Investment Appraisal for Quinn Limited

Compare and give recommendations as to which option for expansion would be the most beneficial to Quinn Limited and provide information on the sources of finance that could be used to fund the project.

Option 1
Build a new factory for the purpose of fulfilling the 15-year contract at the end of which the factory will be sold.

Option 2
Expand the current factory to include facilities to produce the new product.

Introduction
The aim of Investment appraisal is to help companies make decisions on which project they should invest in. The objectives of investment appraisal are to investigate whether: -

1) Capital investment is justified in terms of the expected returns
2) Any alternatives exist which should be chosen
3) In cases of fund shortages which project should be undertaken

There are four main methods of appraisal that should be looked at: -

1) Net Present Value (NPV)
2) Accounting Rate of Return (ARR)
3) Pay Back
4) Internal Rate of Return (IRR)

Net Present Value
The first calculation we shall look at is Net Present Value. Net present value is a calculation of how much value the investment will result in. If the Net Present value is a positive amount then the project should be undertaken. When being used to determine which mutually exclusive project to undertake the project with the highest NPV should be chosen. Net Present value is a widely used calculation as it allows for the "time value of money" and allows alternative proposals to be ranked in order of attractiveness. The main disadvantage of NPV is that it requires the company to calculate an interest rate to use when appraising investment opportunities. The interest rate is usually the companies Weighted Average Cost of Capital (WACC). WACC can change and if it does the NPV will have to be re-calculated as the original figure would no longer be valid.

Accounting rate of Return
When using the ARR for mutually exclusive projects the project with the highest ARR should be chosen. However it should also be checked that the ARR meets the minimum requirement. Although ARR is widely used the calculation does not consider the length of the project, the working capital required or the timing of the cash flows so does not carry the same importance as NPV.

Pay Back

Pay back is the time it takes to pay back the initial investment from the profit before tax. When using pay back to analyse two mutually exclusive projects the project that pays back the investment in the quickest time should be chosen. However there are some disadvantages to pay back. Firstly any cash flow received after the investment is paid back is ignore with this method and secondly Pay back does not take into consideration the timing of the cash flows or the value of the project. So although the project may pay back in the quickest time it may also have the lowest return.

Internal Rate of Return

Internal Rate of return is the discount rate that if applied to the cash flows of the project would return a net present value of zero. Having calculated the IRR the company can then accept any projects with an interest rate lower than the IRR and reject any projects with an interest rate higher than the IRR. Again in the case of mutually exclusive projects the option with the highest IRR should be chosen because it means the interest rate will be able to go up further before the NPV reaches zero.

Analysis

The table below shows the results for both Option 1 and Option 2. Please see appendix for all calculations

	Option 1	**Option 2**
NPV	8,594,856	4,448,275
IRR	26.56%	17.51%
ARR	16.44%	34.63%
Pay Back	7 years	6 years

The Net Present Value calculation has the greatest importance. As you can see from the table the Net Present Value of option 1 is substantially higher (over 50%) then Option 2, this suggests that the company should undertake option 1 as the project would return more profit. Option 1 also has a higher IRR that means that the project would return a positive NPV as long as the interest rate associated with the project remained below 26.56% this is again better than option 2 which should only really be considered as longer as the interest rate remained below 17.51%. Option 2 does however have a quicker Pay Back period (6 years compared to 7 years) but as discussed above Pay Back does not take into account any cash flows after the initial investment has been paid back or the timing of the cash flows. Although many companies look at the Pay Back period it does not rank highly when looking at whether or not to undertake a project. Option 2 also has a higher ARR, 34.63% compared to 16.44%. Again however ARR does not take into account the length of the project, the timing of the cash flows or the amount of working capital needed for the project so it does not carry the same importance as NPV. As NPV has the greatest importance when looking at investment appraisal with the figures above in mind it is recommended that option 1 be undertaken.

Recommendations for Financing the chosen option

There are two forms of finance that the company can use for a long-term project such as this, debt finance or equity finance. Both options can be used individually or they can be used jointly. When considering which form of finance to look at it is important to consider the user of the finance and the provider of the finance. The provider of the finance is making an investment with their money and as such would require a return on that investment. The return on the investment is to compensate for the risk being taken by the investor, for more risky projects the investor would require higher returns to compensate for the loss of opportunities such as interest if the money was invested in a savings account instead. The user of the finance needs to ensure that the project is able to satisfy the return required by the investor for example with equity finance dividends are paid which would provide and income and with debt finance interest is paid to the provider. Debt and equity each have there own cost and the average cost of all the different debt and equity is called the Weighted Average Cost of Capital (WACC). Companies when assessing the viability of capital expenditure projects use this figure.

Equity Finance

Equity finance comes in a variety of forms and is the most common form of borrowing for small businesses. Equity finance is permanent source of finance; it does not have to be repaid by the company it can however be transferred by the borrower via the stock exchange. Equity finance ranks very low if the company goes into liquidation and as such investor require a high rate of return. Below is an explanation of some of the more frequently used forms of equity finance.

Ordinary shares - this investment will come from private investors (family/friends) or investors via the markets (stock exchanges) depending on the size of the business. For a private company the only way to raise funds through issuing shares from investment from family and friends. For the larger public companies it is relatively easy to raise funds through issuing shares, as they will be floated on the stock exchange. Companies floated on the markets (stock exchange, alternative investment market, etc) can raise equity finance a lot easier than private companies. The most common way to raise equity finance is with a rights issue. Existing share holders are given the right to buy new shares in proportion to the shares they already have. The other option is a public share issue where shares are offered to the public in general. A public offer extremely expensive as the shares have to be advertised and information on the company needs to be provided to any one interested in the shares.
Venture capital – can be provided by an individual or by a venture capital fund. Venture capital is about generating a high return for the investment. Venture capitalist supply large sums of unsecured financing in return for company shares.
Business Angels – like venture capital a business angel will provide large sums of finance in exchange for company shares. The business angels are

usually wealth individuals who look for more than financial gain. These deals are usually more personal and less formal than ventur e capital

Both venture capitalist and business angels may stipulate a position on the board as a condition for the finance. In both cases this may be beneficial to the company as they would bring experience and expertise that otherwise may be missing.

Advantages of Equity Finance
No fixed charges, dividends are only paid if the company makes enough profit.
Finance is permanent; the company does not have to repay it.

Disadvantages of Equity Finance
Issuing new share dilutes the control of the existing shareholders.
Dividends are not tax deductible and can therefore be more expensive than debt finance.
Venture capitalists and business angels may insist on a seat on the board.

Debt Finance

Debt financing is straight forward lending. A lender advances a sum of money to a business and charges interest on it. Debt finance comes in a variety of forms.

Loan – a fixed sum is lent to the business for a fixed period of time. The loan is usually repayable in instalments and interest is added to the amount repayable. Loans can be secured or unsecured. Secured loans usual have a low rate of interest than unsecured loans as they are less risky. If the business defaults on a secured loan the lender has rights over the asset that the loan was secured upon.
Overdraft – attached to the business bank account, the business can withdraw money over the balance in the account up to a fixed amount that is repayable at will. This form is especially useful for the business trading account where cheques are draw and paid in frequently.
Debentures – A debenture is simply a loan. Debentures usually give a fixed or floating charge over the companies assets as security although some debentures may be unsecured (the stock exchange requires these to be listed as unsecured loan stock). A company may produce an individual debenture that will be for a large sum of money from one lender or it may produce a large number of debentures known as debenture stock. Each lender will receive a debenture stock certificate.
Sale and Lease back – this involves selling assets (usually property) to financial institutions, the seller although giving up ownership rights will then arrange a long-term lease for the premises with the new owner.

The company should always look at the terms of the le nding to ensure that: -

1) They can afford the interest repayments
2) The interest payment are in line with the market (not too high)
3) Are there any penalties for repaying early

In the case of secure loans the company also needs to take into account and restrictions the lender places over the assets secured e.g. securing other finance on the assets or restrictions on what the company is allowed to do with the assets.

Equity Finance v Debt Finance

When look at whether to finance a project through equity or debt f inance the company needs to look at the cost. Debt finance is less risky than equity finance so therefore the cost of debt finance will be less. Debt is less risky for the provider because interest has to be paid on the debt whereas dividends are only paid on equity if the company makes enough profit to allow it to do so. Debt is also less risky as it has to be paid back after a specific time period whereas equity finance is not paid back by the company. Equity finance can only produce capital gains for the provider if the company is successful and the providers' shares in the company can be traded for a higher value than what was invested. Debt finance is usually secured on the assets of the company. This means that if the company defaulted on payment of the debt then the lender will be able to use the assets that secured the finance to repay the debt. Debt also ranks higher should the company go into liquidation. The company must pay back all debt before it can pay its equity finance so more often then not if a company does go into liquidation the equity financers will not be repaid. It can be suggested therefore that if a company wishes to minimise its cost of capital then it should have a much debt as possible. However adding more debt into the g earing can have an effect on the equity finance that already exists within the company. Increasing the debt in the company will increase the cost of equity even further as less cash will be available to pay dividends due to the extra interest that will ha ve to be paid. This will lead to greater risk and uncertainty for the equity providers and greater risk will mean that the equity providers would require greater rewards which would thus increase the cost of equity to the business.

It is recommended that to maintain the Weight Average Cost of Capital the company should look at equity and debt finance to raise the capital for the planned project. As Quinn Limited are not floated on the stock exchange it is not possible to raise the capital by issuing shar es on the stock exchange. Also due to the large amount of capital require for the project it is unlikely that any friends are family will be able to offer the capital. It is therefore suggested that a proportion of the investment needs be raised through venture capital or business angels. Both forms will be able to invest the large sums of money required and will be able to bring expertise and knowledge to the business. It is also recommended that the remainder of the capital be raised through debt finance in the form of a secured loan. The company has assets that the loan could be secured on which would reduced the interest payable and capital allowance is also allowed on debt finance which would reduce the company tax bill.