

# The Years We Lived Dangerously: Causes, Consequences, and Implications Of The Global Financial and Economic Crisis

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This paper addresses six related themes: (i) a short history of U.S. financial crises during the last 80 years; (ii) severity of the current global recession and corporate sector responses; (iii) government approaches to resolving the current global financial and economic crisis; (iv) the current financial markets outlook; (v) the long-term outlook for the U.S. economy, and (vi) the changing order of geo-political and economic dominance.

## 1. History Of U.S Financial Institution Crises During The Last 80 Years

There have been 5 major crises involving financial institutions in the United States over the last 80 years, with four of these occurring since the early 1980's. Common to the last four crises are attempts by banks and other financial institutions to improve profits through additional risk-taking while not pricing properly for the increased risks. In each case, there have been "bail-outs" – but none as large as for the current crisis. And, in each case, there has been regulatory reform designed to curb excessive risk-taking by U.S. financial institutions.

### 1.1 The Great Depression: 1929 – 1933

The last great global depression was associated with a speculative stock market and real estate "bubble" in the United States that collapsed in 1929. The consequence for the United States was a 10 year period of below-normal growth, the failure of 10,000 banks, and bank depositor losses of $140 billions between 1929-1933 alone. Initial passive behaviour by the U.S. government prolonged the depression and protectionist trade policies in the United States and other countries spawned a deep global economic crisis. Ultimately, the "New Deal" fiscal policy stimulus of President Roosevelt brought the U.S. economy out of depression but it was not until America's entry into World War II before the U.S. economy began to show robust growth again.

The Great Depression resulted in regulatory reform in the U.S., primarily through the Securities and Exchange Act of 1933. This Act required that investors receive significant and "material" information concerning securities being offered for public sale and was designed to prohibit deceit, misrepresentations, and other fraud in the sale of securities to the public. Parallel legislation (The Glass-Seagall Act of 1933) created a deliberate separation between commercial and investment banking activities (to moderate risk exposures) and prohibited commercial banks from holding equity share investments in manufacturing companies (to avoid potential



conflict of interest in times of economic recession or depression). U.S. banks later found legal ways to circumvent the intent to separate commercial and investment banking activities and the Glass-Seagall Act was repealed in 1999.

### 1.2 Financial Disintermediation Challenges the U.S. Banking System

Major U.S. banks adopted asset-liabilities management policies during the 1970's and 1980's. This approach mandated equivalence between funding source and asset management. To avoid interest rate risk exposure, floating rate sources of funds should finance floating rate loans. Fixed rate sources of funds should fund fixed rate loans.

While prudent, this change of philosophy put banks on a collision course with prime bank corporate borrowers. Prime borrowers preferred fixed interest rate contracts for financial planning needs. Banks, with a predominance of floating rate funding, could not meet prime borrower requirements. So, the strong corporate customers went direct to market, asking banks to use their distribution networks to allow corporations to raise money in the commercial paper and bond markets. What starts here is a secular change in the average risk profile of bank loan portfolios and a squeeze on bank profit margins. Banks now try to expand their investment banking activities (for fee and service income) and take more risk to maintain their interest spread incomes.

### 1.3 Latin American Debt Crisis (1980's)

To increase spread income (difference between interest earned and interest paid) large U.S. banks made significant loans to sovereign governments in Latin and Central America in the late 1970's and early 1980's. By 1983 Citibank, for example, earned 60% of its profits from a "single" loan to Brazil, with this loan accounting for 130% of the bank's equity. When Brazil and Mexico formally defaulted on these loan agreements, excessive risk-taking created a threat to the solvency of major U.S. banks. Work-out solutions necessitated reduction and postponement of interest payments on these loans and extension of loan maturity terms. The U.S. banking system did not collapse but risk-adjusted bank profit margins came under extreme duress.

In 1988, the major Western central banks signed the Basle I accord which created a set of international banking regulations that established minimum bank capital requirements linked to the riskiness of bank asset portfolios.

### 1.4 Collapse of U.S. Savings and Loan Institutions (late 1970's – 1990's)

Savings and Loan Institutions (S&L's) were specialized U.S. financial institutions that raised deposit money to fund home mortgage loans. Their funding came in the form of short-term floating interest rate deposits. Their investments were in the form of mid to long-term fixed rate home mortgage loans. When floating interest rates increased dramatically due to unexpected high levels of inflation in the United States during the late 1970's and early 1980's, the spreads (interest earned minus interest paid) on many of these loans turned negative.

Despite a U.S. government bail-out of $105 billions, nearly 50% of U.S. S&L's disappeared between 1986 – 1995. The S&L melt-down was a significant contributor to the U.S. recession of 1990 – 1991.

This crisis consolidated the principle that financial institutions should not take on interest-rate or currency risk exposures on their balance sheets but did not address the gradual migration of good credit risks to financial markets rather than direct lending from banks.

### 1.5 Long-Term Capital Management Crisis (1998)

Long-Term Capital Management (LTCM), formed in 1993, was one of the first U.S. hedge funds. After four years of very profitable operations, this fund, in 1998, leveraged its equity capital of $3 billions with bank debt of $100 billions to use financial derivative products to gamble that the interest rate spreads between short and long-term U.S. government bonds would decrease and that the interest rate spreads between U.S. government bonds and bonds issued by sovereign emerging countries (Russia in particular) would also decrease. When Russia and later Mexico defaulted on their loan obligations in 1998, the solvency of LTCM was threatened, putting $1,000 billions of related global financial derivative contracts at risk.

Then chairman of the U.S. Federal Reserve Bank, Alan Greenspan arranged a "bail-out" of LTCM, convincing primary bank lenders to LTCM that it was in their interest to inject an additional $3 billions of equity into LTCM to avoid a global financial crisis through pre-mature liquidation of its financial derivative contracts. This tactic worked and, under more normal financial market pricing in 2000, LTCM was able to close its positions, repay its loans, and cease operations.

Commenting on this crisis in 1998, Alan Greenspan asked the following question : "How much dependence should be placed on financial modelling which for all of its sophistication can get too far ahead of human judgement?"

U.S. House of Representatives member, Paul Kanjorski, was less kind but closer to American public opinion that would be voiced again during the 2007-2009 crisis. His 1998 statement follows: "Who is going to pay the losses that this fund, these investors, incurred? Every senior citizen that is relying on savings accounts. We just tapped into their funds because these high flying dude billionaires went at risk".

Alan Greenspan was not willing to regulate the use of financial derivative products after the LTCM crisis, which he regretted later in testimony before a U.S. Senate Committee enquiry in 2008. However, the Basle II international regulatory directive of 2004 did extend its risk definition for bank capital adequacy requirements to include investment banking activities. But, Basle II did not fully anticipate how financial derivative products could contribute to the next financial crisis.

### 1.6 U.S. Sub-Prime Mortgage Crisis (2005 – 2009)

The "high-tech" stock market bubble in the United States showed signs of collapse in March of 2000. Concerned that the U.S. economy could move into recession the U.S. Federal Reserve Bank initiated a large number of sequential interest rate cuts driving



the 5-year yield on U.S. government bonds from 6.7% in February 2000 to 2.8% by February 2004. The low interest rate environment as well as Bush government legislation designed to expand home ownership rates fuelled a speculative boom in U.S. house prices.

U.S. house prices rose, on average, by 8% a year between 1998 and 2006 in a relatively low interest rate environment. By comparison, average U.S. housing prices had increased only by 0.7% a year between 1930 – 1998. Historically, the U.S. home mortgage loan market was governed by the principle that home purchase should not exceed 2 or 3 times a family's income. By 2006, some buyers were investing 5 or 6 times income to purchase a house and the percent of sub-prime (high risk) home mortgage loans increased from 5% to 20% of total home mortgage loans between 2002-2006.

Many of these home mortgages were "securitized" (packaged) and sold forward to banks and other investors. Financial derivative products (credit risk derivative swaps) were designed to allow holders of securitized mortgage loans to buy insurance against credit risk changes for these products and some banks began to speculate on how the prices of these contracts would evolve in the future. This credit risk derivative swap market, in contract value, grew from $1 trillion in June 2001 to $57.8 trillions in December 2007 ($57.8 trillions is a very large number: $57,000,000,000,000).

Rating agencies like Moody's did not fully understand the risks associated with sub-prime mortgage loans and (with hindsight) rated them too highly. Some banks admitted later that their internal risk control systems were not sufficiently robust to accurately assess the risks associated with sub-prime mortgage loan portfolio assets.

By 2005, the "cracks" in the system were visible with U.S. housing prices peaking and then turning down, mortgage default rates increasing, and accepted mortgages for home purchase also peaking. Internally, banks already knew that they had a major problem to address by 2005.

In retrospect, the low interest policy of Allan Greenspan may have avoided a recession in 2000 but spawned a much larger problem later on.



## 1.7 What Went Wrong?

Compensation packages for senior executives of the large global banks are commonly paid through common stock price options. Stock options provide senior managers with high upside potential if risky strategies result in rising stock prices. At the same time, these executives do not share the potential loss in shareholder value if their risky investment strategies result in decreased stock market prices. Options are the only financial instrument whose values increase with an increase in risk.

The widespread use of options in banking industry compensation packages created a classic agency problem. Senior bank executives had an incentive to take on more risk than what would normally be desired by their equity shareholders. They could gain from the up-side potential of risky investment strategies but were protected personally from sharing in the downside shareholder losses from these risky strategies if their strategies failed. Re-enforcing this risk-taking behaviour is the historical record of governments to bail-out financial institutions that take on too much risk, make bad bets, and then pose a threat to the collapse of the domestic or global financial system.

Bank originators of sub-prime mortgage loans also deserve some of the blame. Knowing that they would not take these risks on to their own balance sheets, they had little incentive to engage in costly due diligence of the risks and proper pricing for these home mortgage loans.

## 1.8 How Have Various Players Have Fared Out During The Current Crisis?

As examples, consider U.S. homeowners, large global commercial and investment banks, common equity owners, the bond rating agencies, and the general public.

When U.S. housing prices fell by more than 30% between 2006-2008, home owners began to default on mortgage debt obligations with 2.3 million mortgage foreclosures recorded by the end of 2008 and projections that the total number of mortgage foreclosures could reach 6.4 million by 2012 (about 9% of U.S. home owners potentially losing their houses by 2012). Today, the average U.S. household spends 16% of personal income for interest payments on home mortgages, auto loans, and credit cards compared to 10% in 2000.

With default rates soaring, the market prices of “securitized” mortgage loan packages fell dramatically. With “mark-to-market” accounting, banks had to reduce the reported value of their asset portfolios, reducing bank equity levels, and increasing the need for new equity injections to meet the regulated bank capital adequacy standards prescribed by the Basle international banking accords.

The size of the required bailouts is unprecedented. Through its TARP (Troubled Assets Recovery Program) the U.S. government has already injected $45 billions to shore up Citigroup’s equity position while committing to guarantee $306 billions of



toxic Citigroup assets. AIG received $70b of support. Bank of America received $20 b. The initial TARP budget of $700b is now nearly exhausted. But industry experts forecast that there is still between $1,000b to $ 2,000b of toxic bank assets to be dealt with. Lehman Brothers, under the weight of $70b of inventory of sub-prime loans, was allowed to go bankrupt.

In addition to equity fund infusions from Singapore and the Middle East, the Swiss central bank has injected $60b of new funds into UBS.

The government of Ireland has bailed out that country's 3 largest banks at a cost of about 9b euros. The U.K. government now owns Royal Bank of Scotland and Northern Rock. The government of Iceland has taken equity ownership control of its three biggest banks. The German government has bailed out Commerzbank for 18.2b euros.

On a global basis, the value common equity shares decreased by more than 40% during 2008. In the U.S., the S&P index of shareholder returns from common stock price investments in industrial companies fell dramatically, making 2008 returns the second worst ever since 1825 – closely competing with 1931 for first place.

The U.S. bond rating agencies have lost global credibility for the high credit ratings given by them to credit default risk swap instruments and securitized mortgage loan packages. As with Enron, they have failed when the takes were very high for investors.

The general public has been left to bear the burden associated with government bail-out efforts.

### 1.9 Lessons From The Most Recent Financial Crisis

Securitization of financial assets in the new millennium has been driven more by fat bank fees and risk-sifting rather than by due diligence, prudent risk management, and adequate pricing for risk. Conflicts between equity owners and managers have re-surfaced.

Regulatory reform this time in the U.S. is likely to (i) re-establish the separation between commercial and investment banking activities, (ii) strengthen bank capital adequacy requirements; (iii) create new capital adequacy requirements for commercial and investment banks related to their financial derivative positions; (iv) constrain the development and use of very sophisticated financial derivative products, and (v) re-assess and regulate the financial compensation packages for corporate executives, particularly in companies that have benefited from government bail-outs.

### 1.10 What is Left Unresolved?

Financial markets have become more efficient than banks in providing funds, at best cost, to prime and medium credit risk corporate borrowers. Banks are left with



higher risk credits as a primary source of business and have not yet learned how to price appropriately for the new risk environment that they have inherited.

Governments continue to bail-out financial institutions without containing excessive risk-taking by these financial institutions. This is enough to prevent another great depression or complete collapse of the global financial system. But, it is not enough to curb excessive risk-taking or inadequate risk pricing and risk control systems by large global financial institutions who have come to expect that they will be bailed out if they create a significant threat to the functioning of the domestic or global financial markets. Financial institutions need to be guided to improve their risk assessment and risk pricing models as well as their internal risk controls. Without these changes, we can expect more and perhaps larger financial crises.

## 2. The Global Economy

The global economy is much more interconnected today than at any time since the end of the Second World War. Central to this development has been the large increase in trade and capital flows that has supported healthy world-wide GNP growth as well as redistribution of capital and investments and differential growth rates between countries.

Interdependence means that financial crises in one part of the world spread easily into regional or global crises. The Asian crisis of 1997, sparked by Thailand's devaluation of the baht, had profound regional impacts and significant spill over effects on global industries with high export volumes to the region. The current crisis has already spread to Europe's real economy sector as well as to Asia and the Middle East.

### 2.1 How Deep and Broad is The Current Global Recession?

The U.S. economy has entered its second year of recession. Many European countries slipped into recession during the 4th quarter of 2008. In a recent survey reported by CNN on March 23, 2009. 67% of German wage earners expressed concern about losing their jobs during the current recession.

The top 10 wealthiest Russians have lost about 2/3 of their fortunes in the last year. Russian stock market prices fell by 70% over the last year while the Russian rouble has lost 35% of its value since last summer.

Japan's export-oriented economy is in "tail-spin" with real GDP contraction at an annual rate of 12.7% in the last quarter of 2008 (worst quarterly drop since he first oil crisis in 1974).



Some emerging economies (e.g. Thailand) anticipate recession in early 2009. China's growth rate expectations, while still strong, have been reduced by 50%.

In 2007, 72% of U.S. GDP was dependent on consumer spending, rather than business or government spending. U.S. consumer confidence is lowest among major countries. While consumer confidence that things will improve showed an increase in March, most Americans are not optimistic regarding the mid-term prospects for economic recovery. U.S. credit card spending is being constrained by providers who report credit card default rates in the range of 8% - 10% during the first quarter of 2009.

The days of liberal access to cheap credit are over for most Americans and reduced private consumption levels will drag down the U.S. economy further during 2009.

I expect the U.S. unemployment rate to peak in 2009 at 9% - 11%. Recovery to positive growth is not likely to happen before the first half of 2010 and it may take until 2012 before we experience growth rates similar to post World War II growth rates for the U.S. and world economy.

### 2.2 Which Industry Sectors Are Most Vulnerable In the Global Recession?

The commercial banking sector is likely to see consolidation through mergers and acquisitions rather than wide-spread bankruptcies. Higher capital requirements in this industry and new restrictions on product class development and use (e.g. financial derivative products) are likely to reduce levels of bank profitability and executive compensation in this sector for a long time period.

Hardest hit will be industries characterized by high levels of financial leverage and heavy balance sheet requirements for net working capital and net fixed assets. The automobile sector, both suppliers and manufacturers, is most vulnerable by these criteria. The most affected countries will be the U.S., Germany, and Japan where the automobile sector constitutes a very significant proportion of manufacturing jobs. We can expect global consolidation in this industry with the U.S. companies in the weakest position to survive unless they are also bailed out by the U.S. government in what would be viewed globally as a decidedly national protectionist declaration.

Industries that rely on discretionary consumer expenditures will have a difficult time as consumers make difficult choices on where to cut back on expenditures. Typical industry examples would be automobiles, clothing, personal care, restaurants, luxury goods, personal computer up-grades, and home furnishings. We should expect numerous bankruptcies in these sectors.

Service businesses with light balance sheets that are mainly people dependent (e.g. consulting companies, accounting companies, advertising agencies) will need to restructure and downsize, but have higher chances of surviving even if demand falls for their services.

The consumer group most affected will be those approaching retirement or in early retirement years who have invested heavily in financial assets and now find the



value of these assets seriously eroded. I think that this group is least likely to reduce expenditures on health, housing, and heating.

### 2.3 How Will Companies Cope With The Global Recession?

There will be short-term cost reductions, down-sizing, consolidation, and re-shaping of some industries. The advantage will go to companies that are currently “cash-rich”, have businesses that are “cash cows”, and that are not dependent on significant infusions of debt or equity to support their business model objectives. Business managers are learning again that debt capacity is proven in bad times, not in good times.

Most small and middle-sized American and European companies will focus on survival. Cost-cutting will not be enough for many of these companies to survive.

Flexibility to adjust the business plan, speed of decision-making, and new approaches to strategic decision-making will separate winners from losers.

I agree with Hugh Courtney (McKinsey Quarterly Interview, December, 2008) that we have moved away from clarity of future outcomes that impact on corporate strategy choices. There is no single view of the future today. There is no limited set of possible future outcomes with assurance that one of these outcomes will occur. There is not even a clear range of possible future outcomes. Rather, we face true uncertainty – not even a predictable range of possible future outcomes.

With such uncertainty, companies must entertain a broader and more radical set of possible future industry outcomes, develop scenarios of the implications of many of these uncertain outcomes, continuously up-date market intelligence from higher and lower levels within the organization, devote more frequent top-management time to strategy reconsideration, and to act ahead of others based on changing industry developments.

This is not the time to be an industry bystander, waiting for things to happen.

### 2.4 Crises Create Business Opportunities

The Chinese word for “crisis” translates into “opportunity” and the current crisis will provide opportunities for long-term investors, innovators, and well-managed companies.

Crises do create business opportunities. As an example, “…it was during the recessionary 1870’s that Rockefeller and Carnegie began grabbing dominant positions in the emerging oil and steel industries by taking advantage of new refining and steel production technologies and of the weakness of competitors” (Lowell Bryan and Diana Farrell, McKinsey Quarterly, December 2, 2008).

At some point, equity prices will bottom and the variability of daily stock price movements will begin to stabilize, creating lifetime "bargains" for long-term equity investors.

With the crisis most acute in the U.S. and Europe, contraction of foreign investments from this geographic sphere will create opportunities for new and local "Rockefellers" to re-shape industry structures in emerging markets like Brazil, Russia, China and India.

### 2.5 Innovations and The Future of the Liberal Market Economy

There is "short-sightedness" in the emerging populist view that the current crisis demonstrates that the era of liberal economics was wrong and needs to be replaced. The post World War II era of the liberal global market economy has given us unparalleled growth and prosperity over recent decades – even if the last two years are included in the numbers. The current situation was caused by reckless risk-taking behaviour and faulty pricing for risk by bankers who should have known better - not by the underlying market economy model.

The Austrian economist, Joseph Schumpater, described many years ago the "creative destruction" characteristic of liberal market economies. Recessions weed out weak players and stimulate the next wave of innovation. Apple and Microsoft, for example, were founded during the mid 1970's U.S. recession and propelled American leadership during the next business expansion wave. Mobile phones, the first generation of MS-DOS personal computers, laser technology, DNA technology, and the iPod were first introduced commercially during recessions. Google and USA Today were new brand names launched during U.S. recessions.

We should hope for new and transforming innovations coming out of the current global recession. The recession will test us and make us stronger as we lay the foundations for the next period of global growth and prosperity associated with the long-term capacity of the market economy to turn adversity into opportunity and creative rejuvenation.

## 3. Government Approaches To Resolving The Current Global Financial and Economic Crisis

Governments are responding actively, if sometime ill-advisedly, to avoid a repeat of the 1929-1933 global depression.

### 3.1 Interest Rate Initiatives

The U.S Federal Reserve Bank has reduced its short-term bank lending rate to a range of 0.0% to 0.25% to stimulate commercial bank lending. In early February, the Bank of England reduced its bank lending rate to 1.5% (lowest ever for the U.K. economy). Japan has reduced its central bank lending rate to 0.10%.



Low central bank interest rates are unlikely, however, to provide the stimulus necessary to reverse the current global recession. Such policies failed miserably during Japan's "lost decade" of the 1990's after the collapse of Japanese stock prices and real state values during 1991.

### 3.2 Monetary Easing

The U.S. Federal Reserve Bank is beginning to print money to finance the cost of U.S. government spending initiatives and central bank interventions in the financial markets. This is a very risky approach that is rightly criticized by other governments who remember the financial market havoc caused by large-scale printing of money on a global basis in the 1970's that generated unexpected inflation and negative real investor returns during that period. The current U.S. initiative may, in part, be designed to devalue the U.S. dollar to correct U.S. trade imbalances with the rest of the world. But it is not likely, in the mid-term, to restore confidence in the virtue of private investments in U.S. financial securities. Once the money tap is turned on, it will be difficult to reverse course when the real economy eventually shows signs of recovery.

### 3.3 Fiscal Policy Initiatives

Current fiscal policies in the United States, China and Japan have a "New Deal" look.

The Osama government is committed to a record $1,800 billion federal budget deficit in 2009 with a similar budget deficit forecasted for 2010. The Obama domestic stimulus plan will cost $789b+ in 2009. U.S. public infrastructure projects will focus on road, highway, and bridge repairs.

China is committing to a $568b of government spending stimulus to offset the significant employment reductions in this formerly vibrant export economy. Chinese exports fell by 14% in January 2009 with imports falling by 32% (mainly due to global energy and other imported material price decreases). China's stimulus plan will support investments in new housing, railways and airports, plus rebuilding areas devastated by the May 12 earthquake.

Japan's recently announced stimulus plan is equal to 4% of GDP, higher than the U.S. or U.K. It will focus on healthcare and medical services, subsidies for local governments, a new social safety net for non-regular workers, more use of government financial institutions to ease the credit crunch, and solar energy investments.

In Europe, Germany and France are reluctant to embrace fiscal stimuli that could be inflationary in the longer term.



Fiscal initiative that focus on large public infrastructure projects will take time to organize and will not create employment in the sectors that have been hit hardest by the global recession. This could be a case of "too little, too late". If the intent is to stimulate consumption broadly, tax cuts for low and below median wage earners may have provided a more direct and faster stimulus.

While fiscal policies can likely avoid a repeat of the global depression of 1929-1933, they are not likely to stave off a lengthy period of global recession and slow growth thereafter.

### 3.4 Continued U.S. Public Support for Troubled Financial Institutions

It may have been wiser to relax bank capital adequacy requirements during this period rather than to provide banks with equity injections from public funds to meet bank capital adequacy requirements. (This idea is also endorsed in the recent U.K. report on financial institution reform drafted by Lord Turner.) If equity was to be provided, it should have been in the form of common equity initially rather than preferred shares that do not carry ownership rights.

Some troubled U.S. banks should be allowed to go bankrupt with the assets sold at distressed prices to private equity investors ultimately and, if necessary, to government temporarily until private buyers can be identified.

The Obama plan announced on Monday, March 23 to buy and then sell $1,000 billions of toxic bank financial assets, at deep discount, to risk-taking private investors is a move in the right direction. This plan is more in the interest of U.S. tax-payers. It will test the appetite for a market solution (as opposed to statism) to the current financial crisis.

## 4. Current Financial Markets Outlook

Financial market product prices in both mature and emerging economies are moving in tandem during this crisis. Lost in this development is the power of diversification of risks that prompted many investors to internationalize the composition of their portfolios of both financial and real assets. Risks that cannot be diversified away are increasing and the conventional textbook wisdom that equity markets, for example, only price for non-diversifiable (systematic) risk, is being challenged. What is happening this year is similar to what we observed in the meltdown of global equity prices in October of 1987 when total risk, in addition to systematic risk, was being priced in the equity markets.

In the long-run, in a more stable environment, I am convinced that equity markets will revert to pricing systematic (non-diversifiable) risk rather than total risk. More difficult to predict is how long the short-term pricing of total risk will persist.

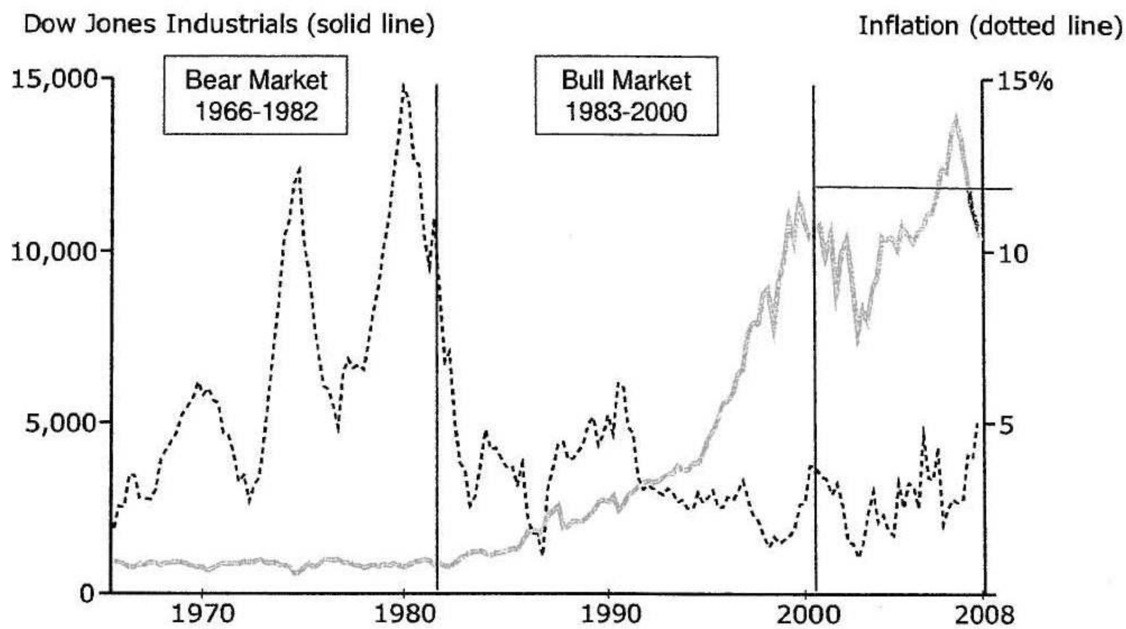
### 4.1 Long Equity Market Pricing Cycles

The U.S. equity market has been characterized by long market cycles. We are coming off a bull market period that has extended from 1983-2007 (with some correction in 2000-2001). The last U.S. bear market lasted 16 years from 1966-



1982. The prior bull market extended from the end of the second World War through to 1966. (See Figure 1 for a graph of the last two long equity market cycles in the U.S.)

**Figure 1: U.S. Equity Market Cycles: 1966 - 2008**




Source: Bureau of Labor Statistics, Dow Jones

**Note: The value of the Dow Jones index of stock prices peaked at 14,155 on October 9, 2007. On March 9, 2009, the Dow Jones index was trading 54% lower, at a value of 6,547**

Long stock market price cycles have been observed in other mature national stock markets. We do not have long time series of data for most emerging country stock market indices.

Fear has been driving the equity markets in recent months and we do not have adequate financial theory to guide us under these pricing conditions. I expect continued high volatility in intra-day stock price movements in the short-term.

Equity markets typically respond with upward stock price increases before we exit from a recessionary period. For the short cycle, we should expect this to happen again.

Barring additional bad news regarding the asset quality of bank assets, global equity prices may have bottomed in March of 2009. I think, however, that we will see lower than normal equity market returns on a global scale over the next decade.

### 4.2 Alternate Investments Are Also Under Stress



Currently, alternative investment choices do not seem very attractive. Bond yields are very low today, perhaps providing negative real returns in many countries. Real estate prices could fall further, reverting to more normal levels. Hedge funds are struggling and experiencing large-scale withdrawals of investors' funds. Private equity funds are vulnerable if inflation induces an upward spiral of nominal interest rates. While cyclical, commodity prices tend to move long-term with inflation rates.

**5. The Longer-Term Outlook for the U.S. Economy**

America has become a nation of debtors, relying on co-operation from other countries to support high levels of current domestic consumption and over-promising regarding future social benefits. Consider the following historical developments, documented recently in "IOUSA The Movie: One Nation, Under Stress, In Debt".

**5.1 Evolution of U.S. Federal Government Debt**

Historically, U.S. federal governments have issued larger amounts of debt in periods of war. The federal government debt, as a % of GDP, hit 14% during the War of 1812, 27% during the Civil War, 35% during World War I, 44% during 1929-1939 depression, and 122% during World War II. The recent Bush government left with a government debt level of 66% of GDP. The last time the U.S. government had no debt was in 1835. Unless taxes are increased or future social benefits reduced, the 2040 forecast (IOUSA) is for a federal government debt level equal to 244% of GDP - $175,000 per person in the U.S (I.O.U.S.A).

**5.2 U.S. Private Savings Rates**

As a % of disposable income, U.S. households saved 14.4% during the 1960's, 13.6% in the 1980's, 6.7% in the 1990's, and negative savings projected for the full decade of the 2000's. (IOUSA). With negative savings, the U.S. is now dependent on other nations to support its domestic consumption pattern, military campaigns, and growth.



### 5.3 International Trade Surpluses

During 2007, China had a trade surplus (exports minus imports) of $341b. Germany's surplus was $245b. The U.S trade deficit (imports minus exports) this year was $816b! (IOUSA). This set of conditions is not sustainable.

### 5.4 Foreign Ownership of U.S. Federal Government Debt

In 1945, all of the U.S. federal government debt obligations (treasury bills and government bonds) were owned by U.S. investors. By 1975, foreign investors (Japan in particular) owned 17% of these debt instruments (largely to settle trade imbalances). By 1995, foreign investors held 22% of U.S. government debt issues, with this number peaking at 45% in 2007 (IOUSA). China was the largest investor in 2007, holding $2,300 billions ($2,300,000,000,000) of U.S. government debt obligations. And, at a recent G20 meeting in London, the Chinese representative publicly questioned the safety of these financial investments.

### 5.5 U.S. Federal Government Current Debt and Future Promises

The total outstanding U.S. government debt was $11,000 billions in 2007. But current promises to American citizens (mainly for future social security and medicare benefits) swell this commitment to an estimated $53,000 billions by 2040 unless U.S. taxes are increased and/or future benefits are decreased. The current average tax rate on personal incomes is 20.5% in the U.S. To bring the U.S. federal debt rate back to zero by 2040 would require an average tax rate on personal incomes of 42% over the next 30 years! (I.O.U.S.A.). Again, the current situation is not sustainable.

## 6. The Changing Order Of Geo-political And Economic Dominance.

China should emerge soon as the next great economic power. Europe had its turn in the height of the colonization period during the 19th century. The U.S. is in decline after dominating the 20th century. China will own most of the 21st century. China's term may not coincide with the resolution of the current economic crisis, but it will come during the first half of this century.

Aside from its rising real economy, consider the global financial power being accumulated by China. As indicated earlier, the largest creditor to the U.S. today is China which owns $2.3 trillions (more than 25%) of U.S. government debt. The U.S. had a similar position with respect to the U.K. in 1956 and used the threat of selling off this position to influence Britain and France to back off from its attempt to occupy the Suez Canal during 1956. Could China threaten to do something similar to promote its geo-political agenda as the emerging global economic power?

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