# Portfolio Diversification

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**There is almost complete agreement amongst portfolio managers on the need for diversification in investment portfolios, but there are very wide differences as to the extent and the methods of diversification and there appears to have been very little public discussion on the subject in Australia.**

Many published works on investment touch on the subject; Graham, Dodd & Cottle in "Security Analysis" devote a chapter to Investment Policy wherein they discuss the disposition of a portfolio amongst the various types of securities; G. C. Harrison in "The Principles of Successful Share Buying & Investment" says:

"But even the most enterprising of investors should maintain a balance between growth stocks and secure issues."

All responsible comment on investment underlines the necessity for a portfolio to be shaped according to the particular needs of the investor, but the question of just what disposition of investments is most desirable for various circumstances is largely unexplored territory. In an endeavour to stimulate discussion on the subject, some observations and thoughts are set out. To contain the topic to manageable proportions two limitations are imposed as to type of investment and type of investor:—

(a) The investment alternatives have been restricted to listed securities or securities issued by listed companies.

(b) Only the viewpoint of the long term investor who is free to make his own choice of investments has been considered.

The types of securities available within the limitation are well known and need no elaboration, but amongst the types of investor there is still room for substantial variations in investment planning according to the needs of the investor. For example, the portfolio manager (even if given complete freedom of action) must take a different course of action for a fund which is introducing no new money and could be called upon for unexpected withdrawals to that which he would take for a steadily growing fund which has no likelihood of reduction for many years. Similiarly a fund which must provide a high level of immediate income as compared with a fund which can ignore immediate return or a fund whose beneficiaries receive precisely what the fund has earned as measured at one point of time as compared with a fund which provides benefits as measured over a period.

Some broad generalisations can be made; if we accept Commonwealth Government Securities as the most readily negotiable, commercial fixed interest securities as the highest immediate income producers, but the least negotiable, and equities as the highest yielding security over a period but the lowest immediate yield and the most volatile in value, it will be obvious that the investor will need to weight his portfolio with these securities in proportion to the weight which he gives to his particular objectives. The two extremes would be the investor who must have almost complete liquidity who would invest entirely in Commonwealth Government Securities and the investor who did not need immediate income and was not concerned with day to day valuations would invest entirely in equities. However, even in these extreme cases the investor is forced to make further decisions — the investor in Commonwealth Securities must balance the desire for maximum return against the length of his investment whilst the equity investor has a multitude of possibilities to consider. Suffice to say that even within each type of security the prudent investor will find reason to diversify his holdings to cover variations in rate, term and risk.

The area in which there are the greatest number of possible variations is, of course, in equity investment. It is in this category also that the greatest uncertainties lie and where the argument in favour of diversification is the strongest. If, approaching from the negative, one asks — "Why diversify at all?" — the answer must be — "If we can find one stock which provides absolute security and maximum return under all possible circumstances, we do not need to diversify at all."

Taking this line a little further, it could be suggested that the degree of diversification represents the degree of our uncertainty. This statement, of course, ignores the problems of size which force many Australian portfolio managers to diversify to a much greater extent than they would otherwise do, simply because there are definite physical limitations to the size of our market. A brief example underscores this point; a number of Australian institutional investors have equity portfolios worth more than £10,000,000 — even if they were content to put as much as £1,000,000 into a particular stock they would be forced into at least ten stocks. An examination of Australian & Overseas portfolios will show a tendency for much greater diversification in Australia than overseas and this physical limitation is the chief determinant in this wider spread. A related factor, arising from problems of size, which affects the degree of diversification is the difficulty in disposing of large quantities of particular stocks. If a portfolio manager was absolutely confident that he could readily dispose of a stock in changing circumstances he could more readily afford a larger investment in the stock, but in our market he is forced to restrict the size of his holdings in the interests of marketability. In this context the smaller investor with, say, £1000 in a stock, has considerably greater freedom of action than the investor with £1,000,000 in a stock.

If it is difficult to accept that lack of complete confidence in any one stock is sufficient reason to force some degree of diversification in all equity portfolios it is pertinent to look, in very broad terms, at some of the industries in which investment is available and suggest factors which could make investment in those industries precarious through no fault of the company or its management. In making such a list it is recognised that although all the fears are possible of realisation, they are, in most cases, highly improbable.

Banking—
Nationalisation or crippling competition from Government Banks on a non-commercial basis.

Hire Purchase—
Restrictive legislation.

Transport—
Nationalisation on U.K. lines or restrictive legislation such as heavy road tax.

Retail—
Growth of discount houses and direct selling; official action on pricing policies (S.A. already outlaws "loss-leaders").

Pastoral—
Wool rendered obsolete by synthetics.

Chemicals, Textiles, Footwear—
Removal of tariff protection.

Tobacco—
Legal prohibition.

Automotive—
Removal of tariff protection or revolutionary designs rendering present manufacturing facilities obsolete.

Metals—
Replacement by synthetics or other metals.

Oil & Coal—
Replacement by alternative fuels — uranium, natural gas.

Steel—
Partial replacement by aluminium or other substances or nationalisation as in U.K.

In addition there is always the possibility that in any one company a set of completely unpredictable circumstances could bring about the collapse of a company as evidenced in the case of an Australian listed insurance company a few years ago. If he has thought through all these matters the portfolio manager may well need to remind himself that "over a period, equities are the highest yielding security" or he might not feel it worthwhile to persevere. If, however, he accepts the challenge there are almost limitless possibilities to consider.

One approach may be to say that we have faith in the growth and development of Australia and if we cannot be sure which industries will succeed, we should cover the full range. The next step is to examine our National "product mix" and see what industry proportions we should use. In 1963 the Commonwealth Bureau of Census and Statistics published an

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# EDITORIAL

With investment analysis now attracting more attention, the aims and ideals of the Australian Society of Security Analysts and their implementation will certainly be examined more closely. That the Society is vibrant with energy is evident from the sustained interest in traditional activities and the enthusiasm to pursue enquiry into new research fields.

"The times they are a'changing."

Analysts, united in purpose, will achieve more in these new fields than that emerging from individual efforts. Higher standards of research must result from the application of a wider range of intellect to a particular problem.

The Society has in its members the latent abilities and the keen enquiring minds. There remains but the determination to weld it into a strong unit.

Now could be our moment of decision. Which path to follow? How shall it be traversed? Let consideration be given to these matters. Let all the possibilities be explored with the same impartial assessment displayed in the everyday conduct of our inquiry into investment subjects.

Above all, let the path be found soon so that the Society's entire energy may be directed to achieve the goal set and in so doing earn the respect of the community in which we move.

amended table of information on Gross National Product and this shows that in 1959-60 (the most recent year for which figures are quoted in full detail) the net operating surpluses of the various industry groups are shown in Table A.

The broadness of these classifications restricts the value of this table, but it does give us some idea of the relative size of various sections. However, we cannot base an investment portfolio on these proportions, because a very large segment of Australian industry is not available for public equity investment. For instance, we can obtain little or no entry to Primary Production, Vehicles, Oil Refining and only a minor portion of Transport.

### *Industry Proportions*

Another approach may be to look at the whole range of listed companies and see just what is available to choose from. In 1963 a list was published showing the market valuations of the whole of the ordinary shares listed on the Sydney Stock Exchange. The companies were divided into industry groupings as in Table B.

This list seems a most useful starting point as it confines the shoppers' decision-making to the actual stock-in-trade. It can, however, give a distorted picture of the relative sizes and importances of various industries because, as mentioned earlier, there are many important industries which are not represented in the Stock Exchange lists. Allowing for this factor it is profitable to use these industry proportions, not as an inflexible blueprint, but as a yardstick against which a portfolio can be measured.

### *"Best" Action*

It is self-evident that we cannot invest directly in industries; we can only invest in individual companies which may then be classified into various industries according to the nature of the company's main business. It is also self-evident that the "best" portfolio consists of investments in the "best" companies

**TABLE A**

| | **£ million** | **% of Total** |
|---|---|---|
| Primary Production | 22.9 | 2.9 |
| Mining and Quarrying | 22.7 | 2.9 |
| Metals and Engineering | 148.0 | 18.7 |
| Vehicles | 47.9 | 6.0 |
| Textiles and Clothing | 30.7 | 3.9 |
| Food, Drink and Tobacco | 59.4 | 7.5 |
| Paper and Printing | 39.6 | 5.0 |
| Other Manufacturing | 112.6 | 14.2 |
| Electricity, Gas and Water | 4.2 | 0.5 |
| Building and Construction | 15.6 | 2.0 |
| Transport and Communication | 18.0 | 2.3 |
| Commerce | 199.2 | 25.1 |
| Community and Business Services | 4.3 | 0.5 |
| Finance and Property | 42.2 | 5.3 |
| All other industries | 21.5 | 2.7 |
| Ownership of dwellings | 4.2 | 0.5 |
| | £793.0 million | |

**TABLE B**

| **Industry** | **Market Value 31/5/63 £ Million** | **% of Total** |
|---|---|---|
| Banks, Insurance and Trustees | 252 | 7.7 |
| Other Finance | 217 | 6.7 |
| Pastoral | 59 | 1.8 |
| Transport and Communication | 57 | 1.7 |
| Trade and Services | 538 | 16.6 |
| Food, Drink and Tobacco | 415 | 12.8 |
| Textiles and Clothing | 69 | 2.1 |
| Basic Materials | 411 | 12.7 |
| Steel and Engineering | 475 | 14.6 |
| Building and Construction | 241 | 7.4 |
| Electrical | 71 | 2.2 |
| Automotive | 75 | 2.3 |
| Non-Ferrous Metals | 259 | 8.0 |
| Fuel, Light and Power | 109 | 3.4 |
| | £3,248 million | |

**TABLE C**

**Australian Investment Companies, Unit Trusts and Mutual Funds:**

| | **1** | **2** | **3** | **4** |
|---|---|---|---|---|
| Banks, Insurance and Trustees | 5.9% | 9.4% | 6.8% | 2.8% |
| Other Finance | 5.6% | 11.0% | | 4.7% |
| Pastoral | 0.8% | 2.7% | — | 2.3% |
| Transport | 2.2% | 3.6% | 2.0% | 3.8% |
| Trade and Services | 12.5% | 19.8% | 24.0% | 18.5% |
| Food, Drink and Tobacco | 12.9% | 10.4% | 9.8% | 14.2% |
| Textiles | 2.8% | 3.3% | 2.2% | 4.1% |
| Basic Materials | 14.3% | 11.6% | 12.9% | 13.2% |
| Steel and Engineering | 13.0% | 9.3% | 15.3% | 14.1% |
| Building and Construction | 14.8% | 5.1% | 9.9% | 11.7% |
| Electrical | 4.3% | 2.2% | 7.3% | 4.2% |
| Automotive | 3.8% | 4.8% | 2.3% | 2.2% |
| Non-Ferrous Metals | 4.5% | 3.4% | 2.4% | 1.8% |
| Fuel, Light and Power | 2.6% | 3.4% | 5.1% | 2.4% |

regardless of the industry in which they operate, but the portfolio manager (who lacks the assistance of a "retro-spectroscope") may have a little difficulty in pinning down the "best" companies at any point of time and such a yardstick will enable him to see whether investment in an industry is being unduly weighted by the winds of fashion which blow strongly through the investment world from time to time.

Finally, it is "interesting" to look at the industry proportions used in some local and overseas portfolios. Table D shows two portfolios managed by the same group but investing in different areas; the difference in emphasis must reflect either differing views on the prospects of an industry in different countries or the availability of stocks.

Table E shows three U.S. portfolios managed by different groups. The marked variations, in part, are the result of the much wider choices available to the U.S. portfolio manager.

Table C shows four Australian portfolios — two managed by brokers, one by a merchant bank and one by a trading bank. The portfolios are very similar (and many of the differences that do exist arise from differences in classification) and generally the portfolios bear a close resemblance to the industry proportions shown in the "Sydney Stock Exchange all listed ordinary" list. The dominant factor in choice of an Australian portfolio appears to be supply.


**— MEMBERS —**

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**Australian Society of Security Analysts,**

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**Sydney.**


### TABLE D

**Swiss managed Funds investing in:**

(a) U.S. and Canada.
(b) Germany.

| | 1 | 2 |
|---|---|---|
| Banks | 8.4% | 17.4% |
| Insurance | 3.1% | 6.8% |
| Railroads | 0.6% | — |
| Public Utilities | 15.2% | 3.8% |
| Retail | 6.8% | 7.7% |
| Oil and Natural Gas | 10.5% | 3.6% |
| Non-Ferrous Metals | 3.3% | 3.3% |
| Steel | 2.2% | 3.7% |
| Machinery | 1.6% | 0.7% |
| Electrical and Electronics | 8.5% | 9.2% |
| Automobiles | 1.6% | 1.5% |
| Aviation | 0.8% | — |
| Chemicals and Drugs | 12.4% | 23.3% |
| Tyres and Rubber | 0.9% | 1.6% |
| Containers and Glass | 1.5% | — |
| Paper | 0.7% | — |
| Food and Tobacco | 11.5% | 4.0% |
| Photographic | 0.8% | — |
| Building | 2.2% | 5.5% |
| Textiles | — | 1.9% |
| Other | 7.4% | 5.8% |

### TABLE E

**U.S. Investment Trusts:**

| | 1 | 2 | 3 |
|---|---|---|---|
| Agricultural Machinery | 3.3% | 1.6% | — |
| Air Transport | 0.9% | — | — |
| Automotive | 3.4% | 4.4% | 4.0% |
| Aviation Manufacturing | 4.2% | — | — |
| Banks | 1.0% | — | 3.4% |
| Building | 2.6% | 0.8% | 2.3% |
| Chemicals and Drugs | 3.7% | 10.0% | 15.5% |
| Communications | — | 2.6% | — |
| Containers and Glass | 2.8% | — | 3.7% |
| Electrical Equipment | 3.1% | 0.8% | 6.0% |
| Financial | 2.2% | — | — |
| Food | 1.3% | — | 2.5% |
| Hotels | 1.6% | — | — |
| Insurance | 0.5% | — | 4.9% |
| Mining and Metals | 7.4% | — | 0.5% |
| Natural Gas | 3.1% | 5.6% | — |
| Oil | 19.5% | 22.2% | 12.8% |
| Paper | 2.4% | 4.0% | 1.1% |
| Railroads | 5.3% | 12.8% | 0.9% |
| Steel | 7.7% | — | 1.0% |
| Retail | 3.0% | 5.0% | 2.0% |
| Telephone | 3.5% | — | — |
| Textiles | 0.9% | — | — |
| Tyres and Rubber | 2.6% | — | — |
| Public Utilities | 7.9% | 10.9% | 34.3% |
| Other | 6.1% | 3.1% | 5.1% |