

# Funding Your Child's Education with Unit Trusts

*With the cost of overseas education rising each year and inflation eroding the purchasing power of money, how much do Malaysians need to save and invest to fund their children's education? This article shows you how to draw up an education investment plan using unit trusts as the investment of choice.*

By Charles Goh

**F**inancing your child's education is one of the major investments that any wise parent is prepared to undertake. A sound university education is not only among the basic requirements to establish a good career; it can also form the foundation of your child's intellectual maturity for life.

We all start learning since birth and the brief period of academic education in our lives represents another landmark in a life-long learning process. But given the high cost of education and the competition to enter well-known universities, it is necessary to have an investment plan to fund our children's brief stint of three to four years in university. With the limited places available in local universities, many Malaysian students have wisely invested in university education abroad.

Faced with the rising costs of overseas university education, how can parents save and invest to finance the tuition fees, let alone the living costs? The depegging of the ringgit from the U.S. dollar last year is a welcome move for many Malaysian parents because under the flexible exchange rate system, the ringgit is likely to appreciate over the long term. This will help Malaysians reduce the cost of overseas education in popular countries such as the U.K., U.S. and Australia in the event the ringgit appreciates against these host

country's currencies.

## Costs & Benefits

Like every financial decision in life, we need to consider the quantitative aspects of the costs and benefits. Aside from the substantial non-economic benefits of a university education, the cost of education can be justified if it is less than the intrinsic economic value of the education.

This is calculated by first estimating the earnings the graduate will receive over his lifetime and subtracting that amount from an estimate of what he would have earned had he lacked his education. The excess earnings are then discounted at an appropriate discount rate back to graduation day. The resulting value is the intrinsic value of the university education.

Let's say, the graduate expects to earn an average annual income of RM200,000 over a 30-year career before retiring at 55 years old. If his alternative non-graduate career could yield an annual income of RM50,000 over the same period, then the excess earnings amount to RM150,000, which when discounted at say an inflation rate of 6 percent, results in an intrinsic value of RM2 million. That is an estimate of how much your child's university education could be worth in terms of future earning power.

## 6-Steps Process

Once you and your spouse have made up your minds to send your child to university, you should be committed to a consistent, long-term financial plan. There are six basic steps to planning for your child's education:

### (1) Nominal Cost of Education:

Estimate the total nominal cost of education including living expenses for the entire period at university. The university and the country chosen will make a huge difference given the different costs of studying and living in various countries. If you have yet to decide on the country, you can take an average of university expenses in three popular countries (e.g. U.S., UK or Australia);

### (2) Real Cost of Education:

Estimate the real cost of education by discounting the nominal cost by a projected inflation rate over the investment/saving period. Table 1 shows the average nominal cost of studying in Australia/Britain/U.S. is about RM330,000 over a three year course (i.e. RM110,000 per annum).

Projecting an inflation rate of 6 percent over 20 years, the real cost of RM330,000 in 20 years' time is about RM1.06 million. This is obtained by the formulae  $= 330,000 \times (1+0.06)^{20} = RM1,058,355$ . Among the three countries, the real cost of tuition and living expenses is estimated to range

**Table 1: Cost of Overseas Education at Inflation Rate of 6% per year \***

	Nominal Cost in Today's Ringgit (Tuition & living expenses) RM	Real Cost in 20 years' Time (Tuition & living expenses) RM
Australia	210,000	673,498
Britain	350,000	1,122,497
United States	430,000	1,379,068
Average	330,000	1,058,355

\* note that medical degrees and degrees at major universities usually cost more.

**Table 2: College Education Plan for Three Different Scenarios**

	Plan A	Plan B	Plan C
Annual Estimated Cost (nominal terms)	110,000	110,000	110,000
Total Estimated Costs (nominal terms)	330,000	330,000	330,000
Inflation assumption	6%	6%	6%
Total Estimated Cost (real terms)	1,058,355	1,058,355	1,058,355
Expected Rate of Return on Investment	10.0%	14.0%	7.0%
Type of unit trust fund	Balanced	Equity	Bond
Monthly Investment required	1,376	847	2,010
Lump Sum Investment	158,753	74,085	275,172

between RM673 thousand (Australia) to RM1.4 million (U.S.)

**(3) Expected Return of Fund:**

Estimate the expected return of the education fund which you expect to achieve over the period of investment i.e. from the present to the time of enrollment into university;

**(4) Amount to Save:** Having estimated the cost of university education (including living expenses), the next main question is how much do you (and your spouse if both of you are working) need to save on a monthly basis to achieve the required funds when your child goes to university? Alternatively, you can ask what is the lump sum you require currently that will accumulate to the required sum of money. Calculate the required amount to be saved on a monthly or lump sum basis using a financial calculator or present value tables.

**(5) Assess Current Financial Resources:** Compare how much

savings is required with how much savings you actually have based on your current financial situation. Are current savings sufficient or is there a shortfall? If the savings suggested by the education plan is too high, you may have to raise your expected return for the investment with the potential of experiencing more risk (volatility) in the investment's return. Likewise, if you are able to save more than the required amount, you can accept an investment with lower but more stable returns.

**(6) Select the Investment Instrument:**

Finally, after adjusting your education plan to the appropriate expected return, you need to select the actual investment instrument that corresponds to the type of return and risk of that portfolio. Unit trusts are the most appropriate investment of choice because unit trusts offer the benefits of professional management, diversification and liquidity.

Based on your risk profile and

objectives, you can select the more aggressive unit trust funds (e.g. equity growth funds or regional equity funds) to achieve potentially higher returns. This could be a good strategy in the first ten years of the education plan. After your fund has generated substantial returns, you can rebalance your portfolio by switching to bond funds as your teenager gets closer to university age. A regular savings plan is an effective way to enhance your education plan as it helps you to ride through the market cycles through the principle of dollar cost averaging.

**Three Different Rates of Return**

As shown in Table 2, there are three alternative plans depending on three different rates of investment return required. You can select a balanced fund which provides a return of 10 percent per annum. (Plan A), an aggressive equity fund which could provide an expected return of 14 percent per annum. (Plan B), or a fixed income fund which could yield

a steady but moderate return of 7 percent (Plan C).

Let us suppose the annual nominal cost is RM110,000 per year, giving a total sum of RM330,000 for three years of education (as discussed earlier in Table 1). The three different plans (A,B,C) correspond to different rates of return on three types of unit trusts - equity funds, balanced funds and bond funds. The lower the expected return from the education, the larger the amount you must put away each month.

In Plan A, your child is currently an infant and he is therefore likely to go to university in 20 years' time. If you expect your child's education fund to achieve a 10 percent per annum return compounded for 20 years, how much do you require to save for the fund? The answer is to RM1,376 per month. This result can be obtained either by a financial calculator or a discounting factor table.

Alternatively, if you wished to start

*“ The lower the expected return from the education, the larger the amount you must put away each month... ”*

education plans A, B and C can be compared in Table 2. Under Plan A, the parents can save RM1,376 per month or have a lump sum of RM158 thousand to put into the education fund. At these investment levels, the expected return required to achieve RM1.06 million in 20 years' time is 10 percent per annum. A balanced equity fund is selected to achieve this goal.

Under Plan B, the parents have decided to adopt a more aggressive investment plan for various reasons such as insufficient savings or simply because they have a more aggressive risk temperament. Thus, the parents can expect to achieve a 14 percent annual return from the education fund by investing only RM847 per month or a lump sum of RM74,085 to accumulate to the final value of RM1.06 million over 20 years. This

Under Plan C, the parents may be very conservative in risk appetite and therefore will only go for more stable returns at the cost of lower returns. At an expected return of 7 percent, Plan C requires RM2,010 per month or a lump sum of about RM275 thousand in order to grow into a final value of RM1.06 million.

### Three Different Time Horizons

Having understood the implications of three different investment rates of returns on your child's education plan, you may consider the implications of different time periods assuming you have ascertained your expected rate of return. Table 3 shows three different scenarios (A,B,C) corresponding to different ages of your child at which you start investing in his/her education fund. The illustration shows that the

**Table 3: College Education Plan for Three Different Scenarios**

	Child A	Child B	Child C
Current age	Infant	10	15
Years to university	20	10	5
Annual estimated Costs in nominal terms	110,000	110,000	110,000
Total estimated Costs in nominal terms	330,000	330,000	330,000
Inflation assumption	6%	6%	6%
Total estimated Costs in real terms	1,058,355	590,980	441,615
Estimated rate of return on investment	14.0%	14.0%	14.0%
Monthly Investment required	847	2,305	5,123
Lump sum investment	74,085	159,565	229,640

with a fixed lump sum of money at the beginning of the investment period and which will grow at 10 percent per annum to the target value in 20 years' time, you can also use the discounting factor table for lump sum basis. The lump sum required is about RM158 thousand, which will grow by a compounded annual growth rate of 10 percent over 20 years to result in a cumulative wealth of RM1.06 million.

The outcome of the three possible

plan's target return of 14 percent can be achieved with a growth or regional equity fund.

Compared to Plan A, Plan B's education fund has an expected return that is 40 percent higher and requires about 40 percent lower in regular savings because the higher return fund requires less money to reach the same goal. However, higher returns come with higher risks and Plan B may experience the greatest volatility (risk) among the three funds.

less time you have available to grow your education fund, the larger the amount you must put away each month.

Child A is an infant and has about 20 years for the fund to grow at a return of 14 percent per annum to reach RM1.06 million. For 10-year old Child B, whose education fund has a shorter investment horizon of 10 years to reach before university, the real cost of

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education is lower at RM590,980 because there are fewer years for the cost of education to escalate (i.e. using the same formulae, real cost =  $330,000 \times (1+0.06)^{10} = \text{RM}590,980$ ).

Based on a 14 percent investment return, the regular monthly savings required for Child B's plan is RM2,305 to accumulate to the final value of RM590 thousand. Compared to Child A, Child B's education fund requires 2.7 times more in savings. This shows why it pays to start saving early, especially if you have more than one child.

The parents of 15-year old Child C have to fork out the most because the investment horizon is only five years. In this scenario, the education fund requires a hefty RM5,123 per month or a lump sum of about RM230 thousand in order to grow into a final value of RM442 thousand.

As a rule of thumb, you should choose the type of investment fund based on your child's age. The more aggressive funds can potentially make higher returns. You can transfer profits from riskier unit trusts to safer ones as

your child grows closer to university age. When your child is young, invest in equity growth unit trusts to maximise growth over the long term. As your child grows older, you may move to more conservative funds such as balanced funds or medium-term bond funds. By the time your child approaches university age, time your investments to mature when the tuition bills are due.

### Conclusion

As you can see from the two illustrations, your investment period and rates of return are two important factors to consider in achieving your child's education plan. Clearly, there is no guarantee that aggressive equity funds can consistently deliver 14 percent per annum (this rate was assumed based on the historical record of equities). Looking at the various investment instruments available, unit trusts should be one of the main investment instruments because unit trusts, when invested properly, do deliver double-digit returns over the long-term. In the case of an education fund, equity unit trust funds offer reasonably good hedges against inflation. Other potential investments could include properties or Real Estate Investment

Trusts but the potential returns of these instruments are comparably lower.

To be safe, it is prudent to have a realistic expected rate of return of say 10 percent -15 percent for equity funds over the long-term period. This is because in the event your education fund exceeds its expected performance, you can switch out early into a more diversified fund or a bond fund to lock in the profits.

Finally timing plays an important role in your child's education plan. If the timing of entry into unit trust funds happens to be when the market cycle is at the start of a long-term rally, then you may well achieve better-than-expected returns. However, entering the market at its peak is a recipe for poor returns in the future. Fortunately, the Malaysian economy is poised to enjoy a period of healthy growth on the back of strong regional economic growth in the next ten years. Equity unit trust funds, whether invested locally or in regional markets, offer the best opportunities for your child's education fund to reach its desired goal. 