

- Suppose a firm needs \$10 million of financing to undertake a positive NPV project. What are the sources of funds for this firm?
 - Retained earnings
 - Rights offering (equity contribution by existing shareholders)
 - Shareholder loans
 - Bank loans
 - Privately placed debt or equity (includes venture capital funding)
 - Issuing bonds (publicly traded)
 - Issuing equity in the stock market (to new shareholders)

Debt vs. Equity

	Debt	Equity
Duration	Until maturity or refinancing	Permanent
Distributions	Regular interest payments required	No distributions required Optional dividend payments
Collateral	Yes (for app. 70%)	No
Investor type	Conservative	Aggressive
Taxes	Interest <u>payments</u> are tax deductible	Dividend payments are not tax deductible (double taxation)
Cash flow rights	Senior to equity	Junior to debt
Control rights	Contingent on breach of contract, no voting rights	Control in normal times and voting rights

The leverage effect of debt

- Suppose you need \$1,000 of funding for an investment project. You can fund this project in one of two ways: (1) Use \$1,000 of equity, (2) Use \$500 of equity and \$500. Let's examine the return on equity (ROE) from this project under two scenarios: (1) GOOD: Project payoff = \$1,200, (2) BAD: Project payoff = \$800. (Assume $i=0\%$ for simplicity)

	All equity	50% equity + 50% debt
GOOD	$=\$200/\$1,000 = 20\%$	$=\$200/\$500 = 40\%$
BAD	$=-\$200/\$1,000 = -20\%$	$=-\$200/\$500 = -40\%$

- **Leverage amplifies both gains and losses for equityholders.**

Types of debt securities

	Traditional sole lender loans	Syndicated loans	Bonds
Borrower type	Small/new	Large/unrated/risky	Large/rated/safe
# of lenders	One	Medium	Atomistic
Credit evaluation	Sole lender	Lead arranger	Rating agencies
Liquidity	Low	Medium	High
Restructuring	Workouts	Workouts with consensus	Bankruptcy
Contract terms:			
Maturity	Short	Medium (3-5 years)	Long (5-30 years)
Collateral	Yes	Yes	Less common
Covenants	Tight	Tight	Loose

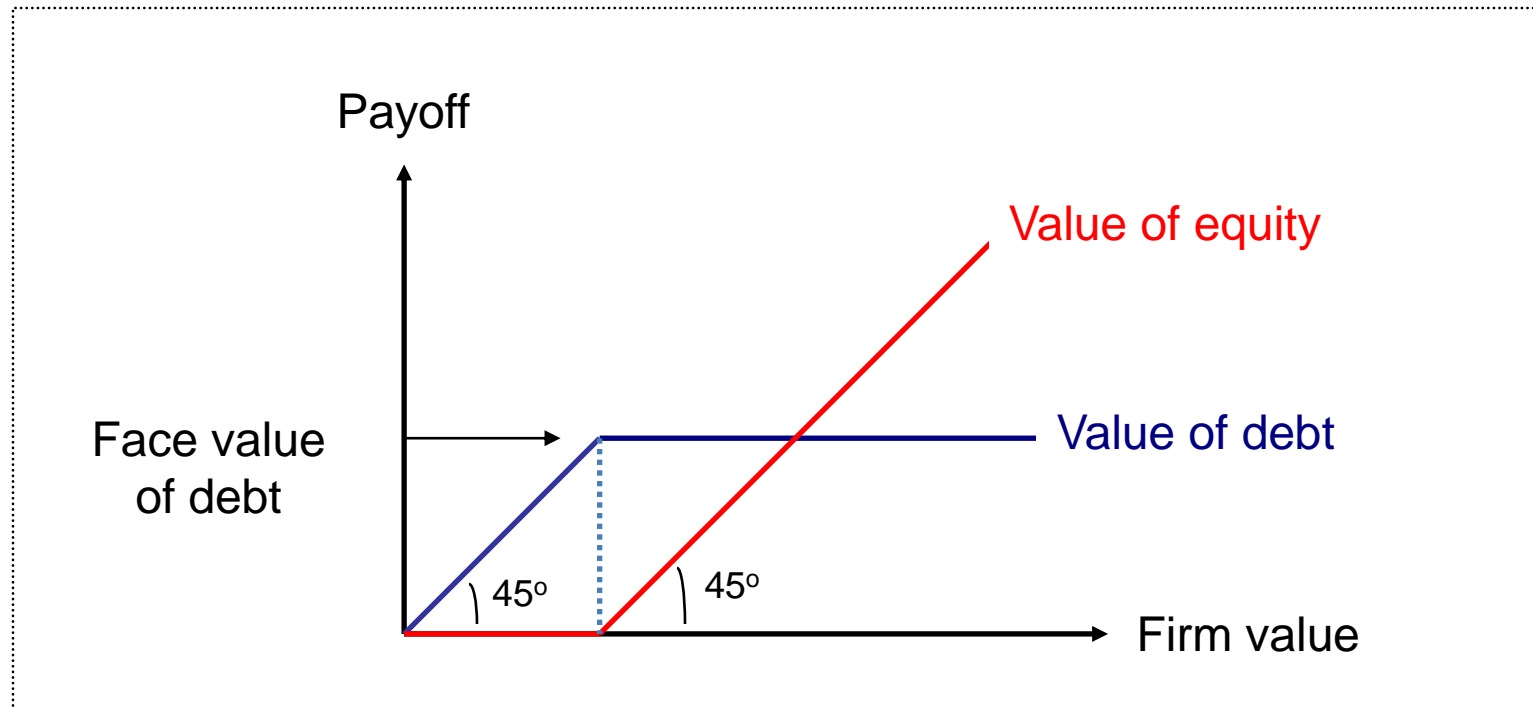
Types of equity securities

	Common stock	Preferred stock
Voting rights	Yes	No
Dividends	Discretionary	Pre-specified (may accumulate)
Cash flow rights	Junior to preferred stock	Senior to common stock

- Preferred stock is junior to debt and thus more expensive.
- Tax disadvantage relative to debt because dividends are deducted from after-tax income while coupon payments on debt is subtracted from pre-tax income.

The limited liability rule

- Limited liability is the legal protection given equityholders whereby they are responsible for the debts and obligations of a corporation only to the extent of their capital contributions.



Why do firms issue equity?

1. To raise funds for investment projects and acquisitions
2. Insiders can cash their paper wealth by selling some of their shares.
3. Provides diversification opportunities for insiders.
4. Market timing (sell overvalued shares to new shareholders and thereby transfer wealth to existing shareholders)
5. To reduce leverage (if the firm is above its leverage target)

Debt vs. equity choice

1. Corporate control considerations: Issuing new equity reduces the control rights of existing shareholder. Debtholders don't have control rights under normal circumstances.
2. Optimal leverage that minimizes the firm's tax burden: If under-levered should issue debt, if over-levered should issue equity.
3. If asymmetric information between the managers and outside investors about the firm's prospects is high, then debt is the cheaper financing option.
4. Debt might be used to reduce managerial free cash flow problems.