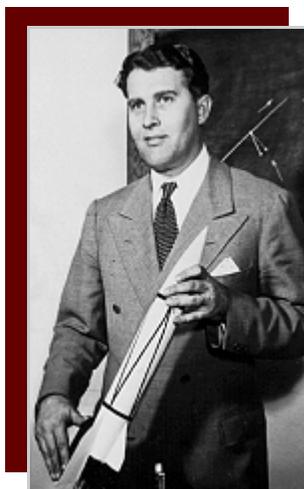


## Liftoff



In the spring of 1929, in the ancient Prussian city of Posen, a 17-year old boy stepped into the town's only movie theater to see the latest film by the acclaimed director Fritz Lang. Lang's 1927 classic *Metropolis* was perhaps the most influential science fiction film ever made, and the boy was a science fiction fanatic. This new film, *Frau im Mond* (*Woman on the Moon*), was an inspiration. With its stark black-and-white paint scheme, it

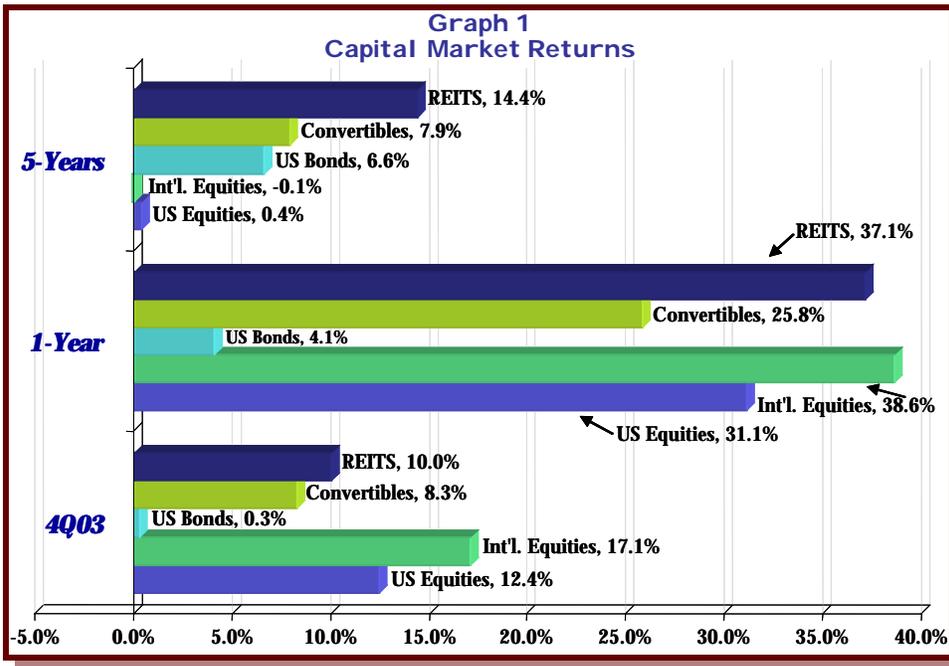


was remarkably prescient in depicting a dramatic rollout of the rocket from behind enormous hangar doors, a countdown to ignition, and blobs of water droplets in weightlessness, all from the imagination of Lang. The boy bounded out of the theater with even greater enthusiasm at the prospect of space travel.

Wernher von Braun was an avid space enthusiast, an active member in the 1920s of Germany's Society for Space Travel. By 1932, with no job and no money to engage in his rocketry hobby, he accepted an offer to join the army. Five years later, just 25 years old, he was leading 10,000 scientists and engineers at a secret base near the town of Peenemünde on the Baltic Sea in developing an extraordinary new rocket. Called the A-4, it could boost a one-ton payload 200 miles at supersonic speed, a remarkable technological feat. Fortunately, von Braun was not a favorite of the army establishment and he and his

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moved a hundred miles south, von Braun surrendered himself, his entire scientific team, and 300 boxcars of papers and materiel to a surprised American army. Months later, they were all re-assembled at a secret US Army base in White Sands, New Mexico.

Von Braun had an acute appreciation for public relations, and in the early 1950s, wrote a series of articles for *Collier's* that laid out his vision of our future in space. He envisioned a space shuttle, a permanent space station and a landing on the moon and

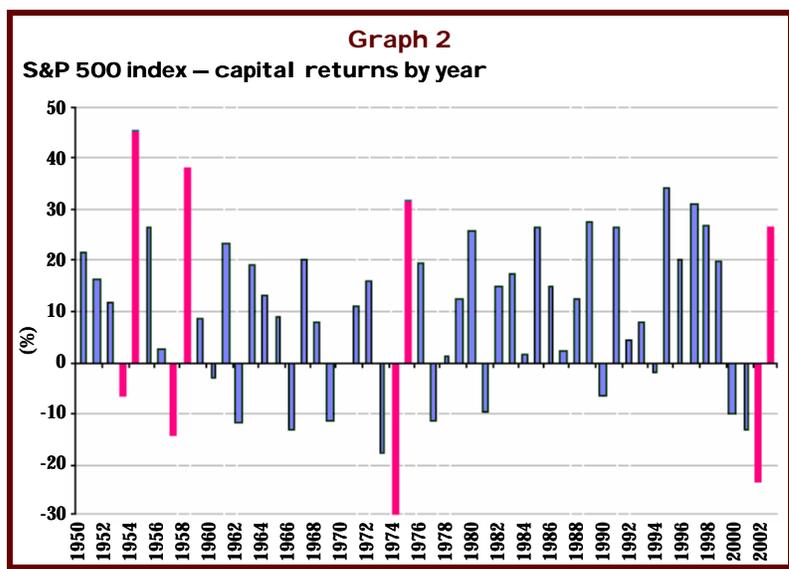
team were ignored. Years later, a desperate army turned to him for a *wunder* weapon that would reverse the tide of the war, and converted his design into the 4,000 V-2 rockets that rained terror on London and other cities in the final months of World War II.

Never a fan of the Nazis, and fearful of falling into the hands of the advancing Russians, von Braun planned an escape. On the night of 2 May 1945, having

eventually on Mars. Walt Disney was so enthralled that he hired von Braun to make a movie based on these articles. *Man in Space* aired as a Disney TV movie on 5 March 1955, and was watched by 100 million people, the highest share in television history, before or since.

But it took more than a popular TV show to energize President Eisenhower. On 4 October 1957 a basketball-size satellite called *Sputnik* beeped across the sky; the race was on and the Russians were winning. The Navy's Vanguard missile project was given immediate priority. The following month saw another Soviet success as the dog Laika was placed in orbit. Then on 6 December, with the world watching on live television, the Navy's Vanguard missile with its three-pound satellite lifted off the pad at Cape Canaveral. It rose a few feet, then exploded. America would have to turn to Werner von Braun and his team to catch the Russians.

We'll come back to the space race after turning to our own, more earthbound, investment contest. In doing so, we'll try to point out that a broad perspective on the world is a requirement for successful investing.



Source: Standard & Poor's

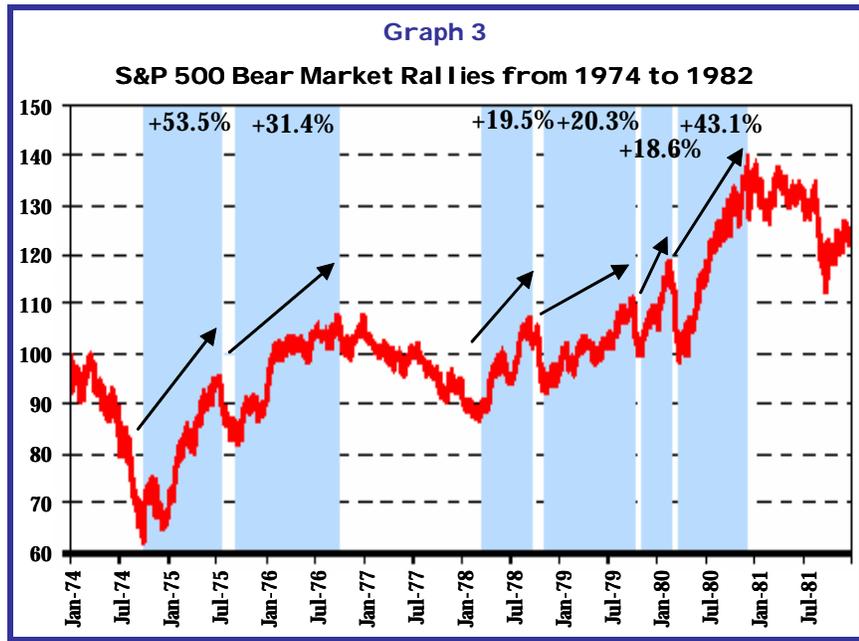
Graph Courtesy of Goldman Sachs

2003 was a year for the record books. The broad US stock market soared 31%, the best turnaround in performance since 1975 (See Graph 2—page 2).

The 49% decline from March 2000 to October 2002 was identical to the 1973-74 bear market. But the end of that bear market did not presage the beginning of a new bull market, notwithstanding the 37% return in 1975. There were six major rallies in the seven years following the market trough before the Great Bull Market began in 1982 (see Graph 3).

This time around, as usual, investors were most bullish at the peak, and most bearish at the bottom (see Graph 4).

Of course, it's hard to blame people for feeling pessimistic at the start of 2003. The world appeared to be on the brink of depression, deflation was spreading around the globe, and equities and interest rates continued to fall. Stocks, in fact, saw their sharpest decline relative to bonds since the 1930s, and the entire outperformance of stocks over bonds since

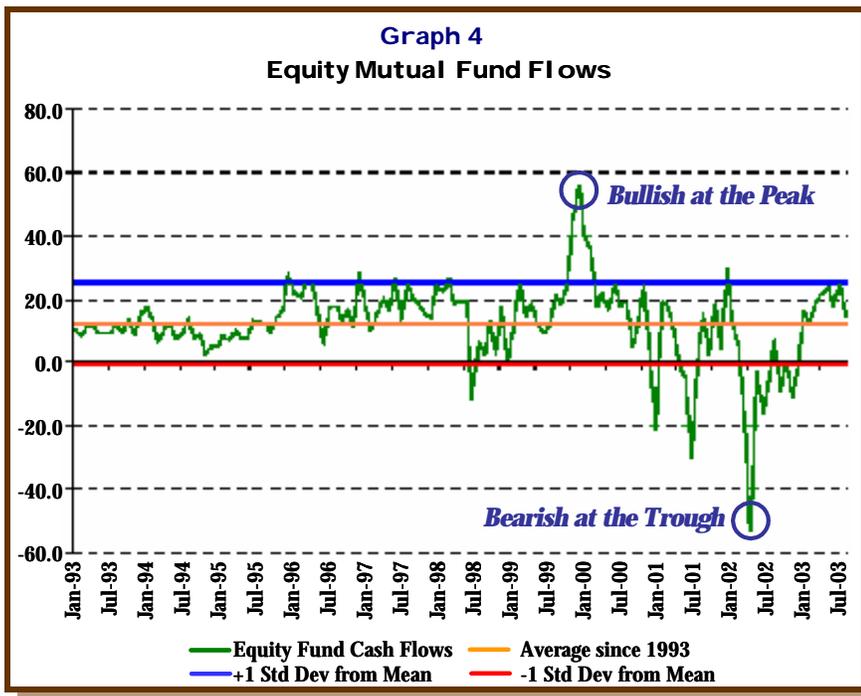


Source: FactSet and Smith Barney U.S. Equity Strategy

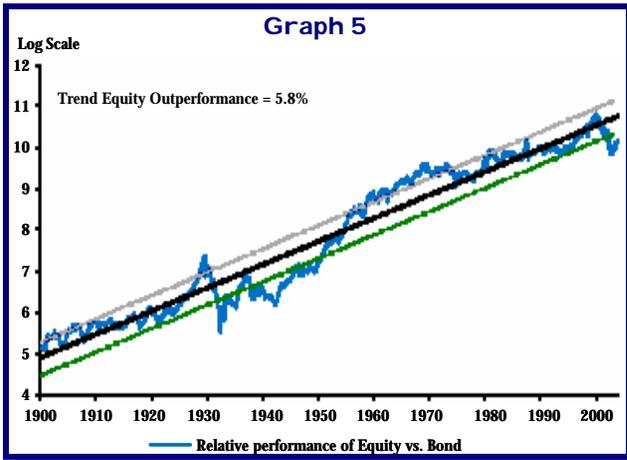
the beginning of the Great Bull Market in 1981 was erased by the first quarter of 2003. Graphs shows that bleak relative performance over the past 22 years, but also adds a longer-term (100 years) perspective on that relationship.

The gains in the stock markets were broad-based. All ten S&P business sectors advanced, but it was technology that shined, up 50% in 2003. Most favored of all were low-priced stocks. Of the 1,500 stocks in the S&P indices, 222 began the year priced less than \$10 per share. These stocks gained 85% last year, and nearly half of them (103) had no earnings at all. More dramatic were the 25 largest stocks on NASDAQ that were priced between \$1-5 per share. All 25 rose more than 500%, and two of them gained more than 1,000%. How's that for high octane?

Globally, the best markets were found in the emerging (or is it submerging?) world. Zimbabwe (!) soared 288%, Armenia gained 177% and Ghana was up 150%. Even among the more respectable markets, Thailand jumped 139% and Brazil



Source: Investment Company Institute and Smith Barney U.S. Equity Strategy



Source: Robert Schiller, Goldman Sachs Research

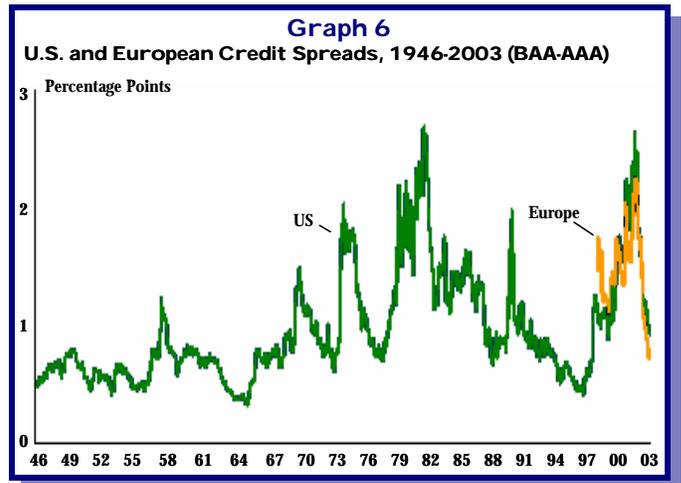
131%, Germany added 61% and Italy 55% (all in US\$ terms). Sadly, Cyprus fell 12%. So our first long/short trade idea for 2004 is buy Cyprus, short Zimbabwe. We'll check back in a year.

**B**onds, broadly, were uninspiring (up 4.1% for the year), as the benchmark ten-year Treasury note yield started the year at 3.82% and ended at 4.25%. But both emerging markets and high yield saw their best year since 1991 (each up about 29%). Credit spreads across the board narrowed dramatically (see Graph 6).

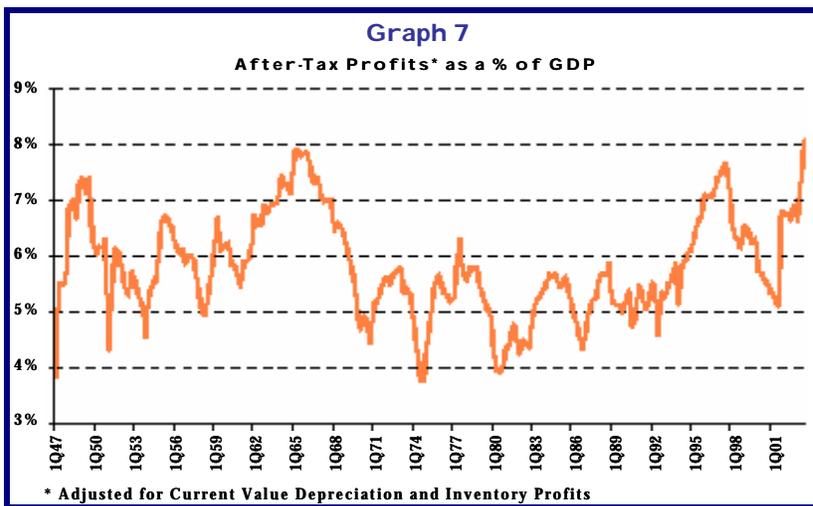
**P**artly behind the surge in equities was the remarkable turnaround in profits. We noted a year ago that 2002 saw the biggest drop in profits since 1938. Well, 2003 saw profit levels rise to their highest level in postwar history (see Graph 7). Lower interest rates, lower taxes,

a weaker dollar and, most importantly, a record surge in productivity, all contributed to this dramatic growth in corporate profits.

**W**hen we blasted off in 2001 (in more ways than one) to survey our investment world and begin this quarterly letter, we noted several themes and valuation discrepancies. We believed the era of excess capital appreciation was over, and we emphasized income-generating assets, such as high yield bonds, real estate and convertibles. We saw unusually low relative valuation in small cap versus large cap and in value versus growth stocks, and thought TIPS were an underappreciated investment. Fortuitously, these themes played out as we thought they might. The downside to this is that



Source: Lehman Brothers, Datastream

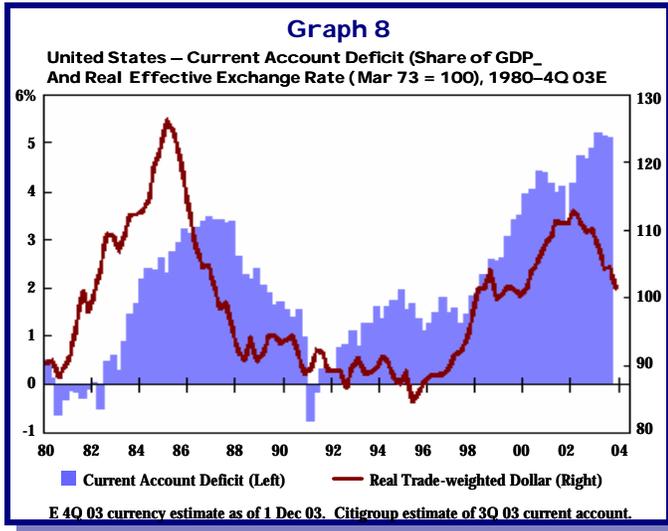


Source: BEA

Graph Courtesy of Smith Barney

these relative value opportunities have largely disappeared. If we are right (always a big if), there are two broad implications. First, investors may not be well-compensated for taking large asset allocation bets (since relative valuations are reasonable). Secondly, returns across asset classes are likely to be much more modest than we saw last year (since assets appear to be fairly valued).

But we are not without a theme. To put it bluntly, we see governments intent on destroying wealth. Of course, this may not be official policy, but we think there's a good chance that that's where we're



Sources: Bureau of Economic Analysis, Federal Reserve Board and Citigroup

headed with current policies expressed through two mechanisms: currencies and inflation. The third mechanism, higher taxes, will come later. We think investors would be prudent to be positioned on the right side of this theme. First, we have to state the case.

**A** fundamental law of economics is that demand and supply must equate. This balance is achieved via the price mechanism. A rising price signals that demand outstrips supply, and a falling price indicates the opposite. The dollar is losing value, down about 9% in 2003 against a broad trade-weighted index of currencies. This was the steepest drop since 1987, when it lost 12.2%. What's remarkable is that the decline wasn't steeper, because the US current account deficit, the amount of dollars we require foreigners to buy, exceeds 5% of GDP (more than \$500 billion —see Graph 8). Not only is this amount a record level, the return we promise foreigners is nominally about 1%. Real (inflation-adjusted) returns are negative, and after adjusting for a declining currency, are double-digit negative for foreign investors.

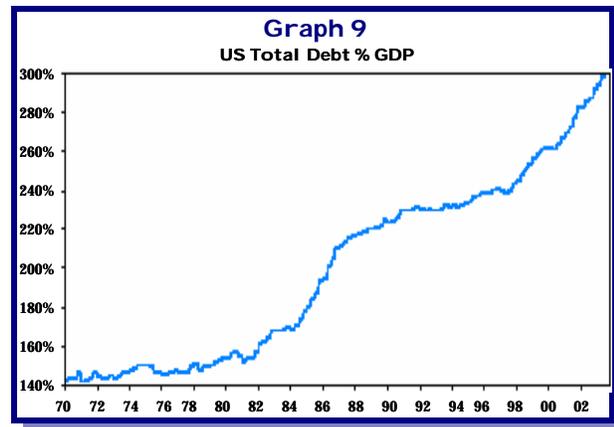
What right-minded investor would invest this way? Governments, of course. As private investors have scaled back their purchases of US assets, central banks have stepped up the pace. Japan spent a record \$187 billion in 2003 to support the dollar, yet it still fell 10% against the yen. The Ministry of Finance is planning to increase its intervention limits by more than \$500 billion (¥61 trillion) in the coming year. China added \$117 billion in reserves last year, nearly all of it to support the US dollar.

America will continue to flood the world with dollars (think rising supply) because we will not curtail

our consumption demand for (cheap) foreign goods. But will foreigners continue to hold those dollars (think demand) under these circumstances (falling prices) indefinitely? In the near-term, the answer is probably yes. Economic growth in Asia is almost entirely based on exports (almost entirely to the United States). As long as this is the case, maintaining a cheap currency takes on a national imperative. But we can see this is a fool's game. As central banks accumulate more and more dollars, the more at risk they are to a declining dollar. That requires them to buy even more dollars, increasing their risk further. Foreign central banks' capacity to absorb dollars does not exceed our capacity to supply them, which is why this is a dangerous game.

The sanest solution to these imbalances is for the US to slow the supply of dollars by reducing consumption, and for foreign governments to restructure their economies to encourage domestic growth. But neither seems likely to happen voluntarily. There isn't a government in the world that wants to see its currency appreciate, and by collectively disrupting the natural balance of demand and supply by maintaining artificial prices for their currencies, and by delaying necessary structural economic liberalization, they risk destroying more wealth for their citizens.

**C**entral banks are desperately trying to re-ignite inflation. Monetary policy is, and will remain, easy for some time, for three reasons. First, there is no visible sign of rising inflation in the US or Europe. This gives central banks more leeway to remain accommodative longer. Secondly, there is a lot of debt in the world. Most governments are running large budget deficits, and as high as debt levels have risen in the US (see Graph 9), it's worse



Graph Courtesy of Bridgewater Associates

in Japan, Italy, Germany and others.

Thirdly, monetary tightening risks appreciating the currency, something no one wants to do. As a consequence, expect to see inflation pick up overseas before we see it in the US. Japan, which has been printing money about as fast as they can (the monetary base is rising at a 20% annual rate), just posted its first month of positive inflation since April 1998. The Bank of Japan is buying nearly 40% of the issuance of new government bonds, and just approved buying stocks and asset-backed securities in a desperate attempt to raise prices. Inflation in China is turning up too; the five-year bout with deflation appears at an end. Inflation in Europe never broke below 2%, and so starts at a higher base.

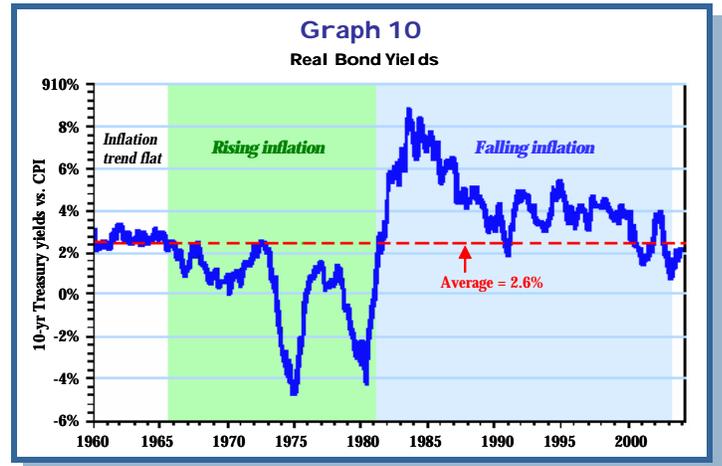
Inflation erodes wealth, and while there is no sign currently of inflation in most of the world, this is where we are headed. Real short-term yields have been negative for the past year (see Graph 10), and the Fed will keep it there for some time. Negative real yields foster, eventually, inflation.

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*These two mechanisms for destroying wealth, currency devaluation and inflation, have really yet to be serious factors. But from our orbiting observation deck,*

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**T**he implications for investors are important. Countries that have accumulated enormous levels of dollar reserves and have prevented their currencies from appre-



*Graph Courtesy of Western Asset Management*

ciating (essentially, most of Asia), are most at risk for a currency adjustment. Investors might seek to accumulate assets in these currencies. Inflation contains other implications. Bonds, in particular, are most harmed by rising inflation. From the US investor perspective, foreign debt may not be as attractive as first seems as the currency appreciation in foreign bonds could be offset by the higher inflation rates abroad.

In a world of currency depreciation and/or higher inflation, investors should ask where the stores of value will be, and the 1970s might provide a useful perspective. Traditional financial assets, stocks and, especially, bonds, did not fare well in that decade. Hard assets, such as real estate and commodities, did perform well. Commodities rose 200% in the 1970s, when inflation jumped 100%. Inflation-linked bonds (TIPS) did not exist in the 1970s, but they do now, guaranteeing about 2% plus whatever the rate of inflation is.

One of the challenges for investors is that



none of these assets is obviously cheap. Gold is up 50% from its lows, and many commodities have moved even higher. Still, most commodities are cheaper today in real terms than they were 30 years ago. Real estate looks overvalued by just about everyone, so investors may have to extend their research into nontraditional markets outside the US. Even TIPS could be weak if real rates move up quickly. And then there's the question of timing. The very steep yield curve means there is a large yield penalty for investors to shorten duration, yet that is what they will want to do before the Fed starts tightening. But it may be awhile before that happens.

Investors should anticipate modest returns in their portfolios in the coming years. None of the ideas we've suggested are without risk, and even if they all come to pass, it would not be prudent to bet our entire portfolios that way. Furthermore, there is a cost, real and opportunity, to reposition too soon, as current trends may persist longer than we anticipate. But the view from a hundred miles up is clearer. It may not (even probably not) come to pass in 2004, but eventually, undervalued currencies will appreciate and inflation will rise. These will bring big, even wrenching, changes in the world's markets, and investors should be positioned on the right side of this structural move.

When President Kennedy committed the nation to go to the moon, first in his State of the Union address in May 1961 and then again at Rice University in September 1962, he had no idea whether this could actually be accomplished.

Wernher von Braun, however, knew what it would take to get to the moon and back. He knew the mathematical computations could be performed, and he knew there would be courageous men willing to go. He also knew that the biggest obstacle, and it was a big one, was in the engineering challenge: in building a rocket powerful enough to make a trip to the moon possible. He began his design process, his dream, in 1962.

The enormity of that task is hard to understate. It became the largest engineering project in over 2,000 years. When the Greek historian Herodotus visited the Great Pyramid in 130 BC, he asked his guide how many people were involved in its construction. He was told

400,000 people labored 20 years to build it. By 1966, von Braun's rocket project, by then known as the Saturn V, employed 400,000 people.

Colossal does not come close to describe the Saturn V. Von Braun designed a three-stage rocket weighing six million pounds. The first stage was powered by five F-1 Rocketdyne engines generating 7.6 million pounds of thrust. This was forty times as powerful as the Redstone rocket that launched Alan Shephard into space in 1961. By contrast, the massive GE90 engines you see on a Boeing 777 together generate 115,000 pounds of thrust. This first stage would lift the rocket 42 miles to a speed of Mach 9 (or 9 times the speed of sound), and then the second stage would ignite. Five smaller J-2 engines would push the rocket to 117 miles from Earth to a speed of Mach 22. The third stage would send it out of Earth's orbit toward the moon at a velocity of more than Mach 35 (+24,000 mph). Scientists would have to (and did) invent entirely new metal alloys just to hold everything together.

To assemble the Saturn V, the world's largest building was constructed at Cape Canaveral, twice the size of the Pentagon. The launch pad was more than three miles away because the fireball at ignition would spread nearly a mile at speeds of Mach 4 and temperatures of 1,900°F. Of course, if anything went wrong on the launch pad, the combination of supercooled liquid oxygen, thousands of gallons of kerosene and ultracold liquid hydrogen would detonate with the force of a nuclear bomb. To stabilize combustion, Rocketdyne designed an injector plate with 6,300 tiny holes that created a fine mist of propellants. They then detonated bombs inside the engine in order to disrupt the combustion flow. The injector plate was able to stabilize the propellant mix so that it could recover perfect combustion in one-tenth of a second after a bomb detonation inside the engine. It was this kind of detail and ingenuity that permeated the entire project. The instruction manual ran 30,000 pages, and the team invented bar scanners to keep track of the more than three million parts.

Not once, in testing or in launch, did the Saturn V rocket ever fail.

On 20 May 1969, the massive doors to the hangar opened, and the Saturn V, in its stark black-and-

*"These will bring big, even wrenching, changes in the world's markets, and investors should be positioned on the right side of this structural move."*

white paint scheme, began its three-mile, ten-hour journey to the launch pad (atop the world's largest land vehicle). On 17 July 1969, it blasted off with the crew of Apollo 11, and four days later, Neil Armstrong and Buzz Aldrin stepped onto the Sea of Tranquility. They returned as heroes, and became, deservedly, national icons. But no less so was Wernher von Braun, his team of scientists, and the countless thousands of people who, quite literally, made that mission possible.

Reaching the moon was a monumental achievement. But perhaps more extraordinary than stepping on the moon was the view it gave us of Earth: to see our own planet, and ourselves, in an entirely new perspective. Our own view of the investment world is often cloudy. But we are certain that looking at our world from a fresh perspective is always helpful. As Proverbs (29:18) says, "Where there is no vision, the people perish." 🏹



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**JANUARY 2004**

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