

THE ECONOMICS OF CONSTRUCTION

Building Types

Buildings can be categorized on the basis of their economic equation. Relation of profit to function. It is determined by original intent.

1. Intent: Purely to function, not to earn: single family house, courthouse, library, etc.
2. Intent: Primarily to function, but also to make economic sense: hospital, nursing home, etc.
3. Intent: Function and earn through its function: factory.
4. Intent: Primarily to earn as an investment, but also to function in order to be marketable: housing, office buildings, commercial buildings.

Motives: Profit (free market) versus Social good (controlled economy) . . . the equation still has to work to make economic sense.

Roles of:
Developer
Market Analyst
Mortgage Lender

PROFORMA

COST

land acquisition
local costs (utility extension, fee, etc.)
construction cost
furnishings
architect/engineer fee
legal expenses/accounting
misc. costs (survey, borings, printing, etc.)
marketing (personal, advertising, etc.)
Project Cost
+ Interest on construction loan
Total Cost (-mortgage = cash equity)

EXPENSE

utilities (gas oil, water, electric, etc.)
operating (engineer, doorman, etc.)
repair and maintenance
management office
continued marketing
insurance
real estate taxes
miscellaneous
operating expense
+ mortgage retirement
Total Expense

INCOME

apartment rents
office or commercial leases
garage rents
gross income
- vacancies (. . . %)
Net Income (or cash flow)

NET INCOME – TOTAL EXPENSE = PROFIT (= % OF EQUITY)

THE "ECONOMIC EQUATION"

Assume a 12-14 story apartment building at a good Evanston site containing 100 two-bedroom apartments of 1200 square feet, 100 parking spaces and 5,000 square feet commercial.

HARD COST

Land:

\$25,000/Unit at 100.....\$ 2,500,000

Building:

Net Units: 100 at 1,200 square feet	120,000 sf
Circulation: add 20%	<u>24,000 sf</u>

	144,000 sf
Common areas: add 7%	10,000 sf
Commercial	<u>5,000 sf</u>

Total	159,000 sf
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159,000 square feet at \$120.00.....\$ 19,080,000

Garage: 100 at 350 square feet..... 35,000 sf

35,000 square feet at \$70.00.....\$ 2,450,000

TOTAL HARD COST\$ 24,030,000

SOFT COST

Construction Loan:.....	\$ 24,030,000
at 7.0 % halved since it will be drawn progressively:	\$ 841,050
Lender's 1.5% Fee:	\$ 360,450
Architect's Fee, 4% of construction cost (Hot Land!):	\$ 861,200
Legal:	\$ 50,000
Marketing:.....	\$ 50,000
Miscellaneous:.....	\$ <u>120,000</u>

TOTAL SOFT COST:.....\$ 2,282,700

TOTAL COST

Hard Cost: \$24,030,000

Soft Cost:..... \$ 2,282,700

TOTAL COST: \$26,312,700

INCOME

Apartment Rents: \$1,600/month

at 100 at 12:.....	\$ 1,920,000
Garage: \$200/month at 100 at 12:.....	\$ 240,000
Commercial:.....	\$ <u>100,000</u>
Subtotal:	\$ 2,260,000
Less 5% vacancy:.....	\$ - <u>113,000</u>

TOTAL INCOME:.....\$ 2,147,000

EXPENSES

Management: salaries, utilities,
maintenance, taxes, etc. 40% of
income: 40% of \$2,147,000: \$ 858,800

Mortgage Retirement: 85% of \$26,312,700 = \$22,365,800
6% \$ 1,341,950

TOTAL EXPENSES:.....\$ 2,200,750

BALANCE

Income.....	\$ 2,147,000
Expenses.....	\$ - <u>2,200,750</u>
Loss:	\$ 53,750 =

Equity: 15% of \$26,312,700 = Almost 1.4%
= \$ 3,946,900 loss/year of investment

CONCLUSION

Compared to risk-free savings accounts or bonds, this is a poor investment. Can it be improved and have it still marketable?

Let's Try Higher Rents:

INCOME

Apartment Rents: \$2,000/month

at 100 at 12:.....	\$ 2,400,000
Garage: \$200/month at 100 at 12:.....	\$ 240,000
Commercial:.....	\$ 100,000
Subtotal:	\$ 2,740,000
Less 5% vacancy:.....	\$ - 137,000

TOTAL INCOME:.....\$ 2,603,000

EXPENSES

Management: salaries, utilities,

maintenance, taxes, etc. 40% of

income: 40% of \$2,603,000:..... \$ 1,041,200

Mortgage Retirement: 85% of \$26,312,700 = \$22,365,800

6% \$ 1,341,950

TOTAL EXPENSES:.....\$ 2,383,150

BALANCE

Income\$ 2,603,000

Expenses\$ - 2,383,150

Gain: \$ 219,850 =

Equity: 15% of 26,312,700

= \$ 3,946,900

= 5.6 %

gain/year of investment

CONCLUSION

This is not a great investment, but if one considers the value of the real estate which increases more rapidly than money in the bank, it might make sense to certain people who are not looking for liquidity.

CONDOMINIUM

Hard Cost (Same):.....	\$ 24,030,000
Soft Cost (Same with increases).....	\$ 2,329,000
Increases:	
Broker: 6% of 24,030,000	\$1,441,800
Legal:.....	\$ 25,000
Surveyor:	\$ <u>75,000</u>
 Sub-total:	 \$ 27,900,800
 Add 15% Profit:	 \$ <u>4,185,120</u>
 Total:	 \$ 32,085,920

$32,085,920 \div 100 = \$320,000/\text{Apartment}$
is a reasonable assumption in Evanston.