increase, workers demand higher wages to pay for higher-priced goods. As companies need to pay for higher wages, they increase the price of their product. The ensuing wage/price spiral can quickly get out of control. Rapid inflation coupled with interest-rate increases to combat inflation can lead to a condition known as stagflation in which the economy has high interest rates, high inflation and no growth. Inflation is arguably the most closely watched statistic by the U.S. Federal Reserve Bank with respect to setting interest-rate policy. Two numbers are released in this figure: CPI and Core CPI. CPI is a measure of the increase in prices of a fixed basket of goods. Core CPI is a measure of the increase in prices of the same basket of goods but excludes food and energy prices. These two items are highly volatile and seasonal. Core CPI is a more accurate measure of the long-term inflation rate in the economy.

**Producer Price Index:** Closely related to CPI, the Producer Price Index measures the increase of prices of inputs to the manufacturing process. These price increases occur at the wholesale rather than the consumer level. There is some flow-through to the consumer level; however, not

all the components of the CPI are present in the PPI. Two numbers are released: PPI and Core PPI. Core PPI excludes food and energy for the same reason as the CPI excludes them.

**Consumer Confidence:** This measures consumer confidence about the economy overall, their own personal financial situation specifically, their willingness to make large purchases and their willingness to finance these purchases with debt. Each month 5,000 households are surveyed to come up with the final index. A second, related figure, the University of Michigan Consumer Sentiment Survey, covers fewer households (~500 vs. 5,000) but asks more questions (50 vs. 5). Until recently, consumer confidence figures were not considered so overly important in analyzing economic activity. Since 2000, these figures have gained more importance as the consumer has become the sole driver of economic growth.

**Non-Farm Payrolls and Unemployment:** Released on the first Friday of the month, these data are released earlier than any other. Non-Farm Payrolls measures the growth or contraction in the number of people working from month to month. They are more important than overall payrolls because of the seasonality of the farm industry. The figure accommodates seasonal aspects to non-farm payrolls (e.g. student summer employment and Christmas). If companies are hiring new workers, payrolls increase, with a positive impact on the economy. The inverse is true for declines in payrolls. The Unemployment Rate is a related number. It generally tracks increases or decreases in payrolls by decreasing or increasing itself (i.e. more people working and a growth in payrolls means a decrease in the unemployment rate).

There are occasions, however, when the unemployment rate will rise at the same time as payrolls. This too can be a positive indicator for the economy. People are tracked as being unemployed as long as they are actively looking for work. If they stop searching for work they are not considered to be a part of the labour force (the pool of people available for work in the economy). When the economy is improving, people who had previously left the labour force under this definition will once again start to look for a job. When this happens, the labour force increases. If the labour force increases faster than payrolls, the unemployment rate will rise in an improving economy.

The so-called full employment level of unemployment (the Non-Accelerating Inflationary Rate of Unemployment or NAIRU) also monitors employment. NAIRU is theoretically the level of unemployment at which the economy can grow without inflation. If this level is surpassed (i.e. if unemployment drops below this level), then inflation will occur, because demand for workers will outstrip supply. Workers will begin to demand higher wages, or employers will be forced to pay more for a scarce resource. The economic expansion of the 1990s tested this theoretical level, as unemployment rates dropped to historical lows but inflation remained in check. This occurred primarily because increases in productivity outstripped increases in labour and other costs (more on this later).

Two related numbers released at the same time are Average Weekly Hours Worked and Average Hourly Earnings. Average hours worked can indicate possible increases in employment. If this figure is rising it can mean that companies are increasing production or output with existing staffing levels and that, if they want to continue to increase production, they may need to add more employees. Average hourly earnings are important because they can indicate inflation. If the figure rises at the same time as average hours worked, this is to be expected. However, if hourly earnings rise while hours worked remain relatively steady, this indicates wage inflation.

**Capacity Utilization and Industrial Production:** Capacity utilization is the rate at which production capacity in the economy is being utilized. Capacity is measured as the long-term, sustainable level of production with normal plant hours and steady availability of needed supplies and machinery. The key level is the full employment level of utilization. This is, in theory, the level above which inflationary pressures will start to be felt. The actual point of this level is around 85%. So if production capacity in the economy is being utilized below 85%, an output gap can allow the economy to grow without inflation. At rates above full employment, workers begin to receive overtime pay or companies add workers. Also, at levels above full employment, there may be insufficient downtime for required maintenance on machinery, which can cause temporary hiccups in production but can also have longer-term implications as companies need to replace worn-out machinery.

Industrial Production is a measure of the level of actual production in the economy. It is dominated by the manufacturing sector but also includes measures of oil and gas production and utility production. Two figures are released: Industrial Production and Industrial Production excluding automobiles. Because the automotive sector makes up such a large component of the manufacturing sector, removing the automotive component gives a better indication of the overall manufacturing sector. Manufacturing is a large component of the economy, so this number is very important. Changes in manufacturing will be reflected in changes in manufacturing payrolls, average hourly wages, average hours worked and purchasing.

**Institute for Supply Management:** This was formerly known as the National Association of Purchasing Managers (NAPM) index. It was changed to the ISM in January 2002. One of the major economic releases not compiled and released by the government, it includes data that are coincident indicators as well as data that are leading indicators. Roughly 400 respondents complete surveys each month, answering questions in five areas:

- Manufacturing Production;
- New Orders;
- Inventories;
- Employment, and
- Vendor Deliveries.

Based on responses to each of these areas, the index is compiled with reference to the previous month. It does not gauge production levels but only how conditions have changed relative to the previous month. A level above 50 indicates an expanding manufacturing sector (increased production) while a number below 50 indicates that the manufacturing sector is declining (decreased production). This number can be volatile from month to month and, in a time of steady production, can rise above and fall below the 50 level from month to month. It should be used as a confirmation of economic activity rather than an actual indicator or predictor of economic activity.

**Productivity:** Strictly defined, productivity is the ratio of a unit of output to a unit of labour input. More simply, it measures how much time it takes to make one widget. Companies can achieve increases in productivity in different ways, including better training and new methodologies. They can also employ better and more efficient production equipment.

Increased productivity means that the unit cost of production decreases. This results in lower or stable inflation. However, productivity statistics can be misleading. Output changes based on demand in the economy. Employment often changes as a result of expectations of economic

activity. So if a company anticipates increased sales, it may begin adding labour before it actually needs it so that it can train new workers for the day when demand actually rises. As a result, productivity levels may drop temporarily. The inverse also applies when companies lay off workers in anticipation of a slowdown in demand.

During much of the economic expansion in the 1990s, productivity increased dramatically. This allowed for high economic growth and low inflation (an economic nirvana). Inflation remained in check because increases in productivity far outpaced increases in labour and materials costs.

Closely related to productivity is unit labour costs. In other words, how much does it cost to produce one widget? As productivity increases, unit labour costs fall (provided productivity increases faster than costs), which allows companies to absorb increases in labour costs and still increase profitability.

Another important component that is measured in these statistics is the Employment Cost Index. The ECI is the most accurate measure of employment costs in the economy. It takes into account both salaries and benefits. When analyzing labour costs, it is important to look at the ECI in comparison to average hourly wages to determine if the increase in ECI is coming from soft costs due to increased cost of benefits. The ECI is also a narrower measure of production costs than unit labour costs, because unit labour costs take into account things such as bonuses, stock options and other factors that are not considered in the ECI.

The following are the major Canadian economic statistics:

Canadian economic releases do not have the same impact as U.S. figures. Also, Canadian economic releases usually appear later than those from the U.S., which further decreases their relevance. I will list only a few of the major ones:

- Labour Force Survey.
- Survey of Manufacturing.
- Consumer Price Index. U.S. consumers bear a significantly higher portion of these costs, a difference that Canada's CPI reflects.
- Employment, Earnings and Hours Worked.
- Real GDP: In Canada, GDP estimates are released monthly rather than quarterly with two subsequent revisions as in the U.S. GDP figures are also released quarterly with the National Accounts. Because figures are released only when all relevant data is available, the Canadian numbers are more reliable than the potentially more volatile U.S. numbers.

**Relationships Between the Numbers:** As mentioned earlier, it is important to view these numbers in relation to others to get an overall picture of the health of the economy. While markets can react strongly to individual numbers, it is largely because the markets do not look at the larger picture that we see such large swings. With the release on one day of an indicator that has negative implications for the economy, equity markets will sell off while bond prices rise; the next day, those price swings may reverse themselves if a more positive indicator appears. As such, the relationship between the various statistics is important.

Here's a simple example: As mentioned earlier, productivity increases kept inflation in check during much of the economic growth of the 1990s. During this time, producer prices increased and there were some quite large increases in the PPI numbers. But those increases did not filter through to CPI. Why? Productivity. While manufacturing input prices and labour costs were increasing, a huge investment in better technology spurred a very strong productivity-based growth cycle that saw increases in productivity of 5% to 5.5%, while PPI increased at an average rate of about 3.5%. Because of this, companies could absorb the increases in costs, maintain prices to the consumer and still increase profitability. But if you had looked only at the PPI numbers, you would have anticipated increasing inflation and increasing interest rates to combat that inflation. What occurred instead was low inflation, stable interest rates and high economic growth.

The next article will examine the role of the U.S. Federal Reserve Bank. It will look at how the Fed views economic statistics, the numbers that it focuses on and how it works to stabilize the economy and prices to achieve consistent economic growth and low inflation.