

## A PERSPECTIVE ON POST NEW ECONOMY BUSINESS CYCLE BEHAVIOR

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### Abstract

By mid-to-late 2001 the NASDAQ Index retraced virtually all of the gains it had achieved during the “new economy” boom. For many market participants that market behavior signaled the end of business cycle activity in the U.S. economy. We apply Austrian Business Cycle Theory to post-new economy market behavior and show how, via expansion of the money supply as measured by M3 and expansion of the national debt, business cycle activity is continuing in the U.S. economy, albeit in a different form. This position is illustrated in an examination of the price behavior of the NASDAQ Index, real estate market, oil market, and gold market. Subsequent to this discussion it is shown how to integrate business cycle analysis with value-based indicators such as low dividend yields and low price-to-earnings ratios to enhance traditional forms of investment analysis. Note that this is not a paper on investment technique; rather, it explains and demonstrates a practical application of business cycle theory.

### **Introduction**

The new economy boom *topped out*, or achieved its highest price level, in March of 2000. Thereafter, the NASDAQ Index retraced virtually all of the gains it had achieved during the boom by mid-to-late 2001. For many people, these facts signaled the end of business cycle activity in the United States economy. Through the use of business cycle theory and price analysis we examine whether business cycle activity has ended since the new economy bust or if it is continuing, albeit in different form. We then address the investment implications of either situation (the end or continuation of business cycle activity) before summarizing our findings in a brief conclusion.

In an earlier paper we showed how the boom and bust waves of business cycles could be analyzed from an investment perspective.<sup>1</sup> The analytical approach utilized was a synthesis of

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Austrian Business Cycle Theory (ABCT), the theory of reflexivity, which is an alternative market theory to the more popular efficient market theory (EMT),<sup>2</sup> and a technical model of a typical boom and bust.<sup>3</sup> The result was the identification of the following eight stages of a business cycle:

- *Stage One* – during this stage business fundamentals (i.e., data pertaining to revenues, costs, profit, etc.) seem much stronger than the market’s valuation of those fundamentals as reflected by low relative market prices. Governmental leaders strive to resolve this dilemma by *priming the pump*, or expanding credit by increasing the money supply. This act artificially decreases the interest rate thereby igniting a *boom*, or a trend of very powerful buying. The analysis of this stage follows ABCT very closely, as will be discussed in greater detail below.
- *Stage Two* – buying gains momentum as consumers and investors respond to the artificially low interest rates.
- *Stage Three* – buying temporarily halts as the market forms a *significant short-term price top*, which is a technical name for the highest price reflected on a price graph over a specific, relatively short-term period of time. For example, in the context of the new economy boom such a top is identified in CHART 1 below by a thick block down-arrow.
- *Stage Four* – given the strong fundamentals the probability of the market price recovering from the Stage Three sell off is very high. When prices rise above that top it will signal technically oriented investors that a powerful trend has begun, which will cause them to aggressively buy into the trend.
- *Stage Five* – the powerful buying begins to decelerate and is in danger of stalling (or possibly even reversing). To prevent this from occurring market participants close the interaction between the fundamentals and market pricing.<sup>4</sup> They generally

accomplish this by focusing on *fundamental substitutes* rather than fundamentals to justify boom driven buying. For example, during the new economy boom two of the most popular fundamental substitutes utilized by market participants were *eyeballs* and real option valuation. “Eyeballs is a term that was used to describe the amount of times an Internet website was ‘hit’ or visited by an individual Internet user. In eyeball valuation, each of these hits is assigned a monetary value, the sum of which was purported to be the value of the new economy firm.”<sup>5</sup> The focus on fundamental substitutes helps to provide a rationale for price levels that are no longer fundamentally supportable. Significantly, that rationale reconciles with the perceived “new” condition driving the boom, e.g., the “new economy” was driven by the belief that the new technology of the Internet would materially and substantially change the way consumers purchase goods and services, which is something that can be captured by eyeballs and real options even if though it was not correct.<sup>6</sup>

- *Stage Six* – is the boom’s final and most powerful price run. It is also the stage during which price spikes begins to emerge. As a result, governmental leaders begin to tighten credit, eventually ending the boom.
- *Stage Seven* – during this stage “the actual fundamentals begin to decline due to the lack of buying, which in conjunction with the rising interest rates causes the fundamental substitutes to deteriorate, which in turn generates increasingly intensive investment liquidation and marginal short selling. This market behavior feeds off itself thus perpetuating a *bust*, or the dynamic reversal of the boom wave”.<sup>7</sup>
- *Stage Eight* – the market price declines to pre-boom price levels and in the process forms a well defined bubble-like price structure that characterizes a complete market reversal.

To illustrate the use of these criteria consider the below chart, which is a graphical depiction of the new economy via a comparison of the NASDAQ Index and the Dow Jones Industrial Average (DJIA):<sup>8</sup>

CHART 1: THE NEW ECONOMY BUSINESS CYCLE – 1991 to 2002



Source: *BigCharts.com*. The block down-arrow denotes the significant short-term price top made in Stage Three of the business cycle. The double sided arrow denotes that the new economy boom and bust occurred on high momentum, which is a typical business cycle characteristic.

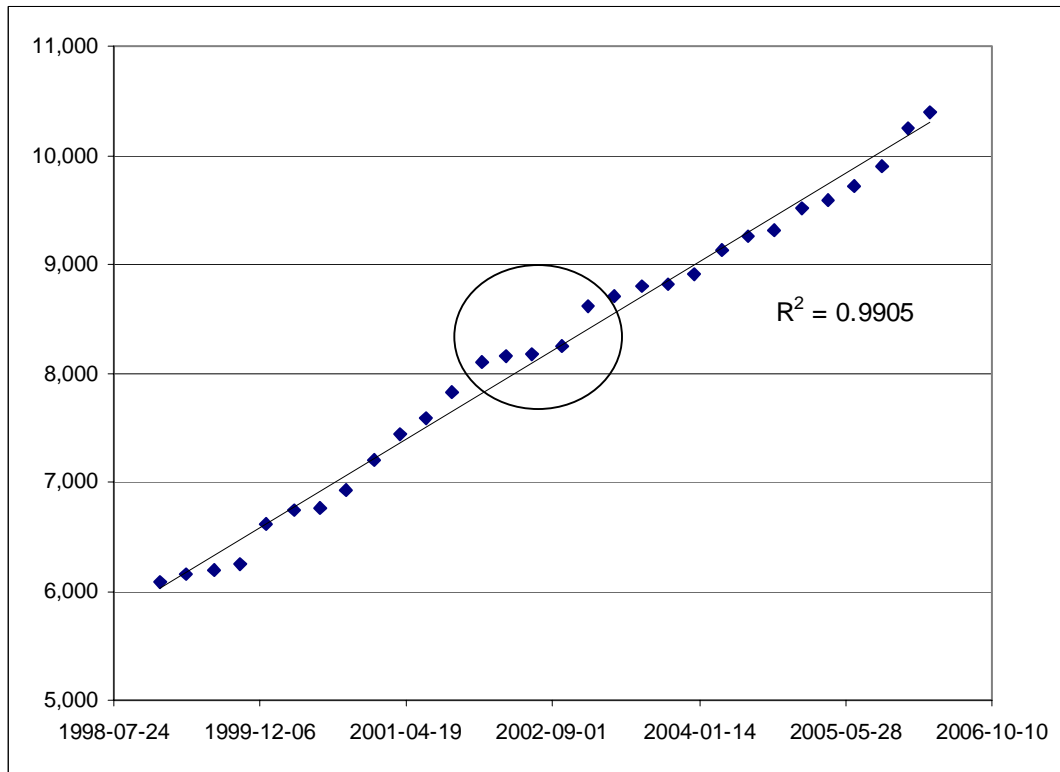
The numbers of each of the stages described above are included on the chart for convenience. Note that the bottom panel of the chart is a *momentum* display. Momentum is a relatively common technical indicator, and is included on the chart to provide insight into the power of the buying and selling that characterized this business cycle.

### Post New Economy Business Cycle Activity

ABCT holds that business cycles end when credit expansion—and any other form of market intervention—ends.<sup>9</sup> With respect to the new economy business cycle, while the Federal

Reserve (Fed) did tighten credit to some extent, which served to end the new economy boom,<sup>10</sup> it resumed credit expansion during the bust. Consider, for example, the below:

CHART 2: M3 – 1998 to 2006



Data source: *Board of Governors of the Federal Reserve System*, units in billions. Data are displayed from December 28, 1980 to March 13, 2006 in three month intervals. In March of 2006 the U.S. Federal Reserve (Fed) stopped providing data on M3. According to a piece in *The Economist* recently: “The Fed claims that M3 does not convey any extra information about the economy that is not already embodied in the narrower M2 measure, so it is not worth the cost of collecting it. It is true that the two Ms move in step for much of the time, but there have been big divergences. During the late 1990s equity bubble, for example, M3 grew faster; over the past year, M3 has grown nearly twice as fast as M2. So it looks odd to claim that M3 does not tell us anything different. The Fed is really saying that it doesn’t believe money matters.” Source: “Running on M3 – Ignore money at your peril.” *The Economist*. March 25, 2006. p. 12.

The circled data in CHART 2 above shows that after a period of stabilization the money supply—as measured by M3—started to once again expand. Such monetary activity is generally undertaken for political reasons to ease the economic trauma of business cycle recoveries, which frequently result in recessions or depressions. However, and as Murray Rothbard has explained:

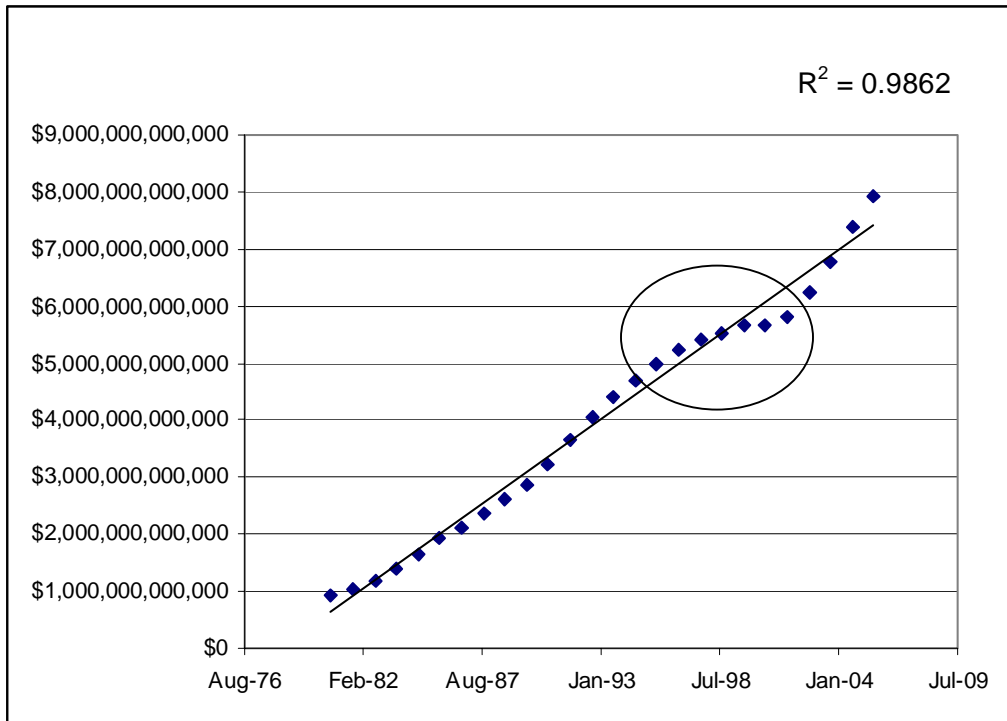
The “depression” is ... the necessary and healthy phase by which the market economy sloughs off and liquidates the unsound, uneconomic investments of the boom, and reestablishes those proportions between consumption and investment that are truly desired by the consumers. The depression is the painful but necessary process by which the free market sloughs off the excesses and errors of the boom and reestablishes the market economy in its function of efficient service to the mass of consumers.<sup>11</sup>

In the case of continued credit expansion Rothbard warns:

The government must not try to inflate [the money supply] again, in order to get out of the depression. For even if this reinflation succeeds, it will only sow greater trouble later on. The government must do nothing to encourage consumption, and it must not increase its own expenditures, for this will further increase the social consumption/investment ratio. ... What the economy needs is not more consumption spending but more saving, in order to validate some of the excessive investments of the boom.<sup>12</sup>

With respect to not increasing government expenditures, as the below chart illustrates governmental expenditures as reflected by the U. S. national debt slowed during the new economy, but have increased tremendously since the bust (as has growth in the money supply):

CHART 3: U.S. NATIONAL DEBT – SEPTEMBER 1980 to SEPTEMBER 2005



Data source: *Bureau of Public Debt*, for the years 1980 to 1984 the data provided were rounded in millions. The data displayed are from September, 1980 to September, 2005.

Despite the powerful increase in both the money supply and national debt the price behavior of the NASDAQ Index, which perhaps best characterized the new economy business cycle, has not exhibited a resumption of boom-like buying:

CHART 4: NEW ECONOMY AND POST NEW ECONOMY MARKET BEHAVIOR – 1991 to 2006



Source: *BigCharts.com*. The double sided block arrow points to the fact that while the NASDAQ is diverging somewhat from the DJIA since the new economy bust, it is doing so on relatively low momentum. This is significant because boom waves are characterized by very powerful momentum.

The NASDAQ Index bottomed out in 2002 around the same time that growth in the money supply was flat (see the circled data in CHART 2 above) and growth in the national debt had stabilized (see the circled data in CHART 3 above) lending credence to Rothbard's above comments, i.e., of a market readjusting following the volatility of a business cycle. Nevertheless, as the new economy boom has not re-ignited following post-bust intervention the question arises what affect, if any, that intervention has had/is having on market behavior and pricing? To

address this question we first review ABCT and then we apply that theory to select areas of post new economy market behavior.

### **Austrian Business Cycle Theory**

By way of overview, ABCT was founded by Ludwig von Mises,<sup>13</sup> and was influenced by the earlier work of Swedish economist Knut Wicksell. Mises' work was developed by Friedrich von Hayek whose research on business cycle theory was cited by the *Royal Swedish Academy of Sciences* when it awarded Hayek the Nobel Prize in Economics in 1974.<sup>14</sup> ABCT is discussed cogently in a variety of essays—including essays written by both Mises and Hayek—that were compiled by Richard Ebeling,<sup>15</sup> by way of an enlightening case study on the Great Depression by Murray Rothbard,<sup>16</sup> and from a modern, uniquely Austrian macroeconomic perspective by Roger Garrison.<sup>17</sup>

ABCT is a well developed theory from the perspective of business cycle causes and what the effects of business cycles are, i.e., business cycles begin once governmental leaders intervene in an economy to influence the buying/selling patterns of market participants. The buying characterizing a business cycle boom is inordinately powerful and frequently extends over a period of years, which is a combination that generates a behavioral phenomenon that has famously come to be known as *irrational exuberance*.<sup>18</sup> Such powerful buying eventually and inevitably generates price spikes, as the easy money makes it way through an economy, which causes the leaders who expanded credit to eventually reverse course. This change in course serves to transition the boom to bust.<sup>19</sup> After the bust ends a period of recovery ensues wherein market participants liquidate the unprofitable investments made during the boom. This period of adjustment frequently entails defaults, delinquencies, bankruptcies, etc., as the malinvested capital is reallocated to more economically viable investments.<sup>20</sup> As explained by Rothbard:



The adjustment process consists in rapid *liquidation* of the wasteful investments. Some of these will be abandoned altogether (like the Western ghost towns constructed in the boom of 1816-1818 and deserted during the Panic of 1819); others will be shifted to other uses. Always the principle will not be to mourn past errors, but to make the most efficient use of the existing stock of capital. In sum, the free market tends to satisfy voluntarily-expressed consumer desires with maximum efficiency, and this includes the public's relative desires for present and future consumption.<sup>21</sup> The inflationary boom hobbles this efficiency, and distorts the structure of production, which no longer serves consumers properly. The crisis signals the end of this inflationary distortion, and the depression is the process by which the economy returns to the efficient service of consumers. In short, and this is a highly important point to grasp, the depression is the "recovery" process, and the end of the depression heralds the return to normal, and to optimum efficiency. The depression, then, far from being an evil scourge, is the *necessary* and beneficial return of the economy to normal after the distortions imposed by the boom. The boom, then, *requires* a "bust."<sup>22</sup> (Italics original)

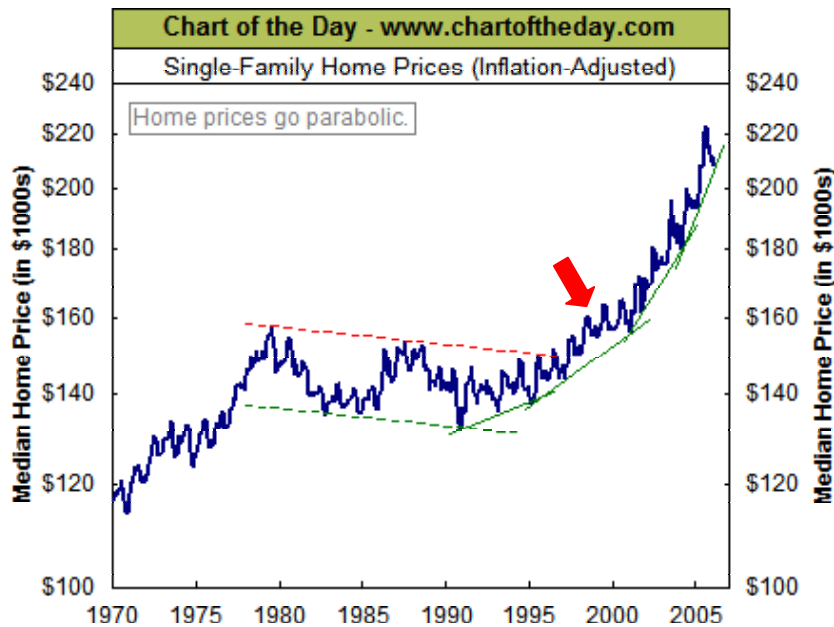
Despite the warnings of Austrian Economists such as Rothbard, many governmental leaders do "inflate again" following a bust, e.g., CHART 2 above. The theory behind such intervention has broadly, and generally, come to be known as *soft-landing theory*, which according to Bob Woodward involves "taking preemptive action to increase interest rates months before actual [price] inflation showed up. This could take the top off the coming boom, moderate and stabilize the economy and prevent [price] inflation—and a recession."<sup>23</sup> However, and as events since 2000 have shown—see for example CHART 1 above—the soft-landing theory certainly did not "take the top off" the new economy: the price bubble is easily observable on virtually any price chart of the NASDAQ Index during the period of the new economy business cycle.

Regarding the claim that post cycle intervention can "moderate and stabilize the economy and prevent [price] inflation," ABCT is very clear that further credit expansion or market intervention only exacerbates economic problems; it does not resolve economic problems that surface in a boom-bust recovery. For example, Murray Rothbard in his *America's Great Depression* presents a number of arguments supporting the position that continued credit expansion, as well as other forms of market intervention, prolonged recovery from the "new era" business cycle of the roaring twenties, i.e., governmental intervention prolonged the Great

Depression. However, Ben Bernanke—the current Chairman of the Federal Reserve System (Fed)—has argued that a credit squeeze (i.e., governmental inaction) was a cause in prolonging the length of the Great Depression.<sup>24</sup> Such disparate positions present a conundrum for anyone trying to make use of the economic insights from that event. Fortunately, Antony Mueller reconciled the discrepancy somewhat by noting that intervening in a business cycle recovery can bring relief in the short run but only at long run costs.<sup>25</sup> Significantly, such costs can generate substantial investment opportunities for astute and well capitalized investors, which will be discussed below.

According to ABCT, when easy money is pumped into an economy its effects are generally first felt in the capital markets.<sup>26</sup> If monetary tightening occurs the effects of the period of expansion will be fully adjusted after a period of recovery. However, if credit expansion resumes, the easy money will continue to make its way through the economy affecting select markets accordingly. To put this into context, consider the behavior of the real estate market:

CHART 5: HOUSING PRICES – 1970 to 2006



Source: *Chart of the Day*. The block down-arrow denotes price consolidation around the historic high price level formed in the late 1970s. Such consolidation often precedes powerful price breakouts and trends.

As the above chart illustrates, just as the NASDAQ boom was maturing the housing market started to challenge a historic twenty-five year market high that was established in the late 1970s. After consolidating around that high for some time the housing market broke out into a powerful uptrend just as the NASDAQ Index was retracing all of its gains, in mid-to-late 2001. This was not an economic coincidence. After highly entrepreneurial (or speculative) investments such as those reflected, for example, in the NASDAQ Index perhaps no other market is more sensitive to interest rate manipulation than the real estate market.

Nevertheless, during much of the new economy boom the real estate market in general was selling at relatively low levels. For example, and as John Neff—the former manager of the highly successful Windsor Fund—stated in his autobiography:

Historical [dividend] yield advantages become tougher to duplicate as bull markets gather steam. But even in steamy 1998 and 1999, opportunities did not vanish entirely. Investors comfortable with real estate investment trusts (REITs) grabbed yields of about 7 percent—quite a striking margin over the 1.4 percent yield by the S&P 500.<sup>27</sup>

Earning a 7 percent yield while waiting for price appreciation with a relatively high probability of occurring is an extremely appealing investment option. With regard to the high probability of REITs prices appreciating, and as indicated above, real estate in general is one of the most interest rate sensitive forms of investment. Thus, following the new economy bust, real estate prices had a relatively high probability of increasing as, *ceteris paribus*, lower interest rates equate to higher real estate values. And as the above charts illustrate, the real estate market in general started to accelerate (CHART 5) following the resumption of the Fed's credit expansion (CHART 2). To put this market behavior into context, consider a comparison of the Dow Jones Wilshire Real Estate Securities Index with the DJIA in a format similar to the one utilized to analyze the new economy boom-bust (CHART 1):

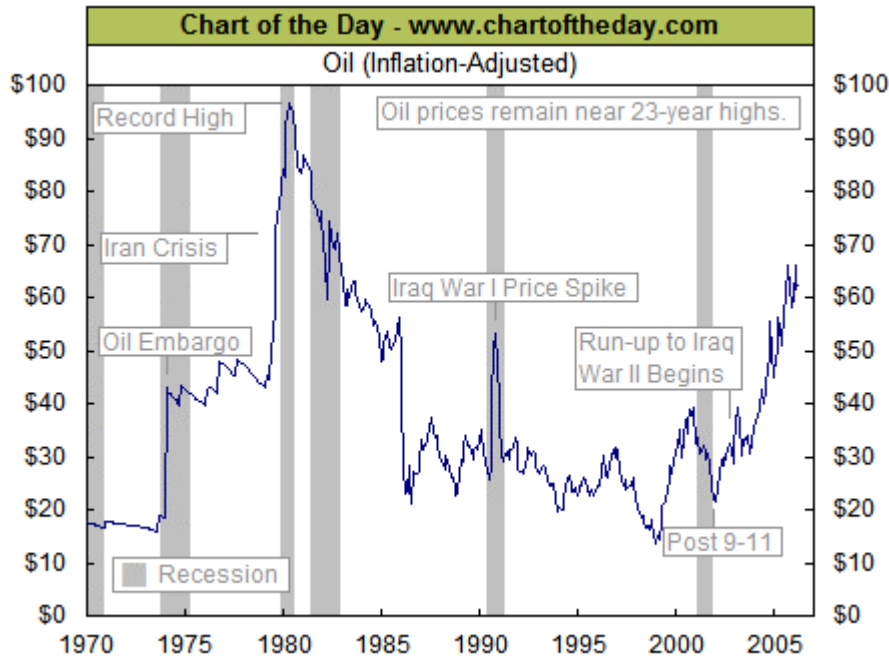
CHART 6: DOW JONES WILSHIRE REAL ESTATE SECURITIES INDEX  
 COMPARED TO THE DJIA – 2004 to 2006



Source: *BigCharts.com*. The number 26199Y17 is the symbol for the Dow Jones Wilshire Real Estate Securities Index. Data before 2004 are unfortunately not available.

In less than two years real estate prices as measured by the Dow Jones Wilshire Real Estate Securities Index have far outstripped the DJIA. However, such price appreciation has “put homeownership out of reach for more people than at any time in more than a decade.”<sup>28</sup> Additionally, the continued credit expansion has started to cause prices to generally inflate. The exact correlation between the extent of credit expansion and the corresponding extent of price spikes is difficult to measure. However, as Rothbard has generally observed, “the larger the increase in money stock, the greater, *ceteris paribus*, will be its impact on prices.”<sup>29</sup> The implications of this on overall prices given the nature and extent of the increase in the money supply thus far (see CHART 2 above) are significant. For example, consider the price of oil:

CHART 7: OIL PRICES – 1970 to 2006



Source: *Chart of the Day*

As the above chart illustrates, the price of oil has increased dramatically—to a twenty year high—subsequent to the 2001 new economy bust. To put this price run-up into context compare the price of oil via the AMEX Oil Index (XOI) to the DJIA in a manner consistent with our above graphical treatment of the NASDAQ and the Dow Jones Wilshire Real Estate Securities Index:

CHART 8: XOJ COMPARED TO THE DJIA – 1991 to 2006



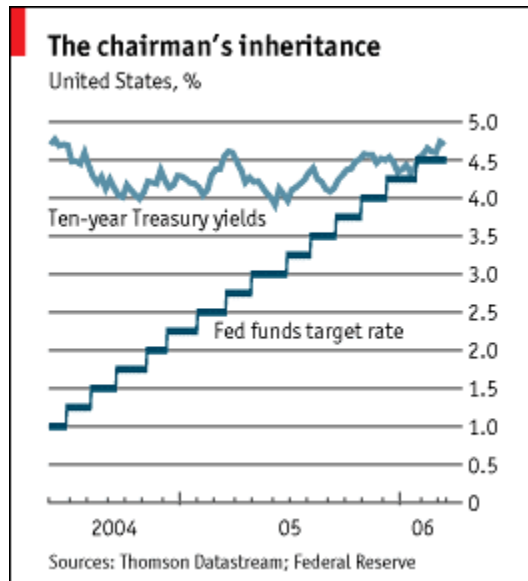
Source: *BigCharts.com*. The thick horizontal line denotes a period of long-term price consolidation. The double-sided block arrow denotes that the XOJ's powerful uptrend occurred on relatively high momentum, which is a typical boom wave characteristic.

As the chart illustrates, the gap created between the DJIA and the XOJ that started to form in 1991 has been closed by a high momentum price uptrend. There are two significant aspects of this uptrend. First, it broke out over a relatively long period of consolidation, which is a technical indicator of price trend sustainability.<sup>30</sup> And second, the highest market price recorded by the XOJ during the consolidation occurred in early-to-mid 2001 or the period of transition from the new economy to post new economy business cycle activity.

### **Investment and Post New Economy Business Cycle Activity**

There have been a number of articles published on the sustainability of the current real estate market boom.<sup>31</sup> Some look to the recent pattern of Fed Funds rate increases, which are illustrated below, to support the hypothesis that the real estate boom is nearing its end:

CHART 9: FED FUNDS RATE DEVELOPMENT – 2003 to 2006



Source: “Bernanke ponders his course.” *The Economist*. March 25, 2006.  
[http://www.economist.com/displaystory.cfm?story\\_id=5662615](http://www.economist.com/displaystory.cfm?story_id=5662615).

Indeed, the real estate boom in general does seem to be cooling a bit as Fed increases lead to higher mortgage rates.<sup>32</sup> The ending of this boom could be economically significant as the real estate market in general serves as a consumption catalyst for so many other markets including the construction trades, building materials such as lumber, copper, etc.,<sup>33</sup> and of course home equity financed driven consumption.

However, the fact that money supply inflation—as measured by M3—has accelerated (see CHART 2 above) suggests that governmental support for boom driven buying still exists. Additionally, default rates as measured by the U.S. High Yield Default Index are extremely low suggesting the absence of the financial distress frequently observed during busts and recoveries in general, and that was observed in the years following the new economy bust (i.e., 2001 and 2002) in particular.<sup>34</sup> Nevertheless, enough uncertainty exists regarding the nature and extent of that support to suggest that investors with interest rate sensitive investments such as real estate should consider ways of protecting the value of those investments.<sup>35</sup> Fortunately, investors will have the option of hedging real estate investments via ten separate real estate indices being offered by

S&P.<sup>36</sup> Such an offering facilitates relatively routine hedging operations through futures and options, and thus is a substantial benefit that past investors unfortunately did not have the luxury of.

In addition to hedging, investors could consider liquidating investments that are no longer characterized by a favorable value gap, i.e., investments that are no longer selling at a discount to expected value.<sup>37</sup> With regard to the advisability of liquidating investments during a boom, legendary money manager Victor Sperandio has, for example, commented on “the profit potential of riding the governmental bubble in the initial stages of inflation, jumping off early, and being on solid ground when the bubble burst, waiting to pick up the pieces.”<sup>38</sup>

In addition to defensive tactics such as those described above, there are several offensive investment tactics that can be utilized during business cycle activity. For example, market participants could consider coordinating investments with the possible resumption of the oil boom through an analysis of the eight business cycle stages discussed above, e.g., buying during the boom stages, liquidating as the boom tops out, and selling short during the bust stages. Additionally, ancillary markets, i.e., other interest rate sensitive markets that have not experienced as pronounced a boom or uptrend, could also be analyzed from an investment perspective. For example, consider the case of gold:



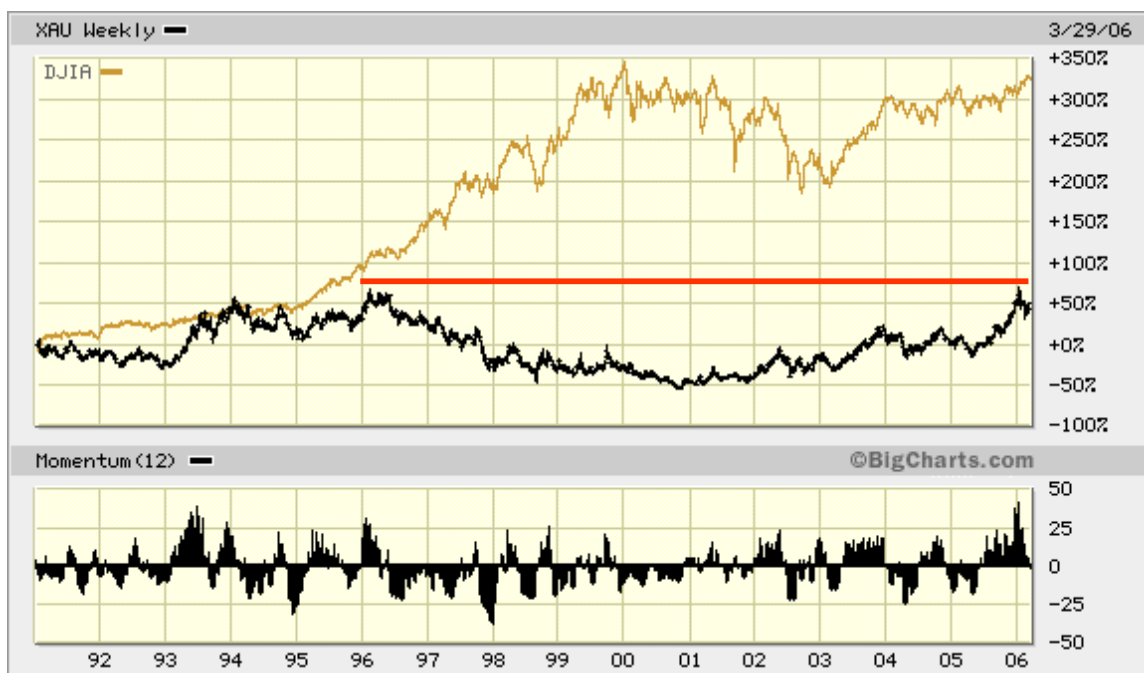
CHART 10: MONTHLY GOLD PRICES – 1976 to 2006



Source: *FutureSource* courtesy of *Lingle Investment Group*. The horizontal bar above the price top formed between 1982 and 1984 denotes an area of price *resistance*, which is a price level above the market where selling pressure is anticipated.

While the price run-up in gold from late 2001 has been to multi-year highs, on a relative basis the price of gold and silver as reflected by the Phlx Gold Silver Index (XAU), for example, continues to lag the DJIA by a fairly wide margin, i.e., the XUA has thus far not exhibited the price behavior reflected by the boom waves in the NASDAQ, the Dow Jones Wilshire Real Estate Securities Index and the XOI:

CHART 11: XAU COMPARED TO THE DJIA – 1991 to 2006



Source: *BigCharts.com*. The thick horizontal bar denotes a significant long term resistance level.

Of potential interest is that the XAU is just starting to challenge multi-year highs (i.e., its prices have not yet broken out above the thick horizontal bar inserted onto CHART 11), which could be extremely significant as investing at new highs can be a very successful strategy,<sup>39</sup> especially during business cycles. In fact, some investors feel there is an informational component to multi-year (or historic) market price highs. For example, Larry Hite (a founder of Mint Investment Management Company) has observed that “When a market makes a historic high it is telling you something. No matter how many people tell you why the market shouldn’t be that high, or why nothing has changed, the mere fact that the price is at a new high tells you something has changed.”<sup>40</sup>

One possible approach to identifying opportunities in a market environment such as the XAU’s, is to utilize value-based indicators such as low price-to-earnings ratios, high dividend yields, etc., to identify potential investments. In this regard, there have been a number of high

profile academic studies that have shown the utility of value-based indicators.<sup>41</sup> Additionally, value-based investing has been utilized over the years by a myriad of extremely successful money managers including Warren Buffett (the popular Chairman of Berkshire Hathaway, Inc.), John Neff (who was mentioned above) and Mario Gabelli (Chairman of Gabelli Asset Management, Inc.).

A relatively recent example of how value-based indicators could have been utilized successfully during a business cycle can be found in the real estate market during the new economy boom. As indicated above, before real estate prices broke out to new highs REIT equities were, in general, selling at very favorable dividend yields. Applying this insight to a search of the equities that make up the XAU Index, for example, reveals the following:

TABLE 1: XAU EQUITIES SCREEN – APRIL, 2006

<b>Ticker</b>	<b>Company Name</b>	<b>P/E</b>	<b>Yield</b>
ABX	Barrick Gold Corporation	38.4	0.79%
AEM	Agnico-Eagle Mines Limited	75.3	0.10%
AU	Anglogold Ashanti Ltd	na	0.36%
DROO.Y	Drdgold Ltd	0	0.00%
FCX	Freeport-McMoRan Copper & Gold Inc.	13.3	2.01%
GFI	Gold Fields Ltd New	0	0.58%
GG	Goldcorp Inc New	37.01	0.61%
HMY	Harmony Gold Mng Ltd	0	0.00%
KGC	Kinross Gold Corp	0	0.00%
MDG	Meridian Gold Inc.	0	0.00%
NEM	Newmont Mining Corporation	62.13	0.77%
PDG	Placer Dome Inc.	104.11	0.45%

Data source: *The Wall Street Journal.com*. This table is for illustration purposes only. It is not a source of investment recommendations.

The above table identifies one firm that *may* be a potentially viable investment from a value perspective: Freeport-McMoRan Copper & Gold Inc. (FCX) is selling at a dividend yield of over 2 percent and at less than 16 times earnings, which is a key historical value threshold.<sup>42</sup> Obviously, substantial research must be undertaken in order to determine if this equity is a viable investment, but this example does illustrate how business cycle analysis could generate investment leads. Continuing along this line we expanded our search into the entire *basic*

*materials* sector of the market, which includes gold, silver and oil equities.<sup>43</sup> For example, we conducted a very basic search of that sector for equities selling at relatively high dividend yields and low price-to-earnings ratios. The partial results of that search are presented below:

TABLE 2: BASIC MATERIALS SECTOR SCREEN – APRIL, 2006

Ticker	Company Name	Mkt Cap	P/E	Return On	
				Equity	Yield
PWI	PRIMEWEST ENE TR	2.311B	13.5	16.2	13.1
PCU	SOUTHERN COPPER C	13.145B	9.1	45.6	13.0
FDG	FORDING CDN COAL	5.499B	7.7	244.6	12.6
DMLP	DORCHESTER MINLS	749.8M	14.4	26.1	11.8
PGH	PENGROWTH EGY UTS	3.682B	12.1	23.7	11.1
ERF	ENERPLUS RES FD	6.039B	14.4	20.1	10.0
PTF	PETROFUND ENERGY	2.570B	12.4	17.6	9.5
PDS	PRECISION DRILL T	4.153B	3.0	13.0	8.5
BPL	BUCKEYE PARTNERS	1.619B	15.8	14.7	6.9
VLI	VALERO LP	2.324B	17.3	9.2	6.8
TCLP	TC PIPELINES LP	583.3M	12.3	16.8	6.8
SXL	SUNOCO LOG PTNRS	1.070B	17.4	12.5	6.8
NBP	NORTHERN BRDR PT	2.227B	16.4	18.8	6.7
MMP	MAGELLAN MIDSTREA	2.208B	16.3	20.0	6.7
PAA	PLAINS ALL AMER L	3.297B	16.4	18.1	6.1
ETP	ENERGY TRANSFER P	4.225B	12.2	26.2	6.1
TNH	TERRA NITR CO COM	379.3M	6.7	41.7	6.0
NRP	NATURAL RES PTNRS	1.324B	15.4	22.0	5.8
YPF	Y P F SOCIEDADE A	21.239B	15.3	18.6	5.6
ARLP	ALLIANCE RES PTNR	1.296B	12.5	151.7	5.1
PVR	PENN VIRGINIA RES	592.2M	11.7	23.6	4.9
CPNO	COPANO ENERGY L.L	802.1M	19.1	16.7	4.9
NL	N L INDS	512.8M	15.8	14.7	4.7
LYO	LYONDELL CHEM CO	4.907B	9.7	18.2	4.5
OLN	OLIN CP	1.574B	11.7	35.7	3.7
DOW	DOW CHEMICAL	39.461B	8.8	32.9	3.7
PTR	PETROCHINA CO ADS	193.213B	11.0	29.3	3.6
UAPH	UAP HOLDING CORP.	1.056B	14.7	66.0	3.5
NHY	NORSK HYDRO ADR	35.720B	14.8	17.3	3.5
WOR	WORTHINGTON INDS	1.810B	14.3	15.2	3.4
RDS-B	ROYAL DUTCH SHELL	219.667B	8.8	28.0	3.4
FRD	FRIEDMAN INDS INC	70.2M	12.5	15.3	3.4
EMN	EASTMAN CHEM CO	4.186B	7.5	39.8	3.4
SXT	SENSIENT TECH COR	833.1M	19.2	6.9	3.3
BP	BP PLC	244.683B	11.2	28.3	3.3
TOT	TOTAL S.A.	155.928B	10.6	34.1	3.1
CVX	CHEVRON CORP	131.967B	9.0	26.1	3.1

*Data source: Yahoo Finance.* This table is for illustration purposes only. It is not a source of investment recommendations.

The above table, similar to the one preceding it, is *not*, of course, a source of investment recommendations. Rather, the tables illustrate how investment leads could be generated from business cycle analysis. These leads were generated on the expectation that intervention in the economy was going to continue, and thus business cycle activity would continue. However, investment leads could also be generated if intervention ceases and markets are allowed to recover through what could be a very painful (and prolonged) period of adjustment. For example, during times of financial distress investments are frequently liquidated at “fire sale” levels to stop capital losses, generate cash to pay creditors, etc. Such situations can result in fairly deep value gaps, which value-based investors have been known to expertly exploit.<sup>44</sup>

Perhaps the most lucrative form of investment during periods of adjustment can be found in bankruptcy proceedings. Investors who specialize in such opportunities are popularly known as *vulture investors*.<sup>45</sup> Despite this pejorative term distressed investing has been and continues to be inordinately lucrative. Undertaking such investments in the context of a business cycle recovery could increase the probability of a successful distressed investment campaign; in other words, by identifying assets under pressure due predominantly to business cycle recovery reasons investors could position themselves to capitalize on relatively favorably priced investments.

### **Conclusion**

Business cycles are not new and their effects are and have been fairly well known, even as far back as the year 1949. For example, Ludwig von Mises wrote during that year:

The teachings of the monetary theory of the trade cycle are today so well known even outside of the circle of economists, that the naïve optimism which inspired the entrepreneurs in the boom periods of the past has given way to a certain skepticism. It may be that businessmen will in the future react to credit expansion in a manner other than they have in the past. It may be that they will avoid using for an expansion of their operations the easy money available because they will keep in mind the inevitable end of the boom. Some signs forebode such a change. But it is too early to make a positive statement.<sup>46</sup>

We are the future businessmen that Mises wrote of and yet business cycles continue to generate extreme volatility during boom waves, bust waves and recovery periods of adjustment.

This paper opened with a description of the eight stages of a typical business cycle and how those stages were utilized to analyze the recent *new economy* boom and bust (CHART 1). Post new economy market behavior was then discussed; specifically, the topic of whether business cycle activity ended with the new economy bust or if it is still occurring, albeit in a different form, was addressed. It was shown that the money supply—as measured by M3—is once again expanding after a brief period of consolidation following the new economy (CHART 2). Further intervention was observed via increased spending as reflected in the growth of the U.S. national debt (CHART 3). The general effect of such acts of intervention is to allow easy money to travel through an economy where its effects are felt in a variety of markets, especially those sensitive to interest rates, e.g., real estate and oil. And those market prices did accelerate as the expansion of money supply and national debt resumed (CHARTS 6 and 7).

One effect of continuous expansion of the money supply is price spikes, such as that witnessed, for example, in the oil market (CHARTS 8 and 9), gold market (CHART 10) and silver and gold indices (CHART 11). It was then demonstrated how investment leads could be generated from business cycle analysis. For example, the Phlx Gold Silver Index (XAU) was shown to be consolidating around a significant long-term price high. In order to capitalize on a potential price breakout of this consolidation it was shown how value-based indicators such as high dividend yields and low price-to-earnings ratios could be utilized to search for potential investment opportunities in the equities that make-up that index (TABLE 1). We then expanded that search into the entire basic materials sector of the market, of which both gold and silver are part, which identified a number of investment leads (TABLE 2).

Business cycle analysis could also be utilized to generate investment leads in the event intervention ends. As ABCT holds, the ending of such intervention allows markets to recover from the effects of the extra market influences via a period of adjustment. Such periods are frequently marked by extensive liquidations as malinvested capital is reallocated. The selling generated by such liquidations can, at times, be overextended; in other words, economically

sound investments can be liquidated at levels below their expected value. Distressed investment tactics could be targeted to capitalize on such situations, i.e., investors can target those assets that are distressed for predominantly business cycle recovery reasons in contrast to those assets that are distressed because of non business cycle reasons, e.g., inefficient operations, suboptimal competitive positioning, etc. This is not to imply that business cycle liquidations will not exhibit elements of inefficient operations, suboptimal positioning, etc., only that such elements will not be the proximate cause of the distressed selling.

In closing, the economic times ahead will likely be turbulent whether business cycle activity continues or ends. However, in turbulence lay opportunity for those with the knowledge, entrepreneurial drive and monetary resources to capitalize on it.

## APPENDIX – FORMS OF MARKET INTERVENTION

Intervention in market activity occurs in a variety of ways such as:

- *By increasing the money supply (CHART 2) and taking other actions to influence interest rates, e.g., adjusting the Fed Funds rate (CHART 9).*
- *Preventing or delaying liquidation, e.g., facilitating loans and other forms of capital to troubled businesses. The phenomenon of protecting troubled firms instead of allowing market forces to reallocate the capital utilized by such firms has been called *zombie lending* by a group of extremely able researchers, and cited as a cause of Japan's troubles throughout the 1990s.<sup>47</sup>*
- *Stimulating consumption and discouraging saving. This form of intervention includes increased government spending, which as reflected by the U.S. national debt in CHART 3 is increasing at an alarming rate. No doubt a major driver of this debt is the second war in Iraq, which has been estimated to cost anywhere between \$410 billion to \$2.24 trillion.<sup>48</sup>*
- *Preventing prices (including wages) from declining, if necessary. Declining prices allows goods and services to be reallocated to where they can better or more economically satisfy consumer needs. Of course, allowing prices to fall in general will be extremely difficult politically for an economy that has funded a significant portion of its consumption on the value of its real estate assets.<sup>49</sup>*



## Endnotes

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<sup>1</sup> Joseph Calandro, Jr. 2004. "Reflexivity, Business Cycles and the New Economy." *Quarterly Journal of Austrian Economics*. Vol. 7, No. 3. pp. 45-69

<sup>2</sup> George Soros. 2003 [1987]. *The Alchemy of Finance* (New York: Wiley). The theory of reflexivity holds that the fundamentals affect the prices of assets and that the prices set on the market affect managerial decisions that will generate future fundamentals, and so on. In short, there is an interactive feedback loop between fundamentals and market prices rather than a one way flow from fundamentals to market prices. This is a substantial insight, and substantial deviation from the EMT, which has generally not received the level of attention that it should. A possible reason for this could be Soros' philosophical writing style.

<sup>3</sup> For more information on technical analysis see John J. Murphy. 1986. *Technical Analysis of the Futures Markets* (NY: New York Institute of Finance).

<sup>4</sup> In other words, market participants close the reflexive feedback loop. See Calandro (2004), pp. 50-53 for a detailed explanation.

<sup>5</sup> Calandro (2004, p. 58). Another, more recent, possible fundamental substitute is *core inflation*, which has been defined as:

A measure of [price] inflation that excludes certain items which face volatile price movements. ... Core inflation is most often calculated by taking the Consumer Price Index and excluding certain items from the index, usually energy and food products. Other methods of calculations include the outliers method, which removes the products that have had the largest price changes.

Source: <http://www.investopedia.com/terms/c/coreinflation.asp> Economically, few goods are as "core" to the wants and needs of consumers than food and energy. As such, a reason for excluding such goods from price inflation measures could be for business cycle reasons: if the intent of inflation measures is to quantify overall rising (or declining) prices then such measures must include "the products that have had the largest price changes" as those products are the very drivers of the overall increase (or decrease).

<sup>6</sup> According to Bruce Greenwald and Judd Kahn. 2005. *Competition Demystified* (NY: Portfolio), p. 111:

After the mania subsided, it became obvious how excessive those predictions were about the rate at which online commerce would supplant traditional shopping. The expectation that the newly hatched, Internet-only retailers would displace their brick-and-mortar competitors also proved mistaken. The bankruptcy courts were soon littered with the remaining assets of failed B-to-C (business to consumer) innovators. There were some significant survivors, Amazon most prominent among them, but their path to profitability proved considerably longer than the proponents of the new economy thesis had anticipated.

<sup>7</sup> Calandro (2004), p. 53.

<sup>8</sup> It should be noted that the NASDAQ and DJIA trended over a relatively well defined range from 1978 until the new economy boom began.

<sup>9</sup> See the APPENDIX for a brief discussion on other forms of market intervention.

<sup>10</sup> See Calandro (2004) and Gene Callahan and Roger W. Garrison. 2003. "Does Austrian Business Cycle Theory Help Explain the Dot-Com Boom and Bust?" *Quarterly Journal of Austrian Economics*. Vol. 6, No. 2. pp. 67-98 for an Austrian Economic examination of the new economy boom and bust.

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- <sup>11</sup> Murray Rothbard. 1969. *Economic Depressions: Their Cause and Cure*. In Ebeling (1996 [1978]), p. 85.
- <sup>12</sup> Ibid, p. 87.
- <sup>13</sup> Ludwig von Mises. 1980 [1912]. *The Theory of Money and Credit* (Indianapolis, IN: Liberty Classics).
- <sup>14</sup> The Nobel award press release can be found at:  
<http://nobelprize.org/economics/laureates/1974/press.html>
- <sup>15</sup> Richard Ebeling, Ed. 1996 [1978]. *The Austrian Theory of the Trade Cycle and Other Essays* (Auburn, AL: Ludwig von Mises Institute).
- <sup>16</sup> Murray Rothbard. 2000 [1963]. *America's Great Depression* (Auburn, AL: LvMI).
- <sup>17</sup> Roger Garrison. 2001. *Time and Money – The Macroeconomics of Capital Structure* (NY: Routledge).
- <sup>18</sup> Alan Greenspan. 1996. *The Challenge of Central Banking in a Democratic Society*. Remarks to the annual dinner and Francis Boyer Lecture of the American Enterprise Institute for Policy Research. Washington D.C. December 5.
- <sup>19</sup> The timing of exactly when the transition occurs is impossible to predict with any degree of certainty, for even the most astute analysts and market participants. For example, Soros (2003 [1987], p. 35) himself was not able to capitalize on the new economy bust because, according to his own account, he sold too early.
- <sup>20</sup> Ludwig von Mises. 1998 [1949]. *Human Action* (Auburn, AL: LvMI), p. 556 defines *malinvestment* as “investment in wrong lines” which according to Garrison (2001, p. 75) is “the intertemporal misallocation of resources” generated by intervention in the market process.
- <sup>21</sup> See Murray Rothbard. 2002 [1956]. *Toward a Reconstruction of Utility and Welfare Economics*. <http://www.mises.org/rothbard/toward.pdf> and Jeffrey Herbener. 1997. “The Pareto Rule and Welfare Economics.” *Review of Austrian Economics*. Vol. 2, No. 1. pp. 97-111 for further information on this point.
- <sup>22</sup> Rothbard (2000 [1963]), p. 12.
- <sup>23</sup> Woodward, Bob. 2000. *Maestro – Greenspan's Fed and the American Boom* (NY: Simon & Schuster). p. 115.
- <sup>24</sup> Ben Bernanke. 2000 [1973]. “Nonmonetary Effects of the Financial Crisis in the Propagation of the Great Depression.” *Essays on The Great Depression* (Princeton, NJ: Princeton University Press).
- <sup>25</sup> Antony P. Mueller. 2001. “Financial Cycles, Business Activity, and the Stock Market.” *Quarterly Journal of Austrian Economics*. Vol. 4, No. 1, pp. 3-21. This is potentially significant because, if Mueller is correct, Greenspan's long run could very well become Bernanke's—Greenspan's successor at the Fed—short run. See for example, “A hard act to follow.” *The Economist*. October 15, 2005. p. 11.
- <sup>26</sup> Rothbard (2000 [1963]), p. 79.
- <sup>27</sup> John Neff and S.L. Mintz. 1999. *John Neff on Investing* (NY: Wiley), p. 72.
- <sup>28</sup> Ruth Simon. 2005. “Housing Affordability Hits 14-Year Low; Higher Prices, Rising Rates Hurt Buyers as Creative Loans Lose Some of Their Punch.” *Wall Street Journal*. [www.wallsteetjournal.com](http://www.wallsteetjournal.com). December 22.

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<sup>29</sup> Murray Rothbard. 2004 [1962]. *Man, Economy, State with Power & Market* (Auburn, AL: LvMI), p. 813.

<sup>30</sup> William O'Neil. 1995 [1988]. *How to Make Money in Stocks 2nd Edition* (NY: McGraw-Hill, Inc.).

<sup>31</sup> See for example, Robert J. Shiller. 2006. "Long-Term Perspectives on the Current Boom in Home Prices." *Economists' Voice*. [www.bepress.com/ev](http://www.bepress.com/ev). March.

<sup>32</sup> At the time of this writing in the year 2006 thirty-year mortgage rates are up on average .4 percent over the prior year. See Ruth Simon. 2006. "The New Rules of Real Estate." *Wall Street Journal*. [www.wallstreetjournal.com](http://www.wallstreetjournal.com). March 28.

<sup>33</sup> Dean Baker. 2006. "The Menace of an Unchecked Housing Bubble." *Economists' Voice*. [www.bepress.com/ev](http://www.bepress.com/ev). March.

<sup>34</sup> Mariarosa Verde, Paul Mancuso and Eric Rosenthal. 2006. "U.S. High Yield Default Rate 3.1% in 2005." *Fitch Ratings*. February 28.

<sup>35</sup> An example of this uncertainty can be found, for instance, in personal bankruptcies: while first quarter 2006 personal bankruptcies were historically low the amount of personal bankruptcies filed since November of 2005 have actually increased four-fold. Source: SmartPros. 2006. *After Plunge, Personal Bankruptcies Rising*. <http://accounting.smartpros.com/x52507.xml>. April 7.

<sup>36</sup> Karen Tally. 2006. "S&P Will Launch Indexes to Track Housing Prices." *Wall Street Journal*. [www.wallstreetjournal.com](http://www.wallstreetjournal.com). March 23.

<sup>37</sup> This is a traditional and well known value-based investing tactic. For more information see Bruce C. N. Greenwald, Judd Kahn, Paul D. Sonkin and Michael van Biema. 2001. *Value Investing – From Graham to Buffett and Beyond* (NY: Wiley). For further information on value gaps in general see William E. Fruhan, Jr. 1988. "Corporate Raiders: Head 'em Off at Value Gap." *Harvard Business Review*. July-August. pp. 63-69.

<sup>38</sup> Victor Sperandeo and T. Sullivan Brown. 1991. *Trader Vic – Methods of a Wall Street Master* (NY: Wiley), p. 110.

<sup>39</sup> O'Neil (1995 [1988]).

<sup>40</sup> Jack D. Schwager. 1989. *Market Wizards – Interviews with Top Traders* (NY: New York Institute of Finance), p. 188. This is a topic worthy of academic research and study.

<sup>41</sup> See for example, Eugene F. Fama and Kenneth R. French. 1998. "Value versus Growth: The International Evidence." *The Journal of Finance*. Vol. LIII, No. 6. pp. 1975-1999 and Rafael LaPorta, Josef Lakonishok, Andrei Shleifer and Robert Vishny. 1997. "Good News for Value Stocks: Further Evidence on Market Efficiency." *The Journal of Finance*. Vol. LII, No. 2. pp. 859-874.

<sup>42</sup> Benjamin Graham and David Dodd. 1934. *Security Analysis* (NY: McGraw-Hill), p. 453.

<sup>43</sup> The components of the *basic materials* sector of the market are: agricultural chemical, aluminum, major diversified chemicals, copper, gold, independent oil and gas, industrial metals and minerals, major integrated oil and gas, nonmetallic mineral mining, oil and gas drilling and exploration, oil and gas equipment and services, oil and gas pipelines, oil and gas refining and marketing, silver, specialty chemicals, steel and iron, and synthetics.

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<sup>44</sup> See for example Greenwald, et al. (2001).

<sup>45</sup> For further information see Stuart Gilson. 1995. "Investing in Distressed Situations: A Market Survey." *Financial Analysts Journal*. November – December. pp. 8-27.

<sup>46</sup> Mises (1998 [1949]), pp. 791-792.

<sup>47</sup> Ricardo J. Caballero, Takeo Hoshi and Anil K. Kashyap. 2006. "Zombie Lending and Distressed Restructuring In Japan." *NBER Working Paper*. March.

<sup>48</sup> "Paying for Iraq – Blood and Treasure." *The Economist*. April 8, 2006. pp. 33-34.

<sup>49</sup> For further information on intervention see, for example, Rothbard (2000 [1963]), pp. 19-23 and Mises (1998 [1949]), pp. 573-583.