PLANNING YOUR FINANCIAL GROWTH IN THE 1980s

Prepared by

Robert D. Buzzell
William E. Fruhan, Jr.
Walter J. Salmon

for

The Coca-Cola Retailing Research Council

and Presented at the
FMI Midwinter Executive Conference
January, 1982

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PLANNING YOUR FINANCIAL GROWTH IN THE 1980s

INTRODUCTION

Our report on growth potential in food retailing in the 1980s explores two critical questions. These questions are:

* How rapidly can a grocery retailing firm grow given its expected level of profitability?
* Is growth desirable? Do traditional perspectives toward growth and profitability change when the economic environment changes? How does the value of a grocery retailer's common stock relate to growth and profitability in today's economic environment?

Growth plans ought to be framed within the context of financial feasibility, so our report includes a computerized financial forecasting model, which allows a firm to test its growth and profitability plans against its financial constraints. This model is explained in a companion document entitled, "A Financial Planning Model for Food Retailers."

Our report also includes a review of each of several low cost sources of financing, which grocery retailers may be able to exploit more effectively (Appendix B).

- HOW RAPIDLY CAN A GROCERY RETAILING FIRM GROW GIVEN ITS EXPECTED LEVEL OF PROFITABILITY?

GROWTH IS A MATTER OF DEFINITION

The term "growth" may be used in many ways. It may be used, for example, to describe year-to-year percentage increases in sales, assets, net profits, and square feet of selling space. The term "growth" is sometimes used to mean "real growth" (in which case the effects of inflation have been removed). At other times the term "growth" is used to mean "nominal growth" (in which case the effects of inflation have **not** been removed).

In the report which follows, where we refer to the growth rate of a firm, we are referring to **nominal** growth in **sales.** Thus a grocery retailer with a 10% growth rate would be standing still in terms of tonnage in an environment of 10% product price inflation. When we discuss sales growth **adjusted** for inflation, we use the term "real growth." Please keep this distinction in mind as you read the report.

THE CONCEPT OF SUSTAINABLE GROWTH

The growth capability of a firm is limited both by what the market can **absorb** and by what the firm can **finance.** Our concern in this report is with the latter of these limits. That is, "How much growth can a firm sustain financially?"

Sustainable growth is defined as the rate of sales growth a firm can sustain without needing to resort to external equity capital. The sustainable growth rate assumes that a firm will maintain, over time

(a) constant capital intensity,
(b) constant profit margins,
(c) constant financial leverage, and
(d) constant dividend payout ratio.

A formula which relates these operating and financial characteristics is shown in Exhibit 1.

Exhibit 1

The Formula For Sustainable Growth

Capital Intensity	X	Profit Margins	X	Financial Leverage	=	Return on Equity
$\frac{\text{Sales}}{\text{Assets}}$	X	$\frac{\text{Profit After Taxes}}{\text{Sales}}$	X	$\frac{\text{Assets}}{\text{Net Worth}}$	=	$\frac{\text{Profit After Taxes}}{\text{Net Worth}}$
Return on Equity	X	Fraction of Earnings Retained	=	Sustainable Rate of Growth in Net Worth (and Sales)		
$\frac{\text{Profit After Taxes}}{\text{Net Worth}}$	X	Fraction of Profits Retained	=	$\frac{\text{Net Worth Added in Year}}{\text{Net Worth}}$		

STABILITY OF THE KEY FINANCIAL RATIOS OVER TIME

Exhibit 1 suggests that a firm's sales will grow only as fast as its net worth, assuming stability in capital intensity, profit margins, financial leverage, and dividend payout ratio. While these may seem like highly restrictive assumptions, in practice these ratios are often fairly stable over time as indicated by the 10 year histories on the two sample firms represented in Exhibit 2.

Exhibit 2

10 YEAR SUSTAINABLE GROWTH HISTORIES FOR TWO LARGE GROCERY RETAILERS 1971-1980

Year	Sales / Assets	x	Profit After Tax / Sales	x	Assets / Net Worth	Profit After Tax / Net Worth	x	1-Div. Payout Ratio	=	Sustainable Rate of Growth
					Firm A					
1980	4.4		.012		2.8	.151		.71		.106
1979	4.0		.014		2.8	.165		.73		.120
1978	3.8		.016		2.9	.176		.75		.132
1977	4.4		.014		2.6	.161		.71		.114
1976	4.6		.013		2.4	.139		.63		.088
1975	4.4		.014		2.5	.149		.75		.112
1974	4.5		.011		2.5	.118		.76		.089
1973	4.4		.011		2.5	.120		.76		.092
1972	3.7		.010		2.4	.087		.66		.057
1971	4.7		.012		2.4	.140		.77		.108
10 Year Average										.102
					Firm B					
1980	6.0*		.017		1.9*	.194		.68		.132
1979	5.8*		.019		1.8*	.201		.71		.144
1978	5.8*		.019		1.8*	.194		.72		.140
1977	6.1*		.017		1.8*	.187		.70		.131
1976	6.5		.019		1.5	.187		.70		.130
1975	6.6		.019		1.5	.192		.69		.132
1974	6.7		.019		1.5	.188		.66		.125
1973	6.8		.020		1.4	.191		.64		.123
1972	6.7		.021		1.4	.197		.63		.124
1971	7.0		.021		1.4	.203		.59		.119
10 Year Average										.130

*Includes capitalized leases beginning in 1977 which accounts for the significant change in ratios.

THE ALTERNATIVES TO NEW ISSUES OF EQUITY CAPITAL

Exhibit 3 shows that, according to our formula for sustainable growth, the largest grocery retailers in 1980 can grow at a sustainable rate of about 9% per year. We should acknowledge, however, that the 9% figure may not be totally representative. It is merely a snapshot in time. Information that could have a bearing on interpretation of these ratios, such as age of assets, is not included, and the snapshot may not present a true picture of a company's long-term strategy.

Nonetheless, the ratios in Exhibit 3 highlight the fact that in this era of double-digit inflation only about half of these chains have achieved levels of profitability, and maintained dividend policies, that will allow them to grow in real terms (after adjusting for inflation) without infusions of externally-supplied equity capital.

Alternatives to new issues of equity capital are represented by manipulating elements of the sustainable growth formula as follows:

* Lowered growth plans in which the growth target is simply decreased
* Improved asset turnover, represented by increasing the ratio of sales to assets
* Improved profit margins
* Higher debt ratios
* Lower dividend payout ratios

There is no escape from the formula of sustainable growth. It is always with us, although its presence is most noticeable during periods of high inflation.

Exhibit 3

Sustainable Rate of Nominal Growth for 20 Large Grocery Retailers Based on 1979-1980 2-Year Average Data

Firm	Sales/Assets	Profit/Sales	Assets/Net Worth	Profit/Net Worth	1-Div. Payout	Sustainable Growth Rate
A	4.48	.0091	3.10	.126	.48	.061
B	5.10	.0093	2.96	.140	.59	.083
C	5.38	(.0034)	3.17	(.058)	1.00	(.058)
D	4.69	.0153	2.93	.211	.44	.092
E	4.06	.0094	3.64	.139	.65	.091
F	5.86	.0181	1.87	.198	.70	.138
G	3.47	.0134	2.58	.120	.60	.072
H	4.77	.0139	3.10	.206	.74	.153
I	4.55	.0099	4.22	.190	.82	.155
J	5.39	.0181	1.63	.158	.85	.135
K	4.73	.0157	2.61	.193	.48	.093
L	4.28	.0069	3.50	.103	.65	.067
M	4.21	.0133	2.82	.158	.72	.113
N	4.10	(.0001)	4.14	(.002)	NMF	(.039)
O	5.60	.0037	5.99	.125	.97	.121
P	5.84	.0078	2.87	.131	1.00	.131
Q	4.34	.0121	3.15	.165	1.00	.165
R	6.62	.0003	4.46	.008	NMF	(.012)
S	5.29	.0126	3.01	.200	.76	.153
T	3.16	.0480	1.20	.182	.75	.137
20-Firm Average	4.80	.0117	3.15	.135	.73	.092

Note: NMF signifies 'not a meaningful figure' due to dividends in excess of profits.

THE RELEVANCE OF LARGE FIRM FINANCIAL DATA TO SMALLER CHAINS AND INDEPENDENTS

Exhibit 3 and many of the exhibits which follow in our report draw upon financial information contained in the annual reports of the 20 largest grocery retailers. These data are utilized for two reasons. First, relevant financial data are readily obtainable in consistent form over long time periods. Second, the growth, profitability, and financial characteristics of these firms span an extremely wide range. Fast growing firms, shrinking firms, highly profitable firms and highly unprofitable firms are all represented. The ranges of performance are comparable to the experience of smaller chains and independents. We believe the analytic techniques used and the conclusions drawn in our report are equally relevant to smaller chains, independents and larger publicly-owned chains.

THE SUSTAINABLE RATE OF REAL GROWTH (Inflation Adjusted) IN GROCERY RETAILING, FOOD PROCESSING, AND ALL U.S. INDUSTRY BROADLY DEFINED

A key variable in determining the sustainable rate of growth for a firm is its return on equity. As indicated in Exhibit 1, return on equity multiplied by the fraction of earnings retained in the business equals the sustainable rate of growth.

Where the rate of inflation is subtracted from a firm's return on equity, we have a rough measure of how rapidly the firm can grow, in real terms, if it paid **no dividend** to shareholders. Results are eye-opening when you compare, over time, the return on equity versus the inflation rate for grocery retailers. Exhibit 4 shows that as the rate of inflation increased from 1.6% in 1960, to 5.9% in 1970, to 13.5 in 1980 (column 4), grocery retailer profitability barely increased at all (column 3). At the 1980 rate of inflation the potential for real growth (even if dividends were totally eliminated) practically disappeared for the average grocery retailer (column 7).

The financial capacity to sustain real growth in 1980 was better in grocery retailing than in other industries, including food processing. In 1980, the average firm included among the 30 Dow Jones Industrials and the average large food processor had even less capacity to sustain real growth than did the average grocery retailer (column 4, Exhibit 4).

Exhibit 4

THE NARROWING CAPACITY TO GROW IN REAL TERMS FOR GROCERY RETAILERS, FOOD PROCESSORS AND THE DOW-JONES INDUSTRIAL FIRMS 1960-1980

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	ROE				ROE — Inflation		
	Dow-Jones Industrials	Large Food Processors	Large Grocery Retailers	Inflation Rate in Year	Dow-Jones Industrials	Large Food Processors	Large Grocery Retailers
1960	.087	.104	.131	.016	.071	.091	.115
1970	.089	.120	.129	.059	.030	.061	.070
1980	.131	.131	.144	.135	(.004)	(.004)	.009

Note: Data on inflation rates and the Dow-Jones Industrials for the 1970s are presented below to show the trends over the decade.

1971	.091		.043	.048
1972	.104		.033	.071
1973	.125		.062	.063
1974	.133		.110	.023
1975	.097		.091	.006
1976	.121		.058	.063
1977	.106		.065	.041
1978	.127		.076	.051
1979	.145		.113	.032

Many grocery retailers did have the profitability to support significant growth in real terms, even in 1980 (column 6, Exhibit 5). These firms can continue to take market share from those retailers who are less well positioned financially.

This analysis suggests that neither the average grocery retailer nor the average industrial company was well positioned to finance real growth in 1980. This is one price which must be paid for failing to increase ROE in line with increases in the rate of inflation. Another even greater price which must be paid for failing to increase ROE in line with increases in the rate of inflation will be described in the following section of our report.

Exhibit 5

THE NARROWING CAPACITY TO GROW IN REAL TERMS FOR GROCERY RETAILERS*
1960-1980

Firm	(1)	(2)	(3)	(4)	(5)	(6)
	ROE as Reported			ROE as Reported Minus Inflation Rate**		
	1960	1970	1980	1960	1970	1980
A	.134	.139	.112	.118	.080	(.023)
B	.127	.120	.141	.111	.061	.006
C	.149	.230	.193	.133	.171	.058
D	.090	.071	.143	.074	.012	.008
E	.230	.187	.194	.214	.128	.059
F	.137	.119	.109	.121	.060	(.026)
G	.113	.153	.199	.097	.094	.064
H	N.A.	.144	.184	N.A.	.085	.049
I	.096	.160	.168	.080	.101	.033
J	.190	.090	.090	.174	.031	(.045)
K	.126	.156	.151	.110	.097	.016
L	.076	.174	.080	.060	.115	(.055)
M	.101	.056	.138	.085	(.003)	.003
N	N.A.	.113	.142	N.A.	.054	.007
O	.105	.080	.158	.089	.021	.023
P	.166	.037	.000	.150	(.022)	(.135)
Q	N.A.	.100	.201	N.A.	.041	.006
R	N.A.	.196	.181	N.A.	.131	.046
Average	.131	.129	.144	.115	.070	.009

*Two firms were deleted because of 1980 losses and data availability problems, respectively.

**The rate of inflation (CPI) in 1960, 1970 and 1980 was 1.6%, 5.9%, and 13.5% respectively.

SECTION SUMMARY

- The financial capacity to sustain real growth in sales in the 1980s varies widely among grocery retailers. At current levels of profitability, some retailers can expand quite aggressively in real terms, while others will be forced to shrink.

- The average large grocery retailer enjoys a better position in terms of financing real growth in the 1980s than the average large industrial firm or the average large food processor.

- Is growth desirable?
- Do traditional perspectives toward growth and profitability change when the economic environment changes?
- How is the value of a grocery retailer's common stock related to growth and profitability in today's economic environment?

FOUR SCENARIOS FOR GROWTH, PROFITABILITY, AND STOCK VALUATION

- A second critical question explored in our report relates to the desirability of growth. Ultimately, growth is desirable where it adds value to the firm that benefits shareowners. But under what circumstances does growth add value for shareowners? To answer this question we shall examine the critical relationships between growth, profitability, and the market value of a firm's common stock.

An examination of the relationships between growth, profitability, and the value of a grocery retailer's common stock forms the basis for describing four basic patterns of how individual grocery retailers might evolve through the 1980s. The four basic patterns may be characterized, somewhat whimsically, as follows:

(1) ROE = 25%; My Cup Runneth Over!

(2) ROE = 20%; Much Ado About Nothing!

(3) ROE = 15%; Things Are Not Always What They Seem

(4) ROE = 10%; Exit, Pursued by a Bear

ROE = 25%; My Cup Runneth Over!

Growth in a firm's sales and net worth is usually thought to be a desirable objective. So is growth in the market value of a share of a firm's common stock. When new investment opportunities for a firm promise returns that are in **excess** of the firm's cost of capital, growth potential **enhances** the value of the firm's common stock. Unfortunately, growth opportunity without adequate profitability erodes the value of a share of a firm's common stock. This "good-news"/"bad news" characteristic of growth in terms of its impact on shareholder value can be seen in Exhibits 6-9 which follow.

- First, in reviewing these exhibits let's accept as a given that the cost of equity capital for the average grocery retailer is about 20%* in an environment of 10% per year anticipated general inflation.
- Second, let's assume that our grocery retailer earns a return on equity of 25%.
- Third, let's assume that this 5 percentage point spread between ROE and equity capital cost will continue for the next decade, and that the shareholder will sell his stock for book value at the end of the decade.
- Finally, assume that the firm has few real growth opportunities offering 25% returns, and can plan on sales growth at only the rate of inflation, which is assumed to be 10%.

This set of assumptions suggests that the firm needs to retain 40% of its earnings for reinvestment (.40 x .25 = .10). The balance of the earnings can be paid out as dividends. Also implicit is the assumption that the firm's debt/equity ratio will remain constant over time.

How should an economically rational investor value a share of stock in our hypothetical grocery retailer? If we discount the expected cash flows to the equity owner (dividend + the sale price of the share in 10 years) at the cost of equity capital, we find that the share should sell at 1.29 times book value (Exhibit 6). In this example, every dollar of equity capital retained in the business is worth $1.29 in added market value for shareholders. The value enhancement flows from the fact that the firm earns a rate of return which exceeds its equity capital cost. The shareholders cup truly runneth over.

*Appendix A contains a discussion of how the cost of equity capital for a firm can be determined. The average cost of equity capital for the large grocery retailers noted in Appendix A is 19.5%.

ROE = 25%; MY CUP RUNNETH OVER!

Exhibit 6

Calculation of the Economically Rational Market Value of a Firm's Equity (Versus its Book Value) Where the Firm Faces:

(a) Investment Opportunities with 25% Returns to Equity in
(b) Amounts Sufficient to Produce 10%/Year Sustainable Growth Rate in Sales for
(c) 10 Years, and
(d) Where the Firm Has a 20% Cost of Equity Capital

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Start of Year	**Book Value of Shareholder's Investment**	**ROE Achieved**	**Profit After Tax**	**Earnings Retention Rate**	**Earnings Retained**	**Cash Return to Shareholders From Dividends and/or Sale of Stock at Book Value**	**Present Value Factor at 20% Discount Rate**	**Present Value of (6)**
1	$ 100.00	25%	$ 25.00	40%	$ 10.00	$ 15.00	.833	$ 12.50
2	110.00	25%	27.50	40%	11.00	16.50	.694	11.46
3	121.00	25%	30.25	40%	12.10	18.15	.579	10.50
4	133.10	25%	33.28	40%	13.31	19.97	.482	9.63
5	146.41	25%	36.30	40%	14.64	21.96	.402	8.83
6	161.05	25%	40.26	40%	16.11	24.15	.335	8.09
7	177.16	25%	44.29	40%	17.72	26.57	.279	7.42
8	194.87	25%	48.72	40%	19.49	29.23	.232	6.80
9	214.36	25%	53.59	40%	21.44	32.15	.194	6.23
10	235.79	25%	58.95	40%	23.58	35.37	.162	5.71
11	259.37					259.37**	.162	41.88
								$ 129.05

$\frac{\text{Economic Value}}{\text{Book Value}} = 1.29$

*A 10% sustainable rate of growth in net worth (and sales) can be achieved with a 40% retention rate if the firm earns an ROE of 25%.

**It is assumed that the stock will be sold at book value at the end of year 10, when future ROE's will equal the firm's assumed cost of equity of 20%.

ROE = 20%; Much Ado About Nothing!

What if our grocery retailer earned only 20% on its equity, and still expected sales growth of 10% per year? Under these circumstances the firm would have to retain and reinvest 50% of its earnings in order to achieve sales growth of 10% (.50 x .20 = .10). The balance of the earnings could be paid out as dividends. The share of this firm's common stock should sell at exactly book value (Exhibit 7). In this example, every dollar of equity capital retained in the business is worth exactly $1.00 in added market value for the firm's common stock. Management's efforts in achieving 10% growth have neither benefited nor damaged shareholders. Thus, this example is described as "Much Ado About Nothing."

ROE = 20%; MUCH ADO ABOUT NOTHING!

Exhibit 7

Calculation of the Economically Rational Market Value of a Firm's Equity (Versus its Book Value) Where the Firm Faces:

(a) Investment Opportunities with 20% Returns to Equity in
(b) Amounts Sufficient to Produce 10%/Year Sustainable Growth Rate in Sales* for
(c) 10 Years, and
(d) Where the Firm Has a 20% Cost of Equity Capital

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Start of Year	**Book Value of Shareholder's Investment**	**ROE Achieved**	**Profit After Tax**	**Earnings Retention Rate**	**Earnings Retained**	**Cash Return to Shareholders From Dividends and/or Sale of Stock at Book Value**	**Present Value Factor at 20% Discount Rate**	**Present Value of (6)**
1	$ 100.00	20%	$ 20.00	50%	$ 10.00	$ 10.00	.833	$ 8.33
2	110.00	20%	22.00	50%	11.00	11.00	.694	7.64
3	121.00	20%	24.20	50%	12.10	12.10	.579	7.00
4	133.10	20%	26.62	50%	13.31	13.31	.482	6.42
5	146.41	20%	29.28	50%	14.64	14.64	.402	5.89
6	161.05	20%	32.21	50%	16.11	16.10	.335	5.39
7	177.16	20%	35.43	50%	17.71	17.72	.279	4.95
8	194.87	20%	38.97	50%	19.49	19.48	.232	4.53
9	214.36	20%	42.87	50%	21.44	21.43	.194	4.15
10	235.79	20%	47.16	50%	23.58	23.58	.162	3.81
11	259.37					259.37**	.162	41.89
								$ 100.00

$$\frac{\text{Economic Value}}{\text{Book Value}} = 1.00$$

*A 10% sustainable rate of growth in net worth (and sales) can be achieved with a 50% earnings retention rate if the firm earns an ROE of 20%.

**It is assumed that the stock will be sold at book value at the end of year 10 when future ROE's will equal the firm's cost of equity at 20%.

ROE = 15%; Things Are Not Always What They Seem

If our valuation example is extended further, a grocery retailer earning only a 15% ROE would have to retain and reinvest 67% of its earnings in order to achieve sales growth of 10% annually. The reduced level of ROE in relation to the 20% cost of equity capital causes the retailer's stock to be valued at only 71% of book value (Exhibit 8). In this example every dollar of equity capital retained in the business is worth only $.71 in added market value to the shareholders. Shareholders would be better off if capital were not retained to finance growth, and the business were to shrink in real terms. While a 15% return might appear to be adequate, it is not. Inflation has taken its toll. A 15% return on equity was excellent in 1960, barely adequate in 1970, and is totally inadequate in the 1980s. The reality is one of declining valuation: "Things are Not What They Seem." Of the 4 examples, this one is the most insidious because the appearance is one of success and the reality one of decline. The firm can be in trouble and make expensive reinvestment errors without even realizing it!

ROE = 15%; THINGS ARE NOT ALWAYS WHAT THEY SEEM

Exhibit 8

Calculation of the Economically Rational Market Value of a Firm's Equity (Versus its Book Value) Where the Firm Faces:

(a) Investment Opportunities with 15% Returns to Equity in
(b) Amounts Sufficient to Produce 10%/Year Sustainable Growth Rate in Sales* for
(c) 10 Years, and
(d) Where the Firm Has a 20% Cost of Equity Capital

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Start of Year	**Book Value of Shareholder's Investment**	**ROE Achieved**	**Profit After Tax**	**Earnings Retention Rate**	**Earnings Retained**	**Cash Return to Shareholders From Dividends and/or Sale of Stock at Book Value**	**Present Value Factor at 20% Discount Rate**	**Present Value of (6)**
1	$ 100.00	15%	$ 15.00	67%	$ 10.00	$ 5.00	.833	$ 4.17
2	110.00	15%	16.50	67%	11.00	5.50	.694	3.82
3	121.00	15%	18.15	67%	12.10	6.05	.579	3.50
4	133.10	15%	19.97	67%	13.31	6.66	.482	3.21
5	146.41	15%	21.96	67%	14.64	7.32	.402	2.94
6	161.05	15%	24.16	67%	16.11	8.05	.335	2.69
7	177.16	15%	26.57	67%	17.71	8.86	.279	2.47
8	194.87	15%	29.23	67%	19.49	9.74	.232	2.27
9	214.36	15%	32.15	67%	21.44	10.72	.194	2.08
10	235.79	15%	35.37	67%	23.58	11.79	.162	1.90
11	259.37					259.37	.162	41.89
								$ 70.94

$$\frac{\text{Economic}}{\text{Book Value}} = .71$$

*A 10% sustainable rate of growth in net worth (and sales) can be achieved with a 67% earnings retention rate if the firm earns an ROE of 15%.

**It is assumed that the stock will be sold at book value at the end of year 10 when future ROE's equal the firm's assumed cost of equity of 20%.

ROE = 10%; Exit, Pursued by A Bear

Finally, if a grocery retailer earned only a 10% ROE, 100% of the firm's earnings would have to be reinvested to achieve a 10% growth in annual sales. No dividend could be paid. The depressed level of profitability in relation to the cost of equity capital would imply that the rational economic value for the share of this grocery retailer would equal only 42% of book value (Exhibit 9). In this example, every dollar of equity capital retained in the business generates only $.42 in added market value of the firm's common stock. Shareholders would be better off if the firm were to shrink rapidly in real terms.

The firm might describe its 10% sales growth as progress, but in fact the need to retain and invest capital to finance this growth is destroying shareholder values at an alarming rate. A firm in this posture for an extended period of time is heading for the exit, pursued by a bear. The W.T. Grant result is not an impossiblity for a firm in this position.

ROE = 10%; EXIT, PURSUED BY A BEAR

Exhibit 9
Calculation of the Economically Rational Market Value of a Firm's Equity (Versus its Book Value) Where the Firm Faces:

(a) Investment Opportunities with 10% Returns to Equity in
(b) Amounts Sufficient to Produce 10%/Year Substainable Growth Rate in Sales* for
(c) 10 Years, and
(d) Where the Firm Has a 20% Cost of Equity Capital

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Start of Year	**Book Value of Shareholder's Investment**	**ROE Achieved**	**Profit After Tax**	**Earnings Retention Rate**	**Earnings Retained**	**Cash Return to Shareholders From Dividends and/or Sale of Stock at Book Value**	**Present Value Factor at 20% Discount Rate**	**Present Value of (6)**
1	$ 100.00	10%	$ 10.00	100%	$ 10.00	0	.833	0
2	110.00	10%	11.00	100%	11.00	0	.694	0
3	121.00	10%	12.10	100%	12.10	0	.579	0
4	133.10	10%	13.31	100%	13.31	0	.482	0
5	146.41	10%	14.64	100%	14.64	0	.402	0
6	161.05	10%	16.11	100%	16.11	0	.335	0
7	177.16	10%	17.72	100%	17.72	0	.279	0
8	194.87	10%	19.49	100%	19.49	0	.232	0
9	214.36	10%	21.44	100%	21.44	0	.194	0
10	235.79	10%	23.58	100%	23.58	0	.162	0
11	$ 259.37					$ 259.37	.162	$ 41.89

$$\frac{\text{Economic Value}}{\text{Book Value}} = .42$$

GROWTH, PROFITABILITY AND STOCK VALUATION SUMMARY

In summary, the economically rational market value in relation to book value for shares of grocery retailers with different ROE profiles (assuming a 10% rate of growth in sales) would appear as follows:

Sales Growth Expectation	ROE	Earnings Reinvestment Rate Required	Common Stock Market Value / Book Value
.10	.25	.40	1.29
.10	.20	.50	1.00
.10	.15	.67	.71
.10	.10	1.00	.42

The table indicates that at successively lower levels of ROE, efforts to stay even with inflation require higher earnings retention rates and lower common stock valuations.

ACTUAL MARKET VALUE/BOOK VALUE RATIOS VERSUS NOMINAL AND REAL PROFITABILITY FOR GROCERY RETAILERS

In the hypothetical examples of Exhibits 6-9, we described a close relationship between growth, profitability, and the valuation of shares. How realistic is this relationship? Is the evidence one gathers from the stock pages of **The Wall Street Journal** consistent with our hypothetical examples? The answer is yes, according to the evidence presented in Exhibit 10.

The data of Exhibit 10 confirms the hypothetical examples of Exhibits 6-9. Using **only the spread** between ROE and equity capital cost (in both nominal and real terms) we can explain much of the variation in market value/book value ratios among grocery retailers. It is not even necessary to forecast rates of growth, although this would undoubtedly improve the relationship between the theory and the observed valuation results.

Inadequate profitability, coupled with the need to account for inflation in financing sales growth (i.e. no real growth) can produce disastrous consequences on security valuation. If their profitability cannot be improved, firms finding themselves in this position would do their shareholders a favor by adopting a policy of rapid **negative** growth. For firms earning more than their cost of equity capital, however, the greater the growth opportunity the greater the market valuation.

Exhibit 10

Rank Ordered Market Value/Book Value Ratio Data Versus Profitability and Equity Capital Cost for Large Grocery Chains 1980

Historic Cost Accounting			Replacement Cost Accounting		
Firm	Market Value** / Book Value	ROE - Cost of Equity	Firm	Market Value ** / Book Value ***	ROE - Cost† of Equity
A	2.25	.021	D	1.61	.037
B	2.02	.025	A	1.45	.024
C	1.93	.062	F	.80	(.030)
D	1.88	.037	C	.79	(.023)
E	1.76	.048	G	.68	(.066)
F	1.73	.047	H	.59	(.067)
G	1.22	(.050)	J	.51	(.055)
H	1.08	(.015)	M	.43	(.064)
I	1.06	.009	I	.41	(.098)
J	1.02	(.027)	K	.40	(.150)
K	.89	(.135)	L	.35	(.081)
L	.81	(.044)	N	.33	(.104)
M	.78	(.051)	O	.27	(.065)
N	.70	(.097)	P	.25	(.224)
O	.51	(.037)	Q	.16	(.185)
P	.51	(.312)			
Q	.35	(.255)			

*The replacement cost of net fixed assets were not reported for two companies, so these firms could not be included in this tabulation.

**Market value data as of 6/12/81.

***Under replacement cost accounting the book value of the firm's common equity is increased by
(1) the amount of the LIFO valuation reserve, and
(2) difference between the net fixed assets at replacement cost and the net fixed assets at historic cost.

†Under replacement cost accounting ROE is reduced as a result of higher depreciation charges due to the higher replacement cost of net fixed assets, and the cost of equity capital is reduced by the expected rate of inflation (.10 in this example).

SECTION SUMMARY

- Growth without adequate profitability destroys shareholder values, and therefore is not desirable.
- The financial capacity to sustain growth does not necessarily mean that growth will be beneficial for the shareholders of grocery retailers.
- The traditional measures of financial success should be re-examined during periods of high inflation.
- Some retailers will be able to finance significant growth in both nominal and **real** terms in the 1980s.
- Many firms will not earn enough on new investments to justify their cost. For such firms, growth means a reduction in shareholder values.

APPENDIX A

Calculating The Cost Of Equity Capital For a Grocery Retailer

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Calculating the Cost of Equity Capital For a Grocery Retailer

Shareholders demand a return for accepting the risk of investing their money in the grocery retailing business. The return demanded by shareholders is equal to the cost of equity capital for a grocery retailer.

How can the cost of equity capital be determined? Analysts who have examined stock market price data over the 50 year period 1926 to 1976 have discovered that the average real (inflation adjusted) rate of return enjoyed by a shareholder owning a stock of average risk was about 9%. If investors in fact received the return they bargained for over this 50 year period, then in today's environment of 10% inflation expectations, investors ought to receive a return of about 19% on a stock of average risk.

Cost of Equity Capital for a Firm of Average Risk in the 1980s	=	Expected Inflation Rate .10	+	Average 1926-1976 Real Return for Stock of Average Risk .09

This required return of 19% for shareholders equals the average firm's cost of equity capital.

While 19% may be the cost of equity capital for the firm of **average** risk in the early 1980s, we need to find a mechanism for calculating the cost of equity capital for **individual** firms whose riskiness may vary widely from the average.

In fact, the risk premium required over the rate of inflation for a specific stock can be determined by its risk level relative to a broad stock market index such as the Dow-Jones Industrials or the S&P 500.

Risk Premium for Stock XYZ	=	Average 1926-1976 Real Return for Stock of Average Risk .09	X	Relative Riskiness of Stock XYZ Versus the Average Stock Beta

The relative riskiness of stock XYZ can be determined by observing how stock XYZ changes in price relative to price changes in the broad market averages. For example, if stock XYZ tends to rise or fall in value by 1.1% when the overall market rises or falls by 1.0%, stock XYZ's relative riskiness is defined as $\frac{1.1}{1.0} = 1.1$ The relative riskiness of a stock is called the stock's beta.

The beta values of several thousand different stocks are reported by investor services such as "Value Line Investment Survey" and Merrill Lynch's "Security Risk Evaluation."

We can calculate the cost of equity capital for an individual firm as follows, given knowledge about:

(1) the expected inflation rate
(2) the beta of an individual stock, and
(3) the average real return required for a stock of average risk

Cost of Equity Capital (or Investor's Required Rate of Return)	=	Expected Inflation Rate .10	+	Beta of Stock	X	Average 1926-1976 Real Return for Stock of Average Risk .09

The betas and calculated cost of equity capital for firms of widely varying riskiness are presented below:

Firm	Stock Beta	Cost of Equity Capital .10 + Beta (.09)
AT&T	.65	.159
IBM	.99	.189
Delta Air Lines	1.04	.194
TWA	1.56	.240

As this pattern of stock betas indicates, firms such as AT&T, which are quite stable and relatively unaffected by economic cycles, have low betas. Firms such as IBM move in the same cycle as the economy overall, and have a beta equal to about 1.0. Firms such as airlines whose results exaggerate the intensity of business cycles tend to have betas in excess of 1.0. Differences in the betas of firms operating within the same industry occur because of differences in leverage, liquidity, market diversification and stability, market size, market share, etc. Thus Delta Air Lines has a significantly lower beta than TWA.

Grocery retailers experience quite wide variations in Beta values for many of the reasons enumerated above, most notable leverage and liquidity. Exhibit A shows the beta values for 17 large grocery retailers, and also shows their calculated costs of equity capital. The 17 firm average cost of equity for grocery retailers is 19.5%, with 10 of the 17 firms falling less than ± 2.0 percentage points away from this average figure. All but one firm falls within ± 4.0 percentage points away from this average figure.

Exhibit A

Estimated Cost of Equity Capital for 17 Large Grocery Retailers 1980

Firm	Actual Beta	×	Average Real Return for Stock of Average Risk	+	Expected Inflation Rate	=	Total Cost of Equity
A	.65		.09		.10		.159
B	.69		.09		.10		.162
C	.79		.09		.10		.171
D	.81		.09		.10		.173
E	.85		.09		.10		.177
F	.90		.09		.10		.181
G	.95		.09		.10		.186
H	.96		.09		.10		.186
I	1.03		.09		.10		.193
J	1.03		.09		.10		.193
K	1.13		.09		.10		.202
L	1.15		.09		.10		.204
M	1.22		.09		.10		.210
N	1.30		.09		.10		.217
O	1.35		.09		.10		.222
P	1.46		.09		.10		.231
Q	1.72		.09		.10		.255
17 Firm Average	1.06		.09		.10		.195

APPENDIX B

Low Cost Sources of Financing For Grocery Retailers

CATALOGUING SOME POSSIBLY NEGLECTED SOURCES OF LOWER COST FINANCING

An important conclusion that can be drawn from our report is that **profitability** should take priority over **growth,** if grocery retailers are to build for their shareholders.

When profitability is adequate, funds have been and undoubtedly will continue to be available to grocery retailers for financing their expansion. While funds are **available,** the **cost** of financing, given today's rate of inflation, is staggering. This fact puts unusual pressure on retail operators to identify sources of financing that are less costly than sources which usually receive first consideration. The purpose of this section of our report is to catalogue a few possibly neglected sources of financing that ought at least be considered before retailers resort to more costly alternatives.

LOW COST INTERNAL FINANCING SOURCES

1. Cash Management
2. Vendor Financing
3. Full-Line Warehousing
4. LIFO
5. Sell/Lease-Back

CASH MANAGEMENT

Cash management is an area that some retailers have yet to exploit fully. Remote disbursing of funds in a relatively non-seasonal business such as grocery retailing can add significant amounts of permanent financing to the business. One day of float for a retailer with $100 million in annual sales volume equals $225,000 of available capital.

Similarly, paying invoices on the date they come due, rather than batching payments (and possibly paying some invoices too early) can add to available capital.

VENDOR FINANCING

Among large retailers the share of inventories which are vendor-financed varies widely (column 1, Exhibit 11). Part of this difference can be explained by variations in inventory levels (column 3, Exhibit 11). Product-mix differences, general merchandise inventories, deal merchandise, warehousing, self-manufacture, etc., all might significantly influence inventory levels.

Inventory levels in relation to sales are only one-half of the story in determining the fraction of inventories that are vendor-financed, however. The other half of the story is determined by the duration of each firm's days' payables outstanding. As shown in column 3 of Exhibit 11, firms differ quite widely in this area. A one-day stretch in average days' payables outstanding adds about $225,000 of financing for a firm with $100 million in annual sales volume.

A full understanding of the sources of the differences in column 3 of Exhibit 11, coupled with careful management of this aspect of the business might provide a significant amount of new permanent financing at relatively modest cost.

Exhibit 11

Fraction of Supplier Financed Inventory, Days Sales in Inventory, and Days Payables Outstanding for 20 Large Grocery Retailers — 1980

Firm	(1) Supplier Financed Inventories* (%)	(2) Days Sales in Inventory**	(3) Days Payables Oustanding†
A	57	39	22.5
B	59	40	23.1
C	56	39	21.9
D	42	45	19.1
E	53	43	22.8
F	46	37	16.9
G	38	48	18.1
H	71	33	23.4
I	63	38	23.8
J	63	30	18.5
K	89	29	26.0
L	51	51	25.6
M	97	26	25.2
N	83	35	29.2
O	41	36	14.7
P	58	29	16.8
Q	70	28	19.8
R	76	31	23.5
S	40	39	15.6
T	48	39	18.5
20-Firm Average	60	35	21.3

*(Accounts payable/FIFO inventories) x 100
**(FIFO inventories/Cost of goods sold on FIFO basis) x 365
†(Accounts payable/Cost of goods sold on FIFO basis) x 365
Note: Column 1 = [(Column 3) ÷ (Column 2)] x 100

Sources: Company Annual Reports

FULL-LINE WAREHOUSING

An article of faith in grocery retailing is that when a firm reaches a certain size (several hundred million in sales volume), it should do its own warehousing. Since the investment commitment to warehousing for a firm with $200 million in volume would approximate $12 million, this is a decision of considerable financial importance. Given the technological advances in warehouse mechanization in recent years, and the dramatic rises in the cost of financing, previously valid rules-of-thumb may no longer produce economically sensible results in the area of warehousing. Midsize retailers ought to carefully analyze whether they are receiving an adequate return on their warehousing investment. If not, reversing this commitment might produce considerable financial capacity for use in other areas of the business.

ADOPTION OF LIFO INVENTORY VALUATION

The utilization of LIFO for inventory valuation purposes has traditionally been a double-edged sword. LIFO offers "free" financing to the extent of the LIFO reserve multiplied by the corporate income tax rate. This can be a very significant benefit. As indicated in Exhibit 12, twenty large grocery chains enjoyed $381 million of "free" financing in 1980. These funds represent a competitive advantage that cannot be replicated by a new competitor, or an old competitor now switching to LIFO.

LIFO has also had some negative features, however. It has been costly to implement, particularly for small chains. It also reduces the level of profitability reported to shareholders. As indicated in Exhibit 13, the median reduction in 1980 ROE resulting from LIFO accounting for 20 large grocery chains was 4.1 percentage points.

Both of LIFO's drawbacks may well be eliminated in the not-too-distant future. The IRS is expected to adopt a proposal which will greatly simplify and reduce the cost of implementing LIFO inventory accounting. In addition, recent court rulings, Treasury Department relaxation of the conformity rule, and Congressional efforts to repeal the conformity rule all indicate that there will soon be no reported profitability penalty for those firms wishing to use LIFO for tax accounting, and FIFO for shareholder reports.

By 1980 LIFO accounting is already a significant source of financing for many grocery retailers. In the continuing era of high anticipated inflation it promises to become even more important. As indicated in Exhibit 14, in the 1980s $10MM of inventory valued on a FIFO basis would rise in nominal value to $31.1 million assuming a 12% inflation rate over the decade. A switch to LIFO in 1981 would produce $9.7 million of tax savings from this change, while reducing cumulative profits and net worth reported to shareholders by $11.4 million. The reinvestment of the cash flow benefit of the LIFO adoption would, however, eliminate much of the reported profit and net worth reduction (line 8 vs. lines 6 and 7 of Exhibit 14).

Once the IRS simplifies the mechanics of LIFO bookkeeping, the adoption of LIFO accounting for tax purposes will become almost a competitive necessity even for smaller grocery retailers. The LIFO accounting choice is too important a source of financing to leave unexploited.

Exhibit 12

Financing Benefits of LIFO Accounting for 20 Large Grocery Retailers — 1980

Firm	Inventory (FIFO)	Inventory (LIFO)	"Free" Financing Provided by LIFO Choice**	Years of LIFO Use
	$ millions			
A	$ 1,273	$ 1,012	$ 120	7
B	862	775	40	2
C	588	*	0	*
D	612	546	30	2
E	586	534	24	6
F	428	342	40	6
G	462	427	16	1
H	212	184	13	2
I	212	180	15	2
J	140	99	19	>6
K	131	118	6	2
L	214	202	6	2
M	109	85	11	7
N	103	89	6	2
O	105	91	6	>13
P	79	57	10	8
Q	78	*	0	*
R	64	53	5	3
S	72	53	9	6
T	55	45	5	>14
Total			$ 381	

*LIFO not utilized.
**Equal to 46% of the difference between FIFO and LIFO inventory.

Exhibit 13

Return on Equity (FIFO versus LIFO Base) for 20 Large Grocery Chains 1980

FIRM	ROE FIFO (%)	ROE LIFO (%)	Difference
A	14.0	11.8	2.2
B	19.9	15.4	4.5
C	(10.9)	N.A.	-
D	27.3	22.3	5.0
E	17.8	15.7	2.1
F	22.3	19.6	2.7
G	17.7	14.8	2.9
H	28.1	23.3	4.8
I	26.9	21.9	5.0
J	18.6	16.8	1.8
K	20.6	18.0	2.6
L	13.7	9.5	4.2
M	20.3	16.9	3.4
N	13.5	8.5	5.0
O	29.8*	14.6*	15.2*
P	20.6	16.5	4.1
Q	18.8	N.A.	-
R	9.8	0	9.8
S	30.0	23.8	6.2
T	21.4	21.0	.4
Median Value			4.1

*Earnings untaxed due to tax loss carryforwards.

NOTE: Profit after taxes/Net worth based on beginning of period net worth.
No adjustment to net worth based on the excess value of FIFO inventory over LIFO inventory.

Exhibit 14

1980-1990 CASH AND PROFIT IMPLICATIONS OF A CHANGE FROM FIFO TO LIFO INVENTORY VALUATION IN 1980 UNDER VARIOUS INFLATION RATE ASSUMPTIONS FOR A FIRM WITH $10 MILLION OF INVENTORY

		3% Annual Cost Increase	8% Annual Cost Increase	12% Annual Cost Increase
		$ millions		
1.	Inventory 1980	10.0	10.0	10.0
2.	Inventory 1990 LIFO	10.0	10.0	10.0
3.	Inventory 1990 FIFO	13.4	21.6	31.1
	Culmulative Balance Sheet Impact - 1990			
4.	Cash	1.6	5.3	9.7
5.	Inventory	(3.4)	(11.6)	(21.1)
6.	Net Worth	(1.9)	(6.3)	(11.4)
7.	Cumulative Income Statement - Impact	(1.9)	(6.3)	(11.4)
	Cumulative Additional Earnings and Cash Flow from Reinvestment			
8.	of Additional Cash @ 13% A.T. Return*	1.1		
	@ 18% A.T. Return*		4.7	
	@ 22% A.T. Return*			9.8

* Assumes that the firm earns a return on equity equal to 10 percentage points over the inflation rate. This is roughly equivalent to its cost of equity capital per Appendix A, Exhibit A.

SELL/LEASE BACK

The Economic Recovery Tax Act of 1981 has altered the Federal Tax Code in a number of ways. It has opened opportunities for tax savings, which could provide some retailers with sources of financing. While the Act is still so new that it has not been thoroughly studied by financial analysts, one financing option that appears to hold particular potential for food retailers is sell/lease-back. Essentially, this is a technique which allows a company with unneeded tax credits to sell those credits to another firm.

LOW COST EXTERNAL FINANCING SOURCES

1. Tax Subsidized Financing (IRB's)
2. Foreign Investment
3. Original Issue Discount Debt

An overview of the traditional sources of external financing for grocery retailers is presented in Exhibit 15. The exhibit suggests that the large retailers have relied upon capitalized leases, mortgages, public and privately placed debt for almost 90% of their external debt requirements. As indicated in Exhibit 16, debt capital accounts for 45% of the total capitalization of the average large grocery retailer based on historic cost accounting. On a replacement cost basis, debt capital comprises only 32% of total capitalization for these retailers.

One of the more lightly utilized sources of debt capital for grocery retailers is the industrial revenue bond. Since this is a source of capital with a cost that is about 2/3rds that of traditional borrowings, it should be a more important source to the industry. And retailers should act soon to utilize this source because recent trends in legislative activity suggest that it may not be widely available in the future.

Equity investments by foreign investors represent a second potential source of low cost financing for some grocery retailers.

Finally, original issue discount debt may represent a lower cost source of financing for the largest and highest rated borrowers in the retail grocery industry.

Analysis of each of these three external financing sources follows.

Exhibit 15

TWENTY LARGE GROCERY RETAILERS
COMPOSITION OF DEBT STRUCTURES — 1980
(%)

Firm	Capitalized Leases	Mortgages	Publicly Issued LT Debt	Private Placement Debt	Commercial Paper	Revolving Credit and Bank Term Loan	Other LT Notes Payable	Short Term Bank Debt	Industrial Revenue Bonds	Total
A	73	5	4	—	11	—	3	4	—	100
B	30	—	51	—	—	—	8	4	7	100
C	62	5	33	—	—	—	—	—	—	100
D	43	25	27	—	—	—	5	—	—	100
E	45	19	34	—	—	1	1	—	—	100
F	83	7	—	—	—	—	—	—	10	100
G	11	38	—	27	10	13	1	—	—	100
H	59	15	—	26	—	—	—	—	—	100
I	64	23	—	13	—	—	—	—	—	100
J	8	24	—	—	—	64	—	4	—	100
K	54	30	—	—	6	—	8	2	—	100
L	41	25	—	34	—	—	—	—	—	100
M	72	2	—	24	—	—	2	—	—	100
N	41	14	11	34	—	—	—	—	—	100
O	50	12	—	5	—	33	—	—	—	100
P	53	36	—	1	—	—	—	—	—	100
Q	70	—	—	—	—	30	—	—	—	100
R	71	9	—	3	—	—	2	—	14	100
S	56	17	—	24	—	2	1	—	—	100
T	—	—	—	—	—	—	—	—	—	100
20 - firm average (%)	49	15	8	10	—	7	2	1	2	N.A.
Total $'s outstanding (millions)	2,448	638	529	440	185	142	106	70	39	4,597
Percentage of total $'s outstanding	53	14	12	10	4	3	2	1	1	100

Sources: Company Annual Reports

Exhibit 16

FIXED CHARGE* COVERAGE RATIOS AND CAPITAL STRUCTURES FOR 20 LARGE GROCERY CHAINS - 1980 HISTORIC COST VS. REPLACEMENT COST ACCOUNTING

		Historic Cost Accounting		Replacement Cost Accounting	
Firm	Fixed Charge Coverage (X)	S.T. Debt + L.T. Debt and Capitalized Leases (%)	Equity (%)	S.T. Debt + L.T. Debt and Capitalized Leases (%)	Equity (%)
A	1.9	53	47	33	67
B	2.0	38	62	23	77
C	.7	46	54	29	71
D	2.5	48	52	NA	NA
E	1.8	53	47	42	58
F	3.3	17	83	NA	NA
G	1.9	42	58	30	70
H	2.6	51	49	32	68
I	2.7	58	42	34	66
J	3.5	14	86	NA	NA
K	2.9	31	59	31	69
L	1.6	58	42	39	61
M	2.5	46	54	32	68
N	1.5	59	41	40	60
O	1.2	70	30	NA	NA
P	3.0	49	51	33	67
Q	1.7	52	48	43	57
R	1.0	54	46	35	65
S	3.3	51	49	34	66
T	22.1	0	100	0	100
Average		45	55	32	68

*Fixed charge coverage is defined as:
[profit before taxes + total rent + interest expenses (including interest capitalized leases)] / [total rent + interest expenses (including interest on capitalized leases)]

INDUSTRIAL REVENUE BONDS

Industrial Revenue Bonds (IRBs) represent a source of government subsidized financing for supermarket retailers. The interest payments on these bonds are a tax deductible expense to the borrower, but they are tax exempt income to the lender, so borrowers can achieve a major reduction in interest costs through the use of IRB financing. In the past several years interest rates on IRB's have averaged 35% below taxable bond rates of equal maturity and credit risk. The savings to a borrower can be dramatic. An "A" rated taxable bond with a 15% interest coupon might be replaced by an IRB with an interest coupon as low as 10%.

The mechanics of IRB financing are as follows:

An investor-developer builds a new store or warehouse facility. Long term fixed rate bonds to finance the land and facility are sold publicly by the municipality in which the new facility is located.[1] The supermarket retailer makes annual lease payments which are sufficient to repay the principal and interest on the IRB issue. The bonds are secured by a first mortgage lien on the property and are guaranteed by the supermarket retailer. The municipality's **own** credit is not at risk.

[1]In addition to **publicly** issued IRBs, there is also a very large market for **privately** placed IRBs. Not much data is available on privately placed IRBs. Commercial banks and casualty insurers represent the principal buyers of privately placed issues. IRBs privately placed with commercial banks are currently usually written at floating interest rates equal to about 65% of the prime rate. The maximum maturity is about 15 years, which makes this type of financing less attractive than the longer term public issues. For the past several years, the volume of privately placed IRBs may have been as much as **4 times** the volume of publicly issued IRB debt.

There are, of course, constraints on the use of IRB issues. No issue may exceed $10 million in size. If the issue exceeds $1.0 million, total capital expenditures on all of the borrowing firm's facilities within the same **county** or **city** may not exceed $10 million for the 3 years before and the 3 years after the issuance of the bond. A municipality must also agree to issue the IRB on behalf of the supermarket retailer. Only 34 of the 50 states permit retailers to utilize IRB financing, and several states allow it only for retail facilities in targeted geographic areas. A few retailers proposing to finance locations with IRBs have been successfully blocked by local merchants who opposed their potential competitor's use of IRB subsidies.

While IRB financing can be more difficult to arrange than traditional long term financing, the value of this financing vehicle has been recognized by a number of retailers. In each of the major retailing sectors, one firm has placed increasing reliance on IRB financing. Kroger, K-Mart, and McDonald's have each begun to aggressively pursue IRB financing whenever possible (Exhibit 17). K-Mart alone now accounts for 60% of the publicly isssued IRB financing of all retail firms. This financing instrument currently saves K-Mart more than $5 million per year in interest cost when compared to taxable long term debt.

IRB financing should be carefully explored by supermarket retailers actively building new facilities. **Legislation aimed at drastically reducing the availability of IRB financing is currently being considered by the U.S. Congress. This fact adds some urgency to the consideration of this financing source.** An example of the economics of a retail superstore under IRB financing versus conventional financing is included at the end of this section.

Exhibit 17

ANNUAL VOLUME OF PUBLICLY* ISSUED INDUSTIAL REVENUE BOND FINANCING COMPLETED BY U.S. RETAIL FIRMS

($ millions)

	Total Pre-1977	1977	1978	1979	1980	Cumulative Totals
Supermarket Retailers and Wholesalers						
American Stores Co.	4	—	—	—	—	4
Colonial Stores	—	5	—	—	—	5
Kroger co.	—	—	—	11	21	32
Stop & Shop Cos.	18	—	—	—	—	18
Super Valu Stores	3	—	—	—	—	3
Subtotal	$ 25	$ 5	—	$ 11	$ 21	$ 62
Department, Drug and Discount Stores						
Jack Eckerd Corp.	—	—	—	8	—	8
Federated Department Stores	3	—	4	4	1	12
K-mart Corp.	34	7	43	44	93	221
Mercantile Stores	—	3	—	—	—	3
Revco D.S. Inc.	12	1	4	7	—	24
Subtotal	$ 49	$ 11	$ 51	63	$ 94	$ 268
Food Service (Restaurants)						
McDonald's	—	—	—	20	14	34
Sambo's Restaurants	5	—	—	—	—	5
Subtotal	$ 5	—	—	$ 20	$ 14	$ 39
All Retailers (Total)	$ 79	16	$ 51	$ 94	$ 129	$ 369

Source: Moody's Bond Record; "Corporates, Convertibles, Governments, Municipals," April 1981.

*Note: As noted earlier, the outstanding volume of **privately** issued IRB debt is believed to be substantially greater than **publicly** issued IRB debt. Data are not available on privately issued IRB debt.

ECONOMICS OF A HYPOTHETICAL RETAIL SUPERSTORE UNDER IRB FINANCING VERSUS CONVENTIONAL FINANCING[1]

The following pages show a rental projection calculation involving a real estate transaction between the developer and the tenant of a retail superstore. Exhibit A assumes the availability of IRB financing in the rental projection calculation. Total project costs would be estimated, the landlord's annual expenses estimated, including financing costs, and the total rent quoted to the tenant on the basis of the servicing of the landlord's annual expenses. Exhibit B shows how the tenant would incorporate the rental expense into its profit analysis and determine whether or not the bottom line net profit possible from the facility would be adequate to warrant proceeding with the facility. As shown in Exhibits A and B, assuming the availability of IRB financing, the rent for the facility would be $263,469 which would translate to the tenant's ability to produce, on the basis of its anticipated sales, a net profit before tax of 3.0%. At these levels of performance, the project might proceed. If however, the project had to be financed conventionally, you can see in Exhibits C and D that the annual rent would have to be increased to $359,713. That new rent would reduce the net profit potential to 2.0% before tax. This might dictate a decision that the project not proceed.

[1]Source: Adopted from the testimony of Richard A. Zappala before the Subcommittee on Oversight, Committee on Ways and Means, Hearing of Small Issue Industrial Revenue Bonds, April 9, 1981, pp. 8, 10-13.

Exhibit A

RENTAL PROJECTION - IRB FINANCED

1. Project Costs

(a)	Land, site improvements, and building (30,000 sq. ft. at $61.67 sq. ft.)	$ 1,850,000
(b)	Financing	185,000
(c)	Other	50,000
	Total Investment	$ 2,085,000

2. Resulting base property rental
   25 years @ 12% — $ 263,469

Exhibit B

PROFIT AND RETURN ANALYSIS FOR RETAIL STORE WITH IRB FINANCING

	Estimate	Percent to Sales
Total sales	$ 9,360,000	
Total gross profit	2,152,000	23.0
Property rental	263,469	2.8
All other expenses	1,605,920	17.2
Total expenses	1,869,389	20.0
Net profit before tax	$ 282,611	3.0

Exhibit C

RENTAL PROJECTION - CONVENTIONALLY FINANCED

1. Project Costs

(a)	Land, site improvements, and building (30,000 sq. ft. at $61.67 sq. ft.)	$ 1,850,000
(b)	Financing	185,000
(c)	Other	50,000
	Total Investment	$ 2,085,000

2. Resulting base property rental
   25 years @ 17% — $ 359,713

Exhibit D

PROFIT AND RETURN ANALYSIS FOR RETAIL STORE WITH CONVENTIONAL FINANCING

	Estimate	Percent to Sales
Total sales	$ 9,360,000	
Total gross profit	2,152,000	23.0
Property rental	359,713	3.8
All other expenses	1,605,920	17.2
Total expenses	1,965,633	21.0
Net profit before tax	$ 186,367	2.0

FOREIGN EQUITY INVESTMENT

Equity investments by foreign investors presents a second potential source of low cost external financing for a few grocery retailers. Foreign investors seeking a **safe haven** for capital may be prepared to pay premium prices in order to establish a position in a U.S. firm. The premium price represents a reduction in the cost of equity capital raised in this fashion for a U.S. firm. Similarly, foreign retailers seeking a **beachhead** for U.S. operations may also be prepared to pay premium prices to establish this position.

Most European investments in U.S. grocery retailers to date have been made at a level assuring majority control of the firm (Exhibit 18). A few foreign investors have been satisfied with small non-control positions, however. Perhaps the most remarkable foreign investment in a U.S. retailer (non-food) to date was made by Vroom & Dreesmann, a Netherlands firm. In December 1979 Vroom & Dreesmann agreed to purchase a 15.3% equity interest in Cole National. The purchase price was $25 per share at a time when Cole National's stock was trading on the New York Stock Exchange for $13-7/8 per share. Vroom & Dreesmann signed a 15 year "standstill' agreement in which they promised not to purchase additional shares, thereby assuring management continuity and Cole National's independence.

Exhibit 18

EUROPEAN EQUITY INVESTMENT IN U.S. FOOD RETAILERS 1972-1980

U.S. Grocery Retailer	Sales ($ millions)	European Investor	Country	Date of Initial Investment	Total Investment ($ millions)	Percent Owned
A&P	6,684	Tengelmann Group	Germany	1979	115	50
Grand Union	3,138	Cavenham	U.K.	1973	130	100
Colonial Stores	N.A.	Cavenham	U.K.	1978	139	100
J. Weingarten	567	Cavenham	U.K.	1980	27	100
Albertsons	3,039	Theo Albrecht Stiftung	Germany	1980	N.A.	10*
Fisher Foods	1,413	General Shopping S.A.		1975	15**	12
Kohl	400	BAT Industries	U.K.	1972	90	100
Bi-Lo	547	Ahold N.V.	Netherlands	1977	60	100
Scrivner	547	Franz Haniel	Germany	1977	27	100
Alterman Foods	495	Delhaize	Belgium	1980	36	100
Food Town Stores	416	Delhaize	Belgium	1974	27	52
Furr's	450	RHG-Liebbrand	Germany	1979	24	100
Red Food Stores	265	Promodes	France	1980	36	100
Lil' Champ Food Stores	31	Docks de France	France	1978	3	35

* Subject to agreement until 1983 to vote shares in same proportion as other shareholders.
**Via convertible subordinated debenture.

Sources: "Europe's U.S. Shopping Spree," Fortune, December 1980; and company proxy statements.

ORIGINAL ISSUE DISCOUNT BONDS

Supermarket retailers have traditionally relied heavily on mortgage debt to finance their asset expansion (Exhibit 15). Some of the larger chains have, however, sold unsecured debt either in the form of direct placements with insurance companies, or as public issues (Exhibit 19). Retailers for whom public or direct placement debt is a possibility might consider the issuance of original issue discount bonds. Original issue discount bonds are bonds with a below-market interest coupon, which must be sold at a discount from face value in order to produce the yield to maturity demanded by investors. One prominent retailer, J.C. Penney, recently issued an 8 year note with **no** interest payable until maturity. The note was designed to produce a 14.25% yield to maturity, so that each $1,000 face value bond was sold for only $332.47. A firm issuing original issue discount bonds derives significant savings from 2 sources, (1) the amortization of bond discount[1] (a non-cash expense) and (2) willingness of tax exempt investors to purchase original issue discount debt and a lower yield to maturity[2] than equivalent newly issued bonds not sold at a discount.

The tax benefits of the J. C. Penney offering amounted to a 60 to 65 basis point equivalent interest savings, and the bond was probably issued at a yield to maturity of 38 to 50 basis points below the yield required on a non-discount bond. The total savings to J. C. Penney was thus on the order or 1.1 percentage points in effective interest cost. While this amount does not compare favorably with the benefits flowing from an Industrial Revenue Bond financing as outlined previously, original issue discount bonds do represent a potentially important source of subsidized or below-market financing for large and growing retailers. Original issue discount debt probably requires an "A" rating, and can be issued either publicly or privately.

[1]In the J. C. Penney example noted above, the company could deduct for tax purposes ($1,000 - $332.47)/8 = $83.44 per year for each $1,000 face value of bond issued. Since this $83.44 would not actually be paid to the owner of the bond until maturity, the tax savings from the early deduction represents a tax-free loan from the government to the bond issuer.

[2]The lower yield to maturity required by investors in original issued discount bonds stems from (1) the fact that these bonds provide a great deal of call protection to the buyer should interest rates decline over the life of the bond, and (2) a reduction in the risk that coupon payments received prior to maturity will have to be reinvested at rates lower than the yield to maturity implicit in the original issue discount bond.

Exhibit 19

PUBLICLY ISSUED DEBT OF LARGE GROCERY RETAILERS
1980

	Coupon %	Maturity	Rating	Amount Outstanding ($ millions)
Safeway Stores	7.4	1997	A	48.2
Kroger	12.375	2004	A	50.0
	9.875	1983	A	39.9
	9.0	1995	A	30.0
	8.7	1998	A	47.8
	8.5	2001	A	43.6
Lucky Stores	11.125	1987	A	50.0
	8.5	1996	A	17.0
	11.75	2005	A	49.6
	5.0*	1993	Baa	.2
	6.75	2000	Baa	5.4
American Stores	12.0	1990	Baa	75.0
	9.875	1990	Baa	14.5
	9.375	2001	Baa	50.0
Fisher Foods	6.5	1994	B	13.4

*Convertible subordinated debentures

Sources: Moody's Bond Record, "Corporates, Convertibles, Governments, Municipals," April 1981; and Corporate Annual Reports.