Alternative Sources of Construction Financing

by

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A.B. Princeton University, 1996

Submitted to the Department of Civil and Environmental Engineering in partial fulfillment of the requirements for the Degree of Master of Science in Civil and Environmental Engineering at the Massachusetts Institute of Technology

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1 January 1998

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ABSTRACT

Because of a number of financial and economic circumstances leading up to the current decade, the sources and methods of real estate finance have undergone a permanent change. As a result, construction financing, one of the most important types of real estate finance, has been forced to change as well. Real estate developers have begun to seek alternative sources and methods to finance their building construction projects. This thesis discusses how this has come about, and addresses some of the most significant new sources and methods of construction finance of which developers have recently made use. Included are FHA credit enhancement, Wall Street capital in the form of debt and equity, REIT and REOC finance, and joint venturing with various potential project partners. This thesis implies that in many cases the best current method of construction finance is a hybrid of bank debt and joint venture equity.

Thesis Supervisor: Dr. Massood Samii
Title: Professor of Civil and Environmental Engineering
"Real estate companies are going to resemble regular corporations."

Alan Leventhal

The entire structure of the real estate capital market has changed dramatically since 1986. Capital sources have shifted vigorously from the private to the public sector. The two most compelling bits of evidence of this shift have been

1. the emergence of the CMBS, the commercial mortgage backed security, a financial instrument almost unheard of in the 1980s but which now represents 25% of all debt originated to finance commercial real estate and

2. Chart from class notes, Real Estate Capital Markets, MIT, Professor Timothy Riddiough.
2. the emergence of the REIT, a once ignored corporate structure which now represents 4% of real estate assets nationwide, growing rapidly¹.

**Market Capitalization of REIT Industry**

1972-1994

Put simply, real estate finance instruments, once the guarded holdings of large institutions, have become available to the general public investor. The result - more sophisticated underwriting techniques necessitated by public ownership have forced the traditionally cryptic, jargon-filled, nuanced, American real estate finance to operate now on the more familiar principles of ordinary corporate finance with less debt and more equity. This change in the real estate capital markets has begun to gravely effect the most hazardous tool of real estate finance: construction

¹ Ibid.
financing. As this thesis will show, the sources and methods of construction financing, like the rest of the market for real estate finance, has begun to and will continue to undergo a permanent structural change over the next market cycle, leading to an altogether different cadre of sources for this money. Under that pre-text, how can the sponsors of construction projects, the real estate developers, continue to achieve the same investment returns that they achieved in the past? With some creative accounting and a vertically integrated organization a developer can successfully finance construction with help from the federal, state or municipal government (eg. FHA), from Wall Street firms via debt, equity or corporate conversion (eg. REOC), or best of all, from a joint venture partner such as a REIT.

WHAT IS THE MEANING OF CONSTRUCTION FINANCING?

Construction financing is a form of project finance, specifically designed for the purposes of a building construction project. There are many forms and sources of project finance, but construction finance is unique and full of nuances due to its intrinsic connection with real estate finance. Generally, when a project sponsor attempts a real estate development project, the sponsor requires immense amounts of capital from sources other than his own balance
Chronologically, the developer may need any or all of the following development stages of finance:

<table>
<thead>
<tr>
<th>Type Of Finance</th>
<th>Use of Finance In Development Chronological Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Finance, Public Equity, Corporate Debt</td>
<td>Day to Day Operations, &quot;Working Capital.&quot;</td>
</tr>
<tr>
<td>Land Loans, Speculative Equity</td>
<td>Land Acquisition and Speculation</td>
</tr>
<tr>
<td>Development Access Grants, Development Loans</td>
<td>Infrastructural Improvements (sewage systems, power, roads, etc.)</td>
</tr>
<tr>
<td>Construction Finance, Debt or Equity</td>
<td>Individual Project Development</td>
</tr>
<tr>
<td>&quot;Bridge,&quot; or &quot;Gap&quot; Financing, Mostly Debt</td>
<td>Short Term Project Operations, Lease-up or Sales Period</td>
</tr>
<tr>
<td>&quot;Permanent&quot; or &quot;Take-Out&quot; Financing</td>
<td>Long Term Income Generating Asset</td>
</tr>
<tr>
<td>Capital Finance, Partially Asset Backed Development Finance</td>
<td>Repairs, Asset Improvements or Redevelopment</td>
</tr>
<tr>
<td>Re-Finance, Secondary &quot;Take-Out&quot;</td>
<td>Re-Financing Due to End of Term or Lower Costs of Capital</td>
</tr>
</tbody>
</table>
All of these finance needs can be satisfied by a variety of sources in many forms of debt and equity. This thesis will focus on #4, construction finance.

THE INHERENT RISKS OF THE CONSTRUCTION PROCESS

There are a number of risks which all parties to a construction project must accept before financing is established. The greatest of these risks is completion risk. Will the builder finish the project? A number of potential obstructions lay down the road of any building project. For example, unforeseen subsurface conditions may render the design not feasible, irresponsible subcontractors may walk away from the job or work more slowly than anticipated, fluctuating material prices during the construction period may throw the project off budget and encourage the developer to halt any further progress. To counter these risks, the financier will almost always require the builder to post a surety bond of some type or personally guarantee completion of the project.

The second greatest risk is "as-planned" completion risk, that the project will be completed within budget and on time. This risk, related to general completion risk, can cause dreadful effects on project finance which will be examined with respect to each of the various sources of finance.
Another great risk that the financier takes is the risk of refinance. The construction lender or investor is generally the primary source of capital, and it expects its loan to be "taken-out" or its equity to be redeemed once the construction process has been completed. Naturally a construction lender will require that a "take-out," or permanent loan be arranged in advance of the first draw-down of the construction loan, but what if the future lender experiences financial problems in the meantime and upon completion cannot afford to make the loan.

Of course the financier is also assuming the real estate developer's specific risk. The success of a real estate project is related to its location, its timing, and its product. If the developer and financier have misjudged the value of the location, have mistimed the real estate market, or have built something which is inappropriate for the above, the project will not yield the expected returns.

The financier is also assuming the general money market risk. It may have loaned the money at a low interest rate just before a rate hike, or it may have invested in a project with a low internal rate of return only to notice that blue chip companies on the stock market would appreciate at twice that rate over the same period.
The Traditional Source of Construction Finance: Bank Debt

"Construction lending is the most hazardous legitimate way for a lender to earn his money, as well as the most sophisticated form of real estate finance."* Alvin Arnold

Risks Specific to Construction Debt

• The building under construction is the collateralized security. A half completed building project is often worth less than the vacant land on which it sits. In case of loan default, the lender's chances of value recovery in foreclosure are slim. Thus, the lender may be forced to complete the project or fund the completion of the project itself - very few lenders have any capacity to build. Moreover, the lender's cost of completing the unfinished margin of the project will certainly be higher than that margin's pro-rata share of the originally planned cost, and meanwhile, the interest clock has been ticking away all the time.

• Mechanic's liens of unpaid or slighted contractors and material suppliers, under the laws of many states, can achieve priority or parity with the rights of the construction lender's original mortgage lien.

• A loss of permanent financing due to construction problems can constitute a serious problem for the

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construction lender. Difficulties during construction or defaults by the sponsor can often release the permanent lender from its obligation to "take-out" the construction lender on completion, leaving the construction lender holding a loan with no immediate source of repayment. Further, the permanent lender may be released from its obligation if the builder has not diligently followed plans and specifications, or has not completed the project quickly enough to meet the permanent lender's commitment deadline.

- **A loss of permanent financing due to real estate marketing problems** can also constitute a serious problem for the construction lender. Often, permanent loan commitments rely on a certain level of marketing success of the project, such as a certain level of vacancy or a total rent roll. If the project does not succeed, or does not succeed quickly enough, the construction lender may have to hold a nonrefundable loan on a bad project.

- **A principal agent with an incongruous interest** can pose an extremely hazardous situation for the debt provider. As discussed in the box above, many developers initiate deals only because they can do so without putting up any of their own capital. With nothing at stake personally, they may have no interest in proceeding with a difficult project and simply allow the lender to foreclose.

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5 Real Estate Development and Construction Financing, Charles Zalaznick,
The nature of debt is such that it is a money instrument with a finite investment up-side and a potentially infinite investment down-side. That is, the most a lender can earn from a loan is the agreed upon interest rate; meanwhile, under unfortunate circumstances, the lender may wind up holding the title to something that is effectively worthless as collateral. For these reasons, lenders will always carefully examine the project's potential problems and attempt to apply credit safeguards to the use of debt instruments. Typically, a debt provider will need to know many things about the project.

- **The experience of the borrower** is often the most important criteria of the lender in initiating the process of assessing a construction loan. As we shall see, most construction borrowers are "relationship" clients of financial institutions which handle their
see, most construction borrowers are "relationship" clients of financial institutions which handle their corporate finance and mortgage banking in general. Construction loans can thus simply be commercial credit. The borrower must have a track record of successful projects and few, if any, bad loans.

- **The financial condition of the borrower** is important for obvious reasons. Without a substantial balance sheet, the developer will clearly be unable to afford his equity input, cost-overruns, and the potential carrying cost of the project before it becomes qualified for the take-out.

- **The legal structure of the borrower** is certainly significant.

- **The experience, reputation, and financial condition of the contractor** is significant to the lender in the case that the borrower and contractor are different. At some point in the value chain the party or parties to the contract must obtain a surety bond or satisfactorily guarantee completion.

- **A historical market survey or study** of the project helps the bank determine the value of the project it might wind up with if the borrower indeed defaults. This real estate value determination is often the most important factor in establishing what maximum amount of credit the lender will extend to the borrower.
• The marketing plan, including pre-sales/pre-leasing is also significant to the lender. The lender wishes to know if the borrower has a competent sales strategy. Also, if the borrower has pre-sold any interests he will likely be eligible for credit enhancement, including more favorable interest rates and a higher loan/value ratio.

• The amount and quality of the "take-out" financing can be a non-starter for most construction lenders. Without a qualified permanent financier in place, with reasonable obligation constraints, few lenders will offer a construction loan.

• The amount of equity invested by the borrower presents a common problem for debt providers. As we shall see, the issue of "developer's equity" is the genesis of many principal agent problems which can develop over the course of the loan.

• The preliminary construction budget, related to the borrower's equity, is a document which is easily manipulated to improve "developer's equity," and must be carefully scrutinized by debt providers.
WHAT HAS HAPPENED TO THE TRADITIONAL SOURCE OF CONSTRUCTION FINANCING?

"The real estate industry was permanently changed by the 10 year drought." Christopher Jeffries, Chairman, Millenium Partners

Up until the 1990's in the United States, most financing for construction projects was available in the form of debt instruments from savings banks (eg. S&Ls, or Building and Loans) or larger commercial banks. These institutions were accustomed to providing sponsors with very large loans as a percentage of project cost, at prevailing interest rates only a couple of hundred basis points above the risk free rate of interest. For the S&Ls this was a good business because it was in compliance with the government regulations which S&Ls needed to meet to maintain their FDIC/FSLIC deposit insurance. By borrowing short at 3% (the interest paid to depositors) and lending short at 8% (the interest owed by construction borrowers), the banks could match the terms of the obligations on their balance sheets. Meanwhile, commercial banks, often had specialized, "Real Estate" divisions, which maintained relationships with client-developers, and made larger scale loans for institutional size projects, unrestricted by federal regulations. For a number of reasons however, these sources of financing were not, in principle, perfectly equipped to make construction loans.
In the case of the S&Ls, the construction loan problem of the 1980's was essentially caused by government regulatory practices. In the 1970's, high inflation and volatile interest rates due to an unstable economy were killing the savings and loans. Indeed, while one year treasury bills were yielding 7% (1970), S&Ls could offer no more than a 4% interest rate on deposits. S&L net deposits floundered at less than $5 billion. Over the next 20 years, the federal government deregulated these financial institutions, allowing them to offer market interest rates, easing charter requirements, reducing capital reserve requirements, allowing brokered deposits, etc. Even as they allowed the S&Ls to invest their deposits in riskier ways, the federal government actually increased the deposit insurance ceilings. As a result, the S&Ls had plenty of capital to go invest in big, risky, real estate development ventures, with no downside risk since the government had guaranteed the depositors' accounts anyway. One real estate recession later, virtually all of the S&Ls and B&Ls were insolvent as a result of bad development loans, bailed out by the federal government and gone from the American banking scene. The federal government re-regulated lending (FIREA/FIDICIA) of deposit-insured institutions, once again limiting brokered

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6 Lecture given by Chris Jeffries, "The Future of Real Estate Development," Boston, MA, November 18, 1997,
deposits, re-imposing restrictions, and increasing the regulatory presence.  

As for the commercial banks, they too had serious problems with their real estate loans in the 1980s. Commercial banks exhibited a few serious errors in the way they made loans. One such error was the backward-looking method of loan analysts. Commercial bankers judged the value of real estate projects on the basis of current and recent historical rental rates for similar, existing assets. This method could not account for the potential change in rental rates due to the new market supply, nor could it account for the inherently cyclical nature of real estate markets. Another error was the herd mentality exhibited by loan officers. Broad commitments by bank executives to allocate large amounts of capital to high yield real estate investments pressured loan officers to compete to make loans. This competition for business caused lending at extremely high loan:value ratios as well as long, standing or in some cases, negative amortization periods. When the market recession arrived, these institutions survived an enormous number of loan defaults, work-outs, corporate restructuring and consolidation to arrive in the 1990s with little desire to resume real estate lending.

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7 From class notes, Real Estate Finance and Investment, MIT, Professor Timothy Riddiough
8 Lecture given by Walter Mercer, Members Meeting of the MIT Center for Real Estate, December 1997.
The 1990's began with no S&Ls and no serious commercial lenders to service old, surviving debts. As the owners of heavily leveraged assets discovered that their mortgages would soon be due, and that their traditional sources of debt capital were gone or uninterested (notice the "credit crunch" in the above chart), they began to seek alternative sources of financing. Who would step in to fill the void? Owners of real estate discovered a few new sources and methods. There was money in the public market, so many converted their debt obligations to equity and reorganized as real estate investment trusts (REITs). As for the private market, although commercial banks were uneager to lend themselves, they, as well as many Wall Street firms, were happy to underwrite "commercial mortgage backed securities", and sell them off to public and institutional clients, making the spread. Since, as was stated above,

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9 Chart from class notes, Real Estate Capital Markets, MIT, Professor Timothy Riddiough.
construction lending is often "relationship" lending, these two sources of finance, the public investor and Wall Street, have naturally begun to finance construction projects as part of the whole client-service package. In addition to these sources, developers may still obtain suitable construction finance from some older sources with some crafty book-keeping.
WHAT ARE THE COMMERCIAL BANKS DOING TODAY?

"There are so many places to go that can slice and dice, there's such a demand for real estate syndication, the skim fees that we're making are huge!" Jerry Ward, Managing Director, Real Estate Group, Bank Boston.  

Sources of Income of Some Major US Banks

<table>
<thead>
<tr>
<th>Source</th>
<th>Interest (Loans)</th>
<th>Trading</th>
<th>Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLEET BANK</td>
<td>64%</td>
<td>4%</td>
<td>32%</td>
</tr>
<tr>
<td>CITIBANK</td>
<td>52%</td>
<td>17%</td>
<td>31%</td>
</tr>
<tr>
<td>BANKERS TRUST</td>
<td>26%</td>
<td>30%</td>
<td>44%</td>
</tr>
<tr>
<td>MERRILL LYNCH</td>
<td>12%</td>
<td>27%</td>
<td>61%</td>
</tr>
</tbody>
</table>

But what of the commercial banks? As was stated, while the S&L's are now gone, commercial banks are still around, still

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10 Lecture given by Jerry Ward, MD Real Estate Group, Bank Boston, MIT Center for Real Estate, December 1997.  
11 Data for charts from Bloomberg financial information service, December 1997.
holding loans and some unfortunate real estate assets, still performing some real estate client services. In the aftermath of the recession of 1992, many commercial banks found themselves at a crossroads. As the rules of the federal Glass-Steigel act, which regulates the investments of banks, have become blurred with the advent of financial technology, many of these banks have begun to establish themselves as international currency and derivatives traders (Bankers Trust), or as international retail money service companies (Citibank), or like Merrill Lynch, have come from investment banking to establish themselves more like retail/commercial bank investment service companies. Finally, a few banks chose to remain in the traditional banking businesses, merging with or taking over other banks, to grow into mammoth, national commercial banking entities, the super-regionals.\textsuperscript{12}

\begin{quote}
SYNDICATING CONSTRUCTION LOANS: THE FLEET CENTER

Construction lending has become a highly lucrative business for these banks who have remained in the business. Consider the case of Boston's own Fleet Center, a well known, privately financed, multi-use stadium facility. Jerry Ward of Bank Boston explains, "I got a call one day from the chairman of the bank. He said, Jerry, we're going to

\textsuperscript{12} Interview with Matt Galligan, Director of Real Estate Banking, Fleet Bank, September 1997.
finance the new Boston Garden. The owner/developer of the stadium, Jerry Jacobs, was a long time customer of the bank, and the deal had the type of PR potential that the bank loved. It was 1993, and the real estate market was just beginning to re-awaken. Jerry Ward started the process.

1. Basic Construction Finance: "You have to know construction loans and know them well."
2. Assemble your Experts: Call a construction engineer, title lawyer, investment banker, insurance consultant, et.al.. Don't second guess the advice of your experts.
3. Assemble your Budget: Rely on your construction engineer. Here you will argue with the owner about the budget. Eventually you will come to an agreement. The owner will always want more money and want the bank to cover contingency funding.
4. Assemble your Revenues: A stadium is essentially just a gigantic restaurant. There are three sources of predictable revenue:
   a) Food Revenue: Concessions, in this case run by Delaware North Company.
   b) Schmooze Boxes: Luxury boxes leased long term to local companies. Also special seats sold in blocks in perpetuity.

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13 Lecture given by Jerry Ward, MD Real Estate Group, Bank Boston, MIT Center for Real Estate, December 1997.
c) Ticket Sales: More difficult to judge, but some factor is included.

5. Slice, Dice, Negotiate - GO!: All the parties to the deal will contend for pieces of the revenue. The bank will be willing to do the deal as long as the previous four steps have been successfully completed, and the results satisfy the following ratios:

a) \[ \text{COI/IDS} = 1.2-1.4, \text{COI} = \text{Contractually Obligated Income (from #4, #5), IDS} = \text{Imputed Debt Service (from #3,#5).} \]

b) \[ \text{Loan/Cost} < 0.7 \]

The ratios in #5 are important. In the 1980's there were no such guidelines. In the 1990's as a result of the FIREA and FIDICIA laws which were passed in response to the S&L debacle, real estate loans must meet these criteria. If not, directors of the bank may be personally liable to fines by the federal government.

Finally, negotiations over the Fleet Center were completed. Each of the three lead banks, Fleet, Bank Boston, and Shawmut, would loan a third of the $160 million of debt needed for the project at LIBOR+250 basis points. It is insignificant that construction was completed early and below budget, and that the banks were financed out of the deal three years early. It is insignificant because Bank Boston sold their loan to a syndicate of 10 other banks six
months before closing, at LIBOR+175 basis points. Bank Boston made almost $1 million without ever having the risk of holding the loan.

According to Matt Galligan, Managing Director of Real Estate Investment Banking at Fleet Bank in Boston, the changes in the banking industry have led to the development of only three "super-regional" banks which have taken large positions in real estate finance. These banks are Fleet Bank in the Northeast, Nationsbank in the Southeast in Midwest, and Wells Fargo in the Midwest and West Coast. While there are still some large more localized banks with ongoing real estate asset lending concerns, such as Republic National Bank, and Bank of New York, sponsors of major construction projects are frequently relying on the three Super-regionals for debt financing.  

14 Interview with Matt Galligan, Director of Real Estate Banking, Fleet Bank, September 1997.
Unfortunately, the Super-regional banks, as a result of their own size and the scope of their market, may in coming years be beset by a number of project lending pitfalls:

**Construction Lending Difficulties for Super-Regional Banks**

- The local commercial bank's advantages in development finance of knowing the local real estate market and being acquainted with the local developers are not available to the super-regionals. Fleet, which is headquartered in Boston for example, must maintain banking relationships with developers from Maine to Virginia, and is involved with construction projects over the same 1500 miles of territory.

- The lack of competition to provide project credit in each region means that credit will always be tight. Tight credit leads to onerous loan terms such as high interest. The high interest rates may only be acceptable to the most risk-loving borrowers, invoking moral hazard problems, loan defaults, and even higher interest rates.

- With no alternative sources of financing, if one super-regional makes a policy decision to avoid real estate loans, it could cause a massive credit crunch, exacerbating loan default problems.

- Loan officers are not independent decision makers. Banks set policies on interest rates and loan to value requirements and generally cannot make appropriate judgements if either of these differ from the standard,
or if the asset/project in question has special circumstances and special risks to underwrite.

- Commercial banks are unsure of whether construction lending is a profit center or a customer service. Bank policies have been unclear recently on this issue.
How did Developers Take Advantage of the Traditional Sources of Financing in the 1980's?

"As long as real estate developers can 'finance out' of individual deals - that is borrow, or raise as equity funds, more money than their projects cost, and have none of their own capital at risk - they will continue to construct more space, regardless of whether the market really needs it. Why? To earn fees, to keep their organizations busy, and because each developer believes he or she can capture whatever tiny market segment remains unserved."

- Salomon Brothers, What Have We Learned From the 1980s Experience

According to Matt Galligan, the type of developer described above exists primarily in the New York Metropolitan area, but realistically, this is the method espoused by most private developers nationwide. The method is, by achieving a high enough loan to value ratio (or low enough debt service coverage ratio) in permanent financing, and vertically integrating enough of the design-construction value chain, the developer can create the project while taking virtually no risk. How does it work?

Consider the 1977 Harvard Business School case of "Savannah West." In Savannah West, a small-time, Georgia general contractor and real estate developer named Willy Welsh had a good idea and a vertically integrated real estate company to realize it.

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15 Course Readings, Real Estate Finance and Investment, MIT, Professor Timothy Riddiough, 1997.
Vacancy rates for garden apartments in the Savannah, GA, area were less than 4%, and Welsh had acquired an 11 acre tract of land in a well serviced location to capitalize on the market demand. Empire State Savings Bank was willing to give Welsh a 10.25%, partially amortizing, 12 year permanent mortgage for no more than 75% of the value of the successfully rented asset. To determine the loan amount, Empire State had commissioned an appraisal of the property to be built. The appraisal yielded a few relevant evaluations.
### 1. Income Approach

#### Rental Income

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>Number</th>
<th>Potential Rent* (mo)</th>
<th>Annual Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1BR(a)</td>
<td>24</td>
<td>$190</td>
<td>$54,720</td>
</tr>
<tr>
<td>1BR(b)</td>
<td>24</td>
<td>$210</td>
<td>$60,480</td>
</tr>
<tr>
<td>2BR(a)</td>
<td>36</td>
<td>$220</td>
<td>$95,040</td>
</tr>
<tr>
<td>2BR(b)</td>
<td>36</td>
<td>$230</td>
<td>$99,360</td>
</tr>
<tr>
<td>2BR(c)</td>
<td>36</td>
<td>$240</td>
<td>$103,680</td>
</tr>
<tr>
<td>2BR(d)</td>
<td>36</td>
<td>$250</td>
<td>$108,000</td>
</tr>
<tr>
<td>3BR(a)</td>
<td>12</td>
<td>$265</td>
<td>$38,160</td>
</tr>
<tr>
<td>3BR(b)</td>
<td>12</td>
<td>$290</td>
<td>$41,760</td>
</tr>
</tbody>
</table>

Total Potential Rental Income: $601,200

Auxiliary Income* (unit/mo): $10

Less Vacancy/Bad Rent: 5% $31,356

**Gross Income**: $595,764

**Expenses†**: $172,315

**Reserves**: $27,336

**Funds From Operations**: $396,113

**Capitalized Value**: Cap. Rate 10% $3,961,000

* Based on rent levels in similar properties.

° Includes laundry machines, cleaning fees, furniture rentals, et. al.

† Includes mgmt. fee, taxes, insurance, sanitation, pest control, utilities, et. al.

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### 2. Replacement Cost

<table>
<thead>
<tr>
<th>Category</th>
<th>Units</th>
<th>cost/unit*</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apartment Area (sf)</td>
<td>197,372</td>
<td>$15.00</td>
<td>$2,960,580</td>
</tr>
<tr>
<td>Hallway Area (sf)</td>
<td>9,072</td>
<td>$5.00</td>
<td>$45,360</td>
</tr>
<tr>
<td>Clubhouse (sf)</td>
<td>800</td>
<td>$18.00</td>
<td>$14,400</td>
</tr>
<tr>
<td>Pool</td>
<td>1</td>
<td>$12,000.00</td>
<td>$12,000</td>
</tr>
<tr>
<td>Tennis Courts</td>
<td>2</td>
<td>$10,000.00</td>
<td>$20,000</td>
</tr>
<tr>
<td>Paving and Parking (sy)</td>
<td>14450</td>
<td>$4.50</td>
<td>$65,025</td>
</tr>
<tr>
<td>Landscaping and Site</td>
<td>$3,052,340.00</td>
<td>5%</td>
<td>$152,617</td>
</tr>
</tbody>
</table>

**Total Hard Costs**: $3,269,982

**Construction Loan Interest (avg. bal)**: $1,961,989.20 10% $196,199

**Misc., Profit, Fees, Overhead (of total)**: $3,466,180.92 15% $519,927

**Total Soft Costs**: $716,126

**Land Value**: $200,000

**Grand Total Rounded Value**: $4,186,000

*Based on an analysis of cost data obtained from developer/contractors who are knowledgeable about the cost of building apartments in this area.
Judging from the results of the two evaluations, Empire State was comfortable assuming the built property to be worth $4 million. Thus, at 75% loan to value, Empire State agreed, subject to numerous terms and conditions, to loan Savannah West $3 million once construction was completed and occupancy at projected rent was established.

Of course, from Willy Welsh's perspective, the project was significantly different. The following chart compares Welsh's cost estimates to those of his permanent lender.

<table>
<thead>
<tr>
<th>Component</th>
<th>Welsh</th>
<th>Bank Appraisal</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Purchase</td>
<td>$172,000</td>
<td>$200,000</td>
<td>16%</td>
</tr>
<tr>
<td>Hard Costs</td>
<td>$2,578,000</td>
<td>$3,269,982</td>
<td>27%</td>
</tr>
<tr>
<td>Arch, Eng, Inspection</td>
<td>$50,000</td>
<td>$226,055</td>
<td>352%</td>
</tr>
<tr>
<td>Construction Interest</td>
<td>$135,000</td>
<td>$196,199</td>
<td>45%</td>
</tr>
<tr>
<td>Legal and Accounting</td>
<td>$20,000</td>
<td>$90,422</td>
<td>352%</td>
</tr>
<tr>
<td>Loan Fees</td>
<td>$45,000</td>
<td>$203,450</td>
<td>352%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$3,000,000</strong></td>
<td><strong>$4,186,108</strong></td>
<td><strong>40%</strong></td>
</tr>
</tbody>
</table>

Thus, by vertically integrating enough of the important development operations, Welsh was able to keep his development costs below the amount of the permanent loan, or internalize his profits at the front of the deal. Consider what this meant for Savannah West's potential internal rate of return. Examine this "back of the envelope" analysis.
<table>
<thead>
<tr>
<th>Willy Welsh's Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Investment Income</td>
</tr>
<tr>
<td>Loan Drawn Down</td>
</tr>
<tr>
<td>Construction Cost</td>
</tr>
<tr>
<td>Investment Cost</td>
</tr>
<tr>
<td>Rent</td>
</tr>
<tr>
<td>Expenses</td>
</tr>
<tr>
<td>Permanent Loan</td>
</tr>
<tr>
<td>Interest</td>
</tr>
<tr>
<td>Net Annual Revenue (pre-tax)</td>
</tr>
</tbody>
</table>

IRR 20% 20%

Notice how, even given a 15% development cost over-run, or an 8% decrease in expected rental income, Welsh still maintains a high IRR. In the optimistic case, Welsh's IRR is infinite, he has created a "free" option. The problem for the bank is, since Welsh has not invested any of his own money in the project, he would have had no reason to attempt to carry it if the market was not as good as expected. To be more specific, if Welsh noticed that the market for garden apartments was such that he would have achieved only 90% of expected revenue, he would have had no financial reason to complete construction and "take-out" the construction loan with the permanent. Rather, he would have simply defaulted and walked away.

All the while, Alison Porter, a loan officer from Chemical Bank, was deciding whether or not she should recommend that Welsh be advanced $3 million in the form of a construction loan. Porter, the case study explains, for the most part
had an entirely different set of incentives. "Welsh was exactly the kind of customer Chemical's 'Real Estate Bank' was looking for. Chemical was committed to expanding its direct lending in the South Atlantic region. ... Welsh might be exactly the right person on whom Chemical should take a chance. He had the potential to become a major regional developer. Here was Chemical's chance to become his bank."

These circumstances were similar to those of many much larger construction loans made up until the end of the 1980s. With so many deals like this, is it any wonder why there were so many loan defaults in the last decade? This case also provides, in a sense, the setting for this thesis. We presume that private debt financiers today have learned from the 1980s experience, that loan to value ratios are much lower, that investors are much more cautious about real estate deals, that the ordinary, conventionally financed, infinite IRR project is a rarely possible dinosaur. What then must a real estate developer do to finance construction projects and still limit his own risk? This thesis will address some of the remaining, viable possibilities.
If the project sponsor finds that the terms of debt finance for a housing project are truly too onerous, and that he cannot reasonably obtain conventional bank financing, the sponsor may attempt to enhance his project's credit via his State government or the Federal government. Many states and municipalities have for a long time offered financial assistance in the form of grants, abatements and loan guarantees, especially for projects which are politically expedient, such as low-income housing and nursing homes. These various programs are too numerous to mention but for the most part offer many of the same benefits as those programs offered by the federal government, or are funded and regulated by HUD (see appendix). The FHA, or Federal Housing Authority (a branch of HUD), has a responsibility, through the sponsorship of projects, to create a healthy supply of affordable housing. This sponsorship is most often a loan guarantee, a simple grant, or rent payment assistance.

HUD also makes mortgage insurance available for nursing homes, intermediate care facilities, board and care homes, and assisted living facilities (section 232 of the National Housing Act); public and proprietary hospitals (section 242
of the NHA); and group practice facilities (title XI of the NHA).  

MORTGAGE AND LOAN INSURANCE

Through the Federal Housing Administration (FHA), HUD provides insurance for mortgages and loans placed by private lenders on manufactured homes, single family and multifamily properties, and certain health and related facilities. This Federal role is designed to encourage lenders to make mortgage credit available in areas and to borrowers who may not otherwise qualify for conventional loans on affordable terms, such as first-time homebuyers.

Under FHA's authorities, which are numerous and contain a host of differing features, the Department's role is essentially that of an insurance company. Consistent with statutory requirements, HUD will make insurance available in connection with lenders, borrowers, and properties that meet certain minimum requirements. Sponsor's equity requirements vary by program, but are generally less rigorous than those required by conventional lenders. Developers pay interest on the loan at a rate that is negotiated with the lender. 

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17 Information from the web page of the Federal Housing Administration, "www.fha.gov".
A periodic mortgage insurance premium is used for all multifamily authorities. The periodic MIP is assessed by applying a fixed percentage (generally up to 1% per year by statute, less by regulation) to the outstanding balance of the loan during amortization. If the construction or permanent loan goes into default, HUD will provide insurance benefits to the lender consistent with the contract of insurance.

In the case of multifamily projects, this is normally accomplished by HUD taking an assignment of the mortgage. In return for paying insurance benefits to the lender, the lender turns the mortgage over to HUD, which makes HUD the owner of the mortgage. HUD can thus foreclose on the mortgage. HUD offsets its insurance losses through the foreclosure of insured mortgages and subsequent sale of the properties. With full insurance, HUD insures the entire loan indebtedness, pays insurance claims on this 100% basis, and generally takes an assignment of the mortgage.

The most widely used "full insurance" multifamily authorities are sections "207" and "221(d)(4)." These provisions offer essentially similar ways of encouraging the construction and substantial rehabilitation of multifamily housing. The 1997 government appropriations for FHA mortgage insurance sets a $110 billion credit limit on additional insurance commitments for multifamily housing.
Rental Housing for New Construction and Substantial Rehabilitation

Section 221(d)(3) and Section 221(d)(4)

The Federal Housing Administration (FHA), which is part of the Department of Housing and Urban Development (HUD), provides mortgage insurance to facilitate the development of rental housing. The 221(d) program is FHA's program for the new construction or substantial rehabilitation of multifamily rental properties. Section 221(d)(3) is used by nonprofit and cooperative sponsors; Section 221(d)(4) is used by profit-motivated sponsors.

The Section 221(d) program is not a direct loan program. FHA insures loans originated by private, HUD-approved lenders. Prospective project sponsors/mortgagors are responsible for finding a HUD-approved lender to make a loan and submit an application for commitment to the HUD State/Area Office with jurisdiction for the property location.

Benefits:

- Long-term (up to 40 years), fixed-rate financing
- Eligible for securitization by the Government National Mortgage Association (Ginnie Mae)
- Federal guarantee with Ginnie Mae securitization, results in AAA rating on financing
- Provides construction and permanent financing
- Nonrecourse loans

Program Eligibility:

- Properties must contain 5 or more rental or cooperative units
- Projects may be designed for elderly (aged 62 or older) or handicapped residents
- Eligible mortgagors include profit-motivated, nonprofit, limited distribution, cooperative
- mortgagors
- Properties must comply with specified HUD and local standards

Mortgage Limitations: The maximum insurable mortgage amount is the LOWEST of:

- 90 percent of FHA's estimate of project replacement cost (may be up to 100 percent for nonprofit sponsors)

\[^{18}\text{Ibid.}\]
• The amount that can be amortized by 90 percent of net income for debt service (95 percent for nonprofit sponsors under Section 221(d)(3))
• Statutory per dwelling unit limits. These limits vary by HUD State/Area Office jurisdiction.

NOTE: The typical mortgage limiting factor is net income - FHA's underwriting analysis must establish that there is sufficient project income to repay the loan, taking into account all required expenses, replacement reserve requirements, and a vacancy and collection loss factor.

Mortgage Term and Interest Rate:
• Term is limited to the lower of 40 years or 3/4 of the project's remaining economic life
• Interest rates are negotiated between the lender and the borrower

Other Requirements:
• Applications may be staged (e.g., Site Appraisal and Market Analysis stage, firm commitment).
• Application and inspection fees apply. The application fee aggregates to $3.00 per $1,000 of requested mortgage amount at the firm commitment stage. The inspection fee is $5.00 per $1,000 of mortgage amount.
• Owner must sign Regulatory Agreement with HUD governing project operations
• Projects are subject to cost certification
• Prevailing wage requirements under the Davis-Bacon Act apply

AN FHA LOAN GUARANTEE HOUSING PROJECT: THE TOWERS OF AMERICA¹⁹

In 1993, Ricardo Stone made an excellent real estate decision based on the 20 years of development experience which substituted for any formal training in real estate economics. Had he been formally training he might have

¹⁹ Adapted from a confidential discussion with Murray Kipnis, Vice President of Huntoon Page and Associates, an FHA mortgage broker and servicer. Many names have been changed for the purposes of presentation, although the facts and figures of the case remain accurate.
explained, "Paying attention to the symptoms of the supply cycle of housing (building permits) rather than those of the demand cycle (market rents) is an effective way to time the markets and make money developing real estate. The New York MSA has millions of units of rental housing yet none have been built in the area since the beginning of the last recession (1991). I have an opportunity to develop up to 1500 new rental apartments, but market financing constraints related to the recession are preventing me from doing so. I'm going to enhance my project's credit, and hence obtain financing, with assistance from the FHA." However, as an experienced and practical man, Stone expressed this decision as, "I want to build some more apartments. The banks won't lend. Let's do a 'D4' job."

The 1500 new rental apartments to which Stone was alluding are the "Towers of America," a development consisting of 4 near-luxury high rises within a larger, mixed-use project, located in the New York Metropolitan area. Stone planned to build these 4 buildings one at a time, beginning with the "Riverside" and the "Atlantic," a pair of buildings, adjoined by a common garage, totaling approximately 750 apartments. The Riverside would be first. Stone considered the annual rent roll for 346 units as well as the cost of construction per unit. Assuming a capitalization rate of 10, Stone
figured the project was worth at least a $3 million profit, as demonstrated on the chart below.

| Apartments | 346 |
| Avg. Monthly Rent | $1,700 |
| Annual Income @ 95% Occupancy | $6,705,480 |
| Annual Expenses/Unit | $8,500 |
| Total Expenses | $2,941,000 |
| NOI | $3,764,480 |
| Value @ .10 Cap. Rate | $37,644,800 |
| Cost/Unit | $100,000 |
| Cost | $34,600,000 |
| Value Creation | $3,044,800 |

The Riverside was originally intended to be a condominium when it was first designed along with the entire project's master plan in 1986. When Stone made the decision to try for FHA credit enhancement, the StoneCO design team, including his general contractor, Primo Antonio, immediately went to work on some major changes. As a condo, the building had high ceilings framed in structural steel with a granite and glass facade. It included features like a roof garden and an enclosed health club, valet parking and well appointed apartments. Stone and Antonio knew that these features would cause the project to be too expensive. Why too expensive? Because the FHA sets limits on how much money it is willing to insure for a project, and Stone wanted to be within those limits. To be precise, the FHA is willing to insure the amount of the lesser of three criteria, 90% of replacement cost, 90%
of net income for debt service, or the regionally adjusted statutory limits per unit (established by law). Since 90% of income for debt service and 90% of replacement cost are almost always generously high numbers, it is almost always the case that the statutory limits are the deciding factor. This is evident on line "4.g." of the FHA form on the following page.  

**Determination of Maximum Insurable Mortgage**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>column 1</th>
<th>column 2</th>
<th>column 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortgage or Loan Amount Requested In Application</td>
<td>$48715325 x 90%</td>
<td>$43843802</td>
<td></td>
</tr>
<tr>
<td>Reserved</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Amount Based on Value or Replacement Cost:</td>
<td>$</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>a. Value (Replacement Cost) in Fee Simple</td>
<td>$48715325 x 90%</td>
<td>$43843802</td>
<td></td>
</tr>
<tr>
<td>b. (1) Value of Leased Fee</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>(2) Grant/Loan funds attributable to R. C. items</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Excess Unusual Land Improvement</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) Cost Containment Mortgage Deduction</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) Total lines (1) to (4)</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Unpaid Balance of Special Assessment</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Total line b plus line c</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Line a minus line d</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount Based on Limitations Per Family Unit:</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Number of no Bedroom Units</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of one Bedroom Units</td>
<td>$179 x $90098</td>
<td>$16127542</td>
<td></td>
</tr>
<tr>
<td>Number of two Bedroom Units</td>
<td>$145 x $116478</td>
<td>$16819310</td>
<td></td>
</tr>
<tr>
<td>b. Cost Not Attributable to Dwelling Use</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of four or more Bedroom Units</td>
<td>$1860124 x 90%</td>
<td>$1761790</td>
<td></td>
</tr>
<tr>
<td>c. Site Not Attributable to Dwelling Use</td>
<td>$3138114 x 90%</td>
<td>$344620</td>
<td></td>
</tr>
<tr>
<td>d. Total lines a through c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Total Number of Spaces</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Sum: Value of Leased Fee and Unpaid Balance of Special Assessment(s)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Line d or line e, whichever is applicable, minus line f</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount Based on Debt Service Relief:</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Mortgage Interest Rate</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Mortgage Insurance Premium Rate</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Initial Curtail Rate</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Sum of Above Rates</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Net Income</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Annual Ground Rent</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Line e minus line f</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Line d divided by line g</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Annual Tax Abatement &amp; Savings</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. Line f plus line l, divided by</td>
<td>$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

20 The forms presented are photocopies of the actual forms used by the FHA for final approval of this project.
Meanwhile, Stone called Murray Kipnis, his representative who shepherded his projects through the FHA process. Then Stone summoned one of his best accountants and one of his most experienced lawyers, and instructed them to begin preparing the significant amount of paperwork which the FHA requires. As Steve Waterman, Stone's accountant explained, certain wrinkles in the laws regarding statutory limits make it possible for sly, vertically integrated developers to achieve an excellent value for the statutory limits. First examine lines "4.b." and "4.c." of the form on the preceding page. Then consider the following form.\[^{21}\]

<table>
<thead>
<tr>
<th>TO BE COMPLETED BY CONSTRUCTION COST ANALYST:</th>
<th>TO BE COMPLETED BY VALUATION SECTION:</th>
</tr>
</thead>
<tbody>
<tr>
<td>COST NOT ATTRIBUTABLE TO DWELLING USE:</td>
<td>C.A.C.L.I.L.UTION OF BUDGETED CONSTRUCTION COST:</td>
</tr>
<tr>
<td>Parking</td>
<td>Maximum Mortgage Amount (from 2264a) $90% or × 100% $4,718,425</td>
</tr>
<tr>
<td>Garage</td>
<td>(Whichever is Appropriate)</td>
</tr>
<tr>
<td>Commercial</td>
<td>19. FHA Land Value (Line C 72) $1,975,600</td>
</tr>
<tr>
<td>Special Ext. Land Improvements</td>
<td>20. Carrying Charges and Fin. $542,812</td>
</tr>
<tr>
<td>Other</td>
<td>21. Legal and Organization $107,500</td>
</tr>
<tr>
<td>TOTAL</td>
<td>22. Consultant Fee $107,500</td>
</tr>
<tr>
<td>$3,224,956</td>
<td>23. Design Architect $1,198,502</td>
</tr>
<tr>
<td>Off-Site</td>
<td>25. Bond Premium $314,125</td>
</tr>
<tr>
<td></td>
<td>26. Supplemental Management Fund $235,594</td>
</tr>
<tr>
<td>Ext. Cost</td>
<td>27. Contingency Reserve $12,143,314</td>
</tr>
<tr>
<td>$1,176,600</td>
<td>28. Total 19 thru 28 - Deduct $34,320,742</td>
</tr>
<tr>
<td></td>
<td>29. Balance available for construction $34,320,742</td>
</tr>
<tr>
<td></td>
<td>30. This includes builder's fee of $1,941,476</td>
</tr>
<tr>
<td></td>
<td>or Bldrs.,Ovhd., &amp; BPRA of $4,544,199</td>
</tr>
</tbody>
</table>

As the above table shows, the developer is able to include as part of the statutory limit 90% of cost not attributable to apartments. That means, in addition to the statutory allowance, the sponsor may add 90% of cost and cost of land

\[^{21}\] Ibid.
for garages, health clubs, parks, etc.. By inflating the value of the associated land, and generously estimating construction cost, the developer can greatly improve his statutory loan insurance allowance.

Kipnis arranged a meeting between some StoneCO executives, including Stone, and some functionaries of the FHA. The meeting would be held at the FHA's Newark office because the project's location indicated that that office would be the appropriate one to handle the project. StoneCO executives, along with Kipnis, arrived at the office one morning in July, 1993. The local FHA economist, a key member of the government's decision making team, was late. Actually, the local economist for the Newark office did not exist at the moment. He had recently retired and, his position left temporarily unfilled, the office was relying on the economist from the Buffalo office to consider Stone's request. StoneCO presented their preliminary set of required documents, pitched the FHA on the idea, talked a little about the process and departed.

Several months later, Kipnis called Stone, "We're having some problems with the Newark office." Apparently, the Buffalo economist was against the deal. He believed that 350 units (the "Riverside") were simply too many for the market. More likely, the Buffalo economist was uncomfortable making any big decisions with respect to the
New York City market. After all, he was unfamiliar with it, and probably had little training in the principles of real estate economics to be capable of making the decision. The "Riverside" was rejected. Kipnis promptly resubmitted it with some changes, hoping that StoneCOS persistence would demonstrate confidence in the development. A year later, nothing had happened.

At last, Kipnis convinced the Newark officials to allow the economist from the New York City FHA Office, David Byrne, to take responsibility for the large-scale multifamily decisions at Newark, at least those in the vicinity of this project. Waterman and Kipnis took Byrne to a lavish lunch at a restaurant with a view of the site. Waterman recalls, "One plate of fried clams and we had him." Byrne himself was not necessarily the best qualified to make the judgement, but at least he recognized the area's significant housing shortage and, as the market had begun to improve, increasing rents. Final approval from the FHA on the project was given in January, 1995, a full 18 months after its inception.

But what does approval mean? Essentially, it means that the FHA is willing to guarantee 99% of the acceptable maximum loan amount, in exchange for possession of the note, to whoever agrees to provide the mortgage. As an agency of the federal government, the FHA's credit rating is AA. That
means, bankruptcy related fees notwithstanding, 99% of the construction loan could be rated AA as well. A number of regular buyers of this type of insured debt solicit Kipnis to invest. These investors would not normally invest in construction loans, but under the circumstances are happy to do so. In the case of "Riverside," three offers were taken for the debt. Two, from conventional sources, were willing to purchase the loans at an 8.5% interest rate. One, from a special source, the AFL-CIO Housing Investment Trust, bid 8.25%. However, in exchange for this lower rate of interest, the trust required that all work on the project be performed by organized, unionized, labor. Since Section 221(d)(4) requires that all workers be paid in accordance with the Davis-Bacon Act, and further since the project was located in an area that relies predominantly on unionized labor anyway, Stone was comfortable placing the loan with the AFL-CIO's pension fund.

Kipnis recommended that the second building, "Atlantic," be submitted immediately as a "fast-track" application, while the background of the first project was still fresh in the minds of the FHA functionaries. Approval on the second building was granted only 48 days after submission of application.
The FHA has offices and sub-offices in all of the major metropolitan areas around the United States. The quality of the FHA's service varies from office to office, so chances of access to FHA programs vary from city to city. Since the FHA does not have profit as a motivation for providing loan guarantees, its pattern of decision may seem rather random to the outside observer. Actually, this is a result of a few key factors the sponsor must recognize before attempting to obtain assistance from the FHA.

- Unless the sponsor already has a lot of experience in dealing with the FHA and has successfully completed many
such projects, he will need a specialist to shepherd the project through the FHA process. This specialist, an FHA service broker, receives a percentage fee much like an ordinary mortgage broker would. The broker's relationship with the functionaries at the local FHA office will make the deal possible.

- Each FHA office has an "economist," who has the right to veto any project for any reason. These individuals must be sweet-talked and sold on the idea of the project. Moreover, although they are known as "economists" these officials generally have no particular aptitude for real estate economics.

- Appropriation for FHA programs are determined annually by the federal government. In times of economic plenty (when federal tax coffers are full) these programs are well funded. Unfortunately, even though periods of recession may be the times of greatest need for affordable housing and economic stimulation, the FHA finance programs will certainly be poorly funded.

- Local FHA officials are perhaps the most backward looking of all investors. When the real estate market is hot, there is always plenty of interest in projects.

- The FHA offers a myriad of non-profit and social service oriented programs, sometimes not even related to housing. In the case that the project can include some health service, elderly service, minority or woman owned business, or other social "good," there are bound to be
plenty of additional, special FHA concessions for development.
"Is Wall Street the S&L's of the 1990s?"\textsuperscript{22} Tim Riddiough, Professor of Real Estate, MIT.

When this thesis addressed the capabilities of commercial banks (above), it concluded that for corporate reasons, loan officers were generally incapable of making real estate loans at competitive terms when the asset in question did not fit exactly into the typical specified criteria of the bank. For example, a loan officer may quote you a 7.5\% mortgage on a 75\% loan:value property, but when you request a quote on the same property at only 50\% loan:value, the loan officer will likely quote you the same 7.5\% interest rate. In other words, commercial banks are poorly equipped to handle loans with special circumstances, either bad or good. To some extent, underwriting departments of some of the various Wall Street firms have stepped in to fill the need for special debt financing.

One company which has found the skills of Wall Street underwriters useful is KEERA, Koll ENSR Environmental Realty Advisors.\textsuperscript{23} KEERA is a joint venture between CB Commercial and ENSR Corporation that opportunistically acquires environmentally impaired real estate throughout the United States.

\textsuperscript{22} Lecture given by Professor Timothy Riddiough, Real Estate Finance and Investment, MIT, November 1997.

States. By combining the extensive resources and core competencies of both companies, KEERA can successfully acquire, manage, reposition and remediate properties across the country. KEERA enhances value by improving cash flows and eliminating risks (both environmental and real estate) for future purchasers.

Consider the case of 200 South Tryon Street, a construction project in downtown Charlotte, NC. Charlotte, as it has happened, has had the fastest growing demand for office space and naturally the most rent price growth, of any city in the United States over the last 5 years. 200 South Tryon Street is a 270,000 square foot building which stands at the corner of South Tryon and 4th, on Charlotte's most important downtown street, in the middle of Charlotte's central business district, one block from Trade Street, Charlotte's absolute, ground zero, premier office location. Despite all of this market strength, 200 South Tryon Street is completely vacant. Why?

Ignore the fact that the building was built in 1962, and that it requires upgrades in its HVAC, conveyance, fire safety, plumbing, electrical and exterior facing systems. Ignore the miscellaneous but expensive architectural upgrades the building requires, such as new bathrooms and ceiling tiles. The really big problem with 200 Tryon Street is asbestos. The building's entire steel structure has
spray-on asbestos fire protection. It also has asbestos floor tiles and insulation. Before 200 Tryon Street can be brought to market, whoever redevelops this building must fully abate the asbestos situation as well as upgrade the various systems.

<table>
<thead>
<tr>
<th>200 South Tryon Construction Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition Cost</td>
</tr>
<tr>
<td>Asbestos Abatement</td>
</tr>
<tr>
<td>HVAC Upgrade</td>
</tr>
<tr>
<td>Elevator Upgrade</td>
</tr>
<tr>
<td>Fire Safety Improvement</td>
</tr>
<tr>
<td>Plumbing Improvement</td>
</tr>
<tr>
<td>Electrical Upgrade</td>
</tr>
<tr>
<td>Architectural Upgrades</td>
</tr>
<tr>
<td>Fees and Contingency</td>
</tr>
<tr>
<td>Tenant Improvements</td>
</tr>
<tr>
<td>Lease Commissions</td>
</tr>
<tr>
<td><strong>Total Construction Costs</strong></td>
</tr>
</tbody>
</table>

Currently, the building is considered class "B" office space. After the 12 month long upgrade period, KEERA, a company which specializes in this type of development, believes the building will be class "A." 200 Tryon has a total rentable area of 201,450 feet. Because of the very strong Charlotte market, KEERA believes the building will be fully leased very quickly, with the first leases coming in 7 months, and gradually filling the building up through the 18th month. Based on historical operating expenses, KEERA believes this building will cost about $6.50/square foot to operate. KEERA figured it could achieve rents at least 25%
below market levels, between $12 - $18 per square foot. But who would finance such a project? KEERA did not have $14 million to invest in the deal. Commercial banks simply did not make construction loans on projects with environmental problems. Moreover, this project had an existing, albeit non-income producing, semi-viable asset to back the loan. So KEERA shopped the deal to a number of Wall Street investment banks. At last KEERA obtained financing from Lehman Brothers. Lehman agreed to finance the deal almost completely with debt, requiring KEERA to put up only $150,000 of equity for construction, a 99% loan:cost ratio. In return, Lehman would require a construction period (18 month) rate of interest of LIBOR + 500, approximately 10%. Since operationally the project would have a Debt:EBIT ratio of about 10%, this meant that Lehman would be entitled to basically all of the project's income in case of problems, as well Lehman should be since it provided 99% of the financing. After construction was completed, Lehman would convert about 31% of the debt to junior mezzanine notes, with a preferred 10% rate of interest, while holding the remaining debt as senior secured debt at 7%. Since Lehman would underwrite only $14,413,273 of permanent debt, and the project would require $15,514,340 of construction and construction interest costs, KEERA would have to pay an additional $951,607 in carrying costs to get the project afloat. In the end, the project would have a loan:value
ratio of about 70%, with a blended interest rate of about 7.93%.

<table>
<thead>
<tr>
<th></th>
<th>Per Square Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-Construction &amp; Acquisition Cost</td>
<td>$ 53.33</td>
</tr>
<tr>
<td>KEERA's Equity Requirement</td>
<td>$ 0.56</td>
</tr>
<tr>
<td>Construction Loan Interest @10%</td>
<td>$ 4.25</td>
</tr>
<tr>
<td></td>
<td>$ 57.58</td>
</tr>
<tr>
<td>Senior Permanent Debt</td>
<td>$ 36.60</td>
</tr>
<tr>
<td>Mezzanine Permanent Debt</td>
<td>$ 16.90</td>
</tr>
<tr>
<td>Total Permanent Financing</td>
<td>$ 53.50</td>
</tr>
<tr>
<td>KEERA's Total Equity Requirement</td>
<td>$ 4.08</td>
</tr>
<tr>
<td>Rental Income</td>
<td>$ 11.51</td>
</tr>
<tr>
<td>Operations Cost</td>
<td>$ 6.50</td>
</tr>
<tr>
<td>EBIT</td>
<td>$ 5.01</td>
</tr>
<tr>
<td>Senior Debt Interest @ 7%</td>
<td>$ 2.56</td>
</tr>
<tr>
<td>Mezzanine Debt Interest @ 10%</td>
<td>$ 1.69</td>
</tr>
<tr>
<td>Pre-tax Income</td>
<td>$ 0.75</td>
</tr>
<tr>
<td>Depreciation</td>
<td>$ 1.06</td>
</tr>
<tr>
<td>Taxes</td>
<td>$ (0.12)</td>
</tr>
<tr>
<td>Income including Tax Credits</td>
<td>$ 1.18</td>
</tr>
</tbody>
</table>

Simplified IRR 26%

Is the KEERA deal a good one for KEERA, for Lehman Brothers? Is the mezzanine debt a good investment? It seems that Wall Street firms are better at answering these questions than commercial banks. In this deal, Lehman did specialty construction financing at specialty interest rates, proving, to an extent, Miller & Modigliani's ideas about the costs of
capital in frictionless markets. Is Wall Street a good source of debt financing in general?

In some ways it is. Consider the following:

1. Wall Street is much better at pricing risk in non-standard deals than ordinary banks.

2. As a result, Wall Street can effectively offer a number of real estate finance instruments at appropriate prices, such as mezzanine debt.

3. Wall Street provides one stop shopping - a developer can obtain senior and junior debt, as well as opportunity fund equity, REIT equity and investment agent services from a Wall Street firm.

4. Where commercial banks relationship with local developers is a strength, Wall Street firms relationship with New York area developers is similarly important.

In other ways, however, it is not:

1. Wall Street firms rarely have in house construction expertise and may have problems monitoring the debt advancement process.

2. Wall Street firms offer their services nationally, and thus may be administering construction loans 'at arms length.'

3. Wall Street firms may not really understand what they are getting in to with these types of loans.
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2. Wall Street firms offer their services nationally, and thus may be administering construction loans 'at arms length.'
3. Wall Street firms may not really understand what they are getting in to with these types of loans.
4. Wall Street firms may be making these loans for the wrong reasons. For example, Ethan Penner, of Nomura, has been noted for making these loans as loss leaders, to generate more permanent commercial real estate loan business. Why would Penner promote such a risky strategy?

CMBS, LOSS LEADERS AND THE FACIT

CMBS is an anagram for commercial mortgage backed security. A CMBS is a security which is collateralized by a number of parsed commercial real estate assets. It is a mortgage which is backed by pieces of lots of other mortgages. The CMBS came about in 1986 when federal tax laws began to permit the REMIC. Since then, CMBS has grown into a 110 billion dollar industry; 25% of all commercial mortgages wind up in pieces in various CMBSs. A CMBS, which is collateralized by a variety of assets, has less risk of volatile devaluation than a security which is backed by an individual asset.
Wall Street firms have taken full advantage of the tax law changes which permit the CMBS. By originating loans or buying whole loans from conduits, they can bundle, strip, and package these loans as CMBS, and sell them to investors at a premium. If they can sell mortgages at 100 basis points less than they buy them, Wall Street firms stand to make 11 billion dollars from CMBS in the near future. As a result, some firms' desires to acquire these mortgages is very strong. Some recent notable examples are Nomura and C.S.First Boston. In many cases, the Wall Street firm will simply buy these loans from a loan originating conduit, commercial bank, or other traditional permanent loan source.

As a result of this strong desire for mortgages, many of these firms have begun to provide construction loans in exchange for guaranteed rights to the permanent mortgages. The greatest danger of this is that in their attempt to gain the lucrative permanent mortgages, the firms are engaging in a form of lending in which they have no sophistication or expertise. That, coupled with the notion that some of these firms are making these construction loans as "loss leaders,"
makes this prospect a very fearsome one. In any event, changes in the 1997 tax law have potentiated a new real estate asset backed security called the FACIT. The FACIT allows for stripped, fully accruing wholly substitutable assets as the collateral for mortgage backed securities. Analysts believe that this will soon develop into CMBS construction loans, securities which are backed by pieces of a variety of construction projects. To date, no such asset has been created but analysts expect to see the first of these in the near future. 24

24 Discussion of FACIT loans from lecture given by Lee Sandwen, Members Meeting of the MIT Center for Real Estate, December 1997.
WHAT ABOUT THE REITs?

"There is nothing wrong with the development business as long as the risk is priced accordingly." 25 Sam Zell, Chairman, Equity Office, Equity Residential REITs.

Much has been said about the REITs, Real Estate Investment Trusts, in the last 10 years. The credit crunch of the early 1990s coupled with the permissive changes in the 1986 federal tax law made REITs a viable solution for the various owner/builders who experienced financial distress as a result of that period's real estate recession. Currently there are hundreds of REITs, many of which have corporate backgrounds in development and construction and still others which tout themselves as developers as a means of insinuating growth potential. In theory, with easy access to public equity capital as well as the ability to issue corporate public debt at low rates, a REIT has an extremely low cost of capital for development purposes. A REIT does not have to go through the arduous task of convincing lenders and equity partners to loan or invest money in a project, one at a time. Rather, a REIT can simply call an investment bank, ask for money, and get it (cheap). 26

25 Lecture given by Sam Zell, Members Meeting of the MIT Center for Real Estate, December 1997.
26 Interview with Chip Nisbet, Vice President, Morgan Stanley Real Estate Opportunity Fund, November 1997.
Many real estate developers may believe that a REIT's cost of capital is the dividend yield of its stock. In that regard, dividend yields range from 9.1% (Alexander Haagen Properties) to 3.1% (Koger Equity). For companies with some growth potential, dividend yields of 5% are not uncommon. But verily, this is not the REIT's cost of capital. Rather, a REIT must contend with the basic principles of corporate finance. Strong REIT's are generally funded about 20% debt and 80% equity. Debt costs are very low, perhaps as low as 6.75%.  

27 Interview with Phil Tager, Senior Vice President, Donaldson, Lufkin and Jenrette, Real Estate Investment Banking, November 1997.
Equity, however, must provide the same, competitive return on investment of any common equity. A stock buyer considering investing in a REIT stock expects that the stock will return about 13% on investment, a fair reward for the risk involved with ownership. In the case of a typical, strong REIT, this 13% amounts to 5% dividends, 2% appreciation of assets, and 6% growth in value. Thus a stock trading at $20 paying a $1 per share annual dividend should be trading at 21.9/16 and paying a $1.08 dividend by the end of the year. In actuality then, a REIT's blended cost of capital is 11.75%. Furthermore, because of the REIT shareholders' intense expectation of growth, construction and development capability is a major boon to the company's implied value. Compared to a private company, which can finance with 70% debt at 7.75%, and 30% equity at 20%, a
blended 11.425%, the REIT is not necessarily better
capitalized to own and finance assets.28

Still, many REITs are considered by investors to be worth
well more than the value of their assets. Real estate
assets are often appraised with a capitalization rate, a
multiple of earnings.

\[
\frac{1}{\text{Cap.Rate}} \times \text{Annual EBIT} = \text{Asset Value}
\]

Typical cap rates for privately held real estate assets
range from .8 to .12 (roughly 8 to 12 times cash flow)
depending on asset type and market strength. REITs trade
off a similar factoring, based on FFO (funds from
operations).

\[
(\text{FFO} \times \text{multiple}) - \text{Debt} = \text{Equity Value}
\]

In the case of very strong REITs, this multiple could be as
high as 30 (effectively a .33 cap rate). In this way, an
asset held by a REIT can be valued three times one held
privately. This means that a REITs acquisition cost of
capital could be 1/3 its actual, as low as 4%. Hence, Wall
Street, and the public investor, may be unrealistically
inflating the value of real estate assets and REITs. For
those REITs which develop, this low acquisition cost of
capital allows them to significantly overpay for
construction and still be lauded by the Wall Street analyst

28 Interview with Steven Cantor, Managing Director, Donaldson, Lufkin
community. We shall see, over the coming years, how this over-valuation scenario plays out.

Unfortunately, the structure of a REIT makes it very difficult for a REIT to successfully develop real estate. REITs must pay out 95% of their funds from operations to their shareholders in the form of a dividend. Thus, they cannot retain earnings for future growth. Development in real estate is not entirely different from R&D for a high technology firm. Earnings must be retained and put into the project, at risk, in the aspiration to long term future growth. In addition to this problem, REIT expertise is generally found in acquisition and management of real property. The risks associated with construction are not easily overlooked, and not appropriate for the REIT rate of return. Sam Zell, Chairman of several, very successful REITs, explains, "As far as I'm concerned there's nothing wrong with the development business as long as the risk is priced accordingly. Stable REITs return 8%. Development risk should not be priced at 9 or 9.5%. There is much more risk than that." For that reason Zell, like most REIT CEOs has chosen not to develop real estate but rather play to his strengths in ownership, management, and operating efficiency, while acquiring new assets from real estate companies who act as development agents for a fee, such as

and Jenrette, Real Estate Investment Banking, November 1997.
Hines Corporation. Hines, it is worth noting, is funded primarily by private equity opportunity funds.

REITs are excellent buyers, owners, managers and financiers of real estate assets, but they are not developers. Owner builders who believe that they can tap a new, cheap source of construction financing by converting from private to REIT form will likely discover that they are slaves to their own public organizations, fighting constantly to acquire more real estate or else be taken over by another REIT, with little effective ability to develop property. For those who are obstinate and still desire direct access to public equity capital, reforming as a C-Corporation (REOC), real estate operating company, rather than a REIT may be a reasonable alternative.

One such company, a firm which owns and develops real estate in C-Corp form, is Catellus Corp., a San Francisco based organization. "Catellus Development is a diversified real estate company with property interests principally in California and in 10 other states in the West, Southwest and Midwest." As a C-Corp, Catellus pays no dividend to shareholders. Meanwhile, from January 1996 to March 1997, Catellus' equity rose from $6 to $16 per share, or a 178% annualized return on investment. Furthermore, Catellus is

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29 Lecture given by Sam Zell, Members Meeting of the MIT Center for Real Estate, December 1997.
Capitalized with approximately 50% debt and 50% equity. As a result, its cost of capital is superb. Assuming its equity costs 14%, and its debt 7.25%, Catellus cash costs only 10.63%. Unfortunately, unlike a REIT, Catellus must pay federal taxes at the corporate level but for the income tax averse investor, this may be beneficial. The very few publicly held development C-Corp. companies like Catellus suffer only from misunderstanding on the part of analysts. Since most stocks are judged and compared on ratios such as Price:Earnings, real estate companies like Catellus which shelter their earnings with depreciation for tax reasons, generally show no earnings and thus have no competitive P:E ratio. This has resulted in significant value discounting by investors. In the case of REITs, analysts are far more sophisticated and evaluate those companies on their FFO (funds from operations) rather than simply on earnings. 30

Meanwhile, Catellus has been busy developing $1 billion in assets such as multifamily residential, flex-industrial and mixed use developments. By self financing and capitalizing all of its construction and development costs, Catellus is able to maintain a significant strategic advantage over the

REITs. Such a vehicle can viably solve the developer's public equity problem.\textsuperscript{31}

\textsuperscript{31} Interview with Ira Yellin, Senior Vice President, Catellus Development, October 1997.
TAKING IN AN EQUITY PARTNER

One thing we know empirically from contemporary corporate finance, is that most businesses optimize their static WACCs somewhere between a 40/60 and 60/40 debt:equity ratio. Real estate assets, up until recently, have generally been financed with ratios closer to 80:20, or in many cases, even higher. As real estate finance continues to approach corporate finance, we can expect the capital market for real estate equity to continue to grow to meet that need. How does private equity work its way into construction financing? Consider the case of Newport Office Center III, a project which one New Jersey developer has been trying to build since 1993.

Joe Immobiliare is an experienced developer in the New York Area. His specialty has been large scale multi-family projects but he has successfully created some office buildings and retail developments (malls) as well. His current project, Newport, a mixed-use community, calls for an office corridor consisting of 6-7 high and mid-rise modern office towers. As of 1997, two of the office towers have been built; the first with success, was net-leased to a Japanese Company; the second, built by Immobiliare's partner, was a failure at first and lost a lot of money, but recently sold for $155 per square foot, which happens to be equal to the current overall construction cost of such a
building. Immobiliare has been working on the project since 1983, and has seen two real estate recessions come and go, leaving their effects on his property values. At the moment, office space is renting for $31 per square foot per year, and the two other office buildings in the project are 100% occupied. Immobiliare has asked his construction department for a rough estimate of what the project will cost, and his chief general contractor has quoted the job at $85 per square foot in hard costs, not including tenant improvements. Immobiliare hopes he can obtain project finance like he did on his previous office projects, with loan-to-values of about 80% including the land which he believes the bank will value at $20 million even though it only costs him $12 million. Immobiliare is anxious to get this project underway while the market is heating up.32

32 This case study is presented from confidential discussions with various individuals. Although most names have been changed, the facts and figures of the case remain accurate.
### A Speculative Office Building, Financed 80% Loan to Value

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Per Square Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Built Area</td>
<td>750000</td>
<td></td>
</tr>
<tr>
<td>Usable Area</td>
<td>637500</td>
<td></td>
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<tr>
<td>Construction Period</td>
<td>18</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Construction Phase Costs</th>
<th>Per Square Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>$12,000,000</td>
</tr>
<tr>
<td>Hard Construction</td>
<td>$63,750,000</td>
</tr>
<tr>
<td>Interest</td>
<td>$3,900,509</td>
</tr>
<tr>
<td>Fees and Commissions inc. brokerage</td>
<td>$20,000,000</td>
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<tr>
<td>Tenant Improvements</td>
<td>$15,937,500</td>
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<tr>
<td>T.I. Interest</td>
<td>$159,375</td>
</tr>
<tr>
<td>Total Development Costs</td>
<td>$115,747,384</td>
</tr>
</tbody>
</table>

| Loan Amount              | 80%      | $98,997,908     | $132.00        |

| Operations Phase Costs   | Inc. R.E. Taxes | $6,000,000     | $8.00          |

| Rent (Market)            | $19,762,500    | $26.35          |
| EBIT                    | $13,762,500    | $18.35          |
| Interest Costs (7.25%)   | $7,177,348     | $9.57           |
| Cash Earnings            | $6,585,152     | $8.78           |
| Depreciation            | $2,967,882     | $3.96           |
| Taxes                   | $1,432,439     | $1.91           |
| Net Earnings            | $5,152,713     | $6.87           |

| Project Analysis         | Developers Equity Requirement | $16,749,477 | $22.33 |
| Simplified IRR           | 27%                            | 27%          |
75%, you'd better have the office building at least 35% pre-leased with credit-worthy tenants. If not, we're not comfortable making a loan for more than 60% of the expected value of the project." Undaunted, Immobiliare attempted to comply with the former of the banks' two options, pre-lease the space. Unfortunately, this type of pre-leasing has some problems. Let's deal with the economic problem first.

PRE-LEASING ECONOMIC PROBLEM

If we assume that he can prelease 35% of the office space to a "bondable" tenant (AAA rated), the bank will be willing to improve the loan's underwriting based on the value of the AAA lease. Let's use the Newport Office Center III example. At a gross rent of $31/sf, net rents, as shown, are close to $16/sf. Assume Immobiliare can find a tenant willing to pay this much, and that as a result, the bank is willing to provide a 20 year, fully amortizing permanent loan. The bank intends to underwrite 35% of the buildings value at 6.75% interest (50 points above the AAA rate to account for the subordinated nature of leased space) assuming a 1.05 debt-service coverage ratio. Meanwhile the bank intends to underwrite the remaining 65% of the building's value at 8% interest and a 1.35 DSCR.

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33 Interview with Matt Galligan, Director of Real Estate Banking, Fleet Bank, September 1997.
As the above chart shows, the AAA tenant accounts for an additional $34.25 per square foot of building value. Since most AAA tenants are shrewd negotiators, the tenant in question will recognize this added value. Realizing that his lease has a value of $97.86 per square foot, and amortizing this value over the length of the lease, the AAA tenant notices that he is entitled to a $9.06 reduction in rent, or a gross rent of $21/sf instead of $31/sf. With 35% of the building leased at only $21/sf, using the same bank underwriting techniques, the building can once again achieve only a 60% loan-to-value ratio.

Apart from this economic issue, Immobiliare discovered that because of the peculiarities of the New York M.S.A. market,
it was very difficult to pre-lease the space. Many potential tenants approached Immobiliare seeking space in a new building, but most of them were only doing so to extract greater benefits from the City of New York as incentives not to cross the river to New Jersey. Also, many of the potential tenants' representatives, corporate real estate divisional managers, were more comfortable protecting their jobs by just signing new leases in existing buildings, even at much higher rents, than risking an agreement for space that was not yet in existence. Immobiliare was caught in a "catch-22." He couldn't build a building without a tenant, but he couldn't get a tenant without a building. Immobiliare knew that based on the local area's 100% occupancy level, the building would perform wonderfully if only he could get it built. So he weighed the possibility of building the project on a speculative basis with only a 60% loan.
Under the above circumstances, the project only manages to yield a 12% internal rate of return given a $41 million out of pocket expense. This IRR well below the hurdle rate required by the developer and this amount of cash investment is more than he feels comfortable with. After all, he has assumed the risks of approvals, design, construction, underwriting, lease-up, general liability as well as long term management. Immobiliare wonders, is there any way to improve the projects IRR and also shift some of these risks
to other parties? Immobiliare is ready for an equity partnership.

The above diagram displays the major requirements of a real estate construction project. Once the developer has concluded that a joint venture may be an efficient method of realizing the project, he must decide who should be responsible for each of these tasks. In Immobiliare's case, this would be his first joint venture ever. Without much experience in joint venturing, Immobiliare began by approaching a firm which had in the past been a source of debt financing for his real estate assets, a large insurance company.

Immobiliare arranged a lunch meeting at the site of the development with two representatives of the insurance company. One, a real estate lending officer, came to examine an apartment building which needed permanent debt financing, the other, Joe Bonner, the regional director of real estate equity investments, came to find out more about the office
project. During the course of the days pleasantries the loan officer made a confession. "We're really not making too many equity investments in real estate right now. We got into a lot of trouble over the last recession and we're pretty much at our limit." The insurance company would be happy to discuss the loan on the apartment building, but doubted there would be any possibility of equity finance. Immobiliare was still hopeful, but after hearing nothing from Joe Bonner after some weeks abandoned the idea. 34 Meanwhile, one of Immobiliare's junior executives was busy exploring other sources of equity partnership when he came upon the Blackstone Group. Blackstone is a small New York investment bank which specializes in opportunistic real estate investing. With about $1 billion of opportunistic capital to invest in real estate every year, Blackstone was anxious to put money out. The junior executive discussed the project with an associate at Blackstone. At first there was some enthusiasm for the project, but eventually, Blackstone concluded that the product did not have enough "grandeur" to be consistent with most of its investments. 35 Finally, Immobiliare was approached by one of his regular weekend golf partners, Hector Tiburon. Tiburon was the chairman of Windmill, a very large and successful real estate investment trust, a publicly held real estate

34 Interview with Joe Bonner, Director of Real Estate Investments, Prudential Insurance Company, July 1997.
35 Interview with Chad Pike, Associate, The Blackstone Group, October, 1997.
ownership, acquisition and arms-length development company. Tiburon needed to continue to buy and develop real estate to keep his company's stock price nice and high. Unfortunately, acquisition opportunities, like the market for real estate, were becoming expensive, and the REIT structure was not conducive to development. Tiburon had already done several joint ventures and was looking for just this sort of project. How would the deal work?  

Essentially, Immobiliare would build the project, Windmill would finance it, and the two would share some of the responsibilities.

36 Interview with the individual known here as Hector Tiburon, October
unfinished, general real estate responsibilities such as long term management and lease-up. Immobiliare would contribute the land as equity, while Windmill would contribute its underwriting expertise and easy access to capital. Because of Windmill's reputation on and relationship with Wall Street, Tiburon was confident that he could improve the project's underwriting to 70% loan:value. Meanwhile, Immobiliare would claim that construction costs were $90 per square foot rather than $85 to imbed a construction management fee, and would take an additional 5% as a development fee. Immobiliare's organization was a fully vertically integrated company, so he would profit from all of these fees. Also, Immobiliare would claim the land value was $20 million rather than $12 million, as his contribution. These numbers would all satisfactorily meet with Windmill's investment return requirements, as the following calculations show.

1997.
For Windmill, an IRR of 15% is just fine. It is above its pure cost of capital (as shown above for REITs in the 11% range), and thus would effectively be worth three times that to the shareholders, since Windmill's FFO multiple is over 30. Windmill would buy 50% of the joint venture for 50% of the "outside" equity requirement, $17,166,975. For Immobiliare, this was becoming a sweet deal.
By internalizing his development fee and profiting immediately from the land, Immobiliare is able to improve his investment return to a whopping 58% while only making a cash equity contribution of about $4 million, a very comfortable amount. Better still, Immobiliare can shift some of the risky development responsibilities like lease-up and management to his partner. Joint venturing can be an excellent source of equity capital.

Sources of Equity Capital for Joint Ventures

1. Real Estate Opportunity Funds: Almost everywhere one looks these days, another "real estate equity opportunity fund" is popping up. These are also often called principal investment groups. Most investment banks perform this kind of investing, such as the "Morgan Stanley Real Estate Opportunity Fund" or "DLJ Equity Capital Partners." Smaller investment banking groups such as Blackstone and Apollo are also heavily involved in this business. These funds, in times of growth, generally have between $500 million and $2 billion to
spend on real estate every year, and actively pursue deals when approached. In most cases their knowledge of real estate assets is limited, but their familiarity with discounted cash flow and pro forma evaluation and their high level of sophistication with underwriting (often with in house debt capability) is definitely a benefit to the developer. The stated rate on this type of private equity investment is between a 20-25% IRR on most deals. However, due to the enormous, growing, amount of money invested in these funds, this IRR requirement has slipped to between 15-20%.37

2. Insurance Companies & Pension Funds: In the 1980s many insurance companies and pension funds purchased equity interests in real estate. Asset allocations of insurance companies are generally determined by higher corporate policy along with certain federal regulations. This allocation, common to most companies, is a sum total 10% in real estate (debt & equity). Insurance companies and pension funds own equity real estate because it represents a long term asset which matches well with their long term liabilities, the lives and careers of their policy holders. Unfortunately, these entities are often unsophisticated real estate investors. They are perhaps the most "backward looking" of all the equity investors and thus they often accumulate real estate at

37 Interviews with various fund managers including those from DLJ, Morgan Stanley, Blackstone Group, etc..
high prices when the market is very strong, and as the market weakens they must sell at severe devaluations to remain within corporate and regulatory investment allocation guidelines. According to Joe Bonner, most analyses account for "market history," "market highs and lows," "the relationship between replacement cost and value." Insurance companies have very little understanding of the construction business, capable of little more than rough overall cost estimates. Moreover, insurance companies definitely prefer "show-case" assets, those located in central business districts with name recognition and face value. Strangely, even though such companies often have construction surety businesses and offer general liability insurance, they do not add these services to the joint venture value chain. Meanwhile, these companies have a steady stream of investment capital, and are not so effected by market volatility. Insurance companies will buy into assets which produce between a 10-16% net operating income (FFO), preferring this hurdle to the more common, leverage inclusive, return on equity.\(^{38}\)

3. REITs: Real estate investment trusts are very good extremely good equity partners for real estate development. They are perhaps the most sophisticated of all possible partners, and are extremely comfortable with

\(^{38}\) Interview with Joe Bonner, Director of Real Estate Investments, Prudential Insurance Company, July 1997.
the risks inherent to real estate investments because
this is their business. Since most REITs perform
operations such as asset management, sales or leasing,
frequent sophisticated underwriting via agent investment
banks, they can often add value to the development
process. REITs are eager buyers of real estate and
especially need to invest in new development to keep
their shareholders happy (see section on REITs). The
REIT cost of capital, and thus hurdle rate, was shown to
be a pure 11.75%, but for market reasons could be as low
as 4%. However, this market over-valuation may prove
treacherous for some of these firms, and their unwitting
partners, in the future.

4. International Investors: International investors
represent a rather small but significant part of equity
investment in real estate in the United States. In the
1980s, Japanese and Middle Eastern equity found its way
into a number of real estate assets, but most of that was
purchased during market highs which caused long run
losses for the investors. In the 1990s, Middle Eastern
investors still persist in the market (notably Kuwait),
but the Japanese capital has, to a great extent, been
replaced by European, including Dutch, German, English
et. al.. International investors are good sources of
capital because they are not always beholden to the
market volatility in this country. In times when cash
may be tight in America, many foreign investors will have
plenty to invest. International investors are both opportunistic and asset-allocation driven. In the latter case, they buy equity real estate as a way of diversification from uniquely European portfolios. In the case of Middle Eastern investors, foreign real estate in stable countries is an excellent diversification from full dependence on oil and gas resources.
CONCLUSIONS & REMARKS

The premise of this thesis is that the nature of real estate finance, and thus construction finance, has changed drastically since the high flying days of the 1980s. As the timeline on the previous page shows, the typical 90%+ debt financed projects of yore, those backed by commercial banks and S&Ls on the debt side, are gone forever. The opportunities of the credit crunch of 1990-1992 were snatched up by Wall Street financiers, providing assets with CMBS debt and public equity for REITs. The underwriting standards in this decade have changed, with commercial banks still providing debt, but only 70% of asset value. Equity, now a much more important type of financing, can be obtained from opportunity funds and REITs for joint ventures. The future is uncertain and ever changing.

It should be clear that construction loans and equity ventures are very risky, hazardous and complex investments. Commercial banks, with their centuries of experience, their regional relationships, are still well positioned to make these investments, even if their level of commitment to construction lending is less than it was. Still, competition for the profits from these loans, especially given the vast opportunities to sell them, has once again
made commercial bankers a bit too ravenous. "The banks," according to Jerry Ward, "are going to screw it up again."

Despite the higher cash equity requirements of the banks, developers can still find ways of generating high investment returns while lessening risk. The FHA, with its various programs for housing and special interest groups, will continue to be an excellent patsy in this regard. As the least rational and most backward-looking investors of the bunch, the officials of the federal government stand to be really taken advantage of by creative developers.

For those willing to pay the interest price or attempting projects with special risks and circumstances, Wall Street is an excellent source of project debt. Never-the-less, the Wall Street firms, note well, are the S&Ls of today. With their three times overvalued REITs, with their opportunity funds beginning to accept project IRRs of less than 18%, Wall Street will be at the proverbial barber shop when the next down of the real estate cycle arrives. Although some have claimed that the public investor is more forward looking and rational than the private, the Wall Street "analysts" on whom these investors rely are just as backward looking and irrational in other ways, as the insurance companies of the 1980s. Finally, some of the CMBSs in the marketplace will certainly experience default problems in the imminent cycle, and now with the loan service agent

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(Wall Street or conduit) separated from the holder of the debt, will there be a serious principal agent problem? Meanwhile, there is always the possibility of the FACIT. As for the REITs, they are certainly good buyers and managers of real estate assets, but they are ill-suited to develop. They are excellent joint venture equity partners. For those who desperately wish to develop real estate as a public company, a REOC, C-corporation is the best way. In the opinion of this author, the optimal alternative source of construction financing is equity partnership. Banks still represent a good source of debt for the first 60-70% of capital. For the rest, a smart developer should cultivate relationships with a small variety of equity investors. This variety should include at least one REIT, one opportunity fund and one foreign investor. Hopefully this will help defray the problems associated with the opportunistic supply of capital, the national real estate market, and the builder's cost of capital in general. In this way the builder can obtain money from sources with much lower investment hurdle rates than his own, and occasionally include some outside expertise when needed.
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