国际财务管理

第二讲 外汇市场

对外经济贸易大学国际商学院会计学系制作

The Foreign Exchange Market

Size and Characteristics of the market

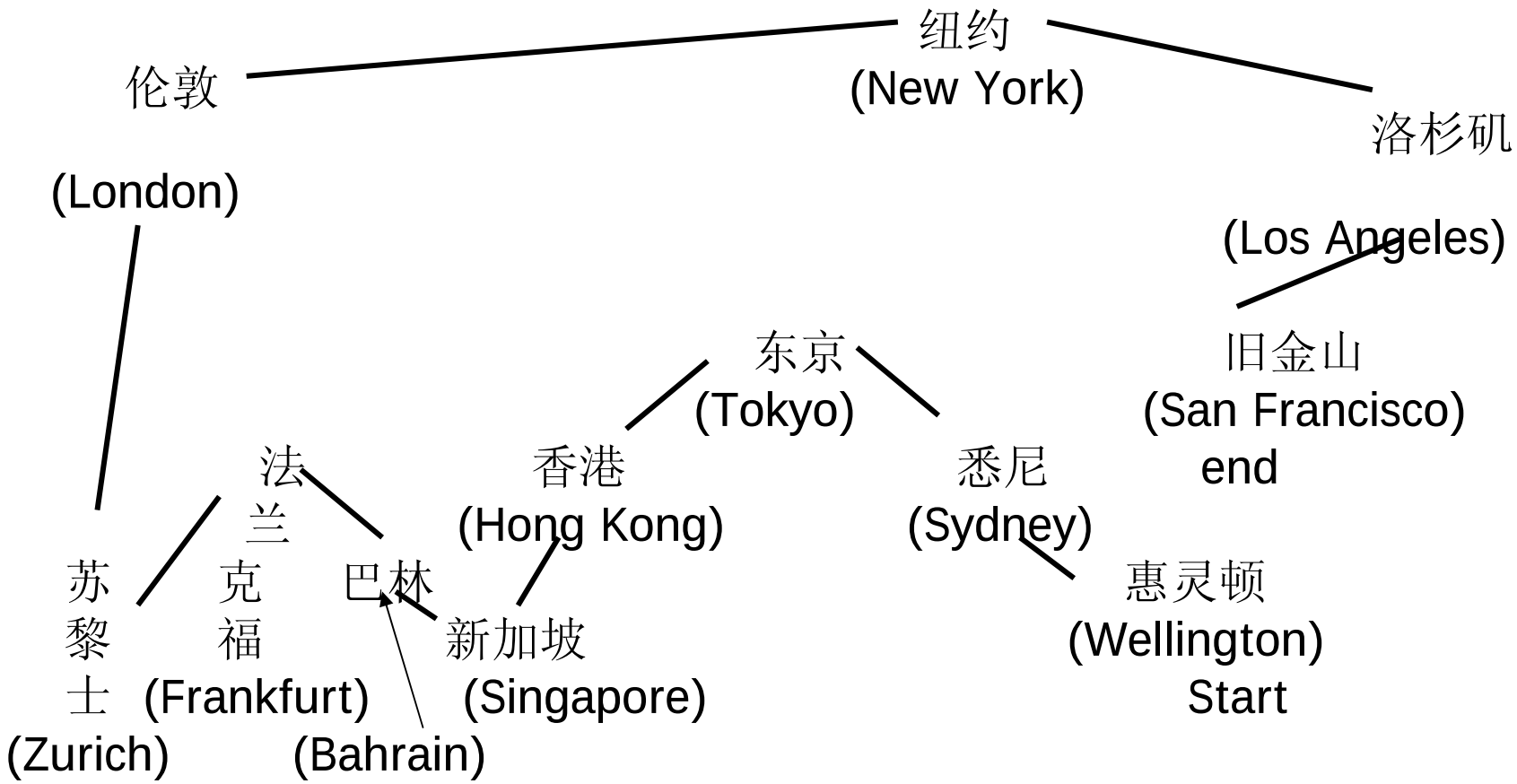


Table1 全球外汇交易和场外衍生市场的平均日交易量

单位：10亿美元

	1989	1992	1995	1998
传统的外汇交易				
即期	350	400	520	590
远期和掉期	240	420	670	900
小计	590	820	1,190	1,500
衍生外汇交易				
直接远期和掉期	-	-	643	864
货币互换	-	-	4	10
期权	-	-	41	87
总计	590	820	1,878	2,461
所占百分比				
即期	59%	49%	28%	24%
远期和掉期	41	51	70	72
货币互换	0	0	0	0
期权	0	0	2	4
总计	100%	100%	100%	100%

资料来源：国际清算银行：1998年4月中央银行关于外汇市场和衍生市场交易情况调查

Exhibit 1 Global Foreign Exchange Market Turnover (daily averages in April, billions of US dollars)

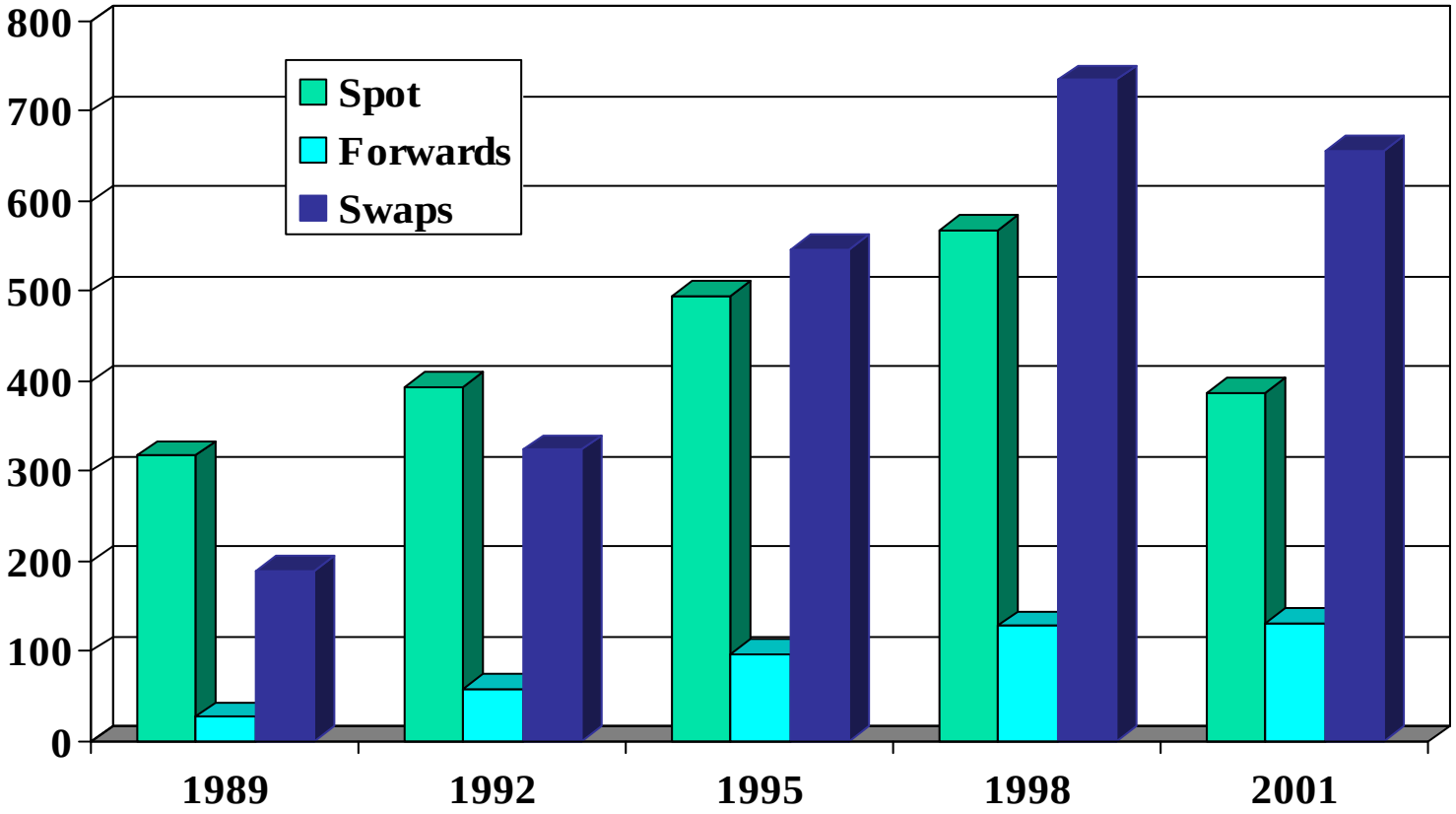


Table 2 全球传统外汇和衍生工具平均日交易额的地理分布

单位：10亿美元

	传统外汇交易活动		衍生市场活动	
	金额	份额（%）	金额	份额（%）
1. 英国	$ 637.3	32.3	$ 170.8	36.0
2. 美国	350.9	17.8	90.9	19.2
3. 日本	148.6	7.5	42.1	8.9
4. 新加坡	139.0	7.1	11.3	2.3
5. 德国	94.3	4.8	34.4	7.3
6. 瑞士	81.7	4.1	15.8	3.3
7. 香港	78.6	4.0	3.8	0.8
8. 法国	71.9	3.6		< 1.0
9. 澳大利亚	46.6	2.4		< 1.0
10. 荷兰	41.0	2.1		< 1.0
11. 加拿大	36.8	1.9		< 1.0
12. 意大利	28.2	1.4		< 1.0
13. 其他国家	226.7	11.4		< 1.0
总额	$1,981.6	100.0%	$ 474.0	100%

资料来源：国际清算银行：1998年4月中央银行关于外汇市场和衍生市场交易情况调查

Exhibit 2 **Geographic Distribution of Foreign Exchange Market Turnover (daily averages in April, billions of US dollars)**

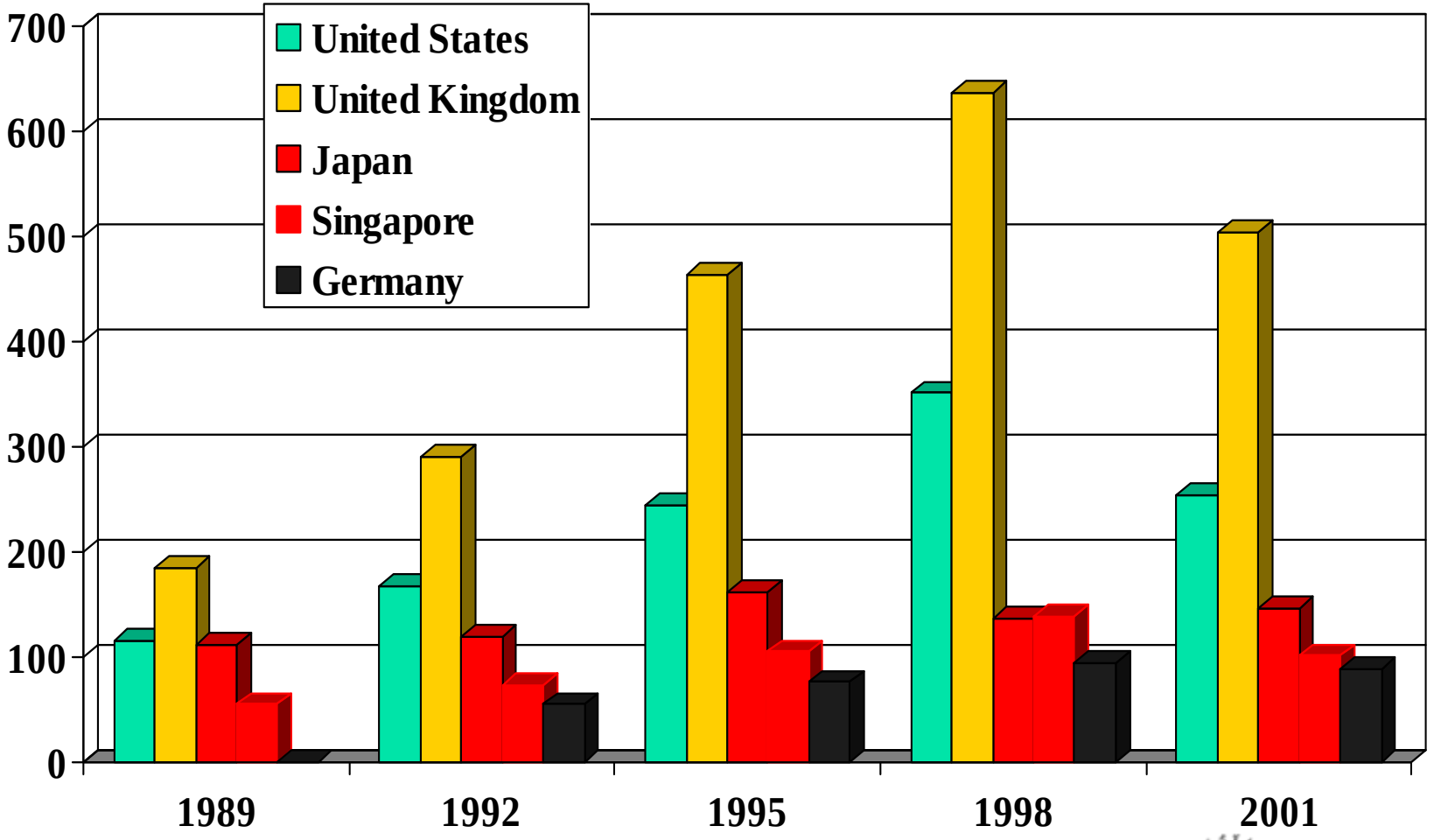


Table 3 全球传统外汇交易市场货币分布

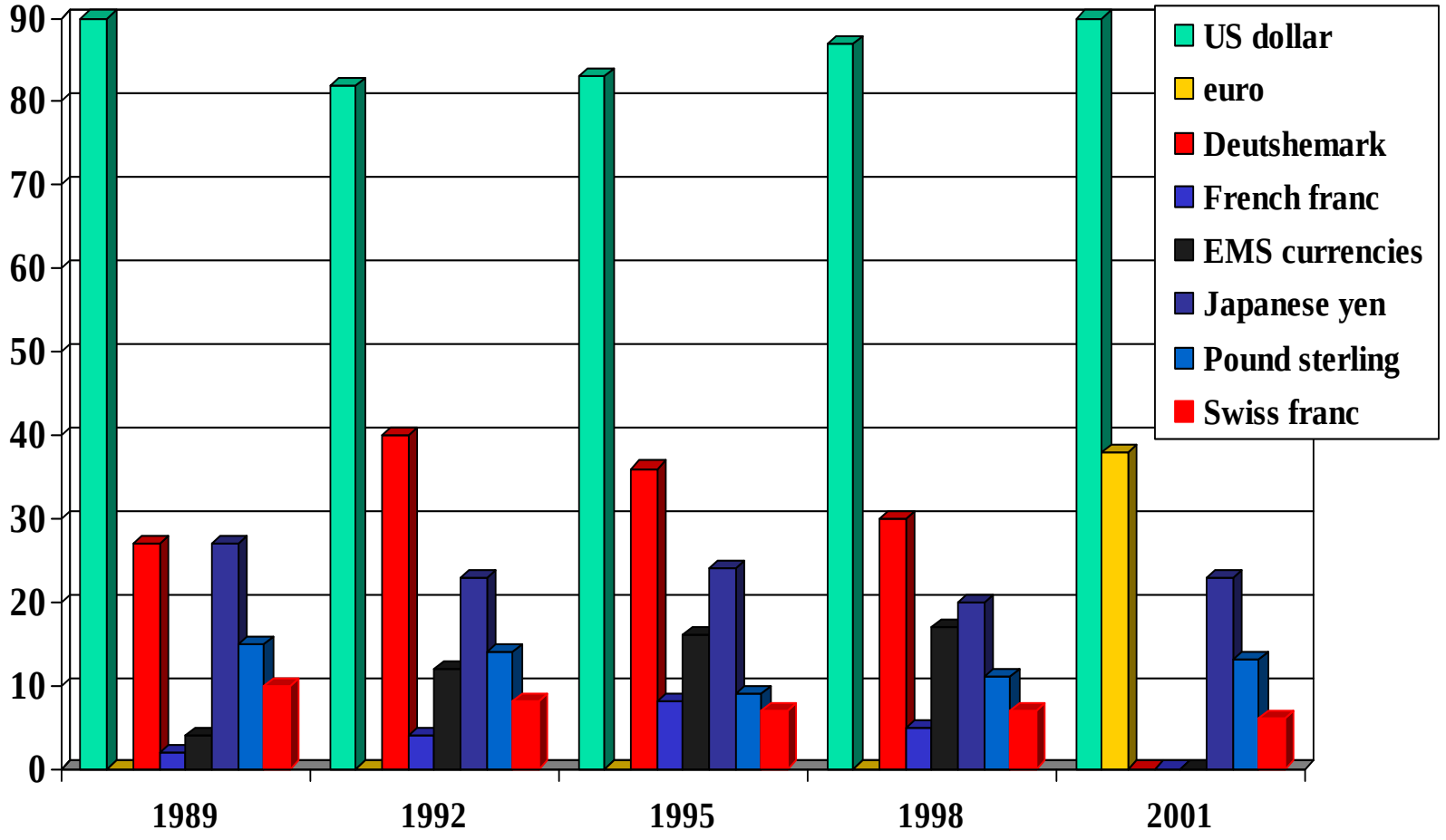
(数据截止到1998年4月，单位：10亿美元)

	总额	份额（%）	对美元的交易（%）
美元	$1,741.0	87.9	-
德国马克	602.7	30.4	68.5
法国法郎	102.6	5.2	80.5
其他EMU的货币	263.1	13.3	NA
日元	407.2	20.5	89.2
英镑	211.9	10.7	75.2
瑞士法郎	138.8	7.0	78.3
所有其他货币	495.9	25.0	-
总额（重复计算）*	$3,963.2	200.0%	-
总额（没有重复计算）	$1,981.6	100.0%	

* 由于在每次交易中，每笔交易涉及到两个国家，因此出现重复报道。

资料来源：国际清算银行第69期年报：1998年中央银行关于外汇市场和衍生市场交易情况调查

Exhibit 3 Currency Distribution of Global Foreign Exchange Market Turnover (percentage shares of average daily turnover in April)



Functions of the Foreign Exchange Market

The foreign exchange Market is the mechanism by which participants:

- Transfer purchasing power between countries
- Obtain or provide credit for international trade transactions
- Minimize exposure to the risks of exchange rate changes

Market Participants

- The foreign exchange market consists of two tiers:
  - The interbank or wholesale market (multiples of $1MM US or equivalent in transaction size)
  - The client or retail market (specific, smaller amounts)
- Five broad categories of participants operate within these two tiers; bank and nonbank foreign exchange dealers, individuals and firms, speculators and arbitragers, central banks and treasuries, and foreign exchange brokers.

Bank and Nonbank Foreign Exchange Dealers

- Banks and a few nonbank foreign exchange dealers operate in both the interbank and client markets.
- The profit from buying foreign exchange at a “bid” price and reselling it at a slightly higher “offer” or “ask” price.
- Dealers in the foreign exchange department of large international banks often function as “market makers.”
- These dealers stand willing at all times to buy and sell those currencies in which they specialize and thus maintain an “inventory” position in those currencies.

Direct Trade:

A: HI BANK OF A CALLING SPOT DM FOR 3 USD PLS

B: 10/20

A: 3 YOURS

B: OK DONE

AT 1.8110 WE BUY USD 3 MIO AGAINST DM VALUE MAY 19,1993

USD TO BANK OF TOKYO NEWYORK FOR OUR A/C 544-9-21236

A: DM TO DEUTSCHE BANK FRANKFURT FOR OUR A/C 5678901

Individuals and Firms

- Individuals (such as tourists) and firms (such as importers, exporters and MNEs) conduct commercial and investment transactions in the foreign exchange market.
- Their use of the foreign exchange market is necessary but nevertheless incidental to their underlying commercial or investment purpose.
- Some of the participants use the market to “hedge” foreign exchange risk.

Speculators and Arbitragers

- Speculators and arbitragers seek to profit from trading in the market itself.
- They operate in their own interest, without a need or obligation to serve clients or ensure a continuous market.
- While dealers seek the bid/ask spread, speculators seek all the profit from exchange rate changes and arbitragers try to profit from simultaneous exchange rate differences in different markets.

Central Banks and Treasuries

- Central banks and treasuries use the market to acquire or spend their country's foreign exchange reserves as well as to influence the price at which their own currency is traded.
- They may act to support the value of their own currency because of policies adopted at the national level or because of commitments entered into through membership in joint agreements such as the European Monetary System.
- The motive is not to earn a profit as such, but rather to influence the foreign exchange value of their currency in a manner that will benefit the interests of their citicizens.
- As willing loss takers, central banks and treasuries differ in motive from all other market participants

Foreign Exchange Brokers

- Foreign exchange brokers are agents who facilitate trading between dealers without themselves becoming principals in the transaction.
- For this service, they charge a commission.
- It is a brokers business to know at any moment exactly which dealers want to buy or sell any currency.
- Dealers use brokers for their speed, and because they want to remain anonymous since the identity of the participants may influence short term quotes.

Type of Transactions

- **Spot Transactions**

  Quotations

  a. Direct and Indirect Quotes
  b. European and American Terms

European Terms	*American Terms*
Foreign currency price of one U.S. dollar.	U.S. dollar price of one unit of foreign currency
£0.5128/$	$1.950/£

- Excluding two important exceptions, most interbank quotations around the world are stated in European terms.

Spot Rate Quotations

Wednesday, January 8, 1997

EXCHANGE RATES

The New York foreign exchange selling rates below apply to trading among banks in amounts of $1 million and more, as quoted at 4 p.m. Eastern time by Dow Jones Telerate Inc. and other sources. Retail transactions provide fewer units of foreign currency per dollar.

Country	U.S. $ equiv. Wed.	U.S. $ equiv. Tues.	Currency per U.S. $ Wed.	Currency per U.S. $ Tues.
Argentina (Peso)	1.0012	1.0012	.9988	.9988
Australia (Dollar)	.7805	.7902	1.2812	1.2655
Austria (Schilling)	.09043	.09101	11.058	10.988
Bahrain (Dinar)	2.6525	2.6525	.3770	.3770
Belgium (Franc)	.03080	.03105	32.470	32.205
Brazil (Real)	.9607	.9615	1.0409	1.0401
Britain (Pound)	1.6880	1.6946	.5924	.5901
30-Day Forward	1.6869	1.6935	.5928	.5905
90-Day Forward	1.6843	1.6910	.5937	.5914
180-Day Forward	1.6802	1.6867	.5952	.5929
Canada (Dollar)	.7399	.7370	1.3516	1.3568
30-Day Forward	.7414	.7386	1.3488	1.3539
90-Day Forward	.7442	.7413	1.3437	1.3489
180-Day Forward	.7479	.7450	1.3370	1.3422
Chile (Peso)	.002352	.002356	425.25	424.40
China (Renminbi)	.1201	.1201	8.3272	8.3276
Colombia (Peso)	.0009985	.0009985	1001.50	1001.50
Czech. Rep (Krouna)	....	....	....	....
Commercial rate	.03662	.03677	27.307	27.194
Denmark (Krone)	.1663	.1677	6.0118	5.9633
Ecuador (Sucre)	....	....	....	....
Floating rate	.0002766	.0002787	3615.00	3587.50
Finland (Markka)	.2121	.2135	4.7150	4.6841
France (Franc)	.1879	.1893	5.3220	5.2838
30-Day Forward	.1882	.1896	5.3126	5.2741
90-Day Forward	.1889	.1903	5.2935	5.2558
180-Day Forward	.1901	.1914	5.2617	5.2243
Germany (Mark)	.6352	.6394	1.5744	1.5639
30-Day Forward	.6364	.6407	1.5714	1.5607
90-Day Forward	.6389	.6432	1.5652	1.5547
180-Day Forward	.6430	.6472	1.5552	1.5450
Greece (Drachma)	.004049	.004068	246.98	245.80
Hong Kong (Dollar)	.1292	.1292	7.7390	7.7390
Hungary (Forint)	.006139	.006164	162.89	162.23
India (Rupee)	.02787	.02786	35.875	35.890
Indonesia (Rupiah)	.0004233	.0004233	2362.15	2362.63
Ireland (Punt)	1.6664	1.6714	.6001	.5983
Israel (Shekel)	.3079	.3085	3.2474	3.2412
Italy (Lira)	.0006483	.0006510	1542.50	1536.00

Country	U.S. $ equiv. Wed.	U.S. $ equiv. Tues.	Currency per U.S. $ Wed.	Currency per U.S. $ Tues.
Japan (Yen)	.008639	.008681	115.75	115.20
30-Day Forward	.008676	.008718	115.26	114.71
90-Day Forward	.008750	.008791	114.28	113.76
180-Day Forward	.008865	.008907	112.80	112.28
Jordan (Dinar)	1.4075	1.4075	.7105	.7105
Kuwait (Dinar)	3.3367	3.3389	.2997	.2995
Lebanon (Pound)	.0006445	.0006445	1551.50	1551.50
Malaysia (Ringgit)	.4018	.4002	2.4885	2.4990
Malta (Lira)	2.7624	2.7701	.3620	.3610
Mexico (Peso)	....	....	....	....
Floating rate	.1278	.1277	7.8220	7.8330
Netherland (Guilder)	.5655	.5699	1.7685	1.7547
New Zealand (Dollar)	.7072	.7106	1.4140	1.4073
Norway (Krone)	.1540	.1548	6.4926	6.4599
Pakistan (Rupee)	.02529	.02529	39.540	39.540
Peru (new Sol)	.3814	.3840	2.6218	2.6039
Philippines (Peso)	.03800	.03802	26.318	26.300
Poland (Zloty)	.3460	.3475	2.8900	2.8780
Portugal (Escudo)	.006307	.006369	158.55	157.02
Russia (Ruble) (a)	.0001787	.0001788	5595.00	5594.00
Saudi Arabia (Riyal)	.2666	.2667	3.7503	3.7502
Singapore (Dollar)	.7116	.7124	1.4053	1.4037
Slovak Rep. (Koruna)	.03259	.03259	30.688	30.688
South Africa (Rand)	.2141	.2142	4.6705	4.6690
South Korea (Won)	.001184	.001184	844.75	844.65
Spain (Peseta)	.007546	.007603	132.52	131.53
Sweden (Krona)	.1431	.1435	6.9865	6.9697
Switzerland (Franc)	.7334	.7387	1.3635	1.3537
30-Day Forward	.7357	.7411	1.3593	1.3494
90-Day Forward	.7401	.7454	1.3511	1.3416
180-Day Forward	.7470	.7523	1.3386	1.3293
Taiwan (Dollar)	.03638	.03637	27.489	27.493
Thailand (Baht)	.03902	.03906	25.625	25.605
Turkey (Lira)	.00000911	.00000915	109755.00	109235.00
United Arab (Dirham)	.2723	.2723	3.6720	3.6720
Uruguay (New Peso)	....	....	....	....
Financial	.1145	.1145	8.7300	8.7300
Venezuela (Bolivar)	.002098	.002096	476.70	477.12
	- - -			
SDR	1.4315	1.4326	.6986	.6980
ECU	1.2308	1.2404	.....	.....

Special Drawing Rights (SDR) are based on exchange rates for the U.S., German, British, French, and Japanese currencies. Source: International Monetary Fund.

European Currency Unit (ECU) is based on a basket of community currencies.

a-fixing, Moscow Interbank Currency Exchange.

The *direct* quote for British pound is:

£1 = $1.688

Spot Rate Quotations

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ading among banks in amounts of $1 million and more
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Countr	U.S. $ equiv. W	T	Currencies per U.S. $ W	T
Ar	1.0012	[illegible]	.9988	.9988
A	[illegible]	[illegible]	1.2812	1.2655
A	[illegible]	.09101	[illegible]	10.988
Bahrain (Di	[illegible]	2.6525	.3770	.3770
Belgium (F	[illegible]	.03105	32.470	32.205
Brazil (Re	[illegible]	.9607	1.0409	1.0401
Britain (P	[illegible]	1.6946	.5924	.5901
30-Da	[illegible]	1.6935	.5928	.5905
90-Da	[illegible]	[illegible]	.5937	.5914
180-Da	1.6802	1.6800	.5952	.5929
Canada (Dollar)	.7399	.7370	1.3516	1.3568
30-Da	.7414	[illegible]	1.3488	1.3539
90-Da	.7442	[illegible]	1.3437	1.3489
180-Da	.7479	.7450	1.3370	1.3422
Chile (P	.002352	.002356	425.25	424.40
China (Renminbi)	.1201	.1201	8.3272	8.3276
Colombia (P	.0009985	.0009985	1001.50	[illegible]
Cz	....	....		
Commercial r	.03662	.03677	27.307	27.194
Denmark (Krone)	.1663	.1677	6.0118	5.9633
Ecuador (Sucre)	....	....	....	....
Floating r	.0002766	.0002787	3615.00	3587.50
Finland (Mar	.2121	.2135	4.7150	4.6841
France (F	.1879	.1893	5.3220	5.2838
30-Da	.1882	.1896	5.3126	5.2741
90-Da	.1889	.1903	5.2935	5.2558
180-Da	.1901	.1914	5.2617	5.2243
German	.6352	.6394	1.5744	1.5639
30-Da	.6364	.6407	1.5714	1.5607
90-Da	.6389	.6432	1.5652	1.5547
180-Da	.6430	.6472	1.5552	1.5450
Greece (Dr	.004049	.004068	246.98	245.80
Hong K	.1292	.1292	7.7390	7.7390
Hungar	.006139	.006164	162.89	162.23
India (Rupee)	.02787	.02786	35.875	35.890
Indonesia (Rupiah)	.0004233	.0004233	2362.15	2362.63
Ireland (Punt)	1.6664	1.6714	.6001	.5983
Israel (Shek	.3079	.3085	3.2474	3.2412
Ital	.0006483	.0006510	1542.50	1536.00

Countr	U W	T	Currenc per U W	T
Japan (Y	.008639	.008681	115.75	115.20
30-Da	.008676	.008718	115.26	114.71
90-Da	.008750	.008791	114.28	113.76
180-Da	.008865	.008907	112.80	112.28
Jor	1.4075	1.4075	.7105	.7105
K	3.3367	3.3389	.2997	.2995
Lebanon (P	.0006445	.0006445	1551.50	1551.50
Mala	.4018	.4002	2.4885	2.4990
Malta (Lir	2.7624	2.7701	.3620	.3610
Me	....	....	....	....
Floating r	.1278	.1277	7.8220	7.8330
Netherland (Guilder)	.5655	.5699	1.7685	1.7547
Ne	.7072	.7106	1.4140	1.4073
Norwa	.1540	.1548	6.4926	6.4599
P	.02529	.02529	39.540	39.540
P	.3814	.3840	2.6218	2.6039
Philippines (P	.03800	.03802	26.318	26.300
P	.3460	.3475	2.8900	2.8780
P	.006307	.006369	158.55	157.02
Russia (Rub	.0001787	.0001788	5595.00	5594.00
Saudi Arabia (Riy	.2666	.2667	3.7503	3.7502
Singapore (Dollar)	.7116	.7124	1.4053	1.4037
Slo	.03259	.03259	30.688	30.688
South Africa (Rand)	.2141	.2142	4.6705	4.6690
South K	.001184	.001184	844.75	844.65
Spain (P	.007546	.007603	132.52	131.53
Sweden (Krona)	.1431	.1435	6.9865	6.9697
Switz	.7334	.7387	1.3635	1.3537
30-Da	.7357	.7411	1.3593	1.3494
90-Da	.7401	.7454	1.3511	1.3416
180-Da	.7470	.7523	1.3386	1.3293
T	.03638	.03637	27.489	27.493
Thailand (Baht)	.03902	.03906	25.625	25.605
T	.00000911	.00000915	109755.00	109235.00
United	.2723	.2723	3.6720	3.6720
Urugua	....	....	....	....
Financial	.1145	.1145	8.7300	8.7300
V	.002098	.002096	476.70	477.12
SDR	1.4315	1.4326	.6986	.6980
ECU	1.2308	1.2404	....	....

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European Currency Unit (ECU) is based on a bask
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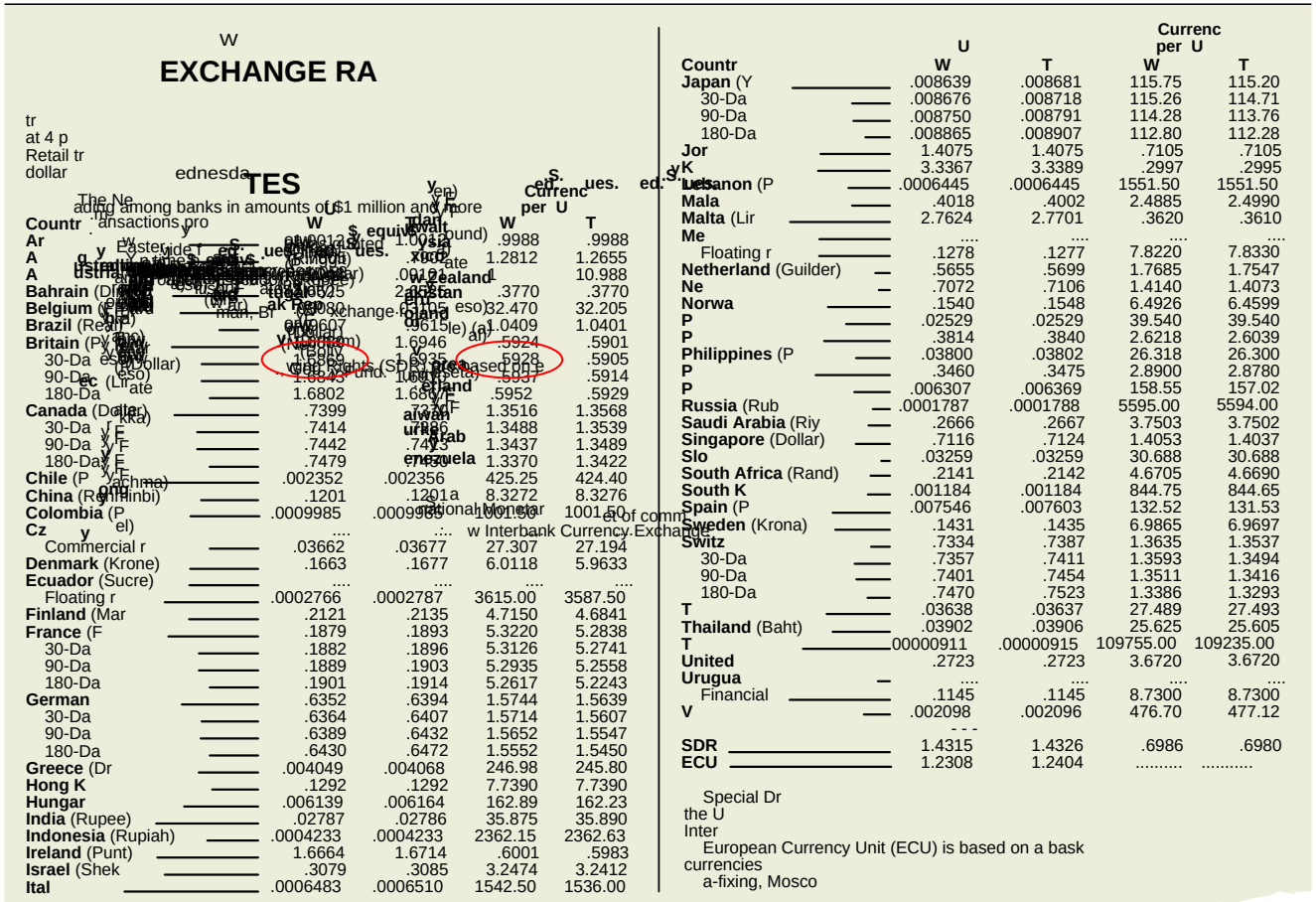
The *indirect* quote for British pound is:

£.5924 = $1

Spot Rate Quotations



EXCHANGE RA

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Currenc per U

Countr	W	T	W	T
Japan (Y	.008639	.008681	115.75	115.20
30-Da	.008676	.008718	115.26	114.71
90-Da	.008750	.008791	114.28	113.76
180-Da	.008865	.008907	112.80	112.28
Jor	1.4075	1.4075	.7105	.7105
yK	3.3367	3.3389	.2997	.2995
Lebanon (P	.0006445	.0006445	1551.50	1551.50
Mala	.4018	.4002	2.4885	2.4990
Malta (Lir	2.7624	2.7701	.3620	.3610
Me	....	....	....	....
Floating r	.1278	.1277	7.8220	7.8330
Netherland (Guilder)	.5655	.5699	1.7685	1.7547
Ne	.7072	.7106	1.4140	1.4073
Norwa	.1540	.1548	6.4926	6.4599
P	.02529	.02529	39.540	39.540
P	.3814	.3840	2.6218	2.6039
Philippines (P	.03800	.03802	26.318	26.300
P	.3460	.3475	2.8900	2.8780
P	.006307	.006369	158.55	157.02
Russia (Rub	.0001787	.0001788	5595.00	5594.00
Saudi Arabia (Riy	.2666	.2667	3.7503	3.7502
Singapore (Dollar)	.7116	.7124	1.4053	1.4037
Slo	.03259	.03259	30.688	30.688
South Africa (Rand)	.2141	.2142	4.6705	4.6690
South K	.001184	.001184	844.75	844.65
Spain (P	.007546	.007603	132.52	131.53
Sweden (Krona)	.1431	.1435	6.9865	6.9697
Switz	.7334	.7387	1.3635	1.3537
30-Da	.7357	.7411	1.3593	1.3494
90-Da	.7401	.7454	1.3511	1.3416
180-Da	.7470	.7523	1.3386	1.3293
T	.03638	.03637	27.489	27.493
Thailand (Baht)	.03902	.03906	25.625	25.605
T	.00000911	.00000915	109755.00	109235.00
United	.2723	.2723	3.6720	3.6720
Urugua	....	....	....	....
Financial	.1145	.1145	8.7300	8.7300
V	.002098	.002096	476.70	477.12
SDR	1.4315	1.4326	.6986	.6980
ECU	1.2308	1.2404	.....	.....

Special Dr
the U
Inter
European Currency Unit (ECU) is based on a bask
currencies
a-fixing, Mosco

Note that the direct quote is the reciprocal of the indirect quote:

$$1.688 = \frac{1}{.5924}$$

Foreign Exchange Rates and Quotations

- As mentioned, several exceptions exist to the use of European terms quotes.
- The two most important are quotes for the euro and U.K. pound sterling which are both normally quoted in American terms.
- American terms are also utilized in quoting rates for most foreign currency options and futures, as well as in retail markets that deal with toursists.

Foreign Exchange Rates and Quotations

- Interbank quotations are given as a bid and ask (also referred to as offer).
- A *bid* is the price (i.e. exchange rate) in one currency at which a dealer will buy another currency.
- An ask is the price (i.e. exchange rate) at which a dealer will sell the other currency.
- Dealers bid (buy) at one price and ask (sell) at a slightly higher price, making their profit from the spread between the buying and selling prices.
- A bid for one currency is also the offer for the opposite currency.

Cross-rate of Spot and Arbitrage

一墨西哥进口商从韩国进口机电设备，需要支付韩元（计作**W**），有关墨西哥比索（计作**Ps**）的报价并没有直接与韩圆的报价，但这两种货币均有与美元的报价，假设报价如下：

韩元	W1200.00/$
墨西哥比索	Ps9.3750/$

墨西哥进口商可按**1**美元等于**9.3750**比索将比索换成美元，然后用美元买韩元，因此套算的汇率如下：

$$\frac{Ps\ 9.3750\ /\ \$}{W\ 1200\ .00\ /\ \$} = Ps\ 0.0078125\ /\ W$$

$$\frac{W1200.00/\$}{Ps9.3750/\$} = W128.00/Ps$$

对跨国公司来讲，通过套算汇率，可以了解或预算各分支公司按一定货币量表示的经营情况，或者建立公司内部的转移定价。

Cross-rate of Spot and Arbitrage

- Many currency pairs are only inactively traded, so their exchange rate is determined through their relationship to a widely traded third currency (cross rate).
- Cross rates can be used to check on opportunities for intermarket arbitrage.
- This situation arose because one bank's (Dresdner) quotation on €/£ is not the same a calculated cross rate between $/£ (Barclay's) and $/€ (Citibank).

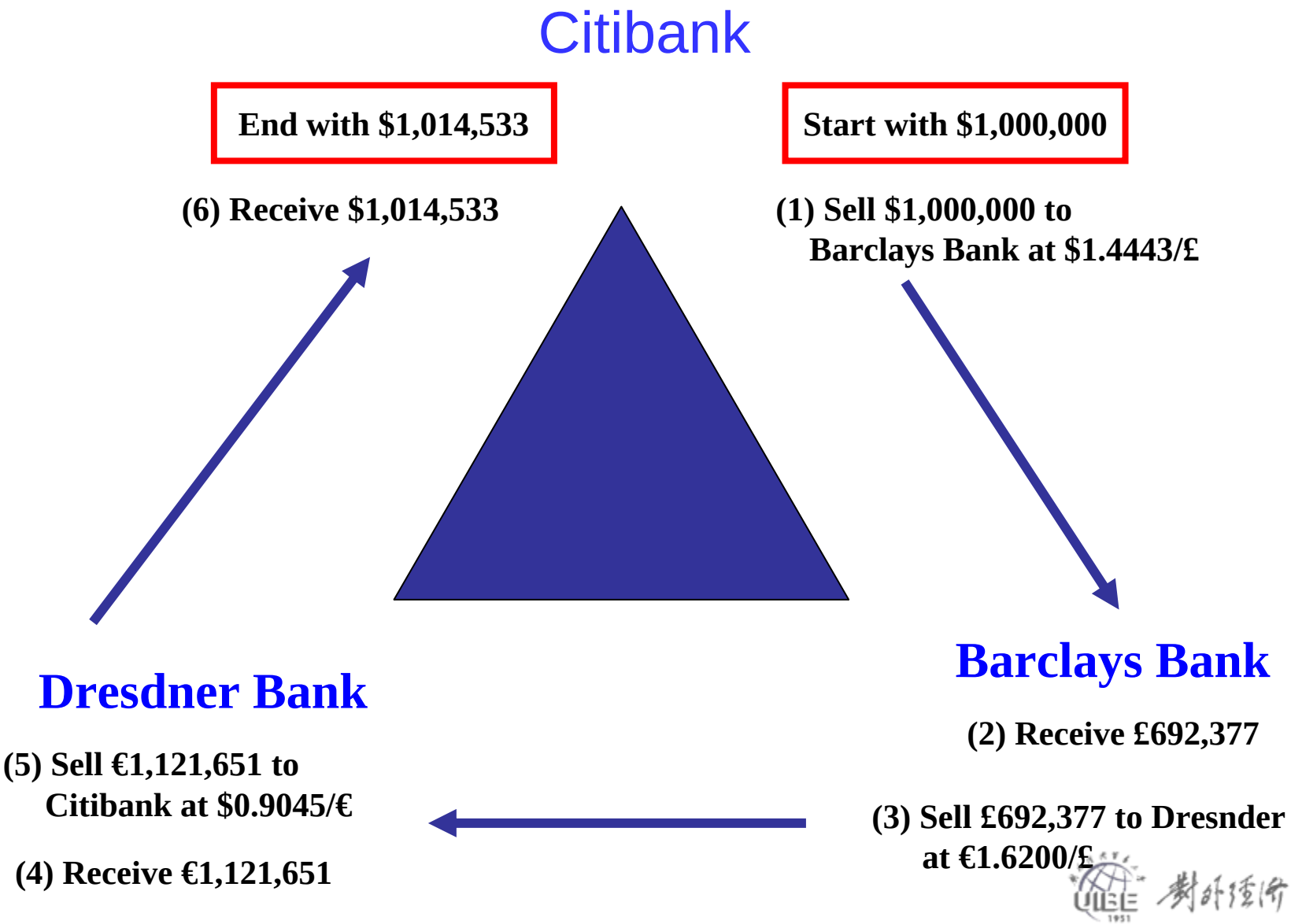
Cross-rate of Spot and Arbitrage

- Citibank quote - $/€ $0.9045/€
- Barclays quote - $/£ $1.4443/£
- Dresdner quote - €/£ €1.6200/£
- Cross rate calculation:

$$\frac{\$1.4443/£}{\$0.9045/€} = €\ 1.5968/£$$

≠

Exhibit 4A Triangular Arbitrage



Forward (Exchange) Transactions

即期外汇买卖与远期外汇买卖交割日的区别

交易日	种类	交割日
1996年11月20日	即期外汇	1996年11月22日
1996年11月20日	1个月远期外汇	1996年12月22日

Appreciation and Devaluation

- Measuring a change in the spot rate for quotations expressed in home currency terms (direct quotations):
- $\%\Delta = \frac{\text{Ending rate} - \text{Beginning Rate}}{\text{Beginning Rate}} \times 100$

- Quotations expressed in foreign currency terms (indirect quotations):
- $\%\Delta = \frac{\text{Beginning Rate} - \text{Ending Rate}}{\text{Ending Rate}} \times 100$

Appreciation and Devaluation

基础货币与标价货币升值与贬值之间存在以下关系：

$$Y = \frac{-X}{1+X}$$

X 表示一种货币对另一种货币的升值或贬值

Y 表示另一种货币对这种货币的贬值或升值

Premium and Discount

- Forward premium (discount)

$$= \frac{Forward - Spot}{Spot} \times \frac{12}{n} \times 100\%$$

式中**n**为远期合约的期限（以月数表示）

Premium and Discount

瑞士法郎的即期汇率为SF1.5035/$, 30天远期汇率为SF1.4975/$,如果要计算瑞士法郎相对美元的远期升水或贴水，应用公式计算如下：

$$\frac{\frac{1}{SF\,1.4975/\$}-\frac{1}{SF\,1.5053/\$}}{\frac{1}{SF\,1.5053/\$}}\times\frac{12}{1}\times 100\%=+4.81\%$$

结果是30天瑞士法郎远期升水每年4.81%。

Premium and Discount

如果考虑30天美元远期升水或贴水，则可直接应用公式：

$$\frac{SF1.4975/\$ - SF1.5035/\$}{SF1.5035/\$} \times \frac{12}{1} \times 100\% = -4.79\%$$

结果表明30天美元远期是每年贴水4. 79%。

Foreign Exchange Rates and Quotes

- Forward rates are typically quoted in terms of points.
- A forward quotation is expressed in points is not a foreign exchange rate as such.
- Rather, it is the *difference* between the forward rate and the spot rate.

Foreign Exchange Rates and Quotes

a. Outright rate

b. Points rate or Swap rate

Forward rate＝Spot rate＋Forward premium (－discount)

	USD/ GBP	DEM/ USD	FRF/ USD
Spot	1.5060/70	1.4330/40	4.1200/50
1MTH	35/30	49/44	10/30
3MTHS	94/89	99/94	20/70
6MTHS	168/153	285/270	70/160
12MTHS	270/240	575/550	120/200

Forward Quotations

远期汇率的计算遵循以下原则：

- 1）如果斜线左边的数字　右边的数字，交易商知道远期报价是升水，即远期汇率比即期汇率高。
- 2）如果斜线左边的数字　右边的数字，交易商知道远期报价是贴水，即远期汇率比即期汇率低。

Forward Quotations

英镑即期汇率	1.5060	1.5070
	— 94	89
3个月英镑远期汇率	1.4966	1.4981
美元即期汇率	4.1200	4.1250
	+ 70	160
6个月美元远期汇率	4.1270	4.1410

The case analyses for forward

利用远期外汇交易避免外汇风险

- 进口付汇的远期外汇操作

1984年**3**月上旬，日元对美元的汇率为**220**日元，远期报价表明日元升值。**3**月**7**日，日本贸易商准备从美国购进一笔货物，合同货币是美元，**6**个月后付款。日元升值对日本商人十分有利，但万一日元贬值，则对日商不利。为了避免汇率变动带来的外汇风险，日商买入**6**个月期远期美元合约：

进口付汇的远期外汇操作

合约月日	买进金额	远期汇率	到期时间
84-03-07	$10,000,000	216.00	84-09-10
	卖出金额		
84-07-05	$5,000,000	237.50	84-09-10

最后，在到期日，在即期市场以即期汇率244.10日元卖出500万美元，这样，经过远期买卖过程，到期结算时，就可获得24800万日元。

进口付汇的远期外汇操作

计算过程如下：

首先，买进**1,000**万美元远期合约，到期交割，日元成本为：

$1,000**万×**¥216/$ = ¥216,000万

其次，卖出远期美元**500**万美元，日元收入为：

$500**万×**¥237.50/$ = ¥ 118,750万

最后，在即期市场卖出**500**万美元，日元收入为：

$500**万×**¥244.10/$ = ¥122,050万

因此，买卖差额为：

¥122050＋¥118750－¥216000＝¥24,800万

故这**24,800**万日元正是通过做远期而获得的收益。

出口收汇的远期外汇操作

某日本出口商根据出口合同情况卖出远期美元，具体操作如下：

合约月日	卖出金额	远期汇率	到期日期
84-02-01	**$2,000,000**	**232.00**	**84-05-02**

3月**7**日，把握日元行情上升的机会，一度买回美元

买进金额

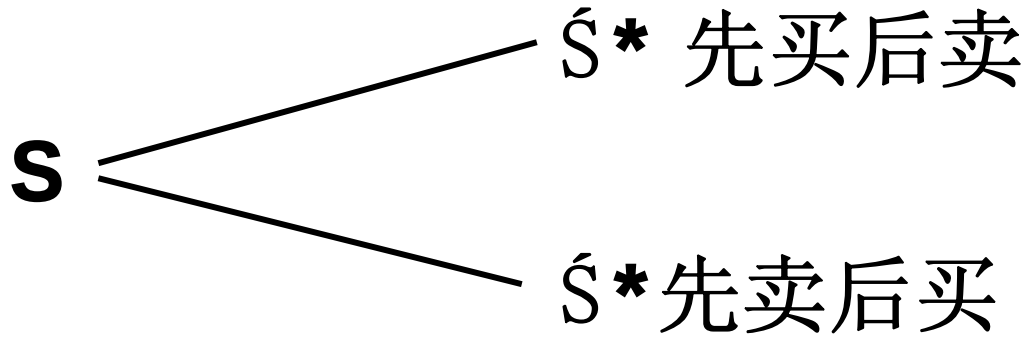
84-03-07	**$2,000,000**	**219.50**	**84-05-02**

这样，**5**月**2**日获得外汇差额

(232.00－219.50)×200万日元＝**2500**万日元

利用远期外汇交易进行外汇投机

一般意义上的投机是一种在预测价格将要上升时先买后卖，在预测价格将要下降时先卖后买。



在现汇市场上投机

S＝FF5.6535

卖出**10**万美元

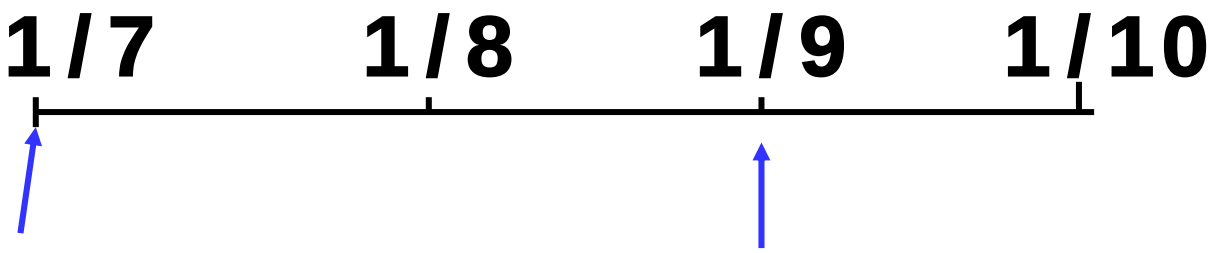
Ś ***=FF5.6525=S**

买进**10**万美元

这一卖一买获利

（5.6535－5.6525）×10万＝FF100

在远期外汇市场上投机



F3=SF1.6230　　**F1=SF1.5230**

卖出**10**万美元　　买进**10**万美元

这一卖一买获利

（1.6230－1.5230）×10万＝SF10000

利用远期合约维护投资者的利益

假设英国的利率为年息10%，美国的利率为年息6%，显然，在英国投资比在美国投资更有利。

第一步：如果美国投资者有1万美元拟在英国投资，为期180天。当时的即期汇率为 $2/£,因此1万美元可购进英镑现汇

$$\$10{,}000 \times \frac{1}{\$2/£} = £5{,}000$$

利用远期合约维护投资者的利益

第二步：投资于英国，按年息10％的收益率，180天后可得：

£5,000（1＋10％×180/360）＝£5,250

第三步：将收回的英镑换回美元，这时汇率为**$1.9/£**，收回的美元数为：

£5,250×$1.9/£=$9,975

如果将1万美元投资在美国，180天以后，可得

$10,000（1＋6％×180/360）＝$10,300

利用远期合约维护投资者的利益

无套期抵补情况下的敏感性分析：

	美元贬值	汇率不变	美元升值
180天后即期汇率	$2.04/£	$2/£	$1.9/£
收回美元	5250×$2.04/£	5250×$2/£	5250×$1.9/£
	=$10,710	=$10,500	=$9,975
合年利率	14.2%	10.0%	-0.5%

利用远期合约维护投资者的利益

套期抵补情况下的收益：

在即期市场将1万美元按即期汇率换成5,000英镑

同时在远期外汇市场上签订180天的买进美元远期合约，180天的远期汇率为$1.98/£, 这样到期履行合约，英镑投资到期可对换成美元数为：

£5,250×$1.98/£ ＝$10,395

年收益率为：

(10,395－10,000)/10,000×360/180×100％=7.9％

利用远期合约建立固定利率融资

A company wishes to borrow 10 million Finnish Markka for two years, but can only borrow on a six-month floating rate basis. Forward contract can be used to create a liability on a fixed basis.

The company borrows 2 million Eurodollars for two years at 6% per annum.

Spot exchange rate: FM 5.00/$

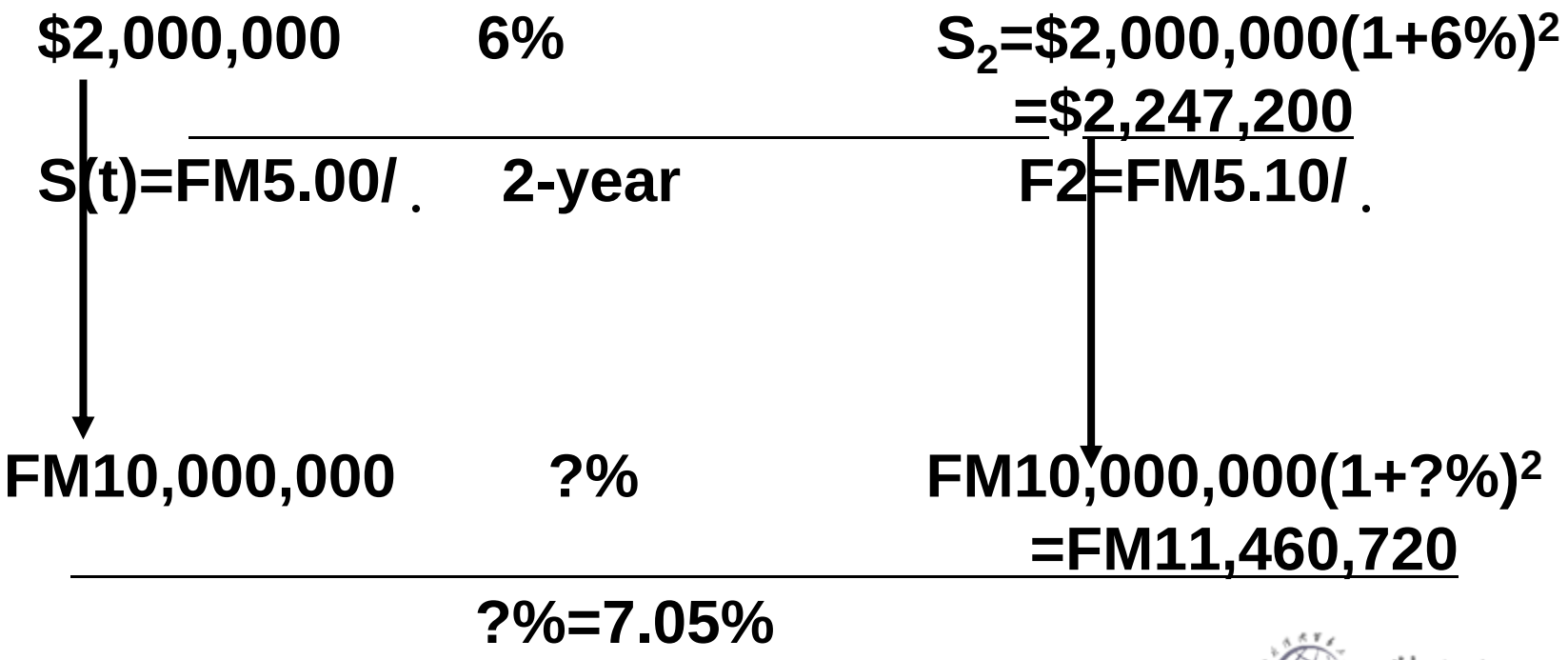
two-year forward: FM 5.10/$

Please show how and calculate FM cost of financing.

利用远期合约建立固定利率融资

1) To borrow FM 10 million: LIBOR + Margin

2) To borrow $2 million



Swap Transaction

调期交易是指在买进或卖出一种期限的某种货币的同时卖出或买入另一种期限的同种货币的外汇交易。

Interest Rate Parity—IRP

The theory of Interest Rate Parity (IRP) provides the linkage between the foreign exchange markets and the international money markets.

The theory states: *The difference in the national interest rates for securities of similar risk and maturity should be equal to, but opposite in sign to, the forward rate discount or premium for the foreign currency, except for transaction costs.*

Interest Rate Parity—IRP

t **t +T**

S(t) —the spot rate of exchange

F (t, T)—the forward rate of exchange

i —domestic interest rate

i * —foreign interest rate

Quotation: $/£

Interest Rate Parity—IRP

1) t: to borrow $1 at i in US: $1

t+T: to repay $(1＋i×T/360)； (1)

2) to covert it to £ at 1/S(t);

3) to invest in UK at i* for T days:

1/S(t)[1+ i*T/360]；

4) t+T: to sell £ for T days at F(t,T)

$$\frac{1}{S(t)}[1+i^{*}\frac{T}{360}]\ \text{F (t, T)} \qquad (2)$$

(1)=(2)

$$1+i\frac{T}{360}=\frac{1}{S(t)}[1+i^{*}\frac{T}{360}]F(t,T)$$

Interest Rate Parity—IRP

$$\frac{F(t,T)}{S(t)} = \frac{1 + i\dfrac{T}{360}}{1 + i^{*}\dfrac{T}{360}}$$

$$F(t,T) = S(t)\frac{1 + i\dfrac{T}{360}}{1 + i^{*}\dfrac{T}{360}}$$

(no transaction cost)

Interest Rate Parity—IRP

$$i - i^* = \frac{F(t,T) - S(t)}{S(t)} \times \frac{360}{T}\left[1 + i^* \frac{T}{360}\right]$$

$$i - i^* \approx \frac{F(t,T) - S(t)}{S(t)} \times \frac{360}{T}$$

Covered Interest Arbitrage— CIA

- The spot and forward exchange rates are not, however, constantly in the state of equilibrium described by interest rate parity.
- When the market is not in equilibrium, the potential for “risk-less” or arbitrage profit exists.
- The arbitrager will exploit the imbalance by investing in whichever currency offers the higher return on a covered basis.
- This is known as *covered interest arbitrage* (CIA).

Covered Interest Arbitrage— CIA