

What is the difference between a recession and a depression?

One day last week I came into the office to find an email from my boss time-stamped 2:46am (and no, he wasn't in another time-zone) asking 'what, technically, is a depression'. What follows is a slightly expanded version of my answer.

There is a very old joke which says "a recession is when your neighbour loses his job, a depression is when you lose yours"¹. This plays to the widely accepted contemporary belief that a depression is simply a particularly severe recession. A quick trawl through cyberspace (which can be done readily by googling 'difference between recession and depression') throws up two criteria for distinguishing a 'depression' from a 'recession' – a 'depression' is either a decline in real GDP of more than 10%, or a contraction in real GDP which lasts more than three, or four, years².

The 'Great Depression' of the 1930s qualifies on both counts (in fact, on the first definition the United States had two depressions in the 1930s – a 33% decline in real GDP between the September quarter of 1929 and the September quarter of 1932, and a 13% decline between the September quarter of 1937 and the March quarter of 1938). Australia experienced an 11% contraction in real GDP between 1926-27 and 1930-31. Australia also experienced two other declines in real GDP which satisfy the first of these definitions of 'depression' during the first half of the twentieth century – in 1914-15, when real GDP fell by 12%; and between 1942-43 and 1946-47, when real GDP fell by 13%; these were of course both during war-time.

The 18% contraction in Indonesia's GDP during 1998 would also qualify as a 'depression' under the first of the above definitions, as would the 15% decline in Thailand's real GDP over the two years ended September quarter 1998, and the 11% decline in Malaysia's real GDP over the year ended December quarter 1998. Finland's economy shrank by 10.6% between 1990 and 1993, largely as a result of the collapse of the Soviet Union, which was Finland's major trading partner at the time. And most of the constituent republics of the Soviet Union experienced even greater economic contractions at that time, including Russia itself by almost 50% between 1990 and 1995 (amply qualifying as a 'depression' on both of the above definitions).

On the other hand, Japan's experience in the aftermath of the collapse of its stock and property market bubbles in the early 1990s would not qualify as a 'depression' on either score, since the largest peak-to-trough decline in Japan's real GDP during that period was 'only' 3.4% over the two years ended March quarter 1999, and that lasted 'only' two years.

In fact, there is *no* official or even widely-accepted criterion for distinguishing between a 'recession' and a 'depression'. In the United States, a 'recession' is officially defined by the National Bureau of Economic Research (a committee comprised largely of academic economists) as "a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales"³.

¹ Ronald Reagan used it in the 1980 Presidential campaign, adding that a recovery was when then-President Jimmy Carter lost his job.

² See, for example, http://economics.about.com/cs/businesscycles/a/depressions_2.htm.

³ For more detail see the NBER website at <http://www.nber.org/cycles/recessions.html>.

This definition does *not* require consecutive quarters of negative real GDP growth, despite the widespread use of this 'rule of thumb' in the media⁴. Notably, the most recent US recession in 2000-01 did not feature consecutive quarters of negative growth - there were three quarters of negative growth, but none of them consecutive.

Other countries do not have a recognized recession-dating body equivalent to the US NBER⁵, with the result that the 'consecutive quarters of negative growth' rule of thumb is more commonly used outside the United States. Nevertheless, this rule is not infallible. In Australia, real GDP did not decline in consecutive quarters during the 1974 recession; and there have been periods of two or more quarters of negative real GDP growth which are not generally regarded as having been 'recessions' (September quarter 1965 through March quarter 1966; December quarter 1971 through March quarter 1972; and the September and December quarters of 1977).

To most economists, a more meaningful definition of a recession is an extended period of below-trend or 'below potential' growth. Trend or potential growth can be hard to measure, but this approach to identifying recession allows for the fact that in countries with high rates of population growth and/or high rates of productivity growth, real GDP does not need to be negative for conditions consistent with recession (such as rising unemployment) to develop.

Thus for example, Australia's labour force has been growing by around 2% per annum in recent years, while Japan's has been shrinking. Thus, other things (in particular productivity growth) being equal, unemployment will start rising at a higher rate of GDP growth in Australia than in Japan.

Similarly, labour productivity in China (defined here because of data limitations as real GDP per person employed rather than per hour worked) has grown at an average annual rate of around 10% per annum so far this decade, compared with 0-2% per annum in most Western economies. Hence, a much higher real GDP growth rate is required to prevent unemployment rising in China than in Western economies.

Since trend or potential growth is difficult to measure, a practical alternative used by many economists is to identify a recession as occurring when the unemployment rate rises by more than a given amount over a specified period - for example, by more than (say) 1½ or 2 percentage points in 12 months⁶.

Such an approach has the additional advantage of making sense to people with no training in economics, who quite reasonably do not know what GDP is, and who will probably not be able to tell when it is declining, but who certainly recognize a rise in unemployment when they see it.

⁴ This 'rule of thumb' appears to have been coined by Julius Shishkin (Chief of the Economic Research and Analysis Division of the US Census Bureau, where he developed the X-11 methodology for seasonally adjusting time series data, and subsequently Commissioner of the Bureau of Labor Statistics) in an article in the *New York Times* in 1974.

⁵ In Australia, this role was unofficially played by Dr Ernst Boehm during his 45-year long academic career at the University of Melbourne and the Melbourne Institute of Applied Economic and Social Research. Ernst Boehm died earlier this month.

⁶ This is a variant of the proposition originally advanced by Arthur M. Okun in 1962, (and since known as Okun's Law), that for each percentage point by which unemployment exceeds its 'natural rate', GDP falls short of its potential level by between 2 and 3 percentage points).

Defining a recession as any period during which the unemployment rises by more than 1½ percentage points in 12 months accurately identifies all of the NBER-designated recessions in the US since 1945, without giving any 'false signals'. It would also signal that the US has also entered recession during the past twelve months, the US unemployment rate having risen from 4.7% in November 2007 to 6.5% in October 2008.

This rule also accurately delineates the five genuine recessions Australia has had in the last 50 years (in 1961, 1974-75, 1982-83 and 1990-91) without giving any 'false signals' – unlike the 'consecutive quarters of negative GDP growth' rule of thumb (which, as noted above, has done so on four occasions in the last 50 years)⁷.

On our current forecasts, Australia will have a recession on this definition (since we see the unemployment rate rising from its current 4¼% to 5¾% by this time next year, and to around 6½% by mid-2010), even if we avoid having consecutive quarters of negative real GDP growth (as we currently expect).

The term 'depression' was widely used before World War II to describe any significant and sustained downturn in economic activity.

Then, as now, booms were typically accompanied rising inflation and by balance of payments deficits (as rising domestic spending and increasing costs led to rising imports and declining exports). Under the 'gold standard' which governed international monetary arrangements from the beginning of the Industrial Revolution until the mid-1930s, however, the downturns which inevitably followed booms entailed not only contractions in economic activity but also declines in prices and wages (that is, deflation), since the only way in which 'balance of payments equilibrium' could be restored (or outflows of gold prevented) was through an improvement in international trade competitiveness achieved by reductions in prices and wages relative to other countries. These downturns were often triggered by 'financial panics' (as episodes of falling asset prices and bank failures were commonly known).

This is what happened, for example, in the US in 1893 and 1894, when real GDP shrank by 3% (although because the US population was growing rapidly this was equivalent to a decline in per capita real GDP of 6.5%), and consumer prices fell by nearly 18%); in 1907-08, when real GDP fell by 7% (or over 10% in per capita terms), and consumer prices by 4%; and again in the early 1920s, when real GDP fell by over 5% and consumer prices by 19%⁸.

Deflations were feasible in the 19th and early 20th century because (in most countries) workers were unable to vote (the right to vote being generally restricted to men who owned property or were members of prescribed professions) or to organize effectively (because of restrictions on trade union activity) to resist wage reductions, and because they were viewed by governments and central banks as part of the 'natural' order of things.

⁷ Setting the threshold for the rise in the unemployment rate within a 12-month period as 1 percentage point (rather than 1½) gives 'false' recession signals in 1972, 1977 and (if monthly data are used) 2001.

⁸ This latter episode led directly to the passage of the Fordney-McCumber Tariff Act of 1922, the precursor to the more notorious Smoot-Hawley Act of 1930 (see Harold James 1930, *The End of Globalization*, Harvard University Press, pp. 116-128).

After World War I, however, the working classes became enfranchised (as a 'reward' for their participation, with varying degrees of willingness and enthusiasm, in the mass slaughter of the Western Front), and (at least in Europe) trade unions acquired legal rights which made it more feasible for them to resist wage reductions. The implications of these developments for the hitherto conventional view of the business cycle became starkly apparent during the British General Strike of 1926, after Winston Churchill as Chancellor of the Exchequer sought to return sterling to its pre-1914 parity against gold⁹.

The 'Great Depression' of the 1930s was characterized by both substantial declines in economic activity (as noted above) and in the price level (consumer prices in the US fell by 27% between October 1929 and May 1933). In the United States, where labour laws favoured employers vis-à-vis unions to a greater extent than in Europe, workers had less power to resist wage reductions.

The severity of the Great Depression owed rather more to calamitous monetary policy mistakes by the US Federal Reserve between 1929 and 1932, misguided attempts by governments to balance their budgets in the face of shrinking economic activity by raising taxes and cutting spending (thereby inadvertently making the downturn worse) and the huge tariff increases enacted by the US Smoot-Hawley Tariff Act of 1930 and the retaliatory measures which it provoked from other countries¹⁰.

After the Great Depression and the carnage of World War II which followed it, a political consensus developed around the proposition that the experiences of the 1930s should never be allowed to occur again. Among other things this consensus entailed the pursuit of 'full employment' as a central objective of government policy, the use of fiscal policy to 'manage' the business cycle, and relatively tight control of the financial sector¹¹.

Since ebbs and flows of confidence (which are an important driver of the business cycle) are also inherently part of human nature, there needed to be a term to describe the downswings without summoning up memories of the depression; according to John Kenneth Galbraith, "from the search for a less disturbing term, the word 'recession' came into use"¹².

This trawl through history suggests that the difference between a 'recession' and a 'depression' is more than simply one of magnitude or duration - that is, it's not simply a matter of saying that if a recession lasts more than, say, four or six quarters, or involves a decline in real GDP of more than, say, 4 or 5%, then it thereby becomes a 'depression'.

⁹ As drawn out by John Maynard Keynes in a series of articles which appeared in the *Evening Standard* of 22, 23 and 24 July 1925, and were subsequently published as *The Economic Consequences of Mr Churchill* (see *The Collected Works of John Maynard Keynes*, Volume IX, *Essays in Persuasion*, 1972, Macmillan, pp. 207-230).

¹⁰ For an excellent non-technical account, see Paul Johnson (1983), *A History of the Modern World from 1917 to the 1980s*, Weidenfeld & Nickelson, pp. 230-260.

¹¹ This consensus broke down in the 1970s and 1980s under the weight of the simultaneous inflation and unemployment ('stagflation') which followed the first oil shock of 1973-74, although challenges to it had begun to emerge in the 1960s from the work of economists such as Milton Friedman.

¹² John Kenneth Galbraith (1994), *The World Economy Since the Wars: A Personal View*, Mandarin, p. 7.

Rather, the distinction hangs on the causes and other characteristics of the downturn. In particular, a recession is nearly always the result of a period of tight monetary policy¹³; while a depression entails a significant and protracted asset price cycle; it involves a contraction in credit or debt (thus potentially rendering monetary policy impotent); and it is characterized by a decline in the general price level as well as in economic activity.

Thus, the economic collapses that followed the demise of the Soviet Union, which were also accompanied by hyper-inflation, were not 'depressions'; nor were the sharp downturns experienced in Indonesia, Thailand and Malaysia during the Asian crisis of a decade ago, since inflation increased during each of these episodes (reaching a peak of over 80% in Indonesia in September 1998).

Inflation also remained positive during the deep recession which Finland experienced in the early 1990s.

The most significant episode in the post-war era which would qualify as 'depressions' in the sense intended here was that experienced by Japan in the late 1990s and early 2000s, when real GDP contracted by 1.0% between the March quarter 1997 and the December quarter 2001, while consumer prices fell by 1.0%, average wages and salaries by 5.5% and the GDP price deflator by 3.9% (and prices and wages continued to decline for a further two years after anaemic growth resumed). Bank lending shrank by 16% during this period, and it was also marked by significant declines in property and share prices.

Another example, perhaps, was Hong Kong's experience during the Asian crisis. Because of its currency board arrangement, the downward adjustment to the international value of economic activity which in other Asian countries was effected by sharp currency depreciations was in Hong Kong accomplished through severe deflation: consumer prices declined by 16% between July 1998 and August 2003, while average wages dropped by 2½-3%. Bank lending halved, and property prices fell by over 60%, from peak to trough across this period (beginning about a year ahead of the fall in consumer prices). Real GDP shrank by 8.7% between September quarter 1997 and December quarter 1998; but the subsequent recovery was driven almost entirely by net exports, and domestic spending did not regain its 1997 level (in real terms) until 2004.

Singapore has also had similar, although less severe, experiences in 1986, 1998 and 2001.

And the US downturn after the 'tech wreck' of 2000 had some of the characteristics of a depression. The Federal Reserve was very worried about the possibility of 'corrosive deflation'¹⁴ and kept lowering US interest rates long after the 2001 recession had officially ended in order to counter it (and thereby inadvertently contributing to the 'bubble' whose bursting triggered the current financial crisis).

¹³ Hence the saying that 'none of the US expansions of the post-War period died in bed of old age, every one was murdered by the Federal Reserve', attributed to Rudiger Dornbusch ('How Real is US Prosperity', *World Economic Laboratory Columns*, MIT, December 1997), and more recently quoted by former Clinton Administration Treasury Secretary Larry Summers, *Risks of Recession, Prospects for Policy*, 19 December 2007 (http://ksghome.harvard.edu/~lsummer/LHS_Final_12_19_07.htm).

¹⁴ Alan Greenspan (2007), *The Age of Turbulence*, Allen Lane, p. 229.

Put differently, a depression does not have to be 'Great' (in the 1930s sense) in order to be a depression. Depressions, like recessions, can be 'mild' or 'severe'.

Another important implication of this distinction between a recession and a depression is that recessions and depressions call for different policy responses.

The most appropriate response to a recession induced by tight monetary policy is easier monetary policy (once the central bank is able to conclude that the upward trend in inflation which prompted it to tighten monetary policy can be credibly expected to peak and return to its desired level) in the form of reductions in 'official' interest rates. Fiscal policy tends to be less effective in countering a recession of the typical post-war variety because of the lags involved in crafting an appropriate fiscal policy response, so that by the time the chosen measures have begun to take effect, the recession has typically passed its trough and the measures end up having a pro-rather than counter-cyclical effect.

By contrast, in a depression characterized by falling asset prices, contractions in credit and deflation, conventional monetary policy may well be ineffective in stimulating private sector spending. Banks may not pass on reductions in 'official' interest rates; if prices are falling then real interest rates may be quite high even if nominal interest rates are low; and households and borrowers may not wish to borrow even in the face of historically low interest rates on loans.

In those circumstances, as Ben Bernanke foreshadowed in a speech he gave almost exactly six years ago (before he became Chairman of the US Federal Reserve)¹⁵, policy-makers need to contemplate actions which might otherwise be regarded as 'unorthodox' or even 'irresponsible'. Bernanke noted that "the U.S. government has a technology, called a printing press (or, today, its electronic equivalent), that allows it to produce as many U.S. dollars as it wishes at essentially no cost", so that "by increasing the number of U.S. dollars in circulation, or even by credibly threatening to do so, the U.S. government can also reduce the value of a dollar in terms of goods and services, which is equivalent to raising the prices in dollars of those goods and services". Bernanke then went on to list a number of practical steps by which the Fed could give effect to such intentions, some of which the Fed has actually implemented over the past 15 months.

Fiscal policy is also likely to be more effective in these circumstances than it has been in the more typical post-war recession.

In his 2002 speech, Ben Bernanke gave as an example "a broad-based tax cut ... accommodated by a program of open-market purchases to alleviate any tendency for interest rates to increase, would almost certainly be an effective stimulant to consumption and hence to prices", or alternatively, "the government could increase spending on current goods and services or even acquire existing real or financial assets. If the Treasury issued debt to purchase private assets and the Fed then purchased an equal amount of Treasury debt with newly created money, the whole operation would be the economic equivalent of direct open-market operations in private assets".

¹⁵ Benjamin S. Bernanke, *Deflation: Making Sure 'It' Doesn't Happen Here*, Remarks before the National Economics Club, Washington DC, November 21, 2002; www.federalreserve.gov/BOARDDOCS/SPEECHES/2002/20021121/default.htm#f4.

Normally such policies would be regarded as inflationary. But, as Keynes wrote in 1929, "to bring up the bogey of inflation as an objection to capital expenditure at the present time is like warning a patient who is wasting away from emaciation of the dangers of excessive corpulence"¹⁶.

The United States may well be in a position where the unorthodox approaches advocated by Keynes in the 1930s, and by Ben Bernanke just six years ago, are appropriate. For the United States, the risk of deflation is enhanced by the 20% appreciation of the US dollar since mid-July, in much the same way as the sharp appreciation of the yen over the first half of the 1990s contributed to the deflation which Japan experienced during the latter part of the decade.

Australia seems less at risk of experiencing deflation, partly because of the substantial depreciation of the Australian dollar since mid-July. Asset price deflation has been less widespread in Australia than in the United States or Europe - while Australian share prices have declined by similar orders of magnitude to share prices in northern hemisphere markets, Australian house prices have in general fallen only marginally, reflecting the underlying shortage of housing in this country and the very low rate (by comparison with the US and, to a lesser extent, Britain) of mortgage delinquencies and defaults. And the Australian banking system has been much less affected by loan losses and write-downs in the values of securities and derivatives than the US and European banking systems, so that although credit standards have been tightened, Australian banks are continuing to lend.

Nonetheless, Australian policy-makers should be willing to contemplate actions which might seem 'unorthodox' by contemporary standards - such as deliberately incurring budget deficits - if we reach the point where they seem to be necessary to avoid replicating the US and European experience here.

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23rd November 2008

¹⁶ 'Can Lloyd George Do It?', published in John Maynard Keynes (1930), *Essays in Persuasion*, Macmillan, p. 118.