

Making an investment plan

Indexfundfan, August 2005.

Before beginning on any long journey, it is important to make a good plan to maximize the chances of success. It is the same with investing – it is prudent to make an appropriate investment plan so that it can guide the investor through the investing journey. This article attempts to address the basic steps to making an investment plan and constructing an appropriate asset allocation.

Note: Before thinking about investing, the investor-to-be should consider making sure that the basic financial foundation is already in place. This means that there should already be some sort of emergency fund reserves allocated against a rainy day and the appropriate family members are properly and adequately insured.

1. Investment goals and taking risks

The first step on the investment journey is to know and determine the investment goal. People invest for various reasons. Most commonly, it is for retirement, but it could be for various other reasons, like for the children's education, or asset accumulation for a major purchase like a home.

Knowing the investment goal is important because it ultimately determines the time horizon of the investments before they are liquidated and consumed. The time horizon factor, together with the need, ability and willingness to take risk will primarily determine the appropriate asset allocation.

1.1. Need-ability-willingness factors

Need to take risk

Does an investor already have sufficient assets accumulated for retirement or are the accumulated assets just a small amount that was leftover from the housing loan payments in the CPF? Generally, most people do need to take on risks in order to accumulate sufficient assets for retirement, especially since the rate of return in the CPF account can hardly beat the rate of inflation. On the other hand, a person in the same enviable position as someone like Bill Gates would no longer any need to take on any risk to have sufficient assets for retirement.

Ability to take risk

The primarily factor that determines an investor's ability to take risk is the investment horizon. If the proceeds of the investments are needed in a few years, then it is prudent for the investor to choose a conservative asset allocation. Other factors that affect the ability of an investor to take risk include job security and the amount of exposure to the economic cycle risk. In general, the longer the investment horizon, the more an investor can handle risk. For example, an investor with a stable job and a long investment horizon would be

much more able to handle risk than another investor whose income is dependent on the economic cycle and the investment proceeds are needed in a few years.

Willingness to take risk

This depends on how well an investor can tolerate seeing their portfolios drop in value without losing sleep. Many investors are by nature risk-averse, and in the case of widespread fear in a severe bear market, they may have the tendency to liquidate investments at possibly the worst time. Conversely, there are also contrarian investors who are willing to take high risks by investing only during market downturns.

2. Asset allocation

2.1. Fixed income to equity ratio

After reviewing the various risk factors, it is time to make the most important decision in an investment plan, which is to decide on the fraction of money to invest in fixed income versus equity instruments. Fixed income instruments refer to bonds, bond funds and money market funds. These tend to have small day-to-day price fluctuations and they generally provide stability in a portfolio. On the other hand, equity instruments refer to stocks (including stock ETFs) and stock funds. Equity instruments provide opportunity for much higher gains but these come at the expense of higher day-to-day price fluctuations and are more affected by the economic cycle. Equity instruments generally are the engines that provide the most “growth” in a portfolio.

Deciding on an asset allocation for a portfolio is basically an exercise to determine the appropriate fixed income versus equity ratio which a) provides the necessary growth on the one hand to meet the investment goals, and b) at the same time minimizing the volatility and risk of the portfolio on the other hand.

Some of the suggestions to determine the fixed income to equity ratio are given below:

Age-based rule-of-thumb

This simple rule, which applies only to investments intended for retirement, suggests that the percentage allocation to fixed income should be given by the investor’s age. For example, an investor age 30 should allocate 30% to fixed income. Many have criticized this rule of thumb as too general and that it assumes a “one size fits all” solution is appropriate. This is probably true. Plus, in addition, it does not take the “need-ability-willingness” factors listed above into consideration.

Allocation based on expected risk-return profile

Vanguard provides quite good illustrations of the expected risk-return profile for a wide range of asset allocations, ranging from the conservative income portfolio to the aggressive growth portfolios. Some of the expected risk-return profiles, based on 1960 to 2004 historical returns, are:

| Fixed income/ Equity | Average annual return | Best year return | Worst year return | Years with loss |
|-------------------------|--------------------------|---------------------|----------------------|-----------------|
| 100/0 | 7.2% | 31.1% | -8.1% | 5 of 45 |
| 80/20 | 8.1% | 28.6% | -8.2% | 5 of 45 |
| 70/30 | 8.5% | 27.4% | -8.4% | 5 of 45 |
| 60/40 | 8.9% | 26.1% | -11.3% | 6 of 45 |
| 50/50 | 9.2% | 27.9% | -14.1% | 8 of 45 |
| 40/60 | 9.5% | 29.6% | -17.0% | 11 of 45 |
| 30/70 | 9.8% | 31.3% | -19.8% | 12 of 45 |
| 20/80 | 10.1% | 33.2% | -22.7% | 12 of 45 |
| 0/100 | 10.6% | 38.5% | -28.4% | 12 of 45 |

The link to the above information is

<http://flagship4.vanguard.com/VGApp/hnw/content/PlanEdu/General/PEdGPCreateTheRightMixContent.jsp>

Larry Swedroe's suggestions

Author Larry Swedroe offers the following suggestions to help determine the maximum equity exposure, given in terms of the investment horizon and maximum loss tolerance. The suggestions, listed in the tables below, are abbreviated from Larry Swedroe's book "What Wall Street Doesn't Want You to Know". Note that these numbers are the maximum values – it does not mean that the values in the table are the recommended equity allocation for investors.

| Investment horizon | Maximum equity allocation |
|----------------------|---------------------------|
| 3 years or less | 0% |
| 3 years to 6 years | 30% |
| 6 years to 10 years | 70% |
| 10 years to 20 years | 90% |
| 20 years or more | 100% |

| Maximum tolerable loss | Maximum equity allocation |
|------------------------|---------------------------|
| 5% | 20% |
| 10% | 30% |
| 20% | 50% |
| 30% | 70% |
| 40% | 90% |
| 50% | 100% |

Using the above information and together with the "need-ability-willingness" factors, an investor should decide on an appropriate fixed income to equity ratio that is tailored to the investor's personal circumstances.

Some fixed income/equity ratio examples:

- a) A young investor in early 20s just starting work and investing for retirement: 15/85.
- b) A young couple in the early 30s with a young family and investing for retirement: 30/70.
- c) A middle-age couple in the late 40s investing for retirement: 40/60.
- d) A couple in the 50s, planning to retire in a few years: 60/40.
- e) A retired couple in the late 60s, and drawing on assets for retirement needs without children's assistance: 80/20.

Zero allocation to fixed income?

Many young investors, typically in the early 20s and investing for retirement, have questioned the inclusion of boring bond funds in their investment portfolios. While it is true that they do have a very long investment horizon, it is important that they consider the following three factors before committing to a 100% equity portfolio:

- a) Author William Bernstein in his book "The Intelligent Asset Allocator" found that historically, the volatility of a portfolio is significantly dampened by the inclusion of just a small amount of fixed income (e.g. 10%) and yet the impact to the expected returns is very minimal. In other words, the risk-adjusted returns of a portfolio with say 10% in fixed income could be higher than a 100% equity portfolio.
- b) The dampening of a portfolio's volatility could prevent an investor from throwing in the towel and liquidating the entire portfolio in a severe equity bear market. Liquidating the portfolio in a bear market is clearly very bad as it would incur huge losses that will take a long time to recover.
- c) The addition of fixed income instruments gives the investor something to rebalance against in a severe equity bear market. Without a fixed income portion, meaningful rebalancing cannot be done if all the equity funds are down by similar proportions.

If an investor, after reviewing the above three points still feels that a 100% equity portfolio is appropriate, then he or she should go ahead with a 100% equity allocation since he or she would already be mentally prepared and will hopefully be less likely to make the wrong decisions in a severe equity bear market.

2.2. Asset classes

After determining the fixed income to equity ratio, it is time to decide on the asset classes to incorporate into the investment plan. There are many available asset class divisions:

Geographical divisions: US, Europe, Asia-Pacific, Emerging markets.

Style divisions for fixed income: investment grade, 'junk'-grade.

Style divisions for equities: large-cap, small-cap, growth, value.

Many different unique "sub-asset classes" can be created by combining the above divisions. For example, by combining US with small-cap and value, we will have the US small-cap value asset class. Emerging markets junk bonds would be another example.

Not all asset classes so created have easily available investment vehicles in Singapore. Therefore, below, we tabulate only some of the most important asset classes available and of interest to retail investors. They are listed in the order of increasing diversification as perceived by the author.

Equity funds

- a) Global equity fund
- b) US fund and EAFE fund (EAFE consists of Europe and Asia-Pacific)
- c) US fund, Europe fund, Asia-Pacific fund
- d) US fund, Europe fund, Asia-Pacific fund, Emerging markets fund
- e) US fund, Europe fund, Asia-Pacific fund, Emerging markets fund, Global small cap fund
- f) US fund, Europe fund, Asia-Pacific excl. Japan fund, Japan fund, Emerging markets fund, Global small cap fund

Fixed income funds

- a) Global bond fund
- b) Global bond fund and SGD denominated bond fund
- c) Global bond fund, SGD denominated bond fund, Emerging markets bond fund

When a portfolio is large or if the investor would like to hedge against certain economic situations, the following tangible asset and sector funds could provide added diversification. These are listed in the order of DECREASING diversification values as perceived by the author.

Tangible asset funds

- a) REIT / property fund
- b) Gold and precious metal fund
- c) Commodity fund

Sector funds

- a) Energy fund
- b) Healthcare / biotech fund
- c) Single country fund
- d) Other narrowly-focused sector funds

The need to diversify

The Callan table (link here: http://www.callan.com/resource/periodic_table/pertbl.pdf) provided by Callan Associates gives a very revealing story in pictorial form of the need to diversify. The Callan table ranks the performance of the major asset classes every year since 1985 to 2004. It can be observed from the table that no single asset class was able to dominate in performance every year. Building a diversified portfolio thus allows the investor to participate in the winning asset classes and also the ability to buy the laggard asset classes at relatively lower prices – all through a process known as rebalancing (more on this topic later).

2.3. Asset class selection

After the review of the different asset classes available, the investor can select one row from the “Equity funds” group and another row from the “Fixed income” group to form the desired asset allocation plan. One or more funds from the “Tangible asset funds” and “Sector funds” group could also be selected.

Some points to consider:

Are you a funds collector?

It is easy to get overboard with wanting to invest in as many asset classes as possible. Sometimes, this only adds to the amount of tracking effort and increases rebalancing difficulties without adding any meaningful diversification. One general rule of thumb is to add the asset class only if an investor can allocate a minimum of 3% of the portfolio to it; otherwise the effect on the entire portfolio will be very small. For example, a 10% rise in an asset class with 1% allocation would only impact the entire portfolio by 0.1%.

Tangible asset and sector funds

In recent years, many investment books have included tangible assets as “legitimate” asset classes and recognized their roles in diversifying portfolios. On the other hand, sector funds are still generally regarded as sector bets. This author believes that it is prudent to limit sector funds to be no more than 10% of the entire portfolio.

Below, two simple examples of asset allocations are presented.

Example A

Investor A prefers simplicity and does not wish to keep track of too many funds. He selects the following investments for his asset allocation.

Equity: Global equity fund

Fixed income: Global bond fund

Example B

Investor B works in the energy sector and is planning for retirement. She is concerned about the rising healthcare cost / inflation and does not mind the added complexity associated with holding more funds. One example portfolio for her could be

Equity: US fund, Europe fund, Asia-Pacific fund, Emerging markets fund, Gold and precious metal fund and Healthcare fund.

Fixed income: Global bond fund, SGD denominated bond fund, Emerging markets bond fund.

Weighting to each sub-asset class

The weighting to allocate to each sub-asset class is a matter of personal preference and the individual investor’s outlook on the economy of the geographical region or sector. For the big three geographical regions (US, Europe and Asia-Pacific), the allocation could be in the proportion of 50%, 30% and 20%, which roughly reflects the relatively sizes of the

stock market capitalization of the three regions currently. Alternatively, for simplicity reasons, it is also not a bad idea to allocate equal weighting to the three regions.

As for sector funds, it is best to limit the total weighting to be no more than 10% of the entire portfolio, as already mentioned above.

2.4. Fund selection

After the asset classes have been decided, the specific fund vehicles must next be selected. The selection criteria that determines which fund is appropriate for a given asset class are by themselves a huge topic which have been covered elsewhere and / or hopefully will be covered in more detail in a separate article. In the meantime, some of the criteria for fund selection are listed below:

- Fund expenses in terms of expense ratios (lower expenses are better).
- Other fund expenses not reflected in the expense ratios. These are usually the consequence of excessive trading (lower turnover ratios are better).
- Actively-managed or passively-managed funds.
- ETF or unit trusts.
- Fund asset sizes (small funds are at higher risk of being terminated).

In the author's opinion, if asked to pick a fund selection criterion and given just only one choice, the author would say that the expense ratio of the fund would be the single most important deciding factor in fund selection (although it is still a very poor indicator). This agrees with the results of a study done by Financial Research Corporation in the article "Warning: Fund stats offer little help" (link here:

http://www.marketwatch.com/news/print_story.asp?print=1&guid={81EB08DF-AA29-491E-9C0C-9889A48CAE84}&siteid=mktw):

Of all the predictors, the expense ratio was the most reliable in predicting future performance as funds with lower expenses delivered "above-average future performance across nearly all time periods."

FRC calls a favorable expense ratio an "exceptional predictor" for bonds, and a "good predictor" for stock funds.

Savvy investors know that fees are one of the biggest drags on performance. Once again, here's the proof. If you want predictable performance, pick low expense funds, and that's usually no-load index funds.

2.5. Sleeping-point test

An investor should understand and be convinced of the rationale behind how the asset allocation was chosen. One of the worst things to happen, as already mentioned before, is that an investor selects an overly aggressive portfolio, but then panics during a downturn and liquidates the portfolio with huge losses.

One of the suggested acid-test to know if the portfolio allocation is right for an investor is to see if the investor becomes worried and sleepless at night in a severe bear market. If this is the case, then the investor probably has an overly aggressive portfolio and the equity portion should be decreased and fixed income portion increased to the point where the sleepless nights disappears.

When in doubt, an investor could always start of with a less aggressive portfolio, putting the remaining money originally intended for equity investments into a money market fund. After some time as the investor becomes more confident and convinced in the original asset allocation plan, the money in the money market fund could be re-deployed into equity instruments.

3. Putting the plan to practice

The construction of the investment plan and then converting the plan into actual investments is the first and most time consuming step of an investor's journey. However, it does not mean that thereafter the work is complete. Instead, the investor should continue to monitor and maintain the portfolio. These subsequent steps are equally important, and they include:

Make regular investments

Continue to invest regularly according to the investment allocation plan, through bull and bear markets. The application of dollar-cost-averaging is a good idea for making regular investments. At the same time, try not to time the market and switch funds excessively.

Rebalancing

It is important to periodically rebalance the portfolio. Since the performances of different asset classes could vary by quite a bit from each other, over time, the relative allocation of each asset class would drift away from each other, making the portfolio out of balance. Rebalancing means to re-allocate the money in the portfolio back to the original asset allocation. This typically involves selling the winners and buying the laggards.

The rebalancing step is important as it enforces a discipline for an investor to take some money out of the winning fund and buy the laggards at a relatively lower price. But more importantly, it re-aligns the portfolio back to the same level of risk and return profile when the portfolio was first set up.

When to re-balance?

Many investors like to do rebalancing once a year and a few have been known to do it near their birthdays. Others prefer to do it around the time they receive their yearly bonuses, when they have additional money to invest. The author thinks that this is quite a good idea since the investor might then find it unnecessary to sell the winners (thus minimizing transaction costs). Instead, with the additional funds available for investment, the investor only needs to top up the laggard funds to bring the portfolio back into balance.

Larry Swedroe's 5/25 rebalancing rule

Author Larry Swedroe suggests using a 5/25 rule to rebalance, instead of relying on specific time intervals. What this rule says is that the portfolio should be rebalanced if at least one of the asset class is 5% out of balance with respect to the entire portfolio or 25% or more out of balance relative to its original allocation. An example will illustrate this.

Consider an asset class with a 10% allocation in an investor's portfolio. Then the 5% "sub-rule" says that if this asset class becomes less than $10\% - 5\% = 5\%$ or more than 15%, then it should be rebalanced. On the other hand, the 25% "sub-rule" says that if this asset class grows to be more than $1.25 * 10\% = 12.5\%$ or less than $0.75 * 10\% = 7.5\%$, rebalancing should be performed. Combining the two "sub-rules", the rebalancing points are triggered at below 7.5% or more than 12.5%.

In the author's opinion, the exact rebalancing method probably does not a lot of difference since there is little evidence to suggest that one technique is better than the other. What is more important though is that rebalancing is performed diligently with a predetermined method.

Periodical review of asset allocation

Periodical reviews of the asset allocation plan are also important. For example, as the investment horizon becomes shorter or as the financial needs are lessened, it might be prudent to cut back on the equity allocation and shift more assets into fixed income instruments. The addition of a new family member or the departure of a loved one are also events that warrants revisiting the asset allocation plan.

4. Conclusions

We have reviewed the major steps in making an investment plan. This consists of four main ingredients – 1) review of the investor's risk profile, 2) selection of the appropriate fixed income/equity ratio, 3) refinement and selection of fund vehicles for each asset class and finally 4) implementation of the plan, investing regularly and rebalancing diligently.

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