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A History of Revenue Forecasts

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“It is hardly necessary to point out that estimates are at best approximate. ... Congressional appropriations, extraordinary in character, or failures to realize fully estimated revenues, are ... influences which may operate seriously to derange all calculations. A conservative margin should, therefore, be reserved in forecasting definite results based on hypothetical calculations.”

*L. J. Gage
Secretary of the Treasury
December 4, 1900*

Abstract

Feenberg et al. (1989) apply a simple regression-based method to test the rationality of state revenue forecasts. Using the same regression-based methodology, we test the rationality of federal revenue forecasts for fiscal year 1802 through 2001. We find that Treasury forecasts of federal revenues satisfy the conditions of weak rationality.

Introduction

The effective conduct of fiscal policy critically depends upon the properties of the revenue forecasts used to implement these policies. More specifically, fiscal policy is frequently used to promote macroeconomic stability, allocative efficiency, and distributional fairness. In order to conduct fiscal policy in support of these goals, officials require accurate revenue forecasts. Suppose, for example, that budget deficits (surpluses) are unexpectedly large due, in part, to inaccurate revenue forecasts. The resulting fiscal posture of the country may be inappropriate for the circumstances and may even exacerbate the conditions that fiscal policy is intended to help alleviate.

Likewise, the ability of officials to use tax policy to promote allocative efficiency requires accurate revenue forecasts. For example, tax policy experts frequently recommend broadening the tax base and

reducing marginal tax rates to encourage work, savings, investment, and entrepreneurial risk-taking. In order to implement such policy prescriptions, however, officials require accurate forecasts of their revenue consequences. Finally, officials also use tax policy to distribute tax burdens according to notions of fairness, such as the ability to pay principle. Designing tax policy to achieve distributional goals without jeopardizing other policy goals, particularly revenue adequacy, also requires accurate revenue forecasts. In short, accurate revenue forecasts play an important role in the development of sound fiscal policies.

The purpose of this study is to evaluate the quality of U.S. Treasury revenue forecasts; however, quality, like beauty, is in the eye of the beholder. For example, the preamble of this study suggests that a “conservative margin should be reserved in forecasting.” This statement seems to argue for downwardly biased forecasts. But, forecasts that are consistently biased in one direction or another may lack credibility. In addition to unbiased estimates, there may be other properties that may be desirable in revenue forecasts.

Accordingly, we propose the following three properties of revenue forecasts. First, the average forecast error should equal zero; otherwise, the forecast is biased. A forecast that is consistently biased in one direction or another will not be credible to officials and the public in the long run. Second, the variance of the revenue forecasts should be less than the variance of actual revenues. A forecast of revenues that is more volatile than actual revenues will not provide a good guide to fiscal policy, particularly stabilization policy. Third, the forecast errors should be uncorrelated with the forecast itself; otherwise, the forecast is not using all available information and could be improved.

We proceed as follows. In the next section, we discuss a regression-based test of forecast accuracy and describe the data employed in this study. Then, we assess the rationality of U.S. Treasury revenue forecasts for the period 1802 to 2001 and for three sub-periods thereof that correspond to major changes in U.S. fiscal policy. We conclude with a summary of our findings and offer suggestions for further research.

Assessing the Rationality of Revenue Forecasts

Future revenues are uncertain for a number of reasons: unanticipated fluctuations in business investment and consumer

spending, the future state of business and consumer confidence, war and peace, and political events at home and abroad. Additional uncertainty arises because the federal tax structure may change in the future. These difficulties are illustrated by the following passage:

It may be useful to add a few general illustrations of the reasons for some of the small estimates now submitted, and of the intrinsic difficulties in attaining much certainty concerning them during crises of overaction and revulsions like the past and the present. ... During the two years before the revulsions in commerce in 1819, and including that year, the sales of public land exceeded the unusual amount of nearly thirty millions of dollars, while in the following years they fell to only about four millions, or less than one-seventh. The system being changed from credit to cash may have cooperated in producing this result; though at the same time, the minimum price per acre was reduced, in order, in some degree, to counteract the effect of that change.

Levi Woodbury
Secretary of the Treasury
September 5, 1837
Reports of the Finances, vol. IV
(pp. 99-100)

Methodology

Since forecasts can only be approximate, we propose the following three properties with which to evaluate the rationality of revenue forecasts.

- (i.) *Unbiasedness*: The expected value of the forecast errors equal zero.
- (ii.) *Efficiency*: The variance of the forecast is less than the variance of actual revenues.
- (iii.) *Independence*: The forecast errors are independent of the forecast itself.

We say that a forecast is *strongly rational* if it exhibits properties (i), (ii), and (iii), and *weakly rational* if it exhibits properties (i) and (ii).¹ While we believe that these three properties are desirable and consistent with generally agreed upon notions of rationality, we concede that an optimal forecast need not be “rational” in the sense described here. A more analytical approach to identifying the properties of optimal revenue forecasts would be to define a loss function in terms of the errors of the revenue forecasts. The optimal properties of the optimal revenue forecasts would those that minimize the loss function. In addition to economic objectives, the loss function could be extended to include political

objectives as well. Although this approach has merit, it is beyond the scope of the present study.

Following Feenberg et al. (1989), we use a simple regression-based method to evaluate the rationality of a set of revenue forecasts. More specifically, first we estimate

$$R_{a,t} = a_0 + a_1 R_{e,t-f} + u_t \quad (1)$$

where $R_{a,t}$ is the actual revenues in fiscal year t , and $R_{e,t-f}$ is the forecast of $R_{a,t}$ made f periods ago. Then, we use appropriate statistical methods to test the joint hypothesis that $a_0 = 0$ and $a_1 = 1$.

Now, we intend to show that the joint test of $a_0 = 0$ and $a_1 = 1$ provides a valid statistical test of weak rationality, as defined above. Greene (1990) shows that $a_0 = E(R_{e,t}) - a_1 E(R_{a,t-f})$; therefore, it follows that a forecast is unbiased if and only if $a_0 = 0$ and $a_1 = 1$. Also, assuming $\text{var}(u_t, R_{e,t-f}) = 0$, it follows from (1) that $\text{var}(R_{a,t}) = (a_1)^2 \text{var}(R_{e,t-f}) + \text{var}(u_t)$. Since variances cannot be negative, if $a_1 \geq 1$, then $\text{var}(R_{e,t-f}) \leq \text{var}(R_{a,t})$. In other words, if the slope coefficient is less than 1.0, the variance of the forecasts is less than the variance of actual revenues. Finally, we note that least squares estimation of (1) imposes property (iii). In summary, the joint test of $a_0 = 0$ and $a_1 = 1$ is a valid statistical test of unbiasedness and efficiency of the forecasts or weak rationality.

The Data

We collected U.S. Treasury revenue forecasts from annual budget reports for fiscal years 1802 to 2001. During this period, the government employs three different definitions of a fiscal year. Consequently, it is necessary to use a variety of sources to get a series of actual revenues that is consistent with the forecasts. Specifically, actual revenues for fiscal years 1802 to 1842 are obtained from the *Report on Finances, 1929*; the *FY 1976 Budget* for 1843 to 1976; and the *FY 2003 Budget* for 1977 to 2001. The data used in this study are reported in a Data Appendix. Finally, the reader should be aware that the series of actual revenues reported in the Historical Tables of the FY 2003 Budget are adjusted to reflect the current fiscal year concept (October 1st to September 30th). Consequently, the unadjusted, actual revenue series used in this study and provided in the Data Appendix may not correspond to the adjusted series in the *FY 2003 Budget*.

In addition to various definitions of the fiscal year, the U.S. budget also employs different definitions of revenue. Currently, for example, federal budget concepts distinguish between on-budget and off-budget revenues as well as current-law and proposed-law revenues. In earlier years, U.S. budgets report revenues inclusive and exclusive of revenues from the operations of the U.S. Post Office and the Panama Canal. So far as practicable, the data series used in this study reflect a consistent definition of budget revenues. The data include all federal revenues, on a cash basis, including those due to the operations of the U.S. Post Office, Panama Canal, and other government enterprises, as well as revenues dedicated to trust funds.

Another difficult issue is whether to use current-law or proposed-law revenue forecasts for this analysis. If we employ current law forecasts and proposed tax legislation was passed into law, then the analysis may be biased. Likewise, the analysis may be biased if we use proposed law revenue forecasts and the proposed tax legislation is not passed into law. We use proposed-law forecasts under the assumption that proposed changes to the tax code are, more often than not, adopted into law. It seems reasonable to assume - despite recent experience to the contrary - that an administration's revenue targets will be honored, even if the Congress makes major changes to the legislation.

Finally, there are twelve (12) observations in the revenue forecast series with missing values. In five (5) instances, the Treasury did *not undertake* (nut) forecasts, and in seven (7) cases the budget documents are *not available* (na) in local libraries. Missing values are indicated in the Data Appendix by *nut* and *na*, as the case may be. Observations with missing values raise another issue: what to do with them. One strategy that leaps to mind is simply to set missing values equal to actual revenue. For such observations, however, there would be no forecast error by construction. Consequently, this approach may bias the analysis. Accordingly, we elect to drop missing observations. Thus, we are left with 188 observations.

Table 1
Descriptive Statistics

Period	Means and Standard Deviations (Millions of \$'s)		Number of Observations
	Actual	Forecast	
1802 – 1861	30.975 (17.417)	26.022 (16.219)	54
1863 - 1941	1,891 (2,1270)	1,753 (2,039)	74
1942 - 2001	498,300 (564,700)	472,500 (502,700)	60
1802 - 2001	159,800 (393,200)	151,500 (358,100)	188

Standard deviations are reported in parentheses.

In addition to the time period from fiscal year 1802 to 2001, we also evaluate the rationality of revenue forecasts for three sub-periods: FY 1802 - 1861, FY 1863 - 1941, and FY 1942 - 2001. These sub-periods are chosen because they correspond to major changes in fiscal policy. Specifically, the size of the federal government grew dramatically during and after the Civil War and, again, during and after World War II. Between 1861 and 1863, federal revenues grow from \$49.860 million to \$123.861 million, or by 148 percent. Similarly, between 1941 and 1943, federal revenues grow from \$8.263 billion to \$13.677 billion, or by approximately 65 percent. The difference in these fiscal regimes also is evident in Table 1, which shows the means and standard deviations of the data for each period. During the 1802 – 1861 period, average revenue is approximately \$31 million; \$1.89 billion for 1863 – 1941; and \$159.8 billion for 1942 – 2001.

Table 1 also provides some interesting insight into important characteristics of Treasury revenue forecasts. Simple observation suggests that the means of the forecasts are less than the means of actual revenues for all four series, but we would like to know if they are statistically significantly different. We compute a conventional test for the difference between two means for the pairs in Table 1. Except for the 1942-2001 series, we reject the hypothesis that the mean of actual revenues is greater than or equal to the mean of the forecasts. In other words, the

revenue forecasts for 1802-1861 and 1863-1941 exhibit a downward bias; the forecasts for 1942-2001 do not.

As previously discussed, we also can perform a test of the efficiency of the revenue forecasts. If actual revenues and the revenue forecasts are drawn from two populations that are normally distributed and if the population variances are equal, then the ratio of the sample variances follows the F distribution. Although the assumption of normality may be unrealistic in this setting, we perform this test pair-wise on the variances of the four series. In all four cases, we cannot reject the null hypothesis that the variance of the forecasts is less than or equal to the variance of actual revenues; in other words, we cannot reject $H_0: \text{var}(R_{e,t-f}) \leq \text{var}(R_{a,t})$. This result is reassuring. One could imagine trying to conduct stabilization policy using revenue forecasts with a variance greater than that of the actual realizations.

While such evidence certainly provides insight into important characteristics of Treasury revenue forecasts, we turn now to our regression-based test of weak rationality.

Are Treasury Revenue Forecasts Rational?

As described above, we regress actual revenues on a constant and revenue forecasts, in levels. Finally, and as previously noted, this foregoing analysis is in levels. We also conducted the analysis in percentages. In this case, we reject weak rationality of the forecasts for the period 1802-2001 and for all three sub-periods. We believe that estimating the model in percentage changes is a higher hurdle, than estimating the model in percentages.

Two examples, summarized in Table 2, help to illustrate the reasoning behind this conclusion. Table 2 shows two forecasts. Forecast 1 in Table 3 switches from period-to-period from 2-units below and 2-units above the actual value, but Forecast 2 is 2-units above the actual value in each period. We suppose that Forecast 1 would strike most people as unbiased and Forecast 2 as biased.

Columns 5-8 of Table 2 show the forecast errors for each forecast computed in levels and in first differences, and the last row of Table 3 shows the corresponding average forecast error. A forecast is unbiased in levels if the average forecast error equals zero and unbiased in first-

differences if the average forecast error equals 1.0. Table 3 clearly shows that Forecast 1 is unbiased in levels (average=0), but biased upward in first differences (average = 1.03). In contrast, forecast 2 is biased in levels (average = -2), but unbiased in first differences. In other words, using first-differences to evaluate the forecasts leads to counter-intuitive conclusions. Hence, we choose to evaluate forecasts in levels.

Table 2
Comparing Two Measures of Computing Forecast Errors

Period	Actual	Forecast		Forecast Errors			
		1	2	Lev-1	Lev-2	Δ -1	Δ -1
1	10	8	8	2	-2	0.71	1
2	20	22	18	-2	-2	1.67	1
3	30	28	28	2	-2	0.71	1
4	40	42	38	-2	-2	-	-
Average				0	-2	1.03	1

We also use nominal values in the regressions because the forecast should predict the future real activity as well as future inflation. Using real values in the regressions would unnecessarily simplify the true challenge facing forecasters. Then, we test the joint hypothesis that the estimated intercept and slope coefficients are equal to zero and 1.0, respectively. If the revenue forecasts satisfy the joint test, we conclude that the forecasts are weakly rational. The results are reported in Table 3.

Before discussing the results of the regression-based test of weak rationality, however, we should briefly describe an important econometric issue affecting the estimation of (1). A common problem with time series data is serially correlated or autoregressive errors. Examining our data, we find that there are 9 positive runs – two or more consecutive forecasts that exceed actual revenues – and 15 negative runs. The average length of a negative run is 6.7, and the average length of a positive run is 3.1. This is clear evidence of autocorrelated errors, and an apparent preference in favor of downwardly biased forecasts. In fact, if we regress of the forecast errors on a constant and the forecasts, the estimated coefficients are positive and statistically significant. As previously noted, violation of independence of the forecast errors and the forecast suggests that all available information is not being used. Alternatively, this may be consistent with a political or bureaucratic constraint that favors negative

forecast errors to positive ones. Further research should explore the possible reasons for this apparent preference.

Even in the presence of autocorrelated errors, least squares estimates are consistent, but the estimates are inefficient. Consequently, inference based on least squares estimates is adversely affected. To test the data for autocorrelation, we compute the Durbin-Watson (DW) statistic for each series. We report the DW-statistic and the associated p-value in the bottom row of Table 2. The p-value is the probability of rejecting the null hypothesis, given that it is true. Clearly, in all four series the DW-statistics provide strong evidence of autocorrelation. For example, the DW-statistic for the 1802 – 2001 series is 0.74902, and the associated p-value is 0.000000. Hence, we compute Newey-West (1987) autoregressive consistent standard errors, which are reported in Table 3 in parentheses beneath the corresponding estimated coefficients.²

Table 3
OLS estimates
(Newey-West autoregressive consistent standard errors)

Coefficients	1802-1861	1863-1941	1942-2001	1802-2001
Constant	0.64E+07 (0.31E+07)	0.20E+09 (0.12E+09)	-0.26E+11 (0.16E+11)	0.52E+10 (0.32E+10)
Forecast	0.9426 (0.97E-01)	0.9659 (0.93E-01)	1.0091 (0.62E-01)	1.0883 (0.56E-01)
P-value of joint test ^a	0.01285	0.22164	0.1899	0.20872
Nobs.	54	74	60	188
DW statistic (P-value)	1.0265 (0.00003)	0.7772 (0.000000)	0.7998 (0.000000)	0.74902 (0.000000)

^a The joint test that $a_0 = 0$ and $a_1 = 1$.

Beginning with the 1802 - 2001 period, we find that the estimated intercept is 0.52E+10, which is not very close to zero. But, the estimate is not statistically significantly different than zero because the standard error of the estimate is quite large as well. The estimated slope coefficient for this series is 1.0883, and the standard error of the estimate is 0.56E-01. Assuming the slope coefficient is equal to 1.0, the t-statistic is equal to 1.58 or $(1.0883 - 1.0)/0.56E-01$, which is not significant at conventional

levels. In summary, the estimated intercept and slope coefficients are not significantly different than zero and 1.0, respectively.

Thus, the revenue forecasts of this period satisfy the conditions for weak rationality. Not surprisingly, this conclusion is also borne out by the joint hypothesis test. The p-value of the joint test for this series is 0.20872. In other words, the probability of rejecting the null hypothesis, given that the null is true, is greater than conventional significance levels. Thus, we cannot reject the null hypothesis that Treasury revenue forecasts are weakly rational. The p-values of the joint tests for the 1863-1941 and 1942-2001 periods are 0.2214 and 0.1899, respectively. Since the p-values are greater than conventional significance levels, we cannot reject the null hypothesis that the revenue forecasts of these two periods are weakly rational. In contrast, the p-value for the 1802 - 1860 period is 0.01285, which is less than conventional significance levels, and thus, we reject weak rationality of the forecasts of this period. In summary, except for the 1802-1861 period, the revenue forecasts satisfy the conditions of weak rationality.

Treasury reports to Congress suggest that eliminating the federal debt was a major policy goal during the early years of the U.S. The sentiments expressed in the following passage are representative of those in other reports during this period:

It is evident that the possibility of thus providing for the payment of the interest of a new debt of thirteen millions of dollars, without recurring to new taxes, or interfering with the provisions heretofore made for the payment of the existing debt, depends on the correctness of the estimate of the public revenue which has been submitted. Although it is not without diffidence that the hope of such a favorable result is entertained, some reliance is placed on the solidarity of the basis on which the estimate is grounded. It rests principally on the expectation that the revenue of the ensuing year shall not be less than that which accrued during the year 1802. No part of it depends on the probable increase which may result from the neutrality of the United States during the continuance of the war in Europe, nor even on the progressive augmentation, which, from past experience, may naturally be expected to arise from the gradual increase of population and wealth.

Albert Gallatin
Secretary of the Treasury
October 25, 1803
Reports of the Finances, vol. I (p. 266)

The foregoing passage seems to reflect a preference for a conservative approach to revenue forecasting. Interestingly, in light of this apparent preference for conservative forecasts, the estimated intercept of the 1802-1861 regression is statistically significantly greater than zero, suggesting that the revenue forecasts during this period are biased downward. The apparent desire to reduce the federal debt, expressed above, may reflect a preference during this period for conservative or downwardly biased revenue forecasts. Briefly, policymakers of this era may have preferred unexpectedly large surpluses due to conservative revenue forecasts because they believed this posture would further their objective of reducing the federal debt.

Finally, it is worth noting that the estimated intercept and slope coefficients are closer to zero and 1.0, respectively, for the 1861 - 1941 series, than for the 1942 - 2001 series. If one can use such patterns to evaluate the quality of forecasts, then it would seem that revenue forecasts of the current period are not as good as those of the pre-war period. This is ironic given the presumed progress in economic science, econometrics, data availability, and data processing. Without further analysis, one should be cautious about drawing any firm conclusions in this regard, but it would be interesting to explore whether differences in political pressure or instability in tax law account for this preliminary finding.

Conclusion

Feenberg et al. (1989) use a simple regression-based test to evaluate the rationality of state revenue forecasts. They find evidence of downward bias in the post-war revenue forecasts of the three states that are the focus of their study. In contrast, we conclude that U.S. Treasury revenue forecasts satisfy the conditions of weak rationality. In the 1802-1861 series, however, we find evidence of downward bias in the forecasts. We speculate that the emphasis on eliminating the federal debt may have resulted in a preference among policymakers of this era for conservative or downwardly biased revenue forecasts.

It would be interesting to explore whether differences in political pressure or differences in the stability of the tax structure account for any change in the quality of Treasury revenue forecasts in the modern period. Further research also should examine the rationality of federal expenditure and deficit forecasts.

Endnotes

¹ Feenberg et al. (1989) describe a strong test of rationality, but this test is difficult to implement because it requires knowledge of all information available at time $t-f$.

² The Newey-West autoregressive consistent errors are computed as follows:

$$V(A) = N(X'X)^{-1}S^*(X'X)^{-1}$$

where: $S^* = S_0(1/N)\sum_{j=1}^L\sum_{t=j+1}^N w_j e_{t-j} e_t (X_t X_{t-j}' + X_{t-j} X_t')$
and $w_j = 1 - j/(L+1)$.

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Data Appendix

Fiscal Year	Actual Revenue	Estimated Reve	FY ending	Source of Estimates
1802	15,287,838	10,600,000	Dec 31	Report on Finances, 1801
1803	11,399,493	10,000,000	Dec 31	Report on Finances, 1802
1804	12,189,256	10,400,000	Dec 31	Report on Finances, 1803
1805	13,960,723	11,750,000	Dec 31	Report on Finances, 1804
1806	15,964,918	12,500,000	Dec 31	Report on Finances, 1805
1807	16,873,166	14,500,000	Dec 31	Report on Finances, 1806
1808	17,521,226	15,800,000	Dec 31	Report on Finances, 1807
1809	8,280,106	16,000,000	Dec 31	Report on Finances, 1808
1810	9,935,899	nut ^b	Dec 31	Report on Finances, 1809
1811	15,010,737	12,500,000	Dec 31	Report on Finances, 1810
1812	10,365,301	8,200,000	Dec 31	Report on Finances, 1811
1813	15,008,564	12,000,000	Dec 31	Report on Finances, 1812
1814	11,866,995	10,100,000	Dec 31	Report on Finances, 1813
1815	16,637,089	8,200,000	Dec 31	Report on Finances, 1814
1816	48,489,665	33,400,000	Dec 31	Report on Finances, 1815
1817	34,072,651	30,650,000	Dec 31	Report on Finances, 1816
1818	22,695,336	24,525,000	Dec 31	Report on Finances, 1817
1819	25,808,041	24,220,000	Dec 31	Report on Finances, 1818
1820	18,986,131	22,000,000	Dec 31	Report on Finances, 1819
1821	15,631,950	21,500,000	Dec 31	Report on Finances, 1820
1822	21,349,316	16,110,000	Dec 31	Report on Finances, 1821
1823	21,670,670	21,100,000	Dec 31	Report on Finances, 1822
1824	20,578,971	18,550,000	Dec 31	Report on Finances, 1823
1825	23,146,913	21,500,000	Dec 31	Report on Finances, 1824
1826	26,707,837	25,500,000	Dec 31	Report on Finances, 1825
1827	24,490,896	23,150,000	Dec 31	Report on Finances, 1826
1828	26,423,525	22,300,000	Dec 31	Report on Finances, 1827
1829	26,534,958	23,140,000	Dec 31	Report on Finances, 1828
1830	26,694,644	23,480,000	Dec 31	Report on Finances, 1829
1831	30,524,071	23,340,000	Dec 31	Report on Finances, 1830
1832	34,123,886	30,100,000	Dec 31	Report on Finances, 1831
1833	36,565,438	24,000,000	Dec 31	Report on Finances, 1832
1834	24,615,585	18,500,000	Dec 31	Report on Finances, 1833
1835	38,422,750	20,000,000	Dec 31	Report on Finances, 1834
1836	54,235,108	19,750,000	Dec 31	Report on Finances, 1835
1837	29,055,856	24,000,000	Dec 31	Report on Finances, 1836
1838	30,541,295	22,800,000	Dec 31	Report on Finances, 1837
1839	35,967,406	24,000,000	Dec 31	Report on Finances, 1838
1840	24,023,637	18,600,000	Dec 31	Report on Finances, 1839
1841	21,267,886	22,580,000	Dec 31	Report on Finances, 1840
1842	24,523,048	19,150,000	Dec 31	Report on Finances, 1841
TQ 1843 ^a	na ^c	9,050,000	Jun 30	Report on Finances, 1842
1843	12,598,927	nut ^b	Jun 30	Report on Finances, 1842
1844	33,558,662	18,850,000	Jun 30	Report on Finances, 1842
1845	34,259,948	22,300,000	Jun 30	Report on Finances, 1843
1846	33,187,166	32,160,302	Jun 30	Report on Finances, 1844
1847	30,376,078	25,000,000	Jun 30	Report on Finances, 1845
1848	40,290,990	32,000,000	Jun 30	Report on Finances, 1846

Fiscal Year	Actual Revenue	Estimated Revenue	FY ending	Source of Estimates
1849	35,913,319	35,100,000	Jun 30	Report on Finances, 1847
1850	49,103,424	35,400,000	Jun 30	Report on Finances, 1848
1851	58,969,908	34,450,000	Jun 30	Report on Finances, 1849
1852	55,031,343	na ^c	Jun 30	Report on Finances, 1850
1853	66,827,779	na ^c	Jun 30	Report on Finances, 1851
1854	80,055,927	na ^c	Jun 30	Report on Finances, 1852
1855	71,992,711	55,000,000	Jun 30	Report on Finances, 1853
1856	80,977,521	62,500,000	Jun 30	Report on Finances, 1854
1857	76,319,265	71,500,000	Jun 30	Report on Finances, 1855
1858	54,142,159	72,955,311	Jun 30	Report on Finances, 1856
1859	61,454,949	75,500,000	Jun 30	Report on Finances, 1857
1860	64,582,675	62,000,000	Jun 30	Report on Finances, 1858
1861	49,859,227	66,225,000	Jun 30	Report on Finances, 1859
1862	60,287,277	na ^c	Jun 30	Report on Finances, 1860
1863	123,861,081	95,800,000	Jun 30	Report on Finances, 1861
1864	277,065,025	233,025,000	Jun 30	Report on Finances, 1862
1865	348,270,764	na ^c	Jun 30	Report on Finances, 1863
1866	572,419,606	396,000,000	Jun 30	Report on Finances, 1864
1867	505,871,037	na ^c	Jun 30	Report on Finances, 1865
1868	421,930,684	436,000,000	Jun 30	Report on Finances, 1866
1869	388,257,923	381,000,000	Jun 30	Report on Finances, 1867
1870	430,135,014	300,000,000	Jun 30	Report on Finances, 1868
1871	403,360,990	393,000,000	Jun 30	Report on Finances, 1869
1872	396,022,294	320,418,000	Jun 30	Report on Finances, 1870
1873	356,734,947	359,000,000	Jun 30	Report on Finances, 1871
1874	331,449,828	na ^c	Jun 30	Report on Finances, 1872
1875	314,791,365	305,700,000	Jun 30	Report on Finances, 1873
1876	322,740,063	293,000,000	Jun 30	Report on Finances, 1874
1877	308,938,004	304,000,000	Jun 30	Report on Finances, 1875
1878	287,041,396	270,050,000	Jun 30	Report on Finances, 1876
1879	303,869,168	269,250,000	Jun 30	Report on Finances, 1877
1880	366,842,090	264,500,000	Jun 30	Report on Finances, 1878
1881	397,567,691	288,000,000	Jun 30	Report on Finances, 1879
1882	445,401,660	350,000,000	Jun 30	Report on Finances, 1880
1883	443,796,275	400,000,000	Jun 30	Report on Finances, 1881
1884	391,845,829	415,000,000	Jun 30	Report on Finances, 1882
1885	391,251,550	343,000,000	Jun 30	Report on Finances, 1883
1886	380,388,149	330,000,000	Jun 30	Report on Finances, 1884
1887	420,240,886	315,000,000	Jun 30	Report on Finances, 1885
1888	431,961,252	nut ^b	Jun 30	Report on Finances, 1886
1889	443,225,670	383,000,000	Jun 30	Report on Finances, 1887
1890	463,963,082	377,000,000	Jun 30	Report on Finances, 1888
1891	458,544,233	385,000,000	Jun 30	Report on Finances, 1889
1892	425,868,260	373,000,000	Jun 30	Report on Finances, 1890
1893	461,716,562	455,336,350	Jun 30	Report on Finances, 1891
1894	381,435,795	490,121,365	Jun 30	Report on Finances, 1892
1895	401,712,547	454,427,748	Jun 30	Report on Finances, 1893
1896	420,641,655	476,907,407	Jun 30	Report on Finances, 1894
1897	430,387,168	464,793,121	Jun 30	Report on Finances, 1895

Fiscal Year	Actual Revenues	Estimated Revenues	FY ending	Source of Estimates
1998	494,333,954	412,227,077	Jun 30	Report on Finances, 1896
1899	610,982,005	482,874,647	Jun 30	Report on Finances, 1897
1900	669,595,431	610,958,112	Jun 30	Report on Finances, 1898
1901	699,316,531	667,773,254	Jun 30	Report on Finances, 1899
1902	684,326,280	716,633,042	Jun 30	Report on Finances, 1900
1903	696,105,165	712,020,630	Jun 30	Report on Finances, 1901
1904	684,669,709	729,767,664	Jun 30	Report on Finances, 1902
1905	697,101,270	704,472,061	Jun 30	Report on Finances, 1903
1906	762,917,229	725,590,515	Jun 30	Report on Finances, 1904
1907	849,445,392	nut ^b	Jun 30	Report on Finances, 1905
1908	793,340,570	nut ^b	Jun 30	Report on Finances, 1906
1909	807,882,881	878,123,011	Jun 30	Report on Finances, 1907
1910	899,640,373	825,340,712	Jun 30	Report on Finances, 1908
1911	939,712,735	672,000,000	Jun 30	Report on Finances, 1909
1912	939,353,220	680,000,000	Jun 30	Report on Finances, 1910
1913	990,730,756	667,000,000	Jun 30	Report on Finances, 1911
1914	1,018,807,733	710,000,000	Jun 30	Report on Finances, 1913
1915	981,658,992	728,000,000	Jun 30	Report on Finances, 1913
1916	1,094,592,237	735,000,000	Jun 30	Report on Finances, 1914
1917	1,448,850,911	580,200,000	Jun 30	Report on Finances, 1915
1918	4,520,770,417	1,005,550,000	Jun 30	Report on Finances, 1916
1919	5,000,714,025	4,097,715,000	Jun 30	Report on Finances, 1917
1920	7,136,351,649	4,942,000,000	Jun 30	Report on Finances, 1918
1921	6,048,008,320	5,420,000,000	Jun 30	Report on Finances, 1919
1922	4,588,368,578	4,859,530,000	Jun 30	Report on Finances, 1920
1923	4,379,873,608	3,345,182,750	Jun 30	Report on Finances, 1921
1924	4,456,989,920	3,361,812,359	Jun 30	Report on Finances, 1922
1925	4,207,235,642	3,693,762,078	Jun 30	Report on Finances, 1923
1926	4,568,277,376	3,641,295,092	Jun 30	Report on Finances, 1924
1927	4,811,544,877	3,824,530,203	Jun 30	Report on Finances, 1925
1928	4,731,869,433	3,772,753,077	Jun 30	Report on Finances, 1926
1929	4,733,166,496	4,352,495,287	Jun 30	Report on Finances, 1927
1930	3,841,000,000	5,605,152,047	Jun 30	Report on Finances, 1928
1931	3,190,000,000	6,404,314,700	Jun 30	Report on Finances, 1929
1932	2,006,000,000	4,085,119,927	Jun 30	Report on Finances, 1930
1933	2,080,000,000	2,473,515,772	Jun 30	Fiscal Year 1933 Budget
1934	3,116,000,000	2,949,162,713	Jun 30	Fiscal Year 1934 Budget
1935	3,800,000,000	3,974,665,479	Jun 30	Fiscal Year 1935 Budget
1936	4,116,000,000	3,991,904,639	Jun 30	Fiscal Year 1936 Budget
1937	5,294,000,000	5,654,217,650	Jun 30	Fiscal Year 1937 Budget
1938	6,242,000,000	7,293,607,197	Jun 30	Fiscal Year 1938 Budget
1939	5,668,000,000	5,919,437,000	Jun 30	Fiscal Year 1939 Budget
1940	5,925,000,000	5,669,320,000	Jun 30	Fiscal Year 1940 Budget
1941	8,263,000,000	6,150,760,000	Jun 30	Fiscal Year 1941 Budget
1942	13,667,000,000	8,971,735,000	Jun 30	Fiscal Year 1942 Budget
1943	23,282,000,000	17,825,090,000	Jun 30	Fiscal Year 1943 Budget
1944	45,408,000,000	35,406,695,000	Jun 30	Fiscal Year 1944 Budget
1945	47,740,000,000	43,425,380,000	Jun 30	Fiscal Year 1945 Budget
1946	44,239,000,000	42,854,752,000	Jun 30	Fiscal Year 1946 Budget
1947	44,718,000,000	32,717,465,945	Jun 30	Fiscal Year 1947 Budget

Fiscal Year	Actual Revenue	Estimated Revenue	FY ending	Source of Estimates
1948	43,827,000,000	39,717,465.94	Jun 30	Fiscal Year 1948 Budget
1849	39,936,000,000	46,499,000,000	Jun 30	Fiscal Year 1949 Budget
1950	39,151,000,000	45,365,000,000	Jun 30	Fiscal Year 1950 Budget
1951	51,263,000,000	52,070,586,034	Jun 30	Fiscal Year 1951 Budget
1952	65,697,000,000	59,236,000,000	Jun 30	Fiscal Year 1952 Budget
1953	64,593,000,000	75,028,000,000	Jun 30	Fiscal Year 1953 Budget
1954	69,795,000,000	72,763,000,000	Jun 30	Fiscal Year 1954 Budget
1955	66,028,000,000	68,751,000,000	Jun 30	Fiscal Year 1955 Budget
1956	75,136,000,000	63,830,000,000	Jun 30	Fiscal Year 1956 Budget
1957	71,029,000,000	73,595,000,000	Jun 30	Fiscal Year 1957 Budget
1958	69,117,000,000	83,893,000,000	Jun 30	Fiscal Year 1958 Budget
1959	68,270,000,000	74,400,000,000	Jun 30	Fiscal Year 1959 Budget
1960	78,457,000,000	77,100,000,000	Jun 30	Fiscal Year 1960 Budget
1961	78,313,000,000	84,000,000,000	Jun 30	Fiscal Year 1961 Budget
1962	101,887,000,000	83,000,000,000	Jun 30	Fiscal Year 1962 Budget
1963	109,700,000,000	93,693,000,000	Jun 30	Fiscal Year 1963 Budget
1964	115,530,000,000	112,196,000,000	Jun 30	Fiscal Year 1964 Budget
1965	119,700,000,000	119,700,000,000	Jun 30	Fiscal Year 1965 Budget
1966	134,480,000,000	123,490,000,000	Jun 30	Fiscal Year 1966 Budget
1967	149,600,000,000	145,500,000,000	Jun 30	Fiscal Year 1967 Budget
1968	190,600,000,000	168,106,000,000	Jun 30	Fiscal Year 1968 Budget
1969	187,792,000,000	178,100,000,000	Jun 30	Fiscal Year 1969 Budget
1970	193,743,000,000	210,100,000,000	Jun 30	Fiscal Year 1970 Budget
1971	188,392,000,000	202,103,000,000	Jun 30	Fiscal Year 1971 Budget
1972	208,649,000,000	217,539,000,000	Jun 30	Fiscal Year 1972 Budget
1973	232,225,000,000	220,785,000,000	Jun 30	Fiscal Year 1973 Budget
1974	264,932,000,000	255,982,000,000	Jun 30	Fiscal Year 1974 Budget
1975	280,997,000,000	295,000,000,000	Jun 30	Fiscal Year 1975 Budget
1976	300,005,000,000	297,520,000,000	Jun 30	Fiscal Year 1976 Budget
1977	355,559,000,000	351,262,000,000	Jun 30	Fiscal Year 1977 Budget
TQ 1977 ^d	81,232,000,000	81,900,000,000	Sep 30	Fiscal Year 1977 Budget
1978	399,561,000,000	393,000,000,000	Sep 30	Fiscal Year 1978 Budget
1979	463,302,000,000	439,600,000,000	Sep 30	Fiscal Year 1979 Budget
1980	517,112,000,000	502,600,000,000	Sep 30	Fiscal Year 1980 Budget
1981	599,272,000,000	599,988,000,000	Sep 30	Fiscal Year 1981 Budget
1982	617,766,000,000	711,780,000,000	Sep 30	Fiscal Year 1982 Budget
1983	600,562,000,000	666,118,000,000	Sep 30	Fiscal Year 1983 Budget
1984	666,486,000,000	659,702,000,000	Sep 30	Fiscal Year 1984 Budget
1985	734,088,000,000	745,127,000,000	Sep 30	Fiscal Year 1985 Budget
1986	769,215,000,000	1,059,983,000,000	Sep 30	Fiscal Year 1986 Budget
1987	854,353,000,000	850,400,000,000	Sep 30	Fiscal Year 1987 Budget
1988	909,303,000,000	916,681,000,000	Sep 30	Fiscal Year 1988 Budget
1989	991,190,000,000	964,700,000,000	Sep 30	Fiscal Year 1989 Budget
1990	1,031,963,900,000	1,059,300,000,000	Sep 30	Fiscal Year 1990 Budget
1991	1,055,041,000,000	964,700,000,000	Sep 30	Fiscal Year 1991 Budget
1992	1,091,279,000,000	1,059,300,000,000	Sep 30	Fiscal Year 1992 Budget

Fiscal Year	Actual Revenues	Estimated Revenue	FY Ending	Source of Estimates
1993	1,154,401,000,000	1,165,400,000,000	Sep 30	Fiscal Year 1993 Budget
1994	1,258,627,000,000	1,252,700,000,000	Sep 30	Fiscal Year 1994 Budget
1995	1,351,830,000,000	1,342,200,000,000	Sep 30	Fiscal Year 1995 Budget
1996	1,453,062,000,000	1,251,300,000,000	Sep 30	Fiscal Year 1996 Budget
1997	1,579,292,000,000	1,353,800,000,000	Sep 30	Fiscal Year 1997 Budget
1998	1,721,798,000,000	1,415,500,000,000	Sep 30	Fiscal Year 1998 Budget
1999	1,827,464,000,000	1,495,200,000,000	Sep 30	Fiscal Year 1999 Budget
2000	2,025,218,000,000	1,566,800,000,000	Sep 30	Fiscal Year 2000 Budget
2001	1,991,030,000,000	1,742,700,000,000	Sep 30	Fiscal Year 2001 Budget

Notes:

1. In 1843, the U.S. changed the fiscal year from one commencing on January 1st and ending on December 31st to one commencing on July 1st and ending on June 30th. As a transitional devise, the *Report on Finances, 1842* provides an estimate for the first half of 1843, which is denoted here as TQ 1843.
2. In certain years, the U.S. Treasury does *not undertake* (nut) revenue forecasts for the upcoming fiscal year. Sometimes this omission is not explained in the budget report, and, in others, the budget document attributes such omissions to the difficulty (impossibility) of providing meaningfully accurate forecasts.
3. The relevant documents are *not available* (na) in local libraries.
4. In Fiscal Year 1977, the U.S. changed the fiscal year from one commencing on July 1st and ending on June 30th to one commencing on October 1st and ending on September 30th. As a transitional devise, the *FY 1977 Budget* reports an estimate for the July - September 1977 quarter, which denoted here as TQ 1977.

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