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TYPICAL OPERATION; THE FORWARD FOREIGN EXCHANGE MARKET/GAMBIA

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The purpose of a forward market is to bring together commercial operations which by the natural business flow acquire claims on or incur liabilities denominated in a currency other than the "home" currency e.g., the currency considered legal tender in the country of domicile of the commercial operation. Just as the ownership of immediately available (spot) foreign currency has no true economic value in a home market i.e., to pay wages, purchase goods etc., the future date claim or liability has no economic value in the home market until conversion.

The important difference between spot and forward transactions is that a spot balance is available for conversion immediately at a quoted value while a forward claim or liability cannot acquire a fixed value unless covered by form of contract which guarantees the ability to satisfy a liability or realize a fixed amount of local exchange for a claim. Throughout the following discussion, it is important to keep in mind that physical possession of currency in the form of banknotes has no commercial value except within the country which issued the promise to pay as evidenced by the banknote. In commercial practice, ownership is rarely evidenced by physical possession of a foreign banknote, but rather evidenced by ownership of a balance on deposit in a bank located in the country utilizing the currency in question for commercial and private payment for goods and services.

Commercial banks, though their correspondent networks are the customary intermediaries between the commercial or business sector in transactions crossing international borders.

The spot, or immediately available transaction:

A commercial customer has acquired a claim or incurred a liability demonstrated in a foreign currency, say U.S. Dollars of $100,000.

An import Trader has arranged purchase of fertilizer delivered at dockside in Banjul, cash against documents. Documents come forward through Chase Manhattan Bank, N.Y., to Standard and Chartered Bank, Banjul, which advises the trader of arrival of title documents.

The trader has on deposit Dalasi 900,000 with S & C and instructs S & C to debit his account and buy U.S. $ at the prevailing spot rate D7.31=U.S.$1. S & C has on deposit in New York at Bankers Trust Company U.S. $150,000, which S & C had acquired at a cost of D7.15=U.S. $1. S & C orders Bankers Trust to pay Chase Manhattan

$100,000 in settlement.

Entries on S&C books at transaction date are as follows:

Debit traders Dalasi account	D 731,000
Credit due from Bankers Trust	D 731,000
Credit (notational) due from Bankers Trust U.S. $ only	$ 100,000

Resultant accounts on transaction date:

Due from Bankers T/C U.S. $50,000 at carry value (initially $150,000 carried at acquisition cost D 1,072,500 less D 731,000 credit)	D 341,500
Due to trader- Deposit account	D 169,000

Assuming no further transactions, at revaluation date the following would occur if the current spot market rate is Dalasis 7.25 = US$ 1:

Revaluation of Due From Bankers T/C

Balance U.S. $50,000 X 7.25 =	D 362,500
Dalasi carry value after above transaction	<u>D 341,500</u>
Result- carry value less than current= Profit	D 21,000

Entries:

Debit Due from Bankers T/C (Dalasi only)	D 21,000
(adjusts carry value to spot value)	
Credit Profit/Loss on Foreign Exchange	D 21,000
(Reflect revaluation profit)	

Taking each element:

S & C acquired U.S. $ at D 7.15 (market rate at purchase)and sold to the trader at D 7.31 (market rate at sale) realizing a profit of D .16 per US $1 at the time of sale (D 16,000). The total profit on the US Dollar position at this point in time is Dalasi 24,000 represented by D 16,000 realized in the sale and the current value as against purchase price of US Dollars remaining in the Bankers T/C account at D 8,000. However, this profit is not reflected in the income accounts of S&C until the Dalasi carry value of the residual US $50,000 balance is adjusted to market (spot) at the date of revaluation. The Dalasi spot market, which weakened against the US Dollar to the date of sale (7.31) recovered between that date and revaluation date (7.25) thereby eroding the Dalasi value of the continued US Dollar holding by Dalasi 3,000 yielding a revaluation profit taken into the income accounts of Dalasi 21,000.

The reverse of the above transaction, an outward collection for goods exported would have passed through the same mechanism, same factors used. S & C would acquire additional U.S. Dollars at the spot market price when the proceeds of the U.S. $ collection were received in the S&C account at Bankers Trust Company, contracting with the exporter to purchase U.S. $ at D 7.31.

Entries at transaction date:

Debit Due from Bankers T/c U.S. $100,000 (notational)	
Debit Due from Bankers T/C	D 731,000
Credit traders deposit a/c	D 731,000

Resultant account at transaction date:

Due from Bankers T/C U.S. $ 250,000 carried at	D 1,803,500
(original cost D 1,072,500 + D 731,000)	
Due to trader - deposit account	D 1,631,000
(original balance D 900,000 + D 731,000)	

Revalue Bankers T/C balance at revaluation date:

U.S. $ 250,000 X 7.25 =	D 1,812,500
Dalasi carry value prior to transaction	D 1,803.500
Carry value less than spot value = Profit	D 9,000

Entries:

Debit Due from Bankers T/C (Dalasi only)	D 9,000
(adjusts carry value to spot value)	
Credit Profit/Loss on Foreign Exchange	D 9,000
(reflects revaluation profit)	

Taking each element:
S & C acquired U.S. $ at D 7.15 (initial purchase) and purchased further U.S. $ from the trader at a price of D7.31. The differential of D .16 represents the weakening of the Dalasi/Dollar rate between the time of the initial purchase and the additional purchase from the trader. Liquidation of the position on the date of the trade would result in a profit of D 24,000. Here again, the profit is not reflected in income accounts until revaluation date. Between the time of the transaction and revaluation date the Dalasi strengthened against the Dollar moving to D7.25, thereby generating a loss of D 6,000 on the amount purchased from the trader, and reducing the liquidation value of the initial purchase by D 9,000 when related to the liquidation value at the date of the trade.

If the transactions had occurred in the same month, the original base amount held in dollars would be unchanged but the Dalasi carry value would vary as follows:

Balance due from Bankers T/C		Carry Value
	US Dollars	Dalasi
Initial purchase	150,000	1,072,500
Sale to Import Trader	-100,000	-731,000
Purchase from Export Trader	+100,000	+731,000
At revaluation date	150,000	1,072,500
Revalue Dollar balance at D 7.25		1,087,500
Carry value is less than spot value = Profit		15,000

The profit taken into income on the spot position is not a realized profit in local currency until such position is liquidated. However, since the US Dollars held in the Bankers Trust Company account are an asset of the Bank available for immediate conversion, it is necessary to periodically adjust the Dalasi carry value through the income accounts to properly reflect condition of the Bank.

In practice, a commercial bank will maintain a differential between the buy rate and sell rate to insure an adequate profit margin, and to provide protection against fluctuation in the spot exchange rate.

Forward contracts and the profit or loss resulting therefrom are generally treated in a different accounting manner. The forward discount or premium reflects several factors; the commercial bank's own position in both spot and forward markets, interest rate differentials between home currency and foreign currency markets, and pressures exerted upon foreign currencies held in relation to other freely traded convertible currencies.

In theory, forward markets reflect the relative financial position of major trading countries and that position projected forward by market intelligence and economic factors. The major trading currencies, Pounds Sterling, U.S. Dollars, Swiss Francs, Deutsche Marks, French Francs and Japanese yen all enjoy deep and highly developed forward markets with hundreds of billions of units traded daily. For example, the Clearing House Interbank Payments System (CHIPS), an electronic funds transfer network operated in New York by the New York Clearing House Association processes a daily volume of payments in excess of U.S. $ 375 billion. It is estimated that one-third to one-half of this volume is generated by settlement of purchase or sale of foreign exchange.

At the commercial level, the forward market is utilized to arrange payment for, or to convert receivables in foreign currencies due or expected at a future date. In the case of commercial movements of goods and merchandise, the forward contract is usually executed at or near the time that a contract of purchase or sale is executed.

Assume that a merchant has accumulated goods for export at a cost of Dalasi 500,000 and contracts to sell at an expected profit margin of 10% to yield Dalasi 550,000. The Dalasi is currently convertible into U.S. Dollars at a spot rate of 7.35. The Dalasi has appreciated against the Dollar over the past three month period moving from 7.50 to the present level.

The merchant's risk in continued appreciation at the same rate (i.e.,.05 per month), assuming three months are required to ship merchandise, receive U.S. Dollars, and complete the transaction is as follows:

Price to acquire and transport	D 500,000
Contract price (D 550,000 at 7.35)	U.S.$ 74,830
Conversion upon receipt ($74,830 at 7.20)	D 538,776

Profit Margin 7.75% or 2.25% less than anticipated.

If the merchant believes that the trend will continue and accelerate, the margin negotiated at execution of the sales contract must be increased accordingly to protect the initial investment.

A commercial bank, in the role of financial intermediary, processes both imports and export transactions, and in a real sense serves as a clearing house for customer payments and receipts in like currencies.

Taking the same transactions as described under the spot section but assuming that both the importer and exporter approached the commercial bank for forward cover at the time of contract, and interjecting a timing differential of 15 days, the export collection preceding payment for imported goods:

<u>April 1-</u>

The exporter agrees with the commercial bank to sell Dollars 100,000 for Dalasi to the bank for delivery value May 15 (45 days forward).

The importer agrees with the same commercial bank to buy Dollars 100,000 for Dalasi from the bank for delivery value May 30 (60 days forward).

Assume, in this case, that the Dalasi is expected to appreciate against the U.S. Dollar at a rate of .05 per month as dictated by current market factors. This would indicate forward rates of 7.235 and 7.21 for the 45 and 60 day forward contracts respectively. The forward rate is the rate that could be expected to be paid to liquidate the dollars held (exporter) or dollars owed (importer) in the spot market at the future dates. The bank trader, given the trend in Dalasi strengthening against the U.S. Dollar, will quote a forward price to the exporter slightly under the 45 day forward rate. Conversely, in the case of the importer, with a requirement sixty days hence, the bank trader will quote slightly over the sixty day rate. The differentials quoted are intended to partially cover the fluctuation risks now borne by the bank, and to provide some profit margin.

The bank trader may elect to hold the positions open for a period of time before covering by purchase or sale of a like amount at the same maturities with the Central Bank or with another commercial bank which has a like time requirement. If the trader believes that the current trend will either accelerate or slow, he may elect to hold one side of the position open to maturity, thereby increasing profit margin on the transaction. There is a risk,of course, that the trader may be wrong in his assessment of the trends which could result in a loss.

Purchase contract - Bank agrees to buy $100,000 from the Exporter for delivery on May 15 (45 days) at .09 off the spot rate (7.31) or $1 = D7.22 for a price of D 722,000.

Sale contract - Bank agrees to sell $100,000 to the Importer for delivery on May 30 (60 days) at .07 off the spot rate (7.31) or $1 = D 7.24 for a price of D 724,000.

Bank entries at transaction date (April 1):

Forward Exchange Purchased	$100,000	D 722,000
Forward Exchange Sold	$100,000	D 724,000

The entries are contingent or "below the line" accounts and do not effect the totals of bank assets or liabilities.

As in the spot example, the bank continues to hold $150,000 on deposit with Bankers Trust Company, New York as a base operating balance or as support for credit lines extended by that bank. For the purposes of this example, the bank will revalue it's position and take profits or losses every fifteen days. No new transactions are entered, but spot and forward rates are subject to movement.

April 15 (revaluation date)- Spot rate 7.31 (stable)

Spot position:

Due from Bankers T/C	$150,000 carried at	D1,072,500
Revalued at D7.31 = $1		D1,096,500
Spot profit if sold		D 24,000

Adjustment for forward values:

Long (purchase) value May 15	$100,000	at D722,000
Cost to cover (sell) at 7.26	$100,000	at D726,000
	Profit	D 3,000

Note: Bank has contracted to take delivery of $100,000 for which it will pay D722,000. If the bank elected to sell $100,000 for delivery on the same future day at the current rate for 30 day Dollars, it would receive D726,000 thereby locking in a profit of D3,000. Forward rates, in the absence of any market aberration, generally move closer to the spot rate as maturity shortens reflecting a lesser period of rate risk.

Short(sale) value May 30	$100,000	at D724,000
Cost to cover (buy) at 7.235	$100,000	at D723,500
	Profit	D 1,000

Note: Bank has contracted to make delivery of $100,000 for which it will receive D724,000. If the Bank elected to buy $100,000 for delivery on the same future date, it would have to pay D723,500 at the current rate for 45 day Dollars. Indicated unrealized profit is D1,000.

Profit/loss in this position is Spot		D24,000
	Forwards	D 4,000
	Profit	D28,000

Entries at revaluation :

Credit-Income on Foreign Exchange	D28,000
(to reflect results of revaluation)	
Debit-Due From Bankers T/C (Dalasi only)	D24,000
(to reflect value of Dollars at current rate)	
Debit-Reserve for Unrealized Profit	D 4,000

<u>April 30 Revaluation Date- Spot Rate 7.26(strengthened)</u>

Spot Position:

Due From Bankers T/C	$150,000 carried at		D1,096,500
Revalued at current spot rate			D1,089,000
		Loss	D 7,500

Adjustment for Forward Values:

Long (purchase) value May 15 $100,000 at D 722,000

Cost to cover (sell) at 7.235	$100,000	at	D 723,500
	Profit	D	1,500

Short (sale) value May 30	$100,000	at	D 724,000
Cost to cover (buy) at 7.21	$100,000	at	D 721,000
	Profit	D	3,000

Profit/loss in this position is	Spot	D - 7,500
	Forwards	D 4 500
	Loss	D -3,000

Entries at revaluation:

Credit-Reserve for Unrealized Profit	D 4,000
Debit- Income on Foreign Exchange	D 4,000
(to reverse prior revaluation entry)	
Debit -Income on Foreign Exchange	D 3,000
Credit-Due from Bankers T/C (Dalasi only)	D 7,500
(to reflect value of Dollars at current rate)	
Debit- Reserve for Unrealized Profit	D 4,500

The Balance Sheet after this revaluation shows:

Due from Bankers T/C $150,000 carried at	D1,089,000
Reserve for Unrealized Profit	D 4,500
Income on Foreign Exchange	D 21,000

Forward Exchange Purchased $100,000 carried at D 723,500

Forward Exchange Sold $100,000 carried at D 741,000

May 15- Revaluation Date- Spot 7.20(strengthened)

The forward purchase contract matures, the Exporter causes delivery of $100,000 to the Bank's account with Bankers Trust Company, and the Bank deposits D722,000 into the account of the Exporter.

Entries:

Debit-Due from Bankers T/C	$100,000	D 722,000
Credit-Exporters deposit account		D 722,000

The forward purchase contract is now extinguished.

Revaluation:

Spot Position:

Due from Bankers T/C	$250,000 carried at	D1,811,000
Revalued at D7.20 = $1		D1,800,000
	Loss	11,000

Adjustment for forward values:

Short (sale) value May 30	$100,000	at	D 724,000
Cost to cover (buy) at 7.175	$100,000	at	D 717,500
		Profit	D 6,500

Profit/loss in this position is Spot D -11,000

Forwards	D	6,500
Loss	D	4,500

Entries at revaluation:

Debit-Income on Foreign Exchange	D	4,500
Credit-Reserve for Unrealized Profit	D	4 500
(to reverse prior revaluation entry)		
Debit-Income on Foreign Exchange	D	4,500
Credit-Due from Bankers T/C (Dalasi only)	D	11,000
Debit-Reserve for Unrealized Profit	D	6,500

The Balance Sheet after this revaluation shows:

Due from Bankers T/C	$250,000 carried at	D	1,800,000
Reserve for Unrealized Profit		D	6,500
Income on Foreign Exchange		D	12,000
Forward Exchange Purchased		D	0
Forward Exchange Sold	$100,000 carried at	D	724,000

<u>May 30- Revaluation Date- Spot 7.28 (weakened vs. Dollar)</u>

The forward sale matures, the Bank delivers $100,000 to order of the importer and debits the importer's deposit account D724,000.

Entries:

Credit-Due from Bankers T/C $100,000	D 724,000
Debit- Importer's deposit account	D 724,000

Revaluation:

Spot Position:

Due from Bankers T/C $150,000 carried at	D1,076,000
Revalued at D7.28 = $1	D1,092,000
Profit	D 16,000

No forward position, revaluation entries are:

Credit-Reserve for Unrealized Profit	D 6,500
Debit-Income on Foreign Exchange	D 6,500
(to reverse prior revaluation entry)	
Debit-Due from Bankers T/C (Dalasi only)	D 16,000
Credit-Income on Foreign Exchange	D 16,000

The Balance Sheet after this revaluation shows:

Due from Bankers T/C $150,000 carried at	D1,092,000
Income on Foreign Exchange	D 21,500

Forward purchase and sale accounts are nil.

Reserve for unrealized profit is nil.

At any point during this exercise the Bank could have closed out all positions by matching forward contracts as to both time and amount, locking in profits or losses at a given time, allowing contracts to mature and pass through the respective settlement accounts. At this point the Bank's sole position at risk is the holding of $150,000 with Bankers Trust Company.

The Bank, depending upon managements judgement of market factors, may elect to liquidate the entire position by selling out the residual spot Dollars (if not required for facility support) and realize the point in time profit, or continue to hold the position in the belief that the Dalasi will continue to weaken against the Dollar.

The operations outlined above are rather simplistic. The price decisions taken could well have been reversed, resulting in losses rather than profits. Success depends heavily upon the exercise of good judgement by traders in establishing and liquidating positions. Equally important is the ability of non-trading senior management to establish limits on the amount of trading risk that the bank can bear without compromising the earnings stream or eroding capital strength. Such limits, once established, must be carefully monitored for full compliance.

In practice, the spot position would have many more transactions flowing through, ranging from purchase of actual currency, checks and drafts forwarded for collection or deposit (technically a long forward position), to the settlement of interest charges and dollar drafts issued. The typical position will contain a number of different currencies with both forward and spot components. It is essential that all bank assets and liabilities denominated in foreign currencies including those incurred for the bank's own account be revalued on a regular basis.

In an active exchange operation, it is not necessary to carry out the revaluation on a contract by contract basis as demonstrated in the example. The dealer (or trader) is usually aware at all times of the risk in his position and the level of profit or loss in the accounts. The revaluation is performed by personnel not reporting to the dealer and results are provided to senior management. In an active position, it is usual revalue the entire position at the spot rate and to create a maturity schedule showing net short and long positions in fifteen day periods permitting calculation of the forward adjustment using the differentials off the spot rate.

The basic rule in revaluation of forward positions is:

Long Position - Forward at premium = Profit
                Forward at discount = Loss

Short Position- Forward at premium = Loss

Forward at discount = Profit

It is also essential to install procedures which require written confirmation of each forward trade by both parties to the transaction. Such confirmations must further be matched against accounting entries to insure accurate and timely recording of all transactions. An undisclosed open position, whether accidental or by intent, often leads to unexpected losses before being closed out.

The test of reasonable accuracy is basically a test of reasonable rate input. This is usually accomplished by matching forward and spot rates applied against information from other market sources.

The forward exchange market holds risks other than those caused by fluctuation in spot and forward prices. The same standards as are generally applied in evaluating credit risks on loans must be applied to the counterparty in an exchange contract to minimize delivery and settlement risk.

Delivery risk is the term used to describe the risk of non delivery by a client committed to deliver exchange at a future date. Delivery risk is a pure rate movement risk in that the financial intermediary has taken anticipated delivery into its position (including revaluation for profit purposes) and is faced at maturity with a need to buy in cover to liquidate an unexpected short on a forward purchase, or to sell exchange to liquidate the unexpected long position on a forward sale. Such purchase or sale is effected on the spot market at the current spot rate different from the original forward contract rate. A loss or profit can result from this type of transaction. The degree of delivery risk is determined by the usual range of rate movement in a given currency market over a given period of time. As a general rule, for currencies traded actively, or currencies pegged to an actively traded currency, banks consider delivery risk to be the 10% of the equivalent loan risk. For example, a customer who commands a credit line for direct loans of D 50,000, may qualify for a forward line of D 500,000, as the risk borne by the bank in the forward line is limited to the cost of buying in spot cover, while the loan risk is failure to repay funds already disbursed.

Settlement risk, in contrast to delivery risk, is virtually the same as loan risk. This is the term used to describe the risk caused by failure to settle of one side of a forward exchange contract, and is more difficult to understand. In granting a loan, the bank is appraising the ability of a borrower to repay an obligation on a specified future date. Fulfillment of a forward exchange contract requires that a bank deliver one currency to the account of its client, while the client must deliver another currency to the account of the bank. Assume that the bank has contracted to sell $100,000 three months forward to a client against Dalasis. The financial condition of the borrower deteriorates significantly during the time between execution of the forward and settlement date. The day before settlement, the bank cables it's New York correspondent to debit it's account and pay away Dollars as ordered by the client value tomorrow.

On settlement date, the client cannot produce the required Dalasi while the Dollars are paid away in New York. The bank is in the position (if the client is still in business and in the country) of extending unsecured credit on an involuntary basis. This issue becomes infinitely more complex on cross currency deals, i.e. delivery of Deutsche Marks vs. Dollars where the bank will not know if effective delivery has been made until the day following settlement or for some days thereafter.

Settlement risk is a very real credit risk which applies to both commercial and bank counter-parties in exchange transactions. Significant losses have been incurred in both commercial and bank failures in recent years as a result of lack of attention to settlement risk.

In conclusion, the reader must bear in mind that the foregoing discussion touches on the simpler factors considered by the bank and commercial trader in practicing the art of exchange trading. An experienced trader will often seize profit opportunities in managing a position not based on readily discernable economic factors, but rather on his sense of which direction the market is taking. Currency prices on world markets will generally move prior to announcement of economic data as traders position to take advantage of what is expected to be announced. Market rumor plays a large part in such movements. The reader must also bear in mind that the method illustrating revaluation in the examples presented is not the only method used in the science of accounting for exchange transactions. Systems will vary both from bank to bank and country to country. Required timimg of revaluation and the recording of profit and loss will show considerable varience depending upon the prescribed accounting practices within a given country. It is usual in the United States to revalue and book profits or losses at the close of each month, while many United Kingdom banks revalue and take profit or loss every six months. The method adopted in monitoring operation of the position must be that which is usual in the country of domicile and must be clearly understood by both the banks operating within that country and the agencies charged with the supervision of such banks.