



Financing Media, Information, and Communications

- 6.1 Introduction – 129**
 - 6.1.1 The Finance Function in Companies – 129
 - 6.1.2 Basic Factors in the Finance of Media and Communications – 129
 - 6.1.3 Case Discussion – 130
 - 6.1.4 An Overview of Funding Sources – 130
- 6.2 Internal Funding – 130**
 - 6.2.1 Case Discussion – 132
- 6.3 Debt Financing – 133**
 - 6.3.1 Pros and Cons of Debt – 133
 - 6.3.2 The Hierarchy of Debt – 133
 - 6.3.3 Case Discussion – 134
 - 6.3.4 Short-Term Debt – 134
 - 6.3.5 Long-Term Debt – 134
- 6.4 Other Types of Debt – 135**
 - 6.4.1 Vendor and Buyer Financing – 135
 - 6.4.2 Lease Finance – 137
 - 6.4.3 Government Financing – 137
 - 6.4.4 Private Grant Financing – 138
 - 6.4.5 The Impact of Debt Financing on Content – 139
- 6.5 Risk Reduction Strategies – 139**
 - 6.5.1 Risk Reduction Strategy: Diversification – 139
 - 6.5.2 Risk Reduction Strategy: Hedging – 140
- 6.6 Equity Financing – 140**
 - 6.6.1 Types of Equity Arrangements – 140

6.7 The Ownership of Media and Communications Companies – 151

6.7.1 Individual and Family Ownership of Media – 151

6.7.2 Institutional Investors – 151

6.7.3 Governmental Ownership – 153

6.8 Capital Structure – 153

6.8.1 Optimal Capital Structure – 154

6.8.2 The Lifecycle of Capital Structure – 157

6.9 Outlook – 158

6.10 Review Materials – 158

6.10.1 Questions for Discussion – 159

6.10.2 Quiz – 160

Quiz Answers – 163

6.1 Introduction

In this chapter, we discuss how media and information sector firms can fund their activities. We will review financing alternatives, and see how they are applied in media and the technology sectors.

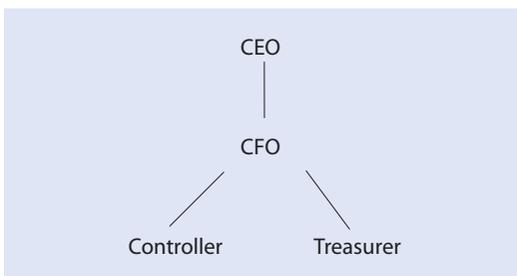
We will also consider how the various funding types affect

- The structure of companies and industries;
- Content and innovation;
- Companies' activities.

6.1.1 The Finance Function in Companies

Within a company, the finance function is usually managed by the Chief Financial Officer (CFO). Reporting to the CFO are typically a treasurer and a controller (■ Fig. 6.1).

The controller handles the accounting function. This includes taxes, cost/financial accounting and information systems. The treasurer handles cash flows, implements capital expenditure decisions and makes financial plans. The CFO is in overall charge of raising the funds to carry out business operations, and the amount, source and type of financing. The CFO also conducts financial analyses of the firm's performance. The CFO takes responsibility for the company's primary financial statements—the balance sheet, the income statement and the statement of cash flows. Publicly traded companies are required to issue financial statements periodically, and also to disclose major ownership changes and any insider transactions. In the USA, after the year 2000 the legal responsibility of CFOs was significantly increased following several financial scandals—in particular, the collapse of the energy and commodities company Enron.



■ Fig. 6.1 Corporate Organizational Chart

One important question is whether the different ways in which media firms are financed also affect the type of content that is produced and distributed by them, and the nature of innovation. What would finance theory suggest about the impact of different financing types? In 1958, the finance professors Merton Miller and Franco Modigliani—both subsequent Nobel Prize winners—postulated a theorem that has become a major concept in the field. According to Miller and Modigliani, the value of firms is unaffected by their funding choices, such as debt, equity or private investment. The value of a company is based on its performance, not on funding types. The conduct and behavior of a firm are aimed at maximizing value, and are independent of its funding. Applied to a media and communications firm, this would mean that its production or marketing decisions would not be affected by its funding sources or styles. Miller and Modigliani's conclusion is based on several unrealistic assumptions.¹ But is the basic point plausible—that content and innovation are independent of a media organization's financings? We will keep returning to that question.

6.1.2 Basic Factors in the Finance of Media and Communications

The high fixed costs of many media and communications projects often force media companies to make large early investments far ahead of the collection of revenues. To bridge that gap they must often borrow large amounts. Investment needs in media products, platforms and devices are high, and keep increasing. The cost of full residential fiber-connection of the USA would be about \$500 billion. Similarly, a broadband wireless infrastructure that would cover most of the population is estimated to require an investment of about \$100 billion per network company to achieve nationwide coverage, and about \$500 billion in total for the entire mobile industry.

Similarly, the production of premium media content is often expensive. It often requires over

¹ These include an efficient financial market, no taxes, symmetric information and no bankruptcy costs.

\$100 million to make and market a Hollywood movie.² Films are perishable, with a short window of revenue generation, yet delayed in the collection of revenues. In network television, the average production cost for a prime time network show rose from \$200,000 in 1971 to \$1 million in 1991, \$1.9 million in 2008, and \$3 million in 2017. The average pre-opening budget for a musical on Broadway was \$10 million and, for a play, about \$4 million. Even “Off-Broadway” theater required \$2 million for a commercial and \$300,000^{3,4} for a non-profit production. (These figures were about two to three times higher than they had been in 2002.)

On top of this, investments are highly risky. Of all films, books and music, 80% do not generate a sufficient audience to become profitable. Most new commercial online sites fail to make money. Two-thirds of new magazines fail in the first year. The distribution of success is extremely skewed. Successful payoff is very high for a few products and low or negative for the rest. Risk is also increased by the long lag between a project’s inception and its transformation into a revenue stream, as well as the excess supply of products relative to demand, and due to price deflation toward low marginal costs.

6.1.3 Case Discussion

The Funding of a New Venture: Time Warner Versus Startup Entrant—A Hypothetical Case

The company Time Warner Media, acquired in 2018 by AT&T, is looking into the possibility of starting a new Internet television project. It is named Time Warner Internet Television (TWIT). The capital costs of the TWIT project will be \$1 billion. The company must ask itself whether this is a worthwhile investment. Also, how is the company going to fund it? Even if it has enough cash on hand, this does

not mean that it should spend it on the new project, just as a family buying a home will, in most cases, not fully deplete its liquid assets and, instead, take a mortgage. TWIT must consider, at the very least, how its actions will affect its profitability, share price and debt repayment burden, and how much control it is willing to give up.

An alternate (and entirely hypothetical) entrant contemplat-

ing a foray into Internet TV is a company called Startup New-Generation Internet Television (SNIT). SNIT’s founders have estimated its initial capital costs to be \$100 million, one-tenth of the better established TWIT, and with the same proportions for the major components of the project as are projected for TWIT.

6.1.4 An Overview of Funding Sources

We will now look at how the different sources of financing are used by media and how they affect them. What, generally, are the funding sources for a business? They are, in particular:

- The creator/entrepreneur personally;
- Family and friends;

- Retained earnings of the company;
- Banks and other lenders;
- Private investors;
- Vendors and buyers;
- Institutional investors (mutual and pension funds, insurance companies, PE funds, etc.);
- Governments.

Within each category, there are multiple varieties. Often, a mix of several funding sources will be put together as a package.

2 A typical theatrical film in Europe cost €11 million to produce. European Commission. “New European film strategy aims to boost cultural diversity and competitiveness in digital era.” May 15, 2014. Last accessed May 16, 2017. ► http://europa.eu/rapid/press-release_IP-14-560_en.htm.

3 Janeway, Michael, and András Szántó. Eds. *Wonderful Town: The Future of Theater in New York*. New York: National Arts Journalism Program, Columbia University, 2002.

4 Rubino-Finn, Olivia. “Broadway Budgets 101: Breaking Down the Production Budget.” *New Musical Theatre*. January 22, 2016. Last accessed May 16, 2017. ► <http://newmusicaltheatre.com/green-room/2016/01/broadway-budgets-101-breaking-down-the-production-budget/>.

6.2 Internal Funding

The first and most obvious source of funding is the company itself, or the owners and entrepreneurs who start it, as well as their family members and friends. Why not go to the bank for a loan instead? Because new businesses initially lack just about

everything that a bank looks for in assessing and reducing risk: a record as an operating entity, audited financial statements, assets that can be used as collateral, a repayment history, or traded securities that are continuously evaluated in the market. This makes it difficult to obtain debt financing in the early stages of a businesses. The alternative for a startup is self-financing. Friends and family will often play an important role. When Bill Gates started Microsoft with Paul Allen, his well-to-do parents contributed money to the fledgling firm. When seeking help from friends and family, one must be mindful of several problems.⁵

- It puts pressure on the relationship and often changes its nature. An entrepreneur who brings in friends as investors must be prepared to lose them when things go wrong.
- It affects the entrepreneur's peace of mind. It is one thing to default on a bank loan, and another to burn through grandma's retirement nest egg.
- Family members and friends often feel free to meddle in the running of the business and it is hard to maintain an arms-length relationship.
- There has to be a clear exit strategy for such investors/friends.
- It deters outside investment. The presence of active family insiders can dissuade professional investors from participating.

On the other end of the spectrum of business size, internal funding can also make sense for very large firms. The resources come from past capital injections, or from earnings which were not returned to shareholders as dividends but were, rather, retained for new investments.⁶ Some firms have accumulated vast reserves and can fund virtually every prospect on their own. This is not always positive. When companies use their own cash, rather than distribute it to shareholders as

dividends, they may make their stock less attractive. Also, there may be a less stringent assessment of internally funded projects, at times based on internal corporate politics, in contrast to the scrutiny that would be applied by a more detached outsider reviewing the project.

That having been said, internal financing by large companies has several advantages:

- Funding may be immediately available.
- Transaction costs are lower relative to the issuance of securities.
- No supervision and review by banks.
- Less disclosure of financial details that could benefit competitors.
- A better informed evaluation of the project and its risk.

Well-established firms will often use a mix of internal and external financing: small projects are funded internally, but large ones externally. Thus, over the life cycle of a firm, internal funding is most likely to be used in the early stages of startups, but also in the mature stages of well-established firms operating in steady state.⁷

It would be a mistake to view self-financing as “free.” Internal funding has an opportunity cost to a company or individuals and a very real cost to shareholders. Profit that is re-invested is money that could have been paid out as a dividend to stockholders. In the words of the investment guru Warren Buffett, “earnings should [only] be retained when there is a reasonable prospect – backed preferably by historical evidence or, when appropriate, by thoughtful analysis of the future – that for every dollar retained by the corporation, at least \$1 of market value will be created for owners.”⁸

There are various ways to estimate the cost of self-funding. For established firms, the finance literature typically uses a “bond-yield-plus-premium” approach. It takes the interest rate of a company's long-term debt and adds a risk premium for the project.

$$\text{Cost of Retained Earnings} = \text{Firm's Long Term Bond Yield} + \text{Risk Premium}$$

5 Kelly, Peter. “Finance and Venture Capital Markets.” In *Handbook of Product Service Development Communication and Information Technology*. Eds. Timo Korhonen, and Antti Ainamo. New York: Springer, 2003, 211–234.

6 Stevenson, Howard H., Michael J. Roberts, and Harold I. Grousbeck. *New Business Ventures and the Entrepreneur*. Homewood, IL: Irwin, Inc., 1985, 190–199.

7 Berger, Allen N., and Gregory F. Udell. “The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle.” *Journal of Banking and Finance* 22, nos. 6–8 (1998): 613–673.

8 Buffet, Warren E., and Lawrence A. Cunningham. *The Essays of Warren: Lessons for Corporate America*. Durham, NC: Carolina Academic Press, 2015.

For a startup company, too, there is an opportunity cost for self-financing. Its calculation is more complex since, as a new company, it has not yet established a long-term debt interest rate and thus one cannot use the “bond-risk-plus- premium” approach of the equation above to estimate the cost of capital. Instead, one looks at a “benchmark” use for these funds, which would be to invest them in a project of comparable riskiness to the prospect at hand. This is done through the “capital asset pricing model” (CAPM) approach, in which the estimated cost of capital is estimated as⁹:

$$r_a = r_f + \beta_a (r_m - r_f)$$

- r_a = Estimated cost of capital;
- r_f = Risk free rate of interest;
- β_a = “Beta”: the volatility of the specific industry vs. the volatility of the stock market as a whole;
- r_m = Expected rate of return for a similar firm.

The CAPM approach has three basic steps. First, one estimates the risk free rate (r_f) on an investment with “zero risk”. Typically used is the rate of US Government Bonds. The 12-month US Treasury Bond rate average since 2000 has been about 2.75%.¹⁰ Second, one determines the expected rate of return for similar firms (r_m). For startups,

the comparison would be with “small cap” stocks, i.e. of moderately-sized firms. Since the 1980s, the average yearly return for small cap firm has been 13.8%.¹¹ The last step is to estimate the company’s riskiness, as expressed in its “beta” (β_a). Beta is an important element in many analyses of stocks and can be calculated from the stock market price fluctuations of a stock in comparison with overall market fluctuations. When one does not know a firm’s specific price volatility because the company’s stock is not traded in a stock exchange and has no reported prices, one can estimate it by using average betas of similar firms in similar industries. For example, the average beta for the “Internet Sector”,¹² based on 180 firms, is 1.11.

Self-financing has an impact on content and innovation. On the one hand, creators and entrepreneurs, since their personal money is on the line, may actually take less risk than a corporate manager whose owners are diffuse and distant, especially when it comes to large projects that could wipe them out financially. But this is usually more than offset by the impact of independence, and the prospects of an upside financial and reputational gain. With self-financing, the owner is in control. Content produced and distributed may reflect the owner’s own opinions and aesthetics. In technology, owners can take greater risks in backing projects in which only they have faith. This encourages greater innovation.

6.2.1 Case Discussion

Internal Funding

Time Warner Media could use retained earnings as a funding source for TWIT. What will be the cost and the availability? Though there are no interest payments associated with using retained earnings, there is still the opportunity cost of the money.

As shown, for established firms the opportunity cost of capital is given by¹³:

$$\text{Cost of Retained Earnings} = \text{Firm's Long Term Bond Yield} + \text{Risk Premium}$$

We will see in later sections that the interest rate on the company’s long-term debt is 6.9%. The risk premiums for media firms run in the 2–5% range,¹⁴ and, since Time Warner is well-established with a good credit rating, its risk premium would be at the lower end of the

9 Investopedia. “CFA Level 1 – Cost of Retained Earnings.” *Investopedia*. 2012. Last accessed May 16, 2017. ► <http://www.investopedia.com/exam-guide/cfa-level-1/corporate-finance/cost-of-retained-earnings.asp>

10 Mortgage-X. “Mortgage (ARM) Indexes.” 2012. Last accessed July 18, 2012. ► http://mortgage-x.com/general/arm_index_average.asp

11 AXA. “Good Things May Come In Small Packages: Small-Cap Stocks.” 2013. Last accessed May 16, 2017. ► <http://www.axa-equitable.com/investments/small-cap-stocks.html>

12 Damodaran, Aswath. “Betas by Sector.” New York University Stern School of Business. January 2012. Last accessed July 18, 2012. ► http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/Betas.html

13 Brigham, Eugene F., Dilip K. Shome, and Steve R. Vinson. “The Risk Premium Approach to Measuring a Utility’s Cost of Equity.” *Financial Management* 14, no. 1 (Spring 1985): 33–45.

14 Investopedia. “CFA Level 1 – Cost of Retained Earnings.” *Investopedia*. 2012. Last accessed May 16, 2017. ► <http://www.investopedia.com/exam-guide/cfa-level-1/corporate-finance/cost-of-retained-earnings.asp>

6.3 · Debt Financing

range. The cost of retained earnings can thus be estimated as $6.9\% + 2\% = 8.9\%$. Expressed in terms of the average US prime rate of the preceding five years (5.45%), it would be 3.45% above that rate.

SNIT

Each of the three founders of SNIT has a total of \$11 million of his

own money and loans from friends and family to invest. The CAPM equation estimates the cost of SNIT's internal funding:

$$r_a = r_f + \beta_a (r_m - r_f).$$

- The risk free rate $r_f = 2.75\%$.
- The return for Internet firms has been $r_m = 13.8$, and their beta has been $\beta_a = 1.11$.

Thus SNIT's estimated cost of capital is:

$$r_a = 2.75 + 1.11(13.8 - 2.75) = 15.02$$

Expressed in terms of the average US prime rate, this would be 5.45% (the average prime rate over five years) plus 9.57%.

6.3 Debt Financing

6.3.1 Pros and Cons of Debt

Other than internal funding, debt is usually the cheapest form of financing. Debt is typically money borrowed from an outside source such as a bank or other type of lender, with the promise to return the principal (the original amount borrowed) and, in addition, pay an agreed level of interest, either regularly or at the end.

There are several advantages to debt. It is:

- Quicker to create than equity.
- Does not change the existing ownership structure.
- Allows for interest payments to be deducted from taxes.
- Keeps the upside potential of the project with shareholders.

But there are disadvantages to debt.

- Loans must be repaid in a timely manner and can lead to the bankruptcy of even a good project if it is caught in a cash flow squeeze.
- The borrowers may have personal liability with their assets.
- Assets pledged as collateral may be lost.
- There is a hidden cost to debt as it makes the company more risky for investments.

A bank will scrutinize a company's business plan, management, financial reports and the other financial backers, and will set conditions on how the company must operate. These "debt covenants"

give lending institutions control and prevent borrowers from increasing riskiness.

6.3.2 The Hierarchy of Debt

Debt comes in many forms, with some more secure than others. A "hierarchy of debt" ranks it from the most secure to least secure. In the event of bankruptcy, the most secure debt is paid first and the least secure debt last, which often means never.

Most mid-sized firms have arranged for a bank debt "Line of Credit" (LOC) or "Letter of Credit", or "Credit Security." An LOC is an agreement in which the lender gives the borrower access to a certain level of funds. This is on condition that the borrower's condition has not suffered material adverse change, or that the borrower has violated a covenant in the contract. In a way, it is like an overdraft privilege for personal checking accounts with a ceiling.

The second most common form of bank financing for small and mid-sized companies is senior term debt. These loans are made against fixed assets that are fairly liquid, such as real property, plant and equipment (e.g. cable TV financing). A "senior" lender ranks ahead of some other creditors in the event of liquidation, and can seek repayment from the forced sale of the secured assets. Such loans will usually not be provided for a new venture.

"Subordinated" or non-collateralized debt ranks below senior debt in repayment when there is a bankruptcy. It can be secured by a second lien on company assets (like a second mortgage on a house), or be unsecured.

6.3.3 Case Discussion

Line of Credit

TWIT

Viable loan programs available to TWIT include a commercial bank loan (term loan) and a revolving line of credit (LOC) secured by the full faith and credit of its parent company. Such borrowings are charged an interest rate that is determined on the basis of Time Warner's senior debt rating (BBB+ at the time).

SNIT

In contrast, startup company SNIT has no, or only limited, access to bank loans or credit lines due to its small size, lack of assets and lack of a historical track record. What interest rate would conceivably compensate a bank for the risk? Assume that the founders themselves have found limited sources for a loan.¹⁵ The loan amounts and the interest charged are based on the credit scores of the founders, their income streams,

and the personal assets that can be pledged as collateral.

Assume that SNIT's five founders have found a lender willing to issue them an LOC in an amount equal to 20% of their net worth. Each of the founders has an impeccable credit score, a private home, an ongoing relationship with the lending bank and an average net worth of \$1 million. The cumulative line of credit amount would therefore be \$1 million. The rate of interest on the LOC would be 15%.¹⁶

6.3.4 Short-Term Debt

6.3.4.1 Commercial Paper

A major way for established companies to raise money for short periods is "commercial paper" (CP). CP is an unsecured loan taken by a company with a repayment period ("maturity") of up to 270 days, but with an average of about 30 days. CP interest is paid at the maturity date. The companies borrow money from financial institutions and issue CPs as promises to repay. These promises, in turn, are resold by the lenders to other investors at a discount.

CP is bought by banks, insurance companies, the money market and pension funds, and other institutional investors. It is typically "issued" (i.e. money is being borrowed) by companies with good financial standing, because they are unsecured by assets and thus stand on the reputation of the borrowing company. It is often said they are the kind of loans made to companies that do not really need them, except for the purpose of smoothing their income. CP buyers (the lenders), in turn, do not need to do much in the way of "due diligence" to investigate the borrower because those firms are low-risk.

6.3.4.2 Case Discussion

Commercial Paper Debt

TWIT

One major debt option for TWIT is unsecured CP backed by its well-established parent company. Generally speaking, a long-term project such as TWIT should be financed through long-term means, rather than using a short-term approach.¹⁷ But the CP could be used as a temporary financing vehicle.

SNIT

SNIT, as a newcomer, would not be able to issue CPs. To enter the CP market, it would require sponsorship from a commercial bank or third party to guarantee payment. But, in SNIT's circumstances, this would be unlikely.

6.3.5 Long-Term Debt

6.3.5.1 Corporate Bonds

Once a firm is well-established its next stage of financing is to access long-term corporate debt. The typical form of such debt is bonds. When such debt is traded in open financial markets it

15 Credit Guru Inc. "Setting Credit Limits." 2012. Last accessed May 17, 2017. <http://www.creditguru.com/CreditLimits.htm>.

16 Marlon, Sharon. "Unsecured Personal Loans on the Increase." *MarketProSecure*. March 14, 2011. Last accessed July 18, 2012. <http://www.marketprosecure.com/personal-finance-news/unsecured-personal-loans-on-the-increase-198.html>.

17 The ceiling on Tier 2 issues is usually around \$6–8 billion. Example: The Walt Disney Company had a substantial \$4.5 billion in outstanding Tier 2 CP debt in 2004. By 2010, this had declined to \$794 million. Tier 3 CP debt is usually rated in the mid-BBB level. It has an interest rate well above LIBOR and smaller issues of \$200–300 million. See also Kacperczyk, Marcin, and Philipp Schnabl. "When Safe Proved Risky: Commercial Paper During The Financial Crisis of 2007–2009." *Journal of Economic Perspectives* 24, no. 1 (Winter 2010): 29–50.

6.4 · Other Types of Debt

is known as “public” debt, which should not be confused with governmental debt. The standard length to maturity of a corporate long-term bond is 3–30 years. However, some bonds have a 100-year maturity date, or even go on forever.

Long-term debt is most appropriate for companies with steady cash flows or strong growth prospects. Examples are companies in cable TV, direct broadcast satellite (DBS), wireless and telecom. Companies issuing bonds are evaluated by rating agencies in terms of their credit level based on business and financial analysis. Three firms lead the credit rating market in the USA: Moody’s, Standard & Poor’s and Fitch. Rating agencies look at both quantitative and qualitative

factors when analyzing bond issuers. Bonds with an acceptably low risk of default are rated BBB and higher. These bonds are considered “investment grade.” Bonds with a rating of BB or lower have a higher risk of default and are considered speculative grade, “high yield” or, colloquially, “junk bonds.” Junk bonds are issued by “rising stars” (new companies). In other cases, it may be a solid company that borrows heavily to finance an acquisition. In still other cases, the company borrows to pay for its own acquisition by others (“leveraged buyout”). The default rates of junk bonds are, on average, approximately 3–4% of all issues, but much higher during downturns in the economy.

6.3.5.2 Case Discussion

Long-Term Debt—Corporate Bonds

TWIT

Corporate bonds require steady cash flows and a strong proven performance. Time Warner had these characteristics. It could issue corporate debt through a process called “underwriting,” with one or more securities firms or banks forming a syndicate and buying the entire issuance of bonds (i.e. they lend the company the money). The banking syndicate would then re-sell much of that debt to investors at a higher price and, hence, at a lower yield. Based on the company’s corporate credit rating of BBB, it would have to pay an annual interest rate of about 6.9%¹⁸ on ten-year corporate bonds. It could finance TWIT’s entire \$1 billion budget through corporate bonds, but there are other

variables that effect its funding decisions, so it may limit the use of corporate long-term debt. In 2010, Time Warner’s debt-to-capital ratio was 33.3%.¹⁹ The company made major efforts to lower its debt in an effort to boost its stock price and lower the cost of borrowing. It does not want to overload again with debt but, rather, to apply its debt financing ratio ceiling of 33.3% to the \$1 billion needed to fund TWIT. This would put a ceiling on its new borrowing.

SNIT

In order for SNIT to issue corporate bonds to the public bond market, it needs to be rated by the major rating agencies to satisfy investors. SNIT, as a startup, would not attain

a decent rating, if any at all. A SNIT borrowing would be considered a high-risk “non-investment grade” bond. It would receive a rating as a corporate “junk bond” rating of CCC, CC, or C.²⁰ It would probably hold a CC rating (“obligations which are highly speculative or which have a high risk of default”). This rating is associated with a steep cost of 30% interest before tax. We assume, hypothetically, that SNIT could find private investors who are willing to buy these highly speculative bonds directly through a private placement offering. This translates to the five-year average prime rate of 5.45% plus 24.55%. Even after tax deductibility, the cost would be at 21%, and hence not desirable for SNIT.

6.4 Other Types of Debt

6.4.1 Vendor and Buyer Financing

Quite frequently, one of the partners in a transaction grants credit to the other in order to conclude a deal. It is usually the seller who extends such

financing to the buyers. For example, a computer manufacturer may entice an animation production company to select its computers for its render farm. In other cases, it is the buyer who lends money to the producer, such as when a film studio or a TV network provides financing for a film which they will later distribute.

18 Besley, Scott, and Eugen F. Brigham. *Principles of Finance*. Independence, KY: Cengage Learning, 2009.

19 Martin, Laura, and Dan Medina. *Time Warner Inc. (TWX): An Investment Analysis*. New York: Needham & Company, LLC, 2010.

20 Fitch IBCA. “Credit Ratings.” June–November 2006. Last accessed July 19, 2012. ► http://www.tgbr.com/tgbr/cont/Credit_Ratings.pdf.

Often, vendor credit is used as a sales tool and can then be cheap, with sellers extending long-term credit or other favorable terms to clinch a sale. They often have advantages over financial institutions in extending such credit, as they have better private information about the business and the buyer. They may also be able to use leverage in terms of withholding future supplies, and they may be better positioned to repossess or resell collateral.²¹

Vendor financing (or its sibling, buyer financing) has existed for film and theater for a long time under various names. In film production, vendor/buyer financing includes funding (or loan guarantees) from studio distributors, theatrical distributors and others. The quid pro quo of a pre-sale financing deal is usually the licensing of the film's rights to a media distributor within a specific territory, or technical platform, or both. Photo laboratories, too, used to provide credit in order to enable the production of a film that would generate a large print order later.

The classic film financing deal is a studio production-finance-distribution (PFD) deal. The distributor (the studio), as the buyer, agrees to lend to the producer part of the cost of production, i.e. to finance it. Producers will often use the studio's facilities, for which the production budget will be charged; this will be repaid when box office revenues start rolling in. Here, the studio is the "seller" of production services. The studio also manages the distribution to exhibition channels. These expenses are charged to and paid for by the film's budget, with interest for the loan.²²

One alternative to such vendor (distributor) financing is a straight purchase contract. This is known in the film business as a "negative pickup deal" in which the distributor pays for a completed film, rather than by funding the production process itself. ("Negative" refers

to the photographic negative, not to a quality assessment). A "negative pickup" letter is a commitment to purchase or license film distribution rights post-production. The independent producer/borrower uses the pickup commitment letter by the distributor studio as collateral in order to borrow production funds from a bank. The producer gets more independence in creating the film, without having to worry about distribution while making the movie. The studio distributor, on their part, has no financial exposure if the producer fails to finish the film, or if it runs over budget.

6.4.1.1 The Impact of Vendor Financing on Content

Arranging advance financing favors established producers with experience, contracts and a proven track record. The selective availability of financing by distributors give these distributors significant influence over content, with the advantage going to established projects over truly independent producers. Distributors generally retain "final cut" rights—i.e. control over editing—for most of the films they finance. This allows them an opportunity for drastic changes to a film in order to make the film more commercially successful, which typically means happy endings, less ambiguity and less controversy. Studio financing can also come with strict procedures. Sometimes, studios demand cast approvals, script change approvals and daily screenings. With studio financing, the studio usually owns the negative and can exploit the film's future in new media. With independently financed films, filmmakers tend to retain ownership.

Vendor financing of media and digital activities is most developed in the film sector, perhaps because its funding requirements are the largest among content media. It is also used, to some extent, for video games, music and book publishing (when printing companies extend credit to small publishers). In the tech sector it is used for hardware. A computer firm, for example, can finance the developer of an advanced semiconductor chip in return for an early delivery of this technology.

21 Berger, Allen N., and Gregory F. Udell. "The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle." *Journal of Banking and Finance* 22, nos. 6–8 (1998): 613–673.

22 Caves, Richard E. *Creative Industries: Contracts between Art and Commerce*. Cambridge: Harvard University Press, 2000.

6.4.1.2 Case Discussion

Vendor Financing

TWIT

For TWIT's tech hardware, vendors could contribute financing in order to boost sales for their firms. An established company could expect vendor financing at an interest rate of about 7.0%.²³ But TWIT's vendor financing would be limited for hardware upgrades to its network infrastructure. It will be hard to pre-sell TWIT's interactive video content because the product is new and unproven for buyers.

SNIT

SNIT would have some access to vendor financing for its hardware purchases. Beyond the 30-day vendor credit, vendors would typically charge startups such as SNIT 10–15% interest. SNIT's initial hardware acquisitions are estimated to be \$30 million. Hardware vendors may finance half of this amount (\$15 million).

6.4.2 Lease Finance

Using leaseback arrangements as a source of financing has become a popular vehicle. It is typically done when, instead of purchasing an asset, a company enters into a long-term lease with the seller. Such leasing frees cash for other purposes. It reduces the debt on a company's balance sheet and enables the firm to take on debt for other purposes. On the consumer level, such a leasing arrangement is popular for automobiles. And, of course, anyone who rents an apartment, rather than buys it, is involved in a lease transaction. In the United States, "equipment under lease" accounts for nearly one-third of the annual overall new equipment investment.²⁴

For the seller, leases can be used as a tool to improve sales. They can also serve as an arbitrage of the credit risk. A seller may have a better credit

standing than the potential buyer/ lessee and thus pay a lower interest rate.

Participants can transfer risk to the corporations that can not only better handle that risk, but also handle it inexpensively. These deals can also transfer tax benefits among companies, from the highly tax-burdened to the lightly taxed.

6.4.3 Government Financing

Governments around the world are important sources for the financing of media and information technology. This help is typically extended through direct grants, tax benefits and loan guarantees. Indirect financing support can be given through protectionism and favorable regulatory policy that make a project more profitable by enabling a company to charge higher prices.

Film is particularly favored as a recipient of cultural subsidies. (This has been discussed in ► Chap. 3 Production Management in Media and Information). The European Union's Commission supports films to the tune of €1.6 billion per year. In France, the Centre Nationale de la Cinematographie (CNC) spends over \$100 million per year financing films. France also offers tax incentives for the film industry and its investors.²⁵

In the United States, too, there is a well-established system of government finance of media and high tech. On the federal level, this is done through a variety of agencies and programs, such as those of the Small Business Administration, the National Telecommunications & Information Administration (NTIA), the National Endowment for the Arts, the Corporation for Public Broadcasting (CPB) and others. Tax benefits are frequently offered by state and

23 Nevitt, Peter K., and Frank J. Fabozzi. *Equipment Leasing*, 4th ed. New Hope, PA: Frank J. Fabozzi Associates, 2000; Mitcham Industries, Inc., Form 10-K, April 6, 2011. Last accessed May 17, 2017. ► http://www.faq.s.org/sec-filings/110406/MITCHAM-INDUSTRIES-INC_10-K/.

24 Sharpe, Steven A., and Hien H. Nguyen. "Capital Market Imperfections and the Incentive to Lease." *Journal of Financial Economics* 39, nos. 2–3 (1995): 271–294.

25 These tax shelters allow investors to write off 40% or more of their investments against their taxes, subject to the upper limit of 25% of taxable income and subsequently capped at €18,000. If such an entity, known as a SOFICA, uses 10% of its investment capital to acquire shares of production companies, then this deduction increases to 43%. Production companies may immediately write off 50% of the amount invested. Another major support mechanism is the quasi-monopoly status of the pay-TV provider Canal+, whose high consumer prices generate revenues that must be partly used for domestic film support.

local governments. Louisiana gives 15% in state tax credits that are transferable (i.e. can be sold to third parties), plus a 20% tax credit on wages paid to Louisiana residents. By 2005, the amount spent on production in Louisiana had risen to \$425 million, with the state providing \$65 million in tax credits.

Film is not the only industry favored in this way. Generally, entrepreneurial high tech is desirable as a clean and knowledge-intensive sector with a high multiplier. Many states and countries have support programs.

6

6.4.3.1 Impact of Government Financing on Media and Tech Firms

The aim of governmental support programs is partly economic, partly cultural. Where the private sector funding for media content underserves significant groups or tastes, the public sector may generate additional money to create such content.

Where financing comes from governmental organizations, it will often come with strings attached. A film financed in Portugal may require scenes in that country, which could be a clumsy fit. In other cases, a country's heritage must be treated with respect. For assisting the film *Ghandi*, the Indian government mandated script changes and other modifications.²⁶

When it comes to tax advantages, given the various approvals and greenlights from agencies across multiple countries that need to be assembled, it would be difficult for a small artsy film to create complex funding packages. A German investor tax shelter consortium, for example, would probably not be interested in a low-budget film. The high transaction and legal costs of such a highly involved deal would consume the profits and tax advantages from a leaseback agreement.²⁷

6.4.3.2 Case Discussion

Government Financing

TWIT

Government funding is an option even for a large company. Time Warner Media could receive state and local support in the form of subsidies for loans with an interest cost of around 2% below the prime rate for equipment and in-state software development. There will also often be tax credits against its state and local taxes. The government programs typically have a ceiling, often \$10 million, and a subsidized interest rate of 2% below market rate. The funding often comes with locational requirements, which may raise some of TWIT's operational costs.

SNIT

SNIT, too, could secure state and local grant subsidies of about 10% of the costs for tech equipment and infrastructure costs, in the form of low-interest loans.

Another alternative is for SNIT to apply for a Small Business Administration loan guarantee. But, for a startup with an unproven track record, such a guarantee will be difficult to secure.

6.4.4 Private Grant Financing

In some countries, in particular in the USA, direct government spending on cultural activities has been relatively low but tax laws provide incentives for private grants and contributions. In the USA, 57% of the income of public broadcasting comes from private sources including as foundations and donations. Corporate and individual funding to the arts exceed US federal funding considerably, and about 40% of private individual giving is paid for indirectly by the tax savings, i.e. is a "tax expenditure."²⁸

However, corporate and private donations are not a stable source of financing, since they decline in a business downturn. Also, corporations tend to use their funding as a way to enhance their national and local image and visibility, and as a way to network more effectively with high-level personalities. These underlying objectives make the contributions less likely to be a force for major

26 Grenier, Richard. *The Gandhi Nobody Knows*. Nashville: Thomas Nelson Publishers, 1983.

27 Epstein, Edward Jay. "How to Finance a Hollywood Blockbuster" *Slate*. April 25, 2005. ► http://www.slate.com/articles/arts/the_hollywood_economist/2005/04/how_to_finance_a_hollywood_blockbuster.html.

28 Americans for the Arts. "Average Source of Revenue for Nonprofit Arts Organizations (Estimated)." Last accessed July 20, 2012. ► http://artsusa.org/pdf/get_involved/advocacy/research/2008/revsources08.pdf.

cultural innovation.²⁹ Other factors that affect corporate giving are a company's relationship to the community, the culture of philanthropy prevailing in an entire industry and the benefits to employee loyalty by matching their contributions to their favored causes.

6.4.5 The Impact of Debt Financing on Content

In conclusion, debt financing reduces the risk-taking and innovation by companies relative to those prevailing with financing by equity. Lenders do not usually require profit maximization, only financial soundness—a high upside is not expected as long as the downside is low.

There is also an impact of short-term vs. long-term debt. A company that must seek frequent re-financing is under greater performance pressure to do well in the short term. Such companies need to be non-risky as well as non-controversial in their content, technology and labor relations. In contrast, long-term debt allows for a longer time horizon to enable managers to create and innovate.

The public good characteristics of media, networks and technology generate a major funding involvement by government in the finance of these activities. Such financing, too, tends to be supportive of non-controversial, relatively low-risk projects.

6.5 Risk Reduction Strategies

To gain access to funding, or to lower its cost, one of the most important tasks for media and tech firms is to reduce the risk involved in their projects. There are several approaches.

6.5.1 Risk Reduction Strategy: Diversification

Companies may internally pool multiple risky projects, making their aggregate cash flow safer.

Similarly, a venture capital fund will bundle numerous projects for investment, and thereby reduce the overall risk through diversification.³⁰ For media firms, being active in a variety of films, music recordings, book titles, games, software programs, TV shows and content genres, and at a variety of budget levels, attracts a wide range of audiences and reduces a media firm's vulnerability to a flop in any one of them. Firms will thus spread their risk by operating in different media projects and industries.³¹ Product diversity also generates information on developing market trends, giving the company a better chance of hitting a moving target.

A second factor for portfolios goes beyond the averaging of risk. It is the assembly of a portfolio of assets whose performances are not merely independent of each other, but are negatively correlated. This was discussed in ► Chap. 3 Production Management in Media and Information. The goal of diversification, then, is to reduce the risk of the portfolio as a whole, for a given return. Risk is defined as the statistical "variance": a measure of the dispersion of the observations from the average (i.e., expected) value. The higher that dispersion, the greater the probability of ending up either way above or way below the average, i.e. the greater the volatility of outcomes and, therefore, the greater the risk. (A similar measure for risk is the "standard deviation," which is just the square root of the variance. It is commonly depicted by the symbol σ .) Now, suppose that if Event 1 happens, Project A goes down but Project B goes up. But if Event 2 happens, it is the reverse. Both of the projects, seen individually, are risky. But, taken together, their joint portfolio has a very low riskiness. Whatever happens out there, one of the assets will counterbalance the other's downturn.³² The measure of how much two variables move together and counter to each other is their

29 LeClair, Mark S., and Kelly Gordon. "Corporate Support for Artistic and Cultural Activities: What Determines the Distribution of Corporate Giving?" *Journal of Cultural Economics* 24, no. 3 (August 2000): 225–241.

30 Caves, Richard E. *Creative Industries: Contracts between Art and Commerce*. Cambridge, MA: Harvard University Press, 2000.

31 Picard, Robert. *The Economics and Financing of Media Companies*. New York: Fordham University Press, 2002.

32 Chan-Olmsted, Sylvia M. "Diversification Strategy of Global Media Conglomerates: Examining Its Patterns and Determinants." *Journal of Media Economics* 16, no. 4 (2003): 227.

“covariance.”³³ Its values range between 1 and -1 . Values of -1 indicate perfect negative correlation. A value of 0 means that the returns on the two assets vary independently, and a value of $+1$ indicates a perfect positive correlation, which would make for a poor portfolio match. A strong positive correlation means that when one investment goes down, the other investment declines, too. To diversify, an investor does not want this; for risk reduction, it is preferable to have a negative correlation.

Thus, a product with a substantial risk may still be feasible if it moves in an apparent direction than other films in the same slate of production. The popular mood two years from now is uncertain. For example, a pacifist movie could be economically risky if a major terrorist activity occurs at the time of release. But, if paired with a war movie, the two films together will be less risky: one of them will probably catch the spirit of the time when released.

6.5.2 Risk Reduction Strategy: Hedging

One major way to reduce risk is to hedge it by “selling” it to another person who is willing to buy the risk, in the same way that people buy insurance. This is also discussed in ► Chap. 11 Pricing of Media and Information. There are several such instruments to reshape the risk profile, either increasing or decreasing exposure: commodity futures, forward contracts, options, swaps and so on. Collectively, these instruments are part of what has come to be called “derivatives.” The

33 In order to estimate the rate at which two assets co-vary, one multiplies the deviation in performance of asset A by the deviation of asset B in each of the N scenarios and then average the products. If A and B are two projects with returns r and probabilities p , then the covariance between the return on A and the return on B is as follows:

$$\text{cov}(r_A, r_B) = \sum_{i=1}^n p_i [r_{iA} - E(r_A)][r_{iB} - E(r_B)]$$

The concept of relatedness that the co-variance expresses can also be stated as the correlation. The statistical correlation between two variables is the co-variance, “normalized” to lie between $+1$ and -1 . Such normalization is done by dividing the co-variance by the product of the variances of the two variables. For the two projects A and B , the correlation between the return on A and the return on B is as follows:

$$\rho(r_A, r_B) = \frac{\text{cov}(r_A, r_B)}{\sigma(r_A, r_B)}$$

term has acquired negative public connotations but the concept is solidly positive (when applied in a transparent fashion). Derivatives transfer risk from people who do not want to bear it to others who are willing to accept it. For example, currency derivatives are attractive to a firm affected by foreign exchange fluctuation because they provide shelter from the worst of swings in the values of the euro, dollar, ruble and so on. Such derivatives can be a contractual arrangement between two parties, or they can be traded at an exchange.

As mentioned, option arrangements are quite frequent in the media and technology field. A film option is a contractual agreement between a production company on the one hand, and a writer on the other hand, in which the producer pays for the right to buy the rights to a screenplay or story from the writer before a certain date, and at a certain price.

6.6 Equity Financing

6.6.1 Types of Equity Arrangements

After self-financing³⁴ and debt, the third major form of financing is through *equity* financing. By this, we mean funding that includes an element of ownership. Equity financing arrangements include:

- Partnerships and limited partnerships,
- Venture and angel financing,
- Private and public equity.

For an order of magnitude, small businesses in the USA receive about 50% of their financing from equity (including self-financing) and the other half from debt.³⁵

Equity financing tends to be an expensive form of financing for a company due to investors taking on more risk with equity investments than they do with debt investments. In the case of bankruptcy, equity investors are usually wiped out but debt holders are paid off, at least partly, especially if they hold collateral. Debt is higher on

34 Self-financing is actually, depending on its structure, part equity, part debt.

35 Berger, Allen N., and Gregory F. Udell. “The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle.” *Journal of Banking and Finance* 22, nos. 6–8 (1998): 613–673.

6.6 · Equity Financing

the pecking order than equity in the case of liquidation and reorganization. Equity may be more risky, but it also offers a great upside—a share in the profits and a gain from an appreciation of the stock. Shareholders also have voting rights and thus affect the control of the firm.

“Preferred stocks” are a hybrid in terms of risk, since dividends must be paid before dividends are paid to common stockholders.

A major reason for a firm’s use of equity financing is that debt may simply not be available. Startups and Internet firms, for example, are mostly financed by equity because few banks will provide loans for such high-risk endeavors without a track record or stable cash flows, and with few assets that could be used as collateral. Another advantage of equity is that there is no obligation to pay interest. A firm may have a bright tomorrow but, when current debt falls due and cannot be paid, the firm becomes insolvent. Other reasons to sell equity include the need of existing owners to increase the liquidity of the company or of themselves, to pay off existing debt, to create funds for new acquisitions, or to facilitate estate planning.

And what are the disadvantages? There is the high cost of return that an equity investor would expect. There are also high transaction costs (underwriting fees) and a dilution of control of the existing owners.³⁶ To counter such dilution of control, the existing owners at times create a system where there are several classes of stock, each with different voting rights. Class A stock may be held by the entrepreneur, management, or the controlling family. It usually offers additional voting rights over other shares. Class B shares offer fewer voting rights but may offer higher dividend entitlements, or a lower acquisition price. It is usually referred to as “common stock.” Class A stock tends to be in control even while being in the minority in terms of investment or overall shares, which is mostly the reason for the arrangement. This may be rationalized as aiming to insulate corporate management from the swings in the stock price and to focus on long-term goals. The preferred class A stock is not available to the public and is usually not traded in the same way as common stock. Examples for minority owners holding full control are the following:

- The Murdoch family held 39% of voting shares in the global media firms News Corp and 21st Century Fox, but only about 16% of equity.
- The Roberts family has only 1–2% of outstanding stock of Comcast, the world’s largest cable TV operator and owner of NBC Universal, but holds 33% of voting shares.
- The Sulzberger family controls The New York Times Company through its 88% of class B shares, but holds only 19% of the total equity outstanding.³⁷
- The Washington Post Co. used to be 75% controlled by the Graham family through 40% of the outstanding stock.³⁸
- Cablevision was controlled by the Dolan family, which owned 20% of equity but 74% of the voting rights.
- In Germany, the Mohn family controls Bertelsmann through its domination of the Bertelsmann Foundation, which holds all of the company’s stock.

6.6.1.1 Partnerships

Equity investments come in many forms. By far the most prevalent in sheer numbers is the individual proprietorship. Usually, its owner also runs the business, assisted by employees. This form of organization is used most often for small businesses. In the media world, a producer may run a project in that fashion. Individual proprietorships could take the legal form of a small corporation, where the stock is not traded but, rather, is held by the sole owner. This provides a limited liability and thus protects the personal assets of the owner from creditors in the event that the business fails.

When a business based on a single proprietorship expands, there is usually a need for outside participation. The most basic form of participation, especially for small firms, is a partnership with others as co-owners and, possibly,

37 The New York Times Company. Notice of 2010 Annual Meeting and Proxy Statement. March 12, 2010. Last accessed May 19, 2017. ► http://s1.q4cdn.com/156149269/files/doc_financials/proxy/2010_Proxy_Statement.pdf.

38 Fox, Justin. “Murdoch vs. Family-Owned Newspapers.” *Time*. May 10, 2007. Last accessed May 19, 2017. ► <http://www.time.com/time/magazine/article/0,9171,1619562,00.html>. The Washington Post Co. was subsequently bought by Jeff Bezos, founder of Amazon.com. Bezos owns “Nash Holdings LLC,” a holding company created for the Washington Post deal. Nash Holdings owns 100% of The Washington Post, which was purchased for \$250 million.

co-managers. Partnerships are formed to pool the skills, resources and information of several individuals or companies. One major advantage of partnerships, in contrast to incorporated firms, is that in many countries there is no income tax on the profits of that partnership because, legally, it is not treated as a separate entity from its owners but merely a “pass-through entity” to each of the partners, who report their share of profits or losses as personal income. Therefore, taxes on partnership income must be paid only once by a partner,³⁹ in contrast to a corporation, which must pay its own corporate income taxes, and then the shareholders must pay income tax again on the distributed profit of the company, i.e. the dividend.⁴⁰

A simple partnership is easy to set up. The law provides a basic structure that defines respective rights (voting, profit participation and so on) and respective obligations (liability questions, loss participation and the like). In the USA, partnerships are governed by state law, except for federal taxes and other nationwide regulations, unless the partners specifically agree to different rules in their partnership agreement. There are two types of partnerships: general and limited partnerships. In a general partnership, all partners have a say in the day-to-day management of the firm and each partner is personally liable for the entirety of any business-related obligation. In other words, if in a film production company Partner A decides to buy the movie rights to a bestselling book, his Partner B must fulfill the payment obligation on behalf of the firm, even if he disagrees with the decision of Partner A and has never approved it. It is therefore prudent to select one’s partners carefully, since one is financially and legally stuck with responsibility for their actions. This risk exposure is reduced in a limited partnership. Here, at least one general partner is responsible for the day-to-day management of the company and is personally liable for business obligations. Limited partners, on the other hand, contribute capital but have minimal control over business operations. In return, their personal liability is capped at the amount of the initial investment. Limited

partnerships are often used in private equity and in hedge funds. The logic behind this division of liability is that it enables the limited partners to invest without having to worry about every move of the general partner that could trigger a potentially huge liability.⁴¹

An example for the fear of liability in a full partnership is Apple Computers. In 1976, Steve Jobs, Steve Wozniak and Ronald Wayne formed Apple Computers as a real partnership, with 45%, 45% and 10% ownership shares, respectively.⁴² But Wayne worried about the possibility of holding the bag in the event of a bankruptcy, given that Jobs and Wozniak had no personal assets, and he formally withdrew from the partnership just a few days later by filing a notarized statement to that effect. He sold back his 10% ownership stake to his two co-partners for \$2300. That stake would have been worth about \$94 billion in 2018.

It is more difficult to create and run a limited partnership than a full one without professional help, since there are requirements in terms of registration, the legal contracts between the partners, tax filings, and compliance with various regulators.

Although there are exceptions, limited partnerships tend to be used more in the early stages of a company or venture rather than in its mature stages, where corporate forms predominate. For investment funds, the limited partnership arrangement is prevalent, in part due to its tax treatment.

Film Partnerships

Partnerships were frequent in film financing. Before the 1976 and 1986 tax reforms in the USA, limited film partnerships were among the most effective tax shelters there. Subsequently, “passive losses” from tax shelters could no longer be used to offset income from wages, salaries, interest and dividends. Absent the tax angle, few movie partnerships have historically returned better than 10–15% annually and many have, in fact, lost money to limited investors. Occasionally, they generate high profits to investors, of course. Yet, from a purely economic standpoint, it is usually better to invest directly in the common stocks

39 On the other hand, India taxes partnerships twice, once with a flat rate of 30% of total income minus a deduction of interests and remuneration to the partners, and then the partners are also taxed.

40 The double taxation of corporate profits and dividends is one of the arguments made for setting corporate income taxes at a lower rate than individual income tax rates.

41 Bankman, Joseph. “The Structure of Silicon Valley Start-ups.” *UCLA Law Review* 41, no. 7 (September 1994): 1737–1768.

42 Isaacson, Walter. *Steve Jobs*. New York: Simon & Schuster, 2011.

of the production or distribution companies, especially considering the advantage of greater liquidity (ability to sell quickly.) But film investments have always been driven by considerations beyond those of pure economic rationale. Investing in film directly via partnerships is often seen as “glamorous,” which is a factor for many investors—whether they admit it or not. On top of that consideration limited partnerships in film are popular in many countries where tax shelters continue to exist to encourage investment in film production.

Some of these perfectly lawful tax loop holes existed by coincidence and were discovered and used by savvy financiers and lawyers until the respective government closed them down. But such tax shelters have often been deliberately designed to help rich and influential people lower their taxes while being justified as supporting the generally risky business of film, which in many countries is not profitable without some kind of governmental help.

A well-organized limited partnership seeking investors requires a prospectus that spells out all aspects of the deal and its downsides. It describes the general partners, other managers, the planned projects, the business plan, the tax angles and so on. The drafting of such a prospectus can cost hundreds of thousands of dollars when it covers a complex scenario. It spells out duties and obligations, which will affect lawsuits if the project is unsuccessful (or highly profitable) and conflicts arise. Creating the legal structure of a limited partnership, important as it is, is only an input toward the goal of finding investors. This will be discussed further later.

Technology Partnerships

In high tech ventures, early funds may also be provided by “angel” investors (the term is borrowed from theater financing), which typically are individuals (or sometimes a firm) specializing in high-risk, “early-stage” investments. Angels have a long business history. Some of the biggest companies (e.g. Ford, Amazon, or Apple) have had business angels in their startup phase.⁴³ By one count, in 2009, there were 260,000 such angels

in the USA, many of them actively sought out by entrepreneurs for investment. In 2008, in the midst of a major recession, over 55,000 ventures were funded with over \$20 billion from angels—an average investment of \$346,500 per deal.⁴⁴ In 2015, angels invested \$24.6 billion in 70,000 deals⁴⁵ for an average of \$351,000. In contrast, venture capitalists are far more selective, and often only after the angels had already invested their money earlier and taken greater risks. In 2015, venture capitalists invested \$59.7 billion in 4,497 deals, with an average deal size of \$13.3 million.⁴⁶

While venture capital funds mostly invest other people’s money, angels put their own personal funds at risk. The angel investors can also be advisors, mentors and facilitators. They are often successful businessmen and women with entrepreneurial experience and expertise in the chosen investment field, and attracted by the potential for getting into a promising technology venture early. For them, a non-financial reason to invest in a venture is active involvement. An angel should not be treated as a “moneybag” but as a business partner.⁴⁷

Angels prefer a low profile to limit the amount of unsolicited deals that may come their way. How, then, to find them? There are several possibilities, the best choice is to use one’s personal network—contacts from college, university, friends, family and so on.

Industry gatherings and forums are public and accessible—though often for a hefty fee—but often less productive. Law firms specializing in media and technology may have information, as may tax accountants. There are also online platforms, such as the Angel Capital Network (ACE-Net), or the website Active Capital.⁴⁸

43 Kelly, Peter. “Finance and Venture Capital Markets.” In *Handbook of Product Service Development Communication and Information Technology*. Eds. Timo Korhonen, and Antti Ainamo. New York: Springer, 2003, 211–234.

44 Bowers, Brent. “In Pitching to Angel Investors, Preparation Tops Zeal.” *New York Times*. June 10, 2009. Last accessed May 19, 2017. ► <http://www.nytimes.com/2009/06/11/business/smallbusiness/11hunt.html>.

45 Angel Capital Association. “2017 Angel Capital Association Summit: Angel Investors Drive the Success of American Startups and Economic Growth” *PR Newswire*. April 12, 2017. ► <http://www.prnewswire.com/news-releases/2017-angel-capital-association-summit-angel-investors-drive-the-success-of-american-startups-and-economic-growth-300438845.html>.

46 PricewaterhouseCoopers. MoneyTree™ Report, Q1 2016. April 2016. Last accessed May 19, 2017. ► <https://www.pwc.com/us/en/technology/assets/national-moneytree-report-summary-q1-2016.pdf>.

47 Kelly, Peter. “Finance and Venture Capital Markets.” In *Handbook of Product Service Development Communication and Information Technology*. Eds. Timo Korhonen, and Antti Ainamo. New York: Springer, 2003, 211–234.

48 In other countries, there are intermediaries such as the British Venture Capital Association (BVCA) ► <http://www.bvca.co.uk/home>, the Canadian organization of angel investors Mindfirst ► <http://mindfirst.com/>, and the European Trade Association for Business Angel Network (EBAN) ► <http://www.eban.org/>.

Pitch fests or business plan competitions from business schools, magazines or consulting firms are also a way not only to get practice, but also possibly leading to prize money and contact with potential angels. Industry trade magazines and webpages, and even the end credits of films, may show funds that have supported films in the past. But it is usually personal contacts that will provide leads and introductions. Trusted referrals are the best openers of doors.⁴⁹

The look-over must be in both directions. An entrepreneur should check out an investor carefully. Meetings with prospective investors must be well-prepared with a business plan and presentation. Investors look at people as much as at their business plan. They will check out the entrepreneur and team, and consider their experience, track record and reputation. Passion to the idea is important in a pitch, but a good business plan, credibility and realism carry more

weight.⁵⁰ A demonstration that the entrepreneurs themselves have invested in their venture is important.

Angels will also look for a profitable exit strategy, with specific potential merger partners or acquirers.

In general, the angel investor will expect a high rate of return, probably at least 30%. Most ventures fail, and those that make it must compensate for the losses of others. Usually, the angel investor will require a stake in the company whose value represents the expected return. Since normal valuation methods—such as discounted cash flows—do not work because they require figures on profits, revenues and expenses, one must rely on some implicit value of the company. This requires judgment as much as calculation. If the parties agree that the company's value is \$1 million, the investor, for a \$100,000 investment, should then expect a 10% stake in the company.

Case Discussion

Limited Partnerships

TWIT

Limited partners could, in concept, be a viable funding source for TWIT: The parent company could remain in control as the general partner and would bear most of the financial risk beyond the limited partner's direct investment. It could set up the limited partnership by selling partnership shares in TWIT. The company has run its projections and expects the internal rate of return (IRR) on the TWIT project to be 16.34%. If it sells a stake in TWIT to limited partners, it will be giving up a proportional amount of expected future profits with this expected return of 16.34%, to which

are added transaction costs. Even this high rate of return may not be enough, since limited partnership investors often require at least 20% return—though, in this case, they may take less. The general partner typically contributes 20% of the investment, in order to assure the outside investors that it, too, has “skin in the game.” Without such assurances, limited partners will require a higher return on their investment. On the whole, forming a limited partnership to fund TWIT would be unattractive to the company, since it has cheaper and more efficient forms of financing available.

SNIT

For SNIT, on the other hand, a limited partnership is a more feasible option. SNIT was started by entrepreneurs with significant experience in this field. These individuals have a combination of technical knowledge and entrepreneurial spirit. SNIT'S initial list of potential limited partners draws from family and friends. The cost of limited partnership funding is based on projections of SNIT'S IRR. The limited partners will also share in the losses, if the company does not do well. If SNIT is successful, then these limited partners could be bought out in the future.

49 Kelly, Peter. “Finance and Venture Capital Markets.” In *Handbook of Product Service Development Communication and Information Technology*. Eds. Timo Korhonen, and Antti Ainamo. New York: Springer, 2003, 211–234.

50 Bowers, Brent. “In Pitching to Angel Investors, Preparation Tops Zeal.” *New York Times*. June 10, 2009. Last accessed May 19, 2017. ► <http://www.nytimes.com/2009/06/11/business/smallbusiness/11hunt.html>.

6.6.1.2 Private Equity

The term “private equity” has a variety of meanings. Almost all of equity is “private” in the sense of being owned by private parties rather than government. But equity is differentiated according to its trading status: *public equity* is stock that is traded on a stock exchange and accessible to the general investing public. Publicly offered securities are subject to securities laws and must adhere to strict legal standards. For example, financial documents such as the company’s balance sheet, income statement and other information have to be disclosed periodically. In contrast, firms whose stock is held *privately* (not traded on a stock exchange) are subject to much looser financial reporting.⁵¹

In most countries, public equity placements must be structured to comply with securities laws. In the USA, these laws, dating back to the 1930s, say that a stock offering must be registered with or approved by a government agency, unless it meets a specific exemption. A sale of securities that is conducted privately, without a public offering, will generally be exempt, on condition that the offering is made only to sophisticated and wealthy investors. The frequently used “Regulation D” stock offerings include a number of exemptions from registration requirements, depending on the size of the issuer, the number of investors and the manner in which the offering is conducted.

Private equity is an important source of funds for a variety of situations:

- Startup firms;
- Financially distressed firms;
- Public firms in need of buyout capital;
- Large shareholders who want to gain full control over their target firm;
- Small companies with untraded stock;
- Startups on the way to going public;
- Large companies withdrawing from public trading.

Private equity funds draw money for their investments either from individuals (who need to be wealthy enough to be legally admitted to invest) or from organizations that invest professionally. Private equity money tends to come from astute

investors with deep pockets, including rich people, insurance companies, pension and mutual funds, endowments and sovereign funds. In 2015, private equity firms raised \$629 billion and, in 2016, \$589 billion.⁵²

Private equity ventures are often financed by leveraged buyout (LBO) debt on the acquired company itself. The private equity firms typically only put up a percentage of the capital required to buy the target corporation.

Private Equity in the Media and Technology Industry

Media and technology companies have been particularly interesting to private equity investors, because there is a possibility of greater returns due to the volatile and risky nature of the business, which favors aggressive investors. In addition, private equity funds believe that the frequent lack of financial and managerial sophistication in newer media and digital companies provides an opportunity.

Impact of PE Acquisitions on Content

With much investment money in the hands of private equity fund managers, what has been the impact on media content or technology innovation? Private equity deals often lead to a breakup of large firms such as media conglomerates in order to reduce the debt that paid for the acquisition. Clear Channel used to be the largest radio company in the world, but the private equity owners, once they got control, sold off almost half of its 1100 radio stations.⁵³ Second, private equity partners will be generally be less interested in investing in quality or innovation that will only pay out in the longer run. Unlike startup venture capital, this kind of private equity is short-term oriented in its search for cash flows to meet debt payments and position the company for resale.

51 *The Economist*. “Public v Private Equity: The Business of Making Money.” July 5, 2007. Last accessed May 19, 2017. ► <http://www.economist.com/node/9440821>.

52 Drean, Antoine. “Private Equity Fundraising Is Set To Break Records, But The Plenty Holds Danger.” *Forbes*. December 8, 2015. Last accessed May 19, 2017. ► <http://www.forbes.com/sites/antoinedrean/2015/12/08/private-equity-fundraising-is-set-to-break-records-but-the-plenty-holds-danger/#495744d751ac>; MacArthur, Hugh, et al. “As Good As It Gets For Private Equity Fund-Raising” *Forbes*, March 10, 2017. ► <https://www.forbes.com/sites/baininsights/2017/03/10/as-good-as-it-gets-for-private-equity-fund-raising/#7b92398771d4>.

53 This was not enough to cover the debt. In 2018 the company filed for Chap. 11 bankruptcy.

Traditional institutional investors such as the Fidelity and other mutual funds rarely exert their influence over the management of companies they invest in. In contrast, private equity funds control the acquired company fully and often install new management with tough performance mandates. With so much capital at risk, as well as the immediate need to make debt service payments to pay back loans, the PE funds play a hands-on operational role beyond the merely financial.

Case Discussion

Private Equity—TWIT Versus SNIT

Private equity financing can be used by a young corporation lacking access to public debt and equity markets. TWIT, by itself, meets that category, but its parent company, Time Warner Media, is an established company with much cheaper funding options.

In contrast, companies such as SNIT that cannot raise finance from debt or public equity markets are candidates for the issuance of private equity to get early stage financing from private investors with faith in the project and its entrepreneur. The cost of such equity will be similar to that of venture financing. It is easily a whopping 40% or more.

6.6.1.3 Venture Capital

Venture capital firms finance new and rapidly growing companies. Venture capital funds are pools of capital, typically organized as limited partnerships, that invest in companies and industries that represent opportunities for a high rate of return. In return for financially backing a startup, they receive equity securities. Usually, they also assist in the development of new products or services. They are designed for institutional and deep-pocket investors. Venture capital firms have a long-term orientation, and take high risks and expect high rewards. They are often hi-tech focused, with less involvement in content media. Venture capital firms invest in a startup company and take a percentage of ownership. Typically, they will look for a 35–40%

return on investment on a single venture, knowing that many of their investments will never return a profit. It is claimed that 20% of venture deals are failures, 60% are disappointing and the remaining 20% are winners.⁵⁴

The main goal of a venture capital firm is exit: to see the portfolio firm go public (an IPO), be acquired, or be merged as soon as possible to make a sizeable profit. Once the stock is freely tradable after an IPO, venture capital firms distribute shares or cash to the limited partner investors.

The process of funding is structured in a benchmark system, similar to the option arrangements discussed earlier. Finance is provided to the portfolio companies in several stages called pre-seed, seed, first round (early stage) and second round (expansion). Funds for a next stage are provided only if the performance objectives are met for the previous stage. At every stage, the level of financing is very different due to a varying level of risk, and the expected return for that phase of the project. Some rules-of-thumb for expected rates of return for each stage of the company are⁵⁵:

- Seed stage: 80%+;
- Startup stage: 50–70%;
- First Stage: 40–60%;
- Second Stage: 30–50%;
- Bridge/mezzanine stage: 20–35%;
- Public expectations stage: 15–25%;

In the early days of venture capital firms, in the 1950s and 1960s, typical venture investors were rich individuals. Only later did venture capital firms emerge as major investment vehicles managing other people's money. Prior to the 1980s, US pension funds were effectively barred from any economically significant investment in venture capital firms due to of the “prudent man rules” that required financiers to be cautious with money they managed. However, in 1979 the US Labor Department reinterpreted the law regarding retirement protection to permit pension fund investment in venture capital if it did not endanger the entire portfolio. These and other

54 Kelly, Peter. “Finance and Venture Capital Markets.” In *Handbook of Product Service Development Communication and Information Technology*. Eds. Timo Korhonen, and Antti Ainamo. New York: Springer, 2003, 211–234.

55 Junee, Ryan. “Startup Valuation –The VC Method.” September 20, 2006. Last accessed July 20, 2012. ► <http://blog.ryanjune.com/2006/09/startup-valuation-the-vc-method/>.

6.6 · Equity Financing

regulatory changes led to a large increase in the flow of investments into venture funds. In 2004, sources of venture capital funds included public pension funds (42%), commercial banks and life insurance companies (25%), and endowments and foundations (21%).⁵⁶ Individuals and families accounted for only 10% of venture capital sources of funds.

For most private equity funds (of which venture capital is a sub-category), the managers of the fund takes a fee of “2 and 20”; a 2% of asset value as an annual management fee and up to 20% of any profits made by their funds. Usually, there is a minimum so-called “watermark” (in the vicinity of 8%, depending on several factors) that must be exceeded in order for the 20% profit participation to kick in. If there are losses in one year and the following years are profitable, the watermark will prevent any profits being reaped by the venture capital fund until the sum of profits and losses exceeds the watermark.

The limited partners typically put up 98% or more of the funds necessary and receive 80% of the partnership’s profits. The general partner provides only a fraction of the investment but contributes the ideas, the entrepreneurship and the management effort. Venture capital firms are usually actively involved in the management of each of the portfolio companies. They often spend more than 100 hours per year on a portfolio firm and visit each firm a dozen times per year.

Venture capital firms are highly selective in the projects they pick. According to one venture capital firm, only 2–3% of deals presented to a venture capital firm get funded. If the business plan is submitted “cold” (without the referral by a trusted intermediary), the odds are practically zero.⁵⁷

The major drawback for venture capital funding is that it is an expensive form of financing, with the founder giving up a big chunk of the firm, thereby reducing their control and upside potential.

Case Discussion

Venture Capital TWIT Versus SNIT

Venture capital is an expensive form of startup financing, at a cost of at least 25% (prime plus 20%) interest. It is too costly in deep-pocket situations when a new project such as TWIT has Time Warner’s corporate backing. It would also dilute control of TWIT, since venture capital firms require a major stake in the venture in return for financing. The benefit of using

venture capital to provide business guidance is also less important to TWIT, since its corporate parent has knowledge resources and experience.

For SNIT, on the other hand, venture finance is much more helpful. Not only could venture capital firms provide much needed capital, but they would also deliver business management advice, contacts

and credibility. SNIT is a good candidate for venture capital as it is too small and too young to raise capital in the public markets, or to secure a bank loan. Yet obtaining venture capital is difficult. Given the first stage status of its development, SNIT should expect financing at an implicit cost of 40–45%, and may get \$5 million at that point.

6.6.1.4 Initial Public Offerings (IPOs)

“Public equity” is supplied by capital markets that are regulated by strict rules (securities laws) and agencies—such as the Securities and Exchange Commission (SEC). A company can access the public equity markets by issuing shares. (They are “public” in the sense of “generally accessible

to investors,” rather than in the sense of “governmental” or “state-owned.”)

Why would a company issue public equity?

- Present owners are not able or willing to increase their capital contribution.
- Present stockholders need cash, and cannot easily sell their shares unless they are publicly traded.

⁵⁶ Berger, Allen N., and Gregory F. Udell. “The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle.” *Journal of Banking and Finance* 22, nos. 6–8 (1998): 613–673.

⁵⁷ Kelly, Peter. “Finance and Venture Capital Markets.” In *Handbook of Product Service Development Communication and Information Technology*. Eds. Timo Korhonen, and Antti Ainamo. New York: Springer, 2003, 211–234.

- Greater credibility of a company as a result of the publicity generated by issuing stock and being followed by security analysts and the business press.⁵⁸
- A wider universe of investors and pool of investment capital is accessible.
- Ability to attract and retain managers, if the firm offers stock options and other incentives.⁵⁹

Founders and shareholders are interested in cashing in their holdings in the company they helped to start up. There are also drawbacks to being a public company:

- There is much less confidentiality for a public company; for example, the salaries for top managers are public. Extensive disclosure of company financial information is required, especially when it is unfavorable.
- Even small IPOs can easily cost hundreds of thousands of dollars.
- The cost of regular compliance with regulation is costly. There are reporting requirements, which require extensive and expensive legal, accounting and investment banking services.
- Due to their increased exposure, public companies are an easier target for pressure groups—such as environmental, child protection, and morality groups⁶⁰—and may face various boycott campaigns.
- The control and vision of the founding managers by the addition of the new shareholders.
- Share fluctuations can be costly and, in some circumstances, place a public corporation in serious peril.
- Managers fixate on the short-term price of the stock and could potentially be ignoring future risks, opportunities and long-term growth.

When a company wants to finance through public markets (whether with debt or through equity), most often it will need to rely on the services of investment banks. In the banking world, one distinguishes between retail banks (for personal financing needs such as a checking account, a mortgage and so on), commercial banks (dealing with businesses about deposits, loans and so forth) and investment banks. The latter are specialty institutions that function mainly as advisors for big companies with respect to financing needs. There are only a few sizeable investment banks in the world and in a country (such as Goldman Sachs or JP Morgan in the USA). The services of an investment bank consist of four major functions:

- Providing advice on issuance, purchase and sale of securities, and on other financial matters.
- Providing capital for corporations and local governments by “underwriting” and distributing new issues of securities. “Underwriting” is the process of purchasing all new securities from a corporation at one price and selling the issues in smaller units to the investing public, usually with a markup.
- Maintaining markets in securities by trading and executing orders in secondary market transactions. Aftermarket trading begins after the new issue has been sold to buyers, at an issuing price.⁶¹
- Providing a “stamp of approval,” i.e. adding their credibility to investors who must decide whether to commit their funds.⁶²

For being listed on the Nasdaq exchange, a company must have a minimum of 1,250,000 publicly held shares, which is defined as “total shares outstanding less those held by officers, directors or anyone who is the beneficial owner of more than 10% of the company.”⁶³ The company is also

58 Investopedia. “What are the advantages and disadvantages for a company going public?” November 12, 2010. Last accessed July 20, 2012. ► <http://www.investopedia.com/ask/answers/06/ipoadvantagedisadvantage.asp>.

59 Inc. “Weighing the Benefits of Hitting the IPO Road.” November 1, 1999. Last accessed May 19, 2017. ► <http://www.inc.com/articles/1999/11/15714.html>.

60 The Economist. “The Business of Making Money.” July 5, 2007. Last accessed July 5, 2007. ► http://www.economist.com/displaystory.cfm?story_id=9,440,821.

61 Investopedia. “A Look at Primary and Secondary Markets.” November 20, 2010. Last accessed July 20, 2012. ► <http://www.investopedia.com/articles/02/101102.asp#axzz1Qg8yNJve>.

62 Callard, Abbey. “Banks, Firms, and Houses: Deciphering the Terms in the Financial Crisis Coverage.” *Slate*. September 18, 2008. Last accessed July 20, 2012. ► <http://www.slate.com/id/2200410/>.

63 In addition, the minimum bid price must be more than \$5, and there must be at least three market makers for the stock. The company must also have at least 450 round lot (100 shares) shareholders, or 2200 total shareholders, or 550 total shareholders with \$1.1 million average monthly trading volume over the preceding 12 months.

required to follow a variety of Nasdaq corporate governance rules, and its aggregate pre-tax earnings in the preceding three years must be at least \$11 million, and no one year in the preceding three years can show a net loss. In addition, its average market capitalization over the prior 12 months must be at least \$550 million, and revenues in the previous fiscal year must be at least \$110 million.

Traditional IPOs are cumbersome and expensive. There have therefore always been efforts to make it easier and less bureaucratic for small companies and startups to enter capital markets and reach potential investors. In 1976, the option of direct public offerings (DPOs) was established in the USA. *SCOR offerings* (small company offering registrations) followed. *Regulation A+ offerings* (known also as “mini-IPOs”) have been in force since 2015. More recently, there have also been moves to use new technology and to use online platforms so that small companies can reach small investors. DPOs over the Internet have risen in popularity. A full registration is still necessary, but a company can raise capital directly, from small investors in small amounts, without an intermediary investment bank or broker-dealer. It may be used by small firms that cannot find an investment bank interested in handling their business. It is then marketed directly via the Internet.

A relatively new method of financing productions is micro-funding, also called “crowdfunding,” where small investments are provided by a large number of enthusiasts for the technology or the creation. Here, “equity crowdfunding” that involves small direct investments in a company must be distinguished from the provision by users of money that is more in the nature of a reward, donation, or loan.⁶⁴ In “rewards crowdfunding,” the contributor receives a product or service once the company is operating. It is, in effect, a pre-sale of products such as software, a film download, or technology devices. PebbleWatch raised \$10 million in a single month with the promise to deliver the connected watches once they were being produced. In contrast, “Donation crowdfunding” involves a voluntary contribution by a fan

to a creator without an expectation of a benefit in return. Such projects include independent films, plays, music, journalism stories, video games, technology projects, even scientific research. For example, small-scale independent music may be funded by “fan-angels” in this way, utilizing micro-funding donation-oriented websites such as Kickstarter, ArtistShare, or IndieGoGo. An artist pitches their project, sets a monetary goal and a deadline, and hopes that fans will become patrons of the project.⁶⁵ An average contribution is about \$25. Kickstarter received about \$2 billion in pledges from almost ten million backers for over 250,000 creative projects. Donation platforms may also be purely charitable, such as DonorsChoose.

There is also “crowd-lending,” in which people lend small amounts to projects they consider promising or worthy. “Equity crowdfunding” platforms include Seedrs, EquityNet, AngelList, Crowdfunders and CrowdCube. To the startup company seeking funds, crowdsourcing provides an access to a wide pool of potential funders. Beyond the money raised, advantages are the creation of word-of-mouth publicity as contributors pass the word to others. The extent of public response is also a gauge for the market potential of a new product.

Equity crowdfunding is treated as a form of public offering of securities. Government concern with Internet-based IPOs is that they invite fraud and manipulation because the Internet provides an anonymous environment to inveigle money out of gullible investors. Securities laws in the USA therefore put conditions on equity crowdfunding. A company must file annual reports and update its crowdfunding disclosures continuously. A company must become a “public” reporting company if it has over 500 investors.⁶⁶ Certain companies are not eligible to use the relaxed rules on crowdfunding. These include non-US companies, for example.⁶⁷

64 Fundable. “Types of Crowdfunding” Last accessed May 19, 2017. [▶ https://www.fundable.com/crowdfunding101/types-of-crowdfunding](https://www.fundable.com/crowdfunding101/types-of-crowdfunding).

65 Billboard. “Rethink Music’s ‘Financing Creativity’ Panel Explores Concept of Fans as Patrons, Not Consumers.” April 26, 2011. Last accessed May 19, 2017. [▶ http://www.billboard.biz/bbbiz/industry/indies/rethink-music-s-financing-creativity-panel-1005154602.story](http://www.billboard.biz/bbbiz/industry/indies/rethink-music-s-financing-creativity-panel-1005154602.story).

66 Mirabile, Christopher. “2016 Crowdfunding Rules: How the Restrictions Work and Why it Matters to You” *Inc.* April 11, 2016. Last accessed May 19, 2017. [▶ http://www.inc.com/christopher-mirabile/2016-crowdfunding-rules-how-the-restrictions-work-and-why-it-matters.html](http://www.inc.com/christopher-mirabile/2016-crowdfunding-rules-how-the-restrictions-work-and-why-it-matters.html).

67 United States Securities and Exchange Commission. “Regulation Crowdfunding: A Small Entity Compliance Guide for Issuers.” May 13, 2016. Last accessed May 19, 2017. [▶ https://www.sec.gov/info/smallbus/sec/rccomplianceguide-051316.htm](https://www.sec.gov/info/smallbus/sec/rccomplianceguide-051316.htm).

The crowdsourcing concept and rules received much media coverage that enthused over the opening of opportunities for small entrepreneurs. Yet, the transaction costs are still formidable.

Impact of IPOs on Media Content and Conduct

When a project is funded by public equity, its managers are held responsible by shareholders. Public corporations therefore need to show

more caution, which makes them move more slowly. They also follow a more pure profit orientation to satisfy shareholders. There is less willingness to produce educational or socially beneficial content unless it, too, helps profits. They take fewer risks and pursue safer content or technology projects. They also have a greater short-term earnings orientation. In short, all other things equal, they are more risk-averse and less innovative.

6

Case Discussion

Initial Public Offering—TWIT Versus SNIT

A TWIT IPO, in which TWIT issues its own stand-alone shares, is difficult to arrange and comes with high cost relative to other financing options. TWIT, on its own, would have complications with a listing on a major stock exchange, as it does not meet requirements in terms of track record and so on. But it could probably have its stock listed on a smaller exchange. A TWIT IPO would also dilute the parent company's control over TWIT, as it would have to share ownership with other investors. TWIT would need to comply with government regulations, which can be intrusive and costly. But, as an alternative, the parent company could issue more of its own stock to finance just this venture, as a secondary public offering (SPO).

SNIT would not be able to undertake an IPO. It has no operating history. Even smaller stock exchanges require that a company has several years of pre-tax earnings, profitability, or cash flow and a minimum market capitalization.

However, after several years with a combination of a proven financial track record, venture capital funding and venture capital guidance, SNIT could aim for an IPO. Taking SNIT public at a good share price could make several categories of people rich: the founders, the financial backers, and those employees who had been partly compensated by shares. Financially, this is the goal of many startups. For example, suppose each of the founders had invested \$100,000 and has 20% ownership, that there are one million shares outstanding, and that the company issues ten million additional shares at a price of \$20. Then, each of the founders now holds a value of \$4 million, 40 times the original investment. If the shareprice rises, as IPO stock often does, their stake would rise correspondingly still further.

Should SNIT use crowdfunding? For once, ironically, SNIT may be too large a project. It is seeking \$100 million in financing. Barely over ten crowdsourcing projects

have been funded for more than \$10 million, most of them videogames or "rewards crowdsourcing" projects that were, in effect, pre-sells of products. SNIT could not expect a huge surge in small equity investor interest, and pre-selling of subscriptions does not seem to have major prospects. Thus, the expected money that could be raised for equity is likely to be modest in size. And at what cost? The various cost of raising and maintaining equity crowdfunded capital for a \$1 million is 25%,⁶⁸ plus the forgone capital gains, estimated at 25% for a tripling of the stock price over five years. There are also significant opportunity costs for the management time required to prepare the periodically required disclosure statements; foregone dividends, if those get distributed; and a dilution of control. Altogether, this does not seem to be an attractive funding option for SNIT: a limited amount of money that can be raised, yet at a high cost and with many headaches of regulatory requirements.

68 SeedInvest. "Title III Crowdfunding Cost Model." Last accessed May 19, 2017. ► <https://docs.google.com/spreadsheets/d/1g2Z0tUy5jd6s4-j0cNaSfoYMZcpJqKXQhVEfNOBRei4/edit#gid=0>.

6.7 The Ownership of Media and Communications Companies

“Equity financing” means, in plain language, “ownership.” We will now look at such ownership.

6.7.1 Individual and Family Ownership of Media

The fields of media, communications and ICT have been a source of great wealth. In 2000, almost one-quarter (99) of the Forbes 400 richest individuals in America had earned their prosperity in the media and communication fields. The 2011 Forbes 400 list⁶⁹ included 119 individuals whose wealth derived from the media, IT and telecom industries. This does not include the many financiers who made fortunes in the field of media, such as Warren Buffet or Ron Perelman.

Individual ownership varies by industry. Top telecom networks companies rarely have major individual owners. The main exception is America Movil in Latin America, with Carlos Slim of Mexico holding 52%. Several other large platform firms with high individual ownership stakes originated as a media or Internet company and added a presence in platforms. They are 21st Century Fox (and its Sky TV platform), controlled by the Murdoch family; Softbank in Japan, owned by Masayoshi Son; and Comcast, owned by the Roberts family. Most of these companies have a dual stock structure to allow the individual owners to maintain control while accessing outside capital. The other major platform companies are majority-owned by large institutional investors or governments, and have no dual stock structure.

In contrast, content oriented media firms around the world tend to be privately owned. Most of the top content companies have major individual or family owners—Globo Group (Marinho family, Brazil); L'Oréal (Lagardère family, France); Bertelsmann (Mohn family,

Germany); Fininvest (former Prime Minister Berlusconi, Italy); Softbank (Masayoshi Son, Japan); Fuji Television (Shikanai family, Japan); TF1 (Bouygues family, France); Fox/News Corp (Murdoch family); Google (Larry Page and Sergey Brin); Comcast (Roberts family); Liberty/Charter (John Malone); CBS/Viacom (Redstone family); Baidu (Robin Lee, China); Yomiuri (Shoriki family, Japan); Vivendi (Bolloré family, France) and Disney (Steve Jobs family with 7.8%).

Many companies are controlled by their founders/entrepreneurs or, later, by their top managers who also own significant stakes in the company. Among media companies, newspapers in particular have traditionally been owned by individuals and families. Even where they are publicly traded companies, the decision making power is usually exercised through special voting stock that is untraded. In other cases, control can be exercised through a family-controlled foundation.

IT firms typically start out with a high insider ownership but this declines over the years due to of the growth cycle of companies from founder-controlled startup to a giant established corporation. Microsoft, for example, was owned 66% by the insider-founders in 1988, but that share declined to 23.6% in 2005 and 11.6%⁷⁰ in 2011.

6.7.2 Institutional Investors

For many companies, the largest owners are institutional investors such as State Street, Vanguard, or Fidelity. The main categories of institutional investors are:

- Mutual funds;
- Pension funds;
- Hedge funds;
- Insurance companies;
- Endowments;
- Trust departments of banks.

Institutional owners control the shares they hold in two ways. First, they own shares outright in

69 Kroll, Luisa. “The Forbes 400 – The Richest People in America.” *Forbes*. September 21, 2011. Last accessed October 4, 2011. ▶ <http://www.forbes.com/forbes-400/list/>.

70 Fidelity. “MSFT Ownership and Insiders.” Last accessed November 15, 2010. ▶ <http://eresearch.fidelity.com/eresearch/evaluate/fundamentals/ownership.jhtml?stockpage=ownership&symbols=MSFT>.

their own account, partly to earn a dividend return and often for the potential gain in value. In some cases, they may have been part of an investment bank consortium that created and marketed the public shares in an IPO or SPO, and they may have kept shares for gradual sale.

The second way for financial institutions to control shares is to hold them as asset managers. They manage other people's money through various forms of investment funds which they run.

Institutional ownership is not a recent phenomenon, but it has increased with the growth of mutual funds and pension funds. Mutual funds are companies that seek and manage the money of investors and invest it in a portfolio of stocks, bonds and other assets. They attempt to optimize return for a given risk level or category of investment. In some countries, government rules aimed at protecting investors from imprudent risk-taking limit fund investment in any single company to no more than, for example, 5% of assets in any one company, and to no more than 10% of any company's outstanding shares.⁷¹ This limits the capacity of any individual fund to exercise much control over a firm.

Aggregate pension fund assets in the USA increased from \$260 billion in 1975 to \$1.7 trillion in 1990, to \$7 trillion by 1998, and \$22.1 trillion in 2014. For 16 major OECD countries, institutional pension funds managed \$23.3 trillion in 2009 and \$36 trillion in 2014.⁷²

Generally, the stake of institutional investors is much larger than those of individuals. In 2013, State Street had \$65 billion invested in major media and digital companies. Rupert Murdoch, in comparison, had "only" \$11.6 billion. Dodge & Cox, with \$20 billion, had more money tied

up in media than Berlusconi, Malone, Redstone and Lagardère combined. The largest institutional investor in the top 20 media and digital platform companies was the Vanguard Group, based in the United States. Vanguard owns shares of 10 of the top 20 platform companies, with a total value of \$47.5 billion, and shares of 12 of the top 20 content companies, valued at \$49.8 billion. Vanguard is invested in almost every major media and digital company: in the United States, the five major TV networks and content providers, the three major traded cable TV companies, and two major search engines; in Europe, three major TV companies; in Canada, Singapore, France and Germany, major telecoms.

More interesting than the components of the portfolio is their magnitude. Vanguard is hugely invested in Google (\$20 billion), Comcast (\$11 billion), Disney (\$10 billion), Time Warner (\$5 billion) and 21st Century Fox (\$5 billion), not counting another \$3 billion for the Time Warner Cable spin-off. Its stake in Google was almost as high as that of company founders Brin and Page (though without the voting power). It holds more shares in Comcast than the Roberts family (again, without the votes). It is by far the largest shareholder in Time Warner, Liberty and Disney (except for Steve Jobs' widow). And so on. Thus, on any objective measure, it is a huge media investor and owner. And yet, hardly anybody has heard of its CEO, F. William McNabb III, or of its headquarters location, Malvern, Pennsylvania.

The total media assets of the top 10 institutional owners add up to \$332.5 billion; the top 20 have \$423.4 billion and the top 30 have \$449 billion. Of overall global media value, estimated as \$4.7 trillion excluding state-owned media, the top 10 institutional owners hold 6.1%, and the top 30 hold 9.6%.

Institutional investors are usually viewed as primarily concerned with short- or medium-term gain, gauging corporate performance solely according to stock price and earnings. But, institutional investors cannot easily liquidate very large stakes and are therefore often in for the long haul. They have the capability to intervene, and top management knows that.

In 2006, several institutional shareholders, led by Carl Icahn, challenged Time Warner's conglomerate structure, advocating a breakup of the company. They argued that the sum of the parts

71 In the USA, institutional investors are required to file disclosure information when they own 5% or more of a publicly traded company. They are limited in their ability to profit on shares held for less than six months once they reach the 10% ownership threshold. If a mutual fund wants to promote itself as "diversified" and gain pass-through tax benefits, then the regulated 75% of the fund cannot own more than 10% of a company in its portfolio. Also, a "diversified" fund cannot have more than 5% of its total assets invested in a single company (Investment Company Act of 1940). Therefore, only 25% of a fund, the unregulated portion, can be concentrated in a single stock. Pension funds fall under the Employee Retirement Income Security Act of 1974 (ERISA), which requires each fund to diversify. But, under ERISA, pension fund managers are given some leeway to avoid diversification if it is "clearly prudent" not to do so.

72 Towers Watson. "Global: Global Pension Funds Up by 15% in 2009." March 2010. Last accessed July 19, 2018. ► <http://www.towerswatson.com/research/1380>.

was more valuable than the whole. Time Warner's management opposed the shareholder resolution and prevailed in a formal sense. But, within a few years, it sold or spun off these parts of the company: Warner Music Group, Time Warner Cable, AOL, TW Telecom, Time Books and Time Inc. magazines. By 2014, Time Warner itself was a target of acquisition, with AT&T signing the deal in 2017.

Has there been an impact of institutional investors on content? The actual ownership of each institutional investment firm in each company and sector may be small and fragmented. No single investor firm owns a majority, or could establish control. However, in the aggregate, institutional owners can influence company decisions through their buy and sell decisions, affecting the value of the stock and sending a signal of support or skepticism to management.

Generally, institutional investors will prefer safe mainstream content, rather than controversial content that may make some of their investors unhappy. Similar incentives for safe mainstream content exist also for corporate media management. It also exists for individual owners, unless their personal politics and commercial interests are intermingled. Institutional ownership may affect content quality through greater pressures for short-term profitability. Yet, it may also shield managers from control by erratic principal owners.

6.7.3 Governmental Ownership

In many countries, there are public service television organizations that are either controlled directly, by the state, or indirectly, through politically appointed boards that may reflect the government in power or a more pluralistic makeup. These broadcasting organizations are quite often the largest and/or most influential media organization in their country.

Also, around the world, many of the large incumbent telecom network companies, even after their privatizations (fully or partly) in the 1980s, have major majority ownership stakes held by their governments. This includes NTT in Japan (33% state ownership), Deutsche Telekom in Germany (32%), Orange in France (27%), China Telecom, China Unicom and China Mobile (100%), Svyazinvest in Russia (53%) and Telkom

in South Africa (50.7%). These governmental ownership stakes are particularly high in companies with fragmented private stock holdings.

Other ownership models are those by employees (e.g. *Der Spiegel*), non-profit organizations such as foundations, churches or universities, or by community groups (e.g. Ohmynews in South Korea).

6.8 Capital Structure

We have looked in the previous sections at various funding options and ownerships. We now address the questions of what mixture, if any, is the best for a firm. This is usually described as the optimization of the “capital structure” —the mix of debt and equity capital of a firm. Some firms or some industries depend more on debt, others more on equity. Within each funding category, there are sub-sets, such as short-term and long-term debt, or public and private equity. The overall mix is the “capital structure.” This composition tends to change over time, depending on interest rates, share prices, and the growth cycle of companies and industries.

The simplest measure of how much debt and equity a firm is using is the proportion of debt to total financing sources:

$$\text{Debt-to-Capital Ratio} = \text{Debt}/(\text{Debt} + \text{Equity}).^{73}$$

For example, the capital structure for incumbent US telecom firms is made up of about 60% debt⁷⁴ and 40% equity. Their Debt-to-Capital Ratio = 60%

Other terms for the same concept are “capital gearing,” “leverage,” or “debt-to-equity ratio”. The abovementioned debt-to-capital ratio of 60% (or 0.6) translates into a debt-to-equity ratio of:

$$\frac{60\%}{40\%} = 1.5$$

Firms with no debt on their balance sheet are called “unlevered” companies. After the issuance

73 Damodaran, Aswath. “Finding the Right Financing Mix: The Capital Structure Decision.” New York University Stern School of Business July 1, 2004. ► <http://pages.stern.nyu.edu/~adamodar/pdfiles/cfovhd/capstr.pdf>.

74 West, Rob. “Competing for Capital: The Diffusion of Bilateral Investment Treaties, 1960–2000.” Working Paper, University of Illinois. February 28, 2000.

of debt, the firm becomes “levered” or “geared.” Startups usually have no access to debt and, by necessity, favor equity. Their debt/equity ratios are therefore lower than those of established companies, such as telecom operators. The median “new economy” firm in the 1990s in the UK even had *negative* net debt/equity ratios, i.e. deposits of cash exceeded gross debt, making net debt negative.⁷⁵

6.8.1 Optimal Capital Structure

Where firms have access to various financing, is there an “optimal” mix between debt and equity?⁷⁶ Companies organize their funding priorities according to several operational principles.

6.8.1.1 The “Pecking Order” Approach to Determining the Capital Structure

The “pecking order” (or ladder) approach is not a theoretically well-defined model but, rather, a practical method based on the reality of availability.⁷⁷ Basically, a firm would use the cheapest method of financing first, up to the available limit, and then move to the next available funding option by ascending order of cost. According to one survey, seven out of ten CFOs prefer the “pecking order” method as a way to proceed.⁷⁸

The “pecking order” of financing is typically as follows, by rank of priority:

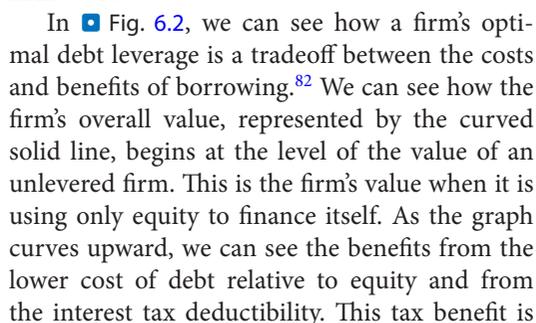
1. Internal funding (retained earnings);
2. Debt;
3. Equity.

Within each of these three classes, there would be an ordering of sub-categories—many of them discussed above—based on their after-tax cost and their availability. The pecking-order approach is practical. Furthermore, it can be used within

a desired debt-to-capital ratio, by applying two pecking orders, one for debt and one for equity, within their respective optimal allocations. The shortcomings are several. A debt option may be cheap but still requires liquidity for repayment, otherwise it could put the company into insolvency. Or, the expectation of dropping interest rates and/or rising stock market prices may favor short-term debt as a placeholder.

6.8.1.2 Optimizing Company Value

Perhaps the major problem with the Miller-Modigliani analysis and the pecking order approach is that, if a company issues more debt, the equity gets riskier, and thus requires a higher risk-adjusted rate of return. Beyond some point, more debt will reduce the value of the firm.⁷⁹ Therefore, when a corporation uses financial leverage (i.e. debt) properly, it can increase its overall market value. Introducing financial leverage into an unleveraged corporate capital structure will initially raise the market value (and then lower it) due to the change in overall returns to debt and equity holders. The company has a “sweet spot” of leverage to lower its cost of capital while simultaneously increasing its market value and share value. If the company increases leverage beyond this sweet spot, it will increase risk, and force investors and lenders to compensate by raising the interest they charge the company, which would raise its capital cost, lower its share value and, thus, the firm’s value.^{80, 81}

In  Fig. 6.2, we can see how a firm’s optimal debt leverage is a tradeoff between the costs and benefits of borrowing.⁸² We can see how the firm’s overall value, represented by the curved solid line, begins at the level of the value of an unlevered firm. This is the firm’s value when it is using only equity to finance itself. As the graph curves upward, we can see the benefits from the lower cost of debt relative to equity and from the interest tax deductibility. This tax benefit is

75 Brierley, P. G., and A. Kearns. “The Financing Patterns of New and Old Economy Firms in UK.” Bank of England. June 22, 2001. Last accessed May 19, 2017. <https://www.bis.org/publ/cgfs19boe1.pdf>.

76 Lewellen, Katherina. “Capital Structure, cont.” MIT. July 1, 2004. Last accessed July 19, 2012. <http://ocw.mit.edu/NR/rdonlyres/Sloan-School-of-Management/15-402Finance-Theory-II/Spring2003/LectureNotes>.

77 Shyam-Sunder, Lakshmi, and Stewart C. Myers. “Testing static tradeoff against pecking order models of capital structure.” *Journal of Financial Economics* 51 (1999): 219–244.

78 Asaf, Samir. *Executive Corporate Finance*. Harlow, Essex: FT Prentice Hall, 2004, 50–70.

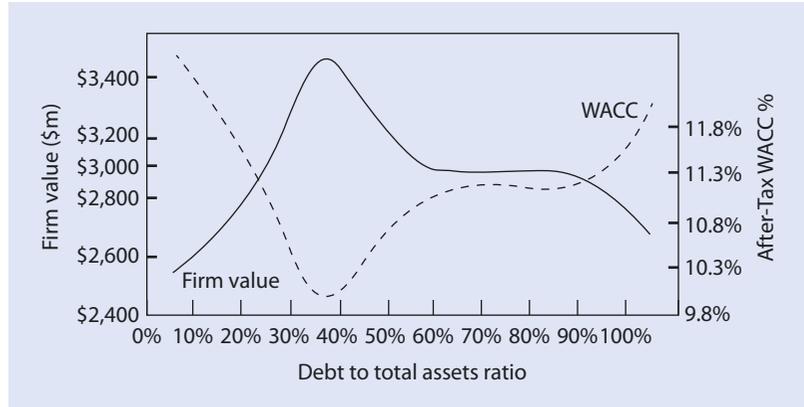
79 Smith, Dr. J. Herbert. “Analysis of Financial Statements.” *University of New Brunswick*. Last accessed July 19, 2012. http://www.unb.ca/web/jhsc/TME_courses/tme3013/ratios/index.htm.

80 Brealey, Richard A., and Stewart C. Myers. *Principles of Corporate Finance*. New York: The McGraw-Hill Companies, Inc., 2003.

81 Asaf, Samir. *Executive Corporate Finance*. Harlow Essex: FT Prentice Hall, 2004.

82 Myers, Stewart C., “The Capital Structure Puzzle.” *The Journal of Finance* 39, no. 3 (July, 1984): 575–592.

■ Fig. 6.2 The Optimal Leverage Ratio



a byproduct of using debt (whose interest cost is deductible), and it increases with additional leverage. These factors initially raise the firm's value because they lower the firm's overall cost of capital. But, if a company were to keep ramping up leverage (debt) too much, it would eventually suffer value erosion. As risk increases and, with it, the interest rate it must pay rises. The overall cost of capital rises, the firm's value declines and share prices fall. At the top of the curve, firm value is maximized. That point identifies the optimal leverage.⁸³ In ■ Fig. 6.2, the optimal financial leverage ratio is 34%. If the firm operated at this ratio, it would be maximizing the total benefit from its current overall value.

According to this approach, the firm should stay at (or at least near) the optimal point in terms of capital structure. It should issue equity or cut back debt when leverage rises above the target level. It should buy back stock or issue debt when leverage falls below the target capital structure level.⁸⁴

There are various ways to find the “sweet spot.” One method is to minimize the cost of capital. A firm would seek to operate at the lowest cost of capital across its several financial sources—the firm's weighted average cost of capital (WACC).⁸⁵

The WACC is a calculation of a company's cost of capital where each source of capital is weighted in proportion to the amount of capital that it supplies to a company. A low WACC indicates that a corporation obtains capital inexpensively. Businesses will discount their cash flows at the WACC rate to determine the NPV of a project, or of the firm.

$$\text{Net Present Value} = \text{Present Value of cash flows, discounted at WACC}$$

A company's WACC is a function of two primary components: (1) the cost of the equity capital (K_e) and debt capital (K_d) that a firm employs, and (2) the mix of equity capital and debt capital used to finance a firm's operations. The cost of debt (K_d) is given as the cost after tax deductions were made on the debt interest payments:

$$\text{WACC} = (W_e \times K_e) + (W_d \times K_d)(1 - t)$$

W_e and W_d are the proportions of equity and debt capital, respectively, used to fund the firm's operations; t is the tax rate. As an example of the application, assume a company with \$100 million debt, \$50 million market value of equity, 10% cost of debt, 20% cost of capital, 35% tax. This information yields:

$$\begin{aligned} \text{Debt to capital ratio} &= \$100/\$150 = 66\% \\ \text{Equity to capital ratio} &= \$50/\$150 = 33\% \text{ and} \end{aligned}$$

$$\begin{aligned} \text{WACC} &= (0.33 \times 0.20) + (0.66 \times 0.10[1 - 0.35]) \\ &= 11\% \end{aligned}$$

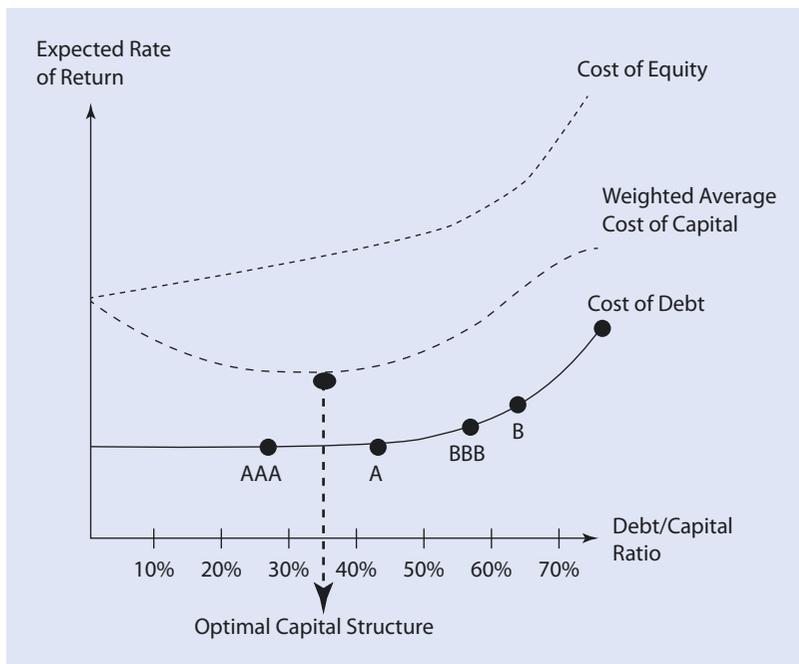
The relationship between the amount of leverage (debt to capital) and the expected rate of

83 Shyam-Sunder, Lakshmi, and Stewart C. Myers. “Testing static tradeoff against pecking order models of capital structure.” *Journal of Financial Economics* 51 (1999): 219–244.

84 Lewellen, Katherine. “Capital Structure, cont.” MIT. July 1, 2004. Last accessed July 19, 2012. ► <http://ocw.mit.edu/NR/rdonlyres/Sloan-School-of-Management/15-402Finance-Theory-II/Spring2003/LectureNotes>.

85 Fairchild, Richard. “An Investigation of the Determinants of BT's Debt Levels from 1998–2002: What does it tell us about the Optimal Capital Structure?” Working Paper, University of Bath School of Management, February 2003. Last accessed May 19, 2017. ► <http://www.bath.ac.uk/management/research/pdf/2003-03.pdf>.

Fig. 6.3 Cost of Capital and Optimal Capital Structure



return by investors and lenders is represented in Fig. 6.3.⁸⁶ The top line represents the cost of equity and the bottom curved line represents the cost of debt. The middle line is the weighted blend of both these financing costs: the WACC. During the initial leverage (debt/capital) ramp-up, the expected rate of return on debt stays constant, the expected rate of return on equity increases very slightly and the WACC falls due to the tax advantages of debt offsetting the slight increase in expected return on equity. But, as the leverage (debt/capital) increases (past 36% on the graph), things change. Both investors in debt and equity

begin to demand higher returns for each incremental increase in leverage, because the firm and its debt become riskier. The WACC begins to rise accordingly. Thus, as a firm increases debt relative to equity, the average cost of capital decreases because debt is cheaper. However, rising debt will eventually lead to higher interest rates charged and to a lower stock price. The lowest WACC is at a 0.36 debt-to-capital ratio. Since the firm value is the firm's income stream discounted by the WACC, with identical income streams the firm's value is highest when the discounting by the WACC is lowest.

6.8.1.3 Case Discussion

The Financial Funding Mix

TWIT

The cheapest method of financing TWIT is for it to fund itself entirely using the corporate parent's (Time Warner Media) debt. TWIT would choose the least expensive composition to fund itself. Based on the case discussion throughout this chapter, this funding would

include, in ascending order of cost:

- \$300 million in CPs at 2.24% after-tax;
- \$10 million in government loans at 2.42% after-tax;
- \$250 million through its line of credit (i.e. bank debt) at 3.50% after-tax;

- \$333 million in convertible debt (i.e. bonds that convert into stock shares) at 4.13% after-tax;
- \$107 million in corporate long-term debt at 4.83% after-tax.

The WACC for the funding would be 3.81%.

⁸⁶ Based on Morris, Matthew R. "Creating Shareholder Value Through Capital Structure Optimization." *Value Incorporated*, 2001.

SNIT

We found SNIT's optimal capital structure to be at the 30% debt-to-capital ratio. SNIT's funding would be composed of:

- \$10 million in government loans at 2.42% after-tax;
- \$15 million in vendor financing at 8.75% after-tax;

- \$5 million in lease financing at 10.50% after-tax;
- \$3 million of internal funding at 15.02%;
- \$67 million limited partnership financing at 16.34%.

SNIT would have a 15.15% cost of capital to raise \$100 million. In comparison, TWIT has a 9.27%

cost of capital to raise \$1 billion, a cost advantage of almost 40% over SNIT. A much lower funding cost and its higher available volume provide significant advantage to TWIT. This kind of advantage can only be overcome by SNIT through much greater innovation and lower operating costs.

6.8.2 The Lifecycle of Capital Structure

Each firm must decide its optimal capital structure based on its specific needs and the needs of its industry. These needs and availabilities change, and depend on the stage of the firm's life cycle. A capital structure must be analyzed regularly and adapted for specific scenarios in which the company finds itself. It may also need to be tailored to the expectations of investors.

The financial needs of a firm are affected by cycles of the macro economy, of the industry and of the firm itself. The general business cycle affects investment needs, riskiness, costs, availability of funding, interest rates and share prices.

The industry cycle is based on technology trends and market demand for new categories of services. Mobile telecommunications, smartphones and apps are an example. The telecom company Verizon invested a very substantial \$30 billion from 2004 to 2007 in fiber optic lines. After the build-out of the desired fiber footprint, the company's investment needs in fiber infrastructure declined considerably, to less than \$1 billion per year in 2015.⁸⁷ On the other hand, Verizon's investment in wireless infrastructure, including spectrum license acquisitions, rose from \$5.6 billion in 2004 to \$11.7 billion in 2015.⁸⁸

The third cycle is the company's own progression. It typically consists of four phases: startup, growth phase, maturity and decline. During the

startup phase there is little debt. There is plenty of risk, little taxable income to make the tax deductibility useful, and lenders are cautious. But, in the *growth* phase, debt increases in the capital structure. During the *maturity* phase, the company will start to distribute higher dividends to shareholders, rather than invest that money, and will rely less on equity funding because debt will be inexpensive since the company is a good credit risk. In the *decline* phase of the company, internal financing becomes scarcer, equity financing becomes more costly, but the firm's asset base permits an expansion of debt, though under less favorable conditions than before.

The main sources of capital also follow the pattern of the company's life cycle. In  Fig. 6.4,⁸⁹ funding sources are plotted horizontally, representing the stage of company maturity. The vertical axis shows the degree of risk an investor faces.⁹⁰

In the initial phases, angel investors and personal acquaintances both take a great deal of risk investing in the business, as very little is known about it. When the business matures slightly, venture capitalists may be available. In the growth phase, with a longer and stronger track record, banks and other financial institutions will provide debt financing. These investors also usually have a larger investment capital available. As the business keeps growing, an IPO may be issued that opens up equity funding. Together with higher-quality commercial bank debt, these are the mainstays

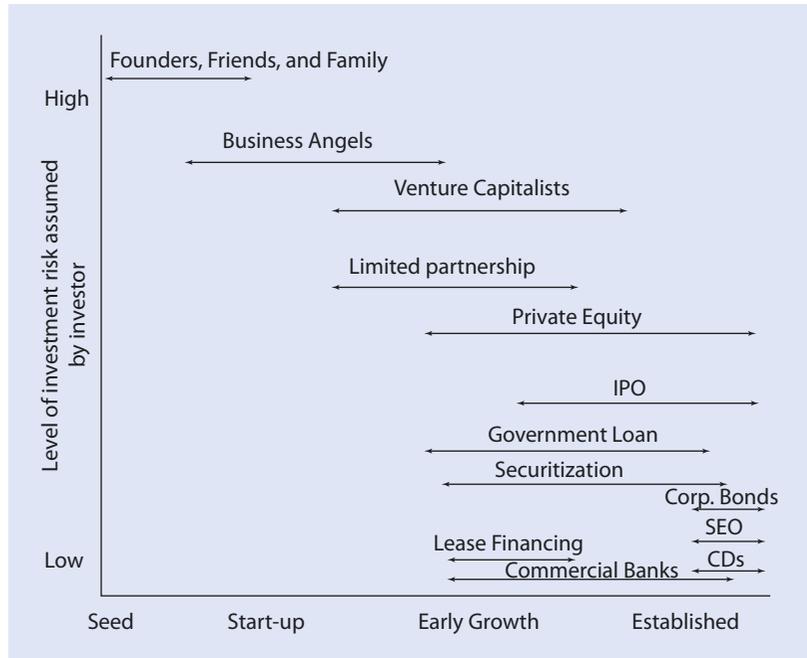
87 Brodtkin, Jon. "Verizon nears 'the end' of FiOS builds." *Ars Technica*. January 23, 2015. Last accessed May 19, 2017. ► <http://arstechnica.com/business/2015/01/verizon-nears-the-end-of-fios-builds/>.

88 Baburajan, K. "Verizon lowers telecom network Capex to \$17.7 billion in 2016." *Telecomlead*. January 21, 2016. Last accessed May 19, 2017. ► <http://www.telecomlead.com/4g-lte/verizon-lowers-telecom-network-capex-17-7-bn-2016-66805>.

89 Partly based on Kelly, Peter. "Finance and Venture Capital Markets." In *Handbook of Product Service Development Communication and Information Technology*. Eds. Timo Korhonen and Antti Ainamo. New York: Springer, 2003, 211–234.

90 Using and supplementing Kelly, Peter. "Finance and Venture Capital Markets." In *Handbook of Product Service Development Communication and Information Technology*. Eds. Timo Korhonen, and Antti Ainamo. New York: Springer, 2003, 211–234.

Fig. 6.4 Funding Options over the Life Cycle of a Company



for the mature company. As its revenues grow, the self-financing component rises.⁹¹ In the decline phase, the asset base permits funding through debt backed by collateral and by the selling off of assets.

6.9 Outlook

As the examples of the Hollywood film industry and of the Silicon Valley technology startups demonstrate, financing techniques and practices for traditional and new media and information sector industries are a major factor for their health. Good ideas, creative concepts, R&D and personal energy are important, but they will usually go nowhere without funding. Creativity and innovation require a financial base.

We have seen how these industries show a rising demand for financing. This is due to an increasing production of content, the growing complexity of electronic distribution networks, and greater and faster R&D cycles. Such financing is inherently risky.

The financing of media and information activities is therefore becoming an ever more central function. It requires effective financial understanding inside media and technology companies. And it requires financial institutions and business practices to channel funds from investors to firms and projects, and to provide a screening and monitoring of projects.

Navigating financing techniques, flows and institutions is therefore a major factor for the strength of media activities and tech ventures. With an effective understanding of the system and its opportunities and pitfalls, a financial manager can make an important contribution to innovation and culture.

6.10 Review Materials

Issues Covered

We have covered the following issues in this chapter:

- Why capital investments in media and communications are high;
- What different funding sources are available to established companies and startups;

⁹¹ Kelly, Peter. "Finance and Venture Capital Markets." In *Handbook of Product Service Development Communication and Information Technology*. Eds. Timo Korhonen, and Antti Ainamo. New York: Springer, 2003, 211–234.

- The pros and cons of debt financing;
- The difference between short-term and long-term financing;
- The different types of debt sources that are available;
- What the various bond ratings mean;
- The impact of vendor financing and PFD deals;
- How negative pickup deals work;
- Why many projects use lease financing;
- The impact of government financing;
- The impact of debt financing on content;
- How risk reduction strategies work;
- How private equity and venture capital work;
- How to set up limited partnerships;
- The requirements for IPOs;
- The opportunities and limitations of private equity and crowdfunding;
- The difference between individual and institutional ownership;
- How a company's optimal capital structure can be determined.

Tools Covered

We used these tools to address financing issues:

- The Miller-Modigliani theory of the irrelevance of funding;
- Capital budgeting;
- Cost of internal funding;
- Capital asset pricing model (CAPM);
- Portfolio diversification and hedging;
- Net present value and discounted cash flow;
- Internal rate of return;
- Duration matching;
- Weighted average cost of capital (WACC);
- Financial funding mix;
- Pecking order approach;
- Debt to capital and equity ratio;
- Life cycle of financing.

6.10.1 Questions for Discussion

1. What are the advantages and disadvantages of debt for an Internet company?
2. What are the advantages and disadvantages of equity for a media company? When should a firm generally choose equity over debt, and debt over equity?
3. What role do institutional investors play in media companies? What accounts for an increasing role?
4. How does governmental funding of media vary across the world? Discuss the US, the EU and the Asian tigers.
5. What are the advantages and disadvantages of a digital company going public—not only in relation to its management, but also its investors? Discuss the impact of IPOs on media content and conduct.
6. How does accessibility to capital vary across a media firm's life cycle?
7. Discuss the pros and cons of financing and distributing a film independently vs. through a studio distributor.
8. Discuss the effect of availability of vendor/buyer finance and lease financing to different types of media firm.
9. Discuss the effects of different kinds of ownership on the way a media company is run. In what ownership model does management have the greatest autonomy?
10. Discuss the advantages and disadvantages of internal funding.
11. What aspects of finance in the media industry are different from other industries?

6.10.2 Quiz

- 6
1. If a radio station sells its transmitter tower to a finance company and then leases it for its use, this is called a:
 - A. Capital lease.
 - B. Operating lease.
 - C. Lease-back.
 - D. Secondary lease.
 2. Which is not a characteristic of the media industry that makes financing difficult?
 - A. Periods of revenue from products are short.
 - B. Period between investment outlay and revenue realization is short.
 - C. Intangible nature of product makes it difficult to charge a price.
 - D. Investments in pioneering technology are uncertain.
 3. Which is not a characteristic of a junk bond?
 - A. Usually offered by a company that has debt of $> 4x$ EBITDA.
 - B. Usually offered by a company that has a quick ratio > 1 .
 - C. Often issued by “fallen angel” companies.
 - D. Has a default rate of 3–4%.
 4. What are the characteristics of a negative pickup deal?
 - A. Making a distribution deal before production gives crew and cast extra incentive to complete movie on time.
 - B. Distributor must bear risk of film going over budget.
 - C. Favors producers with a proven track record.
 - D. Unsuccessful date.
 - E. Does not require advanced financing.
 - F. Both C and D.
 5. Which one of the following is true about leasing as a form of financing?
 - A. Reduces company’s ability to borrow.
 - B. Temporarily increases debt on balance sheet.
 - C. Accounts for more than half of all annual investment in equipment.
 - D. Allows arbitrage of credit risk.
 6. The most common and least expensive form of film financing is:
 - A. Equity.
 - B. Senior term debt.
 - C. Subordinated debt.
 - D. Revolving line of credit.
 7. The largest source of equity for small firms is:
 - A. Principal owner.
 - B. Angel investors.
 - C. Venture capital.
 - D. Publicly raised equity.
 8. What strategy is followed most often in achieving an optimal capital structure?
 - A. Modigliani-Miller theory.
 - B. Target capital structure.
 - C. The pecking order of raising capital.
 - D. No particular strategy comprises a majority of firms’ strategies.
 9. How do media companies often alter the pecking order?
 - A. Resort to debt before equity.
 - B. Rely more heavily on internal financing.
 - C. Place equity before debt.
 - D. They do not.
 10. Which is not a risk reduction strategy for a media product?
 - A. Diversify revenue streams.
 - B. Lengthen term of debt to attract more investors to the higher interest rate.
 - C. Shift risk onto investors with equity offering.
 - D. Develop derivative financing options as hedging devices.
 11. At what part of the firm life cycle is a firm most likely to use venture capital or angel finance?
 - A. Startup.
 - B. Growth.
 - C. Mature.
 - D. Decline.

6.10 · Review Materials

12. Which of the following is a reason that a new startup company would not initially turn to a bank for a loan?
- A. Interest rates are very high and make a loan cost prohibitive for a startup company.
 - B. The cost of hiring attorneys to prepare financial documents to secure a loan is too high for a startup company.
 - C. New companies lack credit records, assets for collateral and other items banks look for when providing loans.
 - D. Banks require an equity stake in young companies to provide loans, which raises the cost of the loan significantly.
13. Which of the following is a limit on commercial paper?
- A. Issuers can only offer short-term CPs, with a limit of 270 days.
 - B. Issuers can only offer interest up to 5%.
 - C. Issuers are required to have a AA+ credit rating.
 - D. Issuers are prohibited from offering CPs to individuals.
14. Which of the following is not a reason a company would issue public equity?
- A. Equityholders of the company need capital and their shares are not easily tradeable in private equity.
 - B. The firm wants to be able to attract and retain managers that would only be attracted if they received stock options and other incentives expected from a publicly traded company.
 - C. It is much cheaper for a company to issue an IPO than to borrow funds from a bank, or to attract money from venture capitalists.
 - D. A wider pool of investors is attracted and the company can raise more money.
15. What is not an attribute of commercial papers (CP)?
- A. CP is a way for established companies to raise money for short periods.
 - B. CP interest is paid at the maturity date.
 - C. The companies borrow money from financial institutions and issue CPs as promises to repay.
 - D. CP is most appropriate for companies with steady cash flows or strong growth prospects.
16. Which statement about vendor financing is correct?
- A. Vendor financing of media and digital activities is most developed in the film sector, perhaps because its funding requirements are the largest among content media.
 - B. It reduces the debt on a company's balance sheet and enables the firm to take on debt for other purposes.
 - C. Under vendor financing the financier typically doesn't influence the production in any way.
 - D. Vendor financing in the film industry is also referred to as a negative pickup deal.
17. Which statement is incorrect for Venture Capital (VC) Financing?
- A. VC firms finance new and rapidly growing companies.
 - B. VC firms also assist in the development of new products or services.
 - C. VC firms differentiate among several stages of startup financing.
 - D. Inexpensive for startups as they don't have to pay interest.
18. One source of funding is often self-financing from undistributed profits. Which statement about internal funding is incorrect?
- A. Transaction costs are lower relative to the insurance of securities.
 - B. No supervision and review by banks.
 - C. Internal funding has no cost to the company.
 - D. Less disclosure of financial details that could benefit competitors.
 - E. Self-financing has an impact on content and innovation.

19. Which statement about the CAPM is not correct?
- A. 12-month US treasury bonds are typically used to estimate the risk free rate of interest.
 - B. A β value of greater than one, indicates that the company is more volatile than the market.
 - C. According to CAPM, a security's expected return is equal to the risk free rate plus a premium.
 - D. None of the above.
20. What does the β in the "capital asset pricing model" (CAPM) stand for?
- A. Estimated cost of capital.
 - B. The company's riskiness.
 - C. Risk free rate of interest.
 - D. Expected rate of return.

Quiz Answers

- ✓ 1. C
- ✓ 2. B
- ✓ 3. B
- ✓ 4. C
- ✓ 5. D
- ✓ 6. D
- ✓ 7. A
- ✓ 8. C
- ✓ 9. C
- ✓ 10. B
- ✓ 11. A
- ✓ 12. C
- ✓ 13. A
- ✓ 14. C
- ✓ 15. D
- ✓ 16. A
- ✓ 17. D
- ✓ 18. C
- ✓ 19. D
- ✓ 20. B