

# Hidden treasure

KNOWING OUR OPTIONS IS AN ESSENTIAL FOUNDATION FOR MAKING BETTER DECISIONS. DOUG WILLIAMSON EXPLAINS HOW TO IDENTIFY AND EXERCISE VALUABLE REAL OPTIONS TO BENEFIT YOUR ORGANISATION AND YOUR CAREER

One of our most important decisions is whether or not to invest money and time into professional learning and other business opportunities. Identifying real options often helps, by revealing substantial value that is ignored by more simplistic approaches.

## Value of choice

The unique value of options is that they give rights, but not obligations, to exercise potentially beneficial choices. If we hold a financial call option, we enjoy the right to buy a traded asset for a pre-agreed price. If the market price is favourable, we will exercise our option to make a gain. But we're not obliged to exercise the option if market prices are against us.

This right to choose is an asset, which has a value. This is the value of the option.

## Say 'yes' if it's free

Like most assets, the value of an option for the holder cannot be negative. Therefore, the option will always be worth something, or at worst nothing. But it is never a liability. For this reason, the existence of any embedded options in our favour will always add value to a project.

If we were lucky enough to be offered an option for free, we would always be rational to accept it. It may also be worth paying to acquire some types of option, depending on the price.

## Why are real options ignored?

Many practical situations give us options, which may not always be recognised or valued appropriately. Perhaps it is the perception

that options are complex, or difficult to value, which means they go unrecognised or undervalued.

## Why should I bother?

For example, studying for a qualification will not normally result in an immediate cash benefit. Indeed, it will cost both money and a substantial investment of our time. Our wise investment of time will hugely increase our options for making future career choices, however. Our career options may not be precisely quantifiable, but they are extremely nice to have, and they have enormous potential value if we exercise them rationally.

## Expanding horizons

Many projects, such as opening a business in a new market, contain an option to expand. For example, a fictional Project P has a negative net present value of \$(12)m and an embedded real option to expand, worth \$68m.<sup>1</sup>

The total value of this project, taking account of the option to expand, is:  $68 - 12 = \$56m$

## Don't reject too soon

A simplistic net present value analysis would have rejected this project, because its net present value is negative. We should still consider it, however, because it potentially adds \$56m to the value of our organisation.

As the option to expand is worth \$68m, it might be beneficial to spend up to \$68m, but not more than \$68m, to acquire it. For

Project P, the price of acquiring the option, worth \$68m, is the expected loss of \$12m on the first phase of the project.

It would normally be a good idea to spend \$12m to acquire an asset worth \$68m, so we should consider undertaking Project P.

### Expand, abandon or delay

The real option to expand a project is a type of call option. A real option to abandon is a type of put option. We can calculate values for real options using general principles of valuing conventional call and put options.

Calculated real option values need to be treated with caution, though. The inputs to the valuation are not so reliable or observable as for conventional options over traded assets.

### In the frame

Let's illustrate a real options framework by planning an answer to a recent assessment question.

Explain the nature of the embedded real options in many projects subject to investment appraisal.

*Financial Maths and Modelling (FMM), April 2014, Q7 extract*

### Three for starters

Three options are embedded in many projects subject to an investment appraisal. These are the Real options to Expand, Abandon or Delay. If you like acronyms, the initial letters spell READ.

An outline answer plan could include the notes set out in the table below.

Option to	Description	Valuation
Expand	Present in most projects. Start small to keep commitment relatively low. If all goes well, scale up.	Call option.
Abandon	Valuable when outcomes are poor. A possibility if there is a fallback position that generates more than just 'walking away'.	Put option.
Delay	Only if we have exclusive rights, which ensure the project remains available during any period of delay.	Call option over income-producing asset.

### Other options

Owners enjoy other real options, too. For example, a switching option is the possibility to switch resources from one type of activity to another. This adds more value to investments which can be put to alternative uses.

### First time for everything

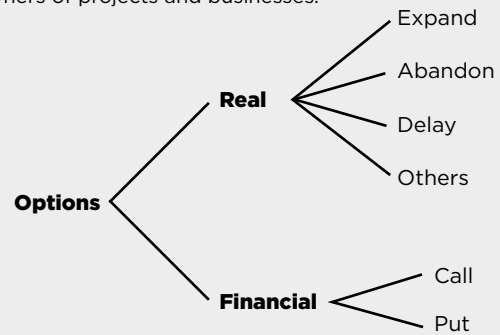
This newly assessed topic received a low average mark.

This is the first time that real options have been covered in the exam, although the material has been in the syllabus for some years. Well-prepared candidates coped well, while others had clearly not covered material that had not appeared in the exam before.

*Examiner's report, FMM, April 2014*

## Real options

Real options are the valuable operational choices available to the owners of projects and businesses.



The examiner's comments highlight a key preparation strategy. You need to engage actively with all of the study material in the course. Most ACT assessments give no choice at all, or very limited choice, about which questions to answer. So negative 'question spotting', skipping topics in the hope they won't be assessed, is not a smart choice. Build in as many safety margins as you can in your preparations.

### Award yourself options

Aiming to do the minimum necessary work to secure a pass may be an unconscious or pragmatic choice for some of us, with limited available study time. But a better choice is to study hard to enjoy the best learning we can, to create a future with many more attractive options.

Recruiter Robert Half recently noted that, when hiring finance professionals, '...the best candidates frequently receive multiple offers and counter-offers when they look to move jobs'.

*The Treasurer, web exclusive, February 2015*

### Distil complexity into simplicity

Having mastered the fundamentals of real options, you will also be well prepared to explain them to senior non-technical audiences considering major investments. David Tilston FCT, group finance director, advises: "Communication, particularly with the CFO and up to the board, means distilling complex decisions down into very simple decisions that a board can understand."<sup>2</sup>

<sup>1</sup> Based on *Financial Maths and Modelling* April 2014, Q7. This topic is also an important part of the Diploma in Treasury Management.

<sup>2</sup> *The Treasurer*, February 2015, page 36.

## HELP FOR ACT STUDENTS

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**Doug Williamson is a treasury and finance tutor. He enjoys seeing you exercise valuable options to your advantage**