



BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON, D. C. 20551

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TO: Federal Open Market Committee

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The attached memorandum was prepared in response to a question raised by President Balles at the FOMC meeting on February 6, 1979.

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Office Correspondence

Date March 5, 1979

To Mr. Zeisel

Subject: The Full Employment Surplus

From Messrs. Wendel, Cohen, and Fralick

I. Introduction and Summary

The full-employment budget estimates presented in the January 31, 1979, Greenbook are significantly different from those released by the Council of Economic Advisers at the beginning of this year. As can be seen in Table 1, a gap of \$25 billion in calendar year 1979 currently exists between the level of the high employment budget as estimated by the CEA and FRB staffs. In terms of changes in the budget, the two series show the same degree of fiscal restraint in 1978 but the Council's estimates show around \$12 billion in fiscal stimulus over the four quarters of 1979; while the FRB staff's estimates show almost \$4 billion of fiscal restraint. For 1980, both series show a significant shift toward restraint.

Three main factors account for the differences: first, the CEA has introduced a new method of calculating the high employment budget that is radically different from the staff's more traditional method; this new technique is inclined to pick up erratic movements in the economy and in the distribution of income. Second, the CEA used an early Commerce Department estimate for GNP in 1978:4 that was substantially lower than the later published preliminary estimate. This early forecast implied a depressed productivity estimate for the fourth quarter and this trend was then carried forward in the CEA projection. Third, the Administration projected that withholding taxes would stay low in 1979 due to the new provisions of the 1978 Revenue Act. Given the uncertainties surrounding these estimates, the FRB staff and other government agencies decided not to change projected withholding rates until more concrete evidence became available.

-2-

In general, the CEA's new procedures have raised some serious questions about the consistency of the CEA estimates with their potential GNP series. Given these questions, the FRB staff decided to rely on the more traditional method of calculating the full employment surplus (or deficit) pending a thorough investigation of the CEA approach. Our preliminary view is that the Council's new procedures introduce a number of serious biases into their full employment budget estimates for calendar years 1979 and 1980 and that the staff's traditional approach gives a better indication of the magnitude and direction of discretionary fiscal policy.

II. High Employment Budget Receipts Projections

Table 2 compares the high employment receipts estimates as prepared by CEA and the Board staffs. As can be seen in the Table, a large and growing difference now exists between the two forecasts. This divergence can largely be explained by analyzing the projection procedures behind both the CEA and the FRB estimates.

A. The FRB Method

The traditional method of computing full-employment receipts is to derive three sets of estimates: (1) potential GNP (in current dollars); (2) the shares of GNP that would be received by major taxpaying categories, such as personal income and (3) the tax rates that would be applied to these income groups. Once these estimates have been made, a time series on full employment receipts can be readily obtained.

-3-

B. The CEA Method

The new CEA method relies on a number of equations that blow-up actual or projected taxes to obtain an estimate of high employment receipts. These blow up factors depend on coefficients estimated from the level of actual GNP and on the difference between certain variables (e.g., the unemployment rate) as measured at actual and potential GNP. For example, the Council's blow-up approach for social insurance taxes takes actual social insurance taxes (NIA basis) and uses the gap between full employment and actual employment rates to enlarge them. Since both the actual receipts series and the blow-up factors tend to pick up erratic movements in the economy, these movements tend to increase the variability of the Council's estimates. In contrast, such movements are screened out by the traditional method.

While there is nothing wrong with the Council's new approach in theory, it depends critically on the assumption of a close correspondence between the output gap (potential less actual) and the unemployment rate gap (full employment less actual).^{1/} Unfortunately the relationship between the gaps has become very unstable in recent years because of recent movements in productivity growth. Since the staff's estimates rely on the potential GNP series and the Council estimates rely in part on the unemployment rate series, it is inevitable that projection differences would arise at this time.^{2/}

Differences in Income Shares--The Council's method also makes implicit assumptions about the full employment shares of corporate and personal incomes.

^{1/} This point has been referred to as "Okun's law."

^{2/} Besides the unemployment rate gap, the Council uses other variables to blow up the personal and corporate tax categories. These variables include the capacity utilization rate in manufacturing and the gap between potential and the actual GNP. In any event, the Council's use of the unemployment rate gap is the primary factor causing a divergence between the CEA and the FRB staff's estimates.

-4-

The share of personal income is derived as a function of the level and change in the unemployment rate, and a time trend. This is in contrast to the traditional method used by Board staff which uses the average of the observed shares in the last two full employment periods (1969 and 1973). In this case again, the two methods result in quite different estimates with the Board method obtaining substantially higher results for full-employment personal income taxes than the Council's method.

These differences in methodology raised the FRB staff's receipts' estimate to a level that was approximately \$12 billion higher than the Council's estimates for 1978. The dollar magnitude of this difference grows over time at rates considerably faster than GNP. This is due partly to the Council's projection of a declining personal income share and the absence of a rising share in some other component of nonpersonal taxable income. By 1980, these differences in methodology cause a \$20 billion spread in full-employment receipts, with the Board estimates larger than the Council. See Table 3, line B.

Differences in Starting Point GNP--Table 3 also shows that the existence of still another methodological problem. As mentioned, the Council used a very early estimate of GNP for the fourth quarter of 1978 as the starting point to project full employment receipts. This early forecast was lower than the Commerce Department's preliminary estimate and implied a low productivity estimate for 1978:4 which the Council carried forward into its projection period.

- 5 -

While the Council did include this fourth quarter preliminary estimate in its mid-January Economic Report, the Council did not have sufficient time to incorporate the new Commerce estimate into its 1979 and 1980 forecasts. Consequently, the Council's low implicit projection of productivity and potential GNP depressed full employment revenues by approximately \$5 billion in both 1979 and 1980 relative to the Board's staff estimates. The Council's reliance on the latest GNP estimates, therefore, led to the incorporation of erratic movements in the economy into the full-employment series. This problem did not occur in the staff's more traditional method.

Differences in Projected Withholding Tax Rates--Another estimating difference that appears in Table 3 is due to projection differences regarding the impact of the Revenue Act of 1978 on effective withholding tax rates.^{1/} The Administration expects that withholding tax receipts in 1979 and 1980 will stay relatively low due to the new legislation. As a result, final settlements are expected to rise sharply in 1980 but not enough to overcome the continued weakness in the withheld tax category. Given the uncertainty surrounding the new withholding tables, the FRB staff decided to wait for more direct evidence in the form of incoming data before adjusting downward our withheld tax rates.^{2/} As a result, the staff receipt estimates are \$4 to \$5 billion higher than the Administration's projection in 1979 and 1980.

1/ Some of this uncertainty is unavoidable since it is not clear at what rate taxpayers will move to bring their withholding tax declarations into conformity with liabilities.

2/ While the budget's receipt estimates--prepared by the Treasury--reflect this under-withholding, Treasury officials have indicated to the Board staff that the withholding tables provide a good match of tax liabilities and withheld taxes. Given this uncertainty, the Board staff decided to wait for more concrete evidence of underwithholding before changing our withheld tax rates.

Differences in Projected Inflation Rates--A final difference between the FRB and CEA staff tax estimates is caused by differences in projections of inflation. Since both methods incorporate inflation forecast (for the actual economy) into the estimates of full employment receipts, forecasting differences between the FRB and CEA tend to result in dissimilar full employment budget estimates. For example, the Board staff projected a change in the GNP deflator of 8.1 and 7.5 per cent for calendar years 1979 and 1980, respectively. The corresponding projections by the Council were 7.7 and 6.8 per cent. For the full-employment economy, the staff estimates that these differences resulted in a \$2 to \$4 billion divergence between the staff's and the Council's receipts estimates for 1979 and 1980.

III. Expenditure Side of High-Employment Budget Projections

Table 4 compares the high-employment expenditure estimates as prepared by the CEA and the Board staff. In each quarter, there are some moderate-sized differences between these projections, as one would expect. However, a large difference toward higher expenditures shows up in the FRB estimates in the last two quarters of 1980. These higher levels of spending reflect an increasing gap in the inflation and interest rate projections between the two staffs, with the Board's estimates higher than those of the Council. As will be recalled, the high-employment budget estimates adjust to a standard level of unemployment, but they do not adjust for differences in projected inflation or interest rates.

IV. Changes in the Full Employment Budget and Conclusion

Finally, the question remains whether the Council's new method or the Board's traditional approach gives a better indication of the magnitude and direction of discretionary fiscal policy. The Government Finance Section has initiated a study to answer this question and the results will be reported as soon as possible. The following observation, however, may be helpful:

1. Changes in the full employment budget are more indicative of the thrust of fiscal policy than the level of the budget. This is because substantial uncertainty exists about the level of the full employment surplus that would be consistent with maintaining high levels of potential output. With this point in mind, Table 5 shows quarterly and annual changes in the full employment surplus estimates as projected by the CEA and the FRB staffs. Both for individual quarters and for yearly periods, the biggest divergence in the changes, occur in 1979 (or the first quarter of 1979) when the CEA series is affected by differences in the GNP start-off estimates and by differences in the evaluation of the new effective rates for withholding taxes. Given the problems associated with the CEA's estimates, the FRB staff believes that the traditional method gives a better picture of the overall thrust of fiscal policy.
2. The Board staff also believes that the traditional estimates have the advantage of being comparable to the estimates that have been previously published by the Board staff and by other agencies.

The staff will continue to evaluate the two methods and will report any new developments.

Table 1

HIGH EMPLOYMENT SURPLUS (OR DEFICIT)--NIA BASIS
(In billions of dollars at annual rates)

	CEA (1)	FRB (2)	Excess FRB (2)-(1) = 3
Level (Calendar Years)			
1978	-12.9	0.2	13.1
1979	-15.7	9.6	25.3
1980	- 0.6	30.2	30.8
Changes (4th Quarter over 4th Quarter)			
1978	32.6	32.6	0
1979	-12.5	3.9	16.4
1980	21.7	28.1	6.4

TABLE 2

HIGH-EMPLOYMENT BUDGET
RECEIPTS--NIA BASIS

(In billions of dollars at annual rates)

Quarters	CEA	FRB	Excess FRB
	(1)	(2)	(2) - (1) (3)
1977 4	403.4	412.8	9.4
1978 1	417.5	430.4	13.4
2	438.1	450.4	12.3
3	455.2	468.8	13.6
4	475.8	485.5	9.7
1979 1	472.6	493.4	20.8
2	485.0	507.3	22.3
3	495.7	521.3	25.6
4	506.8	535.4	28.6
1980 1	527.3	553.8	26.5
2	539.1	570.4	31.3
3	549.8	586.2	36.4
4	561.5	602.5	41.0
<u>Calendar Years</u>			
1978	446.6	458.9	12.3
1979	480.0	514.4	24.4
1980	544.4	578.2	33.8

TABLE 3

HIGH-EMPLOYMENT BUDGET RECEIPTS--
RECONCILIATION BETWEEN FRB AND CEA ESTIMATES

(In billions of dollars)

	1978	1979	1980
A Total excess of FRB relative to CEA	<u>12.3</u>	<u>24.4</u>	<u>33.8</u>
<u>New Method:</u>			
B Due to equations	12	13-1/2	20
C Due to start-off GNP estimates	0	5	5
D Effective tax rate on withholdings	0	4	5
E Inflation projection	0	2	4

TABLE 4

HIGH-EMPLOYMENT BUDGET
EXPENDITURES--NIA BASIS

(In billions of dollars at annual rates)

Quarters	CEA ^{1/}	FRB	Excess FRB
	(1)	(2)	(2) - (1) (3)
1977 4	441.4	440.3	-1.1
1978 1	447.0	446.0	-1.0
2	447.1	446.3	- .8
3	463.0	462.1	- .9
4	481.2	480.5	- .7
1979 1	489.0	486.5	-2.5
2	496.1	492.8	-3.3
3	513.0	513.3	.3
4	524.7	526.4	1.7
1980 1	534.5	532.4	-2.1
2	540.3	539.9	- .4
3	547.6	554.7	7.1
4	557.7	565.4	7.7
<u>Calendar Years</u>			
1978	459.6	458.7	- .9
1979	505.7	504.7	-1.0
1980	545.0	548.1	3.1

^{1/} Source: Through 1978: 1979 Council Report; unpublished data thereafter.

TABLE 5

CHANGE IN HIGH-EMPLOYMENT
BUDGET SURPLUS--NIA BASIS

(In billions of dollars at annual rates)

Quarters		CEA (1)	FRB (2)	Excess FRB (2)-(1) (3)
1978	1	8.5	12.5	4
	2	20.5	19.2	-1.3
	3	1.1	2.4	1.3
	4	2.5	-1.5	-4.0
1979	1	-11.0	1.9	12.9
	2	5.3	7.6	2.3
	3	-6.1	-6.6	-0.5
	4	-0.7	1	1.7
1980	1	10.7	12.5	1.8
	2	5.9	9.0	3.1
	3	3.5	1.0	-2.5
	4	1.6	5.6	4.0
<u>Calendar Years</u> (4th Quarter over 4th quarter)				
	1978	32.6	32.6	0
	1979	-12.5	3.9	16.4
	1980	21.7	28.1	6.4