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August 17, 1989

To: Members of the Executive Board

From: The Secretary

Subject: United States - Staff Report for the 1989 Article IV Consultation

The attached supplement to the staff report for the 1989 Article IV consultation with the United States provides summaries of Appendices I and III through XVII to the paper on recent economic developments (SM/89/176, Supplements 1 and 2).

Mr. Horiguchi (ext. 8486), Mr. Ebrill (ext. 8489), or Mr. Evans (ext. 8491) is available to answer technical or factual questions relating to these summaries prior to the Board discussion.

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INTERNATIONAL MONETARY FUND

UNITED STATES OF AMERICA

Staff Report for the 1989 Article IV Consultation
Supplementary Material

Prepared by the Staff Representatives for the 1989 Consultation with the United States

Approved by S. T. Beza

August 15, 1989

This supplement provides summaries of the appendices to the recent economic developments paper that are referred to in the staff report. The summary of Appendix II on medium-term scenarios is not included because an extensive discussion of the material dealt with in that appendix is contained in the staff report itself.

Appendix I

Assessing the Sources of Changes in U.S. Trade Flows

This appendix considers the choice of the activity variable in econometric equations attempting to explain U.S. nonagricultural exports and nonpetroleum imports and presents estimates of how this choice might influence the decomposition of the sources of changes in exports and imports in recent years. The activity variables considered are GNP, absorption, and total expenditure (defined as GNP plus imports or, alternatively, absorption plus exports).

As a general principle, the income or "activity" variable should be chosen to conform with the import category under consideration. In the case of finished goods a variable such as real disposable income or absorption might be used. If imports include intermediate goods then GNP might be selected as the activity variable. To the extent that some intermediate good imports are used in the production of exports the use of total expenditure might be more appropriate. In general, however, whichever variable is selected, that variable will be at best a proxy--for example, in theory the components of whichever aggregate variable is used should be reweighted to reflect their marginal contribution to import and export demand.

Estimation results indicate that the "income" elasticity of the volume of U.S. nonpetroleum imports is well above 2 regardless of the activity variable used. When absorption is used in the equation, the relative price elasticity is somewhat lower than in the other two cases,

but on balance the equations are broadly the same. A similar conclusion emerges in the case of U.S. nonagricultural exports where, in particular, the elasticity values for the different foreign activity variables are essentially identical.

Although the equations for U.S. nonpetroleum imports and nonagricultural exports thus are relatively unaffected by the choice of activity variables, that choice can affect the decomposition of changes in the U.S. trade deficit into their sources. This is because the gap between the growth in U.S. and foreign absorption, for example, can differ significantly from the gap between the growth in U.S. and foreign GNP or in U.S. and foreign total expenditure.

In fact, during the period 1981-85 the gap between the growth in U.S. and foreign absorption was significantly greater than the growth gap in terms of the other two variables. For that period, the use of absorption as the activity variable would imply that more of the rise in the deficit on nonagricultural and nonpetroleum trade was due to the relatively fast growth of the U.S. economy ($71 billion) than to the competitiveness variable ($66 billion). In contrast, if GNP is used as the activity variable, the relative magnitudes are reversed ($47 billion and $81 billion, respectively). For the period 1986-88, the choice of the activity variable makes relatively small differences to the decomposition of the $29 billion additional rise in the trade deficit. It may be noted that for both periods the variability in decomposition across activity variables occurs mainly in the case of nonpetroleum imports rather than of nonagricultural exports.

Appendix III

Possible Alternatives to Current Services Estimates

This appendix discusses fiscal estimates that could be used as alternatives to current services estimates in indicating the possible evolution of federal revenue, spending, and the budget deficit in the absence of a shift in the policy course from recent trends. One purpose of current services estimates is precisely to provide such information. However, the procedure that has been applied in calculating these estimates has several features which may diminish their usefulness as a tool for providing a benchmark path of the federal fiscal position.

The sources of potential bias include the following:

1. The economic assumptions employed by the Administration at times have erred on the optimistic side, in particular with regard to real growth and real interest rates. The contribution of errors in economic projections to underestimation of federal deficits has averaged $25 billion (equivalent to about 3/4 percent of GNP) annually over the period FY 1982 to FY 1988.

2. By design, the current services estimating procedure tends to produce a declining deficit path since revenue tends to rise a little faster than nominal GNP, while discretionary spending--which has recently accounted for a little less than one half of total outlays--is taken essentially to increase by just enough to offset inflation. It may be noted that in the past few years discretionary spending has risen by nearly 2 percent a year in real terms.

3. The failure to allow for the impact of possible contingencies on outlays can lead to underestimation of expenditures--a possibility underscored by developments over the last year concerning the Federal Savings and Loan Insurance Corporation (FSLIC) and thrift institutions.

4. There may be a tendency for official projections to adopt optimistic technical assumptions in estimating defense and entitlement programs. (Technical assumptions concern such issues as the rate at which unspent budget authority is actually spent and the numbers of beneficiaries for entitlement programs.) According to official estimates, optimistic technical assumptions contributed an average $5 1/2 billion annually to the underestimation of the federal deficit from FY 1982 to FY 1988.

The procedure currently employed by the staff in preparing its own current services estimates is to adjust the official figures on the basis of the staff's economic assumptions, using the sensitivity analysis contained in the budget. This procedure redresses only one potential source of bias, however. The alternative estimates presented in this appendix attempt at least in part to deal with two other potential sources of bias--one related to technical assumptions and the other related to the mechanical assumption that defense budget authority and nondefense discretionary spending remain essentially flat in real terms.

In the latest available Administration current services estimates released last January, the federal fiscal deficit declines to $37 billion by FY 1993. The staff's current services path, adjusting only for differences in economic assumptions, envisages a deficit of $118 billion by FY 1993. An alternative calculation involving both adjustments in technical assumptions and a modest allowance for spending drift generates a higher path in which the deficit remains close to $150 billion in FY 1993.

Appendix IV

Issues Related to Defense Spending Outlook

The U.S. defense budget experienced a very large buildup in the early 1980s. A continuation of rapid growth was then projected for the second half of the decade. However, in the context of efforts to curb the U.S. budget deficit, these ambitious plans were scaled back. For example, defense budget authority for FY 1990--projected at some

$488 billion in the budget for FY 1986--is now estimated at about $300 billion.

This cycle has complicated the process of defense budgetary planning. Many of the reductions made in the last several years have been effected by temporary measures such as stretching out weapons procurement programs rather than by lasting cuts. One result has been a substantial increase in the balance of unspent budget authority. Another important result has been the development over time of a so-called funding gap--the difference between the projected cost of current force structure and weapons programs on the one hand and budgetary resources on the other. Many analysts have estimated this gap at a cumulative $150 billion or more over the next five years.

A key task facing the budgetary planning in the defense area is to achieve consistency between the availability of resources and program costs. The steps taken this year in the amended budget request for the Defense Department have provided a first step, by proposing substantial and lasting cuts. However, a problem of significant proportions appears to remain, and the outcome of the budgetary process continues to be uncertain.

These defense budgetary issues are also significant in assessment of the fiscal outlook more generally. The current services estimates of the Administration issued with the budget for FY 1990 envisage a rapid decline in the fiscal deficit to $37 billion by FY 1993, implying that the GRH target of a balanced budget in that fiscal year could be met with relatively limited policy measures. However, one assumption behind the Administration's current services estimates is that defense appropriations will be held constant in real terms. According to most analysts, achievement of zero real growth over the next five years would in fact require substantial new cuts. Thus the Administration's current services estimates of projected deficits may on this count be contributing to a significant underestimation of the magnitude of the fiscal problem.

Appendix V

Implications of a Lower Capital Gains Tax Rate

This appendix reviews the literature on the revenue implications of changes in capital gains taxation and briefly considers some implications of the capital gains tax for resource allocation. The background is the Administration's proposal to reduce the capital gains tax rate and the subsequent debate over whether this proposal would generate additional revenues. Under the proposal, the effective tax rate on qualified capital gains would be reduced by excluding a proportion of those gains from the tax base--that proportion would be 45 percent in general and 100 percent in the case of taxpayers whose adjusted gross income for tax purposes is less than $20,000. A 15 percent maximum tax

rate would apply to qualified gains. The holding period to qualify for the exclusion would increase in steps from one year to three years from 1989 to 1995.

Reducing the tax rate on capital gains should increase the pace at which investors realize capital gains in the short run. However, whether tax revenues would increase in the long run depends on whether the response of realizations is large enough to offset the revenue effect of the lower tax rate. The existing empirical research indicates that the timing of realizations (and thus tax revenue) is sensitive to tax changes (or the announcement of tax changes) but is inconclusive on the subject of whether there is likely to be a long-run increase in revenue; no study claims that tax revenues would increase very much on a permanent basis. Concerning the Administration's specific proposal, while tax revenue may be positively affected in the short run, the phasing-in of a longer holding period to qualify for the lower capital gains tax rate is likely to result in lower tax revenues in the mid-1990s.

While the revenue implications of the Administration's proposal are clearly important, the proposal also has the potential for a significant impact on resource allocation. The current system for taxing capital gains in the United States distorts investor decisions in a number of ways. For example, capital gains taxes are levied on realizations rather than accruals and on nominal rather than real gains; the first works to the advantage of the investor by permitting him to defer his tax liability while the second serves to increase the tax burden he faces. In addition, different assets tend to face differing tax treatments; the current capital gains tax system is embedded in a structure which, for example, already grants preferential tax treatment to some assets such as owner-occupied housing and, moreover, which affects the source of financing as a result of the differential tax treatment of debt and equity.

Lowering the capital gains tax rate might serve to mitigate some of the adverse resource allocation effects of the current structure but only at the expense of exacerbating others. For example, it might serve to mitigate distortions stemming from the taxation of nominal rather than real capital gains while at the same time creating an incentive for tax arbitrage out of more heavily taxed forms of capital. Underlying this conclusion is the more general observation that direct rather than indirect solutions to sources of resource misallocation are generally preferable--for example, if the concern is with insulating the capital gains tax from the impact of inflation, indexing the tax system might well be preferable to relying on ad hoc adjustments to tax rates. The appendix concludes by arguing that these types of considerations, in addition to its revenue implications, are relevant when evaluating the Administration's proposal.

Appendix VI

International Trade and Investment Policies

This appendix covers major developments in the area of international trade and investment policies since the beginning of 1987. It is divided into six parts: (1) international agreements; (2) import policies and measures; (3) export policies and measures; (4) trade preferences for developing countries; (5) trade legislation; and (6) other measures.

Topics covered in the first section include the Canada-U.S. Free Trade Agreement, the ad referendum agreements with Japan on access to major construction projects and liberalization of beef and citrus imports, and agreements with the European Community on the hormone-ban dispute and with Korea over the liberalization of cigarette and wine imports. The second section discusses textile and apparel agreements with various countries, voluntary restraint agreements on steel, sugar quotas, and developments pertaining to countervailing and antidumping duties as well as unfair trade practices. The section also covers the response of the United States to various GATT dispute settlement rulings and recommendations.

The third section discusses Export-Import Bank policies and the use of tied-aid credits. Developments pertaining to the Generalized System of Preferences--including the annual review of trade preferences and the recent elimination of preferential duty treatment for four newly industrialized economies--and the Caribbean Basin Initiative are covered in the fourth section.

The fifth section summarizes the main features of the Omnibus Trade and Competitiveness Act of 1988 (including the Super 301 provision) and discusses the actions taken in compliance with the Act. The final section covers exchange restrictions.

Appendix VII

An Empirical Analysis of Household Consumption and Saving

This appendix is part of a continuing program of research on the empirical determinants of consumption and saving in the United States. The focus is on the sharp fall in the household saving rate from an average of 8 percent of disposable income in the 1970s to 3 3/4 percent in the most recent three years. The preliminary results suggest that the most important factor contributing to the decline in the household saving rate was the impact of changes in the demographic structure--especially the rise in the share of the population over the age of 65. As for other factors, the higher wealth/income ratio and the lower inflation rate in 1986-88 compared with the 1970s also contributed to

the decline in household saving while the higher real interest rates of recent years served to mitigate that decline.

Looking ahead, the empirical results presented in the appendix indicate that prospective demographic developments appear unlikely to contribute to an increase in the saving rate in the 1990s. The remaining macroeconomic determinants of saving are more difficult to project, but the kind of developments that would be associated with a marked rise in the saving rate--a sharp rise in inflation, a pronounced increased in real interest rates, or a substantial drop in the wealth/-income ratio--do not seem to be on the horizon at present. Consequently, the results suggest that it may be prudent to assume that no major rebound in the household saving rate is in the offing.

Appendix VIII

Official Development Assistance

This appendix discusses U.S. policies concerning official development assistance (ODA) and reviews recent data on the volume of ODA.

The first section deals with the orientation of U.S. development assistance, which reflects the belief that the best approach for developing countries to adopt is to promote broad-based economic growth through the private sector. Policy developments relating to both bilateral and multilateral ODA are examined, and some considerations which may be important in a possible revision to the Foreign Economic Assistance Act are discussed.

Section 2 describes the recent path of, and reviews prospects for, ODA spending. On a commitments basis, the volume of ODA amounted to $11 billion in 1988, equivalent to 0.23 percent of GNP. While a little higher than the previous year, this ratio remained well below the G-7 average and below U.S. figures for earlier years. Prospects are for some decline in the volume of ODA relative to GNP over the next few years.

Appendix IX

A Review of the Operation of the Gramm-Rudman-Hollings Legislation

In the 1980s, U.S. federal fiscal deficits increased sharply. At the same time, policy makers became increasingly concerned about the ability of the existing budget process to curb fiscal deficits and tried instead to establish a new framework to achieve deficit reduction. The Gramm-Rudman-Hollings (GRH) mechanism resulted from these attempts.

The record under GRH has been mixed. There has been no fiscal year in which the relevant GRH target was satisfied. Moreover, the Act was amended in 1987, reducing the magnitude of required fiscal correction in the near term and extending the timetable for achievement of a balanced budget by two years. At the same time, however, it has been argued that the deficits would have been much greater still had the constraints imposed by GRH not been in place.

The GRH framework has changed the incentives faced by policy makers in ways that may not have been intended by the authors of the legislation. First, the fact that the limits under the GRH mechanism are binding only on forecasts of fiscal deficits and not on actual outcomes encourages resort to devices directed at reductions in the projected deficit although not necessarily in the actual deficit. Second, since the final determination of whether the GRH targets are satisfied for a given fiscal year occurs after only two weeks into that year, there is an incentive to shift spending into, and revenue out of, that year once the final determination has been made. In that way, the projected deficit for the following year can be reduced to achieve compliance with GRH. Third, the GRH framework increases the incentive for borrowing to be moved off budget even though that may raise the economic cost of such activities. Fourth, the GRH mechanism may increase the incentive for the use of regulatory policy instead of the direct use of tax or spending policies to achieve public sector objectives. Fifth, the short-term focus of the mechanism may encourage policy makers not to take a long-term view. Finally, the analytical underpinnings of the medium-term target under GRH of achieving a unified budget balance have not been established; a case can be made for a medium-term objective of a substantial federal surplus.

Some reforms to the GRH framework could be contemplated to strengthen its effectiveness. The limits under GRH could be made binding on estimates made in the course of the fiscal year so as to decrease the existing incentive for optimistic budgetary projections, with two potentially suitable occasions for this purpose being the time of the budget presentation (several months into a fiscal year) and the time of the mid-session review (a few months before the end of a fiscal year). Alternatively, one might set debt ceilings consistent with the deficit reduction path envisaged under the GRH. Under such a scheme, should the actual deficit in a given fiscal year exceed the target (and result in the debt ceiling being exceeded), the excess would have to be made up in the subsequent fiscal year. One further possible reform would be to limit the Government's ability to move borrowing off budget.

Appendix X

Savings and Loan Crisis

Despite the record number of insolvency resolutions (regulator-induced cessation of independent operations through liquidation, merger,

or acquisition) undertaken in the course of 1988 by the Federal Savings and Loan Insurance Corporation (FSLIC), 25 percent of all thrift institutions were insolvent or significantly undercapitalized at the year's end. Estimates of the present value cost of the past resolution cases and those likely to occur over the next three years range from $76 billion to $111 billion. On a cash flow basis, total outlays over the next 11 years center around $254 billion, including debt service payments and the capitalization of a new deposit insurance fund for savings and loans.

In response to the large and growing losses at troubled thrift institutions, an outflow of deposits from the industry, and the limited cash resources of the FSLIC, the Administration in early 1989 proposed a reform plan for the industry. The plan had as its objectives the raising of funds to resolve the remaining insolvent thrift institutions as quickly as possible and the reform of the industry to prevent such a crisis from recurring.

The appendix provides an assessment of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA), signed by the President on August 9. The legislation contains five main provisions: (1) the borrowing of $50 billion over the next three years to fund insolvency resolutions; (2) the raising of funds from the thrift industry to meet part of the resolution costs; (3) reforming the regulatory structure of the industry to parallel that for banks; (4) the enhancement of safety and soundness standards for the industry; and (5) the preservation of a separate housing finance system by requiring savings and loans to hold an increased proportion of their assets in mortgages.

The FIRREA represents a substantial step toward the attainment of the goals of the Administration's plan, although some problems remain. Concerning the specific provisions, funding for the insolvency resolutions, albeit substantial, may prove inadequate. The estimated present-value cost of the insolvency resolutions developed in the appendix is somewhat above that assumed in the legislation. While the thrift industry is expected to contribute to some extent toward the resolution costs under FIRREA, over 75 percent of the estimated total cash outlays will be borne by the taxpayers.

The structural reforms promulgated under FIRREA will place the thrift industry on a sounder foundation. Most importantly, the capital adequacy standards will be raised to a level that is no less stringent than the standard for federally chartered banks. However, the measures to preserve a separate housing finance system by increasing the proportion of assets a thrift institution must hold in the form of mortgages and to restrict thrifts' asset powers are likely to weaken the industry.

Appendix XI

The Recent Behavior of Business Fixed Investment in the United States

In the current expansion of the U.S. economy, investment in high technology equipment--primarily office computing and accounting machinery (OCAM)--has boomed, while other categories of business fixed investment have yet to regain their previous cyclical peaks. The high technology boom has been associated with a very rapid decline in the price of computers, as measured by new computer price indexes initially introduced into U.S. national accounts data in 1985.

The pronounced decline in the relative price of computers leads to difficult index number problems which complicate the assessment of investment performance in the 1980s. For example, investment growth since 1982 appears much stronger when calculations are made using 1982 rather than 1987 base prices. This index number problem arises when a component whose relative price is falling is also growing in importance, conditions that are clearly satisfied by the high technology equipment industry in the United States. In such a case, the earlier the base year, the larger the weight given to the rapidly growing component and therefore the greater the measured increase in the overall index.

When ratios of investment to output were examined to see whether the recent investment performance should be characterized as strong or weak, the assessment was clouded by these index number problems. The ratio of real gross business fixed investment to real GNP (in 1982 prices) indicated a strong recent investment performance, while the corresponding ratio in 1987 prices did not. The ratio of net investment to net national product appeared unambiguously to have declined recently, both in nominal and real terms. When a chain-weighted measure of real gross business fixed investment was examined, it was apparent that the trend increase in this ratio observed up to the late 1970s came to a halt in the 1980s and may have given way to a small subsequent decline. A broader measure of real gross investment--incorporating inter alia government capital formation, investment in consumer durables, nondefense research and development, and spending on education--also increased relative to output up to the end of the 1970s and appeared to decline subsequently; a similar time profile was displayed by the ratio of the net capital stock to output.

Previous staff empirical work had estimated conventional equations explaining producers' durable equipment (PDE) investment and investment in non-residential structures in terms of an accelerator term and the cost of capital. When the data were extended to 1988, the equation for investment in nonresidential structures performed much as before, but that for PDE investment significantly underpredicted the recent surge in that category.

When PDE investment was separated into OCAM and the remainder, a stable empirical representation of the latter was found to exist, but no satisfactory equation for OCAM was developed. These results appear to indicate that investment in OCAM and the remainder of PDE may in fact be heterogeneous categories which should be modeled separately. The inability to explain OCAM investment in terms of a conventional specification could stem from measurement difficulties or could suggest that a different approach may be needed for a category of investment experiencing such rapid technological and quality change.

Appendix XII

Social Security, Demographic Trends, and the Federal Budget

The national savings rate has declined substantially in recent years, due in part to the emergence of large and persistent measured federal fiscal deficits. The centerpiece of the response of the U.S. authorities to the federal deficits is the (revised) Gramm-Rudman-Hollings mechanism, which envisages that the unified budget fiscal deficit will be reduced to zero by FY 1993. However, the unified budget deficit includes the operations of the social security trust funds which for demographic reasons--notably, the passage of the "baby boom" generation into its years of high earnings capacity--are running growing cash flow surpluses. These surpluses (including interest income) could reach about $500 billion annually around 2015. However, as the "baby boom" generation ages, the surpluses will give way to large and growing deficits. This appendix considers both the fiscal and the national savings implications of the interactions between prospective demographic trends and the social security system.

The appendix focuses on the economic issue of how the social security system influences individual economic behavior rather than on the accounting issue of how the federal fiscal deficit should be defined. The complex relationship that exists between a typical individual's contributions and benefits under the social security system has resulted in a number of approaches to modeling the economic impact of social security on households. Loosely, these approaches range from viewing social security as just another tax transfer scheme to emphasizing its potential role as a pension plan.

The principal conclusion of the appendix is that a strong economic case can be made for "saving" the social security surpluses which in a unified budget framework would imply running fiscal surpluses in the amount of the social security surpluses. To elaborate, how best to treat the prospective surpluses hinges on two conceptually distinct though interdependent issues, namely, the issue of how much each generation pays into and receives out of social security, and the issue of how the treatment of the prospective surpluses might affect the path of national savings and hence the path of wealth accumulation. Concerning

the first issue, if the surpluses are used to finance current government expenditures, then, irrespective of the underlying model of social security, that would in effect place an increased burden on the next generation when increased social security payments come due and would be tantamount to reversing the intergenerational implications of the 1983 reform of social security.

The second issue arises if social security is analogous to a private pension scheme. If individuals take future social security benefits into account when making their savings decisions and if the social security cash flow surpluses are a useful proxy for the impact of the prospective demographic changes on the social security system, then using those surpluses to defray current government expenditures would mean that there would be no commensurate act of investment to underwrite what individuals view as an increment to their savings. Such a policy would, in effect, serve to reduce the ability of the United States to insulate its economy from the prospective demographic shock.

To provide some sense of the magnitudes involved, the appendix also presents a number of scenarios in which the impact of saving the social security surpluses is analyzed within the context of a growth model using demographic and other relevant economic data drawn from the projections of the Social Security Administration (Scenario II-B). The scenarios show that saving the social security surpluses would have a positive impact on output and consumption over the long run, thereby serving as a useful buffer against the prospective demographic shock.

The appendix also considers the role of public pension plans, specifically military, civilian, and state and local government plans, and suggests, though on somewhat different grounds, that the surpluses of these programs also be "saved." In effect, this already occurs in the case of state and local plans.

Appendix XIII

A Systems Approach to Estimating the Natural Rate of Unemployment and Potential Output for the United States

Although a variety of methods have been used to estimate the natural rate of unemployment and potential output, the two are typically estimated independently or recursively by deriving estimates of one from the other. The methodology used in this appendix to estimate the natural rate of unemployment and potential output has three distinguishing features: first, they are jointly estimated based on a system of equations; second, the estimation procedure systematically integrates wage and price data with "real" and structural data; and third, the methodology encompasses many of the methods found in the literature. In this way estimates of the natural rate of unemployment and potential output are obtained which are consistent with each other, robust in terms of

their relationship to actual wage and price inflation, and comprehensive in terms of their underlying structural determinants.

The appendix reports a number of alternative single-equation estimation results for the wage, price, unemployment, and output equations. Based on the preliminary specification search, the equations are then combined and estimated as a system. In this system there are no proxies for potential output or the natural rate of unemployment which as noted above are jointly estimated and fully consistent. The resulting estimates are interpreted as follows: in equilibrium when the actual unemployment rate is equal to the natural rate of unemployment and when actual output is equal to potential output, (i) there are no pressures for wage or price inflation to rise or fall, (ii) real wages grow at the same rate as labor productivity at potential output and prices at the same rate as normalized unit labor costs, and (iii) income shares are constant.

The estimation results indicate that the growth of potential output has recovered somewhat from the low rates of increase during the 1970s, but remains below the rapid rates of increase in the late 1960s. Similarly the natural rate of unemployment, after rising substantially during the late 1960s and the 1970s, is estimated to have declined in the 1980s. The appendix includes a discussion of the structural factors which underlie these historical developments. The results also suggest that in 1988 actual output exceeded potential while the unemployment rate was below the natural rate of unemployment, implying that there were inflationary pressures emanating from both labor and product markets.

The appendix concludes with an assessment of the prospects for potential output in the medium term. Although a further improvement in the growth of labor productivity is expected over the medium term, this is offset by the assumed continued slowdown in the growth of labor input (the same assumption as in the most recent Economic Report of the President). The staff's assessment is that, compared with the 1980 to 1988 period, there is likely to be a modest pickup in the growth of potential GNP to an average annual rate of slightly above 2 1/2 percent in the period from 1989 to 1994. This estimate takes into account another conclusion of the appendix that the natural rate over the same period is expected to decline and would be down to about 5 percent by 1994.

Appendix XIV

National Savings and Targets for the Federal Budget Balance

The national saving rate has dropped markedly in the 1980s reflecting declines in both the public and private components. Many of the factors that may be behind the decline in the private saving rate appear

difficult to reverse in a major way. An alternative strategy would be for the federal government to aim for the achievement of budgetary surpluses to offset reduced private saving. Such an approach would be justified by the fact that some part of the decline in private saving may reflect unintended consequences of public sector interventions into private market decisions--such as the provision of social security and various aspects of tax policy--and more fundamentally because private sector decisions may not adequately take account of the interests of future generations.

Two alternative frameworks aimed at quantifying medium-term objectives for the federal fiscal balance are developed. The first is based on an explicit optimality criterion--namely finding the neoclassical steady state path on which per capita consumption is maximized. Illustrative calculations indicate that the current U.S. national saving rate appears to be well below the optimal level by this criterion and suggests that a net national saving rate of close to 10 percent of NNP might be called for. The associated target for the federal fiscal balance would be a surplus in the range of 3 percent of NNP.

The second approach calculates the net national saving rate consistent with a target output growth rate, assuming inter alia no reliance on foreign saving. In this framework the assumption made concerning the future behavior of multifactor productivity growth is key; one way to proceed is to assume that the latter rebounds in the projection period above its performance in the 1970s and 1980s, while remaining below the rapid growth rates of the 1950s and 1960s. On this basis, and assuming no reliance on foreign saving, output growth of 3 1/4 percent annually--in line with average growth from 1950-88--would require a net national saving rate of almost 10 percent of NNP and a federal budgetary surplus of close to 3 percent of NNP.

The two alternative frameworks analyzed in the appendix yield the same result that a federal budgetary surplus equivalent to 3 percent of NNP or more may provide an appropriate medium-term objective for U.S. fiscal policy. The precise numerical results of course depend on the specific frameworks presented and the assumptions about certain parameters that are made. Nevertheless, a strong case can be made for a substantial surplus to be an objective of U.S. fiscal policy.

Appendix XV

Investment in Housing: A Portfolio Approach to the Possible Effects of Changes in Tax Policy Concerning Housing

Several features of the U.S. tax system distort the allocation of savings and may exacerbate the problem of low national savings in the United States. One area of particular concern is the preferential tax treatment of housing. Mortgage interest payments are tax deductible, while the imputed income of owner-occupiers is not taxed and the tax

rate on capital gains from selling a house is effectively zero. By eliminating or at least reducing the preferential tax treatment of housing, the allocation of savings could be improved with favorable implications for the U.S. saving/investment balance while the federal fiscal deficit could be reduced without an adverse impact on incentives.

The appendix focuses on the possible effects of eliminating the tax deductibility of mortgage interest payments. A mean-variance portfolio model with three assets (bonds, housing, and stocks) is developed, based on the standard assumptions including that the investor is risk averse. The model is calibrated to reflect actual portfolio shares in the U.S. economy. Initially, the three assets are treated as perfect substitutes in the sense that, except for their risk/return characteristics, investors are indifferent between them. Subsequently, the possibility that assets may be imperfect substitutes is incorporated.

The forces that would restore equilibrium in asset and goods markets after the abolition of mortgage interest deductibility are considered by analyzing how an individual investor would react to that change in the tax code, holding all else constant. In the context of the portfolio approach the investor would find that the rate of return on housing would have decreased significantly. Given the revised tradeoff between the rate of return and risk, the investor in the context of the model would try to switch to a higher risk portfolio with a reduced proportion of his assets in housing.

Since the stock of housing is fixed in the short run, the market solution that emerges in response to investor reactions would initially involve a decline in house prices as the effect of the change in the tax code is capitalized. This would tend to equalize the after-tax rates of return between housing and other assets. The decline in the relative price of housing would then induce a supply response in the housing sector. Investment in that sector would be discouraged. However, as the stock of housing declines over time (relative to its baseline path), the price of housing will begin a recovery process that will continue until prices again cover resource costs.

The long-run equilibrium will be characterized by a smaller stock of housing than otherwise, a diminished flow of saving into the housing sector, a relative price of housing that has recovered from its initial decline to a level determined by the long-run supply curve, and an increase in the before-tax rate of return on housing; where the after-tax rate of return would end up would depend on the interaction between changes in the portfolio shares of each asset and the corresponding changes in the variance/covariance matrix.

These market effects indicate that while abolishing the mortgage interest deduction will result in long-term gains arising from a more efficient allocation of resources, some device such as phasing in that reform might be considered with a view to mitigating the short-run capitalization effects which could be disruptive.

Appendix XVI

The U.S. Health Care Industry: Performance and Issues

The share of health expenditures in GNP in the United States rose from 5.9 percent to 10.9 percent from 1965 to 1986 and is projected to increase further to 15 percent by 2000. Moreover, the federal share of total health expenditures is projected to increase from 29 percent in 1986 to 33 percent in 2000. Given the fiscal pressures faced by the United States, this prospect is viewed with concern.

Economic behavior in the market for the provision of health care is influenced by a range of impediments to the functioning of the price mechanism which impart an upward bias to health care costs and imply efficiency losses. These imperfections mainly arise from the existence of information asymmetries and imperfect competition in the market for health care.

To elaborate, consumers seek the risk-pooling advantages of health insurance in the face of uncertainty concerning future illnesses. However, available insurance policies typically reimburse for medical expenses actually incurred rather than for the underlying illnesses themselves, greatly reducing the incentive for patients to be cost-conscious. Moreover, because of an information asymmetry between patients and physicians/hospitals, patients find it difficult either to assess the quality of the care they receive or to determine whether they are purchasing the correct amount of care. Since they are exposed to liability uncertainties, physicians also purchase malpractice insurance. For their part, insurance companies have less than complete information on those they are insuring, giving rise to another set of information asymmetries.

The result is a second-best world with a range of points of interaction between the various actors in the health care market where the potential arises for a nonoptimal or inefficient outcome. Problem areas include health-insurance induced excess purchases of health care, medical testing to avoid malpractice suits, and a market equilibrium where the amount of malpractice insurance purchased may be significantly greater than optimal. On this last point there is the important benchmark theoretical result which states that under certain conditions the first best solution occurs with a zero demand for malpractice insurance--physicians would merely choose to be non-negligent.

Reforming the health care sector raises a number of difficult issues, including, notably, finding a way to resolve the dilemma posed by the tradeoff between the risk spreading afforded by insurance and establishing appropriate incentives to restrain expenditures. However, rather than alleviating the situation, some features of government policy have only served to exacerbate it. By allowing the employer's contributions to an employee's health care costs to be excluded from individual taxable income, while those contributions are a deductible

expense for the employer, the Government is encouraging excessive purchases of medical insurance and incurring significant revenue losses.

While further progress could clearly be made reforming the demand side of the health care market--for example, by having insurance indemnify actual illnesses rather than health care expenditures--most of the recent reform efforts have targetted the supply side of the market where the tradeoff dilemma noted above is less severe. The appendix discusses the impact of the introduction of the Medicare prospective payments system (PPS)--in effect a fee schedule--for hospitals; the role of Health Maintenance Organizations (HMOs) as a mechanism for internalizing some of the externalities associated with the traditional mode of health care provision; and the recent proposal to change the way Medicare reimburses physicians to a system based on the "true costs" of the inputs used.

These reforms have had some impact in restraining the escalation of health care costs. However, they represent at best partial solutions to the problem. In the absence of a comprehensive initiative, these previous reforms just mentioned could be reinforced by other initiatives, including abolishing the tax subsidy described earlier, further reforming the malpractice/jury-award system, and addressing issues related to the reasons underlying the increasingly burdensome heavy intensive care expenditures incurred in the United States.

Appendix XVII

Corporate Restructuring and Leverage--A Macroeconomic Perspective

The pace of corporate restructuring activity in the past few years has been at its highest level since the late 1960s, facilitated by recent financial innovations. At the same time, corporate leverage has risen appreciably, in part because of the significant substitution of debt for equity in the balance sheets of restructured corporations. While a corporate restructuring frequently permits resources to be allocated to more highly valued uses, and the increase in leverage that it typically entails reduces the cost of capital, these activities can have a potentially adverse macroeconomic consequences. This appendix addresses the issues raised by these trends and, in particular, focuses on the impact of corporate restructurings on the level of households' savings and on the role of corporate leverage in the propagation of business cycles.

The impact of corporate restructurings on households' savings is gauged by measuring the effect on consumption of a general, unanticipated increase in households' wealth, since a corporate restructuring usually results in such an increase in wealth. Using data on the actual responses of share prices to announcements of corporate restructurings as a measure of the unanticipated changes in wealth, it is found that

corporate restructurings can explain about 10 percent of the decline in households' savings ratio in the 1980s.

The policy implications that stem from the analysis of households' consumption behaviour depends on why shareholders' wealth usually increases as a result of a corporate restructuring. If the capital gains reflect a more efficient use of resources, increased consumption need not warrant concern. However, if the gains to shareholders are at the expense of government revenues and if households do not anticipate a future increase in taxes to compensate for that change in revenue, increased consumption would be a source of concern.

In this regard, it is important to note that the proposed reduction in the capital gains tax rate would increase the incentive to engage in tax arbitrage opportunities between more highly taxed forms of income and capital gains. Corporate restructurings are one way in which these opportunities could be exploited, thereby reducing the private sector's overall tax burden and increasing the market value of its wealth.

The increase in corporate leverage has raised concerns about the susceptibility of the economy to a downturn. The connection between leverage and macroeconomic stability is developed by considering the impact of balance sheet conditions on the marginal cost of capital. For example, corporations often pledge some of their assets as collateral to reduce the cost of their external debt financing. If an adverse shock to the economy reduces the value of corporations' unencumbered assets, their marginal cost of capital can increase, thereby propagating a downturn in activity initially caused by other factors. The higher and the more widespread the level of corporate leverage, the greater the significance of this propagation mechanism as more companies would be constrained in their ability to obtain external financing in the event of a downturn.

The policy implications of the link between corporate balance sheets and economic activity are twofold. First, a structure of corporate and personal taxation that is neutral with respect to the corporate financing decision would promote balance sheet conditions that are more conducive to macroeconomic stability. Second, a high degree of corporate leverage may increase the incentive for the monetary authorities to accommodate an adverse demand or supply shock in an attempt to mitigate any decline in the net wealth of corporations or other private borrowers that might propagate the downturn in economic activity.