CELENT

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Flawed Assumptions about the Credit Crisis

A Critical Examination of US Policymakers

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Content

Executive Summary

This report compares leading US policymakers' assumptions with available data regarding the credit and lending markets. We find irreconcilable differences between the public pronouncements of leading US policymakers and information published by the very institutions they lead. We consider the two policymakers most involved in the financial crisis: the chairman of the Federal Reserve Bank, Ben Bernanke, and the secretary of the United States Department of the Treasury, Henry Paulson.

While there is no denying that we are mired in a very serious financial crisis, this does not yet appear to have transformed into a general credit crisis. In aggregate, credit and lending markets appear to be functioning well, and in many cases are actually operating at historically high levels.

In repeated areas, the key assumptions about US credit markets being made by these policymakers are not supported, or are flatly contradicted, by the available data. In most cases, we have relied on data from the Federal Reserve Bank for our analysis. In particular, the following assumptions regarding the credit crisis are at odds with the information available to us:

Table 1: Flawed Assumptions about the Credit Crisis

Assumption	Available Data
Businesses are unable to obtain credit, and lending has been severely curtailed.	■ Overall US bank lending is at its highest level ever and has grown during the crisis. ■ US bank commercial lending is at record highs and is growing particularly quickly at an annual rate of about 19% since May 2007. ■ Corporate bond issuance has declined, but increased commercial lending has compensated for this.
The interbank lending market has ground to a halt, and funding, when available, has become very costly.	■ Interbank reached its highest level ever in September 2008, and remained high in October 2008. Interbank lending has increased about 22% since the beginning of the credit crisis. ■ The cost of interbank lending, as measured by the interest banks charge each other for lending overnight Fed funds, dropped to its lowest level ever in early November, and remains at very low levels.

Source: Industry Sources, Celent analysis

Table 1: Flawed Assumptions about the Credit Crisis

Assumption	Available Data
Households cannot obtain credit.	■ Consumer credit in September 2008 (the latest date for which we have figures) stood at a record high. ■ Household debt burden as a percentage of disposable income was hovering near record highs of about 19% at the end of Q2 2008.
Commercial paper markets have ceased functioning. Only very short-term funding is available, and then at very high costs.	■ Outstanding volumes in the commercial paper market for non-financials are higher now than at any point since early 2004. ■ The cost of borrowing in the commercial paper market has dropped to at least 10-year lows for non-financials. ■ Financials have reduced their issuance of commercial paper, but any shortfall in funding has been more than compensated by increased deposits.
Local governments are having difficulty obtaining credit.	■ Issuance in the municipal bond market has continued at levels similar to those before the credit crisis, which has had no discernible impact.
Loans for real estate are severely diminished.	■ Bank real estate lending reached a record high in October 2008 and has grown consistently during and before the crisis. ■ Issuance of mortgage-backed securities has declined, but the volatility observed in the first half of 2008 is in line with historical norms.

Source: Industry Sources, Celent analysis

We can offer no firm explanation for the discrepancies between the public statements and assumptions being made by US policymakers and the data available. We can only offer two possible hypotheses:

- Policymakers have at their disposal far more information and data than is publicly available. It is possible that these additional data support the hypothesis that there has been a general breakdown in credit markets. However, they have not shared these data with the public, and these data would have the burden of explaining why the data that are being published by the Federal Reserve are, in fact, incorrect. We are sceptical that such data are in fact available.
- Another possible explanation is that policymakers are reacting to the situation of a particular set of businesses and financial institutions, and are incorrectly generalizing this to the market as a whole. If this is the case, the policy tools being employed may well be the wrong ones.

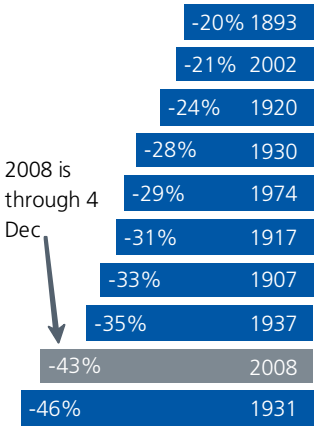
We conclude the report by pointing out some of the results of the policies that have been implemented. In particular, a spectacular rise of in the M0 money supply, which increased a staggering 74% in only 84 days. Previously, this kind of jump would be seen over the course of a decade or more.

Introduction

There is no doubt that we are in the midst of a deep financial crisis. A number of major financial institutions have failed. Indeed, entire countries appear to be teetering close to bankruptcy. Comparisons to 1929 abound. Looking at the performance of the US stock market (see Figure 1), it is clear that these comparisons are not overblown: 2008 has the potential to become the worst year ever for equities; 1931 is only ahead by a small margin.

Figure 1: The Worst 10 Years for Equities since 1870

2008, not yet complete, has the potential to set a new record for the worst year ever.



Source: Yale University, Standard & Poors TMI, Celent analysis

In light of this turmoil, we have seen unprecedented levels of government intervention in the markets. The crisis, while having global ramifications, is squarely centered on the US, and the response of the US government and central bank has been unprecedented in scope and scale. In this report, we do not examine the policies that have been put in place to respond to the crisis, but rather the assumptions that policymakers appear to be making about the crisis. In order for policy to be effective, an accurate diagnosis of the specific market failure at hand is necessary.

Much of the justification for the massive policy response is that lending and credit markets have frozen, that the financial crisis—which undeniably is real—has turned into a *credit* crisis, with banks, households, businesses, and municipalities seeing their access to credit severely curtailed. This report examines the claims and public announcements made by US policymakers and compares them with publicly available data.

The genesis for this report came from a study published by the Federal Reserve Bank in October 2008. Three researchers (V. Chari, L. Christiano, and P. Kehoe) at the Federal Reserve Bank of Minneapolis published a paper entitled *Facts and Myths about the Credit Crisis*[1]. Rather

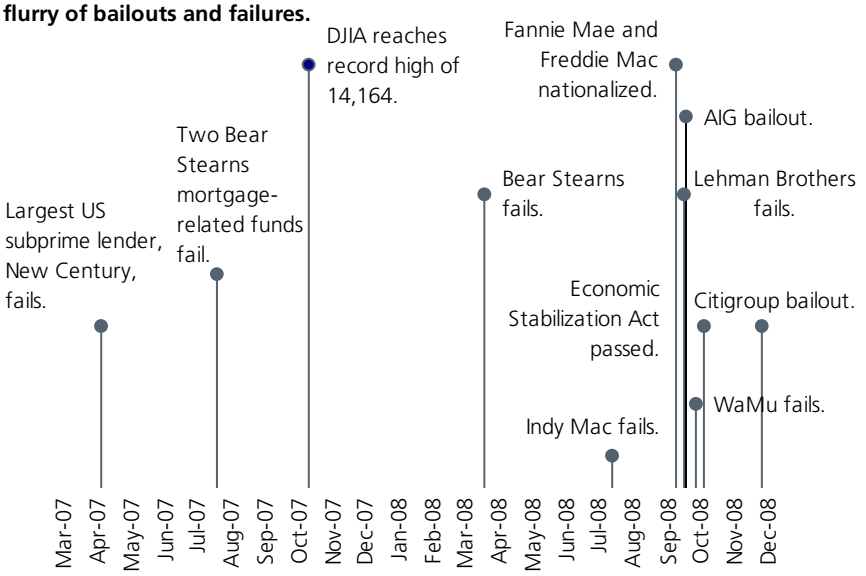
1. http://www.minneapolisfed.org/research/WP/WP666.pdf

ominously, this paper is referred to as Working Paper 666. The study raised interesting points regarding assumptions that policymakers and the public are making about the nature of the current financial crisis.

These researchers claimed that, contrary to popular belief, bank lending in the US has not collapsed, but rather has increased during the credit crisis. Interbank lending, which is widely believed to have completely frozen, is actually as strong as ever. On a variety of measures, the Federal Reserve Bank of Minneapolis claims that there appears to be an abundance of credit flowing in the US market. The researchers are also unusually strident in their criticism of US policymakers, accusing them of an absence of serious analysis and of substituting hard data with their own speculation.

Figure 2: A Timeline of the Credit Crisis in the US

The early warnings of a credit crisis had no impact on the US equities market, which continued to soar until October 2007. By September 2008, the full extent of the crisis became clear with a flurry of bailouts and failures.



Source: Press, Celent analysis

In this report, we examine the claims made by Chari *et al*, extend the analysis to cover additional areas of US policy, and juxtapose these with policymakers' public explanations of the nature of the financial crisis. Furthermore, we add a brief analysis of European and Japanese lending markets in order to determine what the impact of the credit crisis has been on lending activity beyond the US.

US Policymakers' Explanations versus the Data

In this chapter, we examine the explanations and descriptions of the financial crisis that have been offered by policymakers. In particular, we focus our attention upon the Chairman of the Federal Reserve, Ben Bernanke, as well as the Secretary of the Treasury, Henry Paulson, the two individuals who are driving the policy response to the credit crisis in the US.

To the extent possible, we compare the comments made and contrast these with publicly available sources of data. In most cases, we rely on data provided by the Federal Reserve Bank. In other instances, we have relied on generally accepted sources of data.

It is startling that many of Chairman Bernanke's and Secretary Paulson's remarks are not supported or are flatly contradicted by the data provided by the very organizations they lead. At very least, the data indicate that the credit crisis is not as clear-cut a phenomenon as is being suggested.

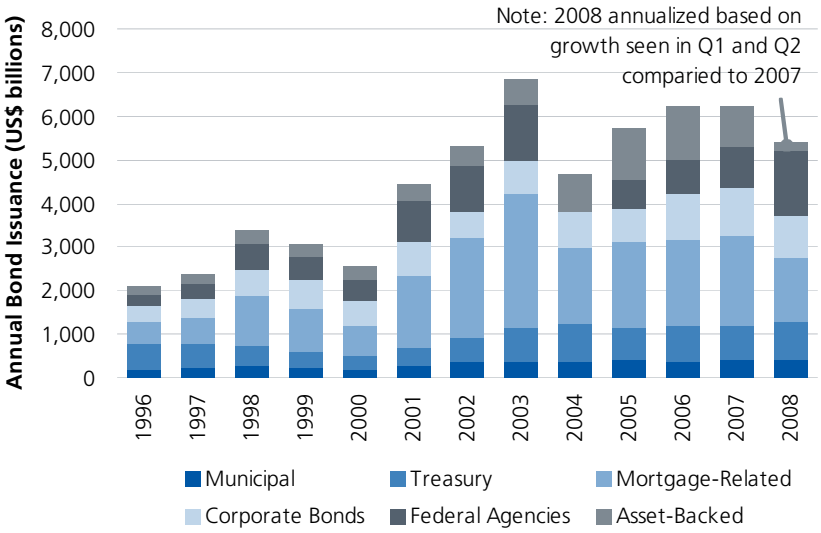
US Bond Market

We begin our analysis by looking at the overall state of the US bond market through end of the second quarter 2008, which is shown in Figure 3. The first half of 2008 did show a decline for bond issuance overall of about 17%.

While troubling, this is hardly the stuff that crises are made of. In subsequent sections of the report, we examine other parts of the credit markets, for which we have more up-to-date data available.

Figure 3: US Bond Markets Issuance 1996 to Q2 2008

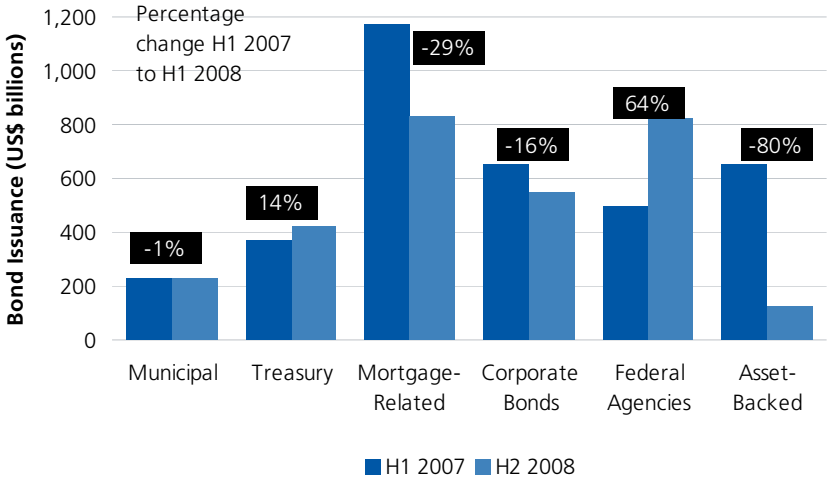
The first half of 2008 witnessed a 17% reduction in bond issuance activity in the US.



Source: US Department of the Treasury, Federal Agencies, Thomson Financial, Inside MBS & ABS, Bloomberg, SIFMA, Celent analysis

Figure 4: US Bond Issuance H1 2008 vs. H1 2007

In the first half of 2008, asset-back securities saw a sharp decline, while the issuance of US Treasuries and Agencies increased significantly.



Source: US Department of the Treasury, Federal Agencies, Thomson Financial, Inside MBS & ABS, Bloomberg, SIFMA, Celent analysis

Bank Lending

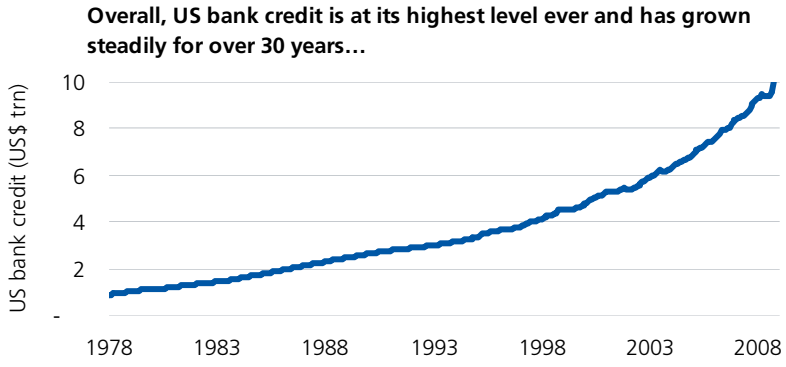
We begin with an analysis of a claim made by Secretary Paulson, focusing on the credit markets in general and on interbank lending in particular:

> *By mid-September, after 13 months of market stress, the financial system essentially seized up and we had a system-wide crisis. Credit markets froze and banks substantially reduced interbank lending.*
> —Secretary Henry M. Paulson, Jr. at The Ronald Reagan Presidential Library, 20 November 2008.

Figure 5 shows the overall level of US bank lending over the 30-year period ending in October 2008. As can be seen, the aggregate level of US bank lending has been unperturbed by the financial crisis and has grown steadily and consistently. In aggregate, US banks reached US$10 trillion in terms of outstanding credit in October 2008. The freezing of the credit markets that Secretary Paulson cites is not visible.

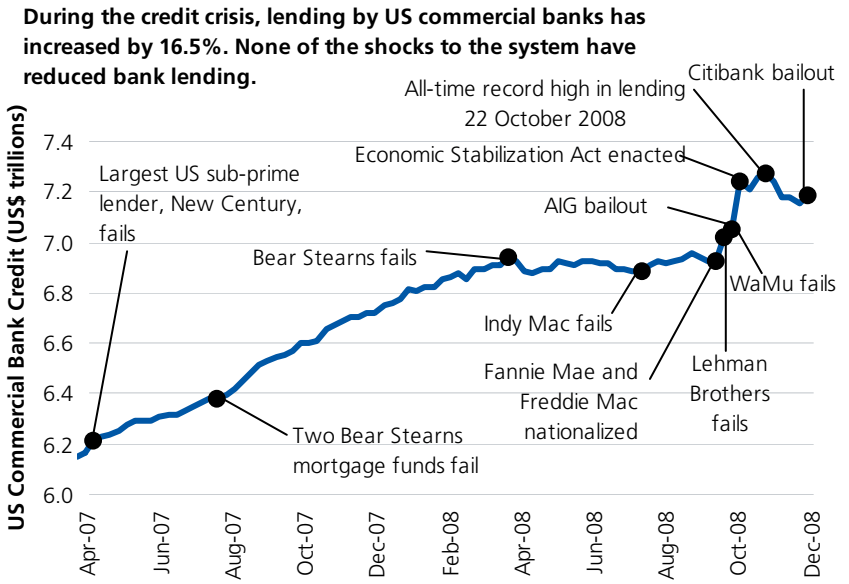
In Figure 6, we zoom in on the 19-month period since the credit crisis began for commercial banks. Far from falling, bank credit is growing and has increased by 16.5% since April 2007. The failures of Bear Stearns, Lehman Brothers, AIG, WaMu, and Indy Mac do not appear to have had any impact on the aggregate lending activities of US banks. Certainly, bank lending is an important part of the credit markets, but it is not the entire market. Other sources of funding are available, including the issuance of commercial paper and corporate bonds. We consider these markets in turn later in this report and find limited evidence to support Secretary Paulson's claims of a seizing up of the credit markets.

Figure 5: US Bank Credit 1978—October 2008



Source: Federal Reserve Bank

Figure 6: US Commercial Bank Credit April 2007 to November 2008

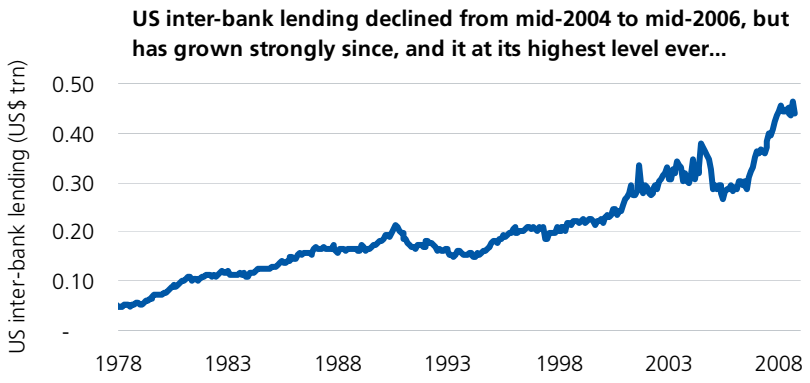


Source: Federal Reserve Bank, Press, Celent analysis

Interbank Lending

Secretary Paulson goes on to talk about a substantial reduction in interbank lending in September 2008. Figure 7 shows the level of inter-bank lending over a 30-year period. This time series shows some volatility, but the overall trend is upward since 1978. In particular, interbank lending has increased by almost 60% since mid-2006, when there was a lull in activity. Far from seeing a substantial reduction in interbank lending, there has been a substantial increase.

Figure 7: US interbank Lending 1978 to October 2008



Source: Federal Reserve Bank

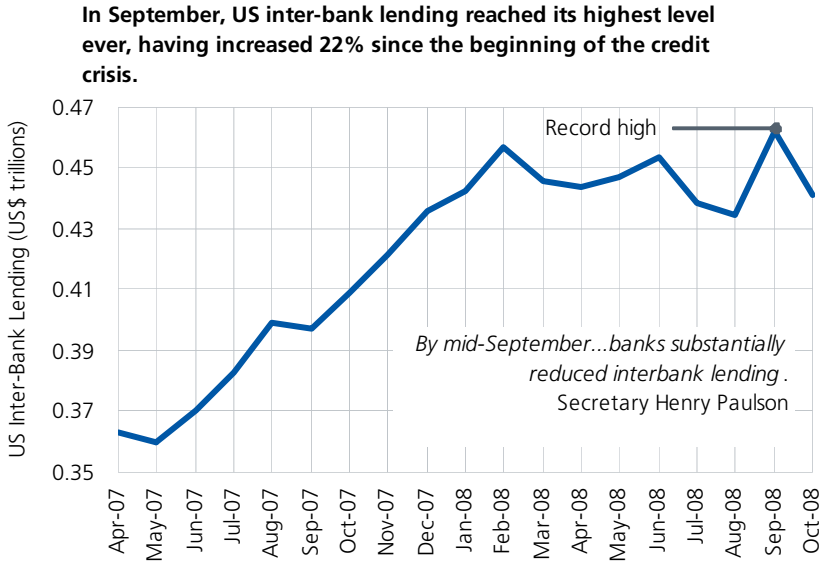
The assertion made by Secretary Paulson that "banks substantially reduced interbank lending" in September 2008 is even more puzzling. Figure 8 shows that interbank lending actually reached a record level in that month. It is impossible to reconcile Secretary Paulson's statement with the numbers provided by the Federal Reserve.

Secretary Paulson is not alone in his assessment of a worsening inter-bank lending market:

> *Conditions in the interbank lending market have worsened, with term funding essentially unavailable.*
> —Federal Reserve Chairman Ben Bernanke, before the Committee on the Budget, US House of Representatives, 20 October 2008

Chairman Bernanke's comment above is more nuanced in that it only refers to "term funding" becoming unavailable in the interbank market. If, in fact, longer-term interbank loans had become unavailable, then there must have been a corresponding, significant increase in overnight lending between banks in order for the overall numbers to demonstrate the growth shown in Figure 8. If this were the case, it could probably be explained by the fact that short-term interest rates have fallen to such low levels recently. However, it is hard to construe this as a crisis in the interbank lending markets.

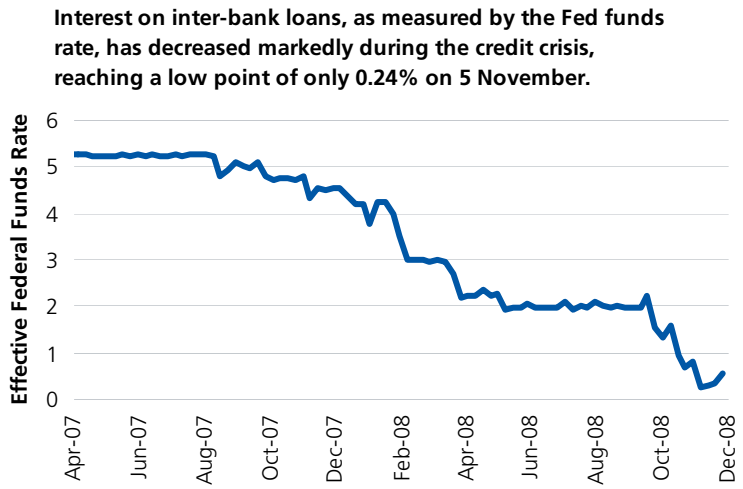
Figure 8: US Interbank Lending from July 2007 to October 2008



Source: Federal Reserve Bank, Press, Celent analysis

Not only has the volume of interbank lending increased during the credit crisis, the cost of borrowing has decreased markedly. Figure 9 shows that the effective Fed funds rate, the rate at which banks lend each other reserves held at the central bank, has dropped to almost zero.

Figure 9: The Effective Federal Funds Rate April 2007 to 26 November 2008



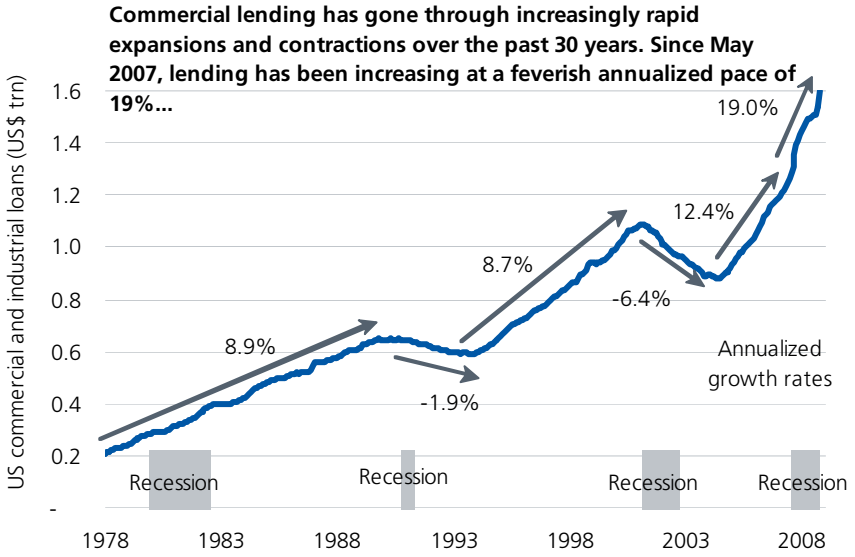
Source: Federal Reserve Bank, Celent analysis

Commercial Lending

> *Businesses, too, are confronting diminished access to credit.*
> —Federal Reserve Chairman Ben Bernanke, in remarks to the National Association for Business Economics, 7 October 2008

Chairman Bernanke's assertion above is widely accepted. However, an analysis of commercial lending activity by US banks suggests that the opposite is actually true. Aggregate US commercial and industrial loans for the 30-year period ending in October 2008 are shown in Figure 10. It is evident that commercial lending has not declined, but reached its highest level ever in October. Indeed, the current growth rate of 19% annually in commercial lending has reached levels that would appear to be unsustainable. The visible cycles of expansion and contraction in commercial loans suggests that a sharp contraction in commercial lending may occur in the near future. However, the "diminished access to credit" is not visible on this measure.

Figure 10: US Commercial Lending 1978—October 2008



Source: Federal Reserve Bank, Celent analysis

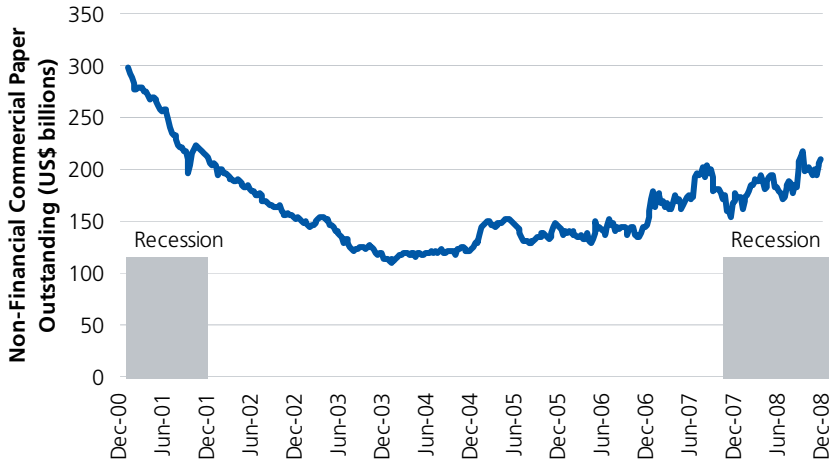
While corporate bond issuances has declined, commercial lending has picked up. Overall, there does not appear to be a funding crisis for US businesses. A shift from the issuance of longer maturity corporate bonds to shorter maturity bank loans could well be explained by the shifts in the yield curves that have occurred during the crisis (see Figure 21 on page 22). Short term borrowing costs are currently significantly less than longer term borrowing, which naturally drives businesses to favor shorter term funding sources. Also, the buyers of corporate bonds are probably viewing assessments from rating agencies with far greater skepticism than in the past, making corporate bonds harder to place.

Commercial Paper

Clearly, businesses may be having difficulty obtaining credit from other sources of financing, but an absence of commercial lending by banks is not the source of any such difficulties. The commercial paper market is one such additional source of funding that businesses routinely turn to. In Figure 11, we examine the total amount of commercial paper outstanding in the US for non-financials. While the outstanding amount of commercial paper certainly shows some variation, there is little in the numbers in Figure 11 to support the claim of a crisis. Indeed, since 2004, the outstanding volume of commercial paper has increased.

Figure 11: Non-Financial Commercial Paper Outstanding 2001–2008

During and after the recession of 2001-2003 , the volume of commercial paper decilned significantly in the US, reaching a low point in early 2004. Since then, the market has grown, albeit unsteadily.



Source: Federal Reserve Bank, Celent analysis

> *The problems extended to blue chip industrial companies who could only issue commercial paper with very short maturities as the commercial paper market became severely impaired.*
> —Secretary Henry M. Paulson, Jr. at The Ronald Reagan Presidential Library, 20 November 2008

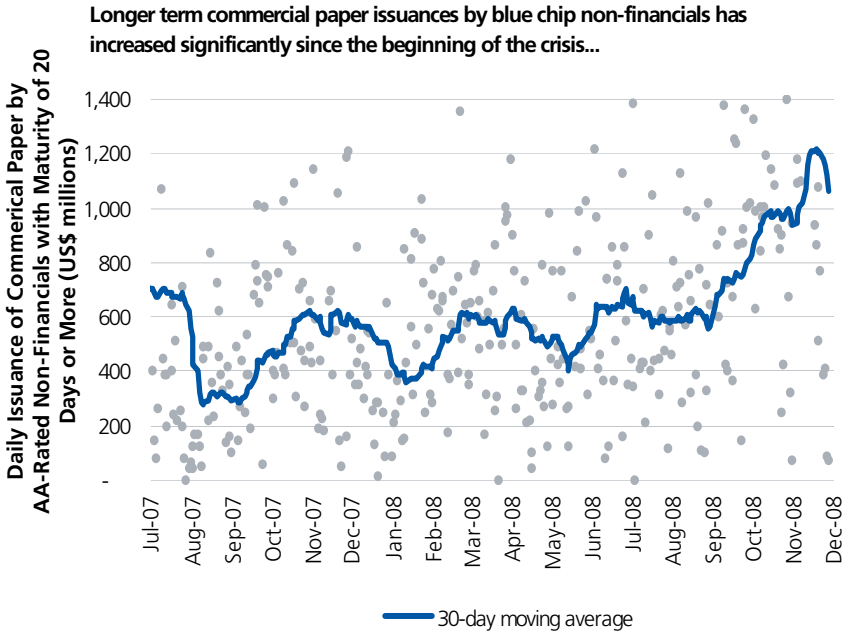
Figure 12 examines commercial paper issuances by AA-rated non-financials. While not precisely the "blue chip industrial companies" that Secretary Paulson refers to in the above citation, this should be a reasonably good proxy. Figure 12 captures daily issuance activity for commercial paper with a maturity of at least 20 days (most commercial paper has a maturity of one to four days). In essence, this includes blue chip industrials and other blue chip non-financial businesses. Shorter maturities are omitted from this series, in order to focus on Secretary Paulson's claim that only very short-term borrowing is available.

Secretary Paulson's assertion that longer-term commercial paper could not be issued by blue chips finds no support in these figures. Rather, Figure 12 shows that issuance of longer-term commercial paper is up, not down.

It is quite possible that specific businesses are facing difficulty obtaining credit, be it directly from banks or through the commercial paper market. For example, the US car industry doubtlessly is having severe

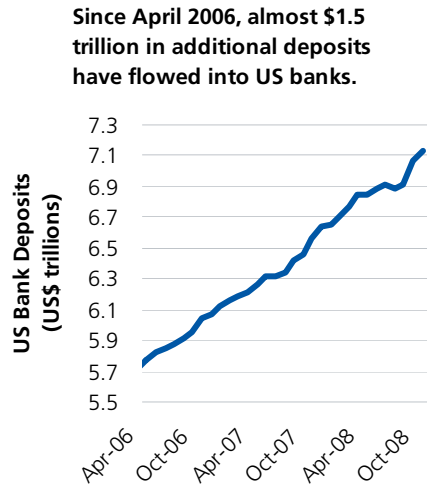
problems raising funds. However, here the market is working well and is declining to extend credit to firms that have poor prospects for the future and represent poor risks. Far from being a market failure, this is a market success: the market working as it should. In aggregate, the commercial paper market for highly rated business continues to function well.

Figure 12: Issuance of Commercial Paper by AA-Rated Non-Financials During Credit Crisis to 28 November 2008



Source: Federal Reserve Bank, Celent analysis

Figure 13: US Bank Deposits April 2006 to October 2008



Source: Federal Reserve Bank, Celent analysis

There certainly has been a reduction in the amount of commercial paper issued by financial institutions. During 2006, blue chip financial institutions would issue $30 billion to $40 billion of commercial paper on a daily basis. Currently, we are closer to $20 to $30 billion being issued daily. A decline certainly, but hardly a crisis.

However, at the same time bank deposits have grown substantially, as shown in Figure 13. This increase in deposits

reduces the need for banks to finance themselves through the commercial paper market. Indeed, in many ways, deposit-based funding is preferable to funding from the institutional markets. A ready explanation of the decline in financials issuing commercial paper is that they have found other, more favorable sources of financing. Since the beginning of the credit crisis in April 2007, about US$1 trillion in new deposits have flowed into US banks.

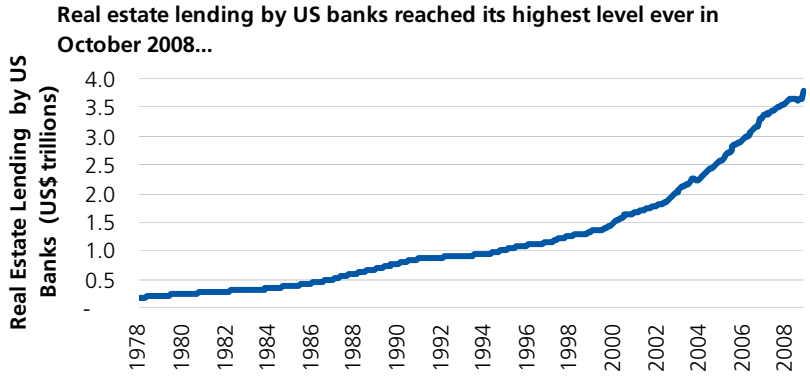
Real Estate Lending

We continue in our analysis to the mortgage market and real estate lending:

> *As we all know, this is a timely issue as the housing correction and capital markets turmoil has reduced the availability of credit for mortgages and other lending.*
> —Secretary Henry M. Paulson, Jr. at the FDIC Forum on Mortgage Lending, 8 July 2008.

Figure 14 shows the level of real estate lending by US banks. Again, there is a contradiction between these numbers, which show that real estate lending by US banks is actually at its highest level ever, and Secretary Paulson's remarks.

Figure 14: Real Estate Lending by US Banks 1978 to October 2008



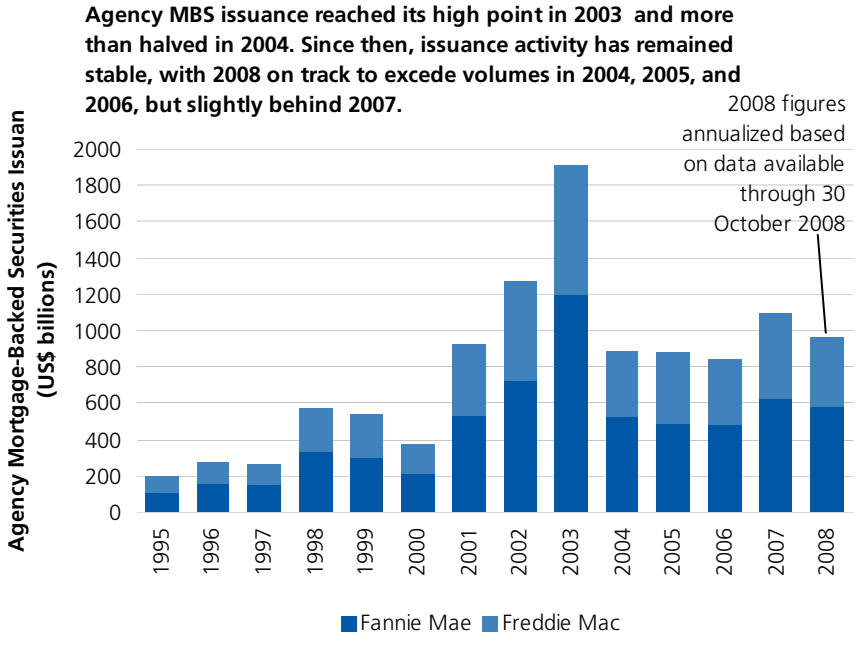
Source: Federal Reserve Bank

Bank real estate loans alone do not tell the entire story. Securitized real estate loans form an important part of the overall market. Figure 16 shows the issuance activity for mortgage-backed securities for the leading issuers of mortgage-backed securities, Fannie Mae and Freddie Mac. So far, 2008 is on track to be in line with the past few years. Clearly, issuance is down from the halycon days of 2003, but the market remains active.

There has, since July 2008, been a marked slow down in terms of these two agencies' issuance activity as shown in Figure 16. However, this reduction has to be interpreted in a larger context. The overall portfolios of mortgages held by the agencies has continued to grow, as have bank mortgage portfolios. The continued growth in the portfolios, despite reductions in issuance, can be attributed to the fact that liquidation rates on mortgages have fallen. Mortgage holders are not pre-paying their mortgages as quickly as in the past, and are re-financing at lower rates. This suggests there is a reduction in the demand for mortgages, not in their availability.

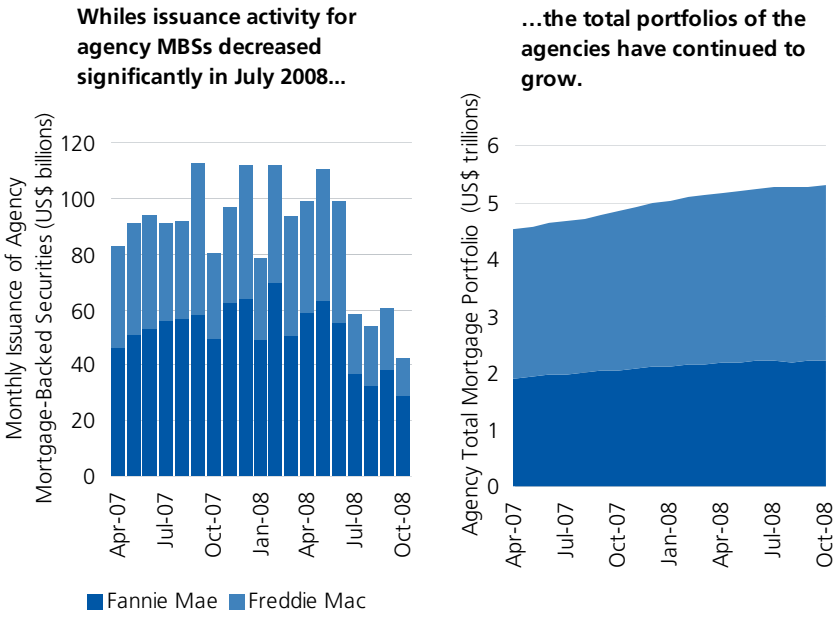
It must be pointed out that non-agency issuance of mortgage-backed securities has, indeed, almost disappeared completely. However, these securities consisted largely of sub-prime or Alt-A mortgages, which were the exactly the types of mortgages to show signs of distress at the beginning of the crisis. It could be argued that the disappearance of these types of securities is a welcome return to more stringent risk management and higher lending standards.

Figure 15: Agency Mortgage-Backed Securities Issuance 1995 to 2008



Source: FNMA, FHLMC, Celent analysis

Figure 16: Issuance and Portfolios at Fannie Mae and Freddie Mac April 2007 to October 2008



Source: FNMA, FHLMC, Celent analysis

Consumer Credit

> *Households and state and local governments have also experienced a notable reduction in credit availability.*
> —Federal Reserve Chairman Ben Bernanke, before the Committee on the Budget, US House of Representatives, 20 October 2008.

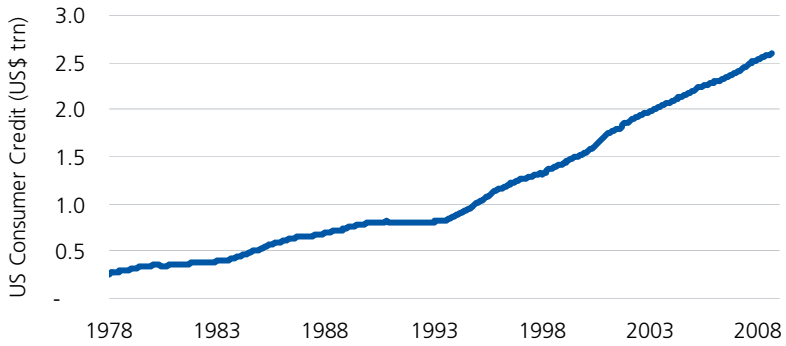
Households have not seen a significant reduction in credit. Rather, in September 2008, the latest month for which figures are available, consumer credit reached record highs (see Figure 22). Certainly, some segments of households may be experiencing difficulty obtaining credit. Perhaps subprime households are finding that they cannot obtain loans any more, but there is no evidence of an aggregate decline in household credit in the US. Indeed, exactly the opposite appears to be the case. If subprime credit were down, then prime credit would have to have increased even more strongly to create the growth for the overall market seen in Figure 22.

Another way to analyze the level of credit that consumers are carrying is shown in Figure 18, which shows the percentage of disposable income that US households spend servicing their debt. At about 19% currently, this figure is close to record highs, suggesting that rather

than facing a "notable reduction in credit availability," they are facing a notable reduction in their ability to take on more debt. A fall in the availability of credit to households is not evident.

Figure 17: US Consumer Credit 1978 to September 2008

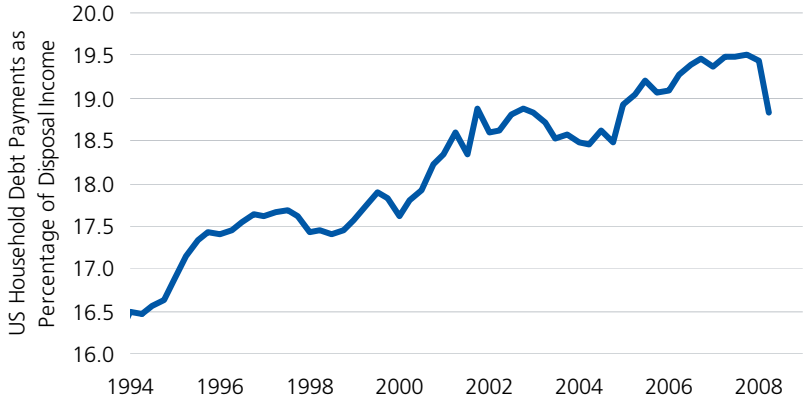
US consumer credit reached its highest level in September 2008 ever and has grown steadily for over 30 years, although there was a flattening during the recession of 1990 to 1991…



Source: Federal Reserve, Celent analysis

Figure 18: US Household Debt Burden 1995 to Q2 2008

At the end of Q2 2008, US households were paying an average of 19% to service debt, a figure that has grown moderately since 1994. This suggests that US households are not facing significantly diminished access to credit.



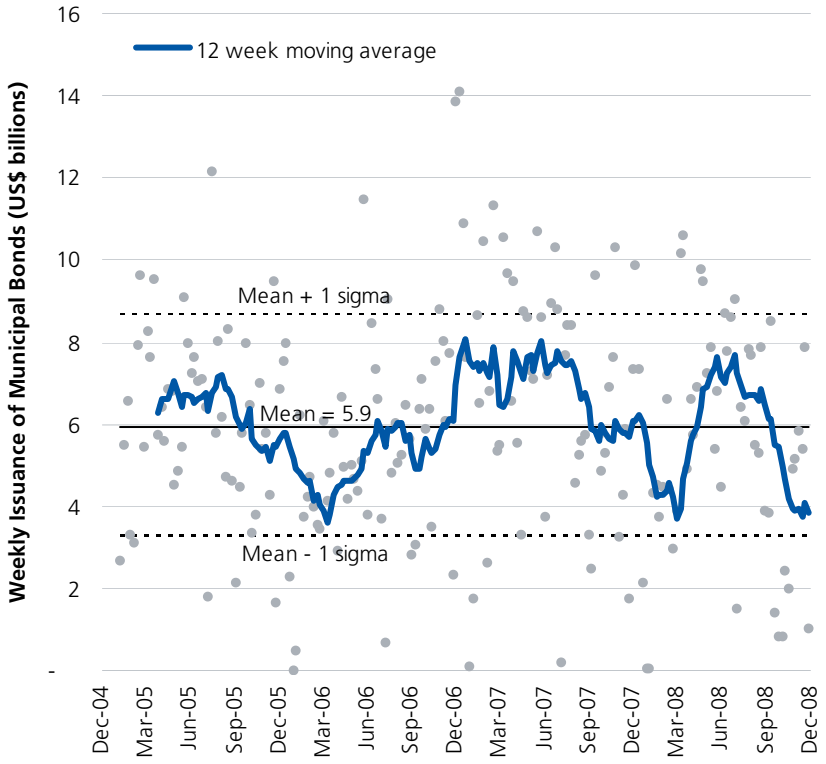
Source: Federal Reserve Bank, Celent analysis

Municipal Bonds

In the previous quotation, Chairman Bernanke goes on to lament the reduction in credit available to "state and local governments." In Figure 19, we examine the level of issuance for municipal bonds from the beginning of 2005 to 28 November 2008. Issuance activity fluctuates from week to week, but the overall trend is flat. There is nothing to suggest that the credit crisis has had a negative impact on the municipal bond market, which continues with issuance activity in line with figures for 2005, before the credit crisis began.

Figure 19: Issuance Activity for Municipal Bond January 2005 to 28 November 2008

Issuance of municipal bonds in the US has fluctuated over time, but is entirely within the bounds of historical volatility. The credit crisis has not had any visibile impact.



Source: Bloomberg, Celent analysis

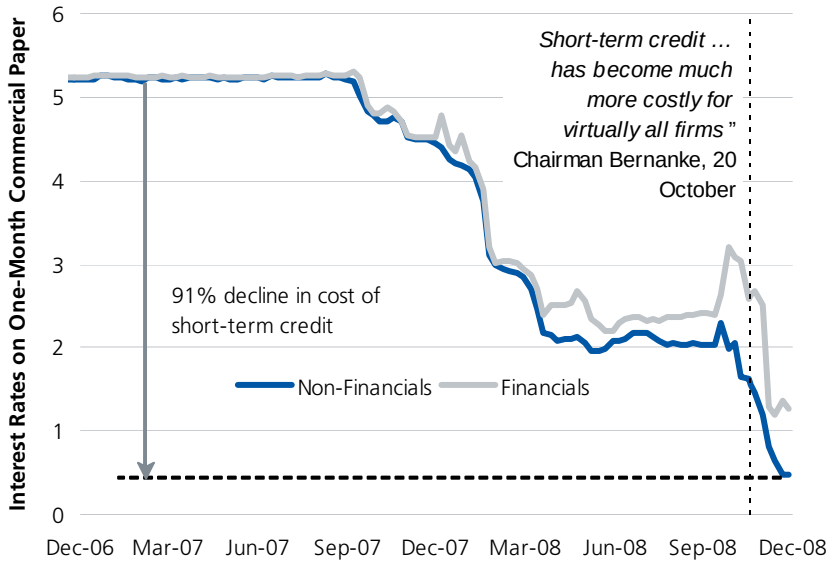
Cost of Credit

Short-term credit, when available, has become much more costly for virtually all firms.
—Federal Reserve Chairman Ben Bernanke, before the Committee on the Budget, US House of Representatives, 20 October 2008

The assertion by Chairman Bernanke that the cost of short-term credit has risen is puzzling. With the dramatic drop in interest rates over the past year, short-term credit in particular has become significantly cheaper, not more costly. Figure 20 shows the interest rates on short term commercial paper for financials and non-financials separately. For non-financials, the cost of commercial paper is at the lowest point for at least a decade. Chairman Bernanke's above statement also suggests that credit for firms is very difficult to come by. As we have seen previously, there are a variety of indicators that suggest this is not the case. Figure 11 on page 14 and Figure 12 on page 15 show the overall size of the commercial paper market remains robust.

Figure 20: Interest Rates on One-Month Commercial Paper December 2006 to 28 November 2008

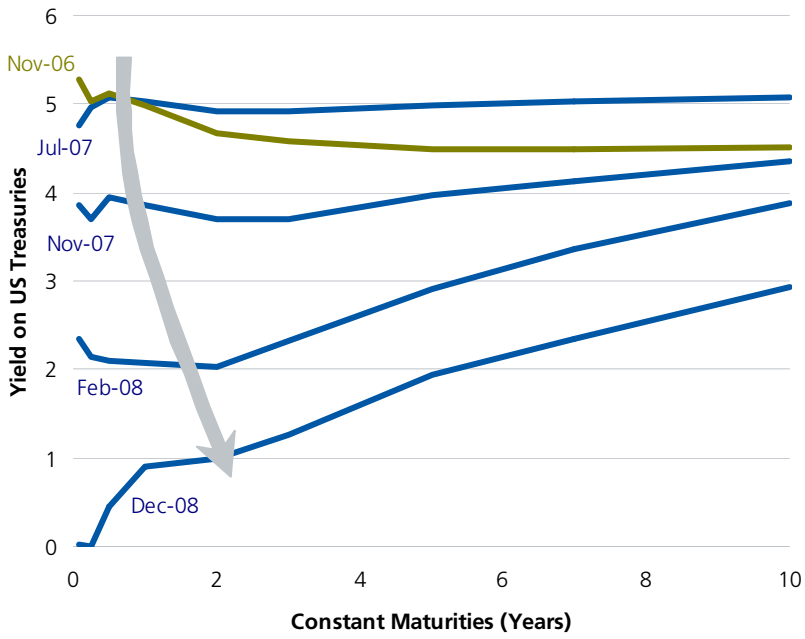
Since the beginning of the credit crisis, interest rates on short term commercial paper have fallen dramatically, particularly for non-financials.



Source: Federal Reserve Bank, Press, Celent analysis

Figure 21: Yield Curves for US Treasuries from November 2006 to December 2008

In late 2006, the yield curve was slightly inverted, and in July 2007 at the beginning of the credit crisis, it was essentially flat. Since then, short term rates have fallen quickly, leading to a steepening yield curve.



Source: US Department of the Treasury, Celent analysis

Lending Activity in Europe and Japan

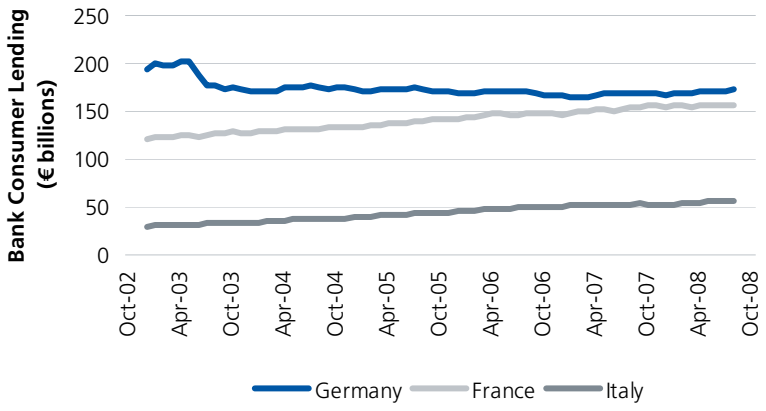
The core of this study was to analyze the assumptions underpinning the massive response undertaken by the US government and central bank, which have consisted of unprecedented injections of liquidity into the financial system. However, this is a crisis with global implications. Financial institutions around the world have been shaken. We provide a brief overview of how lending activity in Europe and Japan have fared during the credit crisis.

Eurozone—France, Germany, and Italy

For the three major economies in the Eurozone, we consider consumer lending and commercial lending separately. Figure 22 shows how consumer lending has evolved in France, Germany, and Italy. France and Italy have shown steady growth since 2002, while Germany witnessed a decline in consumer credit from 2002 to 2003 and has remained essentially flat since then. The time series shown here are for the period through the end of October 2008. No evidence of credit crisis is visible.

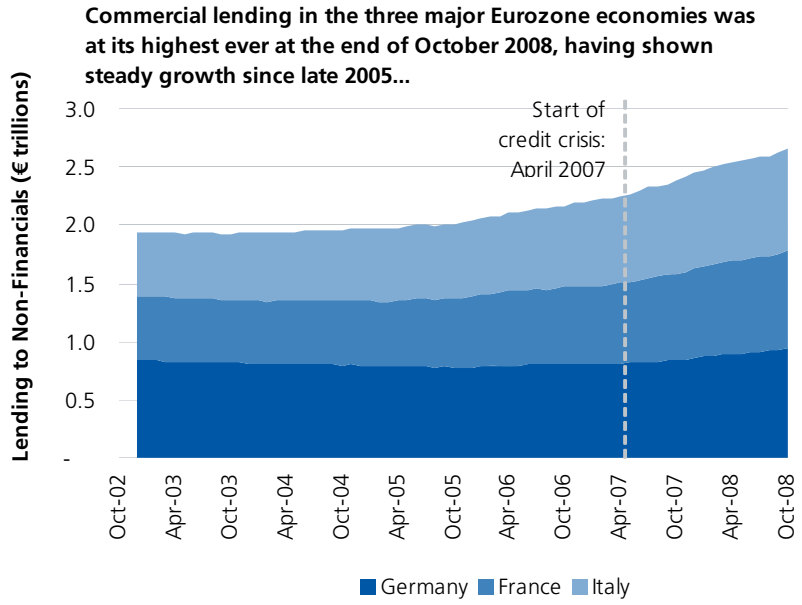
Figure 22: Consumer Lending in the Eurozone 2002 to October 2008

Consumer lending in France and Italy has continued on the same trajectory since the beginning of 2003. In Germany, consumer lending has been flat for some years. The credit crisis has had no impact.



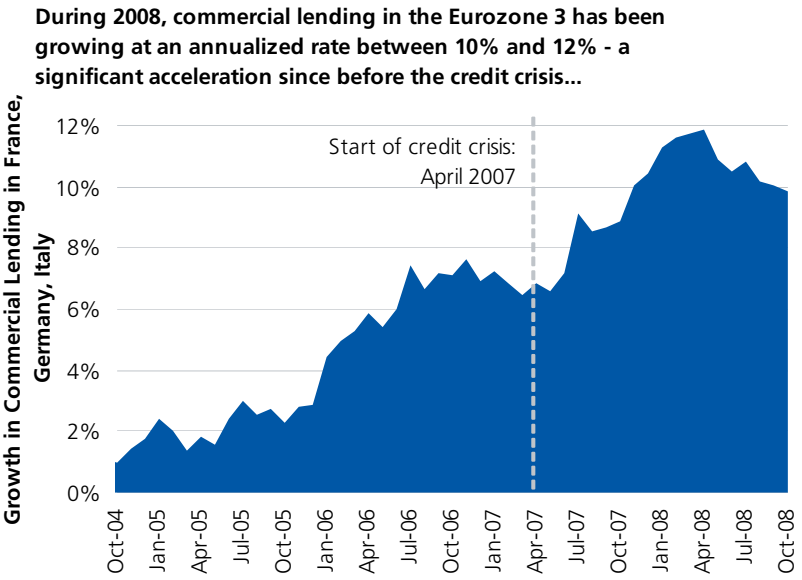
Source: European Central Bank, Celent analysis

Figure 23: Commercial Lending in France, Germany, and Italy from 2002 to October 2008



Source: European Central Bank, Celent analysis

Figure 24: Growth Rate in Commercial Lending in Eurozone 2004 to October 2008

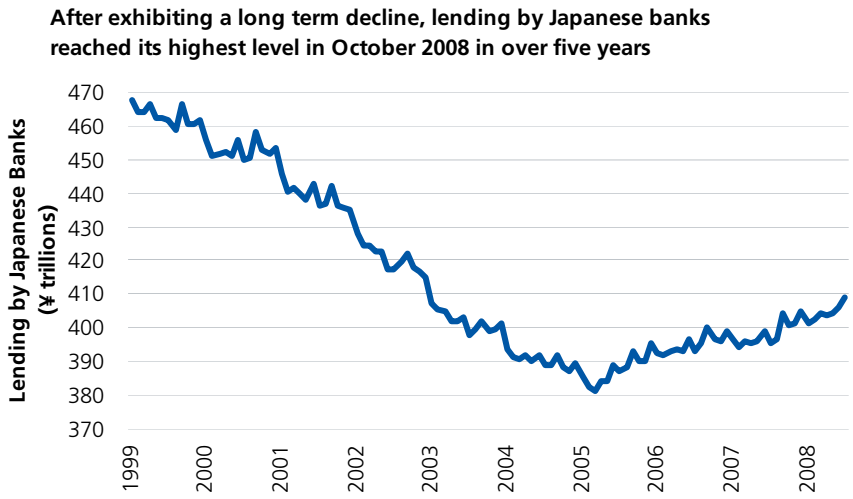


Source: European Central Bank, Celent analysis

Japan

As can be seen in Figure 25, Japanese banks started to increase their lending activity again in late 2005 after a long decline.Through October 2008, there is no indication of a precipitous decline in lending. Indeed, no decline is visible at all since the credit crisis began.

Figure 25: Bank Lending in Japan 1999 to October 2008

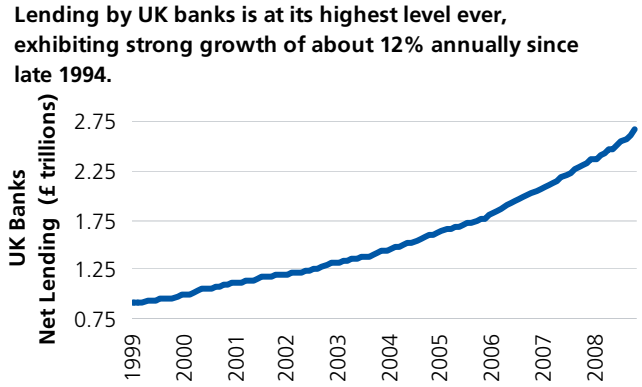


Source: Bank of Japan

United Kingdom

During the period from 1999 to October 2008, bank lending in the United Kingdom has continued to grow, as shown in Figure 26. The annual growth rate of 12% seen since 1999 has continued uninterrupted through the credit crisis.

Figure 26: UK Bank Lending 1999 to October 2008



Source: Bank of England, Celent analysis

Conclusions

Our analysis of the available data suggest the US credit markets are functioning surprisingly well and have been able to withstand a series of shocks over the past 18 months.

The collapse of a number of financial institutions and a severe decline in the stock market have not had negative impacts on bank lending, which is actually currently at or close to record highs. Other sectors of the credit market, such as commercial paper, asset-backed securities, municipal bonds, interbank lending, and consumer credit show surprisingly good health. Some sectors of the credit markets certainly have shown strong declines. However, the dire announcements of a freezing up of the credit markets is difficult to support with an analysis of the available data. This assessment is in stark contrast to the positions held by US policymakers, which have in turn become generally accepted by the public.

A cursory analysis of lending in Japan, Germany, France, the United Kingdom, and Italy suggests that bank lending in those countries is also functioning well. We have not extended our analysis in these five countries to the level of detail as we have done for the US, and that is a topic for further research.

Undeniably, there are some markets that have suffered. Issuance activity for collateralized debt obligations, for example, has collapsed. However, the disappearance of the CDO market will be lamented only by a handful of market participants, and many would consider this to be a positive development. The overall credit markets appear to be continuing to work well. The financial crisis we are living through, which is very real, has not translated into a general credit crisis.

The juxtaposition of policymakers' statements regarding the state of the credit market are both puzzling and troubling. A variety of fundamental assertions about the state of the credit industry in the US are not supported, and in many cases flatly contradicted, by the available data. In most cases, these very data are being published by the organizations led by the policymakers in question.

A variety of explanations could be offered to explain these contradictions, and here we clearly identify the following two explanations as conjecture on our part:

- Policymakers have at their disposal far more information and data than is publicly available. It is possible that these additional data support the hypothesis that there has been a general breakdown in credit markets. Indeed, this explanation was offered by Chari *et al* at the Federal Reserve Bank of Minneapolis. However, it is hard to see why the Federal Reserve Bank itself would publish and continue to publish information that it knows is misleading at best, and simply wrong at worst. For example, Secretary Paulson may well have additional information that supports his statement that *by mid-September ... banks substantially reduced interbank lending*. However, this additional information would have the burden of explaining why the Federal Reserve's data show that interbank lending actually reached its highest level ever in September. We doubt the additional data to which policymakers have access to could be sufficiently compelling and unequivocal to overcome this burden. It is possible, of course, that such data are available. If so, policymakers have a responsibility to share those data with the public.
- Another possible explanation is that policymakers are reacting to the situation of a particular set of businesses and financial institutions and are incorrectly generalizing these to the economy as a whole. Doubtlessly, a number of the leading financial institutions in the US are in serious trouble, as are a number of the leading industrial firms. However, credit difficulties surrounding a specific set of firms is not the same as a problem in the credit markets in aggregate. A choking off of credit to financial and industrial firms with huge losses, questionable prospects for the future, and significant risk of bankruptcy is not a market failure; it is a market success. Current policy is addressing a significant failure in the credit markets in general, not the failure of a specific set of firms.

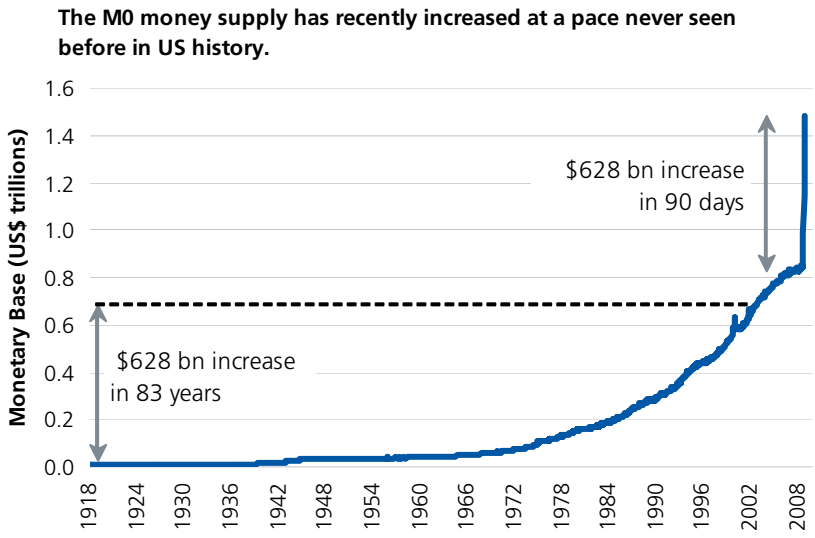
Our analysis ultimately opens more questions than it answers. It is clear that a number of the key assumptions underpinning the US government and Federal Reserve's recent policies are not supported by a review of the available data. A clear and cogent analysis of the credit crisis has not been presented by policymakers, despite the fact that unprecedented levels of public funds are being deployed.

Without an accurate explication of the problems facing the US financial industry, the massive injection of funds could well exacerbate the problem rather than help. Just like a doctor contemplating an obviously sick and suffering patient, a massive surgical intervention based on a misdiagnosis can only worsen the patient's condition.

A Brief Look at the Money Supply

We finish our report by examining some of the policy impacts that have become visible over the past few weeks. Figure 27 shows the most basic measure of money supply in the US, M0, which is also referred to as the monetary base. This measure of money supply consists of currency in circulation and bank reserves held at the Federal Reserve. As can be seen from this chart, there has been an entirely unprecedented increase in the money supply. By the week of 3 December 2008, the money supply was a staggering $630 billion, or 74% higher than it was during the week of 3 September 2008. An increase of this size in the past took on the order of a decade.

Figure 27: M0 Money Supply in US 1918 to December 2008



Source: Federal Reserve Bank, Celent analysis

Such an increase in the monetary base should be cause for alarm, and would normally be seen as an indicator of a pending bought of hyperinflation. There may, however, be more benign explanations. On 9 October, the Federal Reserve started paying interest on banks' reserves held at the central bank. This certainly has made the holding of reserves more attractive to banks, which shifted more of their funds into reserves.

If banks are holding far higher reserves simply in response to the appeal of receiving interest from the Federal Reserve, then there is little cause for concern. However, this action does merit some further explanation from the Federal Reserve. Normally, when a central bank wishes to stimulate greater lending by banks, it encourages banks to *reduce* reserves, not increase them, since reserves funds are bank funds that would otherwise be available for lending.

A thorough analysis of the recent increase in the monetary base is beyond the scope of this report, and is a topic for further research. However, one might be excused for thinking that the frequent comparisons with the Great Depression of 1929 are not the most apt. Perhaps the economic crisis in the Weimar Republic some seven years earlier could provide a better comparison.

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