

Fours Before Long

Bond yields could approach mid 4% range after the year 2000

Highlights

■ While yields will not move down in a straight line, the secular decline in interest rates that began in 1982 has yet to run its course. We continue to believe that long-bond yields will reach the 5% level by the turn of the century, or even earlier—perhaps as soon as 1997 or 1998. As we pointed out in *6 in '96*, and *5 at the Turn*, numerous powerful secular forces will combine to drive both inflation and real interest rates still lower over the next several years.

■ While high budget deficits in aging industrialized countries and rising capital demands from newly industrialized nations will pose challenges in the coming decade, they should not lead to a sustained back-up in bond yields. Reform of government entitlement programs will help to alleviate budget burdens caused by aging baby boomers. Meanwhile, an increase in public savings rates, (i.e., deficit reduction), coupled with an expected rise in private savings as faster growth rates in emerging markets promote greater wealth accumulation (often referred to as the “virtuous cycle” between growth, savings and investment)—will largely offset increased capital demands within those same emerging market nations.

■ Central bankers throughout the world have come to recognize that they can no longer make the short-term trade-off between inflation and growth. Price stability has emerged as the primary policy objective among central banks. As investors come to accept and appreciate this renewed commitment to price stability, the risk premiums in long-duration financial assets are likely to fall. The result—a further decline in real rates.

■ For more than a generation now, the U.S. tax code has heavily favored consumption over investment. However, there is a reform movement afoot that is seeking to completely restructure the tax code. This movement promises not only to simplify the current code, but also to provide powerful incentives for saving and investment. Even a partial restructuring, combined with the powerful secular forces already at work in the economy will help long-bond yields approach the *mid 4% range by the middle of the next decade*.

The secular decline in interest rates that we identified nearly a decade ago in *The Beauty of Bonds* (September 1, 1988), when the long bond was yielding above 9%, and revisited in *6 in '96* (April 21, 1991), has yet to run its course. We continue to believe that long-bond yields will reach the 5% level by the turn of the century, or even earlier—perhaps as soon as 1997 or 1998. As we pointed out in *5 at the Turn* (March 21, 1993) and *It's Still "5 at the Turn"* (May 23, 1994), there are a number of powerful secular forces that will combine to drive both inflation and real interest rates still lower over the next several years. While many have since embraced our call for a continued decline in bond yields, some question the sustainability of a low interest rate environment past the end of this decade.

- There are concerns that the emergence of unfavorable demographic trends after the year 2004 will place severe burdens upon domestic entitlement programs, resulting in re-escalating budget deficits.
- Others believe that expected strong growth among the newly industrialized and soon to be industrialized nations of the world will lead to a global shortage of capital in the decade ahead. There is a fear that soaring global capital demands coupled with higher budget deficits could threaten to push real interest rates even higher.
- There's also concern that central bankers will forsake newly found monetary discipline in the face of mounting structural deficits and choose instead to inflate their way out from under chronic debt burdens.

Meeting the challenge

While high budget deficits in aging industrialized countries and rising capital demands from newly industrialized nations will pose challenges for public policy decision makers and central bankers alike in the coming decade, they won't necessarily lead to a sustained back-up in bond yields.

- We're already seeing the first steps in a reform movement of government entitlement programs that will help to alleviate budget burdens caused by aging baby boomers. Entitlement reform, coupled with greater global fiscal discipline, will ensure that the interest rate declines so painfully achieved during the 1980s and 1990s are sustained well into the 2000s. In fact, there's a good chance that yields could decline still further even *after* the turn of the century.
- The so called "global capital shortage," which many predict for the next decade, may also fail to materialize.

An increase in public savings (i.e., deficit reduction), coupled with the emergence of a "virtuous cycle" between growth, savings and investment within emerging market nations, will largely offset increased capital demands.

- Virtually all the world's central bankers have come to recognize the disastrous long-term effects of inflationary monetary policy. No longer are they willing to make the short-term trade-off between inflation and growth. Price stability has emerged as the primary policy objective among central banks. As investors come to accept and appreciate this renewed commitment to price stability, the risk premiums in long duration financial assets are likely to fall. The result—a further decline in real rates.

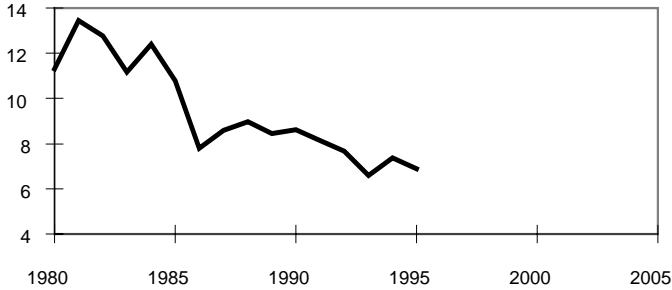
Rates to fall further "after the turn"

What's more, there is a reform movement afoot that promises not only to simplify the current code, but also provides powerful incentives for saving and investment. Keep in mind that, for a generation now, the U.S. tax code has heavily favored consumption over investment. So, even a partial restructuring of the tax code, combined with the powerful secular forces already at work in the economy could help to drive long-bond yields toward the *mid 4% range by the middle of the next decade*. Not only will bonds reach "five at the turn," but the prospects are excellent that Treasury yields will be quoted on a "four handle" by the middle of the next decade as well.

It's still, Still "5 at the Turn"...

The secular decline in interest rates remains on course. Although long-bond yields have dropped about 700 basis points over the past 14 years (Chart 1), they still have further to fall. We emphasized in *5 at the Turn* and *It's Still "5 at the Turn"* that yields on 30-year Treasury bonds will reach a sustainable 5% level by the end of the decade, or earlier. *Continued destimulative global fiscal policies; the proliferation of the productivity revolution; still ample global capacity; high private debt burdens; and further deceleration of healthcare inflation* will combine to push overall inflation down still further. Meanwhile, *continued progress on deficit reduction, a rise in the personal savings rate driven largely by a seismic demographic shift and growing concerns over future retirement benefits* will drive real rates back down toward their long-term historical average of about 2 1/4%. In fact, the effects of these powerful secular forces appear even more pronounced and wide-ranging than even we had originally thought. This will help set the stage for still lower bond yields, even after the turn of the century.

Chart 1
Treasury bond yields
 1980 through 1995

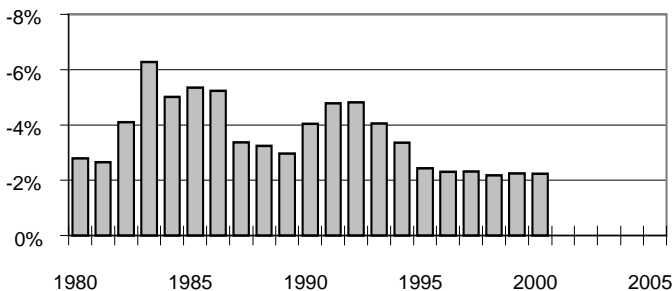


Source: Federal Reserve System, Board of Governors

1. Destimulative global fiscal policies

The downsizing of government has begun. The Republican sweep of the 1994 Congressional elections ushered in a new era in the debate over what role the public sector should play in the U.S. economy. “Downsizing,” “right-sizing,” “restructuring” and other terms, which in the past had been associated exclusively with the private sector, now are surfacing within the halls of formerly moribund federal agencies and bureaucracies. The debate no longer revolves around whether or not government should be scaled back, but rather how such downsizing should occur. While the jury is still out on just how far-reaching and long-lived these structural reforms ultimately will be, the fact is that government spending has ceased to be the engine of growth it was during the 60s, 70s and 80s. Even in the absence of a breakthrough budget accord between President Clinton and the Republican-controlled Congress, the deficit as a percent of GDP still is projected to remain at about 2.2% through the year 2000, according to estimates from the Congressional Budget Office (Chart 2).

Chart 2
Government surplus/deficit as a percent of GDP
 Excluding effects of Balanced Budget Act



Source: DRI; Congressional Budget Office

More to come

But if, as is likely, the players in Washington reach agreement on a seven-year balanced budget plan, the destimulative effects of a shrinking federal deficit will be even more pronounced. The Congressional Budget Office (CBO) projects that the deficit will fall to just \$73 billion—less than 1% of GDP—by the end of this decade under the Republican balanced budget proposal. Under this plan, spending cuts totaling \$890 billion will have to be made over the next seven years. Although the proposal incorporates about \$245 billion in tax breaks, which at least partially offset the impact of the spending cuts, the overall effect is still largely destimulative. And, keep in mind that these deficit reduction measures are in addition to the nearly *half trillion dollars* in spending cuts and tax increases implemented back in 1993. When combined, the *Omnibus Budget Reconciliation Act of 1993* and the current *Balanced Budget Act* represent more than \$1.2 trillion in deficit reduction over a nine-year period (1994 through 2002). It would appear that fiscal policy within the U.S. will remain destimulative well into the next decade.

We're not alone

But destimulative fiscal policies are not limited to the U.S. alone. As we pointed out in *It's Still "5 at the Turn,"* each of the major industrialized countries has run high budget deficits during the last several years and will need to adopt more restrictive fiscal policies over the next several years. Table 1 illustrates the current fiscal positions for industrialized countries, as well as projections for the year 2000. Deficit-to-GDP ratios for the major industrialized nations (i.e., G-7) rose sharply through 1993, and have declined moderately since then. However, the IMF estimates that deficit-to-GDP ratios for the G-7 will fall much further, from an average of 3.3% currently to just 1.9% by the year 2000. Other industrial countries are expected to experience similar declines, with the ratio of deficits to GDP shrinking to an average of just 2.1% at decade's end, compared to an average of 3.9% currently. *The Madrid Declaration* spelled out a number of commitments necessary for promoting sustained global economic expansion and reducing foreign exchange and financial market tensions. Figuring prominently within that declaration was the need for improvements in near- and medium-term fiscal positions.

Table 1
General government fiscal balances
In percent of GDP

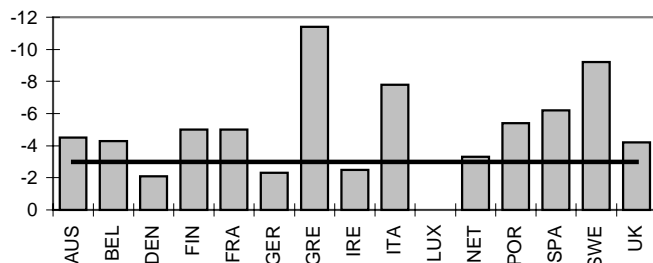
	1993	1995	2000
Major industrialized countries	-4.1	-3.3	-1.9
Other industrialized countries	-5.9	-3.9	-2.1

Source: International Monetary Fund

EMU as catalyst

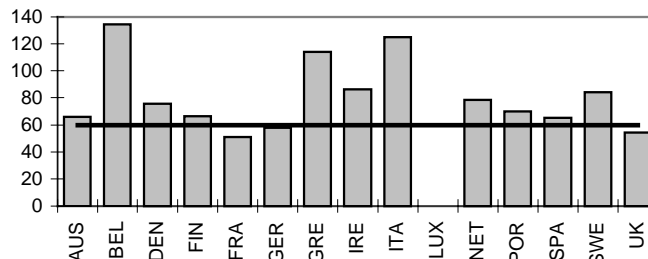
This trend toward fiscal consolidation will only be enhanced by the drive toward European monetary union (EMU). The EMU conversion criteria include stipulations limiting budget deficits to 3% of GDP, and aggregate public debt to 60% of GDP for member nations. Were these conversion criteria in effect today, only Germany and Luxembourg would satisfy both the deficit/GDP and debt/GDP requirements (Charts 3 and 4). (Although 1995 data are not available, it is believed that Luxembourg easily satisfies both criteria). This means that the rate of public savings (i.e., the paring back of budget deficits) will have to accelerate on the Continent for those countries seeking to qualify for monetary union by 1999. There's also the prospect that these deficit goals may be tightened even further in the near future. Hans Teitmeyer, president of the Bundesbank, is pressing to get a commitment from member nations for a scale-back of the deficit/GDP ratio to just 1%, from the current target of 3%. While some backsliding is inevitable and reforms are likely to be hotly contested by affected special interests groups (e.g., transportation workers in France), further fiscal consolidation on the Continent will continue through the end of this decade and into the next, as well.

Chart 3
E.U. government surplus/deficit as a percent of GDP
1995 estimates



Source: Organization for Economic Co-operation and Development (OECD)

Chart 4
E.U. gross government debt as a percent of GDP
1995 estimates

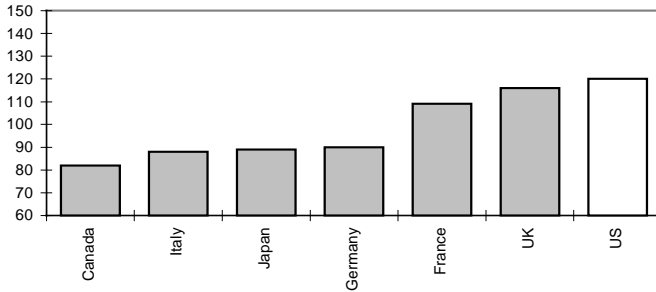


Source: OECD

2. Proliferation of the productivity revolution

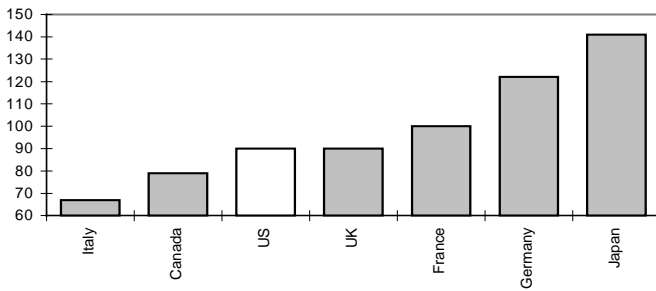
It was little more than a decade ago when the press chronicled the collapse of the domestic manufacturing base and lamented the inability of the U.S. to compete globally. Many may recall sensationalized press accounts of despondent U.S. engineers skulking off with their tails between their legs to study the manufacturing techniques of their chief rivals in Germany and Japan. In fact, by the early 1980s the competitive position of the U.S. had deteriorated so badly that it was at the very bottom of all G-7 nations in terms of productivity as measured by comparative unit labor cost (Chart 5). But over the past decade there has been a near complete reversal of fortune (Chart 6). According to economists from DRI/McGraw Hill, the United States now has become one of the lowest-cost producers among industrial nations, with unit labor costs rising more slowly than in either Germany or Japan. It is estimated that American manufacturers are about 10-20% more productive than German or Japanese manufacturers. William Lewis, director of McKinsey Global Institute, states that the U.S. now has the highest productivity and the best job creation performance among industrial countries. Chart 7, which shows changes in relative unit labor unit cost between the United States, Germany and Japan since 1985, helps illustrate this improvement in the competitive position of the U.S. While many point to the deterioration of the dollar as the principal catalyst behind the improvement in the U.S. competitive position, this is largely misleading. One economist estimates that improvements in U.S. productivity have been nearly twice as important as the changes in the value of the dollar in explaining U.S. export performance during the past several years. As you can see from Chart 8, non-farm business output per hour rose an average of 3.5% from 1991 through 1995 compared to an average of just 0.3% during the previous 20 years. It's clear that this wholesale "re-engineering" of the U.S. industrial sector, which began in the 1980s, is chiefly responsible for the productivity surge that has blossomed in the 1990s.

Chart 5
Relative unit labor cost for G-7 nations
1980



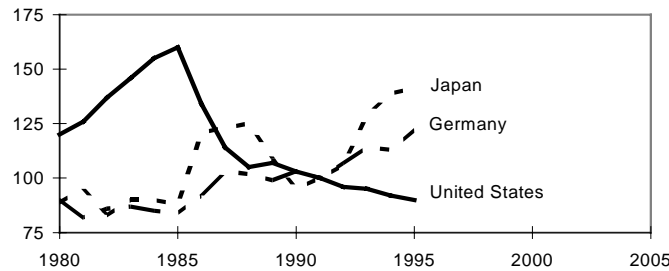
Source: OECD

Chart 6
Relative unit labor cost for G-7 nations
1995



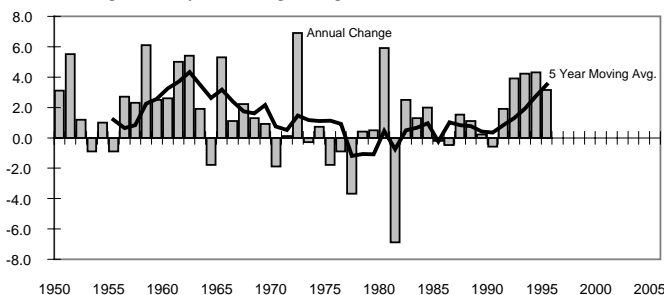
Source: OECD

Chart 7
Relative unit labor costs in dollars
United States, Germany and Japan (1991 = 100)



Source: OECD

Chart 8
U.S. non-farm business output per hour
Annual change vs. five year moving average



Source: U.S. Department of Labor

Information technology and the service sector

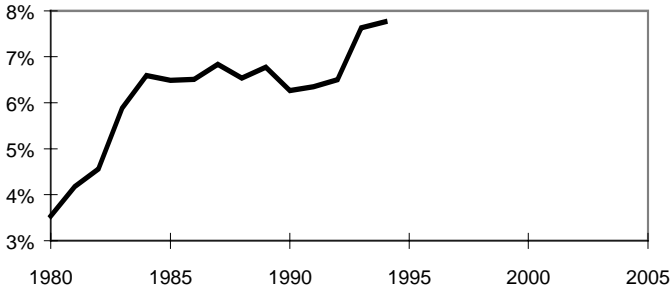
However, as we pointed out in *It's Still "5 at the Turn,"* the biggest potential for future productivity improvement lies not with the manufacturing sector, but rather with the service industry. Keep in mind that three out of every four American workers are employed in some sort of service sector enterprise. What will spur this improvement in service sector productivity? Information technology. Many believe that the prospects for productivity gains resulting from the mainstreaming of information technology ultimately may rival the gains from the agricultural and industrial revolutions. While true enough, this view may actually underestimate the potential payoff from the information revolution. Keep in mind that although the applications from prior technological revolutions were broad based, they were still somewhat limited. For example, improvements in farming methods directly boosted productivity within the agricultural sector, yet only indirectly helped to improve productivity in other sectors by freeing up limited resources. However, the applications of information technology are nearly universal, and the potential for productivity improvements direct. Information technology can be used to enhance productivity in endeavors ranging from the processing of credit card applications to the heating and cooling of buildings, to the diagnosis and treatment of injuries and illnesses, to the extraction of natural resources from the earth.

While the gains achieved thus far from this mainstreaming of information technology have been impressive, they merely represent the proverbial tip of the iceberg. As you can see from Table 2, there has been something of a boom in capital expenditures in the U.S. over the past five years. Fixed capital expenditures within the U.S. rose to 7.8% of GDP for 1990 through 1994, from 7.1% of GDP for 1980 through 1989, and as low as 4.9% of GDP for 1960 through 1969. But, even more important, the portion of those capital expenditures devoted to information technology has risen steadily. From just 3.5% in 1980, computer purchases now comprise 7.8% of all capital expenditures (Chart 9). The investment in technology is even more impressive when you consider that computer costs have actually declined 188% since 1980 (Chart 10). Continued integration of new technology will help hold down inflationary pressures in service industries, historically the most inflation prone segment of the U.S. economy.

Table 2
Fixed capital expenditures in the business sector
As a percent of GDP

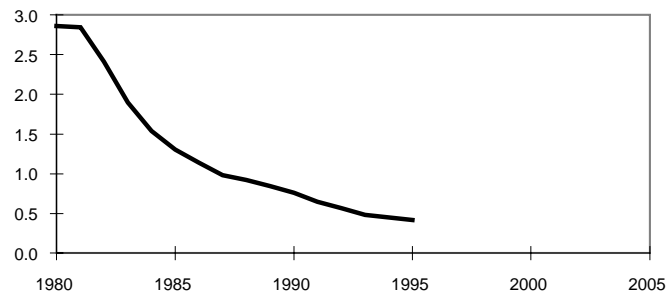
	1960-69	1970-79	1980-89	1990-94
United States	4.9	5.7	7.1	7.8

Chart 9

Computer purchases as a percent of total capital expenditures

Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Chart 10

Price Index: Computers and equipment

Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

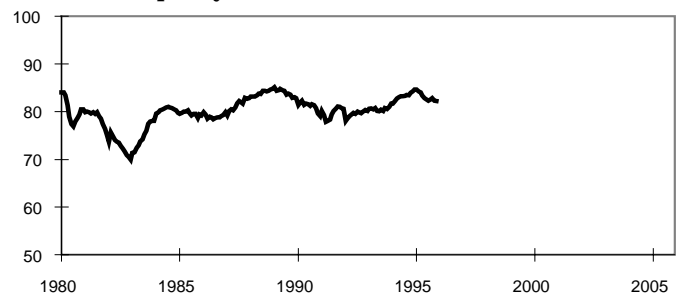
Closing the gap

With all this good news on the productivity front, one might believe that consultants would be crowing about the progress U.S. industry has made in terms of improving efficiency. Think again. Rather than trumpeting the productivity revival in the U.S., think tanks and policy analysts continue to warn of a protracted productivity gap between the U.S. and foreign manufacturers. The *Council on Competitiveness*, for example, cautions that while the U.S. leads most of its major industrial and trade competitors in short-term gains, it still lags in long-term prospects for sustained corporate growth and for steady improvements in the individual standard of living. According to the *Council's* most recent study, the U.S. ranks second lowest among the G-7 nations in improvements in long-term standards of living and national productivity growth. Cause for alarm? Not at all. Continued hand-wringing over the competitive position of the U.S. is actually good news. It means that rather than drifting idly into a sense of complacency over the progress already made, corporate America instead will continue to search for new ways to cut costs and improve productivity. If these consultants and policy analysts are correct, and the U.S. has much further to go in terms of improving its competitive position, then the real payoffs from the productivity revolution may actually lie ahead.

3. Ample global capacity

The capital spending boom that began in the late 1980s has continued into the 1990s. As we've already mentioned, fixed capital expenditures within the U.S. have increased to 7.8% of GDP for 1990 through 1994—the highest level in four decades. What's more, corporations are showing no signs of curtailing their spending plans. According to *Blue Chip Economic Indicators*, real non-residential fixed investment is projected to rise 6.4% in 1996, and 5.2% in 1997. As you can see from Chart 11, domestic capacity utilization rates had peaked at about 85% by the end of 1994 as the current economic expansion was reaching its zenith. Utilization rates have since fallen to about 82%, as the pace of the economy has slowed and more capacity has come on line. However, such traditional measures of resource utilization are probably understating the amount of slack that actually exists within the economy. Keep in mind that over the past ten years, U.S. corporations have taken massive write-offs equal to nearly a full year's worth of earnings based upon the S&P 500 in part to reflect the closing of older antiquated plants (Chart 12). But at the same time they were shuttering these older less efficient plants—capacity that would rarely be economical to bring back on line anyway—corporate America was also making huge investments in new technology and equipment. Today's idle domestic plant and equipment is far more efficient and therefore less expensive to bring back on line than it was even as recently as several years ago.

Chart 11

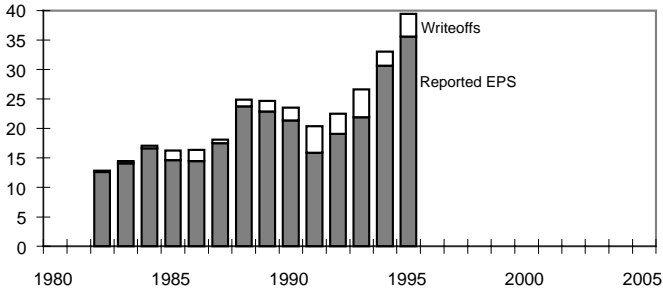
Domestic capacity utilization

Source: Federal Reserve System, Board of Governors

Chart 12

S&P 500 EPS

Operating EPS since 1982



Sources: Standard & Poors, PaineWebber estimates

Understating capacity

Even the government's methodology of accounting for productive capacity may underestimate the slack within the economy. A well-known CEO of a fortune 500 company once related a story of how government measures systematically understate the productive capacity of American industry. The CEO told an audience how one division of his company was able to enhance productivity by replacing an older antiquated production process with a new more technologically efficient one. Not only was the new process more efficient and able to expand production substantially over the old machine, but it was also smaller and therefore required less floor space. However, since the criteria the government used to measure capacity were based largely upon square footage, the switch to the more efficient equipment was actually interpreted as a *decline* in productive capacity. The problem with many government measures is that they often fail to incorporate most qualitative improvements or increases in efficiency, which tend to enhance output. Given the extent to which corporate America has rebuilt itself over the past decade, the prospects for such understating of true capacity have clearly risen.

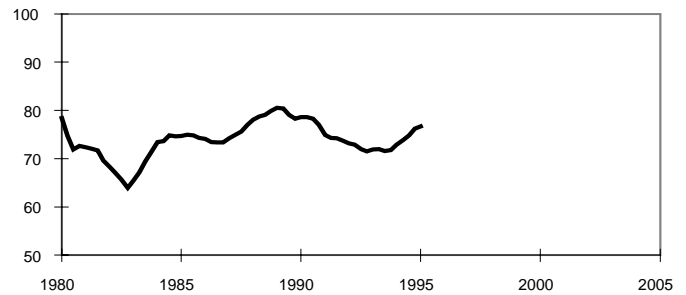
Over there

Capacity constraints are even less of an issue once overseas productive capacity is considered. As you can see from Chart 13, capacity utilization rates in G-7 countries remain relatively low. Just as U.S. corporations have been adding to capacity through increased capital expenditures, so too have their foreign competitors. As you can see from Table 3, fixed capital spending in the business sector as a percent of GDP has risen sharply from the 1960s through the 1980s in each of the G-7 countries. During the past five years this trend has remained intact, with only the U.K. and Germany showing modest declines in the level of fixed capital expenditures as a percent of GDP. Additional capacity abroad has taken on new importance given

the increasingly globalized nature of the economy. According to Henry Rowan from Stanford University, 13 out of the 16 most populous developing nations liberalized trade and foreign investment rules from 1980 to 1993. Breakthrough trade agreements such as NAFTA and GATT will serve to further enhance the liquidity and volume of global trade in both goods and services in the coming decade.

Chart 13

Capacity utilization for G-7 countries



Source: OECD and PaineWebber, Inc.

Table 3

Consumption of fixed capital in the business sector

As a percent of GDP

	1960-69	1970-79	1980-89	1990-94
United States	4.9	5.7	7.1	7.8
Japan	6.2	7.7	8.6	11.6
Germany	8.2	10.1	11.6	11.3
France	N.A.	6.3	7.5	8.1
Italy	N.A.	N.A.	5	5.7
United Kingdom	5.5	6.7	7.6	7.3
Canada	4.1	4.2	6.6	9.1

In an environment of abundant capacity and intense competition, weak demand growth will continue to translate into only moderate inflation pressures. The powerful disciplining effect of global competition upon domestic inflation was clearly in evidence at the end of 1994 and 1995. The NAPM prices-paid index rose to 87.5% during the fourth quarter of 1994—the highest level in 15 years. Yet, despite this surge in crude and intermediate goods inflation, there was virtually no pass-through to finished goods. The reason cited most often by purchasing managers for this inability to pass these costs along to the consumer was the fear of losing market share to foreign competitors. So, even at the top of the business cycle with the economy expanding at the fastest pace in a decade and pipeline inflation at the highest level in 15 years, foreign competition was still a disciplining factor in domestic pricing decisions.

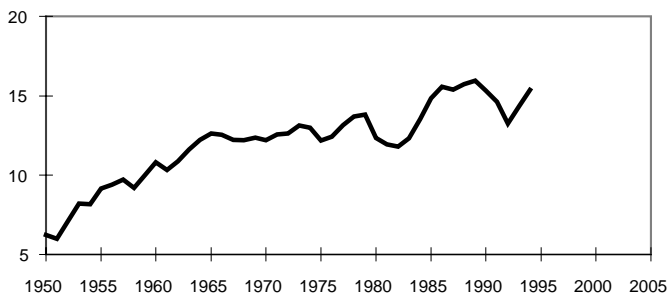
4. Still high private debt burdens

As you can see from Chart 14, consumer debt burdens have risen fairly consistently over the past several decades. After falling temporarily during the early 1990s, consumer installment debt as a percentage of personal income has now risen to the highest level since 1989. As a result of this resurgence in consumer borrowing, non-government debt as a percent of GDP remains stubbornly high (Chart 15). With private debt burdens hovering near historically high levels, the ability of the consumer to increase consumption through additional borrowing will be constrained.

That's not to say, of course, that the consumer sector is poised for a prolonged slump. As we pointed out in *Consumer Comeback* (September 4, 1995), after more than a decade of stagnation, real wages finally are poised to increase. Demand for labor should be healthy as the U.S. avoids a recession, labor supply will grow more slowly because baby boomers already have entered the workforce and corporations will be able to afford higher wages, thanks to strong productivity growth, low unit labor cost increases and slower benefit inflation. This expected increase in real wages, therefore, will provide consumers with additional spending power. Keep in mind, however, that we're not looking for any type of 1980s-style surge in consumption. The process of once again repairing personal balance sheets will serve as a governor on consumer spending for the near term. What's more, the aging of the baby boom generation and commensurate decline in new household formation will limit consumer spending on a longer-term basis. So, while a *Consumer Comeback* is likely over the next several years, a 1980s-style consumption surge is not.

Chart 14

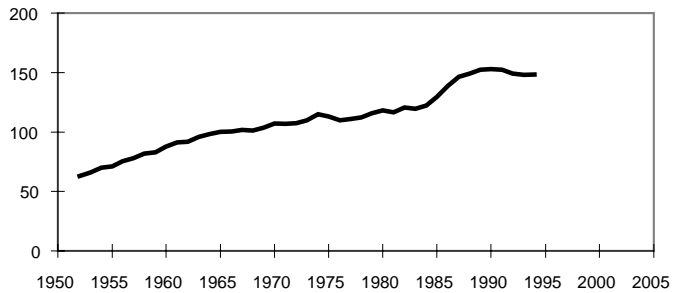
Consumer credit outstanding as a percent of personal income



Source: Federal Reserve System, Board of Governors

Chart 15

Non-public debt as a percent of GDP



Source: Federal Reserve System, Board of Governors

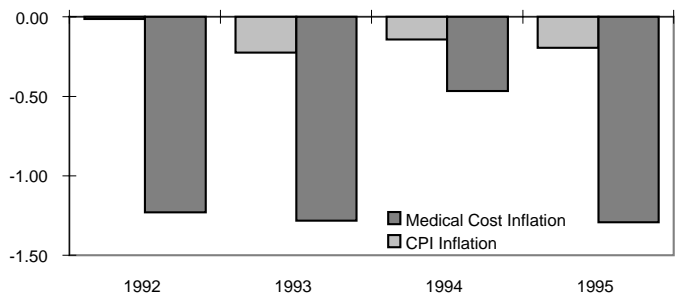
5. Further deceleration of healthcare inflation

Despite the failure of the Clinton administration's efforts to pass comprehensive health care legislation—or perhaps because of it—medical cost inflation has continued to decelerate, and at a faster rate than overall inflation. As you can see from Chart 16, medical cost CPI has decelerated in each of the past four years, and at a much faster rate than overall CPI. Medical cost inflation fell an additional 130 basis points in 1995, compared to a 20 basis point drop in CPI. It appears that this trend toward more moderate increases in health care prices will continue into the next decade as well, due largely to the proliferation of managed care facilities. The drive toward managed care is forcing greater accountability on behalf of health care providers and more cost-effective application of services. Corporations and other institutions are trying to hold down costs by encouraging employees to enroll in HMOs, which in turn have been pressuring hospitals, doctors and other providers to cut their prices. The growing influence of managed care systems has shifted the pricing leverage from the sellers of health care to the purchasers.

Chart 16

Medical cost CPI vs. overall CPI

Change in annual rate



Source: U.S. Dept. of Labor, Bureau of Labor Statistics

A physician glut?

It is estimated that there are approximately 240 physicians in this country for every 100,000 people, and this ratio is

projected to increase to 270 doctors per 100,000 people by the year 2000. It's also estimated that HMOs employ approximately 150 doctors for every 100,000 patients enrolled in their programs, and this ratio may actually *decline* modestly over the next several years. Keep in mind that more than 50 million Americans, or about 19% of the population, are currently covered by HMOs and other managed care facilities, but this ratio is expected to rise sharply over the next ten years. David Lothson, PaineWebber's HMO analyst, believes that within the next decade as much as 90% of the U.S. population is likely to be enrolled in some sort of managed care program. With the overall ratio of doctors to patients projected to increase—at the same time managed care penetration is expected to rise sharply—we're likely to experience an excess supply of doctors in the coming decade. This "physician glut" should trigger further competitive fee discounting, thus helping to drive medical cost inflation even lower.

Medicare reform

Additional declines in medical cost inflation may come from a highly unlikely source—Capitol Hill. Congressional Republicans and the White House are currently embroiled in a bitter, partisan battle over how best to achieve a balanced budget. In their effort to cut spending, the Republicans are calling for \$270 billion in Medicare savings over the next seven years. One of the measures they are counting on to reduce Medicare costs is the enrollment of Medicare patients into managed care programs. It's estimated that only about 9% of the elderly are currently enrolled in some form of managed care program, versus more than twice that percentage for the population in general. Since Medicare is the single largest payer in the country, sponsors of the Republican proposal see substantial savings from such forced conversions.

Critics, however, contend that any projected savings under the Republican plan will be limited. They point to a study by the Physicians Payment Review Commission, which claims that Medicare already pays less than 70% of what private insurers pay. Were this true, forced conversions would yield little in the way of additional reductions in Medicare costs. Fortunately, these estimates prepared by the PPRC appear flawed since they barely take into consideration the discounted prices paid by HMOs—the fastest growing sector of the medical services industry. In many instances, Medicare is actually the *highest payer* for certain medical services and procedures. What's more, even under the current Republican proposal, physicians fees are still expected to rise at about a 2.5% annual rate while private fees are actually projected to decline. It

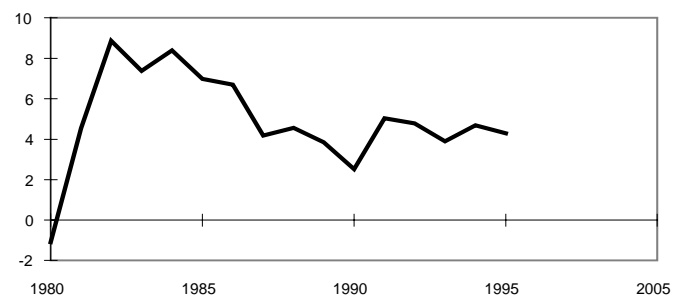
therefore would appear that even greater costs savings than the \$270 billion targeted by the Republican Congress over the next seven years are possible. Considering the large role that Medicare and Medicaid play within the health care industry, any cost savings as a result of structural reforms in public programs could contribute further to the expected deceleration in medical care inflation.

Real rates continue their decline

Real interest rates, which have been unusually high for a decade and a half, have been trending down toward their long-term historical average for the past decade and a half. As you can see from Chart 17, real long-term rates (30-year Treasury yields minus CPI) have fallen from a high of 8.9% in 1982 to 4.3% currently. Despite dropping more than 450 basis points over the past 13 years, real rates are likely to fall still further over the next several years. There are three factors that will help drive real rates lower over the next several years:

- Declining budget deficits as a result of fiscal reforms.
- Rising savings rates, driven largely by an aging population.
- Greater emphasis toward private supplemental savings as future retirees lose confidence in public and private retirement plans.

Chart 17
Real interest rates
Treasury bond yields minus CPI inflation



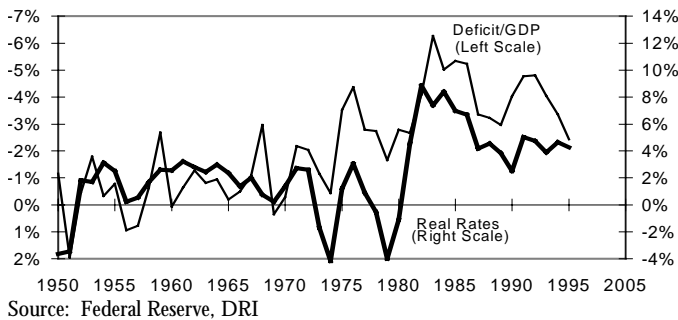
Source: Ibboston Assoc. & Federal Reserve System, Board of Governors

1. Declining budget deficits

As we pointed out in *5 at the Turn*, there appears to be an especially strong correlation between fiscal imbalances and real interest rates. As Chart 18 illustrates, whenever the U.S. has run high budget deficits, real rates of interest have tended to rise in tandem. This rise in real rates is due partly to the "crowding out" effect of government borrowing. Most economists believe that large budget deficits push real rates higher as government and private enterprise are forced to compete for the same pool of

capital. Increases in real rates are also due, in part, to the higher risk premium investors demand as protection against the prospects for government default or monetary inflation. Government leaders have fairly limited policy options at their disposal to escape mounting debt burdens that result from chronic fiscal imbalances. In the past, most have tried to escape these debt burdens directly by defaulting their way out (the Mexican approach) or indirectly by inflating their way out (the American approach). One approach that has rarely been tried, yet offers the only long-term solution to chronic fiscal imbalances, is a concerted effort to reduce government expenditures.

Chart 18
Real rates versus deficit-to-GDP ratios



High stakes

As we've already mentioned, the U.S. recently embarked upon a program of reducing both the size and scope of the government sector. The seriousness of these downsizing efforts is highlighted by recent government shutdowns and the inability of legislators to reach an agreement to raise the statutory debt ceiling. The budget stalemate already has resulted in several shutdowns of non-essential government services, causing hundreds of thousands of federal workers to be furloughed and entire federal agencies to be idled. The commitment to fiscal reform runs so deep that Congressional Republicans were even willing to risk the first default in U.S. history rather than scale back on their deficit reduction goals. Treasury Secretary Robert Rubin was forced into taking such extreme actions as suspending the sale of savings bonds and disinvesting government trust funds in order to forestall default.

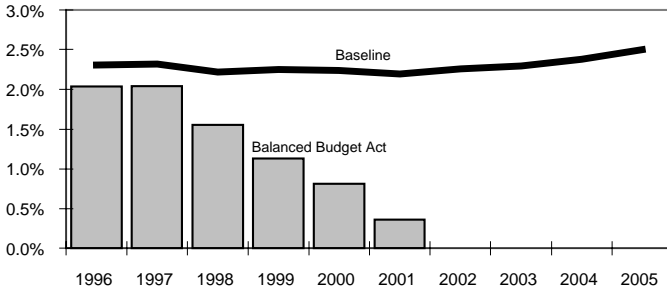
The \$890 billion in spending reductions proposed by Republican Congressional leaders has set the stage for the elimination of the budget deficit by 2002 (the total excludes an estimated \$80 billion in deficit reduction attributable to lower debt-servicing costs). Specifically, Republican leaders estimate that the deficit can be reduced \$408 billion by extending and reducing limits on discretionary appropriations. They project an additional \$226 billion in savings by establishing Medicare Plus plans,

reducing payment rates to certain health care providers in traditional fee-for-service Medicare, increasing premiums paid by beneficiaries and making other changes to reduce the growth of Medicare spending. Repealing Medicaid entitlement and replacing it with new block grants to the states is expected to yield an additional \$133 billion in deficit reduction. Other measures, including changes in the means-testing of benefits for low-income families, federal employee retirement benefits and federal farm price supports, could generate an additional \$122 billion in savings. Even if the Republican proposal for \$245 billion in tax breaks survives, this proposal would still represent nearly three-quarters of a trillion dollars in deficit reduction over the next seven years. The deficit as a percent of GDP would fall from 2.5% in 1995 to 0% in the year 2002. This would represent the first time since 1960 that the U.S. was able to avoid a budget deficit.

Better than expected

Keep in mind that these additional deficit reduction measures are even more far-reaching than we had expected back in May 1994, when we wrote, "...the potential exists for the deficit to decline even more than the CBO expects. As noted earlier, the Senate passed a resolution calling for an additional \$26 billion in spending cuts. Given the newfound sense of fiscal responsibility sweeping Capitol Hill, these budget paring exercises may become an annual event, and the discretionary spending caps—set to expire at the end of 1998—may well be extended." Although we foresaw the prospects for additional deficit reduction measures, we actually underestimated the extent to which the Republican Congressional landslide would alter the fiscal landscape. Chart 19 shows the most recent budget projections as prepared by the Congressional Budget Office compared to the adjusted April baseline deficit. As you can see from this table, the deficit as a percent of GDP is now projected to fall substantially below the original budget estimates during each of the next seven years. This means that real rates, which are closely correlated to fiscal balances, have the potential to fall as well. Our chief economist, Dr. Maury Harris, has projected that for each 1% drop in the deficit as a percent of GDP, real rates could be expected to decline by as much as 50 basis points. Real rates could therefore be expected to drop an additional 100 to 200 basis points if fiscal policy achieves balance by 2002. This means our original 5% projection for bonds by the turn of the century may actually prove a bit too conservative.

Chart 19
Congressional Budget Office fiscal projections
 1996 through 2005



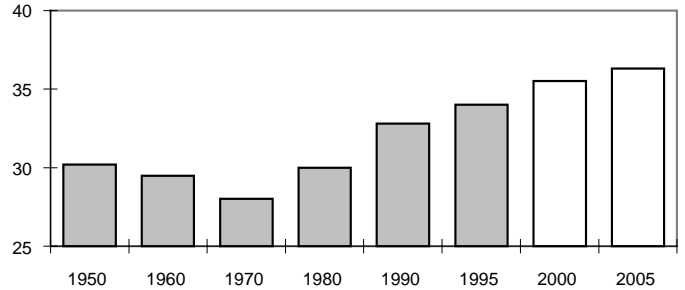
Source: Congressional Budget Office

2. Rising savings

The aging of America is well documented. Virtually every media outlet has focused upon the maturing of the baby boom generation, and the potential impact this could have on different segments of society. This demographic shift is so profound that even mainstream media are likely to get it right this time around. Consider that the median age of the U.S. population rose from 30.1 in 1980, to 32.8 in 1990, and again to 34.0 in 1995. This represents the highest median age for the U.S. population since data first became available in 1850. As you can see from Chart 20, the median age is projected to rise still further to 35.5 years by 2000, and to reach 36.3 years by 2005.

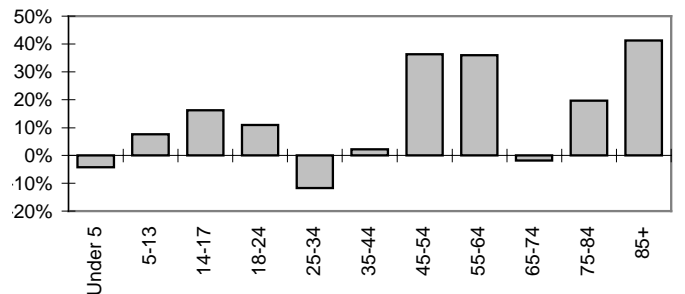
This aging of the U.S. population is expected to lead to substantial increases in personal savings rates that should be sustained well into the next decade. As you can see from Chart 21, the segments of the population ages 45 to 54 and 55 to 64 are projected to increase at rates far above the rate of increase for the overall population from 1995 through 2005. The 45- to 64-year old sector of the population not only has a savings rate that is substantially higher than the overall population but, as you can see from Chart 22, 45- to 54-year olds and 55- to 64-year olds also have the first- and third-highest median income levels among all age sectors of the population. (Although the portion of the population aged 85 and above—classic “dis-savers”—actually will experience the greatest relative increases in population through 2005, Chart 24 shows that this group will represent only a tiny fraction of the population and therefore will have little impact upon the savings rate.) As we pointed out in *Consumer Comeback*, real personal disposable income is expected to finally rise after having stagnated since the 1970s. The increase in the portion of the population aged 45 to 64, coupled with an expected rise in real wages will help boost savings back toward the 7-8% average of the 1950s and 1960s.

Chart 20
Median age of the U.S. population
 1950 through 2005



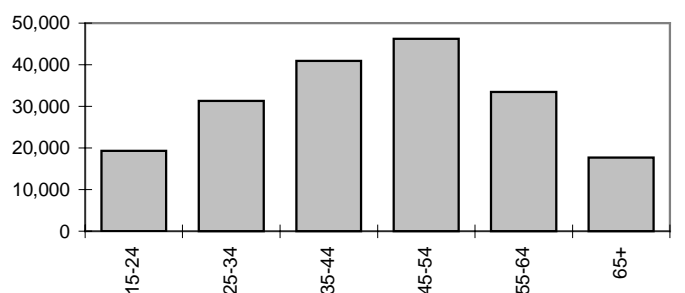
Source: Statistical Abstract of the United States

Chart 21
Relative changes in the composition of the U.S. population
 1995 through 2005



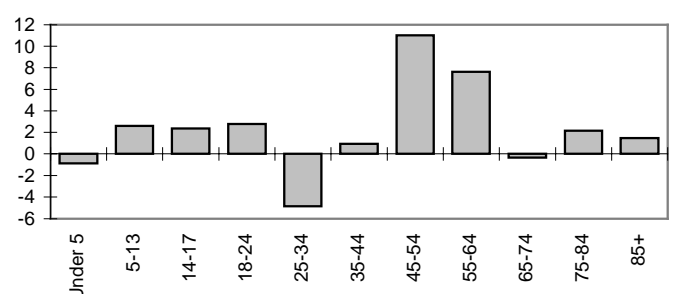
Source: Statistical Abstract of the United States

Chart 22
Median family income by age group
 In dollars



Source: Statistical Abstract of the United States

Chart 23
Absolute changes in composition of U.S. population



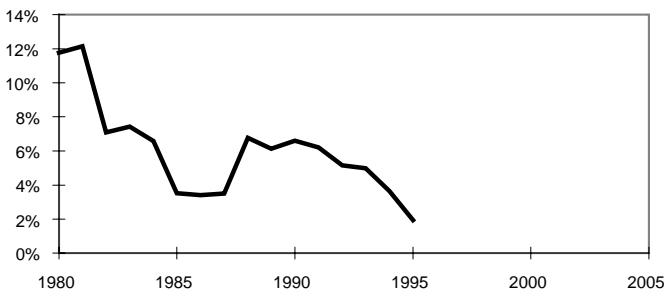
Source: Statistical Abstract of the United States

3. Pension plan anxiety

Not only are baby boomers at the right point in the life cycle to begin substantially increasing their personal savings, but changes to private retirement plans, coupled with potential cutbacks in public retirement plans, have provided a powerful near-term catalyst. While much has been made of the massive layoffs that have occurred over the past two decades as corporate America has restructured, only recently has adequate attention been given to the cutbacks in employee benefits. In order to survive in a globally competitive marketplace, U.S. companies have been forced to cut costs in every way imaginable. One area in which corporations have increasingly focused their attention has been on limiting employee benefit cost increases (Chart 24)—especially pension plans.

Chart 24

U.S. employment benefit cost increase

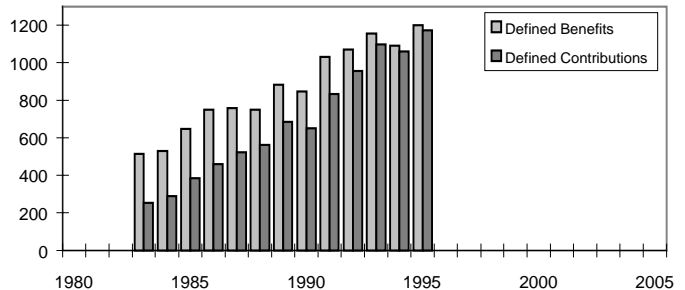


Source: U.S. Department of Labour, Bureau of Labor Statistics

Corporations have been shifting more and more of the responsibilities for retirement planning back to the individual. The most obvious example of this risk shifting has come in the form of switching from defined benefit (DB) plans to defined contribution (DC) plans. DC plans offer sponsors a number of advantages over DB plans including: (1) fewer regulatory and administrative costs; (2) greater flexibility to the sponsor; (3) shifting of the financial risk of the pension assets to the employee; and (4) the ability to structure DC plans in such a way that 10% of the pension assets can be invested in, or loaned to, the sponsoring company. As we pointed out in *It's Still "5 at the Turn," "By 1996 or 1997 assets in defined contribution plans will exceed assets in defined benefit plans for the first time ever."* As Chart 25 illustrates, this trend is well under way. Assets held in trust under single-employer defined contribution retirement plans are likely to exceed those of defined benefit plans within a year. As employers increasingly move to shift more of the liability for retirement plan investing back to employees, the risk that plan assets could fall short of retiree needs rises, necessitating an increase in supplemental savings.

Chart 25

Comparison of assets in defined benefit plans and defined contribution plans



Source: Employee Benefit Research Institute

RPA to accelerate shift

This shift from defined benefit plans to defined contribution plans is likely to accelerate even further as a result of The *Retirement Protection Act of 1994*. The RPA, which Congress passed in part to raise about \$1.75 billion in revenue lost over five years because of a lowering of import tariffs called for by the GATT and in part to reduce potential liability for the Pension Benefit Guarantee Corporation (PBGC), includes several provisions that make DB plans less appealing—especially to smaller companies. Under the old law, companies had to pay premiums to the Pension Benefit Guarantee Corporation of \$19 per participant, plus an incremental penalty up to a total of \$72 per participant for underfunded plans. The new law calls for the upper limit to rise to \$142 per participant phased in over three years. This represents a *doubling* of premiums for companies that have underfunded defined benefit plans. Regulations mandate that these underfunded plans make larger than normal contributions until they are within reach of being fully funded (i.e., 90% funded). Other legislative changes such as switching the interest rate used to determine the present value of future benefit payments, and tax penalties for over- or underfunding of plans, will make employers less likely to continue or start defined benefit plans.

Gray haired and scared

Future retirees are besieged by reports of the coming crisis in both public and private pension funds. The Committee for Economic Development (CED), a group of 250 corporate executives and university presidents, recently issued a report stating that, "*America's retirement system is underfunded, overregulated and soon to be challenged by unprecedented growth in retirement age population.*" The CED estimates that private savings per worker is only about one-third of what's needed for an adequate retirement. Although substantial progress toward reducing the

funding gap was made during 1995, pensions insured by the PBGC are still currently underfunded by about \$31 billion. What's more, budget cutting at the federal level is also putting pressure on future retirees by limiting pretax contributions to retirement accounts.

There's also increasing concern over the prospects for reductions in the level of Social Security benefits. Some proposals for "reforming" Social Security include reducing Cost of Living Adjustments (COLAs), raising the eligibility age for retirement benefits and increasing the portion of benefits that is included in taxable income. Confidence in the ability of Social Security to provide for even a portion of future retirement needs is deteriorating rapidly. Pressure is also mounting to cut back on the retirement programs of government employees. Faced with sharp spending reductions at the federal level, Congress is looking to take an axe to the retirement benefits of federal employees. Congress has proposed several changes to federal pensions including a 2.5% increase in employee contributions to their retirement funds and a change in the salary base for annuity computation from the average of the highest three years' salaries used currently, to an average of the highest five years' salaries. Other reform recommendations include raising the age for full retirement benefits and reducing or eliminating federal pension COLAs.

State and local cutbacks

With tax burdens rising at the local level, retirement benefits for non-federal government employees also are drawing increased scrutiny. The CED estimates that state and local pension plans are only about 80% funded, a finding that supports a 1992 study by the General Accounting Office. Raising the funding levels for these retirement plans has become especially difficult given the increased demands being placed upon state and local finances due to cutbacks at the federal level. Local policy makers are searching for ways to reduce or restrain non-federal workers' retirement benefits in an approach similar to the one being taken with federal employees. Public plan sponsors also are experimenting with the use of 403(b) plans, which are basically public sector "look alike" of private sector 401(k) plans. Initially viewed as complements, state and local government agencies and enterprises may come to view 403(b) plans as lower cost alternatives to the more expensive DB plans.

The "entitlement crisis" and "global capital shortage"

There is concern in some quarters that the "great rate retreat" of the 80s and 90s is unsustainable and that exploding budget deficits caused by aging populations

within industrialized nations, coupled with rising capital demands in newly industrialized countries, will trigger a resurgence in bond yields shortly after the turn of the century. While the projected surge in retirees after the year 2004 (estimated at 76 million) will place additional burdens on entitlement programs such as Social Security and Medicare, this crisis is probably being overstated. Just as the "intractable inflation spiral" was well on its way to being solved even as the wails of the public policy malthusians were reaching their crescendo, so too will the coming entitlement "crisis."

As for the coming "global capital shortage," driven by newly and soon to be industrialized nations, there's reason to be hopeful here, too. Evidence suggests that it is *public demands for capital and not private demands for capital* that ultimately lead to a rise in real rates. An expected increase in public savings (i.e., reductions in government fiscal deficits) coupled with an expected rise in private savings as faster growth rates promote greater wealth accumulation (often referred to as the "virtuous cycle" between growth, savings and investment), will largely offset these increased capital demands. In fact, the countries that are projected to have the largest increases in capital needs over the next several years may actually become net exporters of capital early in the next century.

Reforming entitlement programs

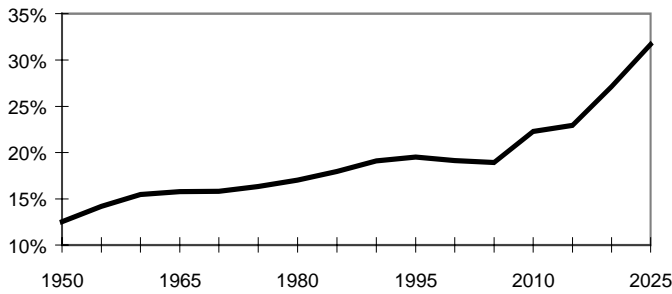
There's virtually universal agreement that the growth of entitlement programs poses the greatest threat to fiscal stability in the coming decade. The explosive growth of medical costs, coupled with an aging population, present seemingly intractable problems for public policy decision makers. It's projected that, unless current policies are changed, Social Security will move to a negative cash flow position by 2013 and run out of funds entirely by 2030. This is due largely to the expected surge in the retired age population as a percent of working age population (Chart 26) as 76 million Americans retire between 2004 and 2016. What's more, Medicare is projected to become insolvent just after the turn of the century unless sweeping reforms are adopted. Yet, rather than deal with these escalating entitlement program liabilities, most fiscal reform measures of the past several decades have focused almost exclusively upon discretionary spending. But that is changing. Entitlement reform, a political non-starter as recently as three years ago, is gaining momentum on Capitol Hill. Skeptics may dismiss the newfound reform focus as a byproduct of the Republican Congressional sweep that is likely to go away once Democrats reclaim the leadership of both the House and Senate—but this view is far too cynical. Supporters of entitlement reform range

from the fiscally conservative (concerned with ballooning budget deficits), to the socially liberal (alarmed at the prospects of a further fraying of the safety net).

Chart 26

Retired dependency ratio

Retired population as a percent of working age population



Source: Statistical Abstract of the United States

Bipartisan efforts

Interestingly enough, some of the reform proposals that offer the most far-reaching policy prescriptions for repairing entitlements are being sponsored jointly by Democrats and Republicans. For example, Senators Bob Kerrey (D-Neb.) and Alan Simpson (R-Wyo.) have proposed a series of legislative initiatives that would help to reform Social Security and other federal retirement programs. These proposals include: raising the eligibility age for Social Security old age benefits; the re-indexing of COLAs; including a larger portion of SS benefits as taxable income; changing benefit calculation for federal employees from an average of the highest three years of service to an average of the highest five years of service; and scaling back generous military retirement benefits. Other less popular reform proposals include means testing for Social Security benefit eligibility and the uncapping of FICA contributions (currently \$3,900 per year). These reform proposals are consistent with Committee for Economic Development recommendations and are similar to the policy prescriptions we identified in *It's Still "5 at the Turn."*

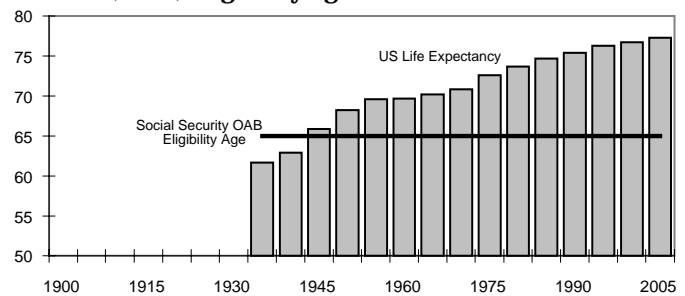
Further and faster

But the reform of entitlement programs may move even further, and happen even faster, than current legislative proposals suggest. For example, while Congress entertains debate on the appropriate reductions in COLAs for Social Security, some have already begun to advocate the elimination of COLAs entirely. They argue that since private sector retirement plans incorporate no such provision for indexing benefit payments to inflation, public sector funds shouldn't either. While the Kerrey/Simpson proposal extends the eligibility age of retirement benefits beyond what current legislation calls for, it too may be too timid.

Chart 27 shows the life expectancy of the U.S. population compared to the eligible retirement age for Social Security benefits. As you can see from this chart, life expectancy has risen from 61.7 years in 1935 (the year the Social Security Act was passed) to 77.3 year in 1995, an increase of 25%. The eligibility age for Social Security benefits, on the other hand, has remained fixed and is only projected to rise to only 67 by 2022—an increase of just over 3% in 87 years. It would not be surprising to see recommendations for extending the eligibility age for Social Security to 70 or even 75 emerge within the next decade. It's also likely that the portion of Social Security benefits included as taxable income will rise from a high of 85% today to 100% before the decade has ended.

Chart 27

U.S. life expectancy versus Social Security Old Age Benefit (OAB) eligibility age



Source: Statistical Abstract of the U.S. and Historical Statistics

Shifting assets

Just over a decade ago Congress passed the *Social Security Reform Act of 1983*, which essentially moved Social Security from a “pay as you go” system to a funded retirement plan. Recognizing a future imbalance between contributors and beneficiaries, the Act established the Social Security Trust Funds, which now total more than \$630 billion in assets. Presently, the trust funds are invested entirely in obligations of the U.S. government, but that could soon change. Senators Kerrey and Simpson have sponsored the *Strengthening Social Security Act (SSSA)*. The SSSA is a comprehensive Social Security reform package, which incorporates various elements of several other Kerrey/Simpson bills in an attempt to correct the long-range deficit and introduce a savings mechanism into the program. However, the SSSA goes one step beyond these other legislative initiatives by including a provision to shift a portion of the Social Security trust fund assets into a stock index fund. According to the proposal, the trust funds would be permitted to invest 25% of assets in equities at the end of a 15-year phase-in period.

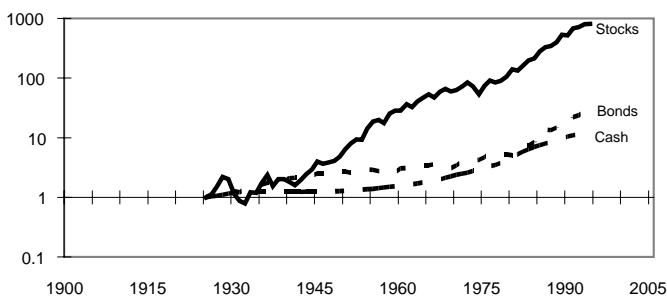
The equity investment recommendation incorporated within the Kerrey/Simpson proposal offers a potential solution to the Social Security funding dilemma that has

been given little serious consideration in the past—the potential to “grow our way out of it.” As you can see from Chart 28, equity investments have consistently provided superior returns versus bonds and cash over both the intermediate and long term. Yet, the entire Social Security trust fund surplus remains invested in fixed-income securities. Adopting an investment approach more in line with private pension plans by shifting a larger portion of trust fund assets into equities is likely to increase the investment returns and, therefore, further reduce any projected level of underfunding as baby boomers retire. The more aggressive the redeployment of assets into equities (i.e., higher than the 25% limit proposed by Kerrey/Simpson), the greater latitude given for investing those assets (i.e., permitting investment in non-U.S. equity securities), and the quicker this shift occurs (i.e., in a period shorter than the 15 years proposed by Kerrey/Simpson), the lower the risk of an emerging entitlement “crisis.”

Chart 28

Total return comparisons for stocks, bonds and cash

Logarithmic scale



Source: Ibbotson Associates

Trimming the fat from Medicare

An aging population, of course, will burden more than just the retirement system; it also will present challenges to medical entitlement programs such as Medicare and Medicaid. Although efforts to curtail waste and fraud, reduce a bloated federal bureaucracy and improve the efficiency of service will yield some savings, the real payoff will come from free market sources. As we've already pointed out, medical cost inflation has been decelerating at a faster rate than overall inflation for the past several years. This is due largely to the proliferation of managed care programs. Corporations and other institutions are trying to hold down costs by encouraging employees to enroll in HMOs, which in turn have been pressuring hospitals, doctors and other providers to cut their prices. Congressional leaders have crafted a reform proposal that attempts to force Medicare and Medicaid patients into managed care. As we've already pointed out, only about 9% of the elderly are currently enrolled in managed care—

half the rate of the overall population. As more of the Medicare and Medicaid recipient pool is steered into managed care, the projected medical costs from these programs are likely to decline. While critics categorize the \$270 billion in Medicare savings targeted by Republican Congressional leaders as “draconian,” industry insiders point out that additional savings are attainable. One healthcare industry consultant from Minnesota claims that the \$270 billion in projected Medicare savings over the next seven years is just a “nibble at the edges - it's a piece of cake.” It therefore wouldn't surprise us to see a second, and perhaps even a third, round of spending reductions aimed at curtailing the growth rate of Medicare and Medicaid. It may turn out that the projected \$270 billion in savings from Medicare over the next seven years is just a beginning.

Exposing the “global shortage of capital” myth

There's a fairly widely held belief that strong growth within newly industrialized and soon-to-be industrialized nations will lead to a global shortage of capital in the coming decade. As nations such as China, India and Indonesia embark upon programs of rapid industrialization, their appetites for capital will only grow. There's also some concern that the continued transition of former eastern bloc nations will only add to global capital needs. It is feared that these rising capital demands will deplete world savings rates, resulting in a commensurate rise in global real interest rates.

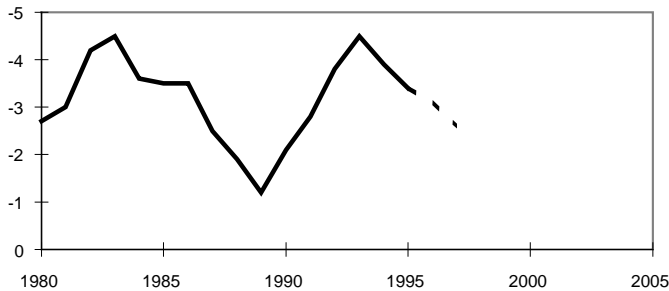
While capital demands from these and other soon to be industrialized nations are sure to rise, there is nothing especially unique nor particularly troubling about this development. Each decade has seen the emergence of a new tier of nations moving toward industrialization. Yet, in the past the capital demands of these emerging nations were satisfied without a material spike in real interest rates. The same is true today. In the coming decade, an increase in public savings coupled with an expected rise in private savings as faster growth rates promote greater wealth accumulation (i.e., the “virtuous cycle”) will be more than adequate to satisfy the rising capital demands of developing nations. Keep in mind that the capital demands of emerging nations are dictated not by the size of the population, but rather by the relative size of the economy.

Increases in public savings

One factor likely to offset rising capital demands from these newly industrialized countries (NICs), is the expected rise in public savings rates (i.e., deficit reduction). As we've already pointed out, the past decade-and-a-half witnessed a rapid rise in the accumulation of public debt,

particularly among the major industrialized nations of the world. For example, general government financial balances for Organization for Economic Cooperation and Development (OECD) countries reached a post-WWII high of 4.5% during 1993 (Chart 29). Keep in mind that it is *public—not private—demand for capital* that ultimately leads to a rise in real rates. It is expected that these public sector deficits will now begin a slow but steady retreat. According to the OECD, budget deficits for the 26 member nations are projected to decline to just 2.6% of GDP by 1997, and could fall still further through the end of the decade.

Chart 29
OECD general government financial balances
 As a percent of GDP



Source: OECD

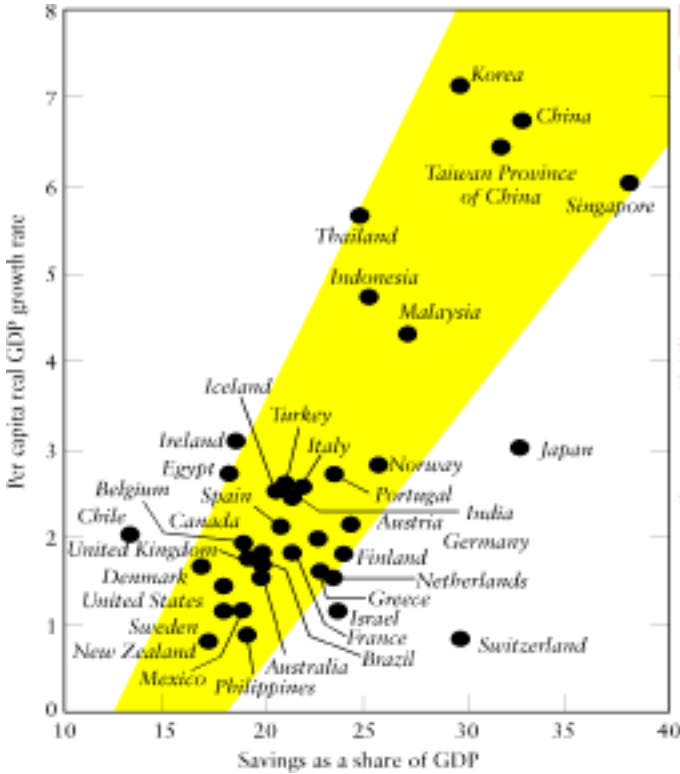
This trend toward fiscal consolidation will only be enhanced by the drive toward European monetary union. As we've already pointed out, only Germany and Luxembourg satisfy both the deficit/GDP and debt/GDP criteria for currency convergence. This means that the rate of public savings (the paring back of budget deficits) will have to accelerate on the Continent for those countries seeking to qualify for the union by 1999. With Bundesbank officials pressing for additional scale-backs of deficits relative to GDP, EMU deficit goals may be tightened even further. What makes the prospects for fiscal consolidation so important is that the decline in the savings rate during the 1980s was almost entirely attributable to public sector dis-savings. According to estimates prepared by the International Monetary Fund (IMF), public savings rates fell from 4% of GDP in the 1960 through 1972 period, to just 0.5% during the 1981 through 1993 period. It would appear that the abnormally high real rates during the 1980s and 1990s have largely been the result of rising public sector debt (commonly referred to as the "crowding out" effect). To the extent governments are better able to rein in fiscal policy in the coming decade, rising capital demands from NICs and soon to be industrialized nations will be met without a decline in global savings rates, nor a rise in global real interest rates.

Internal financing

Although *public demand for capital* clearly causes a rise in real interest rates, the same is not necessarily true of *private demand for capital*. Unlike government expenditures, the private employment of capital has the ability to create new wealth, thereby raising living standards. One by-product of a rise in living standards is an identifiable increase in the personal savings rate of the affected population. In fact, IMF studies of savings trends within developing countries during the last decade suggest that higher growth rates do indeed foster higher savings rates. According to the IMF, savings rates for developing countries have shown a sharp upward trend from 19% in 1970 to 27% today. Some developing countries such as Chile, Korea, Malaysia and Thailand have experienced a doubling of savings rates over the past two decades.

This strong correlation between growth rates and savings rates—often referred to as a "virtuous circle"—is clearly illustrated by Chart 30. The implications of these findings are quite powerful. Rather than representing a serious drain on the global supply of capital as many have feared, the next generation of developing nations may instead be able to finance growth through internal savings within a relatively short period of time. What's more, if these newly industrial nations follow a path similar to their predecessors, such as Japan and Korea, they could actually become net exporters of capital some time early in the next century.

Chart 30
Savings rate and per capita real GDP growth
Average: 1973-93

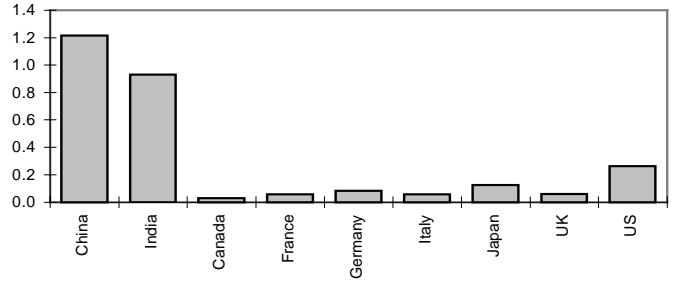


Source: International Monetary Fund

It's not the size of the dog in the fight

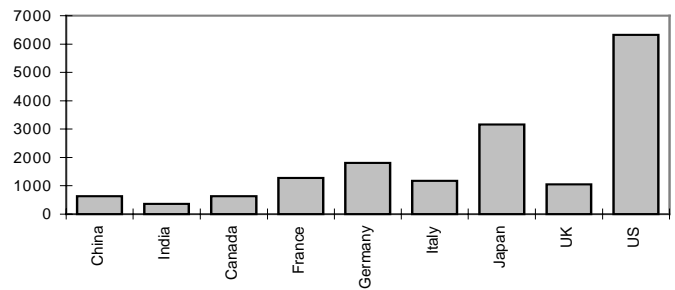
Critics contend that it's "different this time around," because rising capital demands are coming from countries such as China and India—the two most populous nations on earth. Given the size of the new breed of emerging nations relative to the industrial nations of the world (Chart 31), some feel these mounting capital requirements will simply overwhelm the capacity of capital export nations, regardless of the expected increase in public savings. Keep in mind, however, that it is not relative population size that determines capital needs, but rather the relative size of the economy. As you can see from Chart 31, the combined population of the seven largest industrial nations is only about two-thirds the population of India. However, as Chart 32 reveals, the combined GDP of China and India is less than the GDP of the United Kingdom. While China and India represent a new breed of emerging market nation, it's important to keep in mind that neither population nor land mass are the determining factors in capital needs.

Chart 31
Population comparisons
Major industrial nations versus China and India (In billions)



Source: DRI

Chart 32
GDP comparisons
Major industrial nations versus China and India (In billions)



Source: DRI

The new catalysts

Thus far, everything we've discussed merely reinforces our call for a 5% long bond at the turn of the century or supports rates just modestly lower. In order for bond yields to move appreciably below the 5% level *after* the turn of the century, some new catalyst must emerge to drive them there. We believe there are two likely candidates:

- The new orthodoxy among the world's central banks.
- The prospects for a wholesale restructuring of the U.S. tax code.

Central bankers throughout the world have come to recognize that they no longer can make the short-term trade-off between inflation and growth. That is, short-sighted inflationary policies pursued to promote near-term growth have had no lasting impact and, instead, have probably served to retard growth in the long term. Central bankers now appear committed to pursuing monetary policy that elevates price stability over near-term growth targets as a policy goal. Investors, however, remain wary. Too many have been burned by the type of stop/start monetary policy practiced in the past. But, as they come to accept and appreciate renewed central bank commitment to price stability, the risk premiums in long duration financial assets are likely to fall. The result—a further decline in real rates.

Renewed central bank credibility

Since the beginning of the second world war, inflation has been a fixture upon the American scene. The 4 1/2% annual rate of increase in the producer price index since 1940 is in sharp contrast to less than 1% annual rate of increase in wholesale prices from 1860 through 1939. It really shouldn't come as much of a shock that the longest period of sustained high inflation was the period immediately following the most devastating price deflation/depression in this country's history. To many in the post-depression era, high inflation was *de facto* evidence of continued strong economic growth. This pro-growth bias was so strong that it was codified into law with the *Employment Act of 1946* and again later in the *Full Employment and Balanced Growth Act of 1978*. These Acts charged the Fed with the responsibility of promoting full employment and sustainable economic growth, in addition to maintaining a stable pricing environment. If the price for avoiding another depression in which one in four workers was left jobless was somewhat higher inflation, then the economic policymakers and politicians were willing to make that trade-off.

In the short run, this policy approach appeared to have worked. Through the early 1960s the economy expanded at a 4% clip, the unemployment rate averaged just under 5% while inflation rose just modestly to a 1.9% annual rate. But by the late 1960s and early 1970s it became increasingly evident that high inflation and strong economic growth were not destined to move hand in hand. While the economy began to stagnate, inflation pressures continued to escalate. From 1969 through 1981, growth averaged a far more modest 2.5%, unemployment averaged 6.4%, while inflation had accelerated to a 7.8% rate. A new term, "stagflation," was coined to describe this new environment of slow/no growth and high inflation.

The new breed of central bankers

The obvious failure of this attempt to trade off growth and jobs for inflation—commonly referred to as the Phillips curve—emboldened central bankers to set out upon a new, more radical course of action. Under the guise of "monetarism," the Fed adopted a more restrictive policy stance right through the early 1980s. This was in sharp contrast to the 1970s, when a rise in the unemployment rate or a short-term slowing of growth would have prompted the Fed to cut rates. Fed Chairman Paul Volcker sought to break the inflation spiral by returning price stability to primacy among the Fed's conflicting policy goals. The results of these efforts to refocus the Fed's attention almost exclusively on price stability were

both immediate and impressive. CPI inflation, which had averaged 9.3% between 1976 and 1980, fell to an average of just 4.9% between 1981 and 1985. Having come of age during the great inflation of the 60s and 70s, rather than during the great depression of the 20s and 30s, the new breed of central banker was far less willing to accept a near-term boost to growth if the price was a long-term surge in inflation.

"Mack Act" impact

Until now, the Fed's informal targeting of price stability alone has been at odds with the central bank's legislative directive to promote full employment and stable growth. But that will all change if Senator Connie Mack (R-Fla.) gets his way. Senator Mack recently proposed legislation calling for repeal of the *Full Employment and Balance Growth Act of 1978* (Humphrey Hawkins Act). Humphrey Hawkins burdens the Fed with the responsibility of having to simultaneously maximize employment, promote economic growth and maintain price stability. As a replacement to the Humphrey Hawkins Act, Senator Mack has forwarded for consideration the *Economic Growth and Price Stability Act of 1995*. Senator Mack's legislative proposal simplifies the responsibilities of the U.S. central bank by mandating that the Fed concentrate exclusively upon price stability. The Fed would no longer be formally charged with attempting to balance short-term employment concerns against long-term inflation objectives. Instead, the Fed would be given the single policy goal of fighting inflation. Supporters of Senator Mack's proposal make a compelling argument that the "command and control policies" codified in Humphrey Hawkins are responsible for the high inflation and sluggish growth of the 1970s. By replacing these oft conflicting policy objectives with the single goal of price stability, inflation risk premiums are likely to decline, resulting in a further drop in real interest rates.

Some may argue that the Mack Act is largely irrelevant since it merely codifies into law policies that the Fed already has been pursuing for the past decade and a half. While the pursuit of price stability under the Volcker/Greenspan Fed has already gone a long way toward restoring the credibility of the Fed, the Mack Act would go even further. Keep in mind that the central bank recognized throughout the world as the most credible inflation fighter is the Bundesbank. It is no mere coincidence that German law mandates that the sole responsibility of BuBa is to maintain price stability and defend the purchasing power of the Deutschemark. It is this independence of BuBa from short-term policy goals that has enabled the Germans to achieve a stable price envi-

ronment and strong currency. The formalization of price stability as the Fed's only policy goal through passage of the Mack Act would go a long way toward placing the U.S. central bank in the same league as the Bundesbank, and driving real interest rates even lower.

The "Buba-fication" of the ECB

However, some now fear that the proposed monetary union in Europe will threaten the inflation-fighting resolve of the Bundesbank. In the post-WWII era, the Bundesbank stands above all other central banks in terms of its inflation-fighting prowess. The concern is that a pan-European central bank will lack the credibility and commitment of the Bundesbank. Other European central banks, including Italy, France and England, have never had much of a stomach for fighting inflation—especially if the cost entails slower growth and higher unemployment. Investors fear that the European Central Bank (ECB) would take its cues from its less disciplined members, and eschew the tough policy choices typically advocated by BuBa. Although understandable, these concerns don't appear justified. Rather than simply being absorbed into the Brussels bureaucracy, BuBa is likely to emerge as the very model for the ECB. BuBa officials will yield power only if they are convinced that the ECB will maintain the inflation-fighting bias of the German Central Bank.

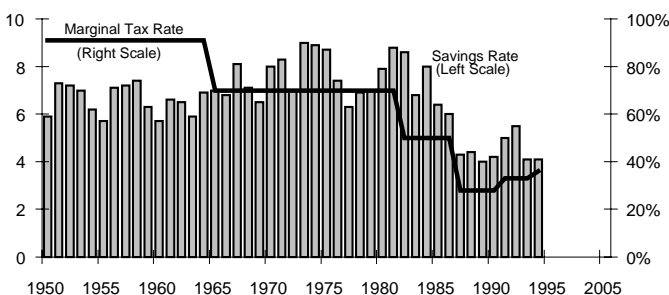
The primacy of BuBa and its policy directives has been clearly established as the move toward monetary union has progressed. It has been the Germans who have dictated the terms of the union and cut short any attempts to backslide on agreements. Were the Germans to become convinced that the vision for ECB was shifting sufficiently away from the BuBa model, they would simply withdraw, leaving the union in a shambles. It's likely that rather than being forced to accept the terms and conditions of less disciplined members of the monetary union, the

folding of BuBa into the ECB will enable German central bankers to dictate monetary policy across the Continent. In short, we're likely to see the "Buba-fication" of the ECB.

Wholesale restructuring of the U.S. tax code

We have repeatedly emphasized that there has never been much of a correlation between tax rates and savings rates. That is, periodic changes in the top marginal tax rate have failed to produce any meaningful or lasting increases or decreases in savings rates (Chart 33). That doesn't mean, however, that tax policy doesn't exert a powerful influence over savings—it does. In fact, many economists believe that the current tax code bears a fair amount of the responsibility for the present low level of savings. Keep in mind that for a generation now we have had a tax code that has encouraged consumption over savings and investment. But that is about to change. There is a reform movement afoot that is seeking to completely restructure the tax code. The principal goals of these tax reform advocates include: the simplification of the current mind numbingly complex code; the promotion of a more economically efficient tax structure; and a change in the incentive system to encourage saving and investment. These reform proposals range from the much heralded (and much maligned) flat tax, to a nearly flat tax, to a consumption/sales tax. While they differ greatly in terms of their mechanics and the interest of the political constituencies they serve, each of these reform proposals vastly improves the incentives for saving.

Chart 33
Savings rates versus marginal tax rates



Source: U.S. Dept. of Commerce, Bureau of Econ. Analysis

Incentives to save

In its purest form, the flat tax excludes all unearned income from the tax base and imposes a levy only upon salaries and wages. This means that all interest, dividends and capital gains would no longer be taxed. This would provide a powerful catalyst for individuals to build wealth through financial assets rather than real estate (their

homes) since homeowners would no longer be permitted to deduct the interest on mortgage debt. A value added tax, or national sales tax (typically referred to as a consumption tax), would have pretty much the same effect. Individuals would no longer have to pay an income tax, and the IRS would be eliminated entirely—a development over which few objections have been voiced. Instead, a sort of national sales tax would be imposed on the purchase of goods and services. Under this proposal interest, dividends and capital gains would also remain free of taxes.

Even the modified flat tax plans (also referred to as "not so flat" tax plans) incorporate some sort of incentive system to encourage savings. One example is the Unlimited Savings Allowance (USA) Account, which is an essential component of the reform proposal put forth by Senators Sam Nunn and Pete Domenici. The USA account is, in essence, a super unlimited IRA account with no penalty imposed for early withdrawal. Any funds that are deposited into the account in any year are excluded from the tax base in the year the contribution is made. For example, if an individual earned \$100,000 per year, but deposited \$40,000 into the USA account, that individual would be taxed only on the \$60,000 balance in that year. The \$40,000 deposited in the USA account would be excluded from the taxable base and be permitted to compound on a tax-deferred basis as well—much like an IRA. However, unlike the IRA account, there are no limitations and no penalties for early withdrawal. Individuals are permitted to deposit as much as they want into the USA account with no caps or limitations. What's more, individuals can withdraw funds at any time from the account without having to pay an additional levy or penalty rate. The funds are merely included in their taxable income for the year and taxed at the appropriate marginal rate.

A boost to productivity

An added benefit from tax reform could be an expansion in the nation's industrial capacity and further improvements in productivity. Most of the reform provisions incorporate some incentive for capital investment. The flat tax, for example, permits corporations to immediately expense purchases of plant and equipment, as well as land. Instead of being able to write off only a portion of the investment in new equipment each year according to some multi-year depreciation schedule, businesses instead would be permitted to recognize the entire cost as an offset to income in the year in which the purchase is made. The impact from such a change in tax policy is both straightforward and far-reaching. Corporations would enjoy a

lower effective cost of capital, which in turn would prompt an increase in capital expenditures. An expansion in manufacturing capacity and likely further declines in pipeline inflation pressures would follow. The productivity revolution is likely to get a further boost from such tax law changes as corporations find it more economical to invest in more efficient plants and equipment, and accelerate the closing of older less efficient capacity. A further streamlining of the tax code will also help to improve productivity. The current code encourages investment in economically inefficient endeavors, simply because there is a tax-based incentive to do so. However, by eliminating most tax breaks and deductions, capital will be committed based upon the economic payoffs from each project, rather than because of tax considerations.

A long and winding road

What are the prospects for tax reform and when could we expect it? While we continue to believe that a revamping of the tax code is likely, it won't happen quickly nor will it be as simple as some of the current proposals suggest. We're not talking about just tinkering with the marginal rates this time around. Virtually all of the competing reform proposals call for a complete dismantling of the current tax code. U.S. business interests are urging Congress to perform an in-depth review of all of the ramifications of the competing tax reform proposals. Given the far reaching impact that such an overhaul could have upon the U.S. economy, Congress is likely to move both cautiously and deliberately before adopting any new revenue-raising schemes. Therefore, the prospects for serious tax reform passing this year are remote. Instead, we believe that the reform process won't begin in earnest until after the 1996 elections. The new Congress will take up the debate in early 1997, but it could take as long as a year before any legislative proposals emerge from committee. The process is likely to be extended as affected constituencies, economic think tanks and public policy advocates (such as the Kemp Commission) are invited before the committee to share their insights and reservations. Once one of the plans has finally emerged from committee, it still must move through both houses of Congress. Keep in mind that lobbyists, taxpayer advocacy groups and local elected officials will weigh in heavily throughout the debate. It is, therefore, our view that the earliest any tax legislation would emerge from Congress would be 1998, and could come as late as 1999.

What reform might look like

And what will this tax reform package ultimately look like? Although the flat tax has gotten the most attention, and

appears to have gained the support of the Kemp commission as well, we view the prospects of passing such a reform proposal as exceedingly low. The true flat tax proposals (modeled after the reform suggestions of Professors Hall and Rabushka of Stanford University) are too politically unpalatable. The list of affected constituencies likely to oppose such a plan includes: the housing and mortgage industries; charitable institutions; the tax avoidance industry; state and local government officials; federal public policy makers; and even certain sectors of U.S. industry. Even Republican presidential candidates are beginning to attack the flat tax plan, resorting to the type of class warfare rhetoric typically reserved for Democrats. The prospects for a flat tax plan surviving the "special interest gauntlet" would, therefore, appear remote. Instead, we believe some sort of compromise reform proposal is likely to emerge that promotes saving and investment, yet eliminates some of the more troubling aspects of the flat tax. Such a compromise plan would probably bear the closest resemblance to the Nunn/Domenici plan. It might be structured as follows:

- The rate structure is likely to remain progressive, but flatter than the current code. There would be two, or perhaps three, different marginal rates as opposed to five currently.
- Certain popular deductions, such as mortgage interest, charitable contributions, and perhaps even state and local property taxes, may be maintained but will probably be capped off at some level.
- Unearned income such as interest, dividends and capital gains will continue to be included in the tax base.
- The code itself will be simplified as many deductions, tax credits and exemptions are eliminated.
- Most importantly, there is likely to be some sort of incentive built into the new code to encourage savings and investments. This will probably take the form of a "super IRA" such as the USA account for individuals and the immediate expensing of capital investment for corporations.

A boom to financial assets

The bottom line here is that some sort of tax reform is likely. Although the more radical approaches such as the flat tax or national sales tax are unlikely, whatever eventually emerges will incorporate greater incentives for savings and investment. This is likely to lead to a material increase in the savings rate, which could happen even faster than we had originally projected. The net result of

combining an aging population with a change in the tax code that favors savings and investment could prove to be the biggest boom to financial assets in a generation. This should help to drive interest rates even lower than our original forecast. We're likely to see Treasury long bonds being quoted "on a four handle" in the decade ahead.

"Lower highs" and "lower lows"

Since 1982 both interest rates and inflation have progressed along a path of "lower highs" and "lower lows." That is, the peaks and troughs of both inflation and interest rates have declined steadily in each ensuing business cycle. Investors have discovered that waiting for bond yields to "back-up" to previous cyclical highs has been a disappointing experience. During each cycle, yields have simply failed to return to prior highs. That's not likely to change. Cyclical increases and decreases in interest rates and inflation will continue—no one claims to have "cured" the business cycle. However, investors soon will discover that the cyclical high of 8.16% back in November 1994 will be unattainable during the next cycle.

The long-term secular decline in bond yields remains intact, and should continue into the next century as well. Structural reforms to entitlement programs will help to alleviate the next "budget crisis," which many are projecting for the middle of the next decade. Net increases in public savings, coupled with the "virtuous cycle" between growth, savings and investment, will meet the increased capital demands of newly industrialized nations. Finally, greater confidence in central bank policy and a wholesale restructuring of the tax code will contribute to even lower real rates after the turn of the century. Bond yields, which are currently quoted at around the 6% level, should fall to near 5% before the end of this decade, and could decline still further to the mid to high 4% range by the middle of the next decade.

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