THE BRANDES INSTITUTE

Examining the Income Component of Total Returns

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I. Executive Summary

This paper examines the role of income as a component of total returns in the long-term performance of financial assets. First, we examine the role of the income component on returns across income-producing asset classes in the United States. This perspective includes research from an extensive U.S. real estate study conducted by the Brandes Institute in collaboration with Professor Elroy Dimson of the London Business School. We then examine U.K.-based asset series, as well as gold (representing a non-income producing asset).

Based on our research, we conclude:

- Income was a significant component of returns for financial assets for periods as short as five years.
- For periods of 10 years or more, the income component was dominant over capital appreciation – it represented greater than half of the returns generated in all income-producing asset classes.
- Original work in a collaborative study between Professor Elroy Dimson and the Brandes Institute shows that, compared to equities, U.S. real estate exhibited relatively high, and stable, income returns, but lower capital appreciation in the long term.
- U.K. financial assets demonstrated substantially the same characteristics as their U.S. counterparts with regard to the importance of income in returns.
- Gold, as a non-income producing asset, fell short of equities and real estate in long-term performance, primarily because of its lack of income.

II. Introduction and Background

The role of income is sometimes relegated to the role of an afterthought regarding investment returns, or touted as ballast for returns in tumultuous markets. Significant capital appreciation for equities and fixed income over the last decade seems to dwarf income's contribution.

A 2003 *BusinessWeek* article noted, "As long as investors, often a gambling bunch, are happier chasing faster stock appreciation than collecting reliable quarterly checks, dividends won't be much to get excited about."[1] The dividend yield on the S&P 500 Index has declined from 2.65% in 1993 to 1.74% in 2003[2], perhaps due in part to the diminished focus on income.

One reason for overlooking income may reside in the perception of what time frame represents "the long term." Often, references to "long-term investment performance" tend to cite three- or five-year asset class returns. We question the validity of a true "long-term" horizon for two reasons. First, individuals and institutions may be investing for

[1] Henry, D. "Dividends Just Aren't Dazzling Enough," *BusinessWeek*, September 15, 2003.
[2] Figures reflect year-end yields. Source: FactSet.

retirement purposes, or with liability needs, that have a horizon of 20 years or more. Second, the characteristics of investment returns may change significantly if "long term" is redefined from 5 years to 20 years or more. This is one focus of this study.

III. Methodology

For reference, all return series measure accumulated returns assuming an initial investment of $100.[3] The primary method of analysis is the use of rolling windows. This approach measures results over a long period using shorter rolling periods[4] (e.g., 5 years, 20 years) from the starting date of the series, then advances one year and repeats the process until the whole data set is included. These results are then averaged across the whole period. This analytical approach allows us to gain insight into the relative importance of the capital appreciation and income components within the total return series. The accompanying charts include data provided by Ibbotson Associates, Global Financial Data, Inc., or the Brandes Institute, with procedural assistance from Professor Dimson.

A collaborative research project between the Brandes Institute and Professor Dimson provided the U.S. real estate returns data. This study aims to break new ground by providing data back to 1926 on a national (as opposed to regional) basis, and by breaking out the components of total return. The real estate return series include residential, commercial, and farm real estate returns. For more information about sources for the series, please see the appendix.

IV. U.S. Asset Classes

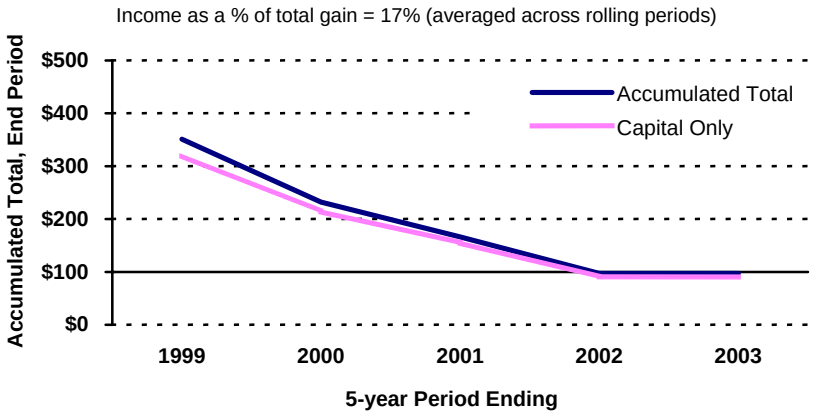
(i) U.S. Equities

The recent performance of U.S. equities, as measured by the S&P 500 Index, seems to suggest income's contribution to returns has been limited. If we start by examining the period from 1995 to 2003, which includes five sets of five-year performance (1995 to 1999, 1996 to 2000, and so on), it appears that capital appreciation has dominated total returns. Within the average rolling five-year performance for equities, we find that reinvested income comprised only 17% of total returns. It appears an investor could have spent the dividend checks with only modest impact. As dividends have dwindled recently, this perception has gained wide acceptance.

[3] We used two return series: a total return series that included the reinvestment of dividends and capital gains distributions and one that was capital appreciation only. We calculated the "income component of returns" by subtracting the capital appreciation only series from the total return series. Neither series reflects considerations for taxes, fees, or other expenses.

[4] Returns for rolling windows are annualized returns for a series of overlapping, smaller time periods within a single, larger time period. For example, the 20-year time period from 12/31/82 through 12/31/02 consists of 16 five-year segments. The first segment is the five-year period 12/31/82-12/31/87, the next segment is the five-year period 12/31/83-12/31/88, and so on.

U.S. Equity
Rolling 5 Years: 1995-2003



Average across all rolling 5-year periods	
Accumulated Total	$189
Initial Investment	$100
Income	$15
Capital Change	$74

Assumes initial investment of $100

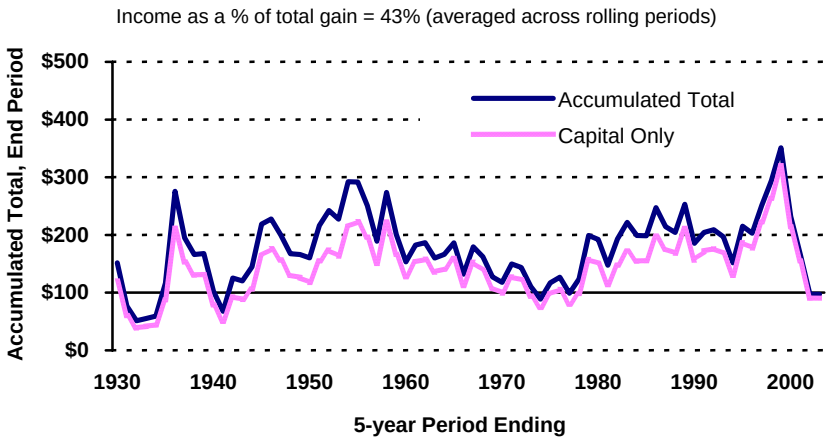
Source: Brandes Institute, based on data from Ibbotson Associates

In addition to addressing income, our research examines whether five years allows for an accurate assessment of the relative importance of the components of long-term performance and the extent of income's contribution over extended periods. To analyze this issue, we expanded our scope in two ways. First, we considered a more comprehensive set of five-year rolling returns, going back to 1926. Second, we extended the rolling period lengths from five years to 10 and 20 years to provide a full perspective on long-term performance and income's contribution to total returns.

We subsequently applied this analysis to other asset classes to examine whether the income component has equal relevance in their long-term returns.

When we extended our perspective on rolling five-year returns for U.S. equities back to 1926, returns from the last decade appear to be an anomaly. While the income component in 1995-2003 accounted for only 17% of (average rolling 5-year) returns, over the full period (1926-2003), income's contribution rose to 43%.

U.S. Equity
Rolling 5 Years: 1926-2003



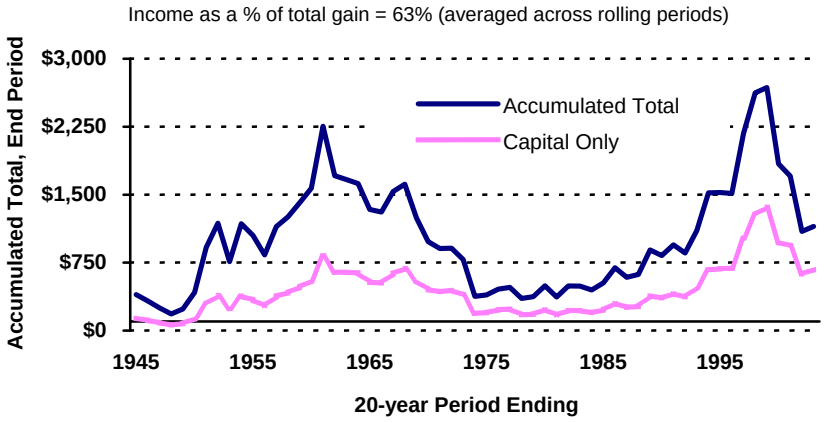
Average across all rolling 5-year periods	
Accumulated Total	$176
Initial Investment	$100
Income	$33
Capital Change	$43

Assumes initial investment of $100

Source: Brandes Institute, based on data from Ibbotson Associates

The compounding effect of reinvesting income becomes much more pronounced when looking at 20-year rolling returns. We believe a 20-year timeframe has relevance both for institutional liabilities and for individuals investing for retirement and post-retirement.

U.S. Equity
Rolling 20 Years: 1926-2003



Average across all rolling 20-year periods	
Accumulated Total	$1,027
Initial Investment	$100
Income	$587
Capital Change	$340

Assumes initial investment of $100

Source: Brandes Institute, based on data from Ibbotson Associates

In this context, income received and reinvested after the first year has 19 years to compound; income from the second year enjoys 18 years, and the pattern continues. Recall that the average income contribution for equities was 17% of total return for the rolling five-year periods since 1995. Extending the period of measurement back to 1926 raised that to 43%. Now, increasing the rolling window to 20 years takes the income component up to 63%. Relying on a 5-year perspective for market returns, especially the most recent 5-year periods, may significantly understate the importance of income in driving portfolio returns.

(ii) U.S. Real Estate

Real estate is also an asset class for which many investors believe performance is primarily driven by capital gain. However, our research into long-term returns on U.S. real estate tells a different story.

The Brandes Institute initiated research into the income component of long-term returns in 2003. Through our dialogue with Professor Dimson, we learned the next phase of his studies on historical performance was to be a review of real estate returns in major markets. While the Institute pursued the study of the income component of long-term returns across certain asset classes, a simultaneous collaborative study was conducted with Professor Dimson, investigating long-term real estate returns in the United States.

Professor Dimson enlisted Rajesh Goyal and Seth Reid, two MBA candidates at the London Business School, to research the historical capital appreciation and income components of returns for U.S. real estate. Over the course of several months, the reseachers extensively examined existing sources of real estate data, reviewed transaction records, consulted with authors on real estate return studies, and evaluated the reliability of source information. Prudential Financial and Brandes Investment Partners® provided financial support for the project.

The research yielded an extensive data compilation covering the U.S. real estate market from 1900 through 2003. Because of the scope of this project and the scarcity of historical real estate data, this exercise inevitably includes approximations, estimations, and subjective judgment on how best to integrate the available data. At the same time, we believe the return series between 1926-2003 is a reasonable assessment of real estate investment over that period. We note that data prior to 1926 is less reliable, and while a return series can be constructed for 1900-1925, we do not have the same level of confidence that we do for the post-1925 series.

The real estate return series represents the result of an extensive research process, which included:

- a literature review of existing research
- identification of existing data series, with rationale for inclusion/exclusion
- compiling the return series, based on the duration of indices and availability of data
- a description of factors affecting real estate during various macroeconomic environments

Real Estate Returns in the United States, 1926-2003

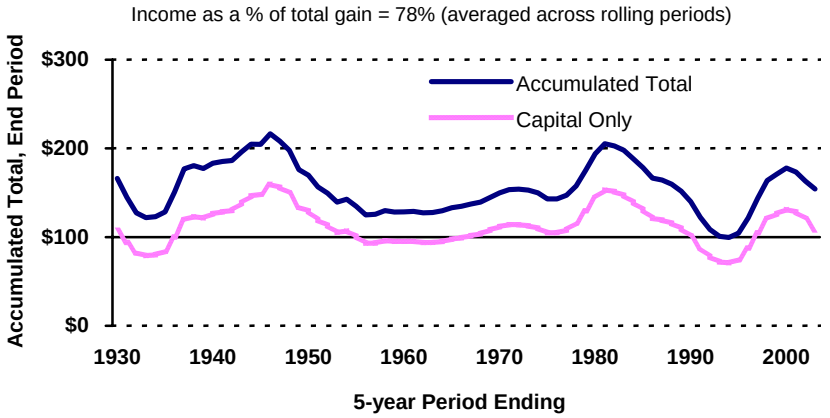
Period and characteristic	Total Return	Annual Average Income	Capital Return
1926-1933 Depression	7.0%	9.2%	-2.0%
1934-1951 Recovery/War	13.0%	6.8%	5.8%
1952-1975 Stable expansion	6.3%	6.2%	0.1%
1976-1985 Inflation	13.2%	6.2%	6.6%
1986-1995 Real estate recession	3.9%	6.8%	-2.8%
1996-2003 Growth	10.4%	6.9%	3.3%

Source: The Brandes Institute, based on a collaborative study with Professor Elroy Dimson of the London Business School.

We observed from the data that real estate capital returns appeared to experience periods of distinct patterns. Accordingly, we aggregated returns into six periods. The beginning and ending dates of each period are reliant solely on our judgment.

Despite the swings in capital returns, income returns remained stable over extended periods. As an example, the current levels of real estate income are similar to those of 50 years ago. The continuation of this stability and the magnitude of income returns provide a much larger segment of the total return than does capital appreciation over rolling periods of five years or greater. For rolling periods of five years, income provided 78% of total return on average. Income's contribution to total returns for real estate increased to an average of 86% for rolling periods of 20 years.

U.S. Real Estate
Rolling 5 Years: 1926-2003

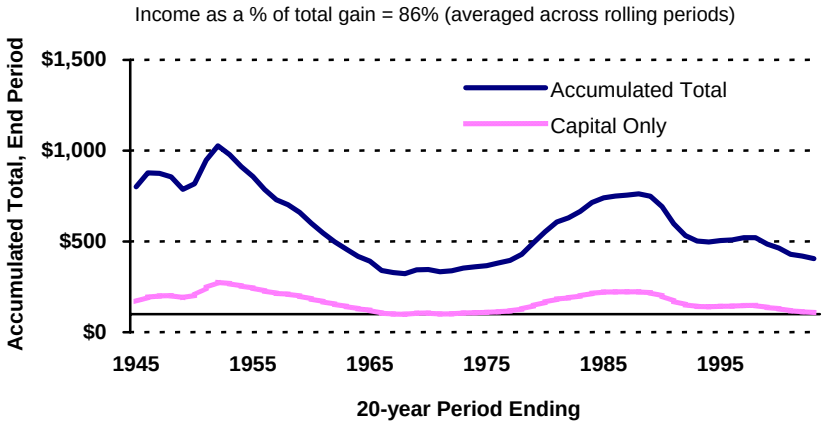


Average across all rolling 5-year periods	
Accumulated Total	$155
Initial Investment	$100
Income	$43
Capital Change	$12

Assumes initial investment of $100

Source: The Brandes Institute, based on a collaborative study with Professor Elroy Dimson of the London Business School.

U.S. Real Estate
Rolling 20 Years: 1926-2003



Average across all rolling 20-year periods	
Accumulated Total	$588
Initial Investment	$100
Income	$422
Capital Change	$66

Assumes initial investment of $100

Source: The Brandes Institute, based on a collaborative study with Professor Elroy Dimson of the London Business School.

When putting these results into the context of the common perception that leveraged capital gains provide the primary means of accumulating wealth in real estate, we suggest that the stability (and hence predictability) of income allows a higher degree of leverage than for other asset classes. Thus, modest capital appreciation can be leveraged into more substantial gains at less risk than for equities (for example). The cautionary note is that the data may suggest that extended periods of price decline can be anticipated; as leverage works both ways, it is clear that leveraging capital on the basis of relatively stable income may not be a useful long-term strategy for those needing to realize liquidity at times not of their choosing (for example, real estate developers).

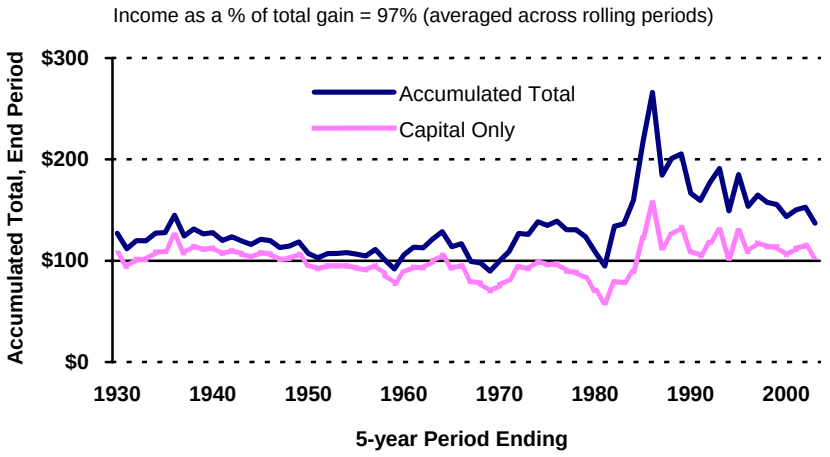
While there are many factors that make the assessment of real estate income returns more challenging than for financial assets, we believe the results of this study provide the first reasonably accurate assessment of these returns.[5]

(iii) U.S. Fixed Income

The fixed income series used in this study is derived from the return on 10-year U.S. government bonds. As such, capital changes are primarily dependent on changes in the maturity yield. In the absence of a long-term secular directional trend in yields, the nature of these capital changes must be cyclical. As a result, over any period longer than a market cycle, the impact of income should be dominant over capital. The charts below illustrate this. For 5-year rolling periods, dividends represented 97% of total returns. This percentage increased to over 100% when the rolling window horizon was increased to 20 years, as shown below. This is a consequence of some extended periods during 1926-2003 when maturity yields were trending higher, and hence bondholders wishing to sell would have incurred capital losses.

[5] The Brandes Institute welcomes input on enhancing the integrity of this data and invites further collaborative research on this topic. Please contact us as at brandesinstitute@brandes.com.

U.S. Fixed Income
Rolling 5 Years: 1926-2003

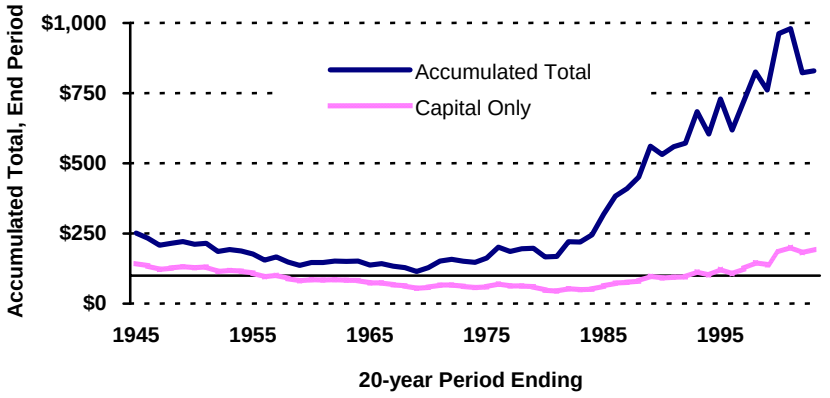


Average across all rolling 5-year periods	
Accumulated Total	$133
Initial Investment	$100
Income	$32
Capital Change	$1

Assumes initial investment of $100

Source: Brandes Institute, based on data from Ibbotson Associates

U.S. Fixed Income
Rolling 20 Years: 1926-2003



Average across all rolling 20-year periods	
Accumulated Total	$328
Initial Investment	$100
Income	$232
Capital Change	$(4)

Assumes initial investment of $100

Source: Brandes Institute, based on data from Ibbotson Associates

One implication of the income dominance over the relatively short 5-year rolling window is that the value-added from tactical market timing in this asset class may be quite small in comparison to the returns generated just by reinvesting income.

V. U.K. Asset Classes

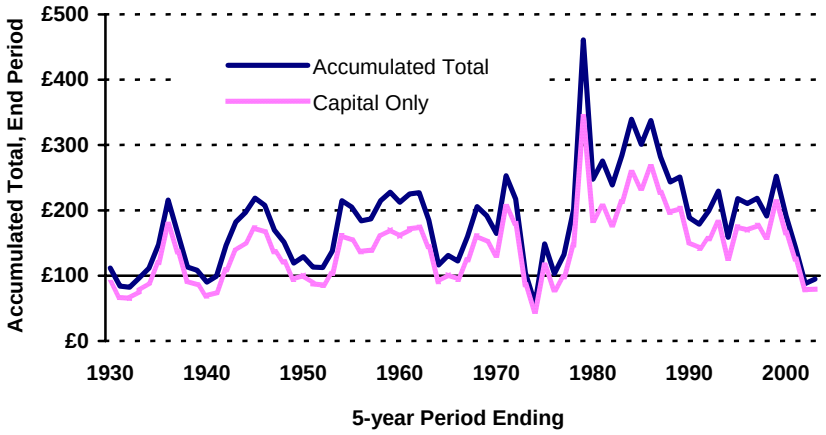
(i) U.K. Equities

Dividend yields in the United Kingdom typically have exceeded those in the United States, and the proportion of dividend-paying stocks in the major indices is also higher. Comparing large cap indices in the two countries at the end of 2003, 93.6% of the 142 stocks in the FTSE All-World United Kingdom Index[6] paid dividends, while only 73.8% of the stocks in the S&P 500 Index did so. This difference may contribute to the slightly higher proportion of income dominance in U.K. equities when compared to the United States.

For 5-year rolling periods, dividends represented 48% of total returns for equities (for U.S. equities, dividends represented 43%). This percentage increased to over 68% for U.K. equities (compared to 63% for the United States) when the rolling window horizon was increased to 20 years, as shown below. Both charts illustrate how the income component of returns has declined in recent years.

U.K. Equity
Rolling 5 Years: 1926-2003

Income as a % of total gain = 48% (averaged across rolling periods)



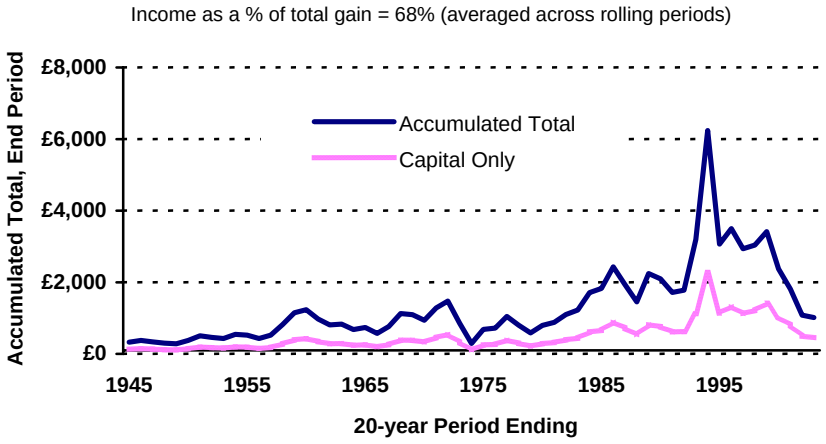
Average across all rolling 5-year periods	
Accumulated Total	£183
Initial Investment	£100
Income	£39
Capital Change	£43

Assumes initial investment of £100

Source: Brandes Institute, based on data from Global Financial Data, Inc.

[6] FTSE All-World United Kingdom: The FTSE All-World United Kingdom Index consists of the U.K.-based members of the FTSE All-World Index. The FTSE All-World United Kingdom Index includes dividends and distributions, but does not reflect fees, brokerage commissions, or other expenses of investing.

U.K. Equity
Rolling 20 Years: 1926-2003



Average across all rolling 20-year periods	
Accumulated Total	£1,317
Initial Investment	£100
Income	£827
Capital Change	£391

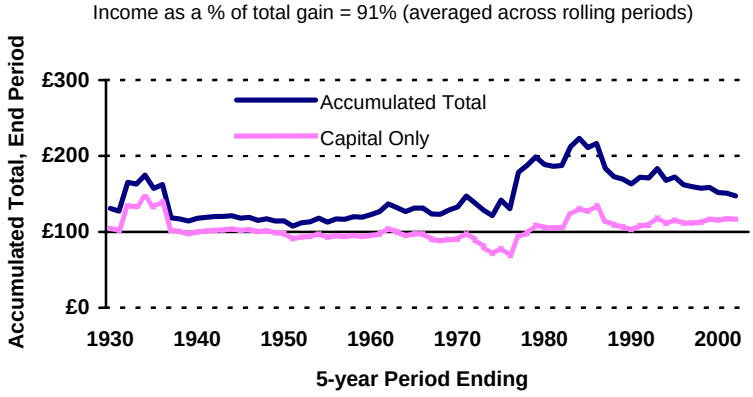
Assumes initial investment of £100

Source: Brandes Institute, based on data from Global Financial Data, Inc.

(ii) U.K. Fixed Income

While the overall pattern of income dominance for fixed income returns is similar in the United Kingdom and the United States at the margin, the average U.K. capital contribution is somewhat higher. The differences are modest however, and do not impact the overall conclusion. We note that this is not an "apples-to-apples" comparison, as the U.K. data is in pounds sterling, and a genuine comparison would have to take into account the local currency long-term returns (which were higher in the United Kingdom) and the long-term depreciation of the pound against the dollar. The behavior of these two factors (higher U.K. returns and currency depreciation) are closely linked.

U.K. Fixed Income
Rolling 5 Years: 1926-2003

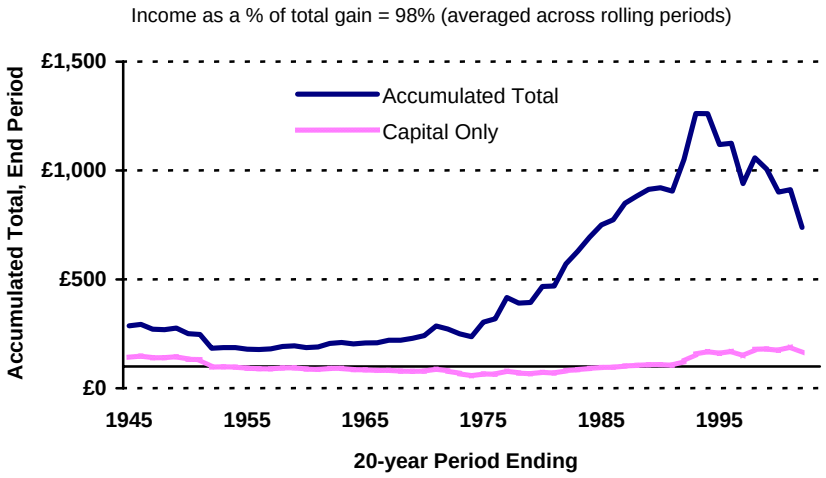


Average across all rolling 5-year periods	
Accumulated Total	£145
Initial Investment	£100
Income	£41
Capital Change	£4

Assumes Initial Investment of £100

Source: Brandes Institute, based on data from Global Financial Data, Inc.

U.K. Fixed Income
Rolling 20 Years: 1926-2003



Average across all rolling 20-year periods	
Accumulated Total	£499
Initial Investment	£100
Income	£391
Capital Change	£8

Assumes Initial Investment of £100

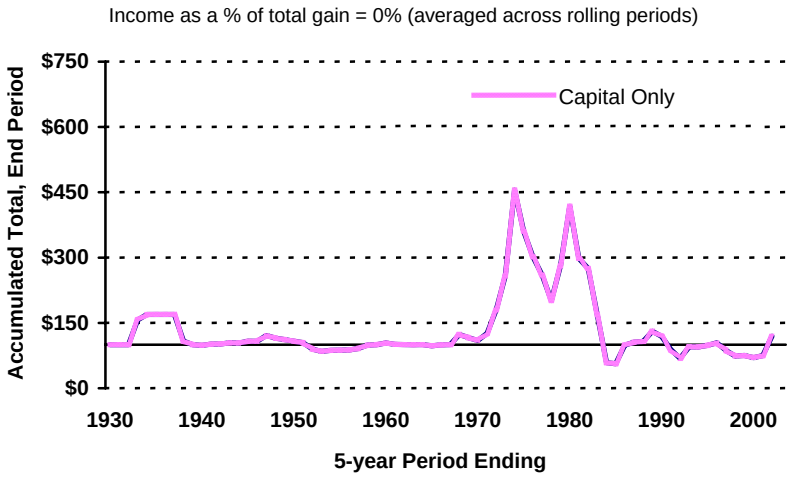
Source: Brandes Institute, based on data from Global Financial Data, Inc.

VI. Non-Income Producing Assets

(i) Gold

Gold bullion is considered by some investors to be a long-term "inflation-hedge" investment. Given its intermittently high volatility, it is periodically the focus of speculators seeking capital gains. In the context of this study, the fact that gold bullion is non-income producing allows us to contrast a capital-only asset with the other income-producing asset classes. Gold's capital appreciation was substantially concentrated in the decade after the United States left the gold standard (1971-1980). Before that, its price movements were limited and, subsequent to 1980, the price has been less volatile. Nevertheless, it may be interesting to review the results over the same period as the income-producing asset classes (1926-2003).

Gold
Rolling 5 Years: 1926-2003

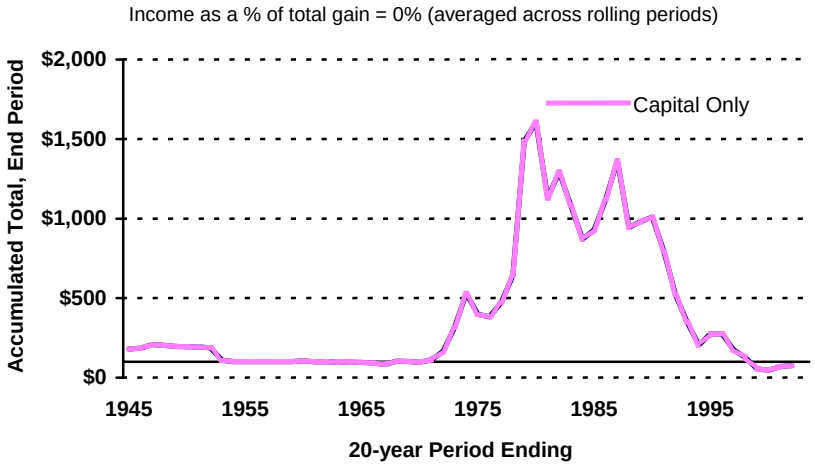


Average across all rolling 5-year periods	
Accumulated Total	$135
Initial Investment	$100
Income	$0
Capital Change	$35

Assumes Initial Investment of $100

Source: Brandes Institute, based on data from Global Financial Data, Inc.

Gold
Rolling 20 Years: 1926-2003



Average across all rolling 20-year periods	
Accumulated Total	$394
Initial Investment	$100
Income	$0
Capital Change	$294

Assumes initial investment of $100

Source: Brandes Institute, based on data from Global Financial Data, Inc.

When considering average rolling periods for capital return only, gold substantially out-performed real estate and fixed income (although, as noted, gold's distribution of returns around that average was much larger). On this basis, gold trailed equities by only a modest amount. However, when income is included, equities and real estate far outpaced gold, with only fixed income trailing. Clearly, the non-income producing nature of gold made it less effective than equities as a long-term investment. For speculators not concerned with income, it may be a different story. The 1970's may have represented an anomaly, as gold re-adjusted in price after decades of enforced stability. If so, then the opportunity offered to speculators may be exaggerated by including the 1970's in such a comparison.

U.S. Assets: Income and Capital Comparison*
Average Accumulation, Based on $100 Investment
20-Year Rolling Periods, 1926 to 2003

	Equity	Fixed	Real Estate	Gold
Total accumulation (income & capital)	$1027	$328	$588	$394
Capital only	$440	$96	$166	$394

Source: Brandes Institute, based on data from Global Financial Data, Inc. and Ibbotson Associates.

**Please see appendix for benchmark information.*

VII. In Summary

Income Percentage of Total Return
Average For All Rolling Periods, 1926-2003

Length of Rolling Period	U.S. Equity	U.S. Real Estate	U.S. Fixed Income	U.K. Equity	U.K. Fixed Income
5 years	43%	78%	97%	48%	91%
10 years	50%	80%	99%	55%	94%
20 years	63%	86%	103%*	68%	98%
78 years	96.2%	99.5%	99.8%	97.7%	99.7%

** Reflects bond price depreciation as a result of higher interest rates during the second half of the period studied.*

Please see appendix for benchmark information.

Based on our review of 78 years of investment returns across five asset classes (gold is not listed in the above chart) and two domiciles, we gain a new perspective on income's contribution to total returns.

- Income was a significant component of returns for financial assets for periods as short as five years.
- For periods of 10 years or more, the income component was dominant – it represented greater than half of the returns generated in all income-producing asset classes.
- For the full period studied (1926 through 2003) in all income-producing asset classes, the income component represented substantially all of the returns.
- Original work in a collaborative study between Professor Dimson and the Brandes Institute shows that compared to equities, U.S. real estate exhibited relatively high, and stable, income returns, but lower capital appreciation in the long term.
- U.K. financial assets demonstrated substantially the same characteristics as their U.S. counterparts with regard to the importance of income in returns.
- Gold, as a non-income producing asset, fell short of equities and real estate in long-term performance, primarily because of its lack of income.

From this perspective, the industry acceptance of five years as long term underestimates the potential of reinvesting and compounding income. By reinvesting the income contribution of investment returns, investors leverage what Albert Einstein described as the most powerful mathematical discovery in mankind's history: compound interest. Investors should not let recent market experience distort their perspective, and particularly should avoid preconceptions of income's contribution to equity and real estate returns. Income has served as a significant component of returns, and the combination of reinvested income and capital appreciation historically has presented the best option for long-term investors to realize optimal returns.

Appendix / Data Sources:

U.S. Equity
S& P 500 Index (S&P 500 Index, 1976-2003; 500 largest U.S. stocks in market value, 1957-1976; 90 largest stocks, U.S. market value, 1926-1957) through Ibbotson Associates (© 2004 Ibbotson Associates, Inc.)
U.S. Fixed Income
Long-term government (10-year) Bond Series (*Wall Street Journal*, 1977-present; Center for Research in Security Prices (CRSP), 1926-1976) through Ibbotson Associates
U.S. Real Estate Returns
103-Year U.S. Real Estate Return Survey, study conducted by the London Business School and sponsored by Brandes Investment Partners. Sources include Agricultural Land Value Surveys (regional, confined to New England), 1960-1994; USDA Farm Returns, 1926-2002, Primary House Rent Index, U.S. Bureau of Economic Analysis, 1926-2002; Frank Russell (1971-1977) and Frank Russell/NCREIF (1977-2003) total real estate returns series.
U.K. Equity
The *Banker's Magazine* capitalization-weighted index of 287 stocks, 1926-1933
The Actuaries General Index, 1933-1962
The Financial Times-Actuaries All-Share Index, 1962-2003 (The All-Share Index is a capitalization-weighted price index and covers about 98-99% of the capital value of all U.K. companies), all through Global Financial Data, Inc.
U.K. Fixed Income
Yield: U.K. 2 1/2% Consol Yield, 1926-2003, through Global Financial Data, Inc.
Total Return: United Kingdom 10-yr Govt. Bond Total Return Index, through Global Financial Data, Inc.
Gold
Gold Spot Price, London PM Fixing (US$/ounce), 1926-2003, Global Financial Data, Inc.

S&P 500 Index: The S&P 500 Index consists of 500 stocks and is designed to form a representative sample of the United States stock market. This index is often used as a benchmark for U.S. equity portfolios and includes dividends and distributions, but does not reflect fees, brokerage commissions, or other expenses of investing.

FTSE All-World United Kingdom: The FTSE All-World United Kingdom Index consists of the U.K.-based members of the FTSE All-World Index. The FTSE All-World United Kingdom Index includes dividends and distributions, but does not reflect fees, brokerage commissions, or other expenses of investing.

All performance is historical and is no indication of future results. Investors' actual results will vary. Investing outside of the United States is subject to certain risks such as currency fluctuation and social and political changes; such risks may result in greater price volatility. Please note that all indices are unmanaged and are not available for direct investment.