

# Research

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## Global: Lessons from the Great Depression

- The current economic and financial crisis is often compared to the Great Depression, which lasted more than three and a half years between August 1929 and March 1933. During this period US unemployment rose from 3% to 25% and real GDP declined by 30%. In this paper we look more closely at why the Great Depression became so protracted and look at similarities and differences between it and the current crisis.
- Both crises were preceded by high credit growth and an asset price bubble, which led to substantial losses in the banking sector once the credit boom was over. A material break-down in credit intermediation has been a key characteristic of both crises. As research by Fed Chairman Bernanke has pointed out, this was a key reason why the Depression became so protracted. Hence the current crisis has the ingredients to become very long and deep as well.
- It can be argued that the shock hitting the US economy in this recession was bigger than the one that led to the Depression. The asset price bubble bursting this time was in the housing market, which tends to have larger economic impact than a bursting equity market bubble. The growth in credit running up to the crisis is likely to have been spread across more sectors as well and the development of complex financial products has added to the difficulties in solving the crisis.
- A key difference this time, however, is the policy response. While both monetary and fiscal policy was actually tightened during the Depression, adding to the downward spiral, policy has been eased substantially during this crisis. Efforts to ease the meltdown in credit intermediation were also absent during the Depression. Today, authorities have focused strongly on fighting the financial crisis and continue to make efforts to provide liquidity and capital to the banking system to get credit flowing again.
- The countries that left the Gold Standard first and eased monetary policy were the first to get out of the Depression. This gives further evidence to the thesis that the size of the policy response is of significance. The risk of Depression is highest in countries that don't realise the need for a substantial response - or realise it too late.
- The current financial crisis is clearly the most severe since the Depression. However, we believe the lessons learned from the mistakes made in the 1930s are a key reason why the US and global economies should avoid a depression this time. A continued deleveraging in the financial sector should continue to put strong downward pressure on the economy, however, and the road back to sustainable growth around trend will be slow. With an expected length of 20 months (we expect it to end in mid-2009) this is likely to turn out to be the longest recession since the Depression.

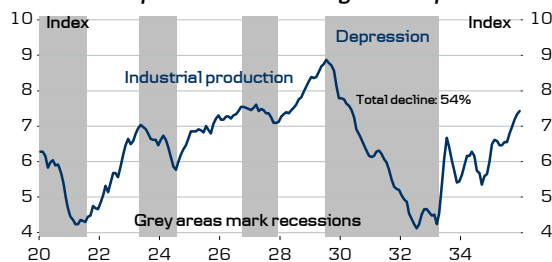
This paper is split into three parts: the first gives a brief overview of the Depression. The second compares the Depression with the current crisis and points to the lessons from the Depression. Part three puts the current US recession into a broader historical context and looks at some stylised facts for recessions.

## The Great Depression

### Overview

The Great Depression lasted three years and seven months from August 1929 to March 1933 – the longest downturn in the 20<sup>th</sup> century. During this period GDP contracted by 30%, unemployment rose from 3% to 25% and consumer prices fell 27%. The Depression was characterised by a substantial crisis in the banking system leading to several phases of financial panic and widespread runs on banks.

### Industrial production during the Depression



Source: Reuters Ecowin

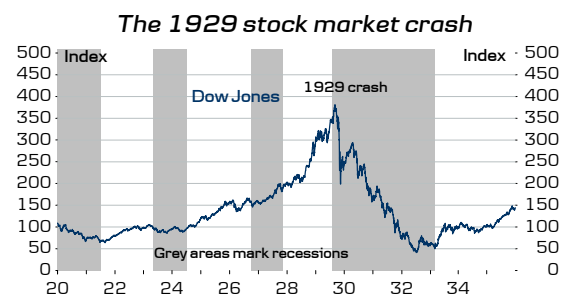
Thousands of banks went bankrupt and at the end of 1933 the number of banks operating was just over half the number that existed in 1929. As we discuss below the crisis deepened for a number of reasons, but a major factor was the lack of significant policy response to stop the crisis. It didn't end until Franklin D. Roosevelt came to power in 1933 and launched the New Deal, which included a range of initiatives to stimulate the economy and fight the financial crisis.

### A brief chronology:

The recession that led to the Depression started in August 1929 and came on the back of a period of substantial credit growth and an asset bubble in the equity market, which eventually led to the crash in October 1929.

### Box I: The 1929 stock market crash

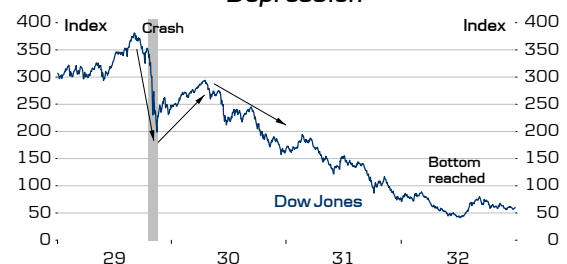
The Great Crash of October 1929 was the longest and most devastating stock market crash in US history. The crash was precipitated by a strong speculative rally, which accelerated in mid-1928. The market was characterised by euphoria and belief that things were different this time. This is best illustrated by the American economist, Irving Fisher's famous words just a few days before the crash: "Stock prices have reached what looks like a permanently high plateau".



Source: Reuters Ecowin

Equity prices peaked in early September 1929 but the crash didn't start until Thursday, 24 October; it continued fiercely over the following week. On Monday and Tuesday 28-29 October prices fell by a cumulative 25%. Prices bottomed in mid-November having fallen 48% from the peak over a period of 40 days. In the following five months the stock market managed to recover and recouped half of the losses.

### The stock market during the Depression



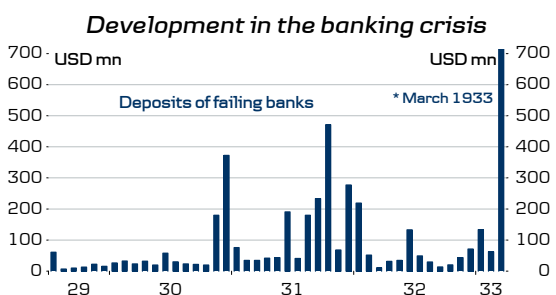
Source: Reuters Ecowin

However, the price declines resumed in April 1930 and the bear market continued until July 1932 when the bottom was reached after a total decline of 89% from peak to trough over two years

and ten months. Interestingly, the stock market bottomed eight months before the Depression ended and the return over the following year was more than 115%.

The Fed had initiated a tightening campaign in the spring of 1928, which lasted until the stock market crash. The motivation for the Fed tightening was primarily concern over speculation on Wall Street based on high credit growth. Consumer prices were actually still falling throughout this period as the economy was just coming out of a recession in 1927.

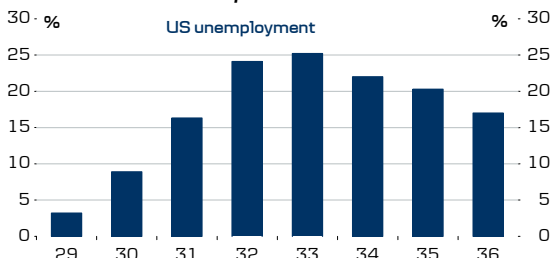
In October 1929, the stock market crashed (see box I). Stocks fell 50% over one and a half months and led to material losses in the banking system. This reinforced the recession, which had already started in August.



\*: In March 1933 the deposits of failing banks were 3276.3 when the bank holiday led to substantial closing of banks. Source: Bernanke (1983).

The stock market crash is sometimes referred to as the cause of the Depression. While it was most likely the trigger for a downturn that had to come, it was probably not a major cause of why the recession turned into such a long depression.

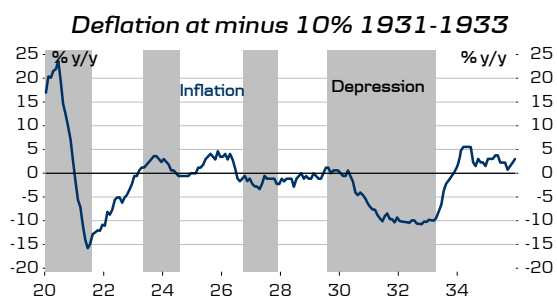
**US unemployment soared to 25% during the Depression**



Source: Reuters Ecowin

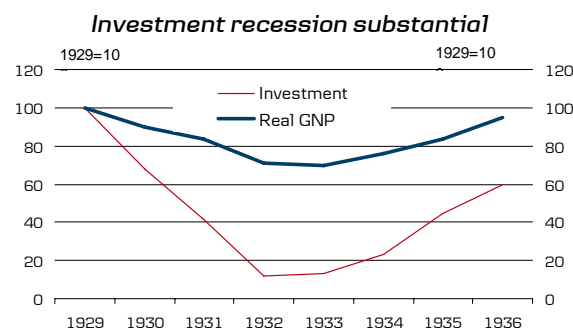
In mid-1930 an attempted recovery was halted by the first banking crisis, which hit in November/December 1930 –one and a half years into the

recession. The financial panic calmed down in early 1931, but from summer 1931 it escalated again. The problems were exacerbated by the Fed tightening monetary policy in October 1931 to defend a speculative attack on the US dollar, which was still fixed to gold (the Gold Standard). The financial crisis put renewed strain on the economy and corporate defaults rose markedly. The economic crisis raged on in 1932.



Source: Reuters Ecowin

The Depression ended in March 1933 when the new president, Franklin D. Roosevelt, launched the New Deal, which included a substantial easing of fiscal policy and the US abandoned the Gold Standard, leading to a weaker dollar and looser monetary policy. Roosevelt also instituted a mandatory four-day bank holiday (Emergency Banking Act) with the aim of closing insolvent banks and reorganising and reopening those banks strong enough to survive.



Source: US Department of Commerce, Bureau of Census

**Why did it go so wrong?**

It has been extensively debated why the economic downturn became so deep and so protracted. Instead of emphasizing one factor, as some authors do, we believe it was probably a combination of many different factors, which together had a compounding effect and led to the massive depth of the Depression:

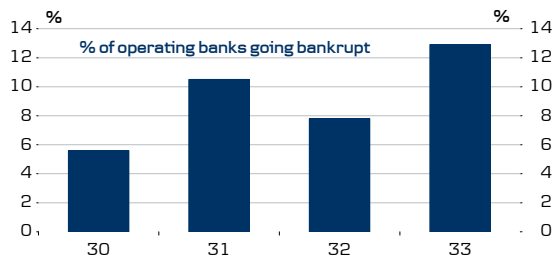
**1. Strong credit expansion ahead of crisis:** During the 1920s, the US economy experienced a strong

expansion in credit. The introduction of major consumer durables to the mass market fuelled strong growth in consumer credit and a marked expansion in mortgage credit was also taking place. Between 1920 and 1929 the outstanding amount of urban real estate mortgages rose from USD11bn to USD27bn. Credit expansion in the corporate sector was also extensive. The outstanding amount of corporate bonds and notes increased from USD26.1bn to USD47.1bn.

The economy became more leveraged and dependent on access to credit. Also it became apparent that too many 'bad borrowers' gained access to credit. When things turned sour, a substantial amount of these 'bad borrowers' went bankrupt and this created huge losses in the banking sector. The strong credit expansion ahead of the crisis is especially highlighted by proponents of the so-called Austrian School of economics, who see this as the primary reason for the long Depression.

**2. Breakdown of financial intermediation:** This factor is especially highlighted by current Fed chairman, Ben Bernanke, who in a paper from 1983 showed how the depth of the financial crisis was a major reason why the Depression became so protracted.

#### Bank failures substantial during the Depression

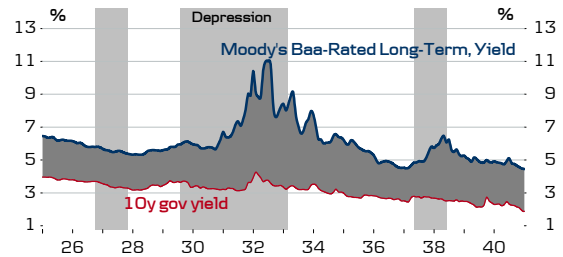


Source: Bernanke (1983)

The financial crisis was indeed of enormous magnitude. As mentioned above, bank runs were widespread and there was an exceptionally high rate of bankruptcies (see chart above). Key to the extent of the bank runs was the lack of deposit insurance at the time. If a bank failed, all deposits in that bank were lost. The banks were vulnerable as their liabilities were mainly in the form of fixed-price callable debt (like demand deposits), whereas assets were typically highly illiquid. Bernanke (1983) highlights the self-reinforcing mechanism through which the withdrawal of deposits leads to forced liquidation of illiquid assets, generating losses that in themselves lead the bank to fail. The banks that did not go bankrupt became extremely cautious

and tightened lending standards. They also increasingly demanded liquid assets – such as government bonds – in exchange for illiquid assets. Bernanke shows how what he calls the “Cost of Credit Intermediation” (see box II) soared during the Depression and that this had a material impact on activity. As a gauge of the “Cost of Credit Intermediation” he uses measures of bank failures and the yield spread between Baa-rated corporate bonds and long-term US government bonds.

#### Financing costs rose substantially in 1931-32



Source: Reuters Ecowin

#### Box II: Bernanke and the Cost of Credit Intermediation

Bernanke (1983) defines the Cost of Credit Intermediation (CCI) as being the cost of channelling funds from ultimate savers/lenders into the hands of *good* borrowers. The CCI includes screening, monitoring, and accounting costs plus expected losses from *bad* borrowers.

When bankruptcies go up and the price of collateral declines, expected losses rise. Banks could respond in two ways: either increase the rate they charged borrowers or – the more usual response – just not lend to people to which they would otherwise have lent in better times. To illustrate, Bernanke uses a quote from D.M Frederiksen (1931):

“We see money accumulating at the centers with difficulty of finding safe investment for it; interest rates dropping down lower than ever before; money available in great plenty for things that are obviously safe, but not available at all for things that are in fact safe, and which under normal conditions would be entirely safe (and there are a great many such), but which are now viewed with suspicion by lenders.”

A striking feature of the financial crisis was how the politicians and the Fed were totally passive. Prior to the establishment of the Fed in 1913, organisations of urban banks - called clearing houses

- were mitigating the danger of bank runs. However, when the Fed was set up the clearing houses no longer saw it as their responsibility to fight bank runs. The Fed had the power to ease the problems of the banks by lending more aggressively to them or by putting more cash in circulation. However, Fed chose to stay passive, even though supporting the banking system to avoid financial panics was a key element in the Fed's original mission when it was set up in 1913. The leadership within the Fed subscribed to the "liquidationist" thesis of Treasury Secretary, Andrew Mellon, who argued that cleaning out "weak" banks was a harsh but necessary condition to the recovery of the banking system.

**3. Tight monetary policy:** Another key feature during the Depression was the contractionary monetary policy governed by the Fed. The main contributors to this factor are Milton Friedman and Anna Schwartz, who present a thorough description of the policy errors made by the Fed during the Depression in their famous book "A Monetary History of the United States, 1867-1960".

Money supply fell throughout the Depression by a cumulative 25%, which was due to several factors. First, the bankruptcies of the banks meant that depositors' money was lost and the monetary base shrank. At the same time, more people pulled their money out of banks and hid it at home, leading to a further withdrawal of funds from the financial system. Finally, the fact that banks became more conservative led to a decline in the credit multiplier and hence a reduction of the money available in the economy. The shortage of money was not compensated for by the Fed adding more liquidity into the financial system

**Monetary developments during the Depression**

	Nominal interest rate	Inflation	Real interest rate	Money supply (1929=100)	Real corp. yield
1929	5.9	0.6	5.3	100	5.4
1930	3.6	-6.4	10.0	97	13.1
1931	2.6	-9.3	11.9	91	19.7
1932	2.7	-10.3	13.0	79	18.7
1933	1.7	0.8	0.9	75	7.0
1934	1	1.5	-0.5	82	4.7
1935	0.8	3	-2.2	97	2.3
1936	0.8	1.4	-0.6	111	3.1

Source: Bernanke (1983), Reuters Ecwin and Danske Bank calculations

Friedman and Schwartz point to several periods of active policy tightening that exacerbated the decline in activity and consumer prices. In October 1931, the Fed tightened monetary policy to defend the dollar from a speculative attack. The US was still using the Gold Standard at that time and had a

fixed exchange rate versus Gold. The UK had been under speculative attack in September and had left the Gold Standard, leading to a depreciation of the currency. The US dollar was next in line, but the Fed raised rates enough for the currency to resist the speculation. However, it was at the cost of the economy and it contributed to a lengthening of the economic downturn.

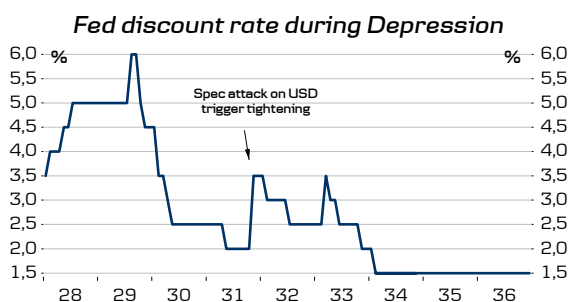
**Box III: The role of the Gold Standard**

Studies by, among others, Eichengreen & Sachs (1985) and Bernanke & James (1991) highlights that the countries that left the Gold Standard first (the UK and the Scandinavian countries in 1932) were also the first to get out of the Depression. After the Gold Standard was suspended during WWI, most countries reinstated it in the second half of the 1920s and hence fixed their currencies to gold. As the US was the anchor of the Gold Standard, any monetary policy tightening in the US immediately forced a tightening in the Gold Standard countries as well in order to keep the exchange rate fixed. Apart from financial and commercial links, this was a feature that led to the spread of the economic crisis to the rest of the world. Speculative attacks on currencies also forced countries to tighten policy even further to protect the fixed exchange rate.

As the Depression took hold countries started to leave the Gold Standard to avoid too much tightening. The countries can be put into four categories in terms of whether they were in the Gold Standard and the timing of when they left it:

1. China and Spain were not participating in the Gold Standard. These countries went through the crisis most unscathed.
2. Early leavers were the UK, Japan and some Scandinavian countries. These recovered much earlier than some of the diehards that hung on to the Gold Standard for a long time.
3. In the middle group were the US and Italy, which remained in the Gold Standard into 1932 or 1933. These recovered later but the subsequent expansion of money helped start a recovery in 1933.
4. The last group were members of the so-called gold bloc, which was led by France and included Belgium, Switzerland and Poland. These remained on the Gold Standard into 1935 or 1936 and were the last to recover.

Between April and June 1932, the Fed finally gave in to strong pressure from Congress and eased monetary policy. This appeared to halt the decline in activity and prices but the Fed remained ambivalent about its policy as some members saw the downturn as inevitable to adjust the financial excesses in the 1920's. Easing policy only meant postponing adjustments that had to be made. The Fed also viewed monetary policy as loose, due to low nominal rates, and failed to take into account that prices were falling. Real rates were still quite high due to deflation and monetary policy was in fact not accommodative at all. Looking at real corporate yields it becomes apparent that financial conditions were far from loose: the real corporate yield rose from 5.4% in 1929 to 19.7% in 1931 and 18.7% in 1932 (see table above). However, Fed reversed its course when Congress adjourned in July 1932 and tightened policy again. By the end of the year the economy was in free fall once more.



A key feature of the Depression was the global scale of the crisis. The Gold Standard was reinstated in many countries in the second half of the 1920s and most countries had to follow US monetary policy, which was the “anchor” at the time. Studies show that the longer a country remained in the Gold Standard, the deeper its depression and the later its recovery (See box III). This supports the thesis that over-tight monetary policy played a key role in the depth of the crisis. Leaving the Gold Standard led to looser monetary policy and depreciation of currencies and helped turn around deflationary pressures in those economies.

**4. Tight fiscal policy:** The orthodoxy in fiscal policy at the time of the Depression was to run balanced budgets. In the early years of the Depression the budget deficit was allowed to rise slightly, but it caused widespread concern. This led to the Revenue Act of 1932, which launched some of the largest tax increases in US history. Tax on highest incomes was raised from 25% to 63% and the estate tax was doubled. Corporate taxes were raised by 15%.

The Hoover administration did actually try to support the economy with the Emergency Relief and Construction Act of July 1932. It set up the Reconstruction Finance Corporation, which gave aid to states and local government and provided loans to banks, railroads and other businesses (this was later expanded in the New Deal policy in 1933). Hoover also set up the Federal Home Loan Act in 1932, which aimed to lower the cost of home ownership and reduce foreclosures.

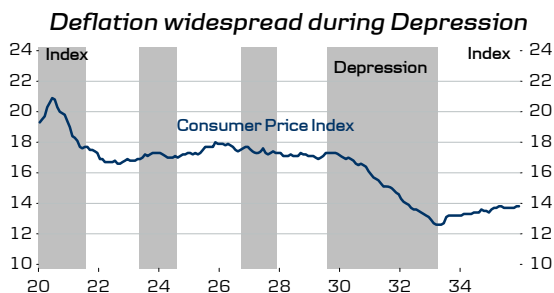
The net effect of the tax increases and public works was very contractionary, however. This can be seen from the development in the “Full employment deficit”, which corresponds to what we today would call the structural deficit. It takes into account the fall in revenue related to declining employment and isolates the effect of discretionary measures in fiscal policy. The full employment deficit rose in the early years, suggesting a slight expansionary effect. But in 1932 and 1933 it was reduced markedly, implying a strong contractionary effect from fiscal policy.

#### Fiscal developments during the Depression

	Actual deficit	Full employment deficit	Chng in full empl. deficit
1929	1.3	1.3	
1930	3.2	2.1	0.8
1931	6.5	4.9	2.8
1932	4.7	1.4	-3.5
1933	3.4	-1.7	-3.1
1934	4.9	-0.3	1.4
1935	4.4	0.1	0.4
1936	6	2	1.9

Note: USDbn. Source: Brown (1956) and Danske Bank Calculations

**5. Deflationary spiral.** As shown above, prices fell strongly throughout the Depression, which contributed to the depth of the crisis. The main contribution on this issue came from Irving Fisher in his paper called “The Debt-Deflation Theory of Great Depressions”, 1933. Deflation works mainly through two channels: First, consumption and investment tends to be postponed when price declines are widespread. Why consume or invest today if goods are likely to be much cheaper tomorrow? Deflation *increases the real interest rate* and therefore reduces spending among both households and companies.



Source: Reuters Ecowin

Second, the debt of households and companies goes up in real terms when income falls. As prices fell and turnover collapsed during the Depression, corporate earnings declined sharply. The household sector saw wages go down steeply; industrial wages fell from USD25 a week to USD17 a week, a decline of 32% during the Depression.

Deflation is important when explaining the extent of debtor insolvency and bankruptcies during the Depression. The massive fall in income led to a sharp rise in debt service costs, which, according to Clark (1933), rose from 9% in 1929 to 19.8% in 1932-33.

However, in 1921-22 a similar period of deflation was seen, which did not lead to mass insolvencies. This supports the thesis that the large build-up in debt during the 1920s was a major reason why the Depression was so protracted. The high debt burden had made households and companies much more vulnerable to deflation.

**6. Protectionism:** The Depression was characterised by protectionism and “beggar-thy-neighbor” policies, rather than cooperation. The implementation of the Smoot Hawley Tariff Bill in June 1930 started a wave of protectionism and most countries increased tariffs in the early 1930s. Originally, US President Hoover mainly focused on raising tariffs on farm products. Farmers had seen falling income throughout the 1920s due to falling agricultural prices and has not taken part in the otherwise prosperous period. But lobbying through Congress made the bill much broader, covering a wide range of products. The effective tariff rate rose from 13.5% in 1929 to 19.8% in 1933, according to the US Statistical Abstract. Economists disagree on how important this factor was for the depth of the Depression. After all, exports were only 5% of GDP in the US. However, it seems clear that the protectionist wave and lack of cooperation during this period was counterproductive for solv-

ing the economic woes and as such added to the depth of the crisis.

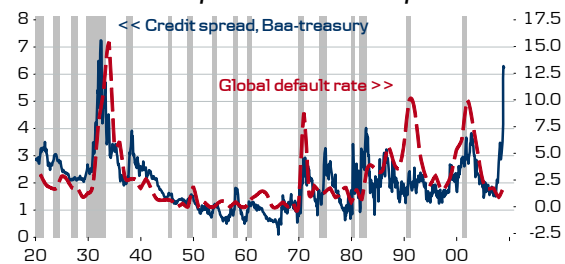
## A comparison with today's crisis

### What have we learned?

There are important similarities as well as important differences between the Depression and the current crisis.

To start with, the *similarities*: the current crisis has also been preceded by a period of rapid credit growth, leading to an excess of loans to “bad borrowers”. In the current crisis sub prime borrowers in the US are the most prominent group. The substantial losses on the bad borrowers have paralysed the financial system and the Cost of Credit Intermediation has risen markedly.

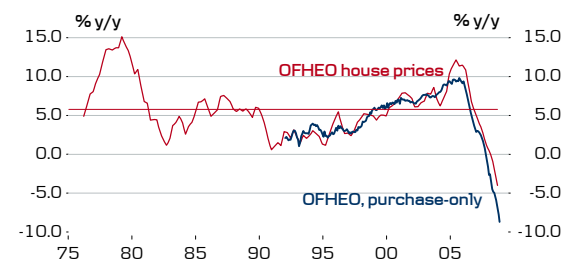
### Current credit spread close to Depression levels



Source: Reuters Ecowin

Both providers of credit – the banks and the capital markets – have stopped working properly. Banks and investors want higher compensation for taking risk and mostly demand assets that are liquid and considered very safe (for example, government bonds). Using one of Bernanke's gauges of CCI – the spread between corporate Baa long yield and the government yield - we are not far from Depression levels (see chart above).

### Falling house prices means falling wealth and lower value of collateral on house loans



Source: Reuters Ecowin

Like the Depression, the current crisis has also been preceded by an asset price bubble - in this

case a bubble in house prices, which reached excessive levels in 2006 and has declined since then. It can be argued that it is more painful to deflate a bubble in house prices than one in equity prices. A housing investment is typically more leveraged and therefore technical insolvency – or fear of it – has a higher impact on savings compared to the effect on savings from purely financial losses, which are typically less leveraged.

For lenders, house prices are a key concern as they often function as collateral for loans. A continuation of falling house prices means continued uncertainty over the value of this collateral and this adds to caution among lenders. It is not clear how many borrowers will default and what the recovery rate will be. A key factor to alleviate this uncertainty will therefore be stabilisation in house prices.

There are some key similarities between the current crisis and the factors that led to the Depression and as such the crisis does indeed have the ingredients to turn into a Depression. In some aspects it can be argued that the initial shock to the system has been larger this time than before the Depression. Adding to this the financial innovations of recent years and the role of complex products only reinforces this argument.

#### Key lessons from the Depression

One proponent of the view that the current shock is worse is former Fed governor, Frederic Mishkin. However, he adds to his comments that “the difference is, we have people on the ball”. Indeed, among the key *differences* today compared to the Depression is the response from policy makers.

#### Box IV: The many fronts of the battle

The economic and financial crisis is being fought on many fronts:

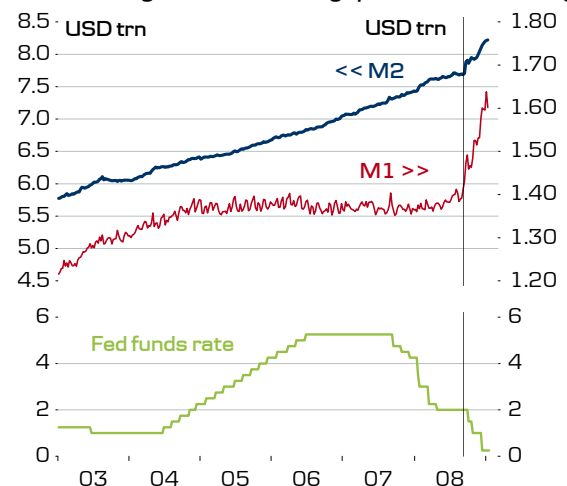
1. **Stimulate demand.** The financial crisis is taking its toll on demand, which in itself increases losses as bankruptcies rise when demand goes down. In order to fill the demand gap caused by the financial shock, both monetary and fiscal policy is being eased to stimulate demand. This is being done through efforts to reduce financing costs (rate cuts), reduce taxes and increase public spending.
2. **Ensure supply of credit.** This battle is aimed at easing conditions in the credit markets and in-

cludes recapitalisation of the banks to make sure they can make loans, provide liquidity to the banks and efforts to ease tensions in capital markets – for example through direct buying in the market.

3. **Limit losses through loan modifications.** In order to avoid a massive liquidation of “bad assets”, loan modifications for borrowers at risk of default has had high priority. It is better to get 80% of a house loan and keep people in the house than liquidate the asset in a market already flooded with houses as this would cause further declines in house prices, making more people insolvent and leading to further deterioration in collateral.

**Lesson 1 – Strong policy response:** One of the key lessons from the Depression is that a financial crisis cannot be left alone. It has to be fought with all possible measures in order to stop a negative spiral of rising bankruptcies and foreclosures, bigger losses in the banking system, tighter lending standards, falling demand and deflation – all leading to even more bankruptcies and losses etc. The battle today is indeed being fought on many fronts and unprecedented steps are being taken. Whether it is enough to deal with a shock of this size remains to be seen, but it seems evident that policymakers will continue to take new measures until the situation is stabilised.

#### Fed lowering rates and using quantitative easing



Source: Reuters Ecowin

On *monetary policy* Fed has acted very fast. The Fed funds rate has been cut from 5.25% to practically zero in 16 months and Fed has already started to use unconventional measures and embarked on what it now calls “credit easing”. This includes

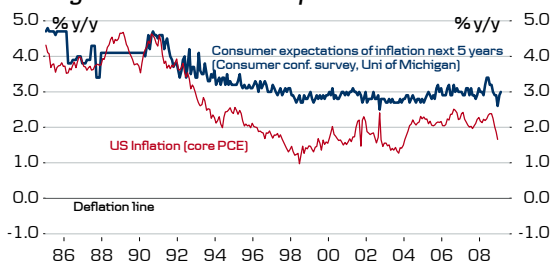
unfunded buying of mortgage backed securities directly in the market, buying Asset Backed Securities and buying Commercial Paper.

*Fiscal policy* is also being eased substantially. Taxes were already cut in the first half of 2008 - only temporarily, though. However, a historically large fiscal package of USD787bn (approximately 6% of GDP) will be launched over the next two years. This will include an immediate injection of tax cuts as well as public projects that will stimulate the economy in the second half of 2009 and 2010.

Finally the *crisis management* has taken a very different role this time. Strong efforts have been made to provide liquidity to the banks and recapitalise the banking system in order to avoid a credit crunch, or at least to try to get credit flowing again. Supply of credit is crucial for a very leveraged economy and authorities are very much aware of this. This is a key difference to the "liquidationist" approach of the 1930s, when it was seen as necessary to let banks go bankrupt on a wide scale. Loan modifications are another tool being used to try and limit losses and avoid even further declines in house prices - and thus lower consumer spending.

**Lesson 2 - Deflation must be avoided:** Another feature of the Depression that reinforced the crisis was massive deflation. The higher the leverage the larger the negative of deflation, as it leads to a strong rise in *real* debt. As incomes fall the debt to income level rises and debt service costs as a share of income also goes up. In order to avoid a deflation trap, monetary policy must be eased to ensure that money growth is high enough for prices to keep rising, and for inflation expectations to stay in positive territory.

**No sign of deflation or expectations of deflation**



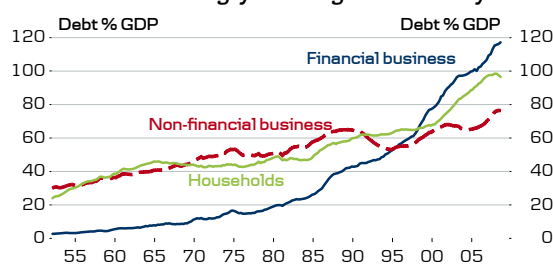
Source: Reuters Ecwin

So far there are no signs of deflation taking hold in the US economy, but policymakers must be alert to make sure it doesn't happen. Headline inflation is heading into negative territory in coming months,

but this is due to lower energy prices and this effect should only be temporary. Core inflation is around 2% and even though we expect it to decline, it will still be far from deflation.

**Lesson 3 - A deleveraging process is long and painful:** A long period of high credit growth leaves over-leverage and a lot of excess in the financial system. The experience of the 1930s shows that deleveraging following a credit boom can be long and very painful. The deleveraging process today is likely to be extended for a long time and it is important to continue to take measures to smooth this transition period.

**US a strongly leveraged economy**



Source: Fed, Flow of Funds

**Lesson 4 - Deposit insurance important to avoid bank runs.** A key reason for the wide extent of bank runs during the Depression was probably the lack of deposit insurance. Today, deposit insurance is in place and the amount insured by the state has been increased to avoid runs on the banks. We have seen a case of a bank run in the UK with the incident of Northern Rock. There are also cases of so-called silent bank runs on some banks (Washington Mutual, Indymac) where money is removed from the bank via net banking. But policymakers have been quick to extend deposit insurance and have avoided financial panics in the street as was seen during the Depression.

Another kind of bank run has been in place, however, - the withdrawal of money from money market funds. When Lehman Brothers filed for bankruptcy, money market funds experienced substantial losses, which led to a large withdrawal of investments in these funds. This impaired a crucial source of liquidity to the banking system as money market funds stopped buying commercial paper debt from the banks, which essentially works as deposits (or short-term loans) to the banks. However, this has been exchanged with the Fed providing that liquidity through the Commercial Paper programme it launched on 7 Oct 2008, in which it buys commercial paper directly from the banks.

## Lesson 5 - Countries leaving the Gold Standard first were also the first to escape the Depression

The countries leaving the Gold Standard first were able to ease monetary policy and devalue their currencies. This helped them fight deflation and get out of the Depression. This gives extra credence to the argument that easing monetary policy is important to avoid deflation and support demand.

### *Box V: Regulation and institutions set up as an effect of the Great Depression*

The **Glass-Steagall Act, June 1933** introduced the separation of banks into commercial banks and investment banks. The speculative activities in the investment bank arms were seen as a main culprit of the financial crisis and the reasoning was that commercial banks were taking too much risk with depositors' money. The act was repealed in 1999 with the Gramm-Leach-Bliley Act, which removed the restrictions.

The Glass-Steagall Act also set up the **Federal Deposit Insurance Corporation (FDIC)**, introducing government insurance on deposits. The aim was to avoid bank runs in the future.

The **Securities and Exchange Commission (SEC)** was created in 1934 by the Securities Exchange Act and regulates sales of securities in the secondary market. The goal was to increase trust in the capital markets by requiring uniform disclosure about public securities offerings.

The **Federal Housing Administration (FHA)** was set up by the National Housing Act of 1934 with the aim of making housing and mortgages more affordable. FHA insures mortgage loans to improve terms and interest rates on these loans.

The **Federal Home Loan Bank System (FHLBank system)** was set up by the Federal Home Loan Bank Act of 1932 with the aim of providing stable and low-cost funding to financial institutions for home mortgages and other types of lending. The system consists of 12 banks that are currently owned by over 8,100 regulated financial institutions, which hold equity in the FHLBank system. The 12 banks are privately capitalized and apart from tax privileges do not receive tax-payer assistance.

**Lesson 6 - Protectionism adds to the downturn.** The Depression is a clear example of how protec-

tionism can make bad things worse as countries try to protect their home markets at the expense of other countries. However, while protectionism was probably not a dominant factor it seems inevitable that it contributed to the downturn. Policymakers today are aware of this and so far strong protectionist measures have not been taken. It remains a risk, though, and the failure of the Doha trade round is evidence of this. Cross-country issues remain unresolved such as the issue of China "manipulating" its currency against the dollar.

The main lesson from the Depression is to respond forcefully to a financial crisis as it is devastating for the economy if left alone. At the same time it is important to underpin demand to stop a negative spiral of rising unemployment, deflationary pressures, rising bankruptcies, further bank losses etc. Monetary policy plays a crucial role in avoiding a contraction in money and in securing positive inflation expectations - and hence avoiding deflationary pressures from taking hold.

## The current recession from a historical perspective

It seems clear that the deleveraging process will continue to weigh on economic growth in the US for some time. This probably means that the road to recovery will be very gradual. But it does not mean that the economy cannot recover. It will depend on how strong the policy response is compared to the size of the financial shock. A key uncertainty here is that we don't really know the size of the financial shock as we have very little experience with financial crises of this degree.

In this section we put the current recession and our forecast of recovery in H2 2009 and 2010 into a historical perspective.

NBER have dated US recessions back to 1857. Since then the US has experienced 33 recessions including the current one. Some interesting observations can be made on the length and depth of the recessions before and after the Depression.

**1. Recession less frequent after Depression.** In the period of 72 years before the Depression the US had gone through 19 recessions. In the 80 years after the Depression, the US experienced 13 recessions.

**2. Recessions are shorter:** Before the Depression the average length of a recession was 22 months. After the Depression the average length has been

only 10 months. This suggests that economic policy has played a more important role in getting out of recessions but possibly also that the economy has become more flexible and adaptive to changes.

**3. Current recession longest since Depression:** In the table below we have compared some statistics on the length and the depth of the recessions after the Depression. The average length is 10 months but the economy grows below potential growth for about one and a half years in an average recession (measured as period in which unemployment is rising). On average the unemployment rate rises by 3pp during recessions. Our expectations are that the current recession will end in August 2009 and thus be 20 months long, which will be the longest recession since the Depression. Also, measured by the rise in unemployment, the current recession will stand out as a severe recession, although the recessions in the 1970s will likely have been as painful if measured through the rise in unemployment.

#### Facts on recessions since the Depression

Start	End	Length of recession	Length of rising unemp.	Rise in unemp. bottom to peak	GDP (y/y) one year after recession ended
Mar-01	Nov-01	8	30	2.4	1.9%
Jul-90	Mar-91	8	24	2.6	3.0%
Jul-81	Nov-82	16	17	3.6	7.7%
Jan-80	Jul-80	6	14	2.2	4.4%
Nov-73	Mar-75	16	19	4.4	6.1%
Dec-69	Nov-70	11	19	2.7	4.5%
Apr-60	Feb-61	10	15	2.3	7.5%
Aug-57	Apr-58	8	16	3.8	9.5%
Jul-53	May-54	10	13	3.6	7.8%
Nov-48	Oct-49	11	22	4.5	13.4%
Feb-45	Oct-45	8	NA	NA	NA
May-37	Jun-38	13	NA	NA	NA
Aug-29	Mar-33	43	App. 48	22	NA
Ave after Depression		10	19	3	6.6%
Current expected					
Dec-07	Aug-09	20	33	4.6	2.9%

Source: Reuters Ecwin and Danske Bank calculations

**4. Recovery will be among the weakest since Depression.** An interesting characteristic of recessions is that growth after the recession has ended is normally very strong. The average growth rate one year after the end of recessions since the Depression has been 6.6%. Why is this so? During recessions, inventories are run down strongly and the economy is stimulated through monetary and often also fiscal policy. At the same time, corporate expansion plans are put in the drawer while companies are being trimmed. Once the negative spiral and negative sentiment turns there is a need for rebuilding inventories and to release some of the pent-up demand as expansion plans are taken out of the drawer again. This means the negative spiral

is turned upside down and a positive spiral is entered once the doom and gloom is put aside.

We do expect, though, that this recovery will be different, as it is likely to be much more muted than normal. The deleveraging of the economy will continue and remain a structural headwind for the economy for several years. The effect of falling house prices will also remain a negative factor for private consumption growth as savings will likely rise. Instead, growth will increasingly be supported by public spending and exports, but not by enough to give the normal strong recovery as we have seen after past recessions.

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