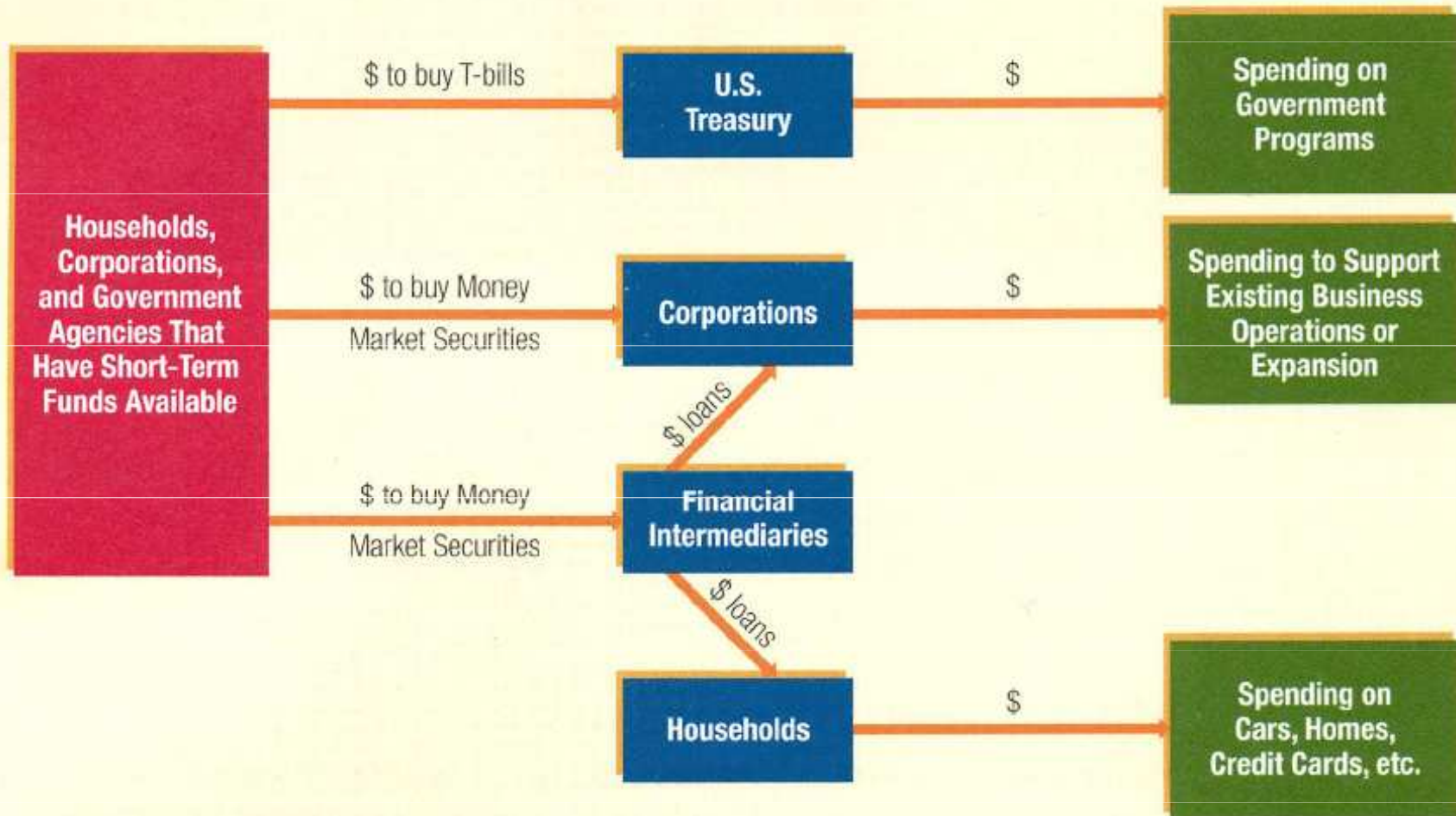

Money Markets

Money Markets

- ...to facilitate the transfer of short-term funds from individuals, corporation and governments
 - ...to maintain liquidity
-

Money Markets Securities

- ...debt securities with maturity of one year or less
 - ...issued in primary market to obtain short term financing
 - ...liquidity provides by secondary market
 - commonly purchase by households, corporations and government agencies
-



■ Source: Madura, J.: *Financial Markets and Institutions*, 9th Edition

Money Market Securities

- T-Bills - government
 - Commercial paper - companies
 - Negotiable certificates of deposit - banks
 - Repurchase agreements- banks
 - Federal funds
 - Banker's acceptance – banks (use companies)
-

Treasury Bills (T-Bills)

- Issued to meet the short-term needs of government
- Typical
 - 4-week, 13-week, 26-week maturities on a weekly basis
- Periodically issued T-Bills
 - Cash management bills
- The par value (face value) was historically a minimum of \$10,000, but now \$1,000 and its multiples
- No pay any interest issue with discount from par value
 - Gain difference between par value and money paid
- Backed by federal government
 - Low default (credit) risk
- High level of liquidity
 - Secondary market and government security dealers

<Search>

98 Export

1-20 of 32 results

Security Finder



- 30 All
- 31 Eqty
- 32 FI
- 33 Mtge
- 34 Cmdty
- 35 Indx/Stats
- 36 FX
- 37 Funds
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- 39 My Securities
- 40 Corp
- 41 Govt
- 42 Loan
- 43 Pfd
- 44 CDS
- 45 CDS Idx
- 46 Muni
- 47 Futr
- 48 Opt
- 49 IRS
- 50 IRS Vol
- 51 Gen Govt

Excluded

Matured/Called (969)

61) Column Settings

R	Name	Ticker	Coupon	Maturity	Mty Type	Cntry	Curr	Identifier	BB Rtg	Ask Px	Source
1	United States Tre	B		03/03/2016	NORMAL	US	USD	912796FZ7	NR	.1200	BGN
2	United States Tre	B		03/10/2016	NORMAL	US	USD	912796HF9	NR	.1700	BGN
3	United States Tre	B		03/17/2016	NORMAL	US	USD	912796HG7	NR	.2150	BGN
4	United States Tre	B		03/24/2016	NORMAL	US	USD	912796HH5	NR	.2150	BGN
5	United States Tre	B		03/31/2016	NORMAL	US	USD	912796GD5	NR	.2150	BGN
6	United States Tre	B		04/07/2016	NORMAL	US	USD	912796HK8	NR	.2400	BGN
7	United States Tre	B		04/14/2016	NORMAL	US	USD	912796HL6	NR	.2450	BGN
8	United States Tre	B		04/21/2016	NORMAL	US	USD	912796HM4	NR	.2600	BGN
9	United States Tre	B		04/28/2016	NORMAL	US	USD	912796GH6	NR	.2650	BGN
10	United States Tre	B		05/05/2016	NORMAL	US	USD	912796HN2	NR	.2450	BGN
11	United States Tre	B		05/12/2016	NORMAL	US	USD	912796HR3	NR	.2750	BGN
12	United States Tre	B		05/19/2016	NORMAL	US	USD	912796HS1	NR	.2800	BGN
13	United States Tre	B		05/26/2016	NORMAL	US	USD	912796GN3	NR	.3000	BGN
14	United States Tre	B		06/02/2016	NORMAL	US	USD	912796HT9	NR	.2900	BGN
15	United States Tre	B		06/09/2016	NORMAL	US	USD	912796HW2	NR	.2900	BGN
16	United States Tre	B		06/16/2016	NORMAL	US	USD	912796HX0	NR	.2950	BGN
17	United States Tre	B		06/23/2016	NORMAL	US	USD	912796GS2	NR	.3000	BGN
18	United States Tre	B		06/30/2016	NORMAL	US	USD	912796HY8	NR	.3250	BGN
19	United States Tre	B		07/07/2016	NORMAL	US	USD	912796HZ5	NR	.3250	BGN
20	United States Tre	B		07/14/2016	NORMAL	US	USD	912796JB6	NR	.3350	BGN

B U US/US/10 | U.1200 - .0500 U.1250 / U.1200 U.127 / U.122

At 15:55

SOURCE

B 0 03/03/16 Govt

97 Settings

Fixed Income Price Discovery

15:55:19



United States Treasury Bill

99 Buy

98 Sell

1) MSG1 Quote Recap | QMGR »

You are not enabled for this source. Click here for info and/or enablement.

2) All Quotes | ALLQ »

Size = All

PCS	Bid Px	Ask Px	BSz(MM)	ASz(MM)	Time
LCM	.125 / .120		100 x 100		15:54
EDFA	.125 / .120		25 x 25		15:54
GUGG	.125 / .120		25 x 25		15:54
BBNY	.125 / .120		10 x 10		15:54
WUSC	.135 / .110		50 x 50		15:54

3) Bloomberg Generic and Evaluated Price | BVAL »

PCS	Bid Px	Ask Px	BVAL Score	Time
BVAL	.180 / .167		Score 10/10	13:00
BGN	.125 / .120			15:55

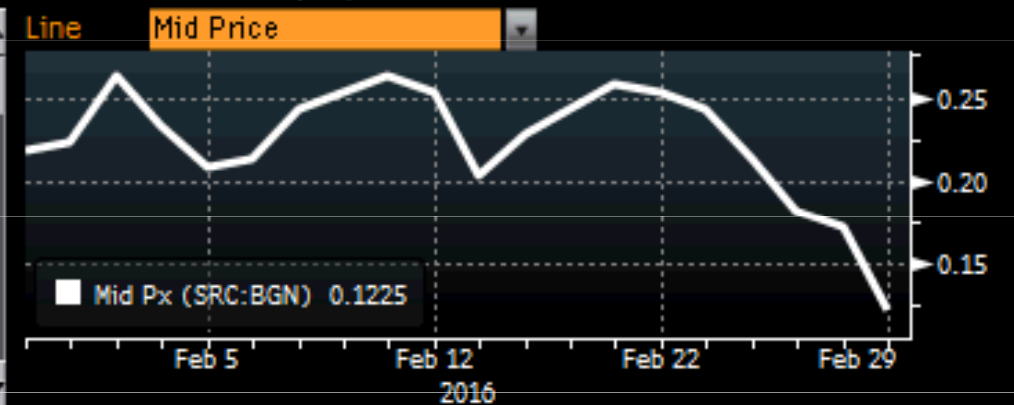
4) BGN Quote Recap | QR »

Time	Bid Px	Ask Px	Bid Yld	Ask Yld
15:55:06	.125 / .120		.127 / .122	
15:55:03	.125 / .120		.127 / .122	
15:54:25	.125 / .120		.127 / .122	
15:53:44	.125 / .120		.127 / .122	
15:53:42	.125 / .120		.127 / .122	
15:53:05	.125 / .120		.127 / .122	
15:52:26	.125 / .120		.127 / .122	
15:52:23	.125 / .120		.127 / .122	
15:51:45	.125 / .120		.127 / .122	

Inside Market



5) BGN Historical Graph | GP »



Why are the bid prices of T-bills higher than the ask prices? Aren't bids supposed to be lower than ask prices?

By Investopedia Staff

f SH

A: Yes, you are correct that the **ask** price of a security should typically be higher than the **bid** price. This is because people will not sell a security (asking price) for lower than the price they are willing to pay for it (bidding price). So, because there is more than one method of quoting the bid and ask prices of **T-bills**, the quoted ask price may simply be perceived as being lower than the bid.

For example, one common quote that you may see for a 365-day T-bill is July 12th, bid 5.35%, ask 5.25%. At first glance, the bid seems higher than the ask, but upon further inspection, you can see that the ask is actually higher. The reason is that a T-bill is a **discount bond** and these percentages are the quoted **yields**, not the actual prices. So, if we convert the bid and ask discount yields into the dollar amounts of the prices, we get a bid of \$94.65 and an ask of \$94.75. Therefore, the bid is actually lower than the ask. Sometimes the quotes on T-bills show the actual prices, in which case you don't have to convert or calculate anything. The same T-bill above, therefore, may be quoted with a bid of 94.65 and an ask of 94.75.

So, as the dollar amount of the bid should be lower than the ask, the bid's quoted yield percentage should be higher than the ask's quoted yield percentage - the two different kinds of quotes are just different ways of saying the same thing.

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HOT DEFINITIONS

Proxy

Treasury Bills (T-Bills)

- Investors in T-Bills
 - Depository institutions
 - Retain portfolio
 - Liquidity
 - Individuals (indirectly)
 - Money market funds (liquidity)
 - Corporation
 - Liquidity
-

Treasury Bills (T-Bills)

- Pricing T-Bills
 - Not pay interest
 - Priced at discount from their par value
 - Price that investor will pay depends on investor's required rate of return
 - Price = present value of the future cash flows to be received
 - Present value of par value (face value)
-

Pricing T-Bills

$$Y_T = \frac{SP - PP}{PP} \times \frac{365}{n}$$

$$\text{T-bill discount} = \frac{\text{Par} - PP}{\text{Par}} \times \frac{360}{n}$$

where

SP = selling price

PP = purchase price

n = number of days of the investment (holding period)

EXAMPLE

An investor purchases a T-bill with a six-month (182-day) maturity and \$10,000 par \$9,600. If this T-bill is held to maturity, its yield is

$$Y_T = \frac{\$10,000 - \$9,600}{\$9,600} \times \frac{365}{182} = 8.36\%$$

Treasury Bills (T-Bills)

■ Treasury Bill Auctions

- The primary market with T-Bills is organized as an auction
 - Competitively or noncompetitively (max. \$5 million per auction)
 - Individuals online bids www.treasurydirect.gov
 - <http://www.treasurydirect.gov/instit/marketable/tbills/tbills.htm>
 - Financial institutions online by Treasury Automated Auction Processing System TAAOSLink
-

Noncompetitive Bidding

- Treasury bill auction—noncompetitive bids (\$5 million limit)
 - ❑ May be used to make sure bid is accepted
 - ❑ Price is the weighted average of the accepted competitive bids
 - ❑ Investors do not know the price in advance so they submit check for full par value
 - ❑ After the auction, investor receives check from the Treasury covering the difference between par and the actual price

Competitive Bidding

- Treasury bill auction (fill bids in amount determined by Treasury borrowing needs)
 - Bid process used to sell T-bills
 - Bids submitted to Federal Reserve banks by the deadline
 - Bid process
 - Accepts highest bids
 - Accepts bids until Treasury needs money

Treasury Bills (T-Bills)

- Estimating the Yield
 - Difference between the selling price and the purchase price
- Estimating the T-bills discount
 - The percent discount of the purchase price from par value
- For a newly issued T-Bills that will be held till maturity
 - T-Bill yield $>$ T-Bill discount

Commercial paper

- Short-term debt instrument
 - 20 and 45 days
 - 1 day or 270 days (SEC, otherwise registered)
 - Alternative to bank loan
 - Dealer placed vs. directly placed
 - Used only by well-known and creditworthy firms
 - Unsecured
 - Minimum denominations of \$100,000
 - Typical denomination are in multiples of \$1 million
 - Not a secondary market or very limited
 - Sometime it is possible to sell the paper back to the dealer
 - In most cases hold till maturity
-

Commercial paper

- Placement
 - Directly
 - Dealers
 - Transaction cost at 1/8 to 1 percentage of FV
 - Backing Commercial Paper
 - Backup lines of credit
-

Commercial paper

- Estimating of Yield
 - Do not pay interest
 - Priced at a discount
 - Yield slightly higher than the yield on T-Bills with same maturity
 - Credit risk
 - Less liquid
 - The nominal return
 - Difference between the price paid and the par value
-

Rating

■ Ratings

- Credit or default risk
- Indicator of a the potential risk of default
- Money market funds – top or second tire (5 % of assets) rating
- Junk commercial papers low or no rating

■ Credit risk during the Credit Crisis

- Historically the percentage of issues that have defaulted is very low
-

Rating grades

	Moody's		S&P		Fitch			
	Long-term	Short-term	Long-term	Short-term	Long-term	Short-term		
Investment	Aaa	P-1	AAA	A-1+	AAA	F1+	Prime	
	Aa1		AA+		AA+		High Grade	
	Aa2		AA		AA			
	Aa3		AA-		AA-			
	A1	P-2	A+	A-1	A+	F1	Upper Medium Grade	
	A2		A		A			
	A3		A-		A-			F2
	Baa1	BBB+	BBB+					
	Baa2	P-3	BBB	A-3	BBB	F3	Lower Medium Grade	
Baa3	BBB-		BBB-					
Speculative	Ba1	Not prime	BB+	B	BB+	B	Non - Investment Grade (speculative)	
	Ba2		BB		BB			
	Ba3		BB-		BB-			
	B1		B+		B+			
	B2		B		B			
	B3		B-		B-			
	Caa1		C	CCC+	C	CCC	C	Substantial risk
	Caa2			CCC		Extremely speculative		
	Caa3			CCC-		In default with little		
	Ca			CC		In default with little prospect for		
	C			C		recovery		
	D	/	DDD	/	In default			

B 0 03/03/16

↑ 0.1200

- .0500

0.1250 / 0.1200

0.127 / 0.122

At 16:35

-- X --

Source BGN

Global

Settings

Sovereign Ratings

Foreign Currency

Local Currency

Ignore Watch

Highlight changes in last

20

business days.

Country	Foreign Currency Long Term				Foreign Currency Short Term				Last Update mm/dd/yyyy
	Moody's	S&P	Fitch	R&I	Moody's	S&P	Fitch	R&I	
68) Estonia	A1	AA-	A+	NR	NR	A-1+	F1	NR	01/13/2012
69) Ethiopia	(P)B1	B	B	NR	NR	B	B	NR	12/02/2014
70) Fiji	B1	B+	NR	NR	NR	B	NR	NR	05/01/2015
71) Finland	Aaa	AA+	AAA	AAA	NR	A-1+	F1+	NR	12/21/2015
72) France	Aa2	AAu	AA	AAA	NR	A-1+u	F1+	NR	09/18/2015
73) French Polynesia	NR	NR	NR	NR	NR	NR	NR	NR	--
74) Gabon	Ba3	B	B+	NR	NR	B	B	NR	01/29/2016
75) Georgia	Ba3	BB-	BB-	NR	NR	B	B	NR	12/15/2011
76) Germany	Aaa	AAAu	AAA	AAA	NR	A-1+u	F1+	NR	08/31/2015
77) Ghana	B3	B-	B	NR	NR	B	B	NR	03/19/2015
78) Gibraltar	NR	NR	NR	NR	NR	NR	NR	NR	--
79) Greece	Caa3	B-	CCC	CC	NP	B	C	NR	01/22/2016
80) Grenada	NR	NR	NR	NR	NR	NR	NR	NR	10/31/2014

(Rating: Up, Down, No Change, Initial, Affirmation (R&I Only))

Rating News | NEWS »

- 11) Sri Lanka Cut to B+ from BB- by Fitch; Outlook Negative BFW 12:43
- 12) Oman Credit Rating Cut at Moody's on Oil Price Impact (Correct) BN 02/28
- 13) Brazilian Banks Downgraded by Moody's After Sovereign Debt Cut BN 02/26
- 14) *S&P REPORT SAYS MENA SOVEREIGN DEBT WILL REMAIN HIGH IN 2016 BN 16:27

<HELP> for explanation.

<Menu> to Return, Enter #<Go> for Rating Profile

9) Company Tree Ratings

Page 1/2

Credit Rating Profile

Hellenic Republic

MOODY'S		13) STANDARD & POOR'S	
1) Outlook	STABLE	14) Outlook	STABLE
2) CC LT Foreign Bank Depst	B3	15) Foreign Currency LT Debt	B-
3) CC LT Foreign Curr Debt	B3	16) Local Currency LT Debt	B-
4) CC ST Foreign Bank Depst	NP	17) Foreign Currency ST Debt	B
5) CC ST Foreign Curr Debt	NP	18) Local Currency ST Debt	B
6) Long Term Rating	Caa3	FITCH	
7) LC Curr Issuer Rating	Caa3	19) Outlook	STABLE
8) FC Curr Issuer Rating	Caa3	20) LT FC Issuer Default	B-
9) Foreign Currency LT Debt	Caa3	21) LT LC Issuer Default	B-
10) Local Currency LT Debt	Caa3	22) Foreign Currency LT Debt	B-
11) Foreign Currency ST Debt	NP	23) Local Currency LT Debt	B-
12) Local Currency ST Debt	NP	24) Foreign Currency ST Debt	B
		25) ST I	

1004Z GA € Unlisted

1004Z GA Equity

9) Company Tree Ratings

Page 1/2

Credit Rating Profile

Hellenic Republic

Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500
 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2
 SN 5412C

Moody's

1) Outlook	STABLE
2) CC LT Foreign Bank Depst	Caa3
3) CC LT Foreign Curr Debt	Caa2
4) CC ST Foreign Bank Depst	NP
5) CC ST Foreign Curr Debt	NP
6) Long Term Rating	Caa3
7) LC Curr Issuer Rating	Caa3
8) FC Curr Issuer Rating	Caa3
9) Foreign Currency LT Debt	Caa3
10) Local Currency LT Debt	Caa3
11) Foreign Currency ST Debt	NP
12) Local Currency ST Debt	NP

13) Standard & Poor's

14) Outlook	STABLE
15) Foreign Currency LT Debt	B-
16) Local Currency LT Debt	B-
17) Foreign Currency ST Debt	B
18) Local Currency ST Debt	B
Fitch	
19) LT FC Issuer Default	CCC
20) LT LC Issuer Default	CCC
21) Foreign Currency LT Debt	CCC
22) Local Currency LT Debt	CCC
23) Foreign Currency ST Debt	C
24) ST FC Issuer Default	C

<HELP> for explanation.

Global 1) Settings Sovereign Ratings

Foreign Currency Local Currency Ignore Watch Highlight changes within last 20 Business days

Country	Foreign Currency Long Term				Foreign Currency Short Term				Last Update ↑
	Moody's	S&P	Fitch	R&I	Moody's	S&P	Fitch	R&I	
germany									mm/dd/yyyy
21) Germany	Aaa	AAAu	AAA	AAA	NR	A-1+u	F1+	NR	08/06/2013

Legend Up / Down / No Change / Initial / Affirmation (R&I Only)

10) Rating News (N)

- 11) Rabo Rates Morning Note: Ukraine - positive or negative for the periphery? RAB 09:47
- 12) Moody's assigns provisional ratings to China Real Estate Asset Mortgages Limited BMP 08:42
- 13) MORE: Macao's Rating Raised to Aa2 at Moody's; Outlook Stable BFW 05:03
- 14) Macao's Rating Upgraded to Aa2, Outlook Stable, Moody's Says BFW 04:59

Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2014 Bloomberg Finance L.P.
SN 541209 CET GMT+1:00 H213-566-0 03-Mar-2014 09:50:26

<HELP> for explanation.
 <Menu> to Close

Global 1) Settings Sovereign Ratings

Foreign Currency
 Local Currency
 Ignore Watch
 Highlight changes within last 20 Business days

Country	Mood	S&P - Foreign Currency LT Debt			Short Term		
		Rating	Watch	Effective	itch	R&I	Last Update
germany		Germany					mm/dd/yyyy
2) Germany	Aaa				1+	NR	08/06/2013
		AAAU		01/13/2012			
		AAAU	*-	12/05/2011			
		AAAU		02/17/2011			
		AAA		08/17/1983			

Legend Up / Down /

10) Rating News (N)

- 1) Rabo Rates Morning Note
- 2) Moody's assigns provisio
- 3) MORE: Macao's Rating R
- 14) Macao's Rating Upgrade

Legend Up / Down / No Change / Initial

Close

Australia 61 2 9777 8600	Brazil 5511 3048 4500	Europe 44 20 7330 7500	Germany 49 69 9204 1210	Hong Kong 852 2977 6000
Japan 81 3 3201 8900	Singapore 65 6212 1000	U.S. 1 212 318 2000	Copyright 2014 Bloomberg Finance L.P.	
				SN 541209 CET GMT+1:00 H213-566-0 03-Mar-2014 09:50:43

Negotiable Certificates of Deposit (NCDs)

- Issued by large commercial banks or depository institutions
 - Minimum denomination of \$100,000 but \$1 million more common
 - Purchased by nonfinancial corporations or money market funds
 - Provide return in the form of interest
 - Maturity
 - Two week to one year
 - Secondary markets supported by dealers in security
-

Repurchase Agreements (Repos)

- Sell a security with the agreement to repurchase it at a specified date and price
 - Loan backed by securities
 - Government securities, commercial papers
 - Borrower defaults, lender has security
 - Maturity
 - From 1day to 15 days or 1, 3, 6 months
 - Reverse repo name for transaction from lender
 - Negotiated over telecommunications network
 - Dealers and brokers used or direct placement
 - No secondary market
-

Repurchase Agreements (Repos)

- Estimating the Yield
 - Difference between initial selling price and the agreed-on repurchase price, annualized with a 360-days year



Repo and Reverse Repo



IBM US Equity

1) Send (VCON)

99) Feedback

Repo/Reverse Repo Analysis

International Business Machine (131.00/131.02) 3x198 Y Prev 131.03

97) Settings

Type Repo Trade Date 03/01/16 10:14 CUSIP 459200101 ISIN US4592001014

Repo Information

Settlement Date 03/03/16

Fixed Floating

Record Date 02/10/16

Repo Rate 0.0100 % (Act/ Act)

Ex Date 02/08/16

Price Settlement Market 131.0300000 131.03

Dividend 1.3000000 Collateral Haircut 100.0000 %

Face Amt 1,000 M OR Settlement Money 131,030,000.00

Termination Date 03/07/16 OR Term (# Days) 4 DVP

Open Trade N Call Notification None

Currency Converter

Money at Termination

View Amts in USD

Wired Amount 131,030,000.00

Repo Interest 143.20

Term Money 131,030,143.20

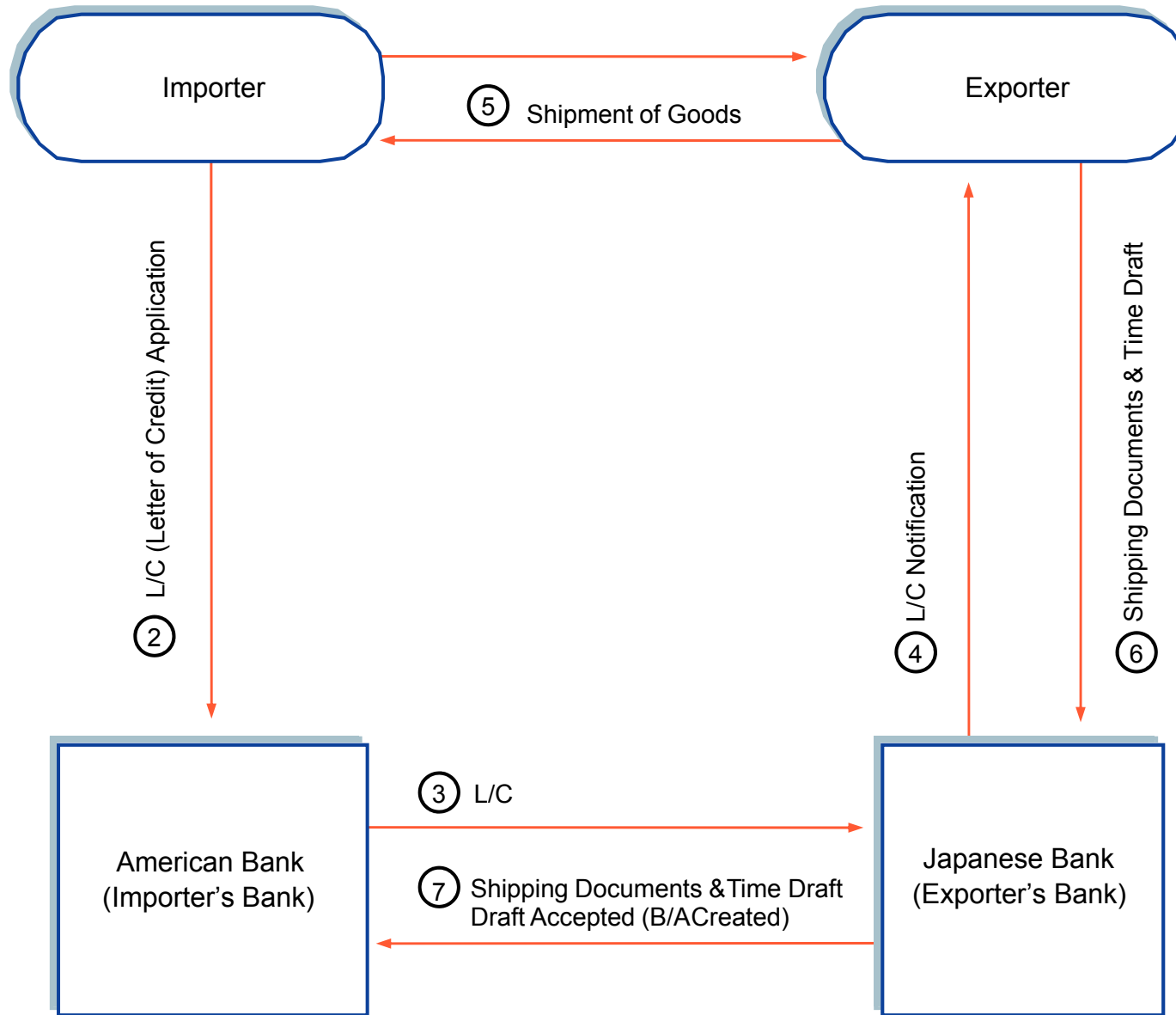
Notes

Federal Funds

- Interbank lending and borrowing
 - Federal funds rate usually slightly higher than T-bill rate
 - Credit risk
 - Fed district bank debits and credits accounts for purchase (borrowing) and sale (lending)
 - Federal funds brokers may match up surplus and deficit using telecommunications network
 - Usually \$5 million or more
-

Banker's Acceptance

- A bank takes responsibility for a future payment
 - International trade transactions
 - Exporters send goods to a foreign destination and want payment assurance before sending
 - Bank acts as a guarantor
 - Bank stamps a time draft from the importer **ACCEPTED** and obligates the bank to make good on the payment at a specific time
 - The importer will pay the bank what is owed to the exporter along with a fee to the bank for guaranteeing the payment
 - Maturity
 - From 20 to 270 days
-



■ *Source: Madura, J.: Financial Markets and Institutions, 9th Edition*

SECURITIES	ISSUED BY	COMMON INVESTORS	COMMON MATURITIES	SECONDARY MARKET ACTIVITY
Treasury bills	Federal government	Households, firms, and financial institutions	13 weeks, 26 weeks, 1 year	High
Negotiable certificates of deposit (NCDs)	Large banks and savings institutions	Firms	2 weeks to 1 year	Moderate
Commercial paper	Bank holding companies, finance companies, and other companies	Firms	1 day to 270 days	Low
Banker's acceptances	Banks (exporting firms can sell the acceptances at a discount to obtain funds)	Firms	30 days to 270 days	High
Federal funds	Depository institutions	Depository institutions	1 day to 7 days	Nonexistent
Repurchase agreements	Firms and financial institutions	Firms and financial institutions	1 day to 15 days	Nonexistent

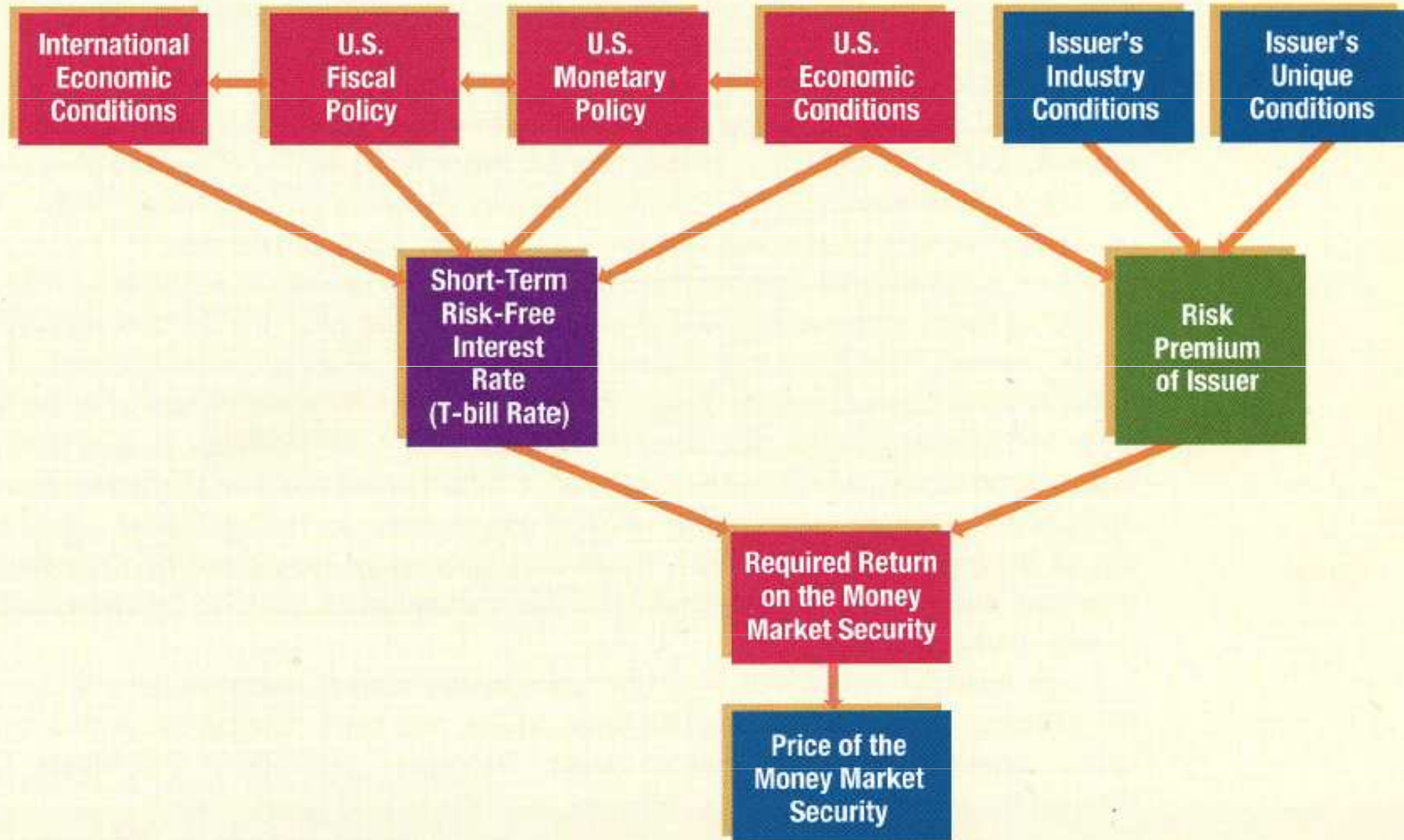
■ *Source: Madura, J.: Financial Markets and Institutions, 9th Edition*

TYPE OF FINANCIAL INSTITUTION	PARTICIPATION IN THE MONEY MARKETS
Commercial banks and savings institutions	<ul style="list-style-type: none"> • Bank holding companies issue commercial paper. • Some banks and savings institutions issue NCDs, borrow or lend funds in the federal funds market, engage in repurchase agreements, and purchase T-bills. • Commercial banks create banker's acceptances. • Commercial bank provide backup lines of credit to corporations that issue commercial paper.
Finance companies	<ul style="list-style-type: none"> • Issue large amounts of commercial paper.
Money market mutual funds	<ul style="list-style-type: none"> • Use proceeds from shares sold to invest in T-bills, commmercial paper, NCDs, repurchase agreements, and banker's acceptances.
Insurance companies	<ul style="list-style-type: none"> • May maintain a portion of their investment portfolio as money market securities for liquidity.
Pension funds	<ul style="list-style-type: none"> • May maintain a portion of their investment portfolio as money market securities that may be liquidated when portfolio managers desire to increase their investments in bonds or stocks.

■ *Source: Madura, J.: Financial Markets and Institutions, 9th Edition*

Valuation of Money Markets Securities

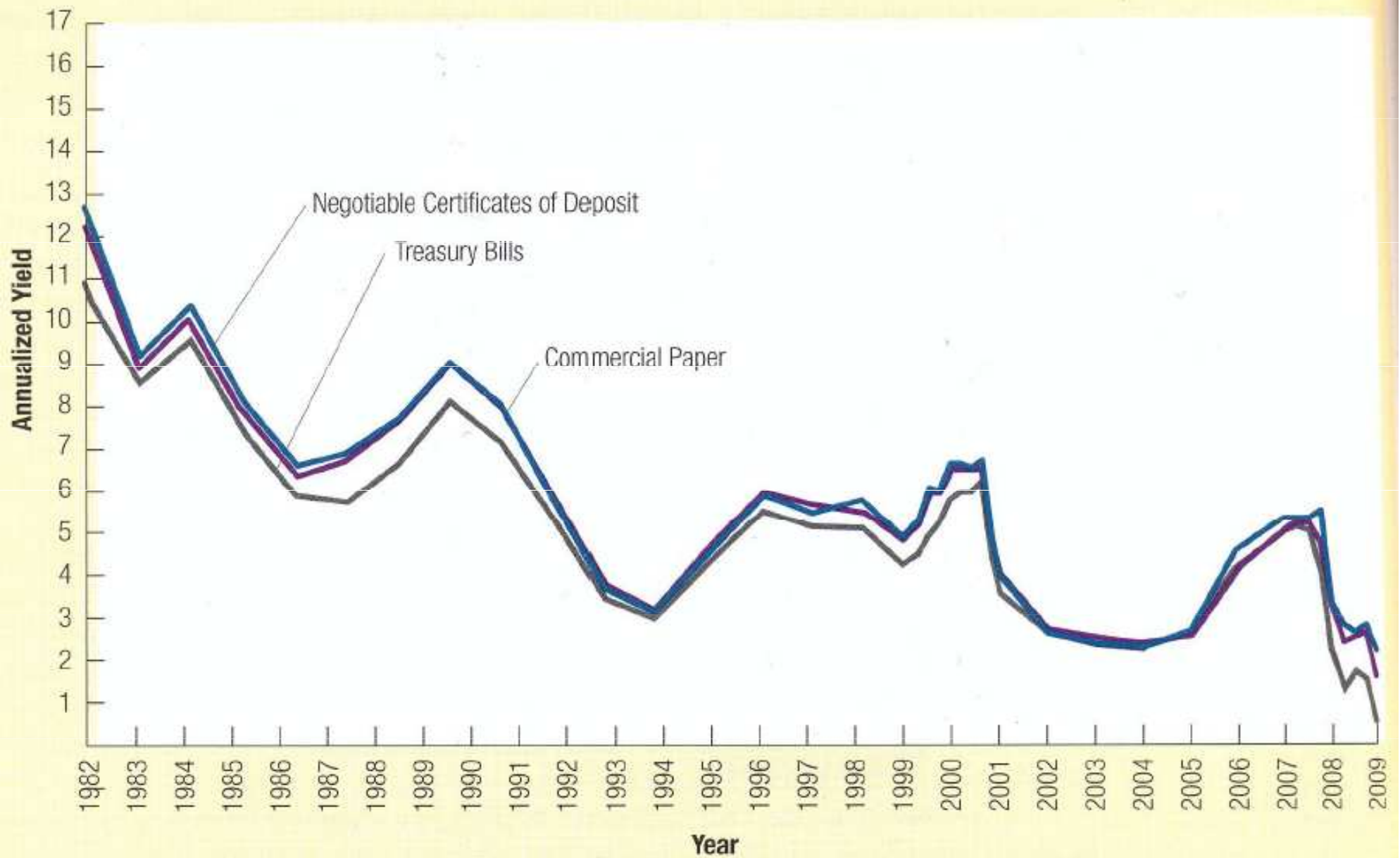
- Present value of future cash flows at maturity (zero coupon)
 - Value (price) inversely related to discount rate or yield
 - Money market security prices more stable than longer term bonds
 - Yields = risk-free rate + default risk premium
-



■ Source: Madura, J.: *Financial Markets and Institutions, 9th Edition*

Interest Rate Risk

- Risk Premium among Money Market Securities
 - T-Bills slightly lower yields than the other securities
 - Others offer compensation for credit risk
 - If short-term interest rates increase, the required rate of return on money market securities will increase
 - Prices of money market securities will decrease
 - Not so sensitive as bonds
 - Shorter term of maturity
-

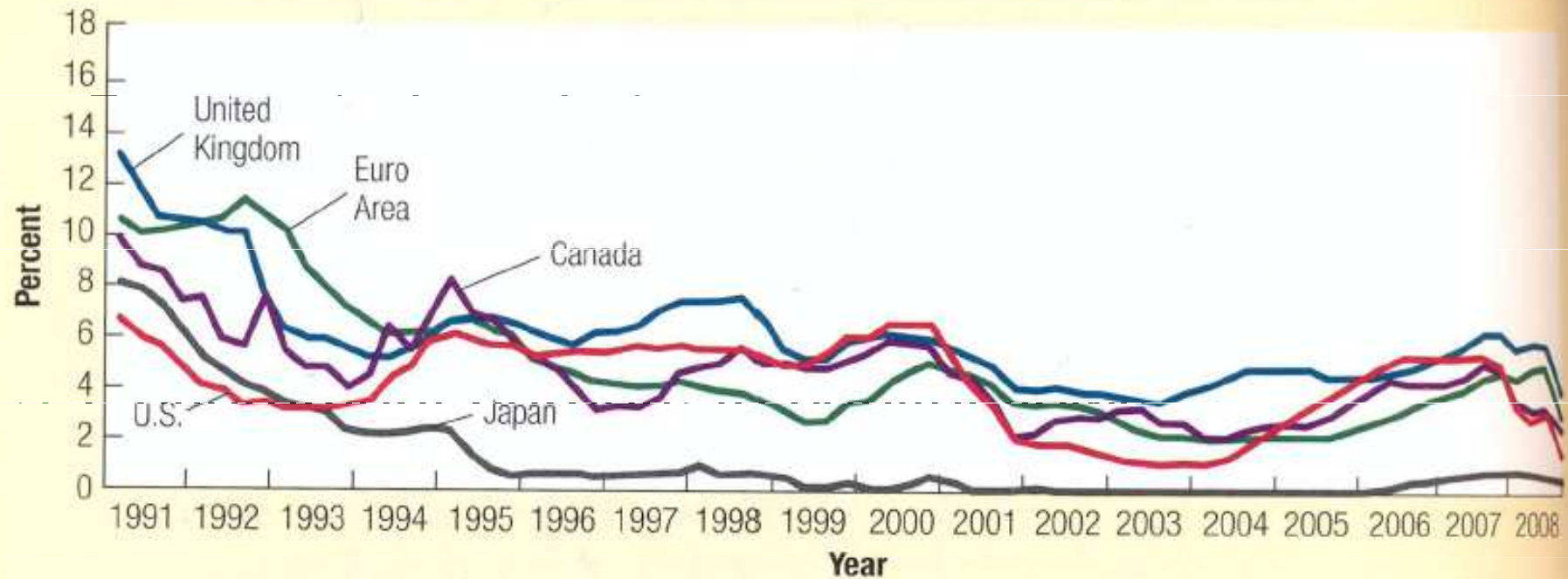


■ Source: Madura, J.: *Financial Markets and Institutions*, 9th Edition

Globalization of Money Markets

- Money market rates vary by country
 - Segmented markets
 - Tax differences
 - Estimated exchange rates
 - Government barriers to capital flows
-

Globalization of Money Markets



Source: Federal Reserve.

■ Source: Madura, J.: *Financial Markets and Institutions, 9th Edition*

<HELP> for explanation.

<Menu> To Return

GT10 Govt 95) Save As 96) Actions 97) Edit 98) Table Yield Chart
03/30/1962 - 03/03/2014 Ask YTM 1) Compare Mov. Avgs No Lower Chart USD
1D 3D 1M 6M YTD 1Y 5Y Max Quarterly Security/Study Event

GT10 Govt - Ask Yield To Maturity 2.617
High on 09/30/81 15.840
Average 6.518
Low on 09/28/12 1.634



Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000

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<HELP> for explanation.

<Menu> To Return

GTGRD10YR Corp 95 Save As 96 Actions 97 Edit 98 Table Yield Chart
07/31/1997 - 03/03/2014 Ask YTM Line 11) Compare Mov. Avgs No Lower Char EUR
1D 3D 1M 6M YTD 1Y 5Y Max Monthly Security/Study Event



1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014
Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
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Globalization of Money Markets

- **Eurodollar deposits and Euronotes**
 - Dollar deposits in banks outside the U.S.
 - Increased because of international trade growth and U.S. trade deficits over time
 - No reserve requirements at banks outside U.S.
 - **Eurodollar Loans**
 - Channel funds to other multinationals that need short-term financing
 - **Euro-commercial paper**
-

International Interbank Market

- Performance of Foreign Money Market Securities
 - Effective yield
 - Yield adjusted for the exchange rate
 - 1. yield earned on the money market security in the foreign currency
 - 2. the exchange rate effect
-

Globalization of Money Markets

- Performance of international securities
- Yield for an international investment

$$Y_f = \frac{SP_f - PP_f}{PP_f}$$

Y_f = Foreign investment's yield

SP_f = Investment's foreign currency selling price

PP_f = Investment's foreign currency purchase

Globalization of Money Markets

- The exchange rate effect ($\% \Delta S$) measures the percentage change in the spot during the investment period

$$Y_e = (1 + Y_f) \times (1 + \% \Delta S) - 1$$

- $\% \Delta S$ measures the expected percent change in the currency
 - Currency appreciated, $\% \Delta S$ is positive and adds to net yield
 - Currency depreciated, $\% \Delta S$ is negative and reduces net yield

Summary

- Surplus units channel investments to securities issued by deficit units
 - Debt securities markets
 - Money Market
 - Capital Market
 - Money market securities
 - Short-term
 - High quality
 - Very good liquidity
-