W

1. Waiting Period

Time during which the Securities and Exchange Commission studies a firm's registration statement. During this time the firm may distribute a preliminary prospectus.

2. Warehousing

A warehousing method of financing can reduce the risk of using inventory as collateral to secure the loan. There are two variations of this method: **field warehousing** and **public warehousing**. See also **Field warehousing** and **Public warehousing**]

Warehousing, like receivables financing, is a flexible source of short-term credit that automatically grows as the company's working capital needs expand. Also, like receivables financing, its cost is fairly high. Typically, the warehousing company imposes a service charge, usually a fixed minimum plus 1 to 2 percent of the funds loaned, plus an interest rate of 8 to 12 percent or sometimes more. The fixed costs of warehousing – the minimum service charge plus the cost of providing the field warehouse facilities or moving goods to a public warehouse – make it unsuitable for very small firms; the minimum feasible inventory size probably is about $100,000.

3. Warrant

A warrant is a financial instrument issued by a corporation that gives the purchaser the right to buy a fixed number of shares at a set price for a specified period. There usually is a secondary market where existing warrants may be traded.

There are two major differences between a warrant and a **publicly traded option**. See also **Publicly traded option**]First, the warrant normally matures in three to five years, whereas the maturity of a publicly traded option is normally less than nine months. The second difference is that the warrant is an agreement between the corporation and the warrant's buyer. If the warrant's owner decides to exercise the right to purchase stock, the corporation issues new shares and receives the cash from the sales of those shares.

Typically, a warrant accompanies a bond issue, but it is detachable; it can be traded separately from the bond. A warrant is essentially a call option written by the company that issues the stock. Its value is influenced by the same factors that influence the value of a call option.

In this context, the value of a warrant at expiration (V_W) is defined by the following equation:

$$V_W = Max\ [0,\ NP - NX]$$

where P and X are the price of the stock and the exercise price of the option, respectively; and N is the number of shares obtainable with each warrant.

4. Wash

A trade in which gains equal losses in stock trading.

5. Weak-Form Efficient Market

Different assumptions about information availability give rise to different types of market efficiency. See also **Efficient market**]

A weak-form efficient market is a market in which prices reflect all past information, such as information in last year's annual reports, previous earnings announcements, and other past news. Some investors, called *chartists* or *technicians*, examine graphs of past price movements, number of shares bought and sold, and other figures to try to predict future price movements. A weak-form efficient market implies that such investors are wasting their time; they cannot earn above-average, risk-adjusted profits by projecting past trends in market variables. Generally, evidence indicates

that historical information is not helpful in predicting stock price performance. ʃee also **Technicians**]

6. Weather Derivatives

Derivative where the payoff depends on the weather.

7. Weekend Effect

The common recurrent negative average return from Friday to Monday in the stock market.

8. Weighted Average Cost of Capital

The weighted average cost of capital (WACC) represents the firm's minimum required rate of return on its average-risk capital budgeting projects. It is found by multiplying the marginal cost of each capital structure component by its appropriate weight and then summing the terms as:

$$WACC = w_d k_d + w_p k_p + w_e k_e.$$

The weights of debt, preferred equity, and common equity in the firm's capital structure are given by w_d, w_p, and w_e, respectively. The cost of debt, preferred equity, and common equity are k_d, k_p, and k_e, respectively. As the weighed average cost of capital covers all of the firm's capital financing sources, the weights must sum to 1.0. The firm's cost of common equity, k_e, can reflect the cost of retained earnings, k_{re}, or the cost of new common stock, k_{cs}, whichever is appropriate.

The weights represent a specific, intended mix of debt and equity that the firm will try to achieve or maintain over the planning horizon. As much as possible, the target weights should reflect the combination of debt and equity that management feels will minimize the firm's weighted average cost of capital. It is necessary to minimize the WACC in order to maximize shareholder wealth.

The firm should make an effort over time to move toward and maintain its target capital structure mix of debt and equity. There are two ways to measure the mix of debt and equity in the firms' capital structure.

One method uses the firms' book values, or balance sheet amounts, of debt and equity. The actual weight of debt in the firm's capital structure equals the book value of its debt divided by the book value of its assets. Similarly, the actual equity weight is the book value of its stockholders' equity divided by total assets. Once the target weights have been determined, the firm can issue or repurchase appropriate quantities of debt and equity to move the balance sheet numbers toward the target weights.

A second method uses the market values of the firm's debt and equity to compare target and actual weights. The actual weight of debt in the firm's capital structure equals the market value of its debt divided by the market value of its assets. Similarly, the actual equity weight is the market value of the firm's stockholders' equity divided by the market value of its assets. Calculated in this way, bond and stock market price fluctuations, as well as new issues and security repurchases, can move the firm toward – or away from – its target.

Financial theory favors the second method as most appropriate. Current market values are used to compute the various costs of financing, so it stands to reason that market-based costs should be weighted by market-based weights.

The basic capital structure of a firm may include debt, preferred equity, and common equity. In practice, calculating the cost of these components is sometimes complicated by the existence of hybrid financing structures (e.g., convertible debt) and other variations of straight debt, preferred equity, or common equity. A comparison of capital costs between countries also is difficult. What may appear to be lower financing costs in one country may disappear after careful analysis.

9. Weighted Average Life for Mortgage-Backed Securities

The weighted average life (WAL) is a product of the time when principal payments are received and

the amount of principal received divided by total principal outstanding. Explicitly, it can be defined as:

$$\text{WAL} = \frac{\sum(\text{Time} \times \text{Expected principal received})}{\text{Total principal outstanding}}.$$

For example, consider a loan with two years to maturity and $100 million in principal. Investors expect $50 million of the principal to be repaid at the end of year 1 and the remaining principal $50 million to be repaid at maturity.

Expected Principal Payments	Principal × Time
$ 50	$ 50 × 1 = $ 50
$ 50	$ 50 × 2 = $ 100
$ 100	$ 150

WAL = 150/100 = 1.5 years

The WAL is presented in mortgage-backed security certificate. In addition to WAL, it also presents: (i) Type of security, (ii) current price, (iii) price change, (iv) spread to average life, (v) spread change, (vi) prepaid speed, and (vii) year to maturity.

10. Weighted Cost of Funds

Weighted average cost of all sources of fund in a depository, including deposits, non-deposits, liabilities, and capital.

11. Weighted Marginal Cost of Fund

Marginal cost of pooled debt funds used in pricing decisions of loans.

12. Weighted Unbiased Estimator

When consideration is given to the types of applications for average rates of return to (1) determine the historical profit rate of an investment and (2) to assess the long-run expected rate of return of some investment instruments, the importance of accuracy and a lack of bias is apparent. Blume (1974) has investigated the possible bias in using either arithmetic average ($\overline{x}$) or geometric average ($\overline{g}$) to forecast such expected rates of return and has proposed four alternative unbiased estimators: (1) simple unbiased, (2) overlapped unbiased, (3) weighed unbiased, and (4) adjusted unbiased. Blume has also mathematically and empirically shown that the weighted unbiased estimator is the most efficient estimator and is the most robust for nonnormal and nonstationary data.

The definition of the weighted unbiased estimator, $M(W)$, is

$$M(W) = \left(\frac{T-n}{T-1}\right)\overline{X} + \left(\frac{n-1}{T-1}\right)\overline{g},$$

where T = the number of periods used to estimate the historical average returns; and n = the number of investment-horizon periods for which a particular investment is to be held.

13. Well-Diversified Portfolio

A portfolio spread out over many securities in such a way that the weight in any security is close to zero.

14. Whipsawing

Whipsawing occurs when the underlying asset increases enough to trigger rebalancing. After more shares are added, the underlying asset decreases in value and the additional shares are sold at a lower price than what was paid for them. A common remedy for this problem is to use a larger adjustment gap or filter rule; however, the wrong number of shares would be held if the filter rule were increases, particularly if the stock moved in a linear manner. Whipsawed positions commonly occurs when the asset fluctuates around a constant level.

15. White Knight

White knights are alternative suitors (acquirers) that offer friendlier terms to a target firm facing a hostile takeover. [See also **Tender offer**]

16. Whole-Life Insurance Policy

Provides a death benefit and a kind of savings plan that builds up cash value for possible future withdrawal. A whole-life policyholder pays pay fixed amount of premiums in exchange for a known death benefit, the face amount of the policy.

17. Wiener Process

A stochastic process where the change in a variable during each short period of time of length δ_t has a normal distribution with a mean equal to zero and a variance equal to δ_t. [See also **Brownian motion**]

18. Wild Card Play

The right to deliver on a futures contract at the closing price for a period of time after the close of trading.

19. Wilshire 5000 Equity Index

The Wilshire 5000 equity index, which includes about 7,000 stocks, is complied by both market-value-weighted and equally-weighted approaches. This index is being used increasingly because it contains most equity securities available for investment, including all NYSE and AMEX issues and the most active stocks traded on the over-the-counter (OTC) market.

The following formula is used to compute the market-value-weighted Wilshire 5000 equity index:

$$I_t = I_{t-1}\left[\sum_{j=1}^{N}\left(S_{jt}\right)P_{jt} \Big/ \sum_{j=1}^{N}\left(S_{jt-1}\right)P_{jt-1}\right],$$

where I_t = index value for the tth period; N = number of stocks in the index; P_{jt} = price of the jth security for the tth period; S_{jt} = shares outstanding of the jth security for the tth period; P_{jt-1} = price of the jth security for the $(t-1)$th period; and S_{jt-1} = shares outstanding of the jth security for the $(t-1)$th period.

20. Window Dressing

The practice in financial reporting in which a firm engages in certain transactions at the end of a reporting period (quarter or fiscal year) to make the financial results appear better or different from that prevailing at the time.

21. Winner's Curse

The average investor wins – that is, gets the desired allocation of a new issue – because those who knew better avoided the issue. Winner's curse is the reason why IPOs have a large average return. To counteract winner's curse and attract the average investor, underwriters underprice issues.

22. Wire Transfers

Wire transfers involve electronic bank-to-bank transfers of funds. A wire transfer can move a large cash balance and make it available to a firm's central finance managers within an hour. While wire transfer is the fastest method available to move funds, it also is the most costly.

23. Working Capital

Working capital is the dollar amount of an organization's current assets, which include cash, marketable securities, accounts receivable, and inventory. These current assets are considered liquid because they can be converted into cash relatively quickly. Each component of working capital is affected by the activities of various parts of the organization. Production, pricing, distribution, marketing, wage contracts, and financing decisions are just a few of the diverse activities within the firm that can affect not only the amount of working capital but also how quickly the individual assets can be converted into cash.

For example, if the firm's union contract requires that the workers be paid weekly, the amount of cash needed to meet the payroll must be avail-

able on each payday. This could require the firm to borrow more cash than if the firm paid its workers only once a month.

The external environment in which the firm operates (product markets, investment markets, and financial markets) also can affect the amount and the rate of change of a firm's working capital. In a highly seasonal industry, inventory typically increases dramatically as demand for the product increases. Inventory then decreases as accounts receivable increases and the inventory is shipped. The cycle is completed when the firm collects cash for its accounts receivable. Many organizations must manage their working capital in the face of seasonal and cyclical forces, which can cause a high degree of variability. See also **Permanent working capital** and **Temporary working capital**]

24. Working Group

The working group gathers the individuals and firms involved in taking the firm public, including investment banks, law firms, and accounting firms. The firm's management team provides the working group with the necessary information and makes the decisions regarding the public offering process. The members of the group work individually and jointly in a number of areas to try to ensure a successful IPO.

The initial planning for an IPO basically involves getting the firm's legal, financial, and organizational details in proper form to minimize the probability of difficulties arising either during or after the IPO. The firm will hire auditors to review its past financial statements and past and current accounting practices. The auditors may require changes in accounting methods and a restatement of past financial data to bring them into regulatory compliance under SEC guidelines.

25. Workout Period

Realignment period of a temporary misaligned yield relationship.

26. World Investable Wealth

The part of world wealth that is traded and is therefore accessible to investors.

27. Writing a Call

Selling a call option.

28. Writing an Option

Selling an option.

29. Written Call

A call that has been sold; a short call.

30. Written Put

A put that has been sold; a short put.

31. Written Straddle

The simultaneous sale of a call and sale of a put, with the same strike price and time to expiration.