Journal of
Business & Financial Affairs
ISSN: 2167-0234

Narayana and Ramiah, J Bus Fin Aff 2017, 6:2
DOI: 10.4172/2167-0234.1000265

Research Article Open Access

Viewing the Purchase of Dental Practices in Australia through a Finance Lens

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Abstract

Most private dentists are faced with the decision to purchase a dental practice at some point in their career, and are usually ill equipped to undertake the necessary capital budgeting decisions, including the valuing of the practice. Valuations of dental practices are usually done according to industry rules of thumb by the dentists themselves or according to accounting principles by accountants who often have little knowledge of the industry. These traditional techniques tend to value practices as a sum of their tangible and intangible assets, rather than in terms of what a prospective buyer is interested in: the potential to generate an income stream. Finance principles can be used to value a practice according to its cash flow potential and to help decide whether the investment in a particular practice should be undertaken. This paper proposes the use of net present value analysis to calculate the value of a dental practice using recent developed asset pricing models, and to evaluate its potential as a future investment, and also examines trends in the Australian market through a finance perspective.

Keywords: Dentistry; Net present value; Discount rate; Risk; Return; Valuation

Introduction

The dental landscape in Australia is still dominated by private practices owned by individual dentists or small groups of dentists. Most young private dentists eventually find themselves considering whether to purchase a dental practice, or a share in one, at some point in their career. This incredibly important career decision is often made out of the desire for clinical and managerial autonomy, as well as the desire for greater financial reward. Dentists often have little finance training and are usually ill equipped to undertake the rigorous financial analysis that would be required in such an important capital budgeting decision. In order to guide them through the process, especially the valuation of the target practice, dentists often turn to accountants or industry experts who use traditional accounting techniques or industry rules of thumb. These methods usually fail to truly value the practice in terms of what the buyer ultimately wants, a future income stream, and are also deficient in evaluating the risk considerations of the investment. This paper examines these considerations, discusses the various practice valuation methods in use, and proposes a method, based on finance principles, to help young dentists decide whether to invest in a dental practice.

Methodology

Risk and return considerations

Young dentists would usually consider practice ownership if they had limited employment opportunities as an employee or contractor, or if they were dissatisfied with working under such arrangements and sought the financial rewards and potential for autonomy that come with practice ownership. Having decided to become one, they must first determine whether to start a practice or buy an existing one, and from a finance perspective, must consider how quickly the cash flow of an existing practice can be replicated by a start-up [1]. Buying an existing practice is usually the less risky option in terms of guaranteeing cash flow, provided the buyer's billing and managerial capabilities are similar to the vendor's [2]. This is because dental patients usually tend to remain at a practice even after a change in ownership, provided there aren't significant changes in the nature of the new dentist and style of the treatment offered [2]. Given that the cost of starting a practice is often equivalent to purchasing an existing one, the latter option offers greater financial return on investment, especially in the time period immediately after the purchase, particularly if young dentists purchase from vendors with similar styles and values [2].

If the decision is made to take the less risky option and buy an existing practice, the prospective purchaser must choose a suitable target based on factors such as its location, the type of dentistry offered, the values of the vendor, the demand for dental services in the practice service area, the number and demographics of the patient base, and any existing affiliations with health insurance companies [1,3,4]. As well as these external characteristics, the potential buyer would have to assess his or her billing and managerial capability and compare it to the vendor's [5]. Collectively, these external and internal characteristics will determine the risks associated with investing in the practice, specifically, the risk that the continuous stream of cash flow desired by the purchaser would not be realised. Finance principles dictate that the level of risk associated with an investment option should be matched by the return, or financial reward associated with it [6]. In the case of a capital budgeting decision, a buyer would wish to pay less for a risky investment to compensate with the risk of future financial reward not being realised. Thus according to these principles, young dentists should be willing to pay more for practices with large, secure patient bases run by dentists with similar clinical abilities to themselves, and less for practices that have small patient bases that are maintained by affiliation with insurance companies or that are operated by clinicians with very different styles and abilities to themselves.

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Received April 16, 2017; **Accepted** May 08, 2017; **Published** May 18, 2017

Citation: Narayana T, Ramiah V (2017) Viewing the Purchase of Dental Practices in Australia through a Finance Lens. J Bus Fin Aff 6: 265. doi: 10.4172/2167-0234.1000265

Current practice valuation methods

The value of a practice can be calculated according to a number of different techniques, but the ultimate sale price depends on whether the market forces at the time favour buyers or sellers, and thus, may not correspond to the value calculated [7]. The current over supply of dentists, especially in urban areas, favours sellers, and prospective buyers are being asked to pay larger amounts of money than their predecessors - the dental paradox. Given this fact, it is prudent for young dentists to familiarise themselves with the techniques used to determine where the value in the practice lies, and what it equates to in numerical terms. The following methods are the most commonly used in the industry.

Gross revenue composite multiplier method or summation of assets method: This method values a practice as the sum of its tangible and intangible assets [2]. The tangible assets are the office and dental equipment and the intangible assets are the quality of the staff, existing protocols and policies, as well as goodwill, which is the propensity of patients to return to the practice [8,9]. The numerical value of the office and dental equipment can be difficult to determine, as it can be calculated according to acquisition price, book value, replacement value, or street value, leading to difficulties in calculation [10]. Calculating the numerical value of intangible assets can be even more difficult, particularly the value of the goodwill, which is specific to a certain clinician and thus cannot really be sold [8,10]. Because of this difficulty, multipliers of gross annual billings are often used to calculate the intangible asset value [11]. The inaccuracies of this method are well documented [10,12].

Income capitalisation method or excess earnings method: Here the intangible asset value is calculated by dividing the earnings of the dentist by a capitalisation rate, often expressed as a percentage that measures the risk of the venture [9,13]. The potential risk of the investment is thus considered in this method when arriving at a value. The capitalisation rate is calculated as the sum of the risk free rate, the percentage risk of the business cash flow not being realised and a percentage for managerial burden [13]. Practice capitalisation rates can range from 20-30% but the rate to be applied to an individual practice would depend on the risk factors associated with it [9,13]. In the excess earnings method, the intangible value is calculated using the earnings less a nominal dentist salary, that is, the final accounting profit of the practice. The value of the plant and equipment, calculated according the methods previously described, is then added to give the final practice value.

Market approach: This compares the practice to others that have recently sold and that are perceived to be similar. A price/gross billings ratio is then applied to the billings of the practice to obtain a price [13]. This relies on being able to make a fair comparison of practice similarity, which is nearly impossible as two practices with similar annual billings could have extremely different expense profiles and long term growth potential [10]. While commonly used, this method is also inaccurate from a finance perspective and again, provides little information to the buyer about the possibility of a future income stream.

Discounted cash flow (DCF) method: The discounted future earning method takes into account projected future cash flows. It totals the future earnings, discounted back to the present value, at a discount rate appropriate to the risk of the venture [9]. Often the discount rate is calculated as the capitalisation rate, with an allowance for growth [13]. The discount rate has to factor in the time value of money, where money is worth less in the future, and also the risk of the business, which factors in the possibility that future profits are never realised at all [14]. Likewise, the cash flow projections have to accurately portray the billing capacity of the dentist, and allow for increasing expenses and capital expenditure [14]. Most authors advise a time period of five to ten years for the time projection due to the diminishing returns over time [13,14]. Using a DCF method usually produces a higher value than the other methods described above [14]. It can therefore represent the highest possible value that a buyer may be willing to pay. In our opinion, while this method often produces the largest figures, it is the most accurate from the buyer's perspective, as the value is determined in terms of future cash flow potential, which is the ultimate concern. Nonetheless, we criticise this approach for failing to consider other asset pricing models such as the Fama and French three-factor model, the Carhart four-factor model and the Fama and French five-factor model as dental practices tend to be small (size factor), well established practices with more experienced dentists continue to perform better (momentum factor) and is experiencing a trend whereby firms are merging (trend factor is discussed later).

Proposed method for valuing a practice and evaluating the risk of the investment

The flaws in all of the valuation methods are well documented [15]. However, from a finance perspective, valuation based on the cash flow of the business is the most accurate, as all the goodwill of the practice ultimately translates to cash, which is the main consideration of a potential buyer [1,15]. A method to determine whether to invest in a practice, based on a net present value (NPV) analysis, is proposed below. NPV analysis states that an investment should be made if the value of future cash flows, adjusted for risk at an appropriate discount rate, is greater than the cost of the initial outlay [6]. Thus, an investor should proceed if the NPV>0, and reject it, if NPV<0.

Step 1: Calculate the value of the practice using the discounted cash flow method, using the formula

NPV= -(Initial cash outflow)+(sum of all future cash inflows, discounted to present value using a discount rate of ten percent)

At NPV=0, the initial cash outflow would equal the present value of all future cash inflows. Thus the cost of a practice, or the value that a buyer should pay, is equal to the present value of the future cash inflows.

It is proposed that the discounted cash flow analysis should use the projected billing and expense profiles of the vendor, and not the buyer, as the purchaser should pay for the practice in its current situation rather than for its future potential. If buyers suspect that they are capable of bettering the billing of the vendor, it would be unwise to use their own figures and thus pay for what the practice may generate. Careful examination of the vendor's financial documents is required to obtain an understanding of cash flow fluctuations, supply costs, equipment replacement frequency and other expenses [16]. Given that most buyers aim to own the practice they buy for an extended period of time we propose that the buyer use the intended time period in the analysis. Thus if the buyer intends to keep the practice for twenty years, this time period should be used in the analysis. In calculating a discount rate, one needs to start with the risk free rate (around 3%), add a premium for investment alternative, and a company specific premium [8]. A discount rate of ten percent has been advised for dentistry as it is a relatively low risk business, and the receipt of cash payments is usually immediately at the time of billing [14]. Given that this step calculates the value of the practice under the current owner,

this discount rate is suitable, as the risk of future cash receipts not being realised under the existing owner would be low.

Step 2: Once the value of the practice has been determined, and agreed upon by the vendor and potential buyer, the buyer would usually seek finance for the purchase, usually in the form of a loan. Prior to the purchase, it is then prudent for the potential buyer to calculate the monthly repayments on the loan, and check whether he or she can afford the repayments by performing a top down personal cash flow analysis. The verification analysis should assume that the repayments are purely to be made from the cash flow of the business, and should ensure that the buyer would be left with what they consider to be a sufficient income after the loan repayments are deducted from the practice profit [9]. It is suspected that many young dentists focus too much on the asking price of the practice, rather than whether they or not they can service their purchase and end up struggling to meet their loan repayments or do so at considerable cost to their personal comfort.

Step 3:Finally, it is proposed that the buyer conduct an NPV analysis using the formula,

NPV=- (Cost calculated in Step 1)+(sum of all future cash inflows under the potential, discounted to present value using a discount rate of twelve percent)

We advocate a two percent increase in discount rate in this step to allow for the increased risk of cash flows not being realised under the potential buyer due to the possibility of patients and staff leaving the practice. The increased discount rate also accounts for the increased difficulty dentists experience in acquiring new patients and growing their patient base in the current competitive climate. The current owner would likely not depend on practice growth to maintain their cash flows as they could rely on their existing patients, but a new buyer would likely be dependent on growing their patient base to compensate for any losses in existing patients. The time period used should be the period that the buyer expects to own the practice, and thus the same as that used in Step 1.

From here, if the NPV analysis provides a result greater than zero, the buyer can feel comfortable proceeding with the practice purchase. While traditional accounting techniques might value the tangible and intangible assets more accurately, these assets are only of value to a buyer if they translate to cash flow, and it is for this reason that we propose that a net present value analysis using the DCF technique be used. It is also worth noting that value is distinctly different from price, as it is completely subjective, and the future success of the practice ultimately comes down to the clinical and managerial skill of the purchaser compared to the vendor. The NPV analysis technique, being forward looking, thus allows potential buyers to see the target practice as something that can be moulded to create future financial value.

The obvious flaw with using projected cash flow techniques is that it is impossible to accurately predict cash flow far into the future. However, the best indicator of future financial performance is immediate past performance, and thus using cash flow projections in Step 1, based on the vendor's billings into the future, is probably the most realistic way in measuring value in terms of cash, which is ultimately what the buyer wants. It is also impossible also for the buyer to project his or her own cash flow projections into the future. While the buyer may have knowledge of their billing capacity, the loss of patients due to the sale of the practice and the resultant drop in revenue, cannot be accurately predicted. Usually, these losses occur only in the first year or two, and if this is accounted for, along with foreseeable expenditure on increased marketing and practice refurbishment as a new owner, a reasonably accurate projection can be made in Step 3.

Current trends in the market

Australia is currently experiencing a wave of corporatisation in the dental landscape. Corporate entities, often private health insurance companies, are purchasing practices at a premium and employ clawback techniques such as requiring vendors to work for five years after the sale, in order to secure cash flow [5]. From a finance perspective, the purchase of practices by corporate entities appears to be an example of synergy in acquisitions. It can be assumed that the synergy comes from acquiring market share of the practice landscape, which can provide long term reduction in capital expenditure and other costs, and the ability to control prices if monopoly is achieved. Private health insurers may also use the provision of dental practices owned by them to attract new members, and thus increase shareholder value. However, it can also be argued that the increased prices paid by these entities are a more accurate reflection of their true worth. It is clear that an analysis based on future cash flow reveals a higher value than traditional accounting or industry rule of thumb methods, and it may be that the apparent synergy is actually the result of practices being valued according to finance principles by corporate entities that see the true potential of their investment. We argue that dental practices in Australia are actually under-valued when examined through a finance lens, and that market sale figures do not reflect their true worth.

Conclusion

The purchase of a dental practice is a major decision in the life of a dentist and not to be taken lightly. From a finance perspective, the decision to purchase a dental practice is a decision to purchase an income stream that ensures future financial security. While numerous accounting based techniques exist to value practices, we argue that discounted cash flow analysis offers the most realistic picture of the practice's worth in terms of its ability to deliver the desired income stream. Dentists are usually not well trained in finance, and often fixate on the cost of the purchase rather than seeing it in finance terms as an investment with risks and associated potential for return. The proposed capital budgeting method can be used by young dentists to methodically work through this decision making process. It is hoped that the proposed methodology and reflections on the current climate in Australia builds on the existing literature on dental practice valuation, and offers insights into how the investment process should be viewed.

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