FreeFellow

FORMULA SHEET

Series 7

FINRA · General Securities Rep.

25 FORMULAS

4 TOPICS

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SEEKING BUSINESS FOR THE BROKER-DEALER

8 items

Green shoe overallotment maximum

$G_{\max} = 0.15 \times N$ — G_max = maximum additional shares manager may purchase, N = original offering size in shares

Selling concession from total spread

$C = S - M - U$ — C = selling concession per share, S = total spread, M = manager's fee per share, U = underwriting fee per share

Net investment income (mutual fund)

$NII = (Dividends + Interest) - Fund\ Expenses$ — NII = net investment income; capital gains are excluded

Eastern (undivided) account unsold share liability

$L_i = p_i \times U$ — L_i = member i's unsold-share liability, p_i = member's participation percentage, U = total unsold shares across syndicate

Underwriting spread

$\text{Spread} = P_{\text{public}} - P_{\text{issuer}}$ — P_public = public offering price per share, P_issuer = price syndicate pays issuer per share

Bull call spread (debit spread) — max gain, max loss

Long call K_1 + short call K_2 ($K_1 < K_2$). Net debit D.

$\text{Max Gain} = (K_2 - K_1) - D$

$\text{Max Loss} = D$

$\text{Breakeven} = K_1 + D$

Covered call — max gain, max loss, breakeven

Long stock S_0 + short call strike K, premium P.

$\text{Max Gain} = (K - S_0) + P$ at $S \geq K$

$\text{Max Loss} = S_0 - P$

$\text{Breakeven} = S_0 - P$

Long straddle — breakevens

Long call + long put, same K, same expiry. Cost = $P_c + P_p$.

$\text{Up BE} = K + P_c + P_p$

$\text{Down BE} = K - P_c - P_p$

$\text{Max loss} = P_c + P_p$ (at $S = K$)

OPENING ACCOUNTS

3 items

529 plan superfunding maximum contribution

$C_{max} = 5 \times G$ — C_max = maximum lump-sum 529 contribution treated as 5 years of gifts, G = annual gift tax exclusion

Rule 144 affiliate volume limit per 3-month period

$\text{Max sale} = \max(0.01 \times S_{out},\ \bar{V}_{4w})$ — S_out = total outstanding shares, V̄_4w = average weekly trading volume over preceding 4 weeks

Bond accrued interest (30/360 convention)

$$\text{AI} = \frac{\text{Annual Coupon}}{360} \times \text{Days Since Last Coupon}$$

30/360: each month = 30 days. Corp + muni bonds.

Treasuries use actual/actual.

INVESTMENT PRODUCTS AND RECOMMENDATIONS

4 items

Short margin account credit balance

$CR = Proceeds + RegT\ deposit$ — CR = credit balance, Proceeds = short sale proceeds, Reg T deposit = 50% of proceeds

SMA in a long margin account

$SMA = Equity - 0.5 \times LMV$ — Equity = LMV - DR, LMV = long market value, 0.5 = Reg T initial requirement

Short margin account equity

$Equity = CR - SMV$ — CR = credit balance (proceeds + Reg T), SMV = current short market value

Long margin account equity

$Equity = LMV - DR$ — LMV = long market value, DR = debit balance

Protective put maximum loss

$\text{Max Loss} = [(P - K) + Pr] \times 100$ — P = stock purchase price, K = put strike, Pr = premium paid per share

Sharpe ratio

$S = \frac{R_p - R_f}{\sigma_p}$ — R_p = portfolio return, R_f = risk-free rate, σ_p = portfolio standard deviation

Closed-end fund discount or premium to NAV

$Discount\% = (NAV - P)/NAV$ — NAV = net asset value per share, P = market price; positive = discount, negative = premium

Mutual fund sales charge percentage

$SC\% = (POP - NAV)/POP$ — POP = public offering price, NAV = net asset value per share; denominator is always POP, not NAV

Put option intrinsic value

$IV_{put} = \max(0,\ K - M)$ — K = strike price, M = market price of underlying; zero if out of the money

Bond price change approximation from duration

$\%\Delta P \approx -D \times \Delta y$ — D = duration (years), Δy = change in yield (decimal, e.g. 0.0050 for 50 bps)

Mutual fund public offering price (POP) from NAV and sales charge

$POP = NAV/(1 - SC)$ — NAV = net asset value per share, SC = sales charge expressed as a decimal percent of POP

Bear put spread maximum gain (debit)

$\text{Max Gain} = (K_H - K_L) - Pr_{net}$ — K_H = higher (long) strike, K_L = lower (short) strike, Pr_net = net debit paid

Call option intrinsic value

$IV_{call} = \max(0,\ M - K)$ — M = market price of underlying, K = strike price; zero if out of the money

Earnings per share (EPS)

$EPS = \frac{NI - D_p}{S}$ — NI = net income, D_p = preferred dividends, S = common shares outstanding