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U.S. AGENCY NOTES FUTURES CONTRACTS

Rule X20 Scope of Chapter This chapter governs transactions in U.S. Agency Notes Futures Contracts. The U.S. Agency Notes Futures Contracts and all trading therein shall be subject to the Rules contained in this chapter, the general Rules of CFFE and the by-laws and Rules of the Clearing Corporation.

U.S. Agency Notes Futures Contracts consist of the following:

(a) U.S. Agency Ten Year Note Futures

(b) U.S. Agency Five Year Note Futures

Rule X21 Emergencies, Acts of God, Acts of Government If the delivery or acceptance, or any precondition or requirement of either, is prevented by strike, fire, accident, act of government, act of God or other emergency, the seller or buyer shall immediately notify the President. If the President determines that emergency action may be necessary, he shall call a special meeting of the Board and arrange for presentation of evidence respecting the emergency condition. If the Board determines that an emergency exists, it shall take such action under Rule 16 as it deems necessary under the circumstances and its decision shall be binding upon all parties to the U.S. Agency Notes Futures Contract in question.

In the event the Board determines that there exists a shortage of deliverable U.S. Agency Notes for any of the contracts covered in this chapter, it may, upon a two-thirds vote under Rule 16, take such action as may in the Board's sole discretion appear necessary to prevent, correct or alleviate the condition. Without limiting the foregoing or the authority of the Board under Rule 16, the Board may:

(a) Designate as deliverable callable U.S. Agency Notes otherwise meeting the specifications and requirements stated for each of the contracts in this chapter;

(b) Designate as deliverable one or more issues of U.S. Agency Notes having maturities shorter or longer than those stated in this chapter, but otherwise meeting the specifications and requirements stated for each contract of this chapter; and/or

(c) Determine a cash settlement based on the current cash value of a note that has a coupon equivalent to the yield determined by the Committee on U.S. Agency Notes Futures and that has the appropriate maturity for each contract in this chapter as determined by using the current market yield curve for U.S. Agency Notes on the last day of trading.

EXHIBIT A

Rule X22 Definitions

(a) Benchmark Securities^{SM} - [1]The U.S. dollar denominated,regularly scheduled debt issues which are designated by Fannie Mae as Benchmark securities.

(b) Benchmark Notes^{SM} - The Non-callable debt securities with maturities of one to ten years issued by Fannie Mae.

(c) Book-Entry Transfer of U.S. Agency Notes - A transfer of book entry U.S. Agency Notes from the short Clearing Member's book entry account at a Qualified Bank to the long Clearing Member's book entry account at a Qualified Bank as defined below. Such book entry transfer (1) constitutes delivery, in bearer form of a definitive U.S. Agency Note and (2) constitutes delivery to the long Clearing Member and (3) constitutes the long Clearing Member as holder of the U.S. Agency Note.

(d) Qualified Bank - A U.S. commercial bank (either Federal or State charter) that is a member of the Federal Reserve System and has capital (capital, surplus and undivided earnings) in excess of one hundred million dollars ($100,000,000).

(e) The Federal National Mortgage Association ("Fannie Mae") - The federally chartered and stockholder-owned corporation organized and existing under the Federal National Mortgage Association Charter Act established as an U.S. government agency to provide supplemental liquidity to the mortgage market.

(f) The Federal Home Loan Mortgage Corporation ("Freddie Mac") - The stockholder-owned U.S. government sponsored enterprise chartered pursuant to the Freddie Mac Act.

(g) Reopening - An agency may issue additional debt securities with the same terms as previously issued debt securities (other than the date of issuance, interest commencement date and offering price, which may vary) that will form a single issue with a previously issued Debt Security. This type of offering is referred to as a "reopening".

(h) Reference Notes^{SM} [2] - The debt issues designated by Freddie Mac as Reference Notes from time to time.

Rule X23 Units of Trading

(a) U.S. Agency Ten Year Note Futures The contract size for U.S. Agency Ten Year Note Futures shall be United States Agency Notes having a face value at maturity of one hundred thousand dollars ($100,000), or multiples thereof.

(b) U.S. Agency Five Year Note Futures The contract size for U.S. Agency Five Year Note Futures shall be United States Agency Notes having a face value at maturity of one hundred thousand dollars ($100,000), or multiples thereof.

(c) The initial first best bid or offer must be for ten (10) or more Contracts. Other bidders or offerers may join the prevailing bid or offer for one Contract or multiples thereof.

Rule X24 Months Traded Trading in U.S. Agency Notes Futures Contracts may be conducted for delivery in March, June, September and December.

Rule X25 Price Basis

[1] "Benchmark Securities" and "Benchmark Notes" are service marks of Fannie Mae.
[2] "Reference Notes" is a service mark of Freddie Mac.

a) U.S. Agency Ten Year Note Futures. Minimum price fluctuations shall be in multiples of one half of one thirty-second (1/2 of 1/32nd) point per 100 points ($15.625 per contract). Par shall be on a basis of 100 points.

b) U.S. Agency Five Year Note Futures. Minimum price fluctuations shall be in multiples of one-quarter of one thirty second (1/4 of 1/32nd) point per 100 points ($7.8125 per contract). Par shall be on a basis of 100 points.

c) Spread Transactions. Notwithstanding paragraphs (a) and (b) above, the minimum price fluctuations for EFP transactions pursuant to Rule 305, or Inter-Month Spread Transactions within a single commodity and Inter-Market Spread Transactions between two different commodities pursuant to Rule 312 (a) shall be as follows:

Contract	Minimum Price Fluctuation
U.S. Agency Ten Year Note Futures	1/4 of 1/32nd of a point
U.S. Agency Five Year Note Futures	1/8 of 1/32nd of a point

d) Inter-Market Spread Transactions shall be done at the smaller of the component commodities' minimum price fluctuations for outright transactions, which are set forth in paragraph (a) through (c) of this Rule. For example, the minimum price fluctuation for an Inter-Market Spread Transaction between a Ten Year Agency Futures Contract and a Five Year Agency Futures Contract is 1/4 of 1/32nd of a point.

e) For the purpose of calculating daily variation margin, the value at the minimum price fluctuation shall always be rounded to the nearest whole cent.

Rule X26 Limits on Daily Price Changes There shall be no limit on daily contract price changes.

Rule X27 Position Limits Subject to the exceptions contained in Rules 200 through 202, the maximum number of U.S. Treasury Agency Five Year Futures Contracts net long or net short in any one month or all months combined which any one person may hold or control is 5,000 and the maximum number of U.S. Treasury Agency Ten Year Futures Contracts net long or net short in any one month or all months combined that any one person may hold or control is 5,000. Additionally for each contract, effective on the first Business Day of the spot month, the maximum gross long and/or short position that any one person may hold or control in the spot month is 5,000 Contracts.

Rule X28 Reportable Positions The following positions in each U.S. Agency Notes Futures Contract on CFFE, long or short, in any one month, which are held or controlled by any person, and which are carried by any single member or member firm shall constitute a reportable position and shall be reported to CFFE in the manner prescribed by CFFE :

Contract	Quantity
U.S. Agency Ten Year Note Futures	100 contracts or more
U.S. Agency Five Year Note Futures	100 contracts or more

For purposes of this Rule X28, the word "person" shall include individuals, associations, partnerships, corporations, and trusts.

Rule X29 Hours of Trading The hours of trading in U.S. Agency Note Futures Contracts shall be 7:30 a.m. to 5:30 p.m., New York time on each Business Day, except that, on the last day of trading of any contract month trading in that contract month shall terminate at 1:00 p.m. New York time of that day. Pos-closing trading shall be permitted thereafter in accordance with Rule 315.

For purposes of these Rules, the day begins with the commencement of trading at 3:00:01p.m. and ends with the close of trading at 3:00:00 p.m., New York time.

Rule X30 Last Day of Trading

No trades in U.S. Agency Ten Year Notes Futures Contracts and U.S. Agency Five Year Notes Futures Contracts deliverable in the current month shall be made during the last seven Business Days of the month. Outstanding contracts may be liquidated by the delivery of book-entry U.S. Agency Notes or by mutual agreement by means of a bona fide exchange of such current futures contracts for the actual U.S. Agency Notes or comparable instruments. Such liquidation by mutual agreement by means of bona fide exchange in any event must be made, and notice must be submitted in proper form to the Clearing Corporation on the following days only:

1. The seventh last Business Day of the delivery month;
2. The sixth last Business Day of the delivery month no later than 2:00 p.m. New York time.

Rule X31 Margin Requirements See Rule 403.

Rule X32 Exclusive Time The Exclusive Time (as such term is defined in Rule 303) applicable to each U.S. Agency Notes Futures Contract shall be as specified from time to time by the Committee on U.S. Agency Notes.

Rule X33 Crossing Session The time or times during each Trading Day at which a Market Crossing session will take place pursuant to Rule 303A shall be as specified from time to time by the Committee on U.S. Agency Notes.

Rule X34 Conversion Factors For U.S. Agency Note Futures Contracts The Committee on U.S. Agency Notes will review quarterly current market yields and durations to set the coupon rate for U.S. Agency Note Futures Contracts. The Coupon Rate shall be fixed as of the first day on which of trading of a contract month is permitted.

Rule X35 Standards for Delivery

(a) U.S. Agency Ten Year Note Futures. The contract grade for delivery on U.S. Agency Ten-Year Note Futures Contracts made under these Rules shall be U.S. Agency Notes that have an actual maturity of not less than six and one-half years. All U.S. Agency Notes delivered against a Contract must be of the same issue.

U.S. Agency Notes deliverable against U.S. Agency Ten-Year Note Futures Contracts under these Rules must:

(1) Be designated as a Benchmark Securities℠ and issued by Fannie Mae or designated as Reference Notes℠ and issued by Freddie Mac.
(2) Be non-callable, fixed rate notes with semi-annual payments.

(3) Have a minimum size of $3 billion in issuance (original and re-issuance) prior to the first calendar day of the delivery month.
(4) Be designated as a Ten-Year Note at issuance or reopening by the issuing agency.

(b) U.S. Agency Five Year Note Futures. The contract grade for delivery on U.S. Agency Five-Year Note Futures Contracts made under these Rules shall be U.S. Agency Notes that have a remaining maturity of not less than four years and two months. All U.S. Agency Notes delivered against a Contract must be of the same issue.

U.S. Agency Notes deliverable against U.S. Agency Five-Year Note Futures Contracts under these Rules must:

1. Be designated as Benchmark Securities[SM] and issued by Fannie Mae or designated as Reference Notes[SM] and issued by Freddie Mac.
2. Be non-callable, fixed rate notes with semi-annual payments.
3. Have a minimum size of $3 billion in issuance (original and re-issuance) prior to the first calendar day of the delivery month.
4. Be designated as a Five-Year Note at issuance or reopening by the issuing agency.

(c) New Issues; Reopening of Issues. New issues of U.S. Agency Notes that are issued prior to the delivery month and satisfy the standards in this Rule shall be added to the deliverable grade as they are issued. New issues of U.S. Agency Notes that are issued during the delivery month will not be deliverable against the expiring contract month. Provided, however, if Fannie Mae or Freddie Mac reopens an existing issue, thus rendering the existing issue indistinguishable from the new issue, and the existing issue meets the standards of this chapter, then the reopened issue shall be deliverable even if issued within the delivery month.

CFFE shall have the right to exclude any new issue from deliverable status or to further limit outstanding issues from deliverable status.

(d) Calculation of Payments The following procedures shall apply in calculating the amount paid for delivery against a futures contract:

(i) The Conversion Factor is defined as the price rounded to four decimals at which the deliverable note given its coupon would yield the coupon rate set by the Committee on U.S. Agency Notes.

(ii) The time to maturity of Notes to be delivered on a U.S. Agency Ten Year Note Futures contract will be calculated in complete three month increments from the first day of the delivery month. For example, if the remaining time to maturity of an agency note on the first day of the delivery month is 9 years and 5 months, then for settlement calculations and conversion factor calculations it is 9 years and 1 quarter.

(iii) The time to maturity of Notes to be delivered on a U.S. Agency Five Year Futures Contract will be calculated in complete one month increments from the first day of the delivery month. For example, if the remaining time to maturity of an agency note on the first day of the delivery month is 4 years, 5 months and 14 days, then for settlement calculations and conversion factor calculation it is rounded to 4 years and 5 months).

(iv) Interest accrued on the Notes shall be charged to the long Clearing Member by the short Clearing Member. The Notes have an accrual method (day count convention) for calculating interest of 30/360. This means an interest calculation of the basis of a 360-day year consisting of twelve 30-day months.

(v) The futures settlement price times the conversion factors plus accrued interest (30/360) will equal the total invoice price of the contract.

Rule X36 Deliveries on Futures Contracts Deliveries against U.S. Agency Notes Futures Contracts shall be by book-entry transfer between accounts of Clearing Members at Qualified Banks in accordance with the applicable operating circulars and letters of the U.S. Federal Reserve Banks and the U.S. Department of Housing and Urban Development. Delivery may take place on any Business Day that is not a New York banking holiday, beginning with the first Business Day of the expiring contract month. Delivery must be made no later than the last Business Day of the contract month as defined in Rule X37.

Rule X37 Date of Delivery Delivery of U.S. Agency Notes may be made by the short Clearing Member upon any permissible delivery day of the delivery month as the short may select. A permissible delivery day is any Business Day that is not a New York banking holiday, beginning with the first Business Day of the month. For all U.S. Agency Note Futures Contracts, delivery of U.S. Agency Notes must be made no later than the last Business Day of the month.

Rule X38 Seller's Invoice to Buyer Notice of Delivery shall be given to the Clearing Corporation by 9:00 p.m. on the second Business Day preceding the delivery day. A Clearing Member holding both long and short contracts for customers must tender such notices of intention to deliver as it receives from its customers who hold short contracts. The Clearing Corporation shall assign all deliveries.

Notice of Delivery shall be furnished to the Clearing Corporation in computer readable form. The Clearing Corporation acting as agent for the short Clearing Member shall assign and provide the Notice to the long Clearing Member.

Upon determining the long Clearing Members obligated to accept deliveries tendered by issuers of Notices of delivery, the Clearing Corporation shall promptly furnish to each issuer the names of the long Clearing Members obligated to accept delivery from such issuer for each U.S. Agency Note for which a Notice was tendered and shall also inform such issuer of the number of Contracts for which each buyer is obligated. Failure of the seller to object to such assignment by 8:00 a.m., New York time, on the next Business Day shall establish an irrefutable presumption that the issuance of the Notice of delivery was authorized by the person in whose name the notice was issued.

Thereupon, the short Clearing Member shall issue delivery invoices to the long Clearing Members that have been allocated Notices of Delivery before 4:00 p.m., New York time, on the first Business Day after such Notices of delivery are received. The delivery invoices shall include: a full description of the Notes to be delivered; the amount of money to be paid by the long Clearing Member based on the delivery prices established by the Clearing Corporation and adjusted for applicable interest payments; the delivery day; and such other information as the Clearing Corporation may consider necessary or appropriate to effect settlement by delivery. Such invoices must be delivered to the long Clearing Member by 4:00 p.m., New York time, on the Business Day following the tender of the Notice of Delivery.

In the event the long Clearing Member does not agree with the terms of the delivery invoice received from the short Clearing Member, the long Clearing Member must notify the short Clearing Member and the dispute must be settled by 10:30 a.m., New York time. If the dispute shall not be settled by such time on the delivery day, delivery shall be made in accordance with instructions of the Clearing Corporation.

The short Clearing Member must have contract grade U.S. Agency Notes in place at its bank in delivery form acceptable to its bank no later than 11:00 a.m., New York time, on the delivery day. The short Clearing Member must notify its bank to transfer contract grade U.S. Agency Notes by book-entry to the long Clearing Member's account at the long Clearing Member's bank on a delivery versus payment basis. That is, payment shall not be made until the Notes are delivered.

The long Clearing Member must make funds available by the opening time of the Federal Reserve Wire System (New York time) and notify its bank to accept contract grade U.S. Agency Notes and to remit federal funds to the short Clearing Member's account at the short Clearing Member's bank in payment for delivery of the Notes.

The amount of money to be paid in connection with any delivery against the U.S. Agency Notes Futures Contract shall be based on the settlement price established on the day the Notice of Delivery otice is received with respect to any such delivery, including any adjustments for differences between contract prices and delivery prices. Interest accrued on the Notes shall be charged to the long by the short on a 30/360 basis.

Rule X39 Method of Delivery Delivery Notices must be delivered to the Clearing Corporation which shall assign the deliveries to long Clearing Members (buyers) having contracts to take delivery of the U.S. Agency Notes. The Clearing Corporation shall notify such Clearing Members of the deliveries that have been assigned to them and shall furnish to the issuers of Notice of Delivery the names of the Clearing Members obligated to accept their deliveries. Clearing Members receiving delivery notices shall assign delivery to the oldest open contracts on their books at the close of business on the previous day.

Rule X40 Buyer's Banking Notification The long Clearing Member shall provide the short Clearing Member by 5:00 p.m., New York time, on the Business Day prior to delivery day, with a Banking Notification form. The Banking Notification form shall include the following information:

(i) The identification number and name of the long Clearing Member
(ii) The delivery date
(iii) The notification number on the delivery assignment
(iv) The identification number and name of the short Clearing Member making delivery
(v) The quantity of contracts being delivered
(vii) Specific Federal Wire instructions for the transfer of U.S. Agency Notes

Rule X41 Payment Payment shall be made in Federal Funds. The long Clearing Member obligated to take delivery must take delivery and make payment before 2:00 p.m. New York time, on the day of delivery except on New York banking holidays when delivery must be taken and payment made before 9:30 a.m., New York time, the next banking business day. Adjustments for differences between contract prices established by the Clearing Corporation and the delivery price shall be made with the Clearing Corporation in accordance with its by-laws and Rules.

Rule X42 Wire Failure In the event that delivery cannot be accomplished because of a failure of the Federal Reserve wire or because of a failure of either the long Clearing Member's bank's or the short Clearing Member's bank's access to the Federal Reserve wire, delivery shall be made before 9:30 a.m., New York time, on the next day on which the Federal Reserve wire is operating and bank access to it is available. Interest shall accrue to the long Clearing Member and must be paid by the short Clearing Member beginning on the day on which the Agency Notes were to be originally delivered.

In the event of any such failure, both the long and the short Clearing Member must provide documented evidence that the instructions were given to their respective banks in accordance with these Rules.

Rule X43 Failure to Perform If a Clearing Member fails to perform any acts required by this chapter or fails to deliver or accept delivery as required by the Rules of the Clearing Corporation, such Clearing Member will be subject to disciplinary action by CFFE , and CFFE can assess such Clearing Member for the expense associated therewith.

Rule X44 Duties of Members Members shall deliver notices pursuant to the By-laws and Rules of the CFFE and in accordance with the assignment thereof to eligible buyers by the Clearing Corporation, and shall make no other disposition thereof. A member who alters an endorsement or makes a false endorsement on a notice of assignment of delivery issued by the Clearing Corporation under Rule X39, for the purpose of avoiding acceptance of the delivery specified therein, shall be deemed guilty of an act detrimental to the welfare of the CFFE.

Rule X45 Office Deliveries Prohibited No office deliveries may be made by members of the Clearing Corporation.

Rule X46 Failure to Accept Delivery Where a buyer to whom a delivery has been assigned by the Clearing Corporation fails to take such delivery and make payment when payment is due, the seller tendering such delivery shall promptly sell the Notes on the open market for the account of the delinquent buyer. It shall then immediately notify the Clearing Corporation of the default, the contract price and the re-sale price, and the Clearing Corporation shall immediately serve a like notice upon the delinquent. Thereupon the delinquent buyer shall be obligated to pay to the seller, through the Clearing Corporation, the difference between the contract price and the re-sale price.

Rule X47 **Settlement Procedures** See Rule 314.

<u>SUMMARY OF CONTRACT TERMS</u>

U.S. AGENCY TEN-YEAR NOTE FUTURES CONTRACTS
U.S. AGENCY FIVE-YEAR FUTURES CONTRACTS

TERM/CONDITION	EXCHANGE RULE	PROPOSAL
1. Commodities	CFFE Rules: X	SEE ABOVE
2. Delivery Months	CFFE Rule: X24	Same as existing CFFE Rule 8.24
3. Last Trade Day	CFFE Rule: X30	Same as existing CFFE Rule 8.30
4. Contract Size	CFFE Rule: X23	Same as existing CFFE Rule 8.23(a)(b)(c)
5. Minimum Tick	CFFE Rule: X25	Same as existing CFFE Rule 8.25(b) and (c)
6. Daily Price Limit	NA	

EXHIBIT B

SUMMARY OF SPECULATIVE LIMITS

U.S. AGENCY TEN-YEAR NOTE FUTURES CONTRACTS
U.S. AGENCY FIVE-YEAR NOTE FUTURES CONTRACTS

Criterion	Applicable CFTC Rule (17 CFR)	Standard	Applicable CFFE Rule
1. Speculative limits	150.5	Proposed Position Limits rule satisfies 150.5. Position Limits are less than one-quarter of the economically deliverable supply	CFFE Rule X27
2. Aggregation rule	150.4	Same as Rule 150.5(g)	CFFE Rule 100(d)
3. Reporting level	15.00(b)(1)(i)	Reporting levels are supported by liquidity of the cash market and adequate deliverable supply numbers	CFFE Rule X28

EXHIBIT C

U.S. Agency Futures Contracts

I. Introduction

Agency Securities are obligations of federal government agencies or government-sponsored enterprises ("GSEs") such as Fannie Mae and Freddie Mac. While most GSEs rely primarily on debt financing for their day-to-day operations, the full faith and credit of the U.S. government do not typically back these securities. The securities are very high credit quality and are rated Aaa/AAA by the major rating agencies. Debt securities issued by GSEs are considered "exempted securities" for purposes of the Securities and Exchange Act of 1934.

The agency debt market has grown rapidly in recent years, whereas the Treasury market has leveled off as budget surpluses have continued to diminish Treasury borrowing needs. To fill the gap left by a decreasing supply of Treasury securities, two government-sponsored enterprises, Fannie Mae and Freddie Mac, introduced their own benchmark debt programs in 1998; Fannie Mae introduced "Benchmark Securities" and Freddie Mac its "Reference Notes and Bonds." These programs provide for the regular issuance of large-sized, non-callable coupon securities in a range of maturities, and they have expanded rapidly in their breadth and depth. The proposed Agency Securities Futures Contracts are designed around these programs.

II. Summary of contract terms and Agency Securities market

Exhibit B provides a summary of the contract terms and conditions of the new U.S. Agency Notes futures contracts. It shows that the many of the terms and conditions of the contracts are similar to existing contract terms for the Treasury Note futures contracts traded on CFFE. The proposed contracts will carry an initial coupon rate of 6.5%, list in a quarterly contract cycle, and have overall and spot month position limits of 5000 contracts. The reporting level will be set at 100 contracts.

The Agency Notes tenderable against the proposed contracts are similar to Treasuries in terms of their characteristics and the way they trade. Accordingly, many of the proposed contract terms and delivery procedures are similar to the terms of existing Treasury Futures Contracts. There is one difference, however, in the invoice procedures: agencies use a 30/360 basis for calculating accrued interest while Treasuries use actual/365. The formulas for calculating conversion factors for the Agency Note contracts are the same as those used for calculating conversion factors for the Treasury Note Contracts; the accrued interest is rounded to the nearest month for the Five-Year and to the nearest quarter for the Ten-Year (See Appendix 1- Conversion Factor Formula).

With respect to the underlying market, Agency securities are fixed rate notes not redeemable before maturity, and issued only in book entry form with a minimum amount of $1,000 and in multiples of $1,000. Agencies currently offer Two, Five, and Ten-Year Notes redeemed at par at maturity, with interest paid semiannually. Agency coupon securities are quoted in terms of their price, with most trades settled on a delivery versus payment basis.

There are three ways that Agencies can issue debt: (1) new issuance; (2) re-opening an existing issue; and (3) exchange offerings.

(1) New Issuance. Agency Benchmark Securities issuances are regularly scheduled. First there is an announcement that provides details of the upcoming issue, including the amount to be priced and the maturity date. Ordinarily, there is a period of a week or less were "when-issued" trading occurs between the time a new security offering is announced and the time the security is actually priced. The Agencies use a syndicate process for pricing and distribution of new issuances.

(2) Re-opening. Instead of issuing a new security, the agency may add to, or reopen an existing issue. Securities with larger amounts outstanding tend to be more liquid, making them more attractive to the investors. A reopening is usually conducted using the syndicate for distribution but Fannie Mae has indicated that it could reopen an issue through a Dutch (single price) auction mechanism. The decision as to which reopening method to use depends on the specific issue being reopened, the size of the reopening and prevailing market conditions. Results of the auction are reported within ten minutes of the submission deadline.

(3) Exchange Offering. Sometimes Agencies allow holders of outstanding maturing securities to exchange them for new issues at an announced price and coupon rate. In other cases, however, new securities are issued only to holders of specific maturities. Fannie Mae has done two debt exchanges, switching the Five-Year and the Ten-Year benchmarks with specific issues of Medium-Term Notes.

III. Deliverable Supplies

Deliverable Supplies depend on (1) frequency of issuance, (2) size of issuance, (3) contract standards that specify what is deliverable, and (4) secondary market liquidity.

(1) Frequency of Issuance. The Agencies have a regular, predictable schedule for offering marketable securities, which they recognize as the most effective approach to create liquid benchmark issues. Announcements are made as far in advance as practical, allowing market participants to prepare for the offerings and ensuring transparency. Calendars for the year 2000 are already available (see Appendices 2 and 3).

In the Year 2000, Fannie Mae is committed to issue in five different months for each of the five-year and ten-year maturities. The Agency will issue new or re-open existing Five-Year Benchmark Notes in February, May, July, September and December. New issues and/or re-openings of Ten-Year Benchmark Notes will occur only in January, April, June, August and November. There will be no issuance of Benchmark Notes in the five- or ten-year maturities at any time other time during the year. Five-Year Notes will be deliverable on the Five-Year Contract, while Ten- and Seven-Year Notes will be deliverable on the Ten-Year Contract. Fannie Mae has scheduled new issues and re-openings for other notes such as the seven-year maturity in March and October and could possibly issue in this maturity at other times.

The Freddie Mac Reference Notes and Bonds Calendar reveals that Five-Year Reference Notes will be issued in the first month of each quarter. There are new issues in January and July and re-openings in April and October. Ten-year Reference Notes will be issued in the third month of each quarter, with new issues in March and September and re-openings in June and December.

(2) Size of Issuance. Minimum sizes of scheduled offerings will be announced by both Agencies on predetermined dates one week prior to pricing date. This longer lead-time between announcement and pricing enables a longer period of pre-marketing for the issue and thus provide for wider placement. At the time minimum sizes are announced, Fannie Mae will also include minimum issue sizes for any additional bullet Benchmark Securities that are not on the calendar.

All pricing for all securities to be issued in a month occur on the same day, the actual pricing may be spaced apart during the day.

As shown in Tables 1 and 2, Agency benchmark issues generally range from $3 to $6 billion in size -- 1 /5 to 1 /2 the size of comparable U.S. Treasury issues. Freddie Mac targets Five- and Ten-year issues at $10 billion in total. New issues are launched for a minimum of $4 billion and a target of $6 billion, while re-openings occur for a minimum of $2 billion and a target of $4 billion. Fannie Mae's minimum size for a new issuance of a Benchmark Note is $3 billion. Through successive re-openings, however, Fannie Mae will target a final outstanding issue size of $6-9 billion for different maturities. Although re-openings have no required minimum size, most have been for $2 billion or more. These large-size issues make Agency benchmark notes the largest transactions of their kind in agency and corporate markets.

Table 1: Issue Sizes of Agency and Treasury Coupon Securities as of October 31, 1999

Issue	**Fannie Mae Benchmark**	**Freddie Mac Reference**	**U.S. Treasury**
Two-year	---	5.0r	15.0
Three-year	3.0	5.0	----
Five-year	6.5r	3.0	15.0
Ten-year	3.5	6.0	12.0
Thirty-year	4.25r	---	10.0

Data: Bloomberg; Fannie Mae, Freddie Mac.
Source of Table: The Benchmark U.S. Treasury Market: Recent Performance and Possible Alternatives. Michael J. Fleming. Federal Reserve Bank of New York. November 1999.
Notes: The table reports the sizes of the most recent non-callable benchmark coupon issues as of October 31, 1999 in billions of U.S. dollars. Securities more than one year old are excluded. U.S. Treasury issue sizes exclude amounts issued to refund maturing securities of Federal Reserve Banks as well as amounts bid for by

Federal Reserve Banks on behalf of foreign and international monetary authorities. A superscript "r" indicates an issue that was reopened.

Table 2: Issue Sizes of Agency and Treasury Coupon Securities as of February 3, 2000

Issue	**Fannie Mae Benchmark**	**Freddie Mac Reference**	**U.S. Treasury**
Two-year	4.0	5.0r	14.0
Three-year	3.0	5.0	-----
Five-year	11.0r	6.0	12.0*
Ten-year	6.0	9.0	10.0*
Thirty-year	4.25 r	2.0	10.0*

Notes: Last issued amounts for Fannie Mae and Freddie Mac and for Two-year Treasury Notes. 2/2/00 Announced issue sizes for Five, Ten and Thirty-year Notes.

The treasury announced on February 2, 2000 that in the second quarter it will pay down over $152 billion of net market borrowings. This is the largest reduction in publicly held debt in any quarter. The Treasury will pay down the debt by conducting buybacks of outstanding Treasury securities prior to maturities. It has also decreased the sizes and frequencies of issues. There is a growing consensus within the governmental and financial sectors that the pay-downs will continue to grow. Additionally, Treasury issuances are decreasing because there is less maturing debt to refinance. Table 2 contrasted with Table 1 shows that the Treasury is taking steps to decrease the size of many of its issues. At the same time, the Agencies are taking steps to schedule issuance consistently and to increase the issuance size.

(3) The Contract Standards. The U.S. Agency Ten- and Five-Year Notes Futures Contract requires deliverable notes to be designated as a Benchmark Note by Fannie Mae or as a Reference Note by Freddie Mac. Both contracts require that minimum aggregated issuance be at least $3 million prior to the first day of the delivery month. This is to insure that only large liquid issues are deliverable on the contract. It does eliminate new issuances in the delivery month from deliverable supply.

The Agencies offer notes in original-issue maturities of two, three, five, seven and ten years. Although the original issuance may not exactly be ten years, the notes are called Ten-Year Notes. The contract standards require that the Ten-Year Note must be designated at issuance or reopening as its benchmark or reference ten-year note. Similarly, the Five-Year Note must be designated at issuance or re-opening as its benchmark or reference Five-Year Note.

In addition, the U.S. Agency Five-Year Note Futures require that the remaining time to maturity be greater than four years and two months while the U.S. Agency Ten-Year Note Futures require that the remaining time to maturity be greater than six years and six months.

Appendices 4, 5 and 6 provide agency histories of issues and eligible supply for the contracts. Since the benchmark notes have only been issued since 1998, the Exchange has made projections on future deliverable supplies based on the calendars provided by the Agencies. Freddie Mac has planned new issuances and re-openings but Fannie Mae has not indicated whether its planned issuances will be new issuances or re-openings. The projections assume that every new issuance is followed by a re-opening.

(4) Secondary Market Liquidity. After issuance, benchmark notes can be bought and sold in the secondary market at prevailing market prices through financial institutions, brokers and dealers. Bid-offer spreads of notes in these secondary markets have been 0.5/32nd to 1/32nd, which is comparable to or better than that for off-the-run U.S. Treasuries.[1] Typical size for transactions is $2-$10 million while large block trades of $100 million are commonly done as swaps. There are trades up to $250 million in individual securities.

Agency market trading volume does not yet approach that of the U.S. Treasury market. Average trading volume for all U.S. Agencies (including discount issues), however, has grown from less than $10 billion a day in 1991 to $55 billion a day in 1999. This is about 29% of the $190 billion worth of daily transactions in all marketable Treasury securities. In 1999 average daily volume for Agency Coupon trading was about 7% of that of Treasury Coupons ($11 billion versus $158 billion)[2].

Regarding market participation, Benchmark and Reference Agency notes are considered by a variety of investors to be high quality and liquid. They are actively used by many types of investors for hedging and trading purposes, and original issues have been broadly placed both geographically and institutionally. The size and liquidity of Agency issues have attracted many investors, some of whom had not participated in the agency market previously. Fannie Mae, for example, classes investors as follows:

(1) traditional, well-capitalized, U.S. Treasury investors seeking higher yields;
(2) foreign central banks and government institutions that prefer to purchase in large sizes of $100 to $500 million;
(3) index fund managers that have replaced core Treasury holdings to achieve spread pick-ups;
(4) traditional buyers of agency securities that have replaced holdings of Medium Term Notes as a way to improve liquidity; and
(5) dealers and other investors who can easily borrow the issue in the repo market and use the notes as a hedge vehicle. (The acceptance of Benchmark and Reference Notes in the overnight repo market has grown with the increase in size of Agency programs. The calendar provides market participants with a better understanding of financing cycles and knowledge of what is available.)

Overall, many investors in Benchmark and Reference Agency notes do not simply follow a buy and hold strategy; they actively trade the securities in what has become a liquid secondary market. Exhibit C shows a summary of the speculative limits and reporting levels on the contract that we believe are supported by available deliverable supply.

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[1] Fannie Mae, fundingnotes[SM] Monthly Report for Fannie Mae
s Investors and Dealers, March 1998. Volume 3 Issue 3.
[2] Total Primary Dealer Transactions Volume in U.S. Government and Federal Agency Securities Market Share for 1999. Federal Reserve Bank of New York.

The unit of trading, the minimum price fluctuations, and the range of notes deliverable on these contracts are the same as existing contracts. With the wide range of notes available for delivery, the Exchange uses conversion factors in the invoicing process to put these notes on roughly equal footing. Initially , the conversion factors for the U.S. Agency Note contracts will be based on a yield to maturity of 6.5%. The yield on which conversion factors are based may change of time. Of course the yield upon which the conversion factors are based is announced prior to the listing of the contract month.

Conversion Factors are used to calculate the invoice price of the notes delivered into the futures contract. They are unique to each note and to each delivery month. Conversion factors are constant throughout the delivery period. For notes with coupons above the base yield to maturity set by the Exchange,

- the conversion factors are greater than 1.
- The conversion factors become smaller as the time to maturity of the notes decrease to reflect the drift of their prices towards par as they approach maturity.

Similiarly, for notes with coupons less than the base yield to maturity set by the Exchange,

- the conversion factors are less than 1.
- conversion factors become larger as the time to maturity of the notes decrease to reflect the drift of their prices upwards towards par as they approach maturity.

The conversion factor is the price at which a note with a specified coupon would yield the base yield set by the Exchange.

$$CF = \sum_{t=q}^{n+q} \frac{C/2}{(1+r/2)^{t}} + \frac{1}{(1+r/2)^{n+q}} - AI$$

CF= Conversion Factor
C = Annual Coupon in decimals (e.g. 5 3/4% =.0575)
r = yield to maturity
n = number of whole time periods to maturity
q = the fractional time period if the first day of the delivery month is in the middle of a coupon period

Appendix 1

The Agency pays coupon interest semiannually. Therefore, each payment period is six months. The number of coupon periods is equal to the remaining time to maturity in months divided by 6. n is the integer part that specifies the number of full coupon payment periods and if we are in the middle of a coupon period, q measures the time to the first payment as a fraction of a full period.

q could be 3/6 for the U.S. Agency Ten Year Notes contracts and could be 1/6, 2/6 . . . 5/6 for the U.S. Agency Five Year Note contract.

AI = Accrued Interest=C/2 * (1-q)

1. Determine the date of the first day of the delivery month.

2. Determine the maturity date of the deliverable issue

3. Round down the difference between these two dates to the nearest month for the U.S. Agency Five Year or to the quarter of the year for the U.S. Agency Ten Year Futures Contracts. (A difference of 10 years, 1 months and 15 days for example would be rounded to 10 years and 0 months for U.S. Agency Note Contracts. A difference of 5 years 4 months and 15 days would be rounded to 5 years 4 months for the U.S. Agency Five Year Futures Contracts.)

4. Calculate the price of an Agency note with the same time to maturity and coupon as the deliverable note assuming a yield to maturity equivalent to the base yield set by the Exchange. Round the result to the fourth decimal.

Alternatively, We can use an alternative formula that can be used to calculate the conversion factors in a spreadsheet.

Appendix 1

Let $v = 1/(1+r/2)^n$

$a = 1/(1+r/2)^q$

$$CF = a * \left\{ C/2 + v + \frac{(C/2)}{(r/2)} * (1-v) \right\} - C/2*(1-q)$$

Conversion Factors are very well understood by the industry and will be available through the Exchange. Many financial software packages include functions to calculate conversion factors also. The attached table provides conversion factors for existing issues that are deliverable into into the June 2000 futures contract and beyond.

Conversion Factors for the U.S. Agency Ten-Year Note Futures

AT-0.065-2000-3

CUSIP	FNM0208	3134A2DT2	FNM0508	3134A2UJ5	FNM0109	3134A3EM4	FNM0609	FNM0909	3134A3M78
Maturity	02/15/2008	04/15/2008	05/15/2008	10/15/2008	01/15/2009	03/15/2009	06/15/2009	09/15/2009	09/15/2009
Coupon	5.750%	5.750%	6.000%	5.125%	5.250%	5.750%	6.375%	6.625%	6.625%
Factor	0.9548	0.9538	0.9692	0.9113	0.9175	0.9495	0.9913	1.0088	1.0088

AT-0.065-2000-6

CUSIP	FNM0208	3134A2DT2	FNM0508	3134A2UJ5	FNM0109	3134A3EM4	FNM0609	FNM0909	3134A3M78
Maturity	02/15/2008	04/15/2008	05/15/2008	10/15/2008	01/15/2009	03/15/2009	06/15/2009	09/15/2009	09/15/2009
Coupon	5.750%	5.750%	6.000%	5.125%	5.250%	5.750%	6.375%	6.625%	6.625%
Factor	0.956	0.9548	0.9698	0.9132	0.9193	0.9504	0.9916	1.0085	1.0085

AT-0.065-2000-9

CUSIP	FNM0208	3134A2DT2	FNM0508	3134A2UJ5	FNM0109	3134A3EM4	FNM0609	FNM0909	3134A3M78
Maturity	02/15/2008	04/15/2008	05/15/2008	10/15/2008	01/15/2009	03/15/2009	06/15/2009	09/15/2009	09/15/2009
Coupon	5.750%	5.750%	6.000%	5.125%	5.250%	5.750%	6.375%	6.625%	6.625%
Factor	0.9571	0.956	0.9707	0.9153	0.921	0.9516	0.9916	1.0084	1.0084

AT-0.065-2000-12

CUSIP	FNM0208	3134A2DT2	FNM0508	3134A2UJ5	FNM0109	3134A3EM4	FNM0609	FNM0909	3134A3M78
Maturity	02/15/2008	04/15/2008	05/15/2008	10/15/2008	01/15/2009	03/15/2009	06/15/2009	09/15/2009	09/15/2009
Coupon	5.750%	5.750%	6.000%	5.125%	5.250%	5.750%	6.375%	6.625%	6.625%
Factor	0.9584	0.9571	0.9713	0.9172	0.923	0.9526	0.9919	1.0081	1.0081

AT-0.065-2001-3

CUSIP	FNM0208	3134A2DT2	FNM0508	3134A2UJ5	FNM0109	3134A3EM4	FNM0609	FNM0909	3134A3M78
Maturity	02/15/2008	04/15/2008	05/15/2008	10/15/2008	01/15/2009	03/15/2009	06/15/2009	09/15/2009	09/15/2009
Coupon	5.750%	5.750%	6.000%	5.125%	5.250%	5.750%	6.375%	6.625%	6.625%
Factor	0.9594	0.9584	0.9722	0.9194	0.9247	0.9538	0.992	1.0081	1.0081

AT-0.065-2001-6

CUSIP	FNM0208	3134A2DT2	FNM0508	3134A2UJ5	FNM0109	3134A3EM4	FNM0609	FNM0909	3134A3M78
Maturity	02/15/2008	04/15/2008	05/15/2008	10/15/2008	01/15/2009	03/15/2009	06/15/2009	09/15/2009	09/15/2009
Coupon	5.750%	5.750%	6.000%	5.125%	5.250%	5.750%	6.375%	6.625%	6.625%
Factor	0.9607	0.9594	0.9729	0.9214	0.9267	0.9548	0.9923	1.0078	1.0078

AT-0.065-2001-9

CUSIP	3134A2DT2	FNM0508	3134A2UJ5	FNM0109	3134A3EM4	FNM0609	FNM0909	3134A3M78
Maturity	04/15/2008	05/15/2008	10/15/2008	01/15/2009	03/15/2009	06/15/2009	09/15/2009	09/15/2009
Coupon	5.750%	6.000%	5.125%	5.250%	5.750%	6.375%	6.625%	6.625%
Factor	0.9607	0.9738	0.9236	0.9285	0.956	0.9924	1.0077	1.0077

AT-0.065-2001-12

CUSIP	3134A2UJ5	FNM0109	3134A3EM4	FNM0609	FNM0909	3134A3M78
Maturity	10/15/2008	01/15/2009	03/15/2009	06/15/2009	09/15/2009	09/15/2009
Coupon	5.125%	5.250%	5.750%	6.375%	6.625%	6.625%
Factor	0.9257	0.9306	0.9571	0.9927	1.0074	1.0074