3 Investment instruments

3.1 Learning outcomes

After studying this text the learner should / should be able to:

- Elucidate the categories of investments.
- Distinguish the investments of the financial system.
- Differentiate the non-financial investments.
- Describe the investments of the investment vehicles and their underlying investments.
- Elucidate the asset classes.

3.2 Introduction

This main section on "Investment instruments" is preceded by the main sections:

- Four phases of the life-cycle.
- The financial system.

It is followed by the main section "Investment principles". In the preceding main sections we differentiated the two categories and the subcategories of investments:

- Ultimate investments:
  - Financial investments instruments (issued by ultimate borrowers):
    - Debt instruments.
    - Share (aka stock and equity) instruments.
  - Real investments:
    - Property (also called real estate).
    - Commodities.
    - Other real investments (art, rare coins, antique furniture, etc.).
- Indirect investment instruments (issued by financial intermediaries):
  - Issued by banks: deposit instruments.
  - Issued by quasi-financial intermediaries: debt instruments.
  - Issued by investment vehicles: participation interests.

Investors hold the *ultimate investments* either directly or indirectly by holding the securities of financial intermediaries. This of course means that while they invest in the securities of the financial intermediaries, they ultimately are holding the *ultimate investments*. The financial intermediaries essentially facilitate this, for example by accepting small amounts of funds from individuals; they also offer diversification in the investment, a vital principle in investments (i.e. a risk management tool as we shall see later).

Many individuals do hold ultimate investments in the form of shares. Almost all individuals hold bank deposits. However, the majority of individuals hold the majority of their assets in the securities [recall that we refer to their securities or products collectively as "participation interests" (PIs)] issued by the investments vehicles (ignoring property for a moment). The investment vehicles are as follows:

- Contractual intermediaries (CIs):
  - Retirement funds.
  - Life insurers (note: only endowment policies & annuities are investments).
- Collective investment schemes (CISs):
  - Securities unit trusts (SUTs).
  - Property unit trusts (PUTs).
  - Exchange traded funds (ETFs).
- Alternative investments (AIs)
  - Hedge funds (HFs).
  - Private equity funds (PEFs).

As noted, PIs are the liabilities of the investment vehicles; they are the instruments which are held by the individual investors. On the asset side of the investment vehicles' balance sheets are the ultimate investments. The investment vehicles exist to facilitate the investment by individuals (and some retirement / other funds) in the ultimate investments. They reduce transactions costs (which are high with ultimate investments) and manage investments on behalf of investors in PIs.

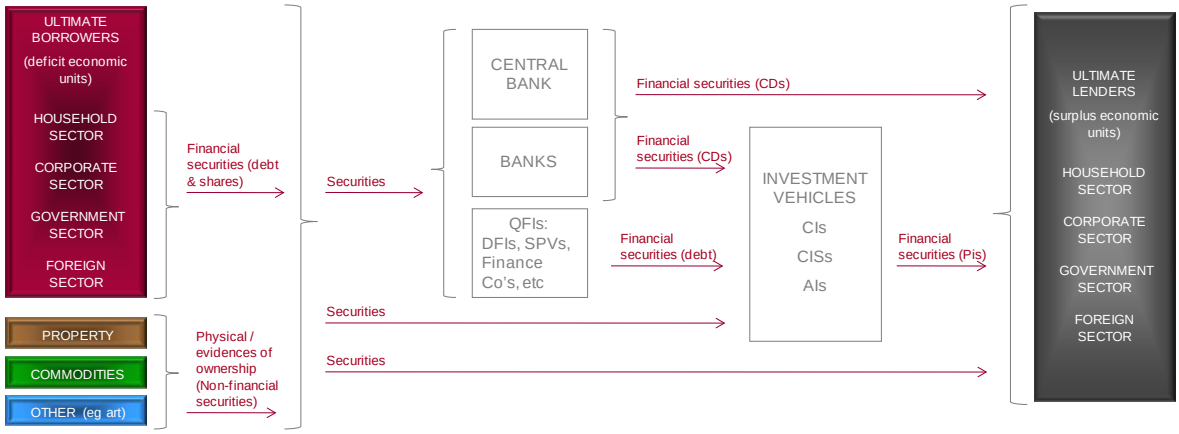


Figure 1: financial intermediaries & instruments (securities) (simplified)

We also differentiated the financial markets of the financial system as follows:

- Short-term debt market (STDM + the deposit market = money market).
- Long-term debt market (LTDM ; marketable part = bond market).
- Shares (listed shares = share market; unlisted shares).
- Forex market (no lending and borrowing; therefore no investment instruments).
- Derivative markets (futures and options can be used as substitutes for investments).

All the investments instruments can be depicted as in Figure 1.

We have given the financial system and its markets most of the attention thusfar – because they deliver the investments most favoured. In this main section we cover the detail of these investments, as well the detail of the real investments, which are held to some degree by investors. We cover them under the following sections:

- Time value of money.
- Money market instruments.
- Bond market instruments.
- Share market instruments.
- Derivative market instruments: futures and options.
- Real investments.
- Investment vehicles.
- Foreign investments.
- Asset classes.

3.3 Time value of money

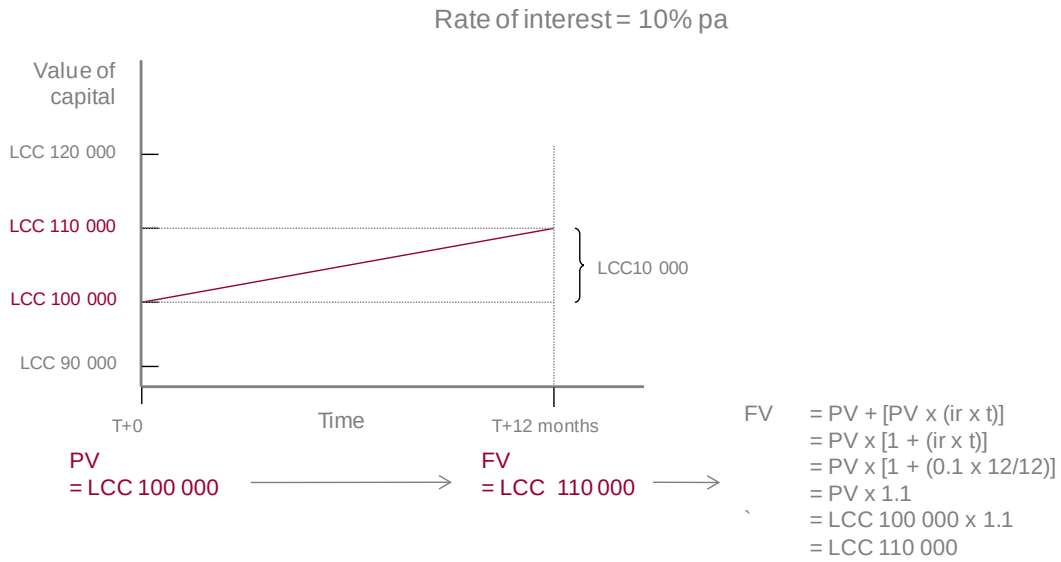


Figure 2: time value of money (PV to FV)

Before we begin with the investment instruments an essential principle needs to be understood: the time value of money (TVM). This is a fancy term for *interest* and the concepts of present value (PV) and future value (FV). The rate of interest for the relevant period is applied to the PV in order to calculate the FV. Figure 2 depicts the TVM.

This simply means that if an amount of LCC[30] 100 000 (= PV) is invested now for a year at a rate of 10% pa it will have a FV of:

$$
\begin{aligned}
FV &= PV + [PV \times (ir \times t)] \qquad (ir = \text{interest rate for period; } t = \text{term}) \\
&= PV \times [1 + (ir \times t)] \\
&= LCC\ 100\ 000 \times [1 + (0.10 \times 12/12)] \\
&= LCC\ 100\ 000 \times 1.10 \\
&= LCC\ 110\ 000.
\end{aligned}
$$

Conversely (see Figure 3), if an investment has a FV of LCC 110 000, and the applicable interest rate (now called *discount rate*) is 10% pa, it has a PV of:

$$
\begin{aligned}
PV &= FV / (1 + (ir \times t)] \\
&= LCC\ 110\ 000 / [1 + (0.10 \times 12/12)] \\
&= LCC\ 110\ 000 / 1.1 \\
&= LCC\ 100\ 000.
\end{aligned}
$$

The TVM principle applies in all the financial markets, in respect of valuation of financial instruments, as we will see shortly and again later.

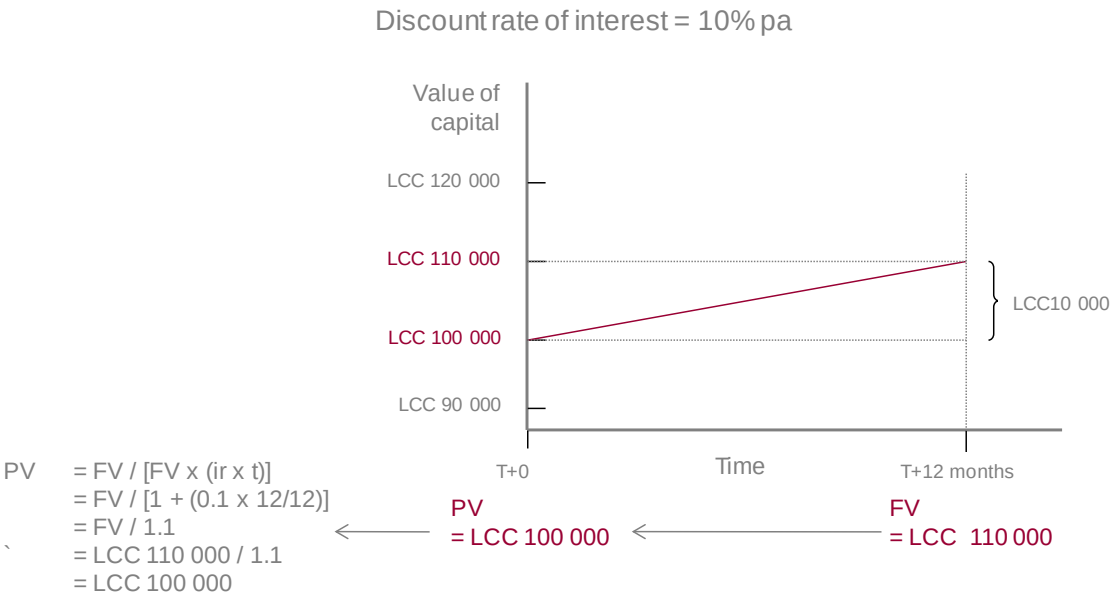
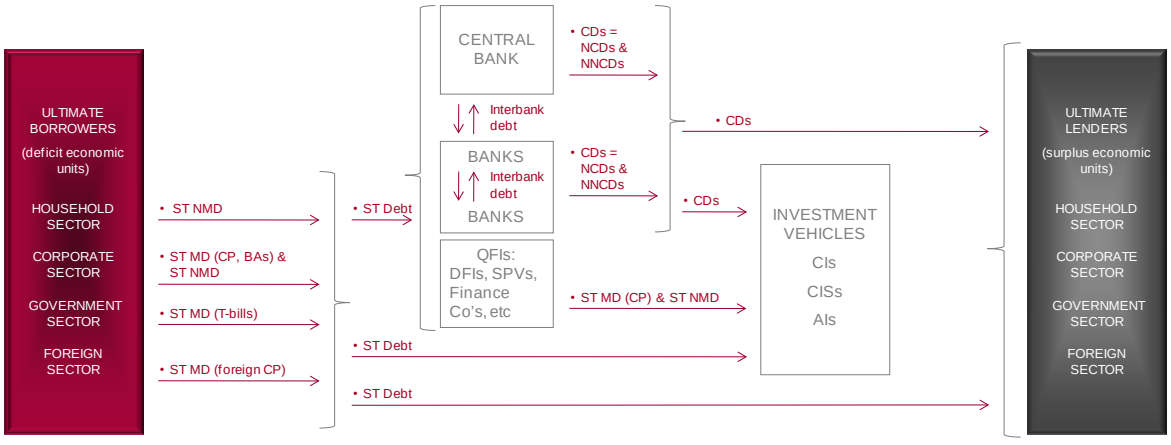


Figure 3: time value of money (FV to PV)

3.4 Money market instruments

A reminder of the money market and its instruments is presented in Figure 4.



MD = marketable debt; NMD = non-marketable debt; CP = commercial paper; BAs= bankers' acceptances; CDs = certificates of deposit (= deposits); NCDs = negotiable certificates of deposit; NNCDs = non-negotiable certificates of deposit;

Figure 4: money market

This information may also be presented (more elucidatory) as in Table 1.

	Short-term non-marketable debt (STNMD) & deposits	Short-term marketable debt (STMD) & deposits
ULTIMATE BORROWERS		
Household sector	Loans from banks	X
Corporate sector	Loans from banks	CP (also BAs, PNs in the past)
Government sector	Loans from banks (local authorities & provinces)	TBs (central government only)
Foreign sector	X	Foreign CP
FINANCIAL INTERMEDIARIES		
Central bank	NNCDs	NCDs*, notes & coins
Private sector banks	NNCDs	NCDs
Quasi-financial intermediaries	Loans from banks	CP

CP = commercial paper; BAs = bankers' acceptances; PNs = promissory notes; NNCDs = non-negotiable certificates of deposit; NCDs = negotiable certificates of deposit.

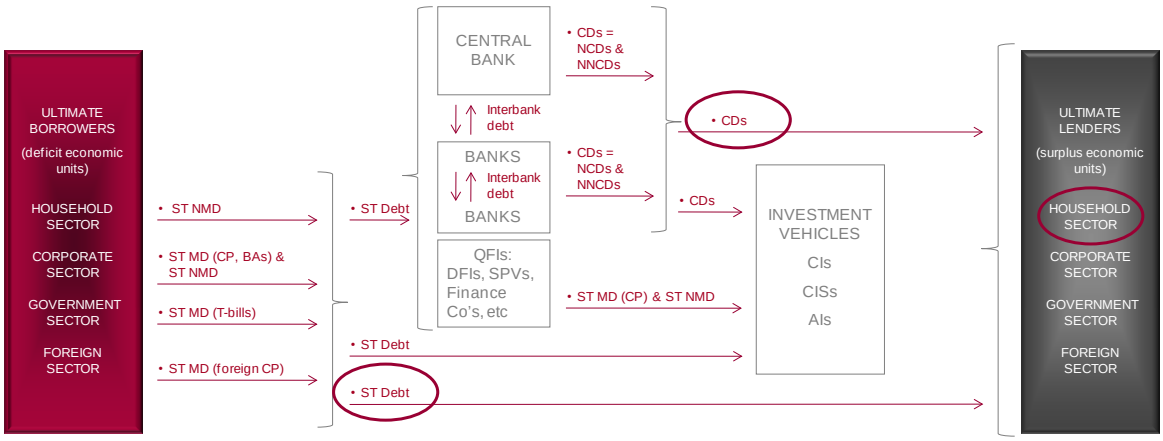
* Central bank (CB) securities, which are akin to NCDs.

Table 1: Money market instruments / securities

The household sector will not be familiar with all these money market investments (or will not invest in them). In general, the household sector will tend to invest in bank deposits in the form of NNCDs, and some may purchase small-denomination TBs.

As is well known, bank deposits yield interest, and here the PV-FV concept applies. If you deposit LCC 100 000 (= PV) with a bank at 10% pa for 180 days the bank will present you a NNCD that states you will get back an amount of LCC 104 931.51 (= FV) after 180 days, calculated as follows:

$$\begin{aligned} FV &= \text{LCC } 100\,000 \times [1 + (0.10 \times 180 / 365)] \\ &= \text{LCC } 100\,000 \times 1.0493151 \\ &= \text{LCC } 104\,931.51. \end{aligned}$$



MD = marketable debt; NMD = non-marketable debt; CP = commercial paper; BAs= bankers' acceptances; CDs = certificates of deposit (= deposits); NCDs = negotiable certificates of deposit; NNCDs = non-negotiable certificates of deposit;

Figure 5: money market investments for the individual investor

BOX 1: TREASURY BILL

TBs and some other money market instruments work a little differently. They pay back a round amount (called the nominal or face value) at maturity (= FV). If the nominal value is LCC 100 000 (= FV), the term is 180 days and the discount rate is 10% pa, you pay for the TB (= PV):

$$\begin{aligned} PV &= \text{LCC } 100\,000 / [1 + (0.10 \times 180 / 365)] \\ &= \text{LCC } 100\,000 / 1.0493151 \\ &= \text{LCC } 95\,300.26 \end{aligned}$$

You will earn LCC 100 000 – LCC 95 300.26 = LCC 4 699.40 on the investment. An example of a TB is presented in Box 1.

3.5 Bond market instruments

A reminder of the bond market and its instruments is presented in Figure 6 and Table 2 (for interest Table 2 also lists LTNMD). From these it will be seen that there are 5 categories of bonds issuers:

- Corporate sector (private).
- Public enterprises (which are incorporated).
- Government sector (central & local).
- Foreign sector (called foreign bonds).
- Special purpose vehicles (called SPV bonds).

	Long-term non-marketable debt (LTNMD)	Long-term marketable debt (LTMD) (bond market)
ULTIMATE BORROWERS		
Household sector	Mortgage loans from banks	X
Corporate sector	Mortgage & other LT loans from banks	Corporate bonds
Government sector	X (not usually)	• Central government (& local authority) bonds • State-owned enterprise (aka public enterprises) bonds
Foreign sector	X	Foreign bonds
FINANCIAL INTERMEDIARIES		
Central bank	X	X
Private sector banks	X	X
Quasi-financial intermediaries	LT loans from banks	Corporate bonds, SPV bonds
SPV = special purpose vehicles.		

Table 2: Bond market instruments / securities

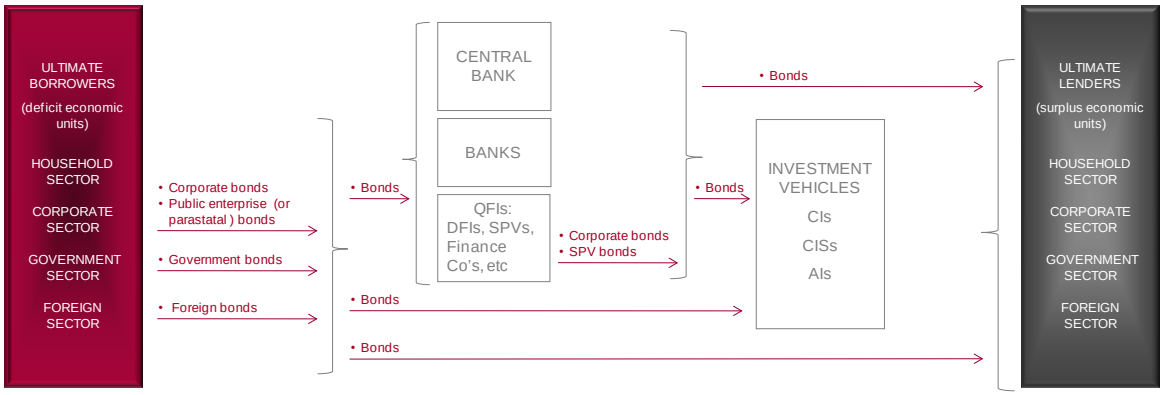


Figure 6: bond market instruments

Worldwide, there is a wide variety of bond-types as follows:

- Plain vanilla bonds.
- Bearer bonds versus registered bonds.
- Perpetual bonds versus fixed-term bonds.
- Floating rate bonds versus fixed-rate bonds.
- Inflation-linked bonds.
- Zero coupon bonds versus coupon bonds.
- Call bonds.
- STRIPS.
- Convertible bonds.
- Exchangeable bonds.
- Bonds with share warrants attached.
- General obligation bonds.
- Revenue bonds.
- Serial bonds.
- Catastrophe bonds.
- Asset-backed bonds.
- Senior, subordinated, junior and mezzanine bonds.
- Junk bonds.
- Guaranteed bonds.
- Pay-in-kind bonds.
- Split coupon bonds.
- Extendable bonds.
- Islamic bonds.
- Foreign bonds.
- Eurobonds.
- Global bonds.
- Retail bonds. [31]

Figure 7: example of plain vanilla bond (3-year maturity; nominal value LLC 100 000; coupon 10% pa)

The most common bond is the first-mentioned: the *plain vanilla bond* (PVB). Probably 95% of bonds are of this variety. It has a fixed maturity date and pays a fixed rate of interest called a *coupon*. This is the bond that the household sector will tend to invest in because it is available in small denominations. The PVB bond issued by government will be favoured because the rate earned is called the risk-free-rate (rfr). It is called this because government has the power to tax and raise revenue to repay these bonds (and the coupon rate). A simplified example is called for (see Figure 7 and Box 2):

Nominal / face value:	LCC 100 000
Term to maturity:	3 years
Coupon:	10% pa
Interest payable:	annually in arrears.

If you buy this bond you will be paid interest pa of LCC 10 000 (= 10% pa on LCC 100 000), irrespective of the rate at which the bond trades in the secondary market after issue. Just like in the case of shares, bonds are bought and sold and price (rate) discovery takes place in the secondary market which is a function of supply and demand [and of course the central bank's (CB's) key interest rate (KIR) which determines the start of the yield curve]. Two issues need to be elaborated upon here:

- The term *rate of interest* does not apply in the case of bonds. Rather, because of multiple cash flows in the future (all are FVs), the secondary market rate that applies here is an *average rate* earned over the life of the bond, which is called the *yield to maturity* (ytm).
- It will be evident that if you buy the bond at an ytm of 10% pa (which equals the coupon of 10% pa, the price of the bond will be 1.0 (i.e. you will pay LCC 100 000 for it). However, if you sell the bond in the secondary market at an ytm lower than the coupon rate (remember it is fixed), then the price of the bond will be higher than 1.0, and you will make a capital gain. Conversely, if you sell the bond are an ytm higher than the coupon rate, the price will be lower than 1.0, and you will make a capital loss.

In this way, bonds are similar to shares. The holding period return (HPR) on a PVB over a will be (P_0 = purchase price of bond; P_1 = selling price of bond):

$$\text{HPR} = (P_1 - P_0) \times \text{nominal value of bond.}$$

Any coupon income is incorporated in the valuation formula, as we will see later.

BOX 2: EXAMPLE OF PLAIN VANILLA BOND

3.6 Share market instruments

As we saw earlier there are two types of shares:

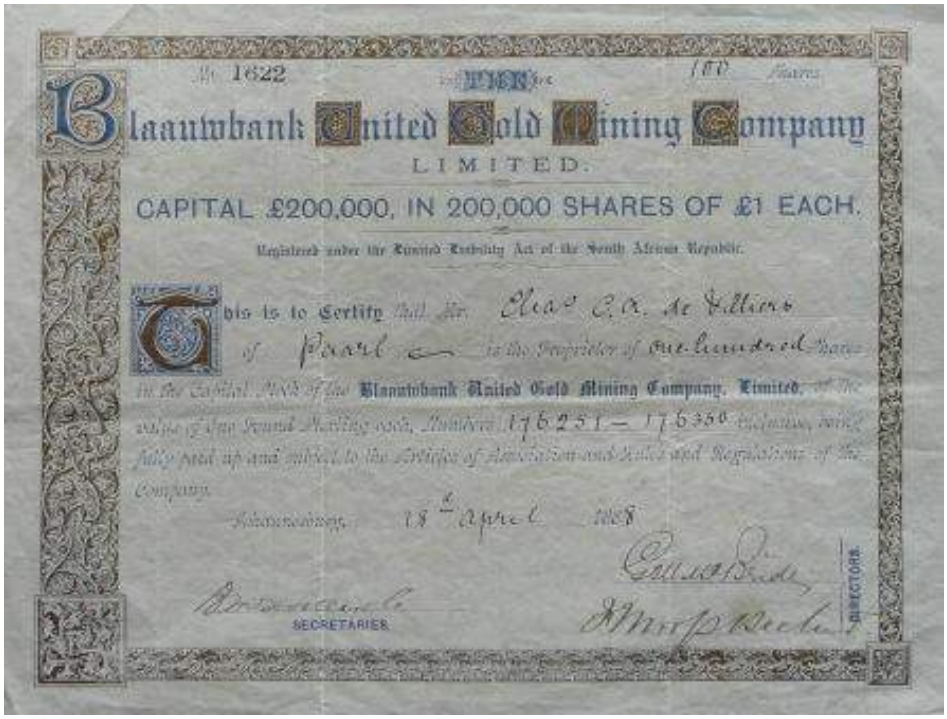
- Ordinary shares.
- Preference shares.

The latter are similar to PVBs in that they have a fixed maturity date (in most cases), a nominal / face value and a coupon (called a dividend). As these instruments are only available in large-denominations only the high net worth (HNW) members of the household sector invest in them (and in fact only a few of them).

Ordinary shares, on the other hand, are the bread of investors, small and large. The small investor may either hold shares directly or via investment vehicles (covered later).

An example of a share is presented in Box 3. The company had a share capital of £ 200 000 and each share had a nominal value of £ 1.0, meaning there were 200 000 shares issued. Thus, when the company was formed and its shares were subscribed for, its balance sheet presented as indicated in Box 4.

BOX 3: EXAMPLE OF ORDINARY SHARE



BOX 4: INITIAL BALANCE SHEET OF BLAAUWBANK UNITED GOLD MINING COMPANY LIMITED (£)

Assets		Capital and liabilities	
Bank deposit	200 000	Share capital	200 000

If the company invested its cash assets (= bank deposit) in a sound mining venture and made say a £ 40 000 after-tax profit the first year, and paid out dividends of half this, i.e. £ 20 000, each shareholder would receive a dividend of £ 0.10 per share (assume 100 pence per £) (£ 20 000 / £ 200 000). Mr de Villiers, the holder of the share certificate in Box 3, i.e. the holder of /investor in 100 shares, would have received a dividend of £ 10 (£ 0.1 × 100 shares). This equals a return of 10% over the period the shares were held (£ 10 / £ 100 × 100).

As we know, shares trade in the secondary market where price discovery takes place, and capital gains and losses can be made. Assuming the "market" (i.e. investors in general) reacted positively to the performance of the company and the dividend paid [= a dividend yield of 10% (£ 20 000 / £ 200 000 × 100)], the share price would have risen. If the "market" was expecting the share market norm for mining companies of a dividend yield of 5%, the share price could have risen to £ 2 per share. For new investors, the new share price delivers, based on the "historical dividend paid" (HDP), a dividend yield (DY) of 5%:

DY = HDP per share / share price × 100
= £ 0.1 / £ 2 × 100
= 5%.

Thus Mr de Villiers' HPR per share (P_1 = selling price of share; P_0 = purchase price of share; D = dividend per share) is:

$$\begin{aligned} HPR &= [(P_1 - P_0) + D] / P_0 \\ &= [(2 - 1) + 0.10] / 1 \\ &= (1 + 0.10) / 1 \\ &= 1.10 \\ &= 110\%. \end{aligned}$$

As we will see later, while the share market delivers superior returns over the long-term, it is accompanied by a high level of risk. There is an immense variety of shares: Table 3 demonstrates the vast categories of shares internationally, according to industry, supersector, sector and subsector.

Industry	Supersector	Sector	Subsector
Oil & gas	Oil & gas	Oil & gas producers	Exploration & production
			Integrated oil & gas
		Oil equipment & services	Oil equipment & services
			Pipelines
Basic materials	Chemicals	Chemicals	Commodity chemicals
			Specialty chemicals
	Basic resources	Forestry & paper	Forestry
			Paper
		Industrial Metals	Aluminium
			Nonferrous metals
			Steel
		Mining	Coal
			Diamonds & gemstones
			General mining
			Gold mining
			Platinum & precious metals
Industrials	Construction & materials	Construction & materials	Building materials & fixtures
			Heavy construction
	Industrial goods & services	Aerospace & Defence	Aerospace
			Defence
		General industrials	Containers & packaging
			Diversified industrials

Industry	Supersector	Sector	Subsector
		Electronic & electrical equipment	Electrical Components & Equipment
			Electronic Equipment
		Industrial engineering	Commercial vehicles & trucks
			Industrial machinery
		Industrial transportation	Delivery Services
			Marine Transportation
			Railroads
			Transportation Services
			Trucking
		Support services	Business support services
			Business training & employment agencies
			Financial administration
			Industrial suppliers
			Waste & disposal services
Consumer goods	Automobiles & parts	Automobiles & parts	Automobiles
			Auto Parts

Industry	Supersector	Sector	Subsector
			Tyres
	Food & beverage	Beverages	Brewers
			Distillers & Vintners
			Soft Drinks
		Food producers	Farming & fishing
			Food products
	Personal & household goods	Household goods	Durable household products
			Nondurable household products
			Furnishings
			Home construction
		Leisure goods	Consumer electronics
			Recreational products
			Toys
		Personal goods	Clothing & accessories
			Footwear
			Personal products
		Tobacco	Tobacco
Healthcare	Healthcare	Health care equipment & services	Health care providers
			Medical equipment
			Medical supplies
		Pharmaceuticals & biotechnology	Biotechnology
			Pharmaceuticals
Consumer services	Retail	Food & drug retailers	Drug retailers
			Food retailers & wholesalers
		General retailers	Apparel retailers
			Broadline retailers
			Home improvement retailers
			Specialised consumer services
			Specialty retailers
	Media	Media	Broadcasting & entertainment
			Media agencies
			Publishing
	Travel & leisure	Travel & leisure	Airlines

Industry	Supersector	Sector	Subsector
			Gambling
			Hotels
			Recreational services
			Restaurants & bars
			Travel & tourism
Telecommunications	Telecommunications	Fixed line telecommunications	Fixed line telecommunications
		Mobile telecommunications	Mobile telecommunications
Utilities	Utilities	Electricity	Electricity
		Gas, water & multiutilities	Gas Distribution
			Multiutilities
			Water
Financials	Banks	Banks	Banks
	Insurance	Nonlife insurance	Full line insurance
			Insurance brokers
			Property & casualty insurance
			Reinsurance

Industry	Supersector	Sector	Subsector
		Life insurance	Life insurance
	Financial services	Real estate	Real estate holding & development
			Real estate investment trusts
		General Financial	Asset managers
			Consumer finance
			Specialty finance
			Investment services
			Mortgage finance
	Investment instruments	Equity investment instruments	Equity investment instruments
		Non-equity investment instruments	Non-equity investment instruments
Technology	Technology	Software & computer services	Computer Services
			Internet
			Software
		Technology hardware & equipment	Computer Hardware
			Electronic Office Equipment
			Semiconductors
			Telecommunications Equipment
Basic data obtained from: www.jse.co.za			

Table 3: FTSE / DOW Jones industry classification system (industry classification benchmark – ICB)

3.7 Derivative market instruments: futures and options

We said earlier that futures and options can be seen as substitutes for outright investments. These terms may appear intimidating, but the instruments are not. If on T+0 you buy a futures contract that expires on T+180 on 1 000 shares of Blaauwbank United Gold Mining Company Limited (BUGMIC) at £ 2.20 (when the share is trading at £ 2.0), it means that you have an *obligation* to buy 1 000 BUGMIC shares on T+180 at the stipulated price of £ 2.20, i.e. you *have to* pay £ 2 200 for the shares on T+180. In the meantime (on T+0) you only need to pay a "good faith deposit" (called a *margin*) of around 5% of the value of the contract = £ 110 (0.05 × 1 000 × 2.2).

You will buy the future because you believe on date T+0 that the price of BUGMIC shares will be higher than £ 2.20 on T+180. If you are right, and the price on T+180 is £ 2.50 per share, you will take delivery of 1 000 BUGMIC shares on T+180 and pay £ 2.20 per share for them. You will then be able to sell them at the market price of £ 2.50 per share, and make a £ 0.30 profit per share, i.e. a £ 300 profit (£ 0.3 × 1 000). You get the margin back plus interest.

The principle will be clear: you have a choice of buying the futures contract or borrowing funds at the going interest rate for 180 days and buying the shares outright. In other words, the FVP of the futures contract will be equal to the spot price of the share, escalated by the rate of interest of 180 days, less any dividends. If it is not, arbitrage opportunities exist. If it is, then it makes no difference to you to buy the future on BUGMIC shares or the shares themselves. We will return to this.

Another example of a futures deal is presented in Figure 8. It is self-explanatory. Note that the 90-day futures contract was sold and bought via the exchange at LCC 1 100, when the spot price was LCC 1 000. The latter is important for determining the futures contract price (discussed later), but becomes irrelevant once the deal is done. The wheat is delivered at LCC 1 100 on T + 90 (in this example when the spot price is much higher – see chart in Figure 8). The deal gave both parties price-certainty, but the flour miller gets the better deal (with hindsight).

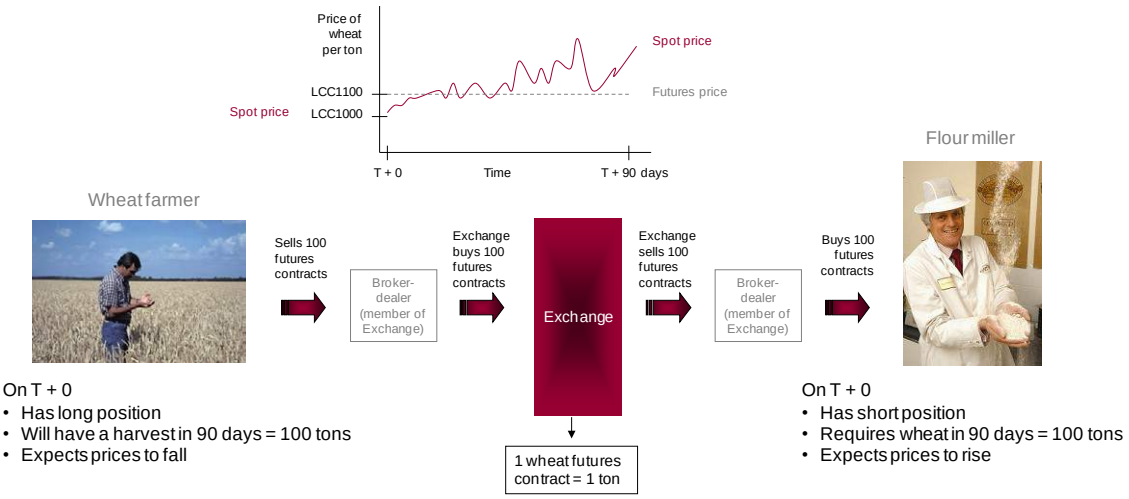


Figure 8: example of future contratct

Options are similar to futures, the difference being that you have the option (*not the obligation*) to buy (call option) or sell (put option) the shares between now (T+0) and expiry of the option contract (T+90). You will only exercise the option if it pays you to do so. You pay a price (called a *premium* as in the case of an insurance contract) for this right to buy or sell at a price determined on T+0.

Futures and options contracts are written on most of the instruments covered here, and retail-sized futures and options are also found in many markets. In many countries individuals can buy / sell futures and options on all the main currencies and many of the shares.

3.8 Real investments

3.8.1 Introduction

As we have seen, real investments are usually categorised into:

- Property.
- Commodities.
- Other (art, antiques, rare coins, rare stamps, etc.).

There are of course many subcategories to be found under each (see below). Real investments have many characteristics that differentiate them from financial assets such as:

- Zero recurring return (with exception of commercial property).
- Inflation hedge.
- Inefficient (illiquid) markets.
- High transactions costs.
- Insurance and storage (in the case of commodities and "other").
- High price volatility.
- Tangibility and pleasure (art, rare books, antiques).

3.8.2 Property Of the real investments, property is the most significant investment for the retail investor (individual), and it usually makes up a large percentage of the portfolio (when young – because the individual is obliged to have this asset). However, in the case of wholesale investors such as retirement funds, property makes up a small proportion of assets (in most countries around 3–5%).

There are many forms of property investment:

- Undeveloped land (zoned residential, industrial, office, etc.).
- Developed farm (fruit, cattle, game, etc).
- Residential (home).
- Multi-residential (block of flats).
- Retail (shopping centre, sectional title retail outlet).
- Office building.
- An office (sectional title).
- Industrial building.
- Leisure and tourism (hotel, resort, golf course, theme park).[32]

Undeveloped land is purchased either to:

- Benefit from a price appreciation that is higher than the risk-free rate (i.e. the minimum guaranteed return) after taxes that may be levied on the property transaction (e.g. capital gains tax).
- Improve the property with the purpose of selling the improved property for a capital gain that is higher… (the statement above applies here also). An example is the building of a block of flats with the purpose of selling them under sectional title. (In fact often the developer will only start building once a certain number of flats have been sold – to lessen risk)
- Improve the property with the purpose of deriving a recurring rental income into the future. Examples are the building of a block of flats and the building of a shopping centre.

With the exception of a residential home, the rest of the forms of property investment are held with the objective of rental income (or income in the case of a farm) in the main. Capital gain is usually a secondary motive, unless the economic environment is one of high inflation. Then, capital gain becomes the primary objective of investment.

As we will see later, the valuation of income-generating property is related to interest rates, i.e. the income on interest bearing assets, the domain of the financial system's money and bond markets.

3.8.3 Commodities

As we have seen, "commodities" is the term for real assets / investments such as precious metals, grain, base metals, etc. These assets produce no recurring income, and are invested in for capital gains only. There are many ways in which to categorise commodities, such as[33]:

- Hard commodities (non-perishable products or non-consumables)
  - Metals
    - Precious metals
      - Gold
      - Platinum
      - Palladium
      - Silver
    - Non-precious metals
      - Base metals
      - Ferrous metals
      - Alloys
  - Minerals
    - Phosphates
    - Coal
    - Oil
    - Gas
- Soft commodities (perishable products or consumables)
  - Agricultural products
    - Crops
      - Vegetables
      - Fruits
      - Grain
      - Oilseeds
    - Livestock
      - Grazing
      - Poultry
      - Pigs
    - Products from livestock
      - Wool
      - Leather
      - Meat
  - Fishing products
    - Fish
    - Crustaceans.

Generally speaking investment portfolios do not contain a large proportion of commodities. The reason, as noted, is that commodities do not produce an income[34]. Also, it is rare that *commodity* portfolios contain consumable products[35]. Where investment portfolios contain commodities, the commodities are usually of the precious metal variety, particularly gold, platinum, silver and so on.

Precious metal investments take on many forms such as bullion, but the norm is coins, because of the convenience (compared with bullion). As noted, commodities do not yield a recurring return, only capital gains. Precious metals are also notably volatile at times; gold, for example, is a popular investment in time of unrest and uncertainty.

Often, investment in commodities takes the form of investment in investment vehicles, such as securities unit trusts (SUTs) and exchange traded funds (ETFs) (to be discussed later), mining shares and so on.

3.8.4 Other real investments

"Other real investments", as we have briefly seen, include investments in items such as:

- Art of masters (such as Rembrandt).
- Antique furniture.
- Rare stamps.
- Rare books.
- Rare coins.

Generally speaking, investments in these items, and in certain commodities (such as gold and diamonds), are not undertaken by the large investors such as retirement funds, but by high net worth individuals and reflect motivations such as:

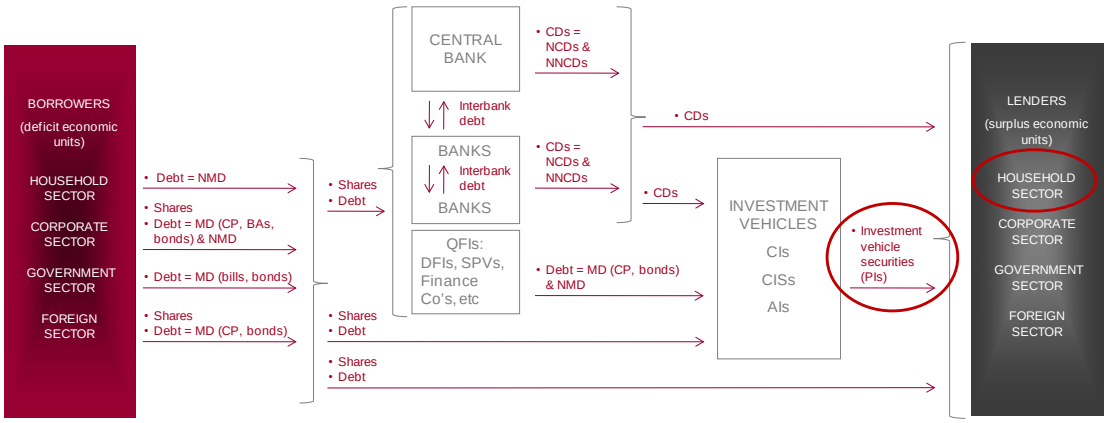
- The desire for diversification of personal investments.
- Personal satisfaction (aesthetic value).
- Survival (as in times of war).
- Inflation hedging.

To this category one can add other investments that do not have an aesthetic value, such as "tank containers". These investments have currency hedging and tax advantages

Generally, investors expect capital gains from all real assets, and a return only on certain non-undeveloped properties in the form of regular rental income. Many individual investors regard their residential property as their sole investment in real assets, because it generally makes up a large proportion of their assets.

3.9 Investment vehicles

3.9.1 Introduction



MD = marketable debt; NMD = non-marketable debt; CP = commercial paper; BAs= bankers' acceptances; CDs = certificates of deposit (= deposits); NCDs = negotiable certificates of deposit; NNCDs = non-negotiable certificates of deposit; foreign sector issues foreign shares and foreign MD (foreign CP & foreign bonds); PI = participation interest

Figure 9: financial instruments / securities: participation interests

The financial system is again presented in Figure 9. The securities issued by the three investment vehicle categories (which we call participation interests – PIs) are highlighted, as well as the household sector (as the main lenders) which is our interest here. The institutions under each category are:

- Contractual intermediaries (CIs):
  - Long-term insurers (LTIs).
  - Retirement funds (RFs).
- Collective investment schemes (CISs):
  - Securities unit trusts (SUTs).
  - Property unit trusts (PUTs).
  - Exchange traded funds (ETFs).
- Alternative investments (AIs):
  - Private equity funds (PEFs).
  - Hedge funds (HFs).

As can be seen, the investment vehicles jointly are holders of the securities issued by the ultimate borrowers and other financial intermediaries [debt (and deposits) and shares]. Not shown here is that certain of the investment vehicles also hold certain real assets.

3.9.2 Long-term insurers

In most countries the statute covering life companies (long-term insurers / assurers) makes provision for the following different *classes of life business*. The insurers are obliged to register under one or more of these classes:

- Assistance
- Disability
- Fund
- Health
- Life
- Sinking fund

The products of these classes are called *policies*, for example, assistance policies, life policies, and so on. Figure 10 illustrates the classes of business and indicates that the only products which can be regarded as investment products are *life insurance / assurance policies*[36]. Life policies are classified into two categories:

- Endowment policies.
- Annuity policies.

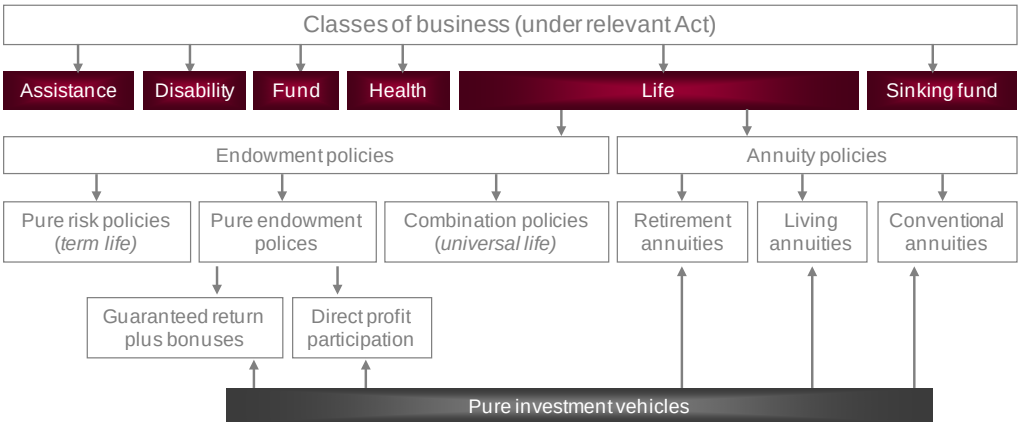


Figure 10: life company business

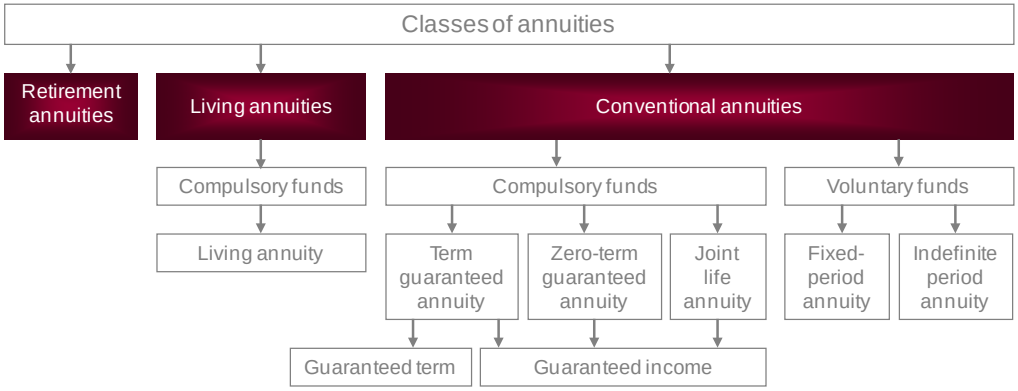


Figure 11: classes of annuities

The *endowment policies* that apply to individuals are:

- Pure risk policies (called *term life* and *risk life assurance* policies).
- Pure endowment polices.
- Combination policies (called *universal life* policies).

Of the endowment policies the *pure endowment policy* is the only one which is a pure investment vehicle. There are two broad categories:

- Guaranteed return plus bonuses.
- Direct profit participation.

All *annuity policies* are pure investment vehicles; there are three types:

- Retirement annuities.
- Living annuities.
- Conventional annuities.

Figure 11 illustrates the various types of annuities.

3.9.3 Retirement funds

Retirement funds (RFs) are the best-known investment vehicles. By retirement, most individuals' share of the fund of which they are a member (called member's interest, undivided share, participation interest) represents their largest asset; usually the next largest asset in terms of value is their residential property.

Retirement funds are *contractual savings institutions*, and they are akin to savings plans. Persons employed (the participants or members) and/or their employers contribute a certain amount of funds per time period (usually monthly) to the fund. This usually takes place during the working lifetime of the members, the *purpose being to provide financially for retirement.*

There are three types of retirement fund:

- Pension fund (also called defined benefit fund – rules of the fund provide for a specified benefit at retirement).
- Provident fund (also called defined contribution fund – rules of the fund do not commit the fund to a particular benefit; the company and the employee contribute a specified amount to the fund).
- Preservation fund (a "parking" fund until retirement required by statute when a retirement fund participant leaves employment).

3.9.4 Securities unit trusts

The most popular investment vehicle for individuals is the securities unit trust (SUT). The structure of a SUT is straightforward (see Figure 12). Put simply, the SUT issues PIs (units) (say 100 000) to investors at a price (say LCC 100 per unit) and with the funds purchases the listed shares, bank deposits etc to the value of the total funds available (LCC 10 000 000). If the value of the shares, etc. increases to LCC 12 000 000 (which is easily measured because the instruments are listed) a month later, each PI (unit) is now worth LCC 120 (minus the costs of managing the SUT).

There is a wide variety of SUTs; the broad categories are:

- Asset allocation flexible funds
- Asset allocation prudential high equity funds
- Asset allocation prudential low equity funds
- Asset allocation prudential medium equity funds
- Asset allocation targeted absolute return funds
- Equity value funds
- Equity financial and industrial funds
- Equity financial sector funds
- Equity general funds
- Equity growth funds
- Equity industrial funds
- Equity large cap funds
- Equity resources and basic industrial funds
- Equity smaller companies funds
- Equity varied specialist funds
- Fixed interest bond funds
- Fixed interest income funds
- Fixed interest money market funds
- Fixed interest varied specialist funds
- Foreign equity general funds
- Foreign equity varied specialist funds
- Foreign fixed interest bond funds
- Foreign fixed interest varied specialist funds
- Foreign asset allocation flexible funds
- Real estate (see below)
- Worldwide asset allocation flex funds
- Worldwide equity varied specialist funds
- Worldwide equity technology funds

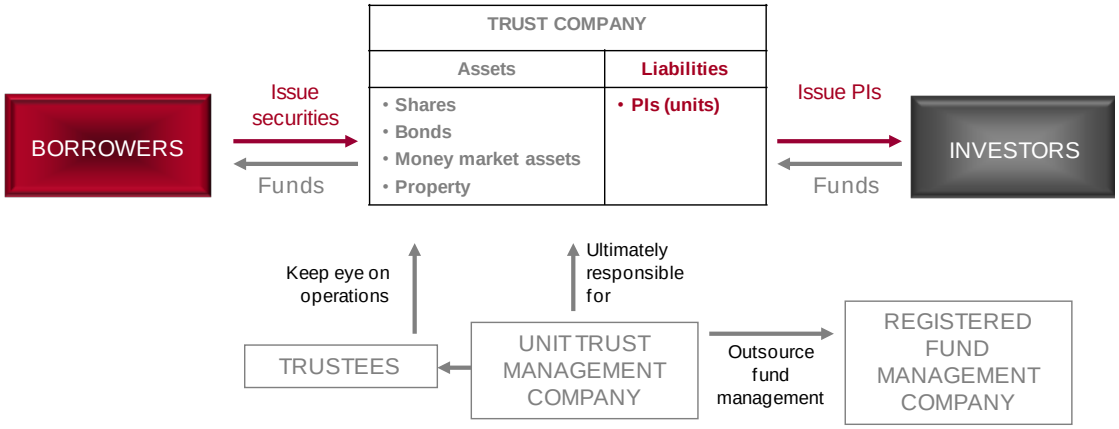


Figure 12: operational structure of securities unit trust (SUT)

Within all or some of the categories there are:

- Specific SUTs.
- Funds of funds (FoFs) (SUTs that are comprised of other SUTs).
- Multi-managed funds (multi-managed SUTs – MMSUTs).
- Multi-managed FoFs (comprised of selected MMSUTs).

3.9.5 Property unit trusts

Property unit trusts (PUTs) are similar to SUTs in every respect except (mainly) in the nature of the asset portfolio (property) and the fact that they are listed. The purpose of a PUT is to provide smaller investors easy (i.e. small-amount) access to the property investment market, diversity in the property investment market, and professional management of the portfolio.

3.9.6 Exchange traded funds

An exchange traded fund (ETF), also called a *tracker fund*, is a fund set up to track a particular index. It is a type of investment company whose investment objective is to achieve the same return as a particular market index. It invests in the securities of companies / government / commodities that are included in a particular market index. This means that the fund has liabilities in the form of PIs (also called shares and securities) which are listed on an exchange, and assets in the form of the specific shares / fixed-interest securities / commodities that make up the relevant index according to their weightings in the index.

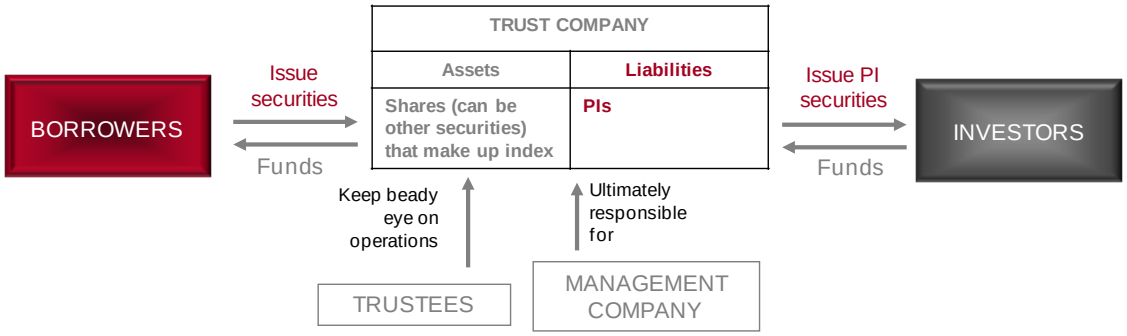


Figure 13: structure of an ETF

An investment in a share index ETF is an inexpensive way of gaining exposure to relevant segment of the share market, i.e. exposure is gained without having to purchase the individual shares that make up the index. Dividends are also payable to the holders of the shares of the ETF. The structure of an ETF is shown in Figure 13.

It may be useful to present a few foreign definitions / explanations of ETFs; The US Securities and Exchange Commission (SEC – the watchdog of the US securities industry) defines an ETF as:

> "…a type of investment company whose investment objective is to achieve the same return as a particular market index. An ETF is similar to an index fund in that it will primarily invest in the securities of companies that are included in a selected market index. An ETF will invest in either all of the securities or a representative sample of the securities included in the index. For example, one type of ETF, known as Spiders or SPDRs, invests in all of the stocks contained in the S&P 500 Composite Stock Price Index."

The American Stock Exchange (Amex)[37]:

> "Exchange Traded Fund(s): are open-ended registered investment companies…which have received certain exemptive relief from the SEC to allow secondary market trading in the ETF shares. ETFs are index-based products, in that each ETF holds a portfolio of securities that is intended to provide investment results that, before fees and expenses, generally correspond to the price and yield performance of the underlying benchmark index."

Examples of ETFs in the US are shown in Table 4.

			INDEX TRACKED
Share ETFs	Broad market ETFs		Russell 3000
			Wilshire 5000
	Major index-tracking ETFs		Dow Jones Industrial Average
			S&P 500
	Market sector ETFs	US domestic sectors	Dow Jones US Financial
			Dow Jones US Industrial
		Global sectors	S&P International Industrial
			International Technology
	Style ETFs	Large-cap ETFs	Russell 1000
		Mid-cap ETFs	S&P MidCap 400
		Small-cap ETFs	S&P SmallCap 600
	International ETFs	Country ETFs	MSCI Australia
		Regional ETFs	S&P Europe 350
		International theme ETFs	MSCI Emerging Markets
Commodity ETFs	Agricultural ETFs		Rogers International Commodity
	Energy commodity ETFs		Rogers Energy
	Industrial commodity ETFs		Dow Jones-AIG Copper
	Precious metals ETFs		COMEX Gold Trust
Bond ETFs			Barclays 7–10 Year Treasury
Real estate ETFs			Dow Jones US Real Estate
Leveraged & short ETFs	Short ETFs		Short Dow 30
	Leveraged ETFs		Ultra NASDAQ-100
	Leveraged short ETFs		Dow 30 ProShares

Table 4: Examples of US ETFs

3.9.7 Private equity funds

Private equity fund (PEF) means a pool of funds that is available for investment in or are already invested in unlisted companies. The motivation for the formation of PEFs is usually to provide funding for entrepreneurial-type businesses that are highly regarded and to profit from the listing of these unlisted companies at some stage in the future. This institution is mentioned here for the sake of completeness. Individuals rarely invest in PEFs.

Private equity has become a separate asset class (some would say "becoming"), and in most countries where private equity funds exist so do industry associations. Private equity is associated with venture capital in that venture capital is seen as a form of private equity (start-up capital for the smaller companies). In most (if not all) cases the industry associations include this term. For example, the South African industry association is called the South African Venture Capital and Private Equity Association (SAVCA), the European one is named European Private Equity and Venture Capital Association (EVCA), the Italian one is called Italian Private Equity and Venture Capital Association (AIFI), and so on.

It should be evident that private equity funds are akin to investment companies on the liability side of their balance sheets, whereas their assets are comprised of investments in non-listed companies only, as opposed to investments in listed shares and other investments such as bonds and money market instruments in the case of CISs.

3.9.8 Hedge funds

A hedge fund (HF) is akin to a pooled fund such a unit trust and a retirement fund in that it takes in funds from investors and invests the funds on behalf of them in financial assets. However, it differs in that it has: less of the statutory limitations of the other collective investment schemes (i.e. pooled funds), a large relatively proportion of funds taken in is forthcoming from the management company and the fund managers and, apart from being a "normal" investment vehicle (i.e. a "long only" investment vehicle), it is able to:

- Use leverage (i.e. borrow funds – apart from the funds of investors).
- Go "short" of securities.
- Engage in derivative transactions.

This institution is mentioned here for the sake of completeness. Individuals rarely invest in HFs.

3.10 Foreign investments

Foreign assets are comprised of the same asset classes as local assets. This is obvious because assets classes are the same worldwide. The difference between the asset classes in smaller countries and those in the larger economies is that the variety of assets in the larger economies is vast; in fact so vast that small country fund managers tend, in their foreign asset class selection, to rely on the expertise of foreign fund managers or invest in these markets via foreign investment vehicles.

There are many considerations in foreign investment selection, the most significant of which are currency risk and the diversification opportunities: individual investors would be wise to spread their foreign investments among a number of currencies in order to reduce risk

3.11 Asset classes

We have briefly covered all the investment assets that are available to investors. A summary is provided in Figure 14 (showing that international asset groupings are the same as local assets groupings), and a different perspective is presented in Figure 15. In the institutional investment industry, fund managers refer to "asset classes". They are as shown in Table 4.

Financial assets:	**Notes:**
Shares	Held directly (with some exceptions): • Ordinary shares • Preference shares
Bonds	Held directly (with some exceptions): • Government bonds • State-owned enterprise (SOE) bonds • Corporate bonds • SPV bonds • Foreign bonds
Money market	Held directly (with some exceptions): • Treasury bills • Commercial paper • NCDs & NNCDs
Hedge funds & private equity funds	Held directly
Real assets:	**Notes:**
Property	Held directly: • Commercial buildings Held indirectly: • Mainly PUTs
Commodities	Held directly: • Mainly precious metals Held indirectly: • Commodity ETFs

Table 4: Asset classes of institutional investors

As indicated earlier, the asset classes are held in different proportions, and generally in the order indicated in Table 4. Note that foreign assets are a proportion of the local asset classes, and generally apply to shares and bonds.

Note the addition of hedge funds and private equity funds in Table 4, which are regarded by some as a separate asset class, and the absence of "other real assets", i.e. art, rare stamps, antique furniture, etc (there are exceptions to the rule).

What is the "institutional investment industry" and who are the "fund managers"? The terms are synonymous, and refer to companies (they are not financial intermediaries, but are robustly-regulated) that manage funds on behalf of the *large investing institutions*, which are the *investment vehicles*. A reminder (see also Figure 15):

- Contractual intermediaries (CIs):
  - Retirement funds.
  - Life insurers (note: only endowment policies & annuities are investments).
- Collective investment schemes (CISs):
  - Securities unit trusts (SUTs).
  - Property unit trusts (PUTs).
  - Exchange traded funds (ETFs).
- Alternative investments (AIs)
  - Hedge funds (HFs).
  - Private equity funds (PEFs).

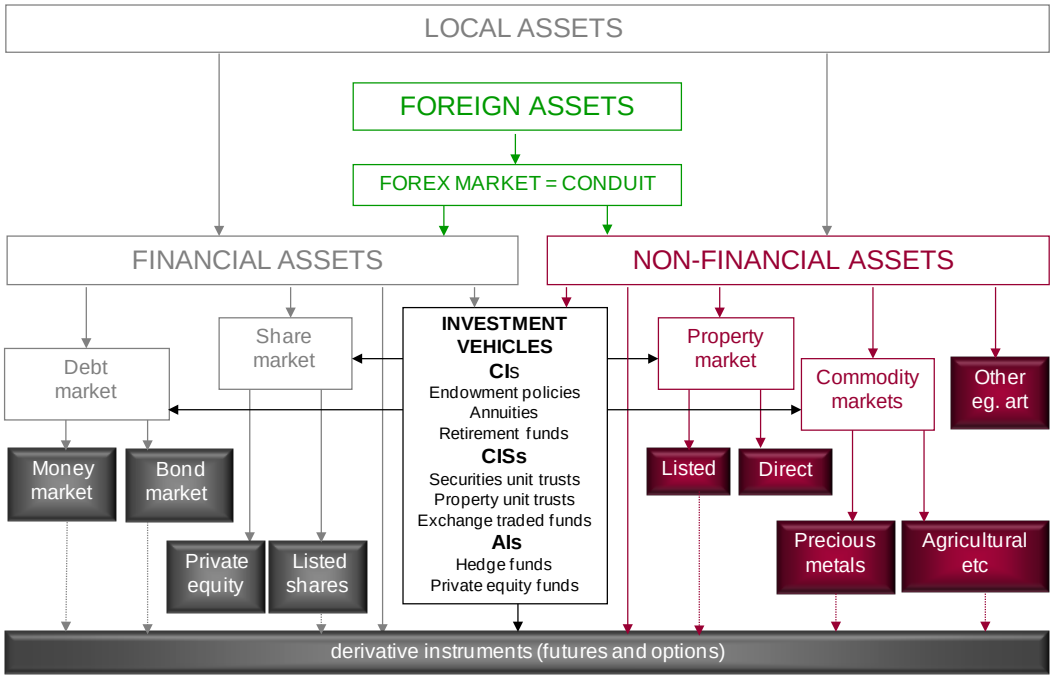


Figure 14: investments

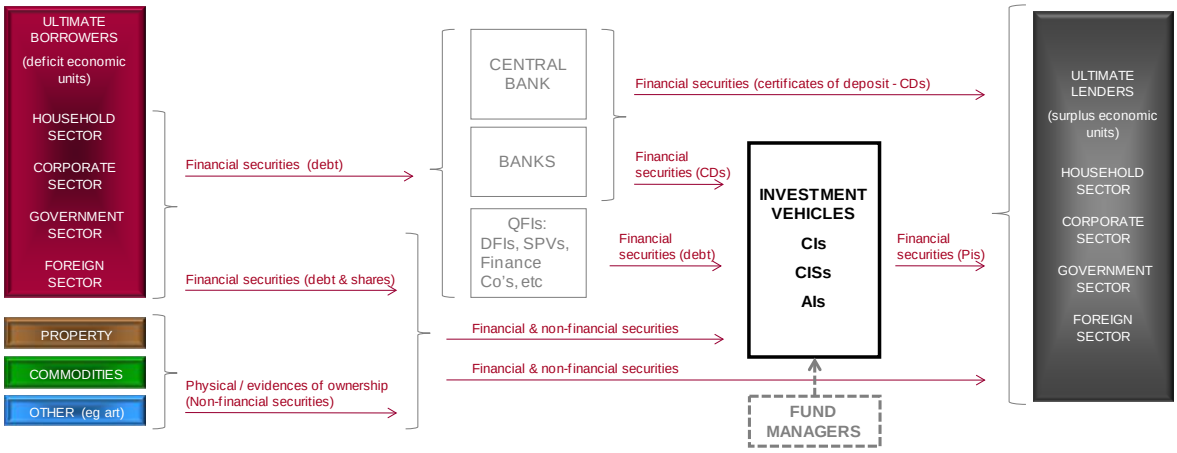


Figure 15: investments in broad groupings

As indicated, the "investment vehicles" essentially hold assets (the ultimate investments) on behalf of the holders of their liabilities, which we have termed PIs (indirect investments).

For individual investors, the asset classes are the same as above with the exception of hedge funds and private equity funds, and the addition of "other real assets" (see Table 5). The asset classes in Table 5 are not in order of funds allocation. It will be evident that individuals' holdings of the asset classes change over the life-cycle (which is discussed in more detail later).

Financial assets:	**Notes:**
Shares	Held in directly via CIs and CISs: • Ordinary shares • Preference shares Held directly (in the case of HNWI[1]) • Ordinary shares
Bonds	Held indirectly via CIs and CISs: • Government bonds • State-owned enterprise (SOE) bonds • Corporate bonds • SPV bonds • Foreign bonds Held directly: • Government bonds (retail bonds)
Money market	Held in directly via CIs and CISs: • Treasury bills • Commercial paper • NCDs & NNCDs Held directly: • NNCDs
Real assets:	**Notes:**
Property	Held in directly via CIs and CISs: • Mainly commercial buildings Held directly • Own residential property • PUTs
Commodities	Held directly: • Precious metals (gold coins) • Cattle (in some countries)
Other real assets	Held directly (by HNWI): • Antique furniture • Rare stamps and books • Art, etc.

Table 5: Asset classes of institutional investors

The above exposition was designed to provide the reader with an introduction to the investment instruments and asset classes, not to provide the detail. It should be seen as a broad overview.

3.12 Bibliography

Bodie, ZVI, Kane, A, Marcus, AJ, 1999. **Investments.** Boston: McGraw-Hill/Irwin.

Bradley, A, Higgins, E and Abey, A, 2000. **Fortune strategy: investment planning for the information age.** Mauritius: Investor Education.

Busetti, F, 2009. **The effective investor**. Johannesburg: Pan Macmillan.

Faure, AP and Ackerman, MPA, 2006a. **Investment analysis.** Cape Town: Quoin Institute (Pty) Limited.

Faure, AP and Ackerman, MPA, 2006b. **Portfolio management.** Cape Town: Quoin Institute (Pty) Limited.

Fourie, L, Codrington, G and Grant-Marshall, S, 2002. Mind over money. Johannesburg: Penguin Books.

Fourie, L, 2004. A video interview by JPM Faure, filmed by AP Faure.

Mayo, HB, 2003. **Investments: an introduction.** Ohio: Thomson South Western.

Michaud, R, 1998. **Efficient asset management.** Boston: Harvard Business School Press.

Mishkin, FS and Eakins, SG, 2000. **Financial markets and institutions** 3e. Reading, Massachusetts: Addison-Wesley.

Reilly, FK and Brown, KC, 2003. **Investment analysis and portfolio analysis** 7e. Ohio: Thomson South Western.

Reilly, FK and Norton, EA, 2003. **Investments** 6e. Ohio: Thomson South Western.

Rose, PS, 2000. **Money and capital markets** Int.e. New York: McGraw-Hill Higher Education.