Excess returns: difference between

α approximation:

REAL RETURNS: -

GROSS and NET RETURN

Gross return - return earned by manager AFTER deduction of:

BUT NO DEDUCTION of:

examples: performance fees, custodial fees,

Net return =

PRE-TAX and AFTER-TAX NOMINAL RETURN

Pre-tax returns generally actual returns earned by investors

After-tax return → to TAXABLE INVESTOR

Country-specific BUT in most countries, but typically:

- tax levied where investment is domiciled
- S-T capital gains tax L-T capital gains tax

- Capital gains tax levied on (+) price return
- Capital gains tax rate Capital distribution tax rate

Capital gains tax:

After-tax return:

AFTER TAX RETURNS are MOST RELEVANT measure for investors
BUT asset MANAGERS do not commonly present them
as calculation is very investor- & jurisdiction-specific!

Strategies to REDUCE overall TAX LIABILITY:

- choosing investments with more favorable tax characteristics
- trading turnover
- delaying

  ⇓

  may also lead to → LOWER TAX RATE (if tax rate dependent on length of holding period)

LEVERAGED RETURNS

leverage – using debt / derivatives in addition to investor's own capital

if returned earned on portfolio (unlevered) $(r_p) > (r_d)$ cost of debt

$$r_{LP} = \frac{r_p \times (V_E + V_D) - V_D \times r_d}{V_E} = r_p + \frac{V_D}{V_E}(r_p - r_d)$$

Example: 100 million invested → 60% EQUITY ⇒ 60 million

→ 9% return over 1 year (r_p)

→ 40% DEBT ⇒ 40 million (4% interest)

USING DERIVATIVES to achieve LEVERAGE

e.g. options → allows investor to gain exposure to an ASSET without paying its full price

cost = option premium