

Understanding South African Financial Markets

Chapter 14: The foreign exchange market



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Study outcomes

When you have studied this chapter you should be able to

- describe the structural organisation of the spot financial markets
- describe the essence of the foreign exchange market
- explain the basis of the foreign exchange market: the exchange of deposits
- explain the basic concepts of the foreign exchange market: what an exchange rate is, rate quotation convention, two-way prices, spreads, cross-rates, etc.
- describe the foreign exchange derivatives
- elucidate the role of the banks in the foreign exchange market
- appreciate the importance of exchange rates.



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Introduction

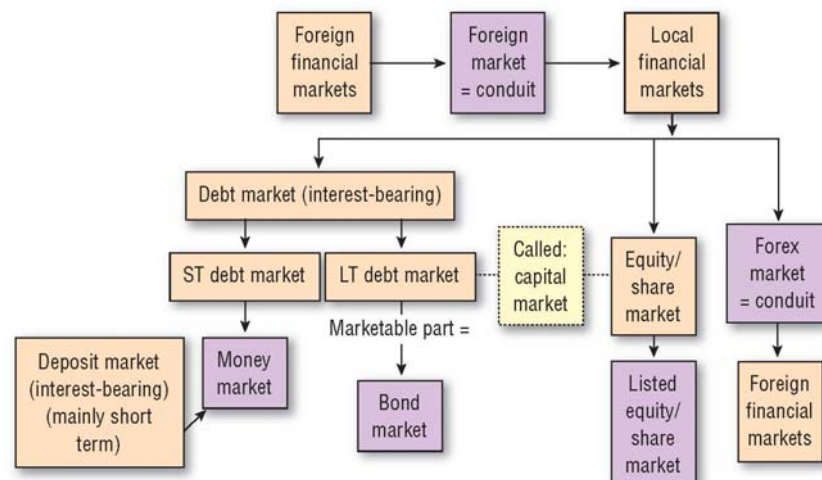
Overview

- The foreign exchange market in a nutshell
- Organisational structure of the forex market
- Monetary unit
- Foreign exchange and bank deposits
- International spot rate quotation conventions
- Two-way spot prices
- Spread
- Cross-rates
- Foreign exchange risk: appreciation and depreciation
- Forex derivatives instruments
- Participants
- Why exchange rates are important
- Published foreign exchange market information

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The foreign exchange market in a nutshell

Figure 14.1 Financial markets (Textbook page 426)



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The foreign exchange market in a nutshell

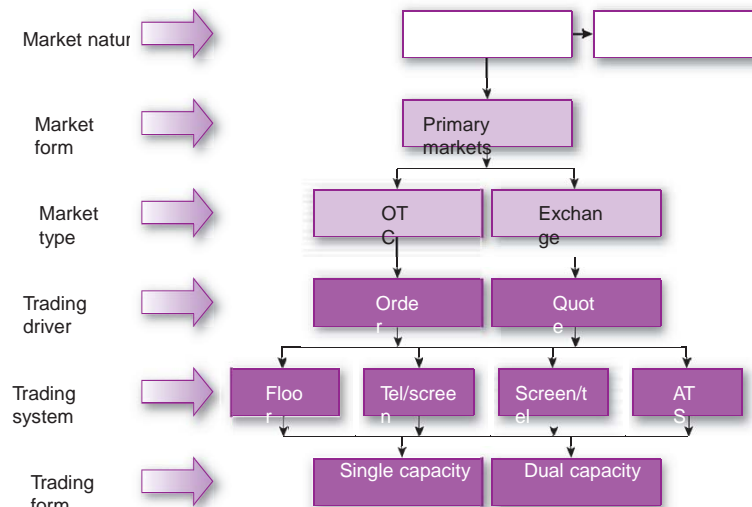
Table 14.1 Demand for and supply of forex (Textbook page 426)

Demand for forex	Supply of forex	BoP account
Importers	Exporters	Trade account
Foreign services used: transport, travel, etc.	Domestic services used: transport, travel, etc.	Services account
Outward payments: interest, dividends, etc.	Inward payments: interest, dividends, etc.	Income account
Outward investment	Inward investment	Capital account
Foreign borrowing locally	Domestic borrowing offshore	Capital account
Bank net purchase	Bank net sale	Forex reserves

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Organisational structure of the forex market

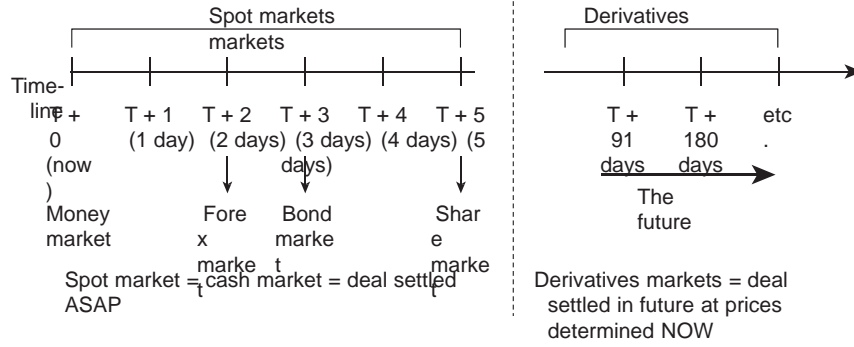
Figure 14.2 Organisational structure of the forex market (Textbook page 428)



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Organisational structure of the forex market

Figure 14.3 Spot and forward settlement (derivatives markets) (Textbook page 429)



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Monetary unit

Figure 14.4 Steps in a forex/investment transaction (Textbook page 433)



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Foreign exchange and bank deposits

Balance sheet 1: SA Exporter (millions)			
Assets (ZAR)		Liabilities (ZAR)	
Goods (exported)	- 100		
US bank deposit	+ 100		
Assets (USD)		Liabilities (USD)	
Goods (exported)	- 10		
US bank deposit	+ 10		

Balance sheet 2: US Importer (USD millions)			
Assets		Liabilities	
Goods (imported)	+ 10		
US bank deposit	- 10		

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Foreign exchange and bank deposits

Balance sheet 3: US Banking system (USD millions)			
Assets		Liabilities	
Deposits – US Importer	-10		
Deposits – SA Exporter	+10		

Balance sheet 4: SA Exporter			
Assets (ZAR)		Liabilities (ZAR)	
US treasury bills	+ 100		
US bank deposit	- 100		
Assets (USD)		Liabilities (USD)	
US treasury bills	+ 10		
US bank deposit	- 10		

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Foreign exchange and bank deposits

Balance sheet 5: US Banking system (USD millions)			
Assets		Liabilities	
Treasury bills	-10	Deposits – LC Exporter	-10

Balance sheet 6: SA Exporter (ZAR millions)			
Assets		Liabilities	
Goods	- 100		
Local country bank deposit	+ 100		

Balance sheet 7: SA Bank (ZAR millions)			
Assets		Liabilities	
US bank deposit	+ 100	Deposits – LC Exporter	+100

Figure 14.4 Steps in a forex/investment transaction (Textbook page 433)

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International spot rate quotation conventions

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Two-way spot prices

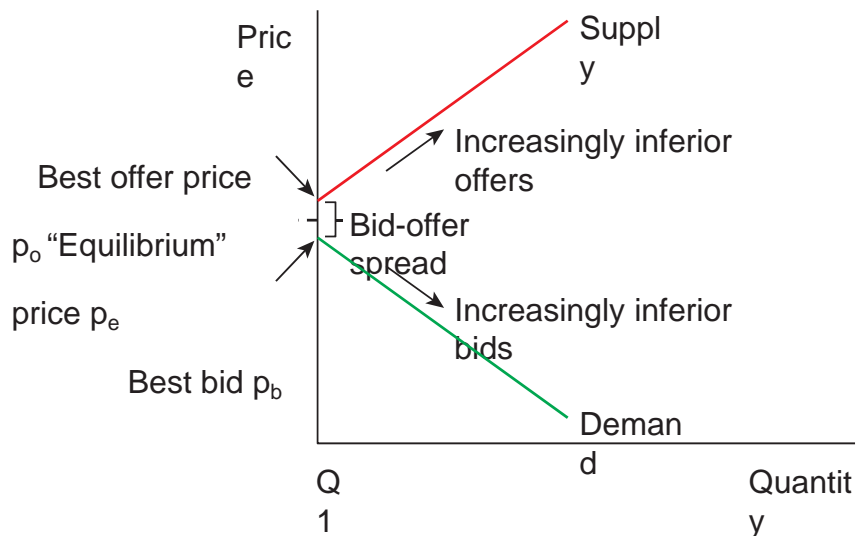
Table 14.2 Spot exchange rates against the USD (Textbook page 435)

Country	Closing midpoint	Foreign currency units per USD	
		Bid	Offer
RSA (ZAR)	7,3450	7,3400	7,3500
Canada (CAD)	0,9839	0,9829	0,9849
Japan (JPY)	85,94	85,92	85,96
Switzerland (CHF)	0,9016	0,9014	0,9018

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Spread

Figure 14.5 Bid and offer prices and spread (Textbook page 436)



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Cross-rates

Table 14.3 Currency cross-rates (Textbook page 437)

Foreign currency per home currency unit (read per row)	Home currency per foreign currency unit (read per column)					
		GBP	EUR	JPY	USD	ZAR
GBP		1	1,1568	131,7480	1,6088	11,1457
EUR		0,8654	1	113,9240	1,3916	9,5460
JPY		0,007602	0,008786	1	0,012224	0,08460
USD		0,6216	0,7191	81,9059	1	6,9280
ZAR		0,0911	0,1049	11,8203	0,1465	1

[F.14.1](#)

[F.14.2](#)

[F.14.3](#)

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Foreign exchange risk: appreciation and depreciation

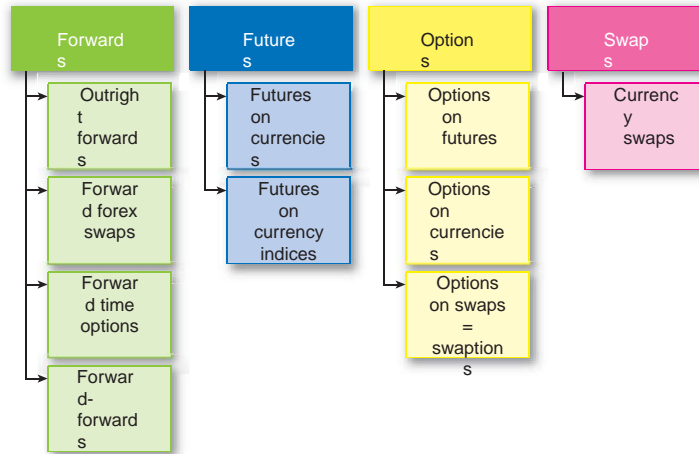
[F.14.4](#)

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Forex derivatives instruments

Introduction

Figure 14.6 Derivative instruments of the forex market (Textbook page 443)



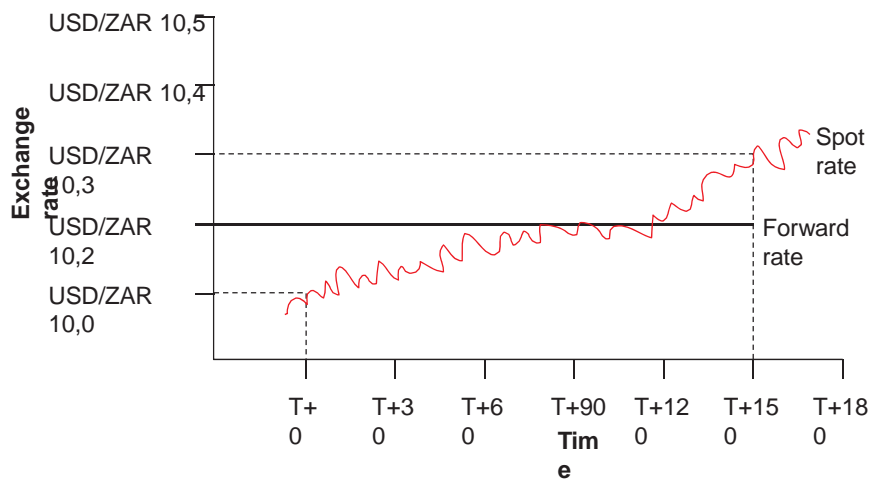
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Forex derivatives instruments

Currency forwards

- Introduction

Figure 14.7 Example of spot and forward rates (Textbook page 444)



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Forex derivatives instruments

Currency forwards

- **Outright forwards**
 - Pricing of outright forward contracts
 - Forward premiums and discounts

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Forex derivatives instruments

Currency forwards

- **Forex swaps**

Table 14.4 Cash flows (1) (Textbook page 448)

Date	Quoting bank (Bank A)	Customer (Bank B)	Customer (Bank C)
Swap deal date	– USD 1 000 000 + ZAR 7 560 000		+ USD 1 000 000 – ZAR 7 560 000
30 days later	+ USD 1 000 000 – ZAR 7 619 000		– USD 1 000 000 + ZAR 7 619 000
Net cash flow	– ZAR 59 000		+ ZAR 59 000

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Forex derivatives instruments

Currency forwards
Forex swaps

Table 14.5 Cash flows (2) (Textbook page 449)

Date	Quoting bank (Bank A)	Customer (Bank B)	Customer (Bank C)
Swap deal date	+ USD 1 000 000 – ZAR 7 560 000		– USD 1 000 000 + ZAR 7 560 000
30 days later	– USD 1 000 000 + ZAR 7 620 000		+ USD 1 000 000 – ZAR 7 620 000
Net cash flow	+ ZAR 60 000		– ZAR 60 000

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Forex derivatives instruments

Currency forwards
Forex swaps

Table 14.6 Cash flows (3) (Textbook page 449)

Date	Quoting bank (Bank A)	Customer (Bank B)	Customer (Bank C)
Swap deal date	USD 0 ZAR 0	+ USD 1 000 000 – ZAR 7 560 000	– USD 1 000 000 + ZAR 7 560 000
30 days later	USD 0 + ZAR 1 000	– USD 1 000 000 + ZAR 7 619 000	+ USD 1 000 000 – ZAR 7 620 000
Net cash flow	+ ZAR 1 000	+ ZAR 59 000	– ZAR 60 000

- Utilising the forex swap market with the purpose of managing forex reserves

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Forex derivatives instruments

Currency forwards

- Influencing ZAR liquidity in the banking system**

Balance sheet 8: SA Exporter (ZAR millions)			
Assets		Liabilities	
Goods (1)	-100		
US Bank deposit (forex) (1)	+100		
US Bank deposit (forex) (2)	-100		
SA Bank deposits (2)	+100		
Total	0	Total	0

Balance sheet 9: SA Bank (ZAR millions)			
Assets		Liabilities	
Forex (from SA Exporter) (2)	+100		
Forex (sold to SARB) (3)	-100	Deposits of SA Exporter (2)	+100
Reserves at SARB (3)	+100		
Total	+100	Total	+100

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Forex derivatives instruments

*Currency forwards**Influencing ZAR liquidity in the banking system*

Balance sheet 10: SARB (ZAR millions)			
Assets		Liabilities	
Forex (3)	+100	Bank reserves (3)	+100
Total	+100	Total	+100

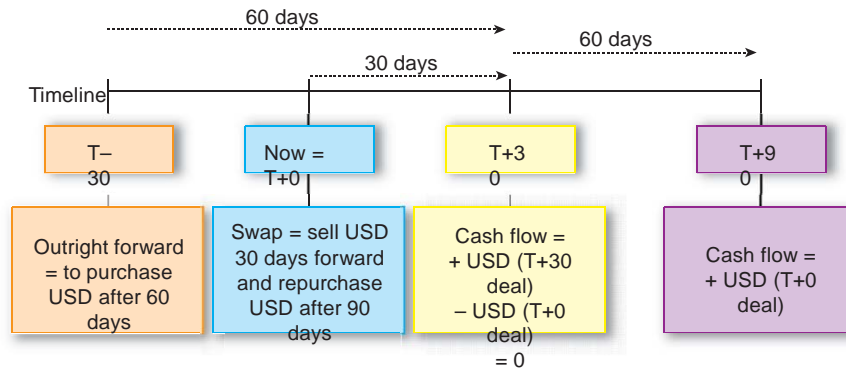
Balance sheet 11: SA Bank (ZAR millions)			
Assets		Liabilities	
Forex (4)	+100		
Reserves at SARB (4)	-100		
Total	0	Total	+0

Balance sheet 12: SARB (ZAR millions)			
Assets		Liabilities	
Forex (4)	-100	Bank reserves (4)	-100
Total	-100	Total	-100

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- *Time options*
- *Forward-forwards*

Figure 14.8 Forward-forward deal (Textbook page 452)

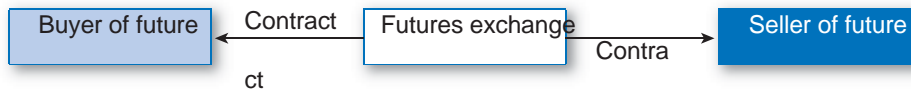


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Currency futures, options and swaps

- *Introduction*
- *Futures*

Figure 14.9 Participants in futures deal (Textbook page 453)




- *Options*
- *Swaps*

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Participants

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Why exchange rates are important

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Published foreign exchange market information



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