**APPENDIX:** Historical Context of the MBS Market Development

This appendix addresses four related developments that coincided with the emergence of the MBS market and the acceptance of MBS as bonds. These developments are changes in interest rates and concurrent attempts at regulation, the bond market growth, other innovations in the bond category, and changes in technology.

**Interest Rates, Regulation, and Deregulation**

For much of the period of study (1968-1981), the interest rates showed an upward trend. This upward trend was deleterious to the survival of mortgage lenders. Two types of entities traditionally performed mortgage lending in the U.S.: thrifts (mostly savings and loan associations) and mortgage banks. While the two types of entities employed two different business models, neither model was well-suited to carrying mortgage debt on their books in a rising interest rate environment. The thrifts carried mortgages on their balance sheets and accepted deposits. The mortgage banks operated on an originate-and-distribute model, originating mortgages to sell to either commercial banks or life insurance companies.

The thrift business model was sustainable in a stable interest rate environment. In *Liar’s Poker*, Michael Lewis described this model as 3-6-3: pay 3% interest on deposits, charge 6% interest on mortgages, and arrive at the golf course at 3pm.[[1]](#footnote-2) However, the rising interest rates disrupted this model by making thrifts pay more interest on their deposits than they were generating on the outstanding mortgages.

While rising interest rates negatively affected both types of mortgage lenders, the regulation and deregulation activities focused on the savings and loan associations because in their capacity as depository institutions they were subject to more regulation than mortgage banks.

The impact of the rising rates on savings and loan associations was partially mitigated by the interest rate ceilings that constrained how much interest thrifts could pay out in deposits, thus, limiting the competition among thrifts. The Interest Rate Control Act of 1966 first instituted such ceilings for thrifts.[[2]](#footnote-3) However, the interest rate ceilings led to funding shortages with the investing public refusing to invest their money at rates that ensured that investors lost money in real terms.[[3]](#footnote-4) These shortages led to the phase-out of Regulation Q as well as the interest rate ceilings for the thrifts.

The inefficacy of interest rate ceiling on deposits as a solution for the savings and loan associations’ predicament led to other attempts to keep the savings and loan associations afloat. Two related acts: the Depository Institutions Deregulation and Monetary Control Act of 1980 and the Garn-St. Germain Depository Institutions Act of 1982 relaxed the constraints on the types of investments the associations could pursue. In absence of correspondent safety and soundness regulation, these regulatory changes effectively invited the savings and loan associations to gamble their way out of financial difficulties by taking on high-risk investments.[[4]](#footnote-5)

These developments had a mostly indirect effect on the development of the MBS market. On the one hand, they meant that savings and loan associations were looking to MBS as a way to unload their low-interest mortgages. On the other hand, the expectations of increasing interest rates constrained the pool of investors interested in making long-term investments and with it the fixed income market. These constraints are evident in Figure 1, which maps the size of the U.S. bond market against interest rate.

Figure A1: U.S. Bond market size (in U.S. Dollar Billions—left axis) and interest rate (in percent—right axis)[[5]](#footnote-6)

As the data in Figure A1 suggest, until interest rates break the upward streak following the 1981 peak, the bond market remains relatively small: the growth of the bond market averages ten billion dollars a year before 1981 and 40 billion dollars a year thereafter.[[6]](#footnote-7)

The success in stabilizing the interest rates came too late for hundreds of savings and loan associations. Instead, the growth of the bond market created fertile ground for the development of securitization, even as falling interest rates made real the prepayment risk in MBS that was mostly hypothetical until this point.

**Bond Market Growth**

Several explanations for the emergence of the MBS market have to do the growth of the corporate bond market and the influx of foreign capital that sheds light on the relative timing of these events. I summarize my findings from these data below. I also created an Appendix to the manuscript that addresses the other trends in the financial markets and includes these data.

The data provide a useful reminder that for much of the period described in the paper, the fixed-income markets were a sleepy backwater.

One sign of this sleepiness is that on the organizational level Wall Street firms’ departments, essential to the bond market growth, such as fixed-income research did not exist on a meaningful scale until well into the 1970s. For much of the 1960s, the fixed-income research staff in all of Wall Street consisted of two people—Sidney Homer and Henry Kaufman, hired by Salomon Brothers in 1961 and 1962 respectively.[[7]](#footnote-8) Many firms hired fixed-income analysts in the early 1970s only to fire them as the decade went on because the market did not have sufficient volume to justify the expense of a fixed-income research department. As late as the 1980s, fixed-income analysts on Wall Street were paid 30% less than their counterparts who covered equity markets.[[8]](#footnote-9)

This qualitative assessment of fixed-income markets finds support in the quantitative data on the fixed-income market size. Figure A2 below shows that the U.S. bond market exhibits little growth before MBS are accepted as bonds, which as I argue in the paper happens in 1983.

Figure A2: Growth of the U.S. bond market, 1955-2010 (U.S. Dollar Billions)[[9]](#footnote-10)

The data in Figure 2 show that the total size of the bond market, measured as all debt securities outstanding does not reach 500 billion dollars until 1984. By comparison, the total market value in the U.S. stock market exceeded 1,700 billion dollars in that year.[[10]](#footnote-11)

*Corporate Bond Market*

The data in Figures A1 and A2 demonstrate that the growth in the corporate bond market does not commence until the latter half of the decade, after MBS are accepted as bonds. These data are consistent with the assertion on page 28 of the paper that the acceptance of MBS as bonds triggers the growth in corporate bond market (because CMOs are included in corporate bond indices) rather than the other way around.

To show the relative sizes of the different components of the fixed-income market more clearly, Figure A3 zooms in at the data series in Figure 1 with 1991 as a cut-off to focus on the market developments in the 1980s.

Figure A3: Growth of the U.S. bond market, 1955-1991 (U.S. Dollar Billions)[[11]](#footnote-12)

The data in Figure A3 show that the volume of corporate bonds stays nearly flat for much of the period of study in the paper and takes off around the same time as the 1986 Tax Reform Act eased the CMO issuance rules.

*Foreign Capital in the Bond Market*

To address the possibility of the influx of foreign capital affecting the acceptance of MBS as bonds, I have collected data on foreign purchases of U.S. bonds 1955-2010 and plotted these purchases against the growth in MBS in Figure A4.

Figure A4: Foreigners’ purchase of U.S bonds and growth in asset-backed securities (ABS) (U.S. Dollar Billions)[[12]](#footnote-13)

Figure A4 shows that the foreign purchases of U.S. bonds stays nearly flat through 1989 and do not take off until nearly a decade after MBS are accepted as bonds. Moreover, even assuming that all the foreign investment is directed into MBS (which is a heroic assumption), the foreign investment averages 26% of the total MBS market size between 1970 and 2008.

1. p. 84. [↑](#footnote-ref-2)
2. Prior to this point, the interest rate ceilings applied only to commercial banks and were enforced by the Federal Reserve under Regulation Q adopted in 1933 (White, *S&L Debacle*). [↑](#footnote-ref-3)
3. Krippner, *Capitalizing on Crisis*. [↑](#footnote-ref-4)
4. White, *S&L Debacle*. [↑](#footnote-ref-5)
5. Sources: bond market size—Board of Governors of the Federal Reserve System, *Flow of Funds Accounts of the United States: Annual Flows and Outstandings* 1955-1964, 1965-1974, 1975-1984, 1985-1994, 1995-2004, 2005-2010; flow of funds rate—Federal Reserve Economic Data https://fred.stlouisfed.org. [↑](#footnote-ref-6)
6. Arguably, part of the reason for the push for securitization was the lack of clarity on how to bring inflation under control. Indeed, the efforts to combat inflation do not bear fruit until early 1980s. On October 6, 1979 the Board of Governors of the Federal Reserve adapted a policy, then viewed as radical, to “finally slay the inflation dragon that was stalking the land” (Fettig, “Review”). The policy succeeded and having run its course was reversed on October 5, 1982. [↑](#footnote-ref-7)
7. Kaufman, *Interest Rates, the Markets, and the New Financial World*, p. 12. [↑](#footnote-ref-8)
8. Donnelly, “Rush for Fixed-Income Research,” p. 165. [↑](#footnote-ref-9)
9. Source: Board of Governors of the Federal Reserve System, *Flow of Funds Accounts of the United States: Annual Flows and Outstandings* 1955-1964, 1965-1974, 1975-1984, 1985-1994, 1995-2004, 2005-2010. [↑](#footnote-ref-10)
10. Source: Center for Research in Security Prices, Total Market Value Index. [↑](#footnote-ref-11)
11. Board of Governors of the Federal Reserve System, *Flow of Funds Accounts of the United States: Annual Flows and Outstandings* 1955-1964, 1965-1974, 1975-1984, 1985-1994. [↑](#footnote-ref-12)
12. Source: Board of Governors of the Federal Reserve System, *Flow of Funds Accounts of the United States: Annual Flows and Outstandings* 1955-1964, 1965-1974, 1975-1984, 1985-1994, 1995-2004, 2005-2010. [↑](#footnote-ref-13)