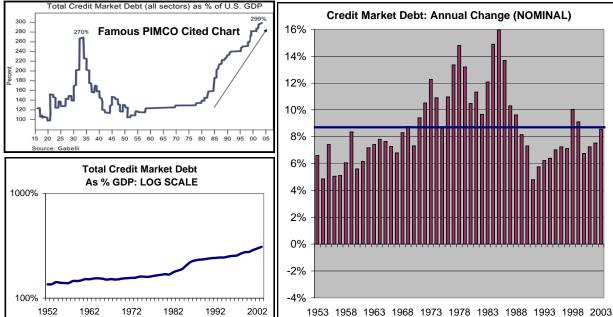
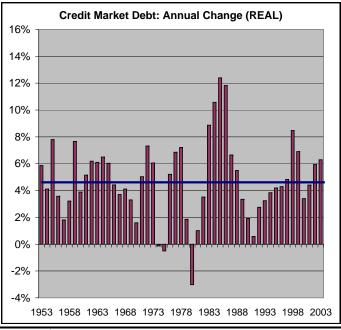
ANALYSIS OF TOTAL CREDIT MARKET DEBT

- 1) This analysis relates to the often-cited statistic that "Total Credit Market Debt" in the U.S. has reached 300% of Gross Domestic Product (GDP), a historically high level.
- 2) The data is accurate; the details are revealing. The often cited implication is that credit market leverage has soared and that the system is vulnerable to implosion or inflation as a result of a leverage bubble. Those comments and conclusions don't fully consider the underlying details.
- 3) The attached schedule includes the details related to the "Credit Market Debt" data. It drills down to the segments that comprise the totals. As well, it provides data points at the start of the plateau (1952), at the inflection point before the surge (1981), and at the recent peak (2003).
- 4) The so-called surge has resulted for a number of reasons, many of which pose relatively low risks to the system.
 - a) Substantial mortgage debt has been added to the ratio, especially after 1981
 - b) A significant number of workers were added to the economy in the 1970's
 - c) A growing economy with retained net worth can sustain higher debt levels
 - d) The substantial decline in the cost of debt encouraged and supported higher debt levels
 - e) Several developments (i.e. FNMA, FHLMC, GNMA, asset-backed securities, etc.) facilitated efficient leverage.
- 5) Home mortgage loans increased from 16% of GDP in 1952 to 66% of GDP in 2003, almost one-third of the increase in "Total Credit Market Debt."
- 6) The civilian workforce increased by 30% in the 1970's, over twice the level for any decade before or after the 1970's. This provided the foundation for a surge in borrowings in the early 1980's.
- 7) Several elements of debt are often overlooked. The most significant is that asset-backed debt has a different implication for on the economy than income-supported debt. An example can be presented in terms of Mr. Smith and Mr. Jones, both of which have annual incomes of \$50,000. Mr. Smith has \$50,000 in credit card debt and Mr. Jones has \$150,000 in home mortgage debt. Who is more leveraged and who represents the greatest credit risk to the system? Mr. Smith is dependent upon his income to repay his debt; Mr. Jones could sell the asset to cover most or all of his debts. Since a significant part of the increase in "Total Credit Market Debt" has been asset-backed debt, the risk to the system is less than it would be if all had been income-dependant. Very important to note as well, the families that bought homes substituted mortgage payments for rents--their monthly costs generally stayed the same. However, the mortgage loan adds substantial debt to the total credit market debt ratio. And rather than losing income to rentals, families built significant equity net worth through home ownership.
- 8) When the cost of debt (interest rates) fell from well over 10% to well less than 10%, borrowers could sustain greater debt levels for the same cost. Debt levels that were artificially suppressed during the high interest rates of the late 1970's, were made up as rates declined in the 1980's.
- 9) As financial markets become more efficient in the 1980's and after, consumer and business debt increased. The efficiency and lower debt costs from mortgage-backed securities, consumer debt pools, and other structures took consumers directly to the credit markets.
- 10) Debt and leverage should be considered across several measures. Many of these conditions have improved over the past decades and reduce the significance of the "Total Credit Market Debt" ratio. First, debt that is backed by assets (e.g. mortgage loans, car loans, etc.) has less risk to the system than income-dependent debt (THUS, look at debt-to-assets). Second, lower interest costs justify higher borrowings (THUS, currently lower interest rates, compared to the double-digit era around 1980, facilitates higher total debt levels). Third, net debt, after considering asset collateral, should be considered in relation to the net worth/equity of the borrower (THUS, two borrowers with the same income level but different net worths can support different levels of debt).

CONCLUSION: The often cited chart reflecting a surge in Total Credit Market Debt as a % of GDP is distorted by a number of factors. One of the most significant reasons is that many families have substituted mortgage payments for rents and, without changing their costs, increased the debt ratio. Ironically, the shift built significant equity value. Further, when the long-term series is viewed on a standard logarithmic scale to show percentage gains over time, the chart becomes much less dramatic (see lower left chart). On a real basis, adjusting for inflation, the rate of growth has been relatively constant over the past 50 years (see lower right chart).

ANALYSIS OF TOTAL CREDIT MARKET DEBT 1952 1981 2003 **DEBT % OF GDP ASSETS % OF GDP** DEBT ASSETS **EQUITY DEBT ASSETS EQUITY** DEBT **ASSETS** NET 1952 1981 2003 1952 1981 2003 Total Credit Markets 485 485 5,269 5,269 34,029 34,029 135% 168% 309% 135% 168% 309% Domestic nonfinancial sectors 458 164 (294)4,366 990 (3,376)22,299 3,706 (18,593)128% 139% 203% 46% 32% 34% 3,956 Rest of the world 15 5 (10)221 217 (4) 651 3,305 4% 7% 6% 1% 7% 36% 101% 88% 240% Financial sectors 11 316 305 682 4,063 3,381 11,079 26,3Ø7 15,288 3% 22% 130% Domestic nonfinancial sectors 458 164 (294)4,366 990 (3,376)22,299 *3*,706 (18.593)128% 139% 203% 46% 32% 34% Federal government 221 19 (202)820 188 (632)4.033 286 (3,747)62% 26% 37% 5% 6% 3% Nonfederal sectors 237 145 (92)3.546 802 (2,744)18.266 3.420 (14,846)66% 113% 166% 40% 26% 31% Household sector 94 105 11 1.513 444 9.281 2.201 (7,080)26% 48% 84% 29% 14% 20% (1,069)Nonfinancial corporate business 85 26 (59)1,027 109 (918)4.986 289 (4,697)24% 33% 45% 7% 3% 3% 2,232 Nonfarm noncorporate business 16 3 (13)457 24 (433)78 (2,154)4% 15% 20% 1% 1% 1% Farm business 11 (11)178 (178)206 (206)3% 6% 2% 0% 0% 0% State and local governments 31 12 (19)372 226 (146)1.560 852 (708)9% 12% 14% 3% 7% 8% 26,367 22% 11 316 305 682 4.063 3.381 11.079 15.288 3% 101% 88% 130% Financial sectors 240% Banks, S&Ls, Credit Unions 186 185 184 2.202 2.018 951 7,769 6.818 0% 6% 9% 52% 70% 71% 1 Insurance Companies 75 75 552 552 8 3,128 3.120 0% 0% 0% 21% 18% 28% GSEs & Federal Mortgage Pools 2,583 10% 55% 7% 23% 4 2 324 218 (106)6,061 (3,478)1% 1% **Asset-Backed Securities** 130 130 2,396 3,488 1,092 0% 0% 22% 0% 4% 32% Money Market & Mutual Funds 3 3 214 3,153 0% 2% 1% 5% 29% 146 142 2,939 0% 4 Finance companies (7)142 (142)939 2,100 1,161 2% 5% 9% 0% 0% 19% Private & public pension funds 13 13 348 348 1,549 1,549 0% 0% 0% 4% 11% 14% Other 34 33 2,597 0% 5% 15% 28 467 439 2,087 1% 9% 24%





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