Development Economics and Viability

This fact sheet is intended for the use of town planners working for planning authorities. The concept of this fact sheet is to provide key information on the subject, combined where relevant with instruction on how to undertake specific actions or tasks.

Introduction

Development will not take place unless it is viable. This means that a development proposal is predicted to generate an enhanced land value and a profit for the developer. In simple terms, the anticipated value of the completed scheme has to exceed the costs by sufficient margin to satisfy those parties investing their money in the project and produce a sufficient return to the landowner.

How do you model a development project to predict viability?

By estimating the sale price of the completed scheme and deducting all your costs (including the profit that you require) to arrive at how much you can afford to pay for the site. Effectively, demand for the product drives the "top line" value which in turn dictates the land value. The developer has to make a profit and the costs will depend upon the type of site, for example, greenfield or brownfield and the quality/specification of the buildings.

Development appraisal is the general term given to financial models to test viability. Developers tend to use two main methods; residual valuation and discounted cash flow (DCF). The residual method is used to calculate how much can be paid for a site and once it is acquired, the potential profit that can be achieved. Its limitations are dependency on many variables and also that it produces figures which are merely "snapshots in time"; no account is taken of the value of money over time.

The alternative, more sophisticated method is DCF. This tends to be used for larger, mixed use schemes with long build-out periods and takes account of the value of money over time; hence its name. If a prospective developer requires a particular minimum profit level then this can be applied in the DCF to test viability.

Once a site has been acquired, a developer will re-run the DCF periodically to ensure that a scheme remains profitable and to reflect any changes to the principal assumptions e.g. value fluctuations, cost savings or floorspace /dwelling type substitutions dictated by changes in demand.

Values, costs, profit level and risk

It is crucial to appreciate the vulnerability of these models to the quality of inputs/assumptions that are made. Experienced developers will have their own databases of information and some developers take advice from chartered surveyors who are active in buying and selling land and buildings suitable for redevelopment on behalf of clients. Evidence of transactions for the same or similar property type (referred to as "comparables") provide the best evidence of value to input into the model.

Any cost which the developer anticipates will be incurred over the lifetime of developing out the proposals must be included in the model. Construction costs can be obtained from a quantity surveyor or by consulting a widely available index such as Spons or the RICS building cost index. If there are likely to be problems with e.g. ground conditions or an untried design then a sum for contingencies may be included.

What is a "normal" profit level? One has to be included in whichever appraisal model is used otherwise the developer will be working for nothing! A typical allowance is 17% - 20% of capital value although lower or higher figures may be appropriate depending upon various factors but principally the degree of risk envisaged by the developer.

So what is risk and how is it factored into development appraisal? The 17% - 20% range referred to above is a "norm" and will generally be the minimum return that a developer looks to receive from investing in property development. If a potential project is perceived to be a greater risk, e.g. if it is in a location of unproven demand or political instability then the return sought is likely to be higher than 20%. Demand may, of course, change over the construction period and the developer may receive more than 20% when the completed development is sold. Conversely, the return may be lower. Property markets can fluctuate like any other market and the asset – property – is competing for capital with other investments e.g. equities, securities etc.

A typical residual valuation for a 1 ha site for 24 houses

Completed value of project less all costs (inc. profit) equals maximum price to be paid for site

Completed value of project	GDV (Gross Development Value), 24 x £300,000	£7,200,000
Less all costs (inc. profit)	Costs • selling (agent + legal) • site preparation • construction • internal roads + pavements • landscaping • professional fees (say 12%) • finance (borrowing) • profit @ 20% (of net GDV) • purchase (agent + legal)	 £ 288,000 £ 25,000 £2,340,000 £ 550,000 £ 300,000 £ 385,800 £ 252,056 £1,382,400 £ 48,837 £5,572,093
Equals maximum price to be paid for site	Land value	£1,627,907 (equivalent to £658,805 /acre)

The roles of the landowner and developer

Developers use their knowledge of demand for particular kinds of property and the processes involved in development to deliver new buildings. Developers achieve a return (profit) for the risk that they take. The raw material is land. Landowners sometimes take on the risk involved by acting as developers but they more often enter contracts with developers to receive a value for their land based on the new use with the benefit of planning consent.

All costs including financial contributions required within a planning consent before development can proceed should be factored into a development appraisal by the developer. Unless unforeseen demands for contributions can be deflected by the developer then development may be stifled. If the landowner is unwilling to bear the additional unforeseen contribution then development will not take place.

Sensitivity Analysis

This is the process of changing key variables or assumptions in the appraisal to see how the residual answer changes. The two key variables are sales price e.g. per house or rent for commercial floorspace and cost. The more complex a scheme is, the more uncertain it will be as each variable in the residual valuation possesses a greater possibility for change. Some form of sensitivity analysis should always been taken.

Viability in a rising or buoyant property market and conversely in a falling or stagnant property market

Generally, developers will take an optimistic view about returns from development when property markets begin to rise and there is tangible evidence of an increase in demand. Monitoring the “pipeline” of supply of e.g. un-let commercial floorspace or housing land is vital to inform developers’ investment decisions. Conversely, developers put such decisions “on hold” or turn opportunities down altogether in a falling or stagnant market when there is doubt over anticipated returns.

The significance of demand

Without demand, projects will not be started or completed. The level of demand can fluctuate dramatically; demand for office space, for example, is related to fluctuations in the economy. If a developer misjudges the estimated demand from occupiers or the economy takes a turn for the worse, the developer is unable to get a tenant or sell the houses that have been built. If the development is a block of flats, the financial outlay is potentially greater because the block has to be finished before any of the units can be sold.

What is the impact of contributions required by the planning system on the economics of development?

Contributions sought by planning authorities are often financial e.g. towards education, maintenance of open space, etc or seek the transfer of land from the applicant towards e.g. affordable housing, open space, cemetery etc. Someone has to pay for the contribution and there is an opportunity cost to development value if land is transferred to the planning authority or another party at less than its market value.

The developer i.e. implementer, has to make a profit; if there is not a prospect of making the requisite minimum return then the development scheme will not be undertaken. (*The requisite return is influenced by rates of return on different investments e.g. bank, building society savings and stock market returns.*)

Ultimately, the cost of contributions is deducted from the land value that has been enhanced through receipt of planning consent, whether it is paid directly by the landowner or indirectly if the landowner has concluded missives with a developer.
The landowner has to be willing to forego part of the enhanced value for development to take place. When land values are falling and developers are less willing to bear the risks involved in development then there is a risk that landowners will withhold their land and wait for recovery in demand. If councils continue to seek contributions in the face of falling demand and loss of confidence or increase the levels of contributions, this behaviour runs the risk of stifling land being brought forward.

The significance of cash flow to development viability

Development takes time to implement and complete. Greenfield sites have to be serviced or existing services such as water, sewerage and electricity upgraded. Access road(s) have to be constructed and buildings erected. And all of this usually takes place before the developer receives any income. Brownfield sites generally have a different “cost profile” caused by demolition, site clearance, de-contamination etc. At the beginning of a development project a developer (implementer) can be substantially out of pocket with a negative cash flow. The funder, often a bank, will have lent a significant sum to reach this point based, in the housebuilder’s case, on an anticipated rate of unit sales per month. The housebuilder, his/her funder, suppliers of materials and the builder’s workforce are all at risk if sales rates do not go according to plan.

The risk in building flats is greater than houses because, generally speaking, all of the flats need to be completed before any are sold. Therefore, the negative cash flow continues for a longer period.

In an economic climate where funders are more nervous about financing development and therefore require a higher rate of return to reflect higher RISK, confidence is lower which in return means a lower level of project starts. In these circumstances the timing of financial contributions in a section 75 agreement becomes significant. “Frontloading” such payments at the start of development can materially

harm the viability of schemes. It is important to understand the developer's perspective. Development will not take place if there are doubts over its viability during the construction through to completion.

As well as complying with the requirements of Circular 1/2010, planning authorities should work together with developers to schedule the timing of contributions to ensure that overall project viability is not threatened. Anticipated land value and the developer's profit level should not be subject to scrutiny; the timing of payment of financial contributions should be based in the case of residential development upon predicted sales rates per month/year. If these rates do not materialise then the agreement has to contain provision to postpone payments until market conditions improve. In the case of commercial development, payment of contributions has to be linked to receipt of income by the developer, whether upon receipt of rental income or onward sale of the completed asset.

Summary

Before a property development is started a prudent developer will have prepared a financial model to ensure that the project is viable and delivers an adequate profit level. This model contains assumptions about how much the project will be worth when it is completed and how much it is going to cost to build. All costs which the developer envisages must be included in this appraisal. A required profit level, generally 17% - 20% will have been built into the model.

The developer is at risk for the length of time it takes to build out the scheme until it is sold. Market conditions and particularly demand can change significantly between the start and completion of a project.

Financial contributions or transfer of land at less than market value required by a Council in return for planning permission impose a cost, or opportunity cost, on development. The prudent developer should factor these matters into his/her development appraisal. Failure to do so may render the project unviable or dissuade the landowner from permitting the land to come forward for development.

In a period of low demand and perception of high risk, planning authorities should discuss the timing of contributions with applicants for planning permission to assist in maintaining viability.

Further information

- Further information on development viability can be found on the Scottish Government planning web-site - www.scotland.gov.uk/Topics/Built-Environment/planning
- Draft Guide on Development Viability - www.scotland.gov.uk/Topics/Built-Environment/planning/modernising/cc/DViability

Acknowledgement

This fact sheet was written by Andrew McCafferty Associates on behalf of the Improvement Service.

This fact sheet was published in February 2011 and is part of a series of fact sheets by the Improvement Service.