

Equity Pooling and Media Ownership

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I. INTRODUCTION

This Article examines methods to increase the diversity of ownership of media outlets. There are several reasons why public policy might be focused in this direction. First, the media has a public goods characteristic where private pricing is not proportional to the benefits obtained by any one consumer. With high fixed costs and virtually no marginal costs, there are barriers to entry for capital-constrained entities. Second, the media disseminates education and culture, which are not homogeneous. Third, corporate ownership may target programming and content toward median and representative consumers, restricting access to a diverse audience.

Technological advances in media have blunted some of these arguments. The free disposal cost and an inability to charge consumers may cre-

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ate niche markets that advertisers are willing to support, such as in “free” newspapers and cable television—both media have targeted minority audiences. While network television has focused on median consumers, cable television has adopted a more aggressive, “narrowcasting” format, and its growth of advertising revenue exceeds that for radio and network television. These developments do not necessarily diversify the ownership base for media properties.

This Article offers a proposal for pooling equity for purchase of media properties. It is based on widespread practices for savings pooling used in inner city and immigrant communities, but with certain wrinkles that facilitate securitization, diversification, and increased access. The basis of the contract is the rotating savings and credit account used to pool savings to achieve capital accumulation. These accounts provide funds for a down payment on a house or to buy a small business. Investors combine their funds into a common pot. Each investor bids for the pot, the winner being the low bidder.

For media properties, the bidding is for a package of a financial pool and a management right. A group of investors contributes to a pool of funds and is concentrated into teams. Each team has the right to bid for both the pool and the management. The low bidder receives both the pot and a management right in exchange for offering a larger lump sum to the unsuccessful bidders. The management right can be resold, allowing a separation of ownership. The base package provides a preferable alliance of equity ownership and management.

Only one investor group receives the management right, which is bid for by surrendering a part of the investment return to the other investors. Investors who do not manage receive compensation from those who do. The successful management group has a minimum equity stake in the business to avoid conflicts between ownership and management. The equity pool bids consecutively on several properties, allowing diversification and access to management by several groups. Alternatively, the same management group can acquire several properties.

The proposal has two principal advantages over tax credits and other policies targeted at specific media properties. First, the pooling allows investors to diversify across several properties and markets, reducing the risk of default and loss of equity. Second, markets are introduced for bidding on management and programming. Those wishing to have a management role or to select the content pay for it by compensating other equity holders. Incentives to dissipate resources are reduced by requiring a management entity to have a sizeable stake in the venture.

Part II of this Article discusses the background for media outlet ownership. Part III has an analytical structure of media firms, where revenue

comes from national and local advertising. The local station or property's expenses are paying for the national network feed and local costs. Media properties that depend on local advertising are particularly vulnerable to shocks in their domestic markets. Particular media properties that are vulnerable in this way are radio stations and "free" throwaway newspapers to which this proposal is targeted.

The proposal is less relevant in media with a more national focus, such as cable television and Internet service providers. These latter types of media can be seen more as content deliverers. Diversification across markets has a greater benefit in such cases, or at least it is more risky to promote programs that involve acquisitions of single properties. Part IV discusses financial data and analyses of media ownership. Diversification across media properties has benefits tied to the proportion of revenue coming locally. Part V discusses issues and caveats in implementation.

II. MEDIA OWNERSHIP

Media outlets have the characteristics of a "public good": watching a television program does not reduce the amount of time that one's neighbor can watch it. This characteristic makes it difficult to charge each individual a price for viewing time. Pay-per-view is an alternative only in one-shot items such as boxing events. In private markets, the price of a good or service is proportional to the marginal utility or benefit that a consumer receives. Pricing that service assures its allocation to consumers willing to pay for it and removes its consumption from those not willing to pay. None of these concepts applies to media properties. There is no scarcity in supply, and virtually all of the cost of production is fixed: The marginal cost of reaching another home with a broadcast signal is virtually zero. Under these conditions, market pricing equilibria fail, and large-scale entities charging zero for their service emerge, crowding out smaller firms.

A second issue is that the media disseminate the culture of the society. If the outlets are owned by corporate or other entities targeting the same advertisers, there is a tendency to appeal to the median consumer, even though that market segment represents a small slice of the overall population. Television markets focus on women ages eighteen to forty-nine in their advertising pitch, even though this group is a minority of the overall population and audience. The target excludes the elderly, minorities, and males ages eighteen to forty-nine. The first two groups have low propensities to consume, and the last group tends not to watch network television. Achieving high ratings has traditionally meant targeting median consumers.

The targeting of the median consumer and its corresponding neglect of minorities is no longer a successful strategy, as cable television has shown. Advertising revenue on cable television has grown more rapidly than on ra-

dio and network television during the 1990s. Network television now attracts only half of viewers watching the medium, excluding those who have gravitated to the Internet. Figure 1 shows advertising revenues for the three types of media outlets.

During the 1990s, cable television advertising revenue has grown at a rate of 12 percent annually, more than double the growth rate of network television. To the extent that cable emphasizes "narrowcasting" and a targeted audience, the strategy of appealing to median consumers is no longer necessarily optimal. The problem with cable television is the fixed cost for entry access onto local cable company lineups. This fixed cost is another barrier to entry for undercapitalized minority entrepreneurs. Economies of scale in production, high fixed costs and low variable costs, and the inability to charge at the margin have continued to favor concentrated ownership in media.

The response by the federal government has been to promote diverse ownership by tax expenditures. Favorable tax treatment is granted to minority buyers or to the sellers of these buyers. In 1978, the Commission adopted the Minority Tax Certificate Program, which gave preferential treatment in

the sale of media companies to minority ownership.¹ Minorities included African Americans, Hispanic Americans, Asian and Pacific Island Americans, Native Americans, and women. If these groups bought an interest in a media company, the seller received preferential tax treatment on the capital gains. The program was controversial since some relatively affluent owners benefited, and it was repealed in 1995.² The program has remained under review. William Kennard, the Chairman of the Federal Communications Commission, has expressed interest in reintroducing some program to expand minority ownership.³

Minority ownership may offer a different perspective. The content of the programming might be altered. There is an educational externality for members of the majority group and educational diffusion for the minorities themselves. The media represent the culture, and it is advantageous to have that diffused across the economy. The market expands by having different types of ownership. The criticism has been that the minority ownership is concentrated in the hands of a few owners who do not exhibit a broad-based perspective. Other funding sources have been introduced, such as the Broadcast Fund, which includes minority media ownership.

Even when minority or other capital-constrained owners are able to buy a media entity, that holding is concentrated and vulnerable to risks in the local market. These unsystematic risks are diversifiable by holding a larger portfolio of several media properties, although most public programs have been directed toward a single property purchase. This single property focus increases the risk of default or of the minority owners serving as a front for more established capital.

Large-scale media companies are able to diversify risk by holding portfolios of stations across the country. Ownership rules allow media companies to own up to twelve television stations, allowing CBS, Disney (ABC), General Electric (NBC), Time-Warner, Fox, and other broadcasters to be largely immune from local risk.

The Minority Tax Certificate Program concentrated on ownership of one local outlet in one market. The conditions in that market increased the bankruptcy risk of all investors.⁴ There is evidence of low correlations in returns on properties across cities within the United States at the same time,

1. See Statement of Policy on Minority Ownership of Broadcasting Facilities, *Public Notice*, 68 F.C.C.2d 979, 42 Rad. Reg. 2d (P & F) 1689 (1978).

2. Act of Apr. 11, 1995, Pub. L. No. 104-7, § 2(a), 109 Stat. 93, *repealing* 26 U.S.C. § 1071.

3. *Kennard Suggests New Approach to Tax Certificates*, COMM. DAILY, Nov. 12, 1998, at 1.

4. Peter Chinloy & Man Cho, *Unlocking House Equity*, 14 REAL EST. FIN. 79, 82 (1998).

notably in the housing market.⁵ In the Chinloy and Cho study, the five largest markets in the United States—New York, Los Angeles, Chicago, San Francisco, and Philadelphia—were examined. The correlation coefficients in returns to holding a single-family house in these five markets range between -0.25 and 0.1.⁶ These are low correlation coefficients, since individual stocks in the U.S. market frequently have correlations of 0.7 to 0.9. The implication is that a substantial amount of risk across markets can be removed by being in both markets instead of a single one.⁷ Large-scale media companies are already aware of this situation and are diversified across markets.

These correlations are lower than between stocks and other financial assets. If returns to radio stations in Buffalo and Chicago behaved identically, their correlation coefficient is one, and it makes no difference to hold stakes in both of them. For practical purposes, such as the transaction costs of the inevitable K1s on income tax returns, monitoring, and fixed costs, it pays to hold a single asset. If those correlation coefficients are less than one or even negative, then it pays to hold a diversified portfolio at one point in time. Targeted programs focusing on acquiring a single property carry risks without commensurate returns. Given the low correlations across markets, it is desirable to have a program that allows investors to hold a portfolio of media properties.⁸

III. EQUITY POOLING

While formal financial markets have left minorities behind, there remains an informal sector that provides capital for start-up businesses. The mechanism is rotating savings and credit accounts. They coexist in the shadows of sophisticated financial markets, sometimes within a stone's throw of them.

These informal pools allow individuals to group together to make a major purchase. Such a system could be applied to the acquisition of media outlets, which have similar characteristics to houses or local businesses that the pools often acquire. Concentrating an investment on a single media outlet or a single house is risky, especially if the investors derive most of their income from the local market by dint of employment or entrepreneurial activity.⁹

5. *Id.* at 81. Wilson Nelson Goetzmann, *The Single Family Home in the Investment Portfolio*, 6 J. REAL EST. FIN. & ECON. 201 (1993).

6. Chinloy & Cho, *supra* note 4, at 82.

7. Goetzmann, *supra* note 5, at 201.

8. Details on the impact of a concentration on local advertising and the effects of diversification on media properties are in the Appendix.

9. Chinloy & Cho, *supra* note 4, at 79.

In the equity pool, investors are grouped collectively for the purpose of buying into a portfolio of media properties. Each group bids to receive an investment return and a management right on a specific property. Bidders bid for the management right by surrendering their investment return. The low bidder receives the pool of funds and the management right.¹⁰ The difference between the pool amount and the low bid is a return to the unsuccessful bidders.¹¹

Each time the pool is formed, all members share in the ownership, but the low bidder is the sole entity holding the management. Alternatively, the pool takes a minority position in the media outlet and contracts the management to another source or to a corporate entity. The successful bidder receives a super share, an above-average equity position. The investors commit to funding for several rounds until a series of acquisitions in different markets or with different properties is made.

Existing rotating savings and credit accounts operate in immigrant and minority communities to pool equity capital. Each member pledges to pay an amount into a fund, typically a fixed annuity. One member of the group acts as the banker, collecting and receiving the funds from contributors.¹² Each member or investor receives two rights in exchange for the continuing investment: a return and a right to the pool. The right to the pool is determined either by random draw or by bidding.¹³ The low bidder receives the pool, permitting a down payment on a house or starting a business. Since the low bid is less than the pool contains, the unsuccessful bidders receive the differential as additional interest.¹⁴

Suppose there are four pool members each contributing \$5,000 per draw for a total of \$20,000, and the successful low bidder bids \$15,000. This low bidder receives the funds from the pool and uses them to start a business or buy a house. The other bidders are co-owners if the asset allows several investors to be on the title. The unsuccessful bidders receive the remaining \$5,000 either as initial interest or as additional equity in the investment. If this were a house, the homeowner might be assigned less than 25 percent ownership in exchange for paying the operating expenses. The house is usually owned 100 percent by the resident, since mortgage application guidelines require sources of the down payment to be indicated and the financial statements of co-owners. The other pool members are unsecured

10. *Id.* at 80.

11. *Id.* at 81.

12. *Id.* at 82.

13. Timothy Besley et al., *The Economics of Rotating Savings and Credit Associations*, 83 AM. ECON. REV. 792 (1993).

14. Chinloy & Cho, *supra* note 4, at 82-83.

lenders and equity holders and rely on the informal relations and structures to ensure repayment with a return.

Equity pools formally securitize informal arrangements where individuals combine resources to accumulate capital. In immigrant and inner city communities the practice is widespread, frequently being imported from societies from which the immigrants came. The Jamaican *partner*, Ghanaian *susu*,¹⁵ and Korean *kye* are methods by which households save for a down payment or start a business. Within the Korean community, dry-cleaning and corner grocery businesses receive initial financing from *kye* funding in addition to ongoing support, factoring, credit lines, and technical expertise. Besley, Coate and Loury, in describing these rotating savings and credit associations in the African-American community, view the pools as “a pot of money to which each participating household contributes an annuity.”¹⁶ The households differ by their desire for the capital in the pool or by their rate of time preference.¹⁷

Equity pools allow minority businesses to become established and house purchases to be financed. They operate almost entirely off the radar screen of financial markets for several reasons. The banker is usually reluctant to deposit funds for tax and drug identification reasons, leading to security and theft risks.¹⁸ There is an enforcement problem in requiring members to continue contributions.¹⁹ If members fail to contribute, the pool is incomplete, and the pool cannot purchase or continue. The contracts are not secured. If a member who has bought a house fails to maintain it or defaults on the mortgage, the pool investors lose their investment. But perhaps that is the beauty of the program: It survives as virtually the only formal capital accumulation program in the ghetto.

In inner city and immigrant communities formal financial institutions typically do not exist. There are frequently no banks or lending entities to provide debt financing. There are no investment banks, venture or opportunity funds, even as these self-same entities located a few miles away scour the world for investment opportunities. There is evidence of a change. Michael Porter has argued that the inner city is a new frontier for investment opportunities.²⁰ Formal banking firms are purchasing other entities that lend

15. Besley et al., *supra* note 13, at 792 n.1.

16. Chinloy & Cho, *supra* note 4, at 80 (citation omitted).

17. *Id.*

18. *Id.* at 83.

19. Besley et al., *supra* note 13, at 794, 805.

20. MICHAEL PORTER, THE COMPETITIVE ADVANTAGE OF NATIONS 154 (1997).

to low and moderate-income households, such as First Union purchasing the Money Store.²¹

IV. MEDIA EQUITY POOLS

To apply the equity pooling concept to the purchase of media properties requires modification of existing arrangements. For the media pool, investors receive a package of two assets: a return and a management right. They are required to participate in a series of investments, although they can transfer their slot by sale to another investor.

Each investor puts in a given amount on each call to participate, analogous to those made by venture capital funds. The investors are grouped into larger bidding teams, for purposes of bidding on the package including the management right, to avoid fragmentation of ownership and management. Investors not wishing any management rights opt out of team membership. A bidding team for the management right must have a minimum equity position, such as 15 percent. The bid is made by surrendering some of the cash to other bidders. The successful bidder is given a management fee capped at 2 percent of revenues.

The pool contributes the equity capital, and other sources of debt and mezzanine equity contribute the rest. The 15 percent minimum pool size reduces the incentive conflicts from management holding a small portion of the equity. These agency conflicts with shareholders come about when management has a minimal equity stake. The conflicts are reduced by the pooling and minimum equity requirement. A management with a low equity stake has incentives to consume perquisites such as travel and entertainment, hiring friends to work at the property, and otherwise dissipating capital. While these moral hazards exist in any business, if the management has a larger stake it dilutes its investment by wasting equity holders' funds. The equity pooling concept reduces the risk of such expense and resource wastage but does not eliminate it.

Unsuccessful bidders receive compensation from successful bidders, another incentive-compatible feature. The management is paying other shareholders for the right to manage the property. The management right could be set for a specific time limit as a further brake on dissipation of resources.

The proposal is an enhancement of existing arrangements. First, the funds receive a formal equity stake with title to the property. Title in existing equity pools frequently rests with the owner-occupant, and the other investors have difficulty in proving their ownership. Second, funds are maintained

21. *First Union Completes Purchase*, WALL ST. J., July 1, 1998, at B5.

by a third-party trustee, deposited in a financial institution, and not held by a member. There are problems with member bankers absconding with investor funds. Third, the program is familiar to most minority and immigrant entrepreneurs who are frequently in such arrangements already. Fourth, the minimum equity requirement and cap on management fees reduces incentives for wastage. Public programs have an incentive to maximize expenses and no incentive to maximize returns.

As a case study, suppose a radio or television station is being valued at sixteen times annual cash flow or eight times gross revenue. Gross revenue is \$2 million annually, 75 percent coming from local advertising. The value of the property is \$16 million at the eight times gross valuation. The annual cash flow, or earnings before interest, income taxes, depreciation, and amortization (EBITDA) is \$1 million, and the sixteen times annual cash flow multiple supports the valuation.

Gross revenue	\$2,000,000
Operating expenses	<u>\$1,000,000</u>
Annual cash flow (EBITDA)	\$1,000,000

The property purchase of \$16 million is to be financed with 75 percent debt or \$12 million, payable at 8 percent annual interest. The debt service and interest cost is \$960,000, or 8 percent of \$12 million. There is no amortization on the debt.

Annual cash flow (EBITDA)	\$1,000,000
Debt service cost	<u>\$ 960,000</u>
Cash flow after debt service	\$ 40,000

The property is financed with \$2.4 million of mezzanine equity, or 15 percent of the total. These investors receive a preferred, priority return, such as 6 percent of their funds if capital is sufficient, plus 40 percent of any residual. The \$40,000 left over is paid to these investors, entitled to 6 percent of \$2.4 million or \$144,000, and there is an unpaid return of \$104,000. This transaction leaves a minimal cash return initially, with the market multiples placing a price on future growth.

The equity pool contributes the remaining \$1.6 million of capital. The summary of the three investors' position is:

Debt:	75 percent of capital investment, 8 percent interest rate;
Mezzanine Equity:	15 percent of capital investment, 10 percent preferred return, 40 percent ownership;
Equity:	10 percent of capital investment, no preferred return, 60 percent ownership plus management.

The management of the property gives an equity participant an opportunity to disseminate the culture or to provide diversity. Equity holders receive a package of 60 percent ownership of the property after all others have been paid and a management right. This management right receives a capped proportion of gross revenue from the property, such as 2 percent of revenue, but allows the manager control of programming and strategy. The combination is a valuable right to income and content. It achieves the goal of diverse management.

A management bid requires a team to have at least 15 percent ownership percentage of the equity and to form a formal entity such as a corporation, partnership, or trust. The management right has a value to investors wanting direct content and programming control. Investors not interested in the management receive compensation in the form of additional debt.

The pool is collateralized at \$2 million. The mechanism is for investors to make contributions, which can be as low as \$2,000 or 0.1 percent of the initial capital requirement. Each investor is assigned to a team. Subgroups interested in management find equity investors to contribute to their team.

As an example, suppose there are four bidding groups, each of which has a 25 percent ownership stake in the \$2 million pool. There are no individual investors wanting to remain outside of a team. After \$12 million in debt and \$2.4 million in mezzanine equity there is \$1.6 million required by the seller. The capital structure is:

Debt:	\$12.0 million
Mezzanine Equity:	\$ 2.4 million
Equity:	\$ 1.6 million

The low bidder receives the management right. Any residual in the pool belongs to the unsuccessful bidders.

A low bid of \$1.6 million covers the equity and leaves \$400,000 in the pool. This amount is a capital reserve, held as a promissory note payable to the unsuccessful bidders, but a liability of the venture acquiring the media property. The balance sheet is:

Assets		Liabilities	
Cash	\$ 0.4 million	Debt	\$ 12.0 million
Media Property	\$ 16.0 million	Promissory Note	\$ 0.4 million

		Equity	
		Mezzanine	\$ 2.4 million
		Investors	\$ 2.0 million
Total	\$ 16.4 million	Total	\$ 16.4 million

The promissory note has priority over the mezzanine equity in the balance sheet. This situation is not a requirement, although it provides an incentive in initial capital raising. The investment has a debt kicker that encourages bidding, as a consolation prize for the unsuccessful.

If the low bid is less than \$1.6 million, the successful bidder must place additional capital. A bidder at \$1.5 million must invest another \$100,000. All four pools retain ownership based on their contribution to the original pool, not the bidding process. The only exception is where this additional capital is contributed. Since the capital pool is now \$2.1 million, the management group is given a share of 6/21 (2/7) of the investor interest. The remaining \$500,000 is a promissory note payable to the unsuccessful bidders, so the management investors have bought the right from the other investors at a premium. The other three investor teams own 5/21 of the 60 percent provided to equity partners.

A bid between \$1.6 million and \$2 million does not change the balance sheet. The seller only needs \$1.6 million. A successful bidder at \$1.8 million pays \$1.6 million, but \$200,000 is a promissory note to the unsuccessful bidders and the other \$200,000 is a promissory note to all bidders, including the successful ones. The first note has priority over the second to encourage the management group to keep its capital invested. Each of the four groups holds 25 percent of the equity portion.

All investors have access to the management right, but the group that values it most highly is the successful bidder. Investors who want a passive investment do not bid on the management right and are compensated. There is a market for management and control offered for sale between participating equity bidders. Those most desirous of management control bid lower and compensate the other bidders.

There are other modifications. A separate submarket could develop for programming and content. A bidding contest for programming and content can be separated from that for management. There may be specialized management firms available for radio and television stations that can be hired on a contract basis. In a radio station case the bidding allows selection of format and content. The low bidders have control over the format and programming structure, and the implementation is up to outside management. In this way, the cultural and educational benefits are maintained; there is diverse ownership, but the management of the properties takes advantage of economies of scale. The equity position for the mezzanine equity capital is

open to modification. The investment could elect to hold only debt and equity, in which case the four pools have a direct ownership of 25 percent each.

The successful investor group has effectively contributed \$500,000 of the equity, or 25 percent of the total equity capitalization of \$2 million. To acquire the property alone, even with the same mezzanine and debt financing would have required \$1.6 million and no capital reserves. The successful investor team is able to hold a diversified portfolio of properties. If the investors have access to the full \$2 million, they participate in four rounds of the equity pooling. If there are three other properties available, they bid at each of the drawings, and if successful, hold the management of four media properties. Alternatively, each of the four teams has access to managing one property, but with diversification reducing the default risk and the bidding process providing incentives to allocate management to those willing to compensate others. Figure 2 summarizes the equity pooling and securitization program.

Combining cable television, radio, and network television, about half of total broadcast advertising revenue comes from local sources. The mix of advertising revenue differs by property type. With the fast-growing cable television medium, advertising is predominantly national. Network television relies on national advertising at the aggregate level. The networks pay the local stations to carry the national programming. The stations sell local advertising both during certain assigned slots during network prime time and have revenue control outside of prime time. In exchange, the television stations affiliated with the network must carry the prime time and other network programming and its national advertising. Radio has an above-average mix of local advertising, partly because of the signal limit but also because of fragmented ownership. This unsystematic risk can be mitigated by diversification across markets and stations.

An issue of late is an upsurge in the demand for radio stations. Apart from the boom in all assets, physical and hard, the demand growth comes partly from FCC proposals to ease concentration ownership restrictions on radio stations. Hicks Muse of Dallas has become the largest radio station operator in the country. Walt Disney, CBS, Chancellor, Liberty, and the leveraged buyout firms Hicks Muse and Kohlberg Kravis Roberts have all recognized not only the diversification benefits but the ability to sell to national advertisers with a national network. The corollary is any comparable entity may require a presence in several markets.

V. CONCLUSION

This Article outlines an implementable strategy for expanding ownership of media properties. The strategy achieves diversification and is incentive compatible by establishing bidding markets for management and content. Diversification reduces the risk of concentrating on one property and one market. Setting up markets for management, with requirements that management hold a substantial equity position, reduces tendencies to maximize expenses and shifts them toward maximizing profits, while attaining cultural objectives. Unsuccessful bidders are rewarded with additional debt position as compensation for surrendering management and programming control. The structure builds on existing institutions and formalizes them, notably in equity pooling.

Financial markets have been securitizing both debt and equity contracts. An equity pool has some elements of securitization. Participants are required to make periodic contributions, not unlike mortgage payments. In exchange, they receive ownership positions entitling them to cash flows and bids for management rights. If the capital inflows from contributors were partly predictable, they could be sold as securities providing lump sums to investors, as zero-coupon bonds.

APPENDIX

Diversification and Local Risk

The Appendix discusses how the mixture of local and national advertising affects pricing and how the risk can be diversified. Let c_t be the cash flow or funds from operations per dollar of asset price. The asset price of a property, such as a radio or television station at time t is P_t . The total return to holding a property is:

$$(1) \quad r_t = p_t + c_t$$

where $p_t = (P_{t+1} - P_t)/P_t$ is the rate of capital gains or increase in the asset value of the media property between dates t and $t+1$. These observations can be obtained by the price paid for a broadcast property in a given market. Since these properties trade infrequently, some adjustment for time between sales is also needed.

Suppose the market price is a multiple of cash flow, with a common market-wide multiple l . The multiple is expressed in total revenue or, in the case of cable television properties, per subscriber. Cable television franchises change hands at a price per subscriber, such as \$2,500 as a lump sum. A frequent multiple on small businesses such as radio stations is fifteen to sixteen times operating income. Media properties sell at eight to ten times gross revenue.

From the funds from operations statement, cash flow has two basic components, a national or economy-wide and a local effect. These are proxied by national and local advertising net of operating and capital expenses.

A national television network may require a local affiliate to carry programming and advertising in exchange for a payment, or even require the payment of licensing fees. At the cable level, ESPN charges cable operators for the right to carry its programming. These costs are chargeable against national revenue. Most of the local affiliate's costs for rent, labor, and supplies are purchased in the local real estate and labor markets and subject to the costs and market conditions there. An exception might be for news anchors, where the market for such talent is subject to superstar status, and a local affiliate must pay the national rate.

Cash flow is:

$$(2) \quad c_t = c_{Lt} + c_{Nt}$$

as a vector across markets, reflecting local L and national N net advertising revenue. The national revenue exhibits no local component and is not subject to unsystematic risk. The price of the media property is:

$$(3) \quad P_t = \lambda c_t$$

where it is common for the multiple to be based on cash flow. Cash flow for a media property includes the protection afforded by depreciation provisions, such as over the price paid for cable television households. If a property is traded at eight times annual cash flow, then each dollar of cash flow yields an eight-dollar asset price.

If this multiple is constant and parametric to the national market, then substituting the two media-income conditions (2) and (3) in the general return (1) yields

$$(4) \quad \left\{ \begin{array}{l} r_t = \lambda (c_{Lt} + c_{Nt}) + \lambda \frac{c_{Lt+1} + c_{Nt+1} - c_{Lt} - c_{Nt}}{c_{Lt} + c_{Nt}} = \lambda (c_{Lt} + c_{Nt}) + \lambda (g_{Lt} + g_{Nt}) \\ = \lambda (c_{Lt} + c_{Nt}) + \lambda \left(\frac{c_{Lt+1} + c_{Nt+1}}{c_{Lt} + c_{Nt}} \right) - 1. \end{array} \right.$$

This structure means that only the cash flows from local and national sources of a media property need to be known for two adjacent time periods, such as years, to determine the return to holding a property. The growth rate of cash flow from local advertising is g_{Lt} and that from national advertising is g_{Nt} . These data are readily available for properties and can be used to determine rates of return for individual properties in local markets.

If there is information on these returns over a period of time in each property, then there is a group r_{it} of returns over $t = 1, \dots, T$. The mean and standard deviation of the returns over the T observations for the i th property are (m_i, s_i) , and the correlation coefficient between returns in two different markets is p_{ij} . The means over all the properties are $m = (m_1, \dots, m_I)$, and the variance-covariance matrix V has diagonal elements s_i^2 and off-diagonal elements $p_{ij}s_i s_j$. The investor is selecting the proportions of its portfolio w to minimize the risk associated with the variance of returns.

$$(5) \quad \left\{ \begin{array}{l} \min \quad w^T V w \\ ST \quad w^T m \geq m^* \\ w \geq 0 \quad (\text{no short sale}) \end{array} \right.$$

The problem is to select the portfolio allocations w that minimize the risk subject to the investor obtaining a target return m^* . Solving this problem repeatedly for various values of m^* ranging from that on a riskless asset such as Treasury bills to a high return of 25 percent yields the minimum risk consistent with that return. The solution is an optimal portfolio combination

of w . If one of the w elements is one and the rest zero, then the investor puts all eggs in one basket. Since the correlation coefficients across markets are low, in areas where local advertising is important, there is a gain to diversification.

As for any investment, the return to holding a media property is the sum of its income yield and its capital gain. Media companies have important characteristics of growth stocks. First, they are largely protected from foreign competition because of cultural content. There are explicit prohibitions on foreign ownership in some cases, but generally cultural jobs cannot be easily exported to low-wage locales. There is even evidence that foreign capital, although mobile across borders, cannot easily mobilize creative talent. The experience of Sony in making television sets as opposed to operating a motion picture studio is a case in point.

Second, media companies have the potential for rapid growth because of the superstar effect described by Cook and Frank and Rosen.²² Superstar markets are characterized by low cost of replication and diffusion, a case with broadcast technology. On the demand side, there is limited substitutability between one talent and another.²³ Moreover, there is bounded rationality, in that consumers only have limited shelf space to keep track of top talent. With the supply technology expanding and broadcast companies controlling the delivery, there are prospects for superstars and their deliverers to exhibit extremely rapid growth and capture above-average returns. Over the past two years, the leading sector in total return performance among publicly traded stocks has been cable television, with broadcasting second, with annual returns in excess of 60 percent, more than twice the growth of the benchmark Standard and Poor's 500. An outline of the income statement and valuations is below:

22. PHILIP J. COOK & ROBERT H. FRANK, *THE WINNER-TAKE-ALL SOCIETY* (1996); Sherwin Rosen, *The Economics of Superstars*, 71 *AM. ECON. REV.* 845 (1981).

23. Rosen, *supra* note 22, at 847-49.

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Pro Forma Income Statement, Media Property

Revenue

Advertising (Local)

+ Advertising (National)

= Total Revenue

- Operating Expenses (Payroll, Supplies, Rent)

= Operating Income or Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA)

- Capital Expenditures (Equipment, Buildings)

= Funds from Operations: Cash Flow

Asset Values (Selling Prices)

= Gross Revenue Multiple * Total Revenue

= Net Revenue Multiple * EBITDA