

Where are we with the U.S. recession? Current conditions seem atypical with regard to last decades cycles

Last February, we published an *Economic Viewpoint*¹ that used a series of economic and financial indicators to see whether the United States was at the dawn of an economic recession or not. Three months later, after numerous rebounds in the financial markets, what is the state of the U.S. economy?

Even though it hasn't been made official, the U.S. economy seems to be in a contraction phase, which probably began in early 2008 or slightly earlier. A number of observers are painting an extremely dark picture of the current conditions. However, up to this point, this phase of contraction has been so small that a number of indicators are in contradiction regarding its existence. Some of these indicators signal that production of goods and services is stagnating or diminishing, while others continue to show that certain signs of growth, however anaemic, are persisting. The most important of these signs comes from the advance estimate of U.S. national accounts for Q1 of 2008, while real GDP showed slight growth. This measure (the largest) of economic activity in the United States shows that growth is still with us. Other indicators like the ISM indexes are also signalling more solid conditions.

If we estimate that a recession is truly underway, for the moment, at least, we can describe it as a pale recession, to use Alan Greenspan's expression. The next few months remain uncertain, however. Are the U.S. Federal Reserve's (Fed) interventions and the economic stimulus fiscal plan achieving their ends by cutting short the depressed atmosphere? Or are higher energy prices, the debacle in the housing market and tightening credit conditions eating up what's left of the U.S. economy?

¹ See the *Economic Viewpoint* entitled "Is the United States in a recession? What are the signs?" February 14, 2008.

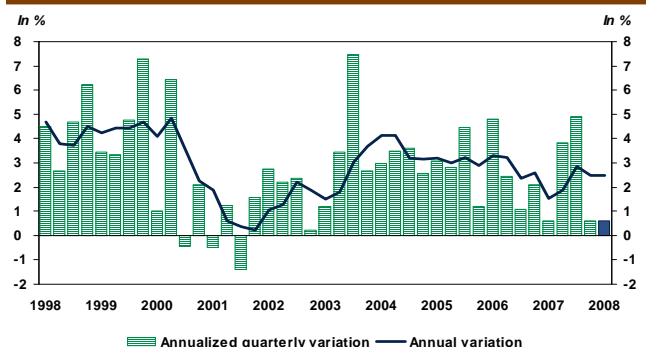
HAS A RECESSION IN THE UNITED STATES ALREADY BEGUN?

There are two definitions for a recession floating around. The first is recording a minimum of two consecutive quarters of real GDP contraction. The second is the definition by the National Bureau of Economic Research (NBER), who, since 1929, officially declares the dates at which economic cycles in the United States begin and end. It is based on contraction of these variables: employment, industrial production, real sales and real income.

At least two consecutive quarters of contraction

According to this definition, the United States is not yet in recession. The advance version of national accounts for Q1 posted growth of 0.6% of real GDP (Graph 1). This performance is similar to the growth posted in the last quarter of 2007. The economy continues to grow, although very weakly. This gain is also fragile: the main component that contributed the most to real GDP growth is the one related to inventory change. Excluding it, real GDP would actually have experienced an annualized drop of 0.2%. It is still possible that Q2 of 2008 will post a decline in real GDP. Of course, the tax rebate cheques issued under the federal government's

Graph 1 – Real GDP continued to grow in Q1 of 2008



Sources: Bureau of Economic Analysis and Desjardins, Economic Studies

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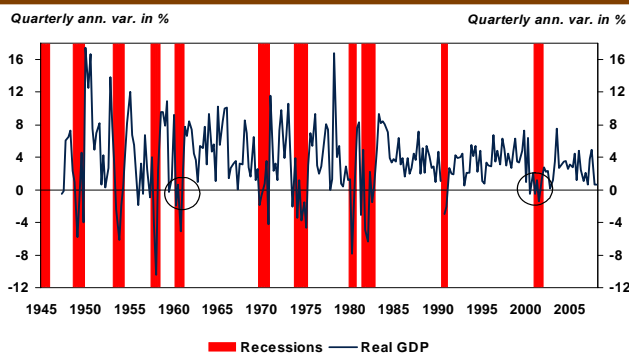
economic stimulus fiscal plan have already begun to be sent to U.S. households, but the effect on consumption should mainly be felt from Q3 on.

Recessions officialized by the NBER

The criteria suggested by the NBER to officialize the beginning and ending dates for a recession in the United States go beyond the unique condition of a minimum of two successive contractions in real GDP. The NBER counts on information from national accounts, of course, but not exclusively. It establishes a monthly chronology of economic cycles, but real GDP data only have a quarterly frequency. To further clarify recession dates, the NBER uses monthly indicators, the four major ones being: employment, industrial production, real sales and real income.

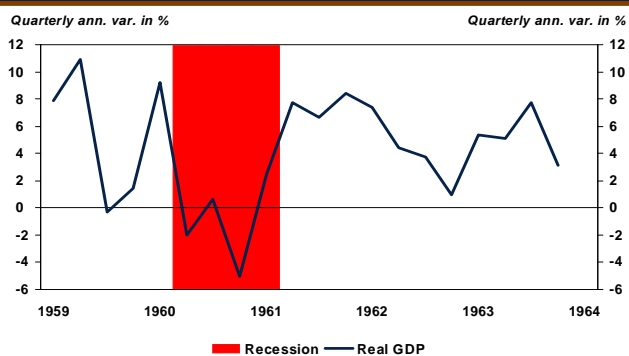
In practice, the NBER can officially declare a recession without two consecutive quarterly contractions in real GDP. Since the information on U.S. GDP has been available, there have been two episodes of this type: the recessions of 1960 and 2001, where the quarters of GDP contraction were not consecutive (Graphs 2 to 4). The opposite situation also

Graph 2 – According to the NBER, a recession may take place without two consecutive quarters of real GDP contraction



Sources: Bureau of Economic Analysis and Desjardins, Economic Studies

Graph 3 – The 1960 recession did not record two consecutive quarterly contractions in real GDP



Sources: Bureau of Economic Analysis and Desjardins, Economic Studies

Graph 4 – There were not two consecutive quarterly contractions in real GDP in 2001



Sources: Bureau of Economic Analysis and Desjardins, Economic Studies

exists: the second and third quarters of 1947 were negative, but NBER did not classify them as a recession. It is no longer necessary to see contraction of real GDP right from the time the recession begins. The recessions of 1980 and 1990 began even though real GDP was still on the rise.

Usually, between 6 and 18 months can go by before NBER officially declares that a recession has begun. The recession that began in 2001 (March) was announced in November of that year. The recession of 1990 (July) was announced in April 1991. The beginning of the 1981 recession (July) was officially declared in January 1982 and the beginning of the 1980 recession (January) was announced in June 1980. As the NBER bases its recommendations on a panoply of economic indicators, which are often subject to multiple monthly revisions, this approach is prudent so as to not have to modify the dates after the fact. The most recent change to a previously announced period of contraction dates from 1975.

When the NBER officially declared the beginning of the 2001 recession, on November 26 of the same year, the results from national accounts for the first three quarters were already known (the third being its advance estimate). At that time, the first two quarters showed annualized growth of 1.3 and 0.3% respectively, while the third quarter posted an initial negative result of -0.4%. The NBER then signalled the start of the recession based on one fairly minimal quarter of contraction. Time and revisions to national accounts data proved that the body had been right. During the annual revision of summer 2002, the first three quarters “became” negative. This lasted two years: the 2004 revision (the last for results for the 2001 year) brought the second quarter into positive territory with a 1.2% gain in real GDP. Table 1 presents the various estimates for GDP growth for the four quarters of 2001.

Table 1
Estimation of the evolution of real GDP

	Quarterly annualized variations in %			
	Q1 2001	Q2 2001	Q3 2001	Q4 2001
Estimation date				
April 27, 2001	2.0			
May 25, 2001	1.3			
June 29, 2001	1.2			
July 27, 2001	1.3	0.7		
August 29, 2001	1.3	0.2		
September 28, 2001	1.3	0.3		
October 31, 2001	1.3	0.3	-0.4	
November 30, 2001	1.3	0.3	-1.1	
December 21, 2001	1.3	0.3	-1.3	
January 30, 2002	1.3	0.3	-1.3	0.2
February 28, 2002	1.3	0.3	-1.3	1.4
March 28, 2002	1.3	0.3	-1.3	1.7
Annual revisions				
July 31, 2002	-0.6	-1.6	-0.3	2.7
December 10, 2003	-0.2	-0.6	-1.3	2.0
July 30, 2004	-0.5	1.2	-1.4	1.6

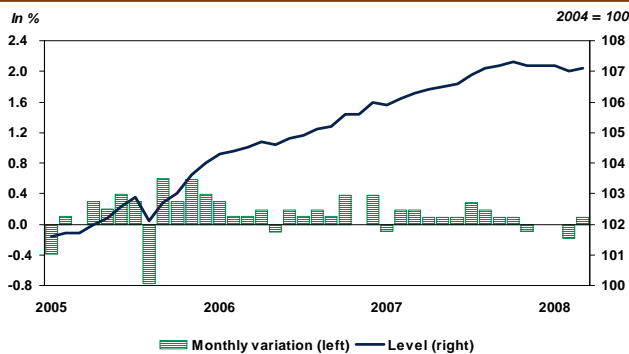
Sources: Bureau of Economic Analysis and Desjardins, Economic Studies

So, given the approach adopted by NBER, a recession could have begun in the first months of 2008, even though real GDP variation remained positive in Q1. An analysis of the recent evolution of the main statistics used by the NBER can be used to discern the beginning of a new recession. Graphs 5 to 8 on the next page present recent movements in these indicators.

Analysis of these four variables truly signals a drop in the economic activity underway, although it has been very modest to this point. These four variables also make up the Conference Board's coincident indicator, which is published each month at the same time as the leading indicator. Graph 9 shows the level of the coincident indicator since the beginning of 2007. According to this indicator, we see that

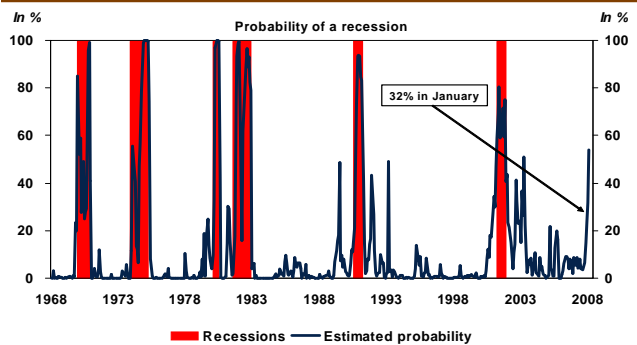
activity peaked in the fall. Is this enough to conclude that the recession began before the start of 2008? If we use the four results to build a model of the probability of a recession², we see that the probability remained weak until January, and we went over the 50 bar in February. Graph 10 shows fluctuations in this model, compared with the recessions officially declared by the NBER since 1970. The rise of the probability of a

Graph 9 – The coinciding indicator peaked last autumn



Sources: Conference Board and Desjardins, Economic Studies

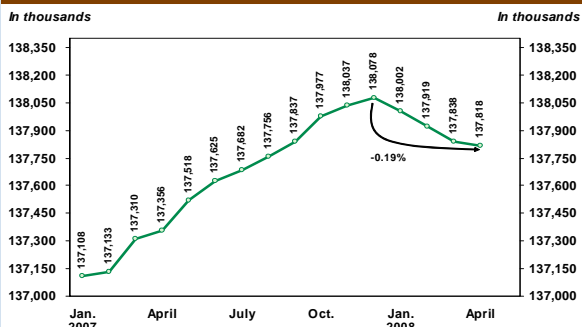
Graph 10 – Likelihood of a recession based on the four variables analyzed by the NBER*



* We use the 3-month percentage variation for employment, production, income and total sales.
Source: Desjardins, Economic Studies

² From the 3-month percentage variation of the variables analyzed by the NBER, a binary variable model was estimated to obtain the likelihood that a recession is underway. The results show that since November, probability has increased and exceeded 30% in January and 50% in February. Based on the results obtained during past recessions, it is reasonable to suppose that one began in January. For example, probability of only 21% was calculated during the first month of the 1990 recession and the following months saw the probability climb to 50%.

Graph 5 – Recent evolution in employment

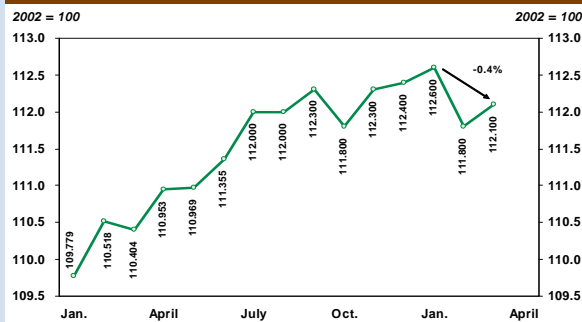


Sources: Bureau of Labor Statistics and Desjardins, Economic Studies

Employment

According to the business survey, employment peaked in December 2007. Since then, 260,000 jobs have been lost in the United States. This decrease remains fairly minimal, representing only 0.19% of the number of workers at the end of 2007. The direction of recent fluctuations in the job market is compatible with a recession, but the amplitude is insufficient. It should also be said that since 1945, there have never been four consecutive monthly declines in jobs without a subsequent recession.

Graph 6 – Recent evolution in industrial production

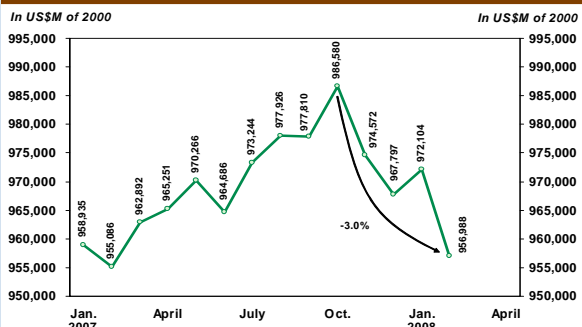


Sources: Federal Reserve Board and Desjardins, Economic Studies

Industrial production

The drop in industrial production is more recent. The volume of production hit its peak last January. There was a strong drop (-0.7%) in February, then a slight rise in March. Production remained at 0.4% under its level for January. Production however is still benefiting from a contribution by energy providers. The manufacturing component peaked in July 2007 and dropped 0.6% since then.

Graph 7 – Recent evolution in real sales

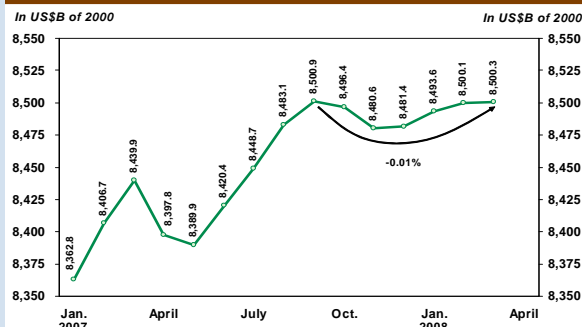


Sources: U.S. Census Bureau and Desjardins, Economic Studies

Real sales

Among the statistics used by the NBER, the largest drop has come from real sales (manufacturing, wholesalers and retailers). The most recent information (February) shows a 3.0% drop since the peak hit in October 2007. The increase in energy prices and a notable drop in goods consumption are at the source of this decrease in total sales.

Graph 8 – Recent evolution in real income (less transfer payments)



Sources: Bureau of Economic Analysis and Desjardins, Economic Studies

Real income less transfers

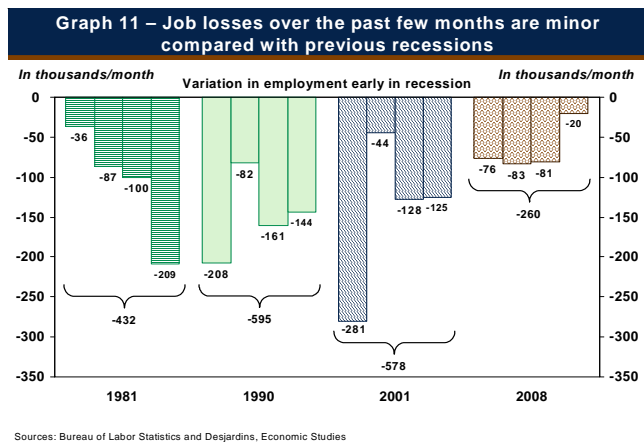
Revenue is the statistic used by the NBER which has dropped the least up until now. In fact, the last drop dates to November 2007. Since then, real income have posted a slight upward trend and the total decline in relation to September's peak is now barely 0.01%.

recession in January 2008 coincides with the first drops in total employment. We use this date as the date of entry into recession. According to this hypothesis, the peak of the preceding economic cycle which began in December 2001 ended in December 2007. This 72-month growth cycle was much shorter than the 92-month cycle of the 80s or the 120-month cycle in the 90s. January, the date chosen, remains an approximation. The NBER could choose another month. In this case, February would also be a good choice as it is the first month where the four indicators show a decrease in relation to a recent peak. NBER President Martin Feldstein recently said that the economic peak was probably reached in December or January.

THE FIRST MONTHS OF RECESSION

Supposing that a contraction phase in the U.S. economy really did begin in January, it is interesting to see how much certain economic variables have evolved with regard to what was observed in the first months of previous recessions. The main conclusion that comes out of this analysis is that the beginning of the current contraction phase seems to be weaker than in past recessions.

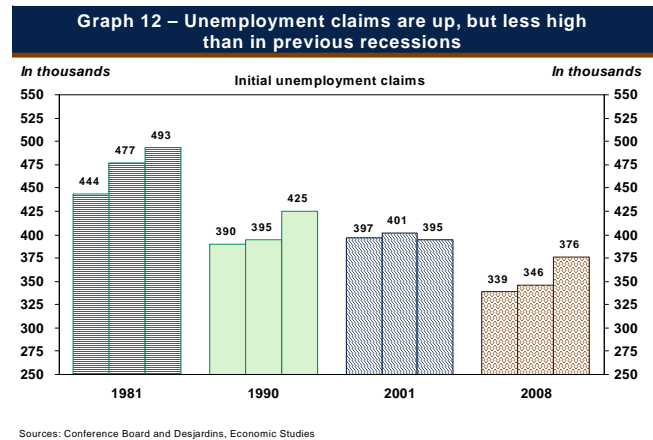
At the risk of being repetitive, a decrease in employment is a key indicator of the state of a recession. When comparing employment losses recorded in January against losses observed during the first months of the three previous recessions, we conclude that they are much less significant. Cumulative job losses between January and April reached 260,000 (Graph 11). On average, for the 1981, 1990 and 2001 recessions, job losses for the first four months came in at around 535,000, nearly double the current losses.



Sources: Bureau of Labor Statistics and Desjardins, Economic Studies

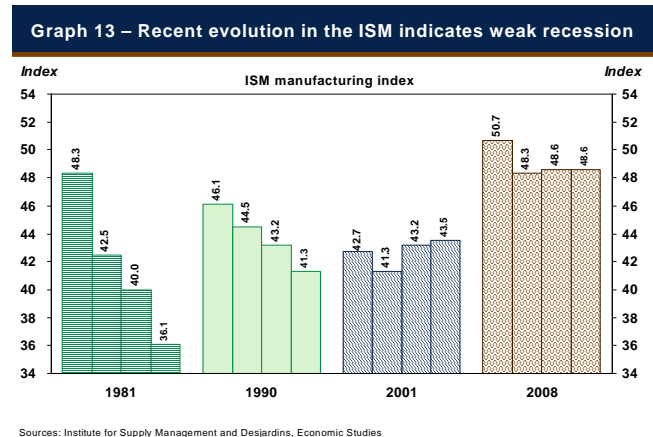
The job market's resistance is also visible in information on initial unemployment insurance claims. Although on the rise, new claims remain below levels observed during previous recessions. They climbed to 376,000 in March, and, on average, they were 354,000 since the year began, or 50,000

less than what was observed at the beginning of recessions in 1990 and 2001 (Graph 12).



Sources: Conference Board and Desjardins, Economic Studies

Information on the ISM manufacturing index, a very useful indicator for following U.S. economic cycles, also testifies to the beginning of a weak contraction. In March and April, the index remained unchanged at 48.6. During preceding recessions, the ISM index posted a downward trend and hit levels much weaker than those currently being observed (Graph 13). Historically, a value below 48.5 in the index is compatible with the beginning of a recession and a value of nearly 41 is compatible with an advanced state of recession.

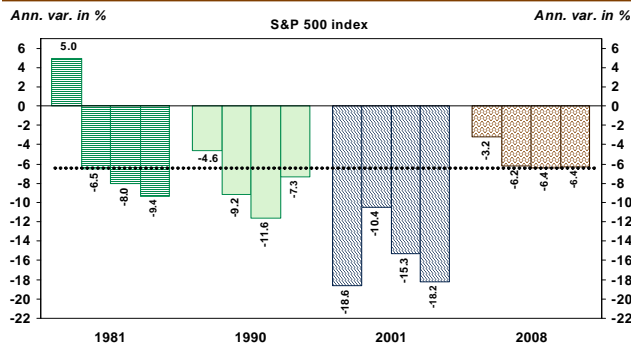


Sources: Institute for Supply Management and Desjardins, Economic Studies

Since the year began, although volatile, the U.S. stock market seems less sensitive relative to what has been observed in previous recessions. On average, losses, in annual variation of the S&P 500, hit 6.4% in March and April. Usually, as shown in past experience, stock market losses are approaching -10% over the four first months of a recession (Graph 14).

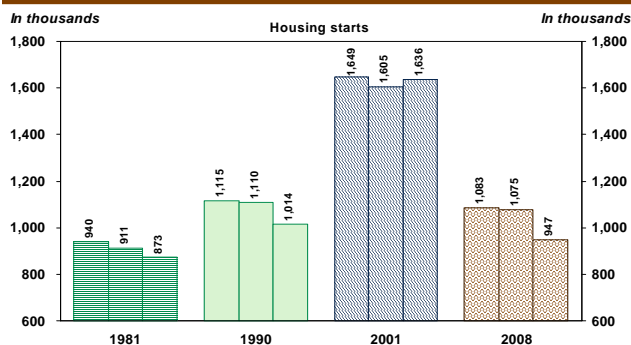
Not all of the indicators suggest a weak contraction, however. The drop in housing starts corresponds very well with the data from recessions in 1981 and 1990 (Graph 15). Evolution

Graph 14 – Less negative stock returns than in previous recessions



Sources: Standard and Poors' and Desjardins, Economic Studies

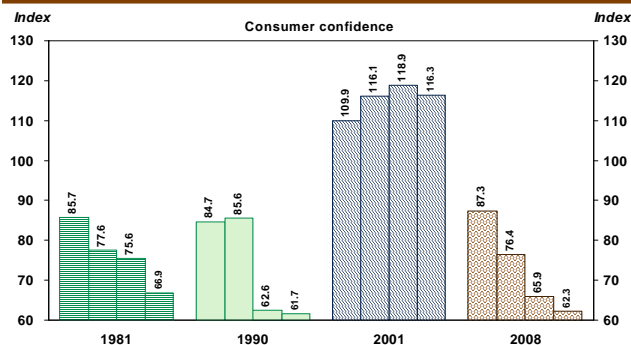
Graph 15 – Drop in housing starts: the clearest sign that the U.S. economy is in recession



Sources: U.S. Census Bureau and Desjardins, Economic Studies

in consumer confidence also reflects a conventional state of recession. In April, the confidence index has fallen to a low of 62.3, which is comparable to values observed during the first months of the 1981 and 1990 recessions (Graph 16). The drop in the household confidence index could however underestimate the consumption of the next few months as it is mostly due to the strong rally in gas prices which is sapping real disposable income. An anticipated drop in oil prices³ and

Graph 16 – Evolution in consumer confidence is similar to that observed in 1981 and 1990



Sources: Conference Board and Desjardins, Economic Studies

the effect of the tax rebates which have already started to be sent should minimize the slowdown in real consumption.

WHAT A RECESSION USUALLY HAS IN STORE

As we have seen, the amplitude of the current slowdown is now fairly weak versus what we have seen in past recessions. But what can we expect over the entire phase of the decline, if the current situation truly does reflect an average recession? To find out, we can return to the variables used by the NBER to officially declare periods of recession. Table 2 presents the average variations in % between peaks and troughs for each variable during previous recessions (since 1960).

In terms of jobs, the last recessions have shown a drop between 1.2% (1970) and 3.1% (2001). This averages out to 1,755,000 jobs lost (1.9%). If the current period truly reflects a normal recession, we could lose around 1,500,000 jobs over the 260,000 layoffs already made. It should be noted that during the 2001 recession, the drop in jobs was particularly rough, both in terms of volume (-2,708,000 jobs lost) as well as duration. Positions were being cut over a 30-month period, while the recession itself lasted only 8 months. This was fuelled by businesses adjusting to new technology, growth of productivity, global structures changes in the manufacturing sector and a wave of delocalization for an ever-increasing slab of production toward emerging countries, including China and India. It is possible that the current phase of the decline in employment could be less difficult though. Gains in the job market during the last growth cycle were relatively modest⁴. A strong correction in the market is therefore less necessary.

During previous recessions, industrial production fell by 7.7% on average. The worst drop (-12.9%) was in 1973, while production only dipped by 3.9% in 1990. In 2001, the decrease was 6.2% but began when tech plummeted long before the recession began. The 0.4% drop recorded up until now could therefore get larger.

Up until now, the decline in real sales has been fairly comfortable. We've already experienced nearly half of the average drop of 6.9% recorded over the last recessions. In fact, we are nearing 3.9% of the drop in sales observed in 2001. Sales expressed in current dollars have increased until January to recede by 1.1% in February, so the drop in real

³ See the *Economic Viewpoint* entitled "Are current oil prices justified?", April 30, 2008.

⁴ During the economic growth cycle that ended in 2001, average monthly job creation was 209,000 and unemployment went down to 3.8 % in April 2000. Over the last growth cycle, monthly job creation was 159,000 on average and the jobless rate hit a low of 4.4% in March 2007.

Table 2
Change in percentage between trough and peak*

	<i>Variables analysed by the NBER</i>			
	Employment	Production	Sales	Income
Recessions				
1960	-1.8	-8.6	-6.2	-1.2
1970	-1.2	-7.0	-5.6	-0.2
1973	-2.8	-12.9	-12.9	-5.3
1980	-1.3	-6.6	-6.8	-2.6
1981	-3.1	-8.8	-8.1	-0.9
1990	-1.5	-3.9	-5.1	-2.5
2001	-2.0	-6.2	-3.9	-1.8
Average	-1.9	-7.7	-6.9	-2.1
Median	-1.8	-7.0	-6.2	-1.8
Lower	-1.2	-3.9	-3.9	-0.2
Higher	-3.1	-12.9	-12.9	-5.3

* The peak may outstrip the formal entry into recession and the trough may follow after the official end of a recession.

Sources: Bureau of Labor Statistics, Federal Reserve Board, U.S. Census Bureau, Bureau of Economic Analysis and Desjardins, Economic Studies

sales is mostly due to the price effect, which is exacerbated by higher energy costs.

As in employment, earnings tend to fall less than production or sales during a recession. On average, it falls by 2.1%. The last two recessions have seen a dip in earnings fairly close to this average. For the time being, real household income (less transfer payments) has diminished very little. A true recession will imply a significant reduction in income over the coming months.⁵ Remember that cheques from the economic stimulus fiscal plan are considered tax rebates, so total personal income should not be affected. There will, however, be a considerable rise in disposable income.

THE SITUATION ON THE U.S. RECESSION AND PERSPECTIVE FOR THE COMING MONTHS

A few conclusions can be drawn from this analysis. First, even if real GDP continues to grow during the first quarter of 2008, a recession may still have begun early in the year. Second, from the numbers the NBER looks at in determining the dates of recessions in the United States, meaning employment, industrial production, real sales and real income, we agree that the economic cycle peaked in December and that a contraction phase has likely been underway since January. Third, if we compare the evolution of some economic indicators, we see that the degree of severity of this new

phase of contraction in the U.S. economy is less elevated than those of preceding recessions. Last, based on past experience, for an “average” recession, we would still see significant losses in employment and larger losses in industrial production and real income.

Since the beginning of the month of May, Americans have begun to receive cheques from the economic stimulus fiscal plan adopted by the United States Congress and signed by President Bush on February 13. This economic stimulus is significant as it should bring an additional injection of 0.5% to annual growth in real consumption for 2008. In our economic scenario, we expect a rebound in the third quarter and a weaker end to the year. The real upswing won't come until 2009. The assistance plan should also contribute to limiting losses to jobs, production and earnings. In the event that the current situation truly qualifies as a recession, so to speak, it could be less severe than on average.

However, developments in the last few weeks have cast a shadow on the scenario. The price of oil per barrel has shattered records and prices of several food commodities are posting impressive increases. The bottom line: a portion of the amounts paid out to Americans will only help to make up for more expensive gas and grocery prices. The net rebound anticipated could largely be offset and the ripple effect on activity may ebb. Therefore, in this alternative scenario, the contraction phase of the U.S. economy could be prolonged and amplified to resemble more of a classic recession. In this case, economic statistics could record a net deterioration with regard to the fairly cautious drops recorded up to this point.

⁵ The NBER tends to officially declare a start to a recession very close to an earnings peak. If the summit reached last October persists, if the current phase is truly a recession and if the NBER keeps its trend of lining up peaks in the economic cycle and real earnings, the recession may have begun as early as last fall!

In this context, it is clear that the risks remain significant and uncertainty is clearly present. It is not impossible that the financial markets will underestimate the duration of the current difficulties. If the actual slowdown comes to resemble a true recession over time, the Fed may need to respond again by reducing interest rates. Stakeholders on the money, bonds, stock and currency markets could also have to revise their short-term expectations.

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