The High Cost of Debt: Very-High-Denomination Treasury Notes and U.S. Treasury Debt Management, 1955-1969

A Paper for Presentation at the 2005 Annual Conference of the Economic History Society at the University of Leicester, 8-10 April 2005

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Introduction

For most of their history after World War II, Treasury notes have been issued with denominations never rising above a high of $1 million. Yet, from 1955 to 1969, the Treasury issued Treasury notes with the added denominations of $100 million and $500 million. The purpose of this study is to determine why the Treasury issued these very-high-denomination Treasury notes and why it stopped doing so.

Treasury Debt Management after World War II

The history of Treasury notes, including those offered in very-high denominations is linked to the broader story of the management of the public debt. The paramount goal of Treasury debt management has always been to borrow money at the lowest cost possible. Borrowing costs include not only the interest rate at which the money is borrowed but also the costs of holding and servicing the debt. Keeping these costs low became more difficult after World War II because of the frequent need for refunding operations.

The need to refund a sizeable amount of the debt arose from the cost of the war. By 1946, the public debt had risen from a pre-war level of $49 billion to $269 billion. Debt of this magnitude, 130% of the gross domestic product in 1946, could not be paid off quickly and would have to be refunded or rolled-over into the future. Treasury officials still thought and operated as though the public debt was still at its pre-war levels; and, as in that period, managing the debt required only occasional, almost ad-hoc, entries into the market with a focus on rolling over maturing short-term securities. As a result, "[e]ach financing operation seemed to be an independent crisis, requiring new and largely unpredictable decisions as to terms and maturities, rather than one part of a carefully planned debt-management program."[1]

This crisis atmosphere in the government securities market was compounded by the Treasury's practice of trying to dictate interest rates on government securities. In 1942, foreseeing a massive increase in the debt because of the war effort, the Treasury, with the help of the Federal Reserve, pegged interest rates on newly issued securities at below market levels.[2] After World War II, the Treasury tried to maintain the wartime pattern of interest rates even though market rates began to rise and the Federal

[1] Tilford C. Gaines, *Techniques of Treasury Debt Management* (New York: Free Press of Glencoe, 1962), 79.
[2] Henry C. Murphy, *National Debt in War and Transition* (New York: McGraw-Hill, 1950), 92-103.

Reserve refused to continue its support of the pegged rates. As a result, it became increasingly difficult for the Treasury to sell anything other than short-term securities to investors, shortening the average length to maturity of the public debt as a whole and the time to the next refinancing. Treasury competition for short-term debt and the disturbances caused by its frequent and irregular financing operations created inflationary pressures that further raised market interest rates and compounded the Treasury's financing problems.

By 1953, and the appointment of George M. Humphrey as Secretary of the Treasury in the Eisenhower administration, it was evident that the Treasury could not continue business as usual. Unable to borrow money at artificially low rates, Humphrey accepted that the Treasury needed to follow the market in determining rates; and after fiscal year 1953, there was a significant rise in the Treasury's long-term rates to market levels. To minimize market rates overall, the Treasury had to do its best to lessen its involvement in the short-term market and take the uncertainty out of its financing operations by entering the market less often.[3] To do this, the Treasury needed to lengthen the average length to maturity of the public debt.

Increase in Treasury Notes

Unable to sell large quantities of long-term Treasury bonds, the Treasury, in the early 1950s, was forced to turn to short-term securities and medium-term securities to refund maturing securities. And, as short-term securities would only work to further shorten the average maturity of the public debt, Humphrey was forced to use Treasury notes as the primary vehicle to lengthen maturities. The result was a rapid expansion in the issue of notes.

There were increases in both the dollar amount sold and the number of issues of Treasury notes. By the end of fiscal year 1955, the percentage increase in dollar amounts from 1952 was 979%, while the number of issues per fiscal year rose from zero to four. These changes translated into increased administrative costs and difficulties.

Costs of Servicing Treasury Notes

The Treasury notes issued in the early 1950s were all couponed bearer securities, paying interest on a semiannual basis. To receive his interest payment, the holder of the note would detach the appropriate coupon and present it to his bank, which would then send it on to the regional Federal Reserve bank. The Federal Reserve bank would issue a payment, physically cancel the coupon, and send on the coupon to the Bureau of the Public Debt.[4] The Bureau then recorded the payment and destroyed the coupon.

With the ten-fold increase in the dollar amount of Treasury notes issued between 1952 and 1955, the amount of work handled by the Federal Reserve banks and the Bureau of

[3] Address by Deputy to the Secretary Burgess before the American Bankers Association, Washington, D.C., September 23, 1953. *Annual Report of the Secretary of the Treasury on the State of the Finances* (Washington, DC: Government Printing Office, 1953), 262-66.

[4] Anne Meister, Deputy Commissioner of the Bureau of the Public Debt, email to author, April 1, 2004.

the Public Debt exploded. Correspondingly, the printing run of Treasury notes at the Bureau of Engraving and Printing increased from around 67,000 10-coupon notes in fiscal year 1952 to 690,000 10-coupon notes (or 6.9 million coupons in total) in fiscal year 1955.[5] All these millions of notes and coupons would have to pass through the Federal Reserve system and the Bureau of the Public Debt.

An investor buying millions of dollars in notes or a custodial bank holding billions of dollars in notes for their customers also had a lot of work to do when they wanted to cash in their coupons. Every year two coupons had to be detached from every individual security and turned in for payment. If an investor had $500 million in Treasury notes, and hopefully held the sum in $1 million denomination securities, he would have to detach and turn in 1,000 coupons a year. Custodial banks handling larger sums and many smaller denominations had an even worse time.[6] People had to be employed to cut, count, track, file, transport, and guard the coupons. Vault space was needed to store the Treasury notes. And, between 1952 and 1955, the number of notes and coupons involved was to expand ten fold. The resulting increase in costs was burdensome.

The Rise of Very-High-Denomination Treasury Notes

An easy way to reduce the administrative costs involved would be to add a few zeros onto the existing denominations, and this is what was done. In February 1955, the denominations of $100 million and $500 million were added to the existing ones of $1,000, $5,000, $10,000, $100,000, and $1 million. Raising the maximum denomination to $500 million cut down the amount of work involved in large issues of Treasury notes for everyone. The $500 million investor now had only two coupons to worry about, as did the Bureau of the Public Debt. And, the Bureau of Engraving and Printing only had to print one $500 million security instead of 500 $1 million securities. So, very-high-denomination Treasury notes were really money saving devices.

The issue of Treasury notes bearing very-high denominations was to continue for the next 14 years, through three administrations and five Secretaries of the Treasury. Their longevity was the result of the continuation of the trends first seen in the early 1950s: the Treasury's inability to sell long-term bonds, market pressures toward short-term securities, and upward trends in servicing costs.

The End of Very-High Denominations

The last issue of very-high-denomination Treasury notes occurred in October 1969. After that, the maximum denomination returned to the earlier high of $1 million. It was

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[5] *Annual Report of the Secretary of the Treasury on the State of the Finances* (Washington, DC: Government Printing Office, 1953), 103; *Annual Report of the Director, Bureau of Engraving and Printing, Fiscal Year ended 1952*, Table 9; idem,, *Fiscal Year ended 1954*, Table 9; *idem, Fiscal Year ended 1955*, Table 9. Historical Resource Center, Bureau of Engraving and Printing, Washington, DC.

[6] Kenneth D. Garbade, "G-20 Case Study: United States: Innovation and Structural Change in the U.S. Treasury Securities Market," 2003: 33. URL: http://www.g20.org/download/public/20031026_cs_institutional_building_usa.pdf.

the drive for further cost savings in debt administration that led to the disappearance of very-high-denomination Treasury notes. While very-high denominations saved on the costs of handling coupons and printing securities, they could not eliminate these costs or decrease the costs of safe-keeping and transferring bearer securities.

The movement of paper certificates and their filing and refiling increased the chances of them being lost, and the losses from theft were rising. While the losses of Treasury securities due to theft amounted to less than $4 million in 1966 by 1969 they had skyrocketed to over $30 million. [7] By late 1970, insurance companies were refusing to cover holders of Treasury securities against loss, threatening the functioning of the government securities market.

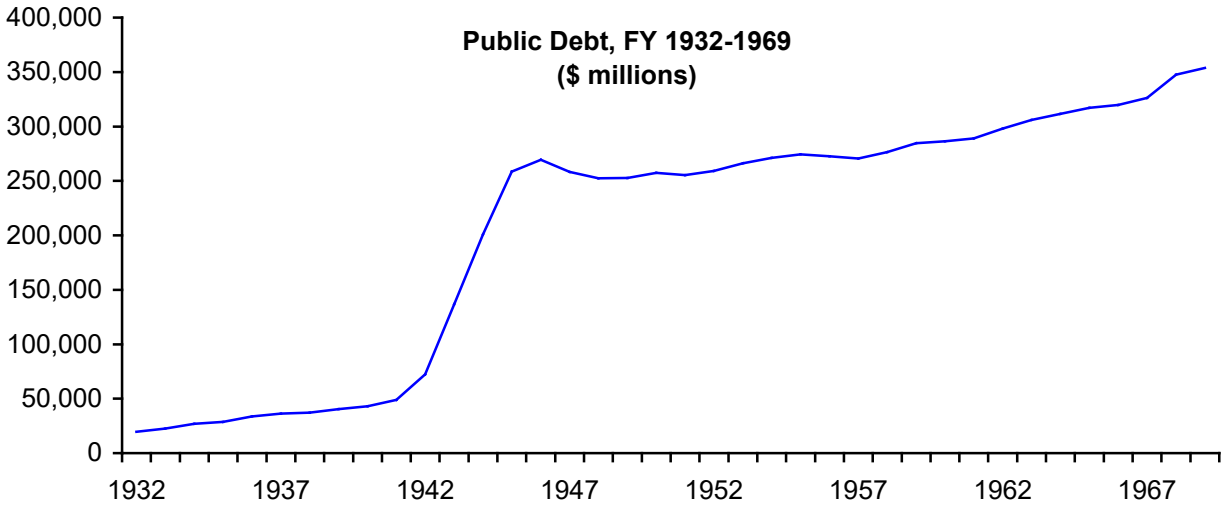
Amongst the most hard-pressed by these developments were the Federal Reserve banks. Federal Reserve banks performed numerous transfers and held securities for numerous entities, including the Federal Reserve's System Open Market Account. In the early 1960s, the Federal Reserve began to investigate whether the securities held by member banks and Federal Reserve banks could be held in book-entry form or managed electronically, eliminating the need for physical documents. Beginning in January 1968, a book-entry option was offered by the Federal Reserve to member banks. And by January 1970, the bearer securities held in the Federal Reserve's System Open Market Account were converted into book-entry form. This last action converted almost a quarter of all outstanding marketable debt into book-entry form. The combination of the conversion of System Open Market Account securities with securities converted to book-entry since January 1968 brought the amount of outstanding marketable debt in book-entry form to some 40% of the total in January 1970. It was at this point that the Treasury stopped offering very-high-denomination Treasury notes as there was no longer be any need for them.

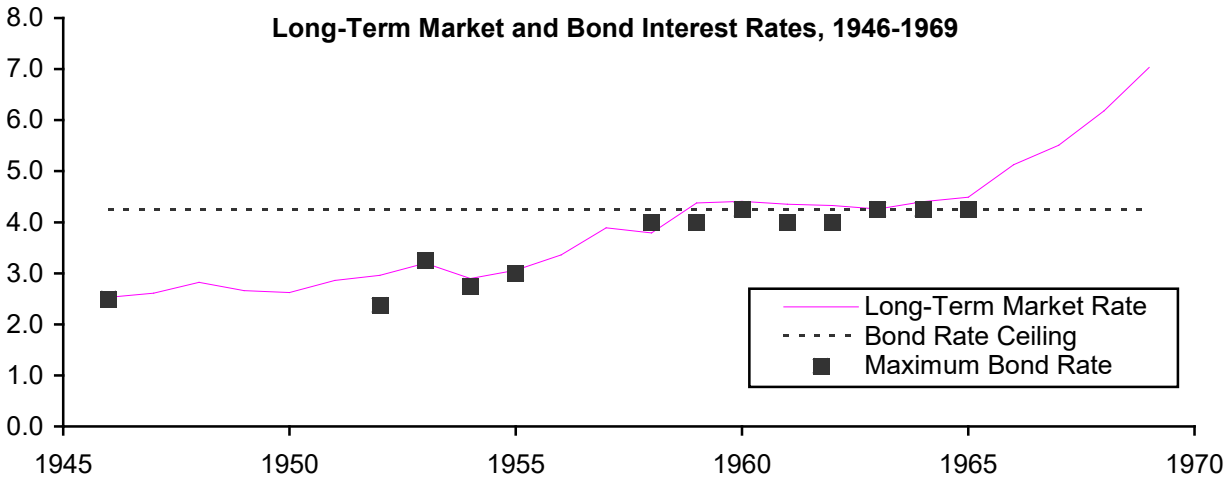
The maximum denomination was now reduced to $1 million. Very-high-denomination Treasury notes just were no longer necessary or cost-efficient. Large buyers of government securities now had the option of holding paper certificates or having the securities electronically entered into their accounts at their Federal Reserve bank. Such investors were eager to take the cost-saving book-entry option. For the Treasury, the book-entry system was also a cost saving development. The Bureau of the Public Debt could track securities and their semiannual interest payments electronically. Interest payments became lump sums transferred electronically and did not involve the shuffling of paper coupons and money back and forth. More electronic securities also meant fewer paper securities and less work for the Bureau of Engraving and Printing. Thus, book-entry procedure was a cost saving for both the Treasury and the large investor, obviating the need for very-high-denomination Treasury notes.

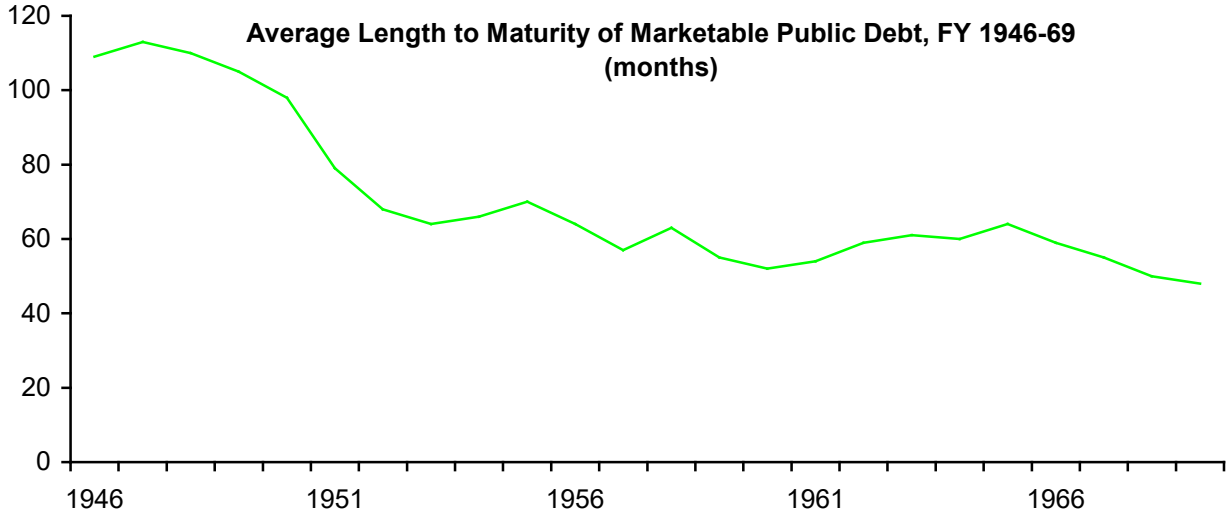
[7] Testimony of John Carlock, Fiscal Assistant Secretary of the Treasury, before the Senate Permanent Subcommittee on Investigations of the Committee on Government Operations, 92nd Cong., 1st sess., 8, 9, 10, 16 June 1971, 153. Public Debt Central Files, OA-155, Book Entry Procedure for Transferable Treasury Bonds, Notes, Certificates of Indebtedness, and Bills, Important Data File, vol. V.

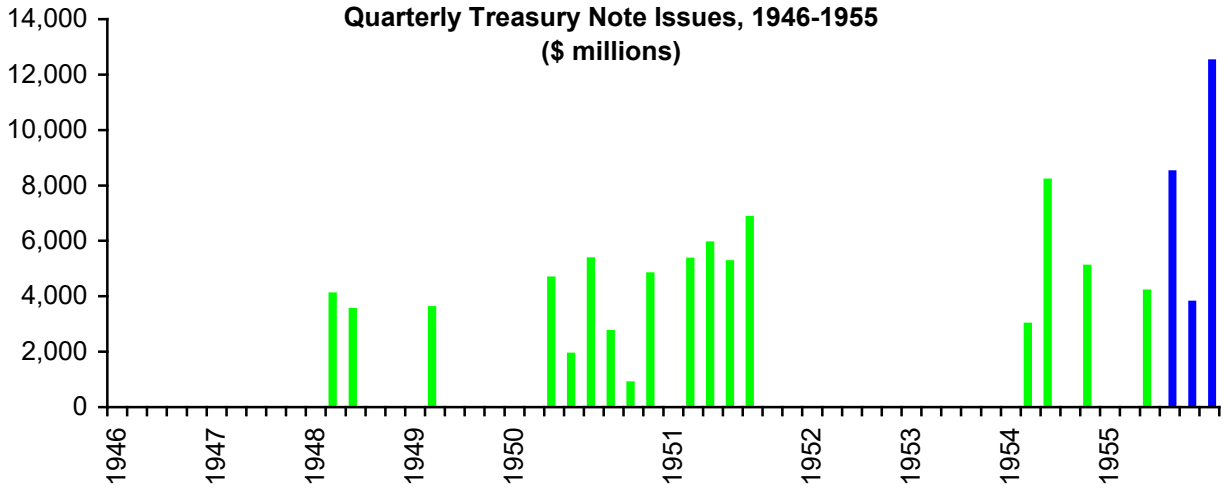
Conclusion

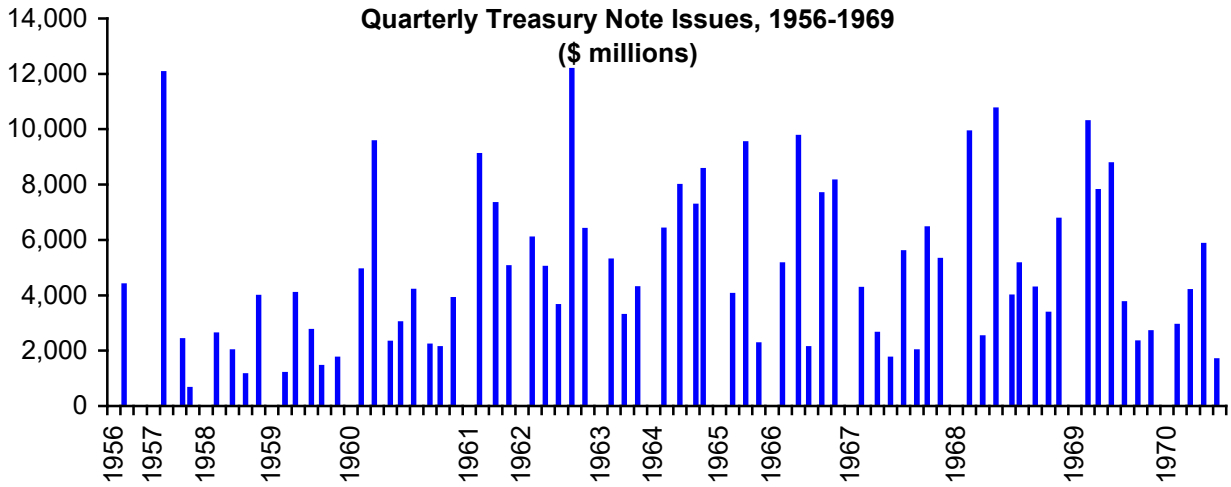
In conclusion, very-high-denomination Treasury notes arose from the Treasury's need to use Treasury notes as the primary vehicle for refunding the public debt. Treasury notes became the primary method of refunding the public debt because they were the only viable way, at the same time, to lengthen and consolidate the debt, as the government securities market did not support the marketing of long-term Treasury bonds. With the vast increase in the amount of notes sold came increasing administrative costs both for investors and the Treasury. Keeping, tracking, and servicing billions of dollars of Treasury notes quickly became burdensome in the early 1950s. The costs and administrative difficulties were reduced by the issue of very-high-denomination Treasury notes in fiscal year 1955. A further reduction in servicing costs was made possible with the introduction of book-entry procedures in early 1968. Electronic record keeping ended the need for the very-high-denomination Treasury notes, and they were no longer offered for sale.

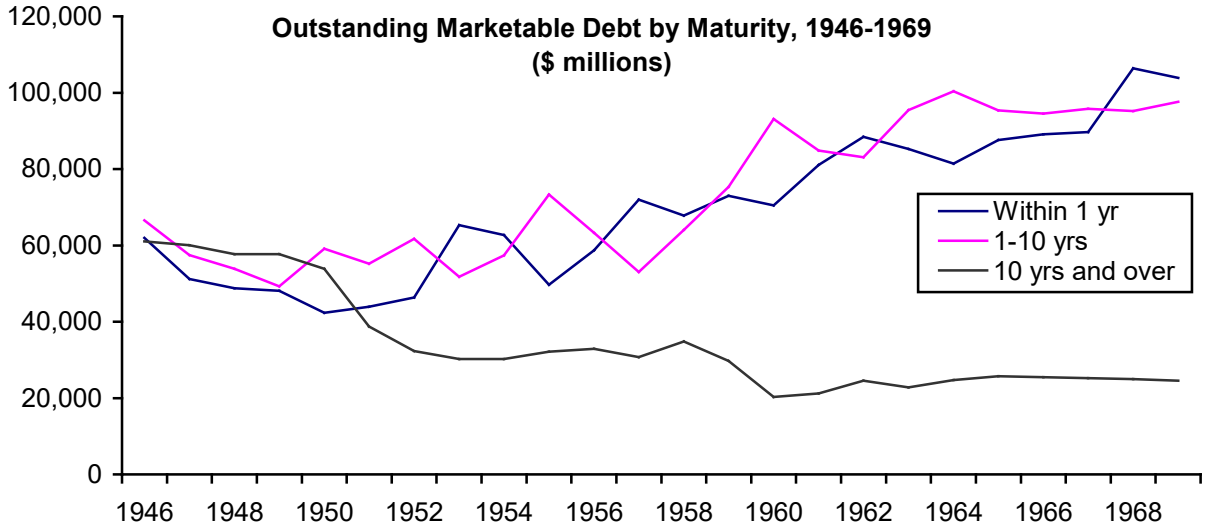

Public Debt, FY 1932-1969
($ millions)
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
1932
1937
1942
1947
1952
1957
1962
1967

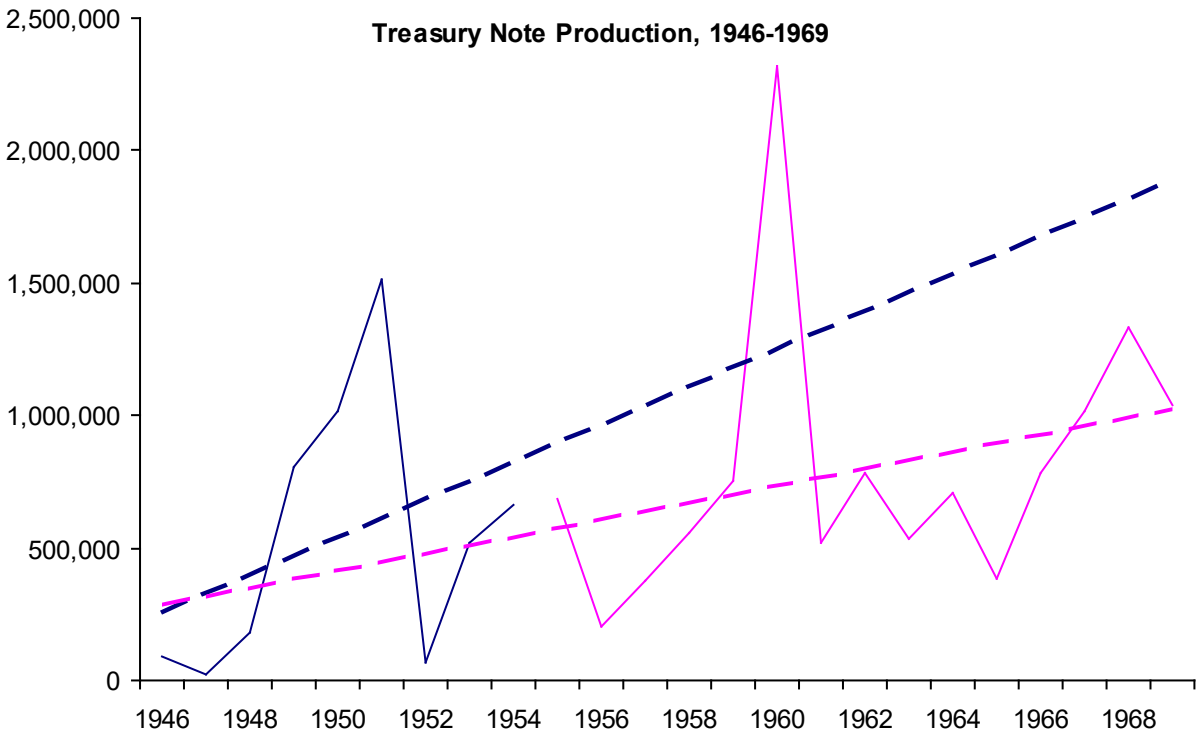

Long-Term Market and Bond Interest Rates, 1946-1969
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
1945
1950
1955
1960
1965
1970
Long-Term Market Rate
Bond Rate Ceiling
Maximum Bond Rate

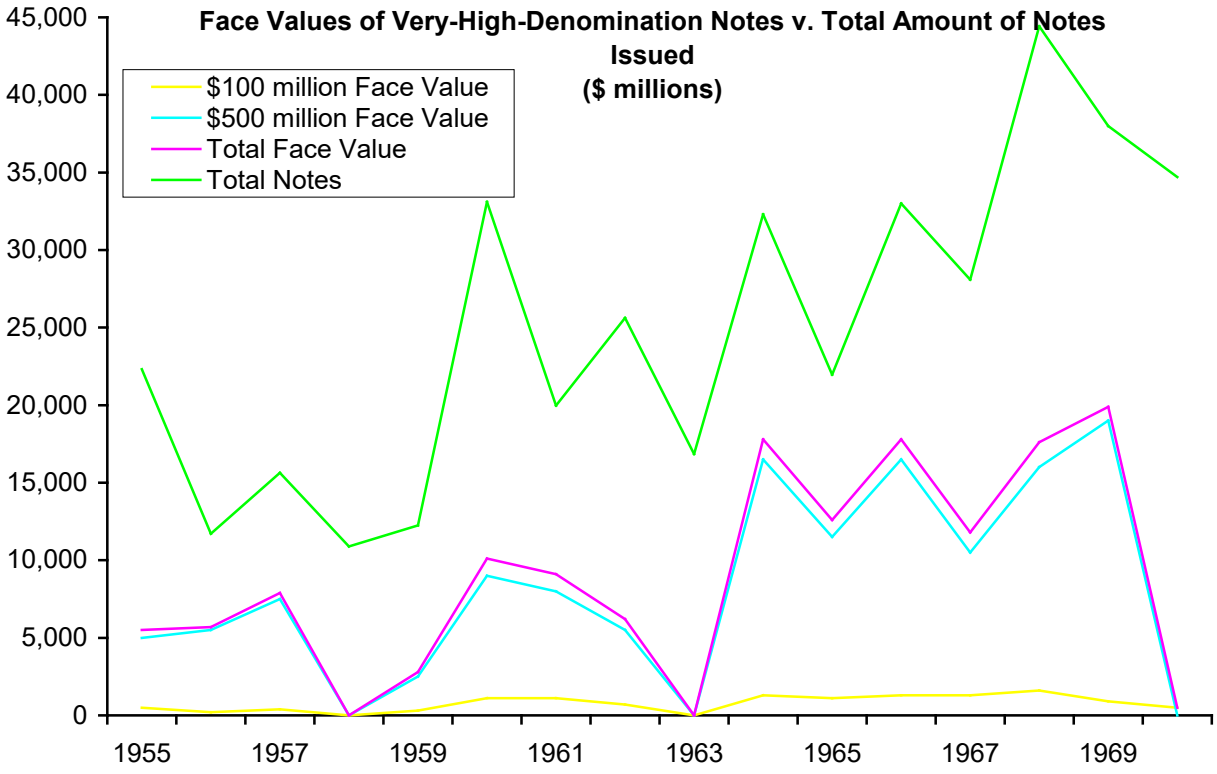

Average Length to Maturity of Marketable Public Debt, FY 1946-69
(months)
120
100
80
60
40
20
0
1946
1951
1956
1961
1966


Quarterly Treasury Note Issues, 1946-1955
($ millions)
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955


Quarterly Treasury Note Issues, 1956-1969
($ millions)
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1956
1957
1958
1959
1960
1961
1962
1963
1964
1965
1966
1967
1968
1969
1970


Outstanding Marketable Debt by Maturity, 1946-1969
($ millions)
120,000
100,000
80,000
60,000
40,000
20,000
0
1946
1948
1950
1952
1954
1956
1958
1960
1962
1964
1966
1968
Within 1 yr
1-10 yrs
10 yrs and over


Treasury Note Production, 1946-1969
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
1946
1948
1950
1952
1954
1956
1958
1960
1962
1964
1966
1968


Face Values of Very-High-Denomination Notes v. Total Amount of Notes Issued
($ millions)
$100 million Face Value
$500 million Face Value
Total Face Value
Total Notes
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1955
1957
1959
1961
1963
1965
1967
1969