

JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS  
V. INDUSTRY SEMINARS AND SPEECHES - SHORT TERM  
F. Miscellaneous Professional Associations  
4. "Real Estate as Part of a Diversified  
Portfolio", presented to the Chicago Mortgage  
Bankers Association, April 21, 1983

Chicago Mortgage Bankers Association  
Thursday, April 21, 1983

"Real Estate as Part of a Diversified Portfolio"

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University of Wisconsin School of Business  
Director - First Asset Realty Advisors

- I. Why Should Real Estate be Part of the Investment Portfolio?
  - A. ERISA changed definition of prudent man rule to prudent financial professional rule - a change which will affect general common law perceptions.
  - B. Expansion of fiduciary concept from safety of corpus to preservation of purchasing power of the corpus.
  - C. Recognition of risk management as control of variance between expectations and realizations; allocation of variance among non-systematic risks, systematic risks, and money risks and liquidity risks.
    1. Diversification to control non-systematic risks
    2. Hedging to control systematic risk
    3. Tiering of assets to control liquidity risks
    4. Arbitraging to control market inefficiency risk
  - D. Investment goals in an uncertain economy are enterprises that are self liquidating, self indexing for changes in purchasing power of the dollar or inflation load on the interest cost of money, and structured to outperform systematic growth patterns due to monopolistic pricing or institutional rigidity on the down side.
  - E. Investment quality real estate has all of these potentials:
    1. It is a fungible commodity in terms of space/time use
    2. Properly located, constructed and managed it has a predictable income stream locked in by contract and monopolistic pricing tendency
    3. Conservatively financed it is solvent on the down side, a speculation in the money market with fixed interest rates or shift of interest costs to tenants.
    4. A real estate investment can benefit from rising replacement costs, falling interest rates, rising interest rates due to inflationary price increases, or real growth in net income.
    5. Real estate offers diversification in the form of regional geography, multiple industries, retail sales indexes, and co-variance to stock and bond portfolio fluctuation.
- II. How Does Real Estate Compare With Stocks, Bonds and Other Traditional Investments?
  - A. Comparison requires agreement on time span, measurement methods of return, risk loading adjustment, etc.
  - B. Attached study suggests real estate has outperformed stocks and bonds in terms of real income for at least the last ten years.

- C. Confidential insurance company studies indicate real estate has been their best investment performer.
- D. Pension fund managers refer to their investment in commingled funds as their bond proxy account - an effective but crude indexed income stream and capital asset.
- E. Charts presented by PRISA overstate stability and growth of real estate but nevertheless the general order of magnitude is correct.
- F. Major problem in measurement of the return is the accounting/appraisal interface. National Council of Real Estate Fiduciaries is just beginning research to standardize and monitor appraisal practice in determining present value of an income stream defined with some generally accepted accounting principles. FARA's letter of engagement for methods upon the appraiser.

III. What are Some of the Present Trends in the Real Estate Market?

- A. Real estate men laughed at P/E rates in the stock market in the '60's; stock market men laughed at P/E rates in real estate in the late '70's - now things are beginning to equalize.
- B. In the last twelve months cap rates in real estate have risen from .085 to .10, maybe .11; loan to value ratios have fallen back towards 67%, and cash on cash yields moved up from 7-9% minimum. The basic standard is becoming a cash on cash yield which is at least 60% of targeted IRR and the internal rate should provide a real return of 4-6% above inflation.
- C. Investors are learning you make your money when you buy not when you sell; you make your money by increasing net income through management and property improvement.
- D. Investors are learning that marketing loads in syndications and other group investments are skimming the cream and flattening the yield. Only a trust department fund has no front end loads, no participation, no flip-flop clauses, no buy-out clauses which allow the buyer to arbitrage, and no profit centers in providing a variety of services with a conflict of interest - only a flat 1¼% asset management charge.
- E. Development of portfolio management theory for real estate
  1. Recognition of the inefficient market and the value added by a knowledgeable search.
  2. Recognition that a portfolio of good properties sells for more as a package than the sum of the individual property does.
  3. Recognition that computerized accounting on a standardized line basis gives the asset manager unique insight on each enterprise which is impossible with corporate stock and bonds.
  4. The real estate enterprise is directly responsible to policy contributions and operating suggestions of the asset manager. Where else is there only one layer of manager between the asset manager and the manager of a \$20,000,000 enterprise called a hotel or a shopping center?

5. The development of investment performance indexes of asset managers - the FRC index.

#### IV. How Does CREF Meet These Trends and Needs?

- A. In an inefficient market you need people who have private access to information and the integrity to use it for the beneficiaries of their fiduciary trust.
- B. Not only must they have the inclination but have the demonstrated ability to use it. Since real estate is still an art form and not a science, behavioral economics rather than financial mathematics, it requires certain element of entrepreneurial talent for measuring opportunity and risk.
- C. Our CREF is one of the first in the country and generates excitement wherever I go because it represents an alternative to the promotional loads that are inherent in:
  1. Oil well drilling and timber resources
  2. Syndications
  3. REIT's with outside management corporation
  4. Real estate stocks hyped investment bankers who have caused every real estate disaster since 1948
  5. REIT's have structural flaws which prevent theory of contra-dilution from working
  6. Corporate bookkeeping submerges true asset values and smooths income streams
  7. Individual properties don't provide sufficient diversification and create management liabilities for trustee

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GROUP PENSION DEPARTMENT

COMPARATIVE INVESTMENT PERFORMANCE OF  
THE PRUDENTIAL PROPERTY INVESTMENT SEPARATE ACCOUNT (PRISA\*)

## PART I

*Percent Change in PRISA Unit Value and Value of the Indices Shown  
for the 12-month period ending with the month indicated*

Month	<i>Property</i>	<i>Common Stocks</i>	<i>Long-term Bonds</i>	<i>Short-term Money Market</i>	<i>Consumer Prices</i>	<i>Average Hourly Wages</i>
	PRISA (Note 1)	S & P 500 (Note 2)	Salomon Bros. Index (Note 3)	3-Month Treasury Bills (Note 4)	Index (Note 5)	Index (Note 6)
9/71	5.2%	21.3%	14.5%	4.6%	4.0%	6.7%
12/71	5.3	14.3	11.0	4.3	3.4	7.1
3/72	5.4	10.5	7.7	4.2	3.5	6.8
6/72	5.9	10.7	12.4	4.1	2.9	6.1
9/72	6.4	15.8	9.3	3.9	3.3	6.1
12/72	5.9	19.0	7.3	4.1	3.4	6.3
3/73	6.3	6.7	6.4	4.6	4.7	5.8
6/73	7.0	0.1	4.7	5.3	5.9	6.4
9/73	8.9	1.0	5.5	6.4	7.4	6.8
12/73	9.2	-14.8	1.1	7.0	8.8	6.4
3/74	9.6	-12.9	- 2.5	7.5	10.2	6.8
6/74	9.9	-15.0	- 7.2	7.9	11.0	8.3
9/74	8.7	-39.0	-12.0	7.9	12.0	8.8
12/74	8.8	-26.6	- 3.0	7.8	12.2	9.2
3/75	8.6	- 7.1	5.3	7.4	10.3	9.7
6/75	9.0	16.0	15.0	6.7	9.3	8.2
9/75	8.6	38.2	14.7	6.2	7.8	7.5
12/75	8.3	37.3	14.6	5.8	7.0	7.2
3/76	8.5	28.3	14.1	5.6	6.1	6.7
6/76	7.9	13.9	10.4	5.5	5.9	6.7
9/76	8.1	30.2	20.5	5.3	5.5	7.4
12/76	8.5	23.6	18.6	5.0	4.8	7.5
3/77	9.0	- 0.4	11.2	4.9	6.4	7.7
6/77	9.8	0.4	15.2	4.8	6.9	7.8
9/77	10.0	- 4.2	10.3	4.9	6.6	7.3
12/77	10.7	- 7.4	1.7	5.2	6.8	7.4
3/78	11.4	- 4.8	4.1	5.7	6.5	7.9
6/78	12.7	0.0	- 0.8	6.1	7.4	8.1
9/78	13.9	11.8	1.2	6.6	8.3	8.4
12/78	19.5	6.5	- 0.1	7.2	9.0	8.5
3/79	21.4	19.8	1.5	7.9	10.2	8.2
6/79	26.0	13.6	7.2	8.7	10.9	7.8
9/79	27.4	12.3	1.9	9.2	12.1	8.2
12/79	23.9	18.3	- 4.2	10.1	13.3	8.4
3/80	28.0	5.8	-18.4	11.0	14.7	8.9
6/80	24.0	16.6	- 2.4	11.1	14.3	9.5
9/80	23.3	20.6	-11.3	11.0	12.7	8.6
12/80	22.0	31.8	- 2.6	11.4	12.4	9.2
3/81	16.8	39.5	11.4	11.7	10.6	9.5
6/81	16.3	20.2	-12.9	13.0	9.6	8.6
9/81	16.2	-2.9	-11.2	14.5	11.2	9.7
12/81	15.8	-5.2	-1.0	14.0	8.9	7.9

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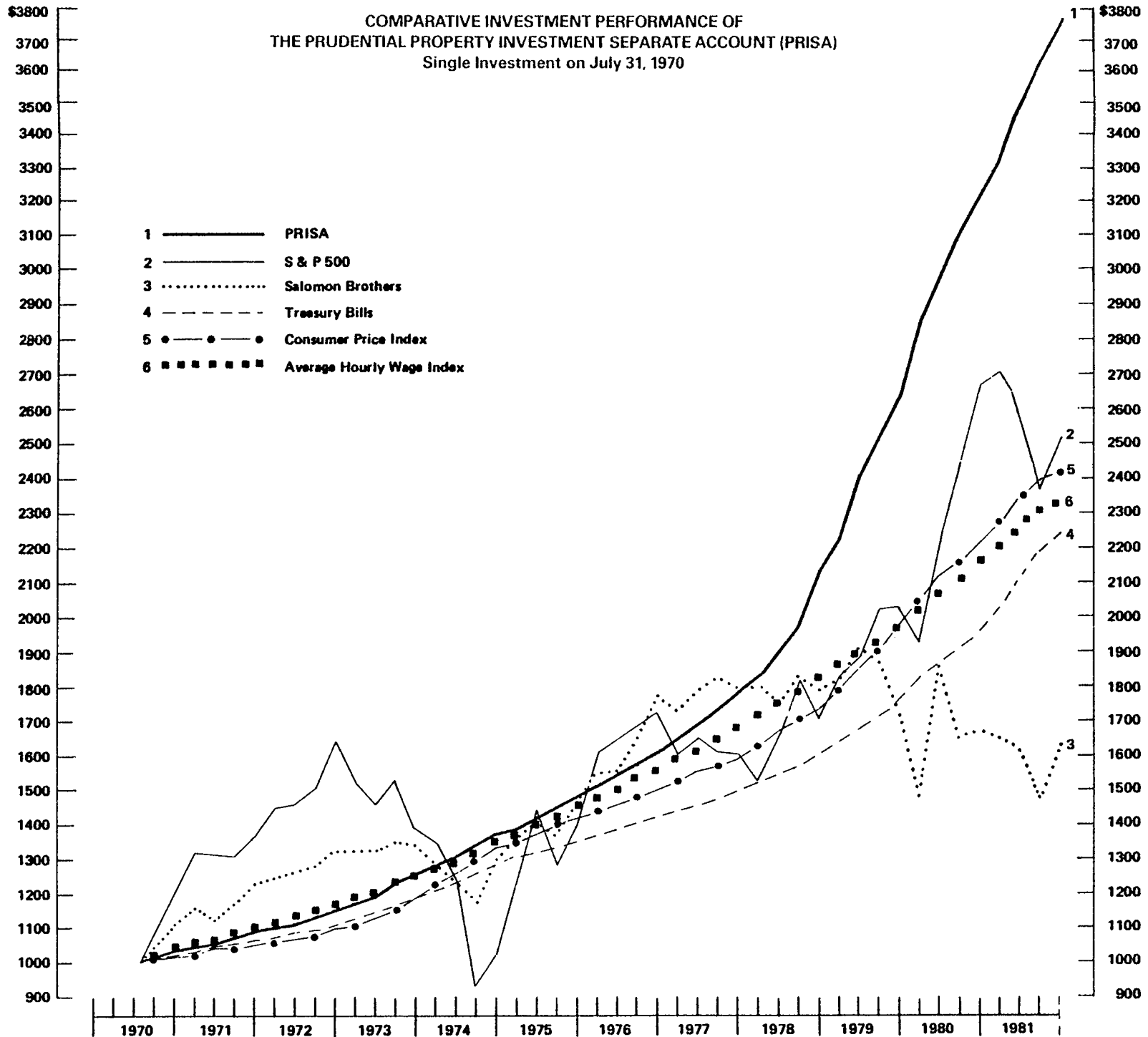
COMPARATIVE INVESTMENT PERFORMANCE OF  
THE PRUDENTIAL PROPERTY INVESTMENT SEPARATE ACCOUNT (PRISA)

PART II

*Dollar Value* as of the end of the month shown of a  
Single Investment of \$1000 made at the end of July, 1970

Month	<u>Property</u>	<u>Common</u>	<u>Long-term</u>	<u>Short-term</u>	<u>Consumer</u>	<u>Average</u>
	PRISA (Note 1)	Stocks S & P 500 (Note 2)	Bonds Salomon Bros. Index (Note 3)	Money Market 3-Month Treasury Bills (Note 4)	Prices Index (Note 5)	Hourly Wages Index (Note 6)
7/70	\$1000	\$1000	\$1000	\$1000	\$1000	\$1000
12/70	1035	1199	1113	1024	1021	1027
3/71	1044	1316	1159	1033	1027	1048
6/71	1054	1318	1125	1044	1041	1066
9/71	1067	1310	1172	1057	1047	1081
12/71	1089	1371	1236	1068	1055	1100
3/72	1101	1454	1248	1077	1063	1119
6/72	1116	1460	1264	1087	1071	1131
9/72	1135	1512	1281	1098	1081	1147
12/72	1153	1646	1326	1112	1091	1169
3/73	1170	1533	1328	1127	1112	1184
6/73	1194	1462	1323	1145	1135	1203
9/73	1236	1529	1351	1168	1161	1225
12/73	1259	1390	1341	1189	1187	1245
3/74	1282	1352	1294	1211	1226	1264
6/74	1312	1249	1227	1236	1259	1303
9/74	1343	933	1190	1260	1300	1332
12/74	1371	1021	1300	1283	1332	1360
3/75	1392	1256	1362	1301	1352	1387
6/75	1430	1449	1411	1318	1376	1411
9/75	1459	1290	1365	1339	1402	1432
12/75	1484	1401	1490	1357	1425	1457
3/76	1510	1612	1553	1374	1435	1480
6/76	1543	1650	1558	1391	1458	1506
9/76	1578	1681	1645	1409	1479	1539
12/76	1610	1733	1768	1425	1494	1566
3/77	1646	1605	1727	1441	1527	1594
6/77	1694	1656	1794	1458	1558	1623
9/77	1736	1610	1813	1478	1577	1650
12/77	1782	1606	1798	1500	1595	1683
3/78	1833	1528	1799	1523	1626	1720
6/78	1908	1657	1779	1547	1674	1755
9/78	1978	1801	1834	1575	1708	1789
12/78	2130	1710	1797	1608	1739	1826
3/79	2226	1832	1826	1644	1792	1861
6/79	2405	1882	1908	1681	1856	1893
9/79	2520	2023	1869	1721	1914	1936
12/79	2640	2024	1722	1769	1970	1979
3/80	2849	1937	1489	1826	2055	2027
6/80	2983	2195	1862	1868	2122	2072
9/80	3108	2440	1657	1909	2157	2103
12/80	3220	2668	1677	1971	2214	2162
3/81	3328	2703	1659	2039	2272	2220
6/81	3469	2639	1621	2111	2325	2253
9/81	3610	2370	1470	2186	2398	2316
12/81	3727	2530	1660	2247	2412	2335

**COMPARATIVE INVESTMENT PERFORMANCE OF  
THE PRUDENTIAL PROPERTY INVESTMENT SEPARATE ACCOUNT (PRISA)  
Single Investment on July 31, 1970**



**NOTE:** The above chart shows the relative values as of the end of the quarter shown, of a single investment on July 31, 1970 in PRISA, Standard & Poor's 500 Stocks, Salomon Bros. Bonds, Treasury Bills, the

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COMPARATIVE INVESTMENT PERFORMANCE OF  
THE PRUDENTIAL PROPERTY INVESTMENT SEPARATE ACCOUNT (PRISA)

PART III

Effective Annual Rate of Return as of the end of the month shown of a  
Single Investment of \$1000 made at the end of July, 1970

Month	<u>Property</u>	<u>Common</u>	<u>Long-term Bonds</u>	<u>Short-term</u>	<u>Consumer</u>	<u>Average</u>
	PRISA (Note 1)	S & P 500 (Note 2)	Salomon Bros. Index (Note 3)	Money Market 3-Month Treasury Bills (Note 4)	Prices Index (Note 5)	Hourly Wages Index (Note 6)
12/70	8.6%	54.6%	29.3%	5.9%	5.1%	6.6%
3/71	6.7	51.0	24.8	5.0	4.1	7.3
6/71	5.9	35.2	13.7	4.8	4.5	7.2
9/71	5.7	26.0	14.6	4.9	4.0	6.9
12/71	6.2	24.9	16.1	4.8	3.9	6.9
3/72	5.9	25.2	14.2	4.6	3.7	7.0
6/72	5.9	21.8	13.0	4.4	3.6	6.6
9/72	6.0	21.0	12.1	4.4	3.7	6.5
12/72	6.1	22.9	12.4	4.5	3.7	6.7
3/73	6.1	17.4	11.2	4.6	4.1	6.5
6/73	6.3	13.9	10.1	4.8	3.6	6.3
9/73	6.9	14.3	10.0	5.0	3.7	6.6
12/73	7.0	10.1	9.0	5.2	3.7	6.6
3/74	7.0	8.6	7.3	5.4	5.7	6.6
6/74	7.2	5.8	5.4	5.6	6.1	7.0
9/74	7.3	-1.7	4.3	5.7	6.5	7.1
12/74	7.4	0.5	6.1	5.8	6.7	7.2
3/75	7.3	5.0	6.8	5.8	6.7	7.3
6/75	7.5	7.8	7.2	5.8	6.7	7.2
9/75	7.6	5.1	6.2	5.8	6.8	7.2
12/75	7.6	6.4	7.6	5.8	6.8	7.2
3/76	7.5	8.8	8.1	5.8	6.6	7.2
6/76	7.6	8.8	7.8	5.7	6.6	7.2
9/76	7.7	8.8	8.4	5.7	6.6	7.2
12/76	7.7	8.9	9.3	5.7	6.5	7.2
3/77	7.8	7.4	8.5	5.6	6.6	7.2
6/77	7.9	7.6	8.8	5.6	6.6	7.2
9/77	8.0	6.9	8.7	5.6	6.6	7.2
12/77	8.1	6.6	8.2	5.6	6.5	7.3
3/78	8.2	5.7	8.0	5.6	6.5	7.3
6/78	8.5	6.6	6.7	5.7	6.7	7.4
9/78	8.7	7.5	7.7	5.7	6.8	7.4
12/78	9.4	6.6	7.2	5.8	6.8	7.4
3/79	9.7	7.2	7.2	5.9	7.0	7.4
6/79	10.3	7.3	7.5	6.0	7.2	7.4
9/79	10.6	8.0	7.1	6.1	7.3	7.5
12/79	10.9	7.8	5.9	6.2	7.5	7.5
3/80	11.4	7.1	4.2	6.4	7.7	7.6
6/80	11.6	8.2	6.5	6.5	7.9	7.6
9/80	11.8	9.2	5.1	6.6	7.9	7.6
12/80	11.9	9.9	5.1	6.7	7.9	7.7
3/81	11.9	9.8	4.9	6.9	8.0	7.8
6/81	12.1	9.3	4.5	7.1	8.0	7.7
9/81	12.2	8.0	3.5	7.2	8.1	7.8
12/81	12.3	8.5	4.5	7.3	8.0	7.7*

\*Estimated



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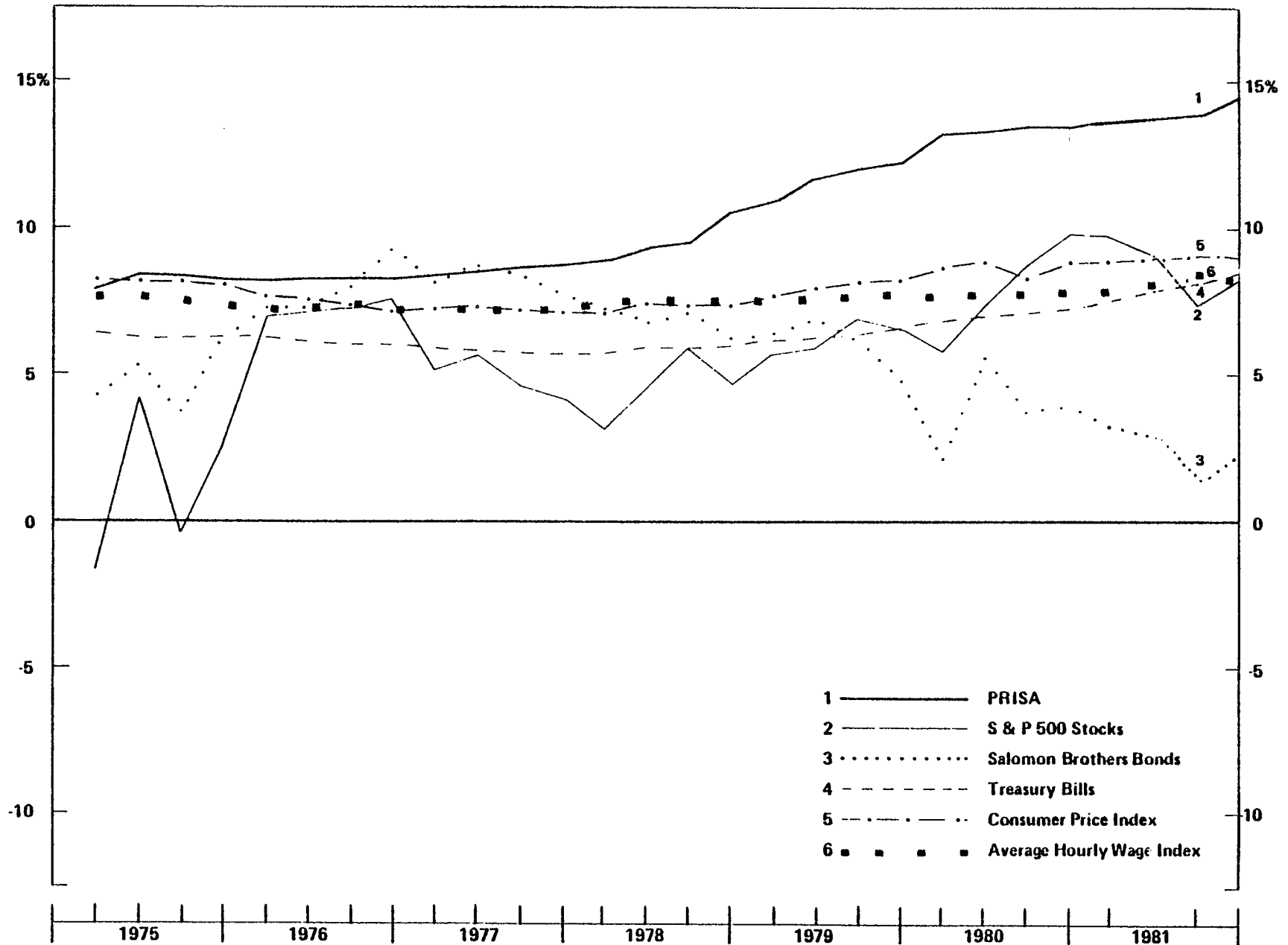
COMPARATIVE INVESTMENT PERFORMANCE OF  
THE PRUDENTIAL PROPERTY INVESTMENT SEPARATE ACCOUNT (PRISA)

PART IV

Equivalent *Annual Rate* of Total Investment Return to the end of the month shown of  
Equal Quarterly Investments beginning July 31, 1970  
Excluding investments in any quarter in which contributions were not accepted to PRISA

Month	<u>Property</u>	<u>Common</u>	<u>Long-term Bonds</u>	<u>Short-term</u>	<u>Consumer</u>	<u>Average</u>
	PRISA (Note 1)	S & P 500 (Note 2)	Salomon Bros. Index (Note 3)	3-Month Treasury Bills (Note 4)	Index (Note 5)	Hourly Wages (Note 6)
6/71	4.9%	26.0%	6.5%	4.5%	4.6%	7.4%
9/71	5.0	14.9	10.6	4.7	3.7	6.7
12/71	6.0	16.4	14.4	4.5	3.5	6.9
3/72	5.6	19.0	11.5	4.2	3.3	6.9
6/72	5.6	14.7	10.0	4.1	3.3	6.4
9/72	5.9	14.7	9.0	4.1	3.4	6.2
12/72	6.0	19.1	10.1	4.3	3.4	6.2
3/73	6.0	10.2	8.4	4.5	4.3	6.3
6/73	6.4	5.3	6.8	4.8	4.9	6.4
9/73	7.6	7.3	7.1	5.4	5.6	6.5
12/73	7.6	0.7	5.6	5.6	6.1	6.5
3/74	7.6	- 0.8	2.9	5.9	7.1	6.5
6/74	7.8	- 4.6	-0.1	6.2	7.5	7.3
9/74	8.1	-17.2	-1.5	6.4	8.2	7.5
12/74	8.1	-11.4	2.6	6.5	8.4	7.6
3/75	7.9	- 1.6	4.3	6.4	8.2	7.6
6/75	8.3	4.3	5.3	6.3	8.1	7.6
9/75	8.3	- 0.4	3.6	6.3	8.1	7.5
12/75	8.2	2.6	6.4	6.3	8.0	7.4
3/76	8.1	6.9	7.2	6.2	7.6	7.4
6/76	8.2	7.1	6.8	6.1	7.5	7.3
9/76	8.2	7.2	7.9	6.0	7.4	7.5
12/76	8.2	7.5	9.3	6.0	7.2	7.4
3/77	8.3	5.1	8.1	5.9	7.3	7.4
6/77	8.5	5.6	8.6	5.8	7.4	7.4
9/77	8.6	4.6	8.4	5.8	7.2	7.4
12/77	8.7	4.3	7.7	5.8	7.1	7.4
3/78	8.9	3.1	7.3	5.8	7.1	7.5
6/78	9.3	4.5	6.8	5.9	7.4	7.6
9/78	9.5	5.9	7.0	5.9	7.4	7.6
12/78	10.5	4.7	6.3	6.0	7.4	7.6
3/79	10.8	5.7	6.4	6.2	7.6	7.6
6/79	11.7	5.9	6.8	6.3	7.9	7.6
9/79	12.0	6.9	6.2	6.4	8.1	7.7
12/79	12.3	6.6	4.7	6.6	8.3	7.7
3/80	13.1	5.7	2.2	6.9	8.6	7.8
6/80	13.3	7.4	5.6	7.0	8.8	7.9
9/80	13.5	8.8	3.6	7.1	8.4	7.8
12/80	13.5	9.8	3.9	7.3	8.8	7.9
3/81	13.6	9.7	3.3	7.5	8.8	7.9
6/81	13.7	9.0	2.9	7.7	8.9	8.0
9/81	13.8	7.1	1.3	8.0	9.0	8.1
12/81	14.5	8.2	2.4	8.4	8.9	8.0

**COMPARATIVE INVESTMENT PERFORMANCE OF  
THE PRUDENTIAL PROPERTY INVESTMENT SEPARATE ACCOUNT (PRISA)  
Equal Quarterly Investments**



**NOTE:** The above chart shows the effective annual yields to the end of the month shown of equal quarterly investments beginning July 31, 1970 in PRISA, Standard & Poor's 500 Stocks, Salomon Bros. Bonds, Treasury Bills, the Consumer Price Index, and the Average Hourly Wage Index, excluding quarters in which contributions were not accepted to PRISA.

NOTES:

1. PRISA is a separate account of Prudential, started on July 31, 1970. Its objective is to invest primarily in equity ownership of real property. Emphasis is given to properties which provide an attractive rate of current income as well as prospects of long-term growth.

The PRISA unit values reflect investment income (after deduction of expenses), realized and unrealized gain or loss on investments (current value of properties is determined in accordance with an appraisal procedure), and an investment management fee. The management fee is currently at the effective annual rate of  $1\frac{1}{4}\%$  of net assets, less 1% of securities and less  $1\frac{1}{8}\%$  of short-term investments and cash included in net assets.

2. The results for the S&P 500 have been computed on a basis which reflects changes in Standard & Poor's 500 Composite Price Index including daily reinvestment of dividends, but have *not* been reduced for expenses.
3. The results for the Salomon Bros. Index have been computed on a basis which reflects changes in Salomon Brothers High Grade Corporate Bond Index including monthly reinvestment of interest payments, but have *not* been reduced for expenses.
4. The results for the 3-Month Treasury Bills are based on the monthly average of rates for new issues, as published by Standard & Poor's, but have *not* been reduced for expenses.
5. The results for Consumer Prices have been computed on a basis which assumes investment results at the rate of the change in the Consumer Price Index for all Urban Consumers, National Average, as published by the Bureau of Labor Statistics, and have *not* been reduced for expenses.
6. The results for Average Hourly Wages have been computed on a basis which assumes investment results at the rate of the change in the Average Hourly Wage Index (AHWI) for the Non-agricultural, Non-supervisory, Private Workers, Seasonally Adjusted, as published by the Bureau of Labor Statistics, and have *not* been reduced for expenses.

*The results shown should not be considered as a representation of future performance.*