



Finance Pass

CONSOLIDATED STUDY NOTES

For:

CISI

Chartered Institute for Securities & Investment

CAPITAL MARKETS PROGRAMME

SECURITIES

(Level 3)

Edition: 14 December 2018

Relating to syllabus version 18.0

Covering examinations from

22 March 2019 to 21 March 2020

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Capital Markets Programme

Securities (Level 3)

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Learning with Finance Pass Consolidated Study Notes

Finance Pass are providers of high quality eLearning material for professionals in the finance and investment industry. Our consolidated study notes are specifically designed to save time and enhance the learning experience of candidates taking professional finance examinations, principally with the Chartered Institute for Securities & Investment (CISI), the Chartered Financial Analyst Institute (CFA) and the Investment Management Certificate (IMC).

Full-time professionals who are exam candidates have limited time to read long, highly detailed course material more than once, it is often difficult to remember all the detail required and making notes is essential, but this is time consuming.

Finance Pass consolidated study notes are intended a stand-alone resource for exam preparation, they capture the required content of the approved course workbooks whilst at the same time removing unnecessary text and presenting the required content in a condensed, succinct, easy-to-digest format. Course workbooks consisting of several hundred pages of detailed information, that can often take days or even weeks to read and digest, are typically condensed into a document that can be read straight-through and clearly understood in usually less than a few days.

Ideally, exam candidates will have already read the approved course workbook and become familiar with the principles contained therein, although this is not essential. The consolidated study notes can then be used to reinforce, consolidate and bring together this knowledge and all the required material in a timely and efficient manner for an efficient exam preparation.

Section headings and numberings in the approved course booklets have been retained for ease of reference, where a section has been deleted the section numberings have not been changed.

For the longer, more detailed examination modules, the content is clearly marked as follows:

HIGH occurrence of examination questions

MEDIUM occurrence of examination questions

LOW occurrence of examination questions

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CHAPTER 2

ASSET CLASSES (24%)

1 EQUITIES

Divided into Ordinary shares and Preference shares

1.1 FEATURES OF ORDINARY SHARES

Ordinary shares (Common Stock in the USA):

Have voting rights, possible dividends, registered or bearer

Dividends proposed and ratified at **Annual General Meeting (AGM)**

Dividends paid only after Preference Shares have been paid

Can be sold for a profit/capital gain if demand increases

More than one class of ordinary share may be issued

e.g. some ordinary shares may be non-voting, or have more voting rights

Have a **nominal or par value** to be paid by shareholder in return for share

Sometimes not all nominal value is demanded at issue = **partly paid shares**

Redeemable shares are relatively unusual – can be bought back by company

Most ordinary shares are registered

1.2 TYPES OF PREFERENCE SHARE

Preference shares (Preferred Stock in the USA):

Usually no voting rights, fixed dividends (not guaranteed)

Higher rank in default than Ordinary shares

Dividends paid before ordinary shareholders

Can be voting if dividends are not paid for long time

Sometimes known as **Hybrid Securities**

Preference shares:

Cumulative: unpaid historical dividends to be paid before ordinary shareholders

Participating: option for higher dividends

Redeemable: company can buy back at pre-determined price (unusual, like debt)

Convertible: can convert to ordinary shares at pre-determined rate, e.g. 1:2

Zero Coupon: pays no dividend but redeems at a higher price than the issue price

Preference shares can have more than one of these characteristics.

2 DEBT INSTRUMENTS

2.1 FEATURES & CHARACTERISTICS

A **bond** is essentially an IOU, a loan to be paid back on maturity.

The **Principal / Nominal** value to be paid back on **Maturity Date/Redemption Date**
Pays a **coupon** (interest on nominal value), usually fixed, semi-annually

Floating Rate Bonds: has a variable coupon usually set by a published interest rate e.g.
London Interbank Offered Rate (LIBOR)

Index-Linked Bonds: coupon and principal amount repaid at maturity are adjusted according to rate of inflation/an inflationary index e.g. **Consumer Price Index (CPI)**

2.2 YIELDS

2.2.1 FLAT YIELD

$$\text{Flat Yield (\%)} = \frac{\text{Annual Coupon}}{\text{Market Price}} \times 100$$

Applicable for: short-term, non-tax paying investors

Limitations: No timed cash flow, no redemption cash flow, ignores interest rate changes on bond price

CALCULATE the Flat yield for:

a 3% Gilt maturing in 8 years priced at £99.25

$$\text{Flat Yield} = 3/99.25 \times 100 = \underline{\underline{3.02\%}}$$

2.2.2 GROSS REDEMPTION YIELD (GRY)

Also known as **Yield to Maturity (YTM)**

Gives a fuller measure of the yield, includes both coupon payments and any gain/loss from redemption payment through to maturity

Calculated using the discounted cash flow method described in 'The Present Value of a Bond' section later in this chapter.

$$\text{GRY (\%)} = \frac{\text{Sum of Discounted Cashflows}}{\text{Market Price}} \times 100$$

$$\text{Real Interest Rate} = \frac{(1 + \text{Nominal Interest Rate})}{(1 + \text{Inflation Rate})} - 1$$

Can be negative.

With rising inflation and interest rates, bond prices will fall to bring up the yield (coupon is usually fixed, but not always e.g. index-linked or floating-rate bonds)

e.g. in early 1980's UK and USA experienced interest rates of 20% due to surging commodity prices (e.g. oil) in late 1970's, consumer prices increased and the short-term interest rates had to be drastically increased.

3.2.3 Consumer Price Indices

Index-linked Bonds:

Coupon & redemption amount are increased by **Rate of Inflation** over life of bond.

They use **Consumer Prices Indices:**

Historically in UK, **Retail Price Index (RPI)**, based on cost of 300 consumer goods & services

Since 2003, the **Harmonised CPI (HICP)**, now called the **Consumer Price Index (CPI)**, CPI based inflation target set by BoE **Monetary Policy Committee (MPC)** is 2%/year

EU initially developed **HICP** to assess if prospective members of **European Monetary Union (EMU)** would pass required inflation convergence criterion

European Central Bank (ECB) then used **HICP (CPI)** as measure of inflation to assess price stability

European Union (EU) required all countries to use **CPI** for uniformity

Producer Price Indices (PPI)

Measure raw materials supply chain etc., used in early production process, factory-gate.

3.3 SEPARATE TRADING OF REGISTERED INTEREST & PRINCIPAL OF SECURITIES (STRIPS)

Zero Coupon Bond ZCB:

Pays no interest, pays only nominal at redemption

ZCB bond is issued at a discount to its face value.

Usually will be an ongoing CP issuance program (unlike bonds/long-term debt, in one go, CP is a rolling form of debt, subject to refinancing or **rollover risk**.

5.4 REPO MARKETS

Repo = Sale & purchase agreement, legally binding
e.g. Government bond in which the bond seller agrees to buy back the bond at a future time and lower price. Buyer uses bond for own liquidity etc.

Government Bond Repo is a means of borrowing using the bond as security

The Seller enters into a **Repo Transaction**, buys back bond at lower price.
The Buyer enters into a **Reverse Repo Transaction**.

Difference between seller & buyer cost is the **Repo rate**.

Pros: cheap source of short-term finance for seller, bond liquidity for buyer.

In the UK, the DMO's standing Repo facility enables the smooth running of the gilts market and provides liquidity for the overall debt market.

6 EUROBONDS

Eurobonds are International bond issues sold outside home country
Enables companies to issue debt to **overseas** investors.
Allows investors access to overseas markets and currencies.
Issued in any currency *other than* the currency of the bond-issuing country.

Eurobonds are issued as follows:

i) Issuer appoints Lead Manager:

Issuer works with an investment bank, defines maturity/coupon/other details, bank underwrites and guarantees amount raised, for a fee

ii) Lead Manager establishes syndicate:

For large issues, lead manager establishes a syndicate of banks, each bank will sell to their clients and underwrite their portion

iii) Syndicate distributes to client base:

Eurobonds are sold to the clients of syndicate of banks & issuer

Usually issued in bearer form (no register)

Largely free of National Regulation

Innovative structuring to accommodate issuers and investors

Pay interest gross, buyer responsible for paying taxes, avoiding withholding tax (WHT)

Various forms of bonds

8.2 SPOT AND FORWARD TRANSACTIONS

Spot market:

Immediate deal on T+2 settlement

e.g.

For GBP/USD Spot Rate 1.3055 – 1.3145:

£1 = \$1.3055 – \$1.3145, refers to buying and selling rate of USD = the **Bid-Offer Spread**.

£1 buys \$1.3055

\$1.3145 buys £1

Forward market:

Same as the Spot market except that currency deals are agreed for a future date, at a rate of exchange fixed now.

$\text{Forward Quote} = \text{Spot Rate} + \text{Forward Rate}$

CALCULATE Forward rate for GBP/USD quote spot \$1.3175 - \$1.3282, and 3-month forward rate is 1.10 – 0.98 cents **pm**,

Pm = premium in cents in 3 months' time.

A premium **pm** is used when USD is going to be more expensive to GBP, and a discount **dis** for visa-versa.

Resulting 3-month forward quote =

$$\$1.3175 - \$0.011 = \underline{\$1.3065 \text{ to sell GBP}}$$

$$\text{and } \$1.3282 - 0.0098 = \underline{\$1.3184 \text{ to buy GBP}}$$

Note: ADD the **dis** for discount quote (USD going to be less expensive than GBP).

CALCULATE the forward rate using a three-month forward rate of 0.85 – 0.89c **dis**:
(USD is going to be less expensive to GBP)

3-month forward quote =

$$\$1.3175 + 0.0085 = \underline{\$1.3260 \text{ to sell GBP}}$$

$$\text{and } 1.3282 + 0.0089 = \underline{\$1.3371 \text{ to buy GBP}}$$

The forward rate will always exhibit a **wider spread** than the spot rate.

8.2.1 INTEREST RATE PARITY (IRP)

Based on notion of **rational pricing and arbitrage**

i.e. Asset prices will reflect the **arbitrage-free** price of the asset as any deviation from this price will be arbitrated away.

IRP says that the spot and future prices for currency trades incorporate any interest rate differentials.

Forward exchange contract:

An agreement between two parties to buy/sell foreign currency at a fixed exchange rate for settlement at a future date.

Interest rates affect the forward rate
e.g. for GBP/USD:

$$\text{Forward Rate GBPUSD} = \text{GBP Spot Rate} \times \frac{(1 + \text{US USD Short term interest rate})}{(1 + \text{UK GBP Short term interest rate})}$$

This is purely mathematical, not a forecast of rates.

CALCULATE Forward Rate for:

GBPUSD Spot = 1.4780, and 3-month UK annual interest rate = 3.27%, and US = 2.12%

The 3-month forward exchange rate will be calculated as follows:
(divide annual interest rate by 4 to get 3-month rate)

Sterling interest payable over 3 months = 3.27%/4	= 0.8175%
USD interest payable over 3 months = 2.12%/4	= 0.53%
Forward GBPUSD rate = 1.4780 * (1 + 0.0053)/(1 + 0.008175)	= <u>\$1.4737</u>

8.3 FACTORS AFFECTING FOREIGN EXCHANGE RATES

Bretton Woods agreement in 1944 fixed Interest rates

UK devalued in 1968, from \$2.80 to \$2.40.

Generally, fixed rates ended in the 1970's due to USD currency crisis and end of Gold convertibility.

However, Saudi and UAE (and others) still have currency pegged to USD.

8.3.1 Purchasing Power Parity (PPP)

Primary factors for exchange rates are **supply & demand** and **market sentiment**.

9.2.2 INVESTMENT TRUSTS

Closed-ended

A company, not a trust.

Enables investors to gain exposure to a portfolio of shares easily.

A form of collective investment, managed, held by individuals and pension funds etc.

Quoted on exchanges, bid/offer spread, single price may be given (typically the mid-market price), use stockbrokers etc.

Number of shares fixed.

Net Asset Value (NAV)

= the net worth of an Investment Trust company's equity capital

$$\text{NAV} = (\text{Value of Investments Listed and Unlisted} + \text{Cash etc}) - (\text{Company liabilities} + \text{Preference Share Capital at Nominal Value})$$

Divide by number of shares to get NAV/share.

Valuation daily/weekly/monthly.

Most investment trusts operate at a discount to NAV

Premium/discount relates to demand for the shares

9.2.3 COMPARISON BETWEEN OPEN-ENDED & CLOSED-ENDED FUNDS

Closed-ended:

Wider investment freedom,

Invests in unquoted companies,

Provides **Venture Capital (VC)** capital,

Borrows money & leverage/gearing

No share creation/cancellation, so managers can take a long-term view

No cash payments required for unit sellers, new investors buy from existing holders

Share price may vary according to demand = higher volatility.

Can be purchased at a discount to NAV = greater yield

Open-ended:

New shares can be created & cancelled – sales of units require payment of cash to holders

Managers may have to sell investments to cover this.

9.2.4 EXCHANGE-TRADED FUNDS (ETFs)

ETF is an **open-ended investment fund** similar to shares and CISs
Trade in real-time on stock markets (like shares)
Contain a basket of investments (shares, bonds etc) bought by a manager (like CISs)
Generally passively managed

Only authorised participants e.g large institutions buy direct from manager
These institutions usually act as market-maker, provide liquidity
Individuals buy/sell via secondary exchanges/broker.
Relatively new product, since 1993 in US, 1999 in Europe
Exclusively Index Trackers up to 2008, SEC then authorised actively managed ETFs
Highly popular with individuals and institutions

Characteristics:

Real-time pricing unlike most CISs
Managed by large financial intermediaries, banks etc.
Lower charges than most CISs
Can have a distorting effect on the market

Physical versus Synthetic ETFs:

Physical replication: will own the underlying company shares, labour-intensive & costly

Synthetic replication: entering into a Swap contract with a counterparty bank, reduces cost and tracking errors, but has counterparty risk.

9.2.5 SPECIALIST FUNDS

Closed-ended funds that invest in PE, property etc.
Illiquid, alternative assets, only for long-term institutional investors
NOT listed on exchanges.

Private Equity

Usually a limited partnership, institutional and wealthy investors generally.

Invest in other businesses, then maximise returns by exiting at a profit.
Specialist and widely varied sector
Buy businesses which require capital or overhauling
High levels of debt taken on
PE highly correlated to economic cycle, exit can be difficult
Size of fund varies, need to assess liquidity

3.1.1 MECHANICS OF A RIGHTS ISSUE

Rights Issue announcement is made

Ex-rights period begins on/shortly after announcement, on day after allotment letter is posted

Ex-rights decision period runs for > 10 days, to acceptance date

Ex-rights total period = 3 weeks

Rights issue shares rank *pari passu* with existing shares

Once existing shares are declared ex-dividend market price should therefore fall (more shares)

Theoretical Ex Rights Price

$$= \frac{(\text{Cum rights price} \times \text{Cum rights shares}) + (\text{Rights issue price} \times \text{rights allocated})}{\text{Total number of shares (assuming all rights exercised)}}$$

$$\text{Nil Paid Value} = \text{Theoretical Ex rights price} - \text{Rights issue price}$$

Nil Paid Value = Theoretical value of the right to buy a share in a rights issue

Option 1: Take up rights in full:

Shareholder sends cheque to company

Option 2: Sell the rights nil-paid in full:

Shareholder sells nil-rights during the 3 week period, completes **form of renunciation** on allotment letter, sends to broker

Option 3: Sell part of nil-paid to fund remaining rights

Shareholder sells % of nil-paid to cover take up of remaining rights without additional capital, instructs broker to **split allotment letter**.

Known as **Swallowing the Tail**

Option 4: Take no action

Shareholder takes no action by Acceptance date, rights are sold nil-paid.

Often the most economical way to proceed for small shareholders, although investors' overall % stake in the company will be diluted.

3.1.2 IMPACT OF RIGHTS ISSUE ON SHARE PRICE

CALCULATE theoretical **ex-rights price** for:

A company with 1MM shares with \$1 nominal (Par value)

Share premium account (additional paid-in capital) shows a balance of \$0.5MM

Company wishes to raise \$300K by a 1 for 5 rights issue at a price of \$1.50.

Company's accounts (before rights) shows \$2MM and retained profits of \$0.5MM

Market price prior to rights is \$2.90

	No. Shares	Share price	Holdings
Before:	1.0MM	\$2.90	\$2.90MM
Rights:	0.20MM	\$1.50	\$0.300MM
After:	1.20MM	<u>\$2.67</u>	\$3.200MM

\$2.67 = theoretical ex-rights price

Impact on accounts:

Shares are issued: cost: 200K x \$1 nominal = \$200K

Capital raised: = \$300K

Share premium account increase = \$300K - \$200K = **\$100K**

Share Premium account increases

3.1.3 NIL-PAID VALUE

= the theoretical value of the right to buy a share in a rights issue.

CALCULATE the Nil-Paid Value for the above example;

Nil-paid value = \$2.67 - \$1.50 = **\$1.17**

This will be the price paid to purchase a new share for \$1.50.

3.1.4 Selling some Rights to take up others (Swallowing the Tail)

To Calculate the maximum nil-paid rights to be sold to take up the balance of rights at nil-cost and prevent dilution:

$$\text{Maximum Nil Paid Rights} = \frac{\text{Rights issue price} \times \text{number rights allocated}}{\text{Theoretical ex rights price}}$$

Rounded up to the nearest integer (whole shares)