

# a/s/m


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*Actuarial Study Materials*

Learning Made Easier

## **Flashcards for SOA Exam IFM**

1st Edition, Fourth Printing



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# Introductory Note for ASM Flashcards for Exam IFM

These flashcards will help you remember important formulas and concepts for Exam IFM. This introduction discusses the features of the cards.

On the back of each card, the left header states the broad topic for the card's content. The topics, and the lessons corresponding to these topics are given in Table 1.

The left footer provides a cross-reference to the lesson number, page number, and table or formula number where applicable, of the 1<sup>st</sup> edition 5<sup>th</sup> printing of the ASM IFM manual. The lesson number in the earlier printings is the same, but the page number and formula number may be different.

While flashcards are a useful study aid, they do not replace working out tons of exercises. Flashcards are limited to formulas or concepts that can be expressed briefly on a card. The number of flashcards for a topic depends on the number of formulas for that topic, but is not necessarily a measure of the importance of a topic.

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When you send errata in, identify this publication as “IFM Flashcards, 1<sup>st</sup> edition 4<sup>rd</sup> printing. ”

**Table 1:** Lessons in ASM manual corresponding to each topic

Topic	Lesson
Introduction	1
Project Analysis	2
Monte Carlo Simulation	3
Efficient Markets Hypothesis	4
CAPM	5–8
Capital Structure	9–11
Equity and Debt Financing	12–13
Forwards and Futures	14–15
Options	16
Option Strategies	17
Put-Call Parity	18
Comparing Options	19
Binomial Trees	20–22
Lognormal Distribution	23
Black-Scholes Formula	24–25
Delta Hedging	26
Exotic Options	27–28
Actuarial Applications of Options	31

**Table 2:** Rating system

★★★★★	Essential—appears repeatedly on every exam
★★★★★	Important—appears on every exam
★★★★	Average importance—regularly appears on exams
★★★	Not so important—appears occasionally on exams, or easy to derive as needed
★	Obscure—on syllabus, but unlikely to appear on exam. Sometimes this indicates a formula not covered by all the reading options. No released exam uses this formula or concept, and students have never reported a question from an unreleased exam requiring this formula or concept.



*Four measures of market size and activity*



1. *Trading volume*

2. *Market value*

3. *Notional value*

4. *Open interest*





## *Definition of open interest*

Introduction



*Number of contracts for which there is a future  
obligation to perform*

Lesson 1

2B



*Four purposes served by derivative  
instruments*



1. *Risk management*
2. *Speculation*
3. *Reduced transaction costs*
4. *Regulatory arbitrage*



## *Definition of market order*

Introduction



*Order to buy at the market ask price or sell at market bid price*

Lesson 1

4B



*Definition of limit order*



*Order to buy only at or below a specified maximum price, or to sell only at or above a specified minimum price.*





*Definition of stop loss order*

Introduction



*Order to sell if price decreases to a specified amount*

Lesson 1

6B



*Three purposes served by short selling*

Introduction



*1. Speculation*

*2. Financing*

*3. Hedging*

Lesson 1

7B



## *Definition of repo rate*

Introduction



*Rate paid on collateral by one who lends a bond*

Lesson 1

8B



*NPV in terms of free cash flows*



$$\text{NPV} = \sum_{n=0}^{\infty} \frac{\text{FCF}_n}{(1+r)^n}$$

*where*

*FCF<sub>n</sub> is free cash flow at time n*

*r is the cost of capital*





*NPV at interest rate  $i$  if cash flows are 1 in the first year and grow at rate  $g$  perpetually.*

Project Analysis



$$\text{NPV} = \frac{1}{i - g}$$