

**VALUE ADDED RESELLERS IN INFORMATION TECHNOLOGY: TRENDS
IN ACQUISITIONS**

by

Adam Byard MacLean
Bachelor of Engineering, Lakehead University, 2008

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Approval

Name: Adam Byard MacLean

Degree: Master of Business Administration

Title of Project: VALUE ADDED RESELLERS IN INFORMATION
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Supervisory Committee:

Dr. Pek-Hooi Soh
Senior Supervisor

Dr. Jan Simon
Second Reader

Date Approved:

Abstract

The information technology (IT) hardware and software distribution industry has experienced a shift towards centralized services and lightweight applications over the past decade. In response, resellers of hardware and software are expanding their offerings into managed services through acquisitions. As a result, large firms are competing to build portfolios of services that meet their client's needs for fully integrated IT systems.

This report examines trends in acquisitions amongst software and hardware distributors and identifies factors that influence acquisitions of firms within the reselling industry. The purpose of this analysis is to develop a background that will allow an acquirer to begin to generate an assessment of the value of a firm.

The analysis component of this report describes a set of acquisitions over the past four years by market vertical, product portfolio, market share, and geography. Following that, a summary of trends in market forces is presented to provide an idea for what to expect moving forward if current market conditions persist. Lastly, a set of criteria is presented to aid acquirers in evaluating potential targets for acquisition.

Keywords: Mergers and acquisitions; M&A, finance; North America. Value Added Reseller, Software, IT

Dedication

"It's better to be lucky than good," Lamar Gillett, WWII Fighter Pilot

This report is dedicated to my parents, Janice Henrikson and Byard MacLean, and my grandparents, Guther and Verna Henrikson, and Harold and Marion MacLean, who have always stressed the importance of education and hard work. I am very lucky to have had their support, guidance, and the opportunities that they have provided me. I attribute any current and future success to having their influence in my life.

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Glossary

Core Capabilities	Core capabilities are the specific capabilities of a firm that are difficult for competitors to imitate and they contribute value to the products that a firm creates.
Enterprise Value	Enterprise Value is a firm's market capitalization, plus debt, plus minority interests and the cost of any preferred shares, minus cash.
GDP	Gross Domestic Product is the measure of net production of a country and is a particularly strong indicator of trends in mergers and acquisitions.
Internal rate of return	IRR is the rate that an investment pays for itself relative to the amount invested in the project.
Minimum effective scale	Minimum effective scale is the minimum size of a firm in a given industry.
Size Premium	If all other things are equal, larger companies are generally considered safer investments. Therefore, investing in them is less risky and yields a lower expected return. The size premium is the price investors pay for the safety of investing in large firms.

1: Introduction

1.1 The Objective of the Study

The objective of this study is to inform the reader of what is to be expected when engaging in acquisitions of value added resellers (VARs) presently and in the near future. The traditional business of VARs is the supply information technology (IT) hardware and software products and services. This study evaluates the emergence of alternative supply chains, which have negatively affected the value that VARs add to products over the past decade. VARs supply products through business-to-business channel sales to a wide variety of industries around the world. In these industries, VARs have traditionally been the primary providers of integrated IT products and training. The nature of this industry is highly competitive due to the universal demand for these products. As a result, net profit margins are thin and susceptible to market pressure from customers, suppliers, and competitors.

The purpose of the analysis component of this study is to assess the response to the previously mentioned market pressures in terms of acquisitions. Resellers are reorganizing through acquisitions into more operationally efficient firms. The results of the industry analysis is combined with the background of M&A strategy to create a valuation summary of findings which serves as a benchmark for analysing potential synergies between targets and buyers.

1.2 The Organization of the Report

This report is organized into seven chapters. The first chapter introduces the report and clarifies its objective. The second chapter provides a background on mergers and acquisitions to explain the motives behind the activities discussed in later chapters. The third chapter discusses the role of VARs in the distribution of IT goods and services, the evolution of the industry, the current state of firms, and significant trends affecting firms. The fourth chapter discusses the criteria for the creation of the data set used in the analysis chapter. The fifth chapter brings the ideas of the first four chapters together by using them to analyse at a set of recent acquisitions. The sixth chapter builds on the preceding chapter by summarizing the trends in the acquisitions and compares them to industry averages. Lastly, a brief conclusion discusses the relevance of the findings and provides recommendations for potential acquirers and targets.

2: Background on M&A

Mergers and acquisitions involve the absorbing or joining of two separate companies for the purpose of generating value that would not be possible if the two entities continued to operate independently. The difference between a merger and an acquisition is the nature of the relationship between the two companies as they join. In a merger, two companies combine their resources and assets to create a single company or organization. In the case of a merger, it is possible that it is not a merger of equals. In this case, one company typically takes a senior position relative to on-going operations. In contrast to that, the acquisition of one company by another can be friendly or hostile. In the case of a public company, the acquirer is bound by regulatory issues and approval by the target's board and shareholders. In the case of a private transaction, the arrangement is usually simpler because the deal is an agreement between two parties (Lajoux, Nesvold, & Reed, 2005).

The companies that will be analysed in chapter 5 are resellers of hardware and software. These companies have a simple operating structure that involves purchasing goods from a manufacturer and reselling them to retailers and businesses. Due to emerging market pressures, these companies are struggling to refine and expand their selling capabilities in new and existing markets to stay profitable. There are four methods for firms to expand their core capabilities. These methods are internal development, outsource development, engage in a joint venture with a firm that already has the desired resources and capabilities, or acquire a firm with the desired capabilities.

The internal development of a core capability achieved through using resources within the firm for development and implementation of a new capability. The advantages of this are that it allows the firm to control costs, intellectual property (IP), and economies of learning during development. On the other hand, there are significant costs in terms of time and capital associated with developing a new core capability. If the industry in question has long development timelines and is particularly sensitive to intellectual property (IP) protection, such as a pharmaceutical company, internal development is a logical option.

The benefits of outsourcing are that the timeline for implementation of a new capability is short and there are few up-front costs relative to internal development. Although this may be an

attractive option, variable costs will be higher than for a capability that is wholly owned, there is limited control over production, and any economies of learning that are created will stay with the subcontractor. Therefore, if time is restricted, the costs are not prohibitive, and there is a low penalty for intellectual property loss then outsourcing can be a valuable way to implement aspects of a core capability. However, by definition, a core capability cannot be outsourced in its entirety due to it being something that is not easily imitated by another firm. Although the entire process of pharmaceutical development cannot be outsourced, due to the risk of loss of IP, aspects of a core capability, such as the clinical trial component of pharmaceutical development can.

A low-cost option for developing or implementing a core capability with moderate IP protection is a joint venture. The decision to pursue a joint venture will depend on the barriers to entry, timeline of development, the competitive nature of the capability, and the lack of regulatory approval required. In a joint venture, timelines are longer to implement than outsourcing, but IP is protected, and the risk of failure is lower than for internal development of products or services. In a joint venture, the needs of both parties influence the structure of the venture, as well as the risk and rewards of engaging in the deal.

The purpose of focussing on M&A for the remainder of this report is to look at how resellers of goods are increasing their reselling capabilities in response to market pressure. Increasing the reselling capacity of resellers is done through increasing the number product lines available to customers, expanding into new territories, and reinforcing their presence in their current territories. It is strategically important for firms to reinforce their presence in existing territories because it decreases competition in the territory and gives resellers more price setting power. An example of a firm merging within its territory to increase pricing power is AT&T's recent bid for T-Mobile in the United States. If the US government had not blocked this merger, cell phone users would have had one less provider to choose from and the market would have become significantly less competitive, resulting in higher prices for consumers.

Of the four methods of extending core capabilities, acquisitions are most similar to a joint venture due to the lack of IP risk, highly competitive nature of the industry, and short timescale for implementation. A merger is functionally similar to a joint venture, but with the addition of legal integration, financial integration, and regulatory approval to function as a single entity. The following section discusses deal structures, valuations, economic conditions that fuel M&A, and describes the details of the deal in terms of value to the buyer and seller.

2.1 Drivers of Mergers and Acquisitions

This section describes the strategic and financial benefits of acquiring or merging with another firm. An acquisition strategy is a combination of one or more of the following motives: unlocking value within the combined firm, reducing the risk profile of the firms, expanding the acquiring firm's capabilities, giving the acquiring firm access to cash, tax benefits, and expanding the acquiring firm's current operations into new markets (Damodaran, 2001).

The first driver mentioned above is the acquisition of firms to unlock value. The acquirer of an undervalued firm has an incentive to purchase the firm because the acquirer gains the difference between the value of the consideration paid and the actual value unlocked in the target. However, to realize the difference in value requires some sort of catalyst to unlock the untapped value. An example of value that can be unlocked is Research in Motion's patent portfolio, which is currently valued at more than its enterprise value. A firm such as IBM, Apple, or Google would potentially be capable of unlocking the value in RIM's patent portfolio if one of them were to purchase the company, as these firms are capable of unlocking the value in high tech IP.

The second driver mentioned is the benefit that comes from the reduction of risk to the firm through diversification of revenue sources. By purchasing firms with complementary seasonal earnings, unrelated products, or other unrelated business activities, earnings volatility will decrease as well as firm-specific risk. However, the market will apply a holding discount if the business or products are unrelated which negates the benefit of merging in that case.

The third driver mentioned is the benefit that comes from both firms operating as one. The general idea is that the value of the merged firms, plus the value that is unlocked through synergies, is greater than the value of the two firms operating independently.

$$Value_{Firm A} + Value_{Firm B} < Value_{Firm AB} + Value_{Unlocked Through Merging}$$

However, it has been observed by Ma et al. in their study of 1077 deals announced between 1978 and 2002 that, in general, mergers and acquisitions lead to overall decreases in value due to lower than expected post-acquisition earnings and an increase in the firms cost of capital (Ma, Whidbee, & Zhang, 2011).

Financial synergies can come from four sources and they are access to cash, an increase in debt capacity, cheaper financing, and a more favourable tax structure. A firm with many opportunities and excess cash has an incentive to find a smaller firm that can be purchased and levered. In this situation, the larger firms borrowing base increases because the relative leverage of the combined firm is lower. In addition, as the firm increases in size, its ability to negotiate

their cost of capital increases. Lastly, the combined tax structure of the new entity may be more favourable if the acquirer is particularly profitable and the target experiences large operating losses or heavily depreciating assets both of which offset the taxable income of the acquirer.

Operational synergy comes from four sources; more efficient economies of scale, less competition, expanded functionality, and access to new markets. In a vertical merger, tighter integration with suppliers reduces market friction if tight synergies exist which decrease operating costs. The resulting decrease in costs allows the firm to capture greater rents. If the merger is horizontal, both companies operate within the same market and the customers of the target become the customers of the acquirer. As a result, the firm's suppliers have fewer customers, which will result in an increase in upstream bargaining power. As well, downstream customers may have fewer choices (if the entities remain separate) of suppliers. Fewer suppliers increase the firm's price setting power. If the target and acquiring firm have complementary operational capabilities, such as a steel fabricator purchasing a company that paints steel products, the fabrication company can turn their competitors into customers as well as decrease their own processing costs. Lastly, if a company that distributes steel infrastructure products in North America purchases a European distributor of nuts and bolts, the North American firm can utilize the distribution network and customer base of the nuts and bolts supplier. This allows the North American firm to expand into Europe without having to take on the risk of failure of developing these resources independently. The resulting timescale for implementation and barriers to entry decrease substantially.

2.2 Deal Structures

Mergers and acquisitions are a mix of art and science. A company can finance a merger or acquisition in numerous ways. This section will discuss a number of common elements. These elements are forms of payment that have been researched in collaboration with a prominent North American acquisition focused private equity firm. In addition to the multitude of terms of payment, there are many ways to raise funds, although they all have their own costs of capital and relevant risk profiles.

2.2.1 Private vs. Public Deals

The deal structures of acquisitions of public and private companies differ greatly. While both public and private companies are subject to regional regulations, public transactions are

usually more difficult to execute due to public companies having a larger pool of stakeholders and the transaction's exposure to scrutiny by the public.

There are many examples of public transactions that have been derailed due to government or shareholder intervention. For example, in the UK in September of 2009 Kraft made a £10.2 billion takeover bid for Cadbury. In response to this offer, the UK government implemented legislation that protects large domestic firms from foreign acquisitions. In January of 2010, the offer was approved as long as partial financing was provided by British owned banks. Closer to the Canadian markets, the US \$38.6 billion bid for Canadian Potash Corp by mining giant BHP was blocked by the Canadian government due to the acquisition, "not present[ing] a likely net benefit to Canada", according to Canada's Industry Minister Tony Clement (BBC News, 2010).

As well, a recent bid by US-based Lowe's Corporation for Rona Inc. of Quebec for US \$1.76 billion has not been accepted as of July 31, 2012. Quebec Finance Minister Raymond Bachand voiced the disapproval by Quebec's government stating, "This transaction does not appear to be in the interests of either Quebec or Canada". Following that, the Quebec government stated that it is interested in setting up a fund to "defend Quebec's interests" (CBC News, 2012).

In contrast, private deals have a minimum number of stakeholders, while they are subject to regulation and other factors they are typically easier to structure. In North America, there is a trend amongst companies started by baby boomers who are now interested in transitioning ownership. Most often, these companies are small to mid-market and are transitioning due to the founder's desire to retire and the next generation not having the interest in continuing management of the business (Wade, 2011).

2.2.2 Cash

Cash is the most common form of payment in a transaction; however, the availability of cash is dependent on a number of factors, for example the current economic climate. Cash can come from multiple sources including debt and equity (which are discussed in the following sections of this chapter), and any cash reserves that the acquirer may have. The costs of equity and debt are sensitive to the investment climate at the time of the proposed transaction and are discussed later in this chapter. The acquiring company's ability to raise capital will be affected by the performance of the industry in which the target resides, the performance of the acquiring firm, and the opportunity cost associated with the investment.

2.2.3 Equity and Stock

From the perspective of the acquiring company, it is possible to generate funds through selling a portion of the company's equity to investors. Equity is generally the most expensive method of raising capital. Equity can be cheaper than debt because each subsequent issue of debt costs more than the previous issue, and eventually it increases to the point where it costs more than equity.

Stock in the resulting post-transaction company is also a valid currency in deals. Stock is often used in a transaction where the acquiring company does not wish to increase its debt load. This may be a strategic decision by the acquiring firm to offer stock vs. cash, or alternatively it may be due to the resulting company's inability to sustain a favourable fixed charge ratio, hence making debt unavailable at the current asking price.

Acquiring companies with stock, or "paper", is less common amongst North American private equity firms. In order to create value in an acquisition scenario, a private equity firm would usually want to retain as much equity as possible. Stock is always the most expensive form of acquisition financing when the acquiring firm is growing because it is the riskiest. An example of a transaction that involved stock is Facebook's acquisition of Instagram. The transaction value was US \$1 billion, however, the payment structure of the deal was \$700 million in Facebook stock, and \$300 million in cash. Unfortunately, Facebook's stock has fallen in value and the total value of the cash and stock is now around \$600 million.

In a merger, stock-based transactions force the shareholders on both sides of the transaction to align their interests due to them both having a financial stake in the success of the company. However, lock-in periods are seldom the case for financial investors and they only apply to insiders. This is done for many reasons, however, primarily to limit their influence on the share price at the time. For example, immediately post-acquisition if the CEO liquidates his holdings it would decrease confidence in the market and drive the share price down. Typically, insiders will have a stock lock-up schedule in which stock is released to them for sale at scheduled intervals.

2.2.4 Debt

Raising cash through debt involves a third party (usually a bank or investor) that lends funds to a buyer who makes payments on the principle and interest of the amount borrowed. The interest rates at the time of issuance determine the interest rate of the debt. As a result, long-term

debt is not subject to fluctuations in nominal interest rates. However, issues of short-term debt must be refinanced at their term and are subject to fluctuations in nominal interest rates.

In terms of the cost of capital, debt is generally cheaper than equity, and more expensive than cash. The cost of debt increases with subsequent issues of debt, and eventually the cost of additional issues becomes greater the cost of equity. The balance of the use of debt, equity, and cash are optimized to generate the greatest return for a given buyer's risk profile. Debt comes in a variety of types, each with a different risk/reward profile for the lender.

The riskiest type of debt is mezzanine. It is short-term, high-interest, and functions similarly to a bridge loan. It is riskiest because it is only senior to equity-holders for claims to repayment in the event of default.

Junior debt is senior to mezzanine but junior to senior debt holders. The risk profile is higher than for senior debt and therefore lenders require a high rate of return. Junior debt can be broken down further into tiers that take claim to repayment ahead of one another in the event of default. Each tier will have a risk/return profile that corresponds to its claim and will be classified as "junior to" or "senior to" other tiers in the series of junior debt holders. Junior debt holders are "junior to" all senior debt holders and "senior to" all mezzanine debt holders. Senior debt has the lowest risk, and often the longest term, and lowest rate of return for the lender. It has the greatest claim to repayment in the event of default (aside from employees and the government) and like junior debt, can be broken down into a series of tiers.

2.2.5 Earn Outs

Earn outs are a form of consideration that hinges future partial payments to the management team of the target firm on the target reaching performance milestones. It is a useful form of consideration in situations where there is a disagreement between the buyer and seller regarding future growth of the target. These situations come about because sellers have an interest in an overly optimistic valuation while buyers have an interest in a more conservative valuation. Earn outs bridge the gap between these two assessments and create a motivator to preserve shareholder value. This is accomplished through structuring the payment into two phases, up-front purchase followed by a series of future payments that are based upon performance. Typically 50-60% is paid up front with the remainder paid over three years at specific performance milestones.

This is a useful deal structure for purchasing a private firm with a large amount of potential for growth, such as an early stage technology company. It is particularly useful in such cases because, in addition to providing buyers with a pay for performance mechanism, it also provides an incentive for the management of the target to meet payment milestones. In deals where the target firm's management team is kept in place, this structure ensures management buy-in and provides a method of recourse for the acquirer that other methods of consideration do not.

2.3 Types of Buyers

Strategic buyers are typically operating companies seeking to acquire firms where synergies between the firms will allow them to unlock value. As a result, the increase in value that can be unlocked by a strategic buyer, relative to a financial buyer, increases their willingness to pay. Typically, the buyer will operate within the same industry as the target firm and they are concerned with long-term integration rather than a quick exit. An example of this would be a company such as Apple, Google, or IBM considering an acquisition of RIM for the strategic value in their IP, manufacturing facilities, distribution network, and engineering capabilities. Additionally, AT&T's bid for T-Mobile was strategic because it would decrease competition, increase pricing the power of firms, increase AT&T's infrastructure, and expand their operating capacity.

Financial buyers are typically private equity acquirers that are interested in making an acquisition of a firm that is undervalued or underdeveloped in some way (mismanagement, undervalued assets, etc.) and can be quickly turned around and sold. Often, an exit strategy is in place prior to purchase by a financial buyer. Unlike strategic buyers, they are only concerned with financial fundamentals therefore synergies are not valued unless the financial buyer is doing a roll-up. Roll-ups are where a financial buyer makes a financial purchase of a company and follows it with a strategic purchase of another company within the same industry. As financial buyers may not be concerned with synergies when making financial purchases, they are buyers less willing to pay than for strategic buyers, and they are more willing to increase the leverage of the target to finance the transaction.

2.4 Valuations

This section discusses common methods for valuating target firms. There are a number of methods for determining the enterprise value of a company. Enterprise value is used instead of

equity value because it takes the cash and debt of the company into consideration and therefore is a more accurate value of what an acquirer is purchasing. To calculate the enterprise value of a company the following equation is used:

$$\text{Enterprise Value} = \text{Equity Value} - \text{Cash and Cash Equivalents} - (\text{Short} + \text{Long Term Investments}) + (\text{Short} + \text{Long Term Debt}) + \text{Minority Interest}$$

This section discusses four common methods used to value prospective targets. Each method is presented along with a summary of strengths, weaknesses and assumptions. In the analysis chapter, trends in valuations are identified using the multiples method.

2.4.1 Multiples / Comparable Transactions Method

The multiples method looks at similar M&A transactions that involve similar firms to create a starting point for assessing value. The starting point for calculating the value of the target is by looking at transaction multiples of a set of similar companies within the same industry at similar points in their life. For select industries, industry multiples are published and can be used as a starting point in a valuation. To compensate for differences that exist between similar companies such as customer base and brand value, adjustments are made to reflect these differences. However, it is difficult to defend a multiple if there are significant differences between firms. The disadvantages of this method are the subjective nature of the adjustments, comparisons, and the effort required to find comparable transactions.

The multiples method can be used to generate an enterprise value (using a multiple of EBIT, EBITDA or, Unlevered Free Cash Flows) or equity value (using a multiple of Earnings/Share, Book Value, or PEG Ratio) of the firm. It is useful to use enterprise value when earnings data is readily available and earnings are steady, however some multiples methods do not use earnings data as the key metric. The downside of using a multiple of earnings is that it only captures value at a single point in time and ignores growth and future earnings (unless the price to earnings, growth (PEG) method is used).

In a study of M&A valuations by Aswath Damodaran, over 50% of valuations in acquisitions in a recent survey use the multiples method to establish a starting point for developing a transaction value. The transaction value is the total amount paid in consideration for the acquisition (Damodaran, 2012).

2.4.2 Discounted Cash Flow

The Discounted Cash Flow (DCF) method uses an estimated value of future free cash flows of the company and discounts them back to their present value at a discount rate. The formula to calculate the estimated value of future free cash flows to the firm is as follows:

$$\begin{aligned} & \textit{Free Cash Flows} \\ & = \textit{Operating Cash Flow} - \textit{Capital Expenditures} \\ & - \textit{Changes in Working Capital} \\ & + \textit{Salvage Value of Plant, Property \& Equipment} \\ & - \textit{Opportunity Cost of Land} \end{aligned}$$

The estimated value of free cash flows to the firm is then discounted to the present at the rate of the company's weighted average cost of capital (WACC). The calculation of the firm's WACC is as follows:

$$\begin{aligned} WACC = & \left(\textit{Borrowing Rate}_{Equity} \times \frac{\textit{Equity}}{\textit{Debt} + \textit{Equity}} \right) \\ & + \left(\textit{Borrowing Rate}_{Debt} \times (1 - \textit{Corporate Tax Rate}) \left(\frac{\textit{Debt}}{\textit{Debt} + \textit{Equity}} \right) \right) \end{aligned}$$

This method is useful for companies where future cash flows can easily be determined and it is not useful for 'start-ups' or other types of companies where cash flows cannot be accurately determined or estimated. The downside of this method is that it has the greatest number of forecasted inputs of all of the valuation methods, including an estimate of when stable growth will occur and what the risk characteristics of its cash flows will look like at that point.

2.4.3 Liquidation Value

The liquidation value method for valuing companies produces a price that is simply the total liquidation value of the firm's assets minus its liabilities. A good example of a useful application of this is in the case of RIM. RIM's patent portfolio has value that is greater than the purchase price of its outstanding stock. A valuation using this method would yield a price in excess of the stock price and would imply that a buyer who could unlock the value in the portfolio could buy the patent portfolio at a discount relative to purchasing the portfolio directly, assuming transaction costs and liquidations costs are zero.

To generate a value for the assets, inventory is typically discounted to a liquidation value of 50%, accounts receivable is marked down to 80%, plant and property are valued at their

respective market values, and machinery gets marked down heavily. The downside of this method is that the subjective value of goodwill and IP lead to subjective valuations (Wade, 2011).

2.4.4 Book Value

The book value of the firm is the total value of the company's assets on its balance sheet. To calculate the book value, subtract the book value of the firm's liabilities from the book value of the assets. Book value estimates are most accurate for businesses with a large amount of tangible assets and few intangibles. The downside of using this method is that it uses backward-looking values of assets that may not be accurate due to aging or changes in their utility. Due to accounting rules, goodwill and other intangibles are not included in this calculation. Therefore, the value of service-based companies is not meaningfully measured with book value. An example of a company that would have a perceived low book value would be Microsoft due to its high level of intellectual property and branding and a relatively low level of tangible assets. The upside of this method is that it is simple.

2.5 M&A Cycles

The waves of mergers and acquisitions align with macroeconomic recessions and recoveries of economies due to their dependence on the health of equity markets and access to credit. There are four phases of an M&A cycle and they are: the beginning of the recovery after a recession, the slowdown of the recovery, the beginning of the following recession, and the end of the recession. The following section takes a detailed look at how these phases have manifested over time (Sigwalt, 2010).

The first phase occurs as an economy begins to recover after a crash in equity markets followed by a depression. Historically, crashes in equity markets have been caused by global energy supply shocks, war, and other events of similar magnitude. In this phase, capital is expensive because creditors are risk averse and equity valuations are low.

Buyers in this phase are bidding low due to depressed valuations of targets. Valuations are depressed due to higher discount rates being applied to firms. The depressed valuations by buyers create a spread between themselves and sellers who would like to see their valuations reflect the higher premium they saw before the recession. As a result, both parties are reluctant to cross the spread and deal volume is low.

Buyers who are capable of acting in this phase have an advantage over their peers because their targets have depressed valuations. Access to cash is particularly important in this phase because it is always the cheapest form of payment and similarly leveraged competitors within an industry have access to the same sources of credit. However, at this point in the cycle debt and equity are at their most expensive. Therefore, a firm with cash reserves will be able to acquire firms with depressed valuations and at a lower cost of capital relative to other similarly leveraged firms.

The second phase is a period of economic stabilization as the economy approaches the next bubble, this phase is a period of “temporarily overvalued equity”. During this phase, deals have large equity components as valuations begin to soar. In addition to valuations, deal and dollar volume increases substantially relative to the first phase. The increase in deal volume occurs because healthy credit markets allow acquirers to have greater access to debt and high valuations decrease the cost of equity (Martynova & Renneboog, 2008).

The third and fourth phases cover the peak of the valuation bubble, equity market crash, and following years of recession. The collapse of equity markets causes credit for financing to dry up and M&A volume declines. M&A volume is low during these phases until equity markets begin to recover and creditors are more willing to lend.

By definition, two consecutive quarters of negative rates of growth in Gross Domestic Production (GDP) indicate that an economy is in recession. GDP is the closest indicator of which phase of the M&A cycle an economy is in but it cannot be measured directly because it is measured historically. However, stock market indices reflect the present expectations of economic growth and interest rates and therefore function as a leading indicator of trends in GDP and M&A.

Figure 1 displays the growth rate of the United States GDP from 2009 until the first half of 2012. There is a crash after the leverage crisis of 2007, a recession until early 2009, and positive growth from 2009 until 2012. Therefore, based upon the stock index performance and GDP growth, if current market conditions persist, it would be reasonable to expect M&A volume to continue to grow.

United States GDP Growth by Quarter 2008-2012

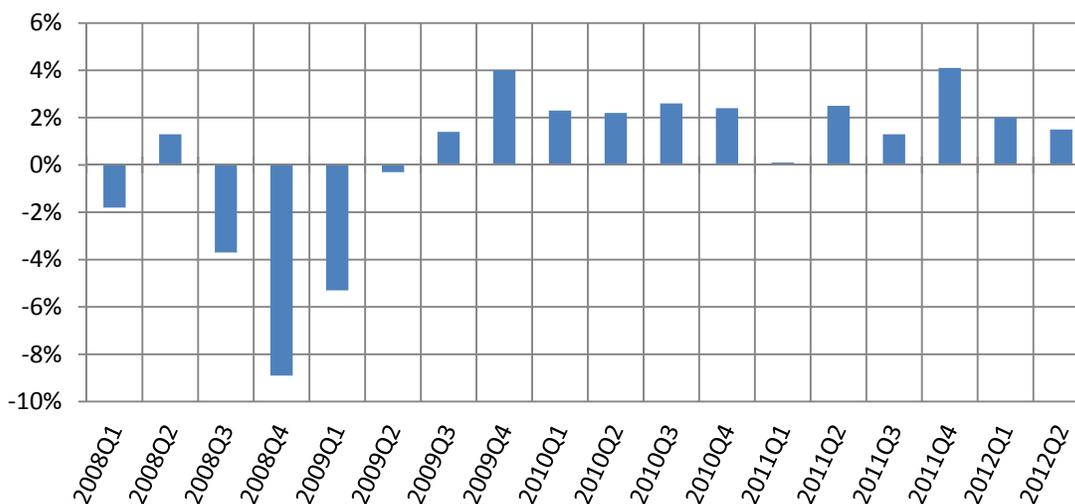


Figure 1: United States GDP Growth By Quarter 2009-2012 (Amadeo, 2012)

2.6 History of M&A

To understand the connection between M&A cycles and macroscopic economic events, it is useful to identify the macroscopic conditions that sustain and events that halt M&A growth. The following section gives an overview of the six M&A cycles that have occurred since the late 19th century and identifies the factors that support and halt waves in M&A (Martynova & Renneboog, 2008).

The first wave of the 1890s was driven by industrial development and the formation of monopolies. The development of the NYSE and laws regarding the formation of corporations created a platform for the formation of monopolies through horizontal mergers across entire industries. This era of mergers ended in 1904 with the introduction of laws that prevented the formation of monopolies.

The second wave occurred between 1916 and 1929. This wave was fuelled by the formation of oligopolies. The companies that were not included in the monopolies of the first wave merged into vertically integrated oligopolies. The Great Depression and the stock market crash of 1929 ended this wave.

The third wave began in the 1950s as the US began to recover from the depression and the Second World War. This wave was fuelled by the formation of highly leveraged

conglomerates that were focused on takeovers. The formation of conglomerates allowed large companies to work around anti-trust laws that were put in place to prevent the formation of monopolies. This wave persisted until the early 1970s when competition laws ended the wave of acquisitions by conglomerates and the global oil crisis forced the US into a recession.

The fourth wave began in the early 1980s when equity markets began their recovery from the oil crisis of the 1970s. This wave was fuelled by deregulation in financial services, innovations in technology, and a shift toward more sophisticated operating structures. An economic slowdown in the late 1980s caused the wave to end.

In the early 1990s, the fifth wave, known today as the ‘tech boom’, was fuelled by a prolonged surge in financial markets. Again, an equity market collapse caused the wave to end in 2001 when the dot-com bubble burst.

In 2003, the sixth wave began when the economies the US, Europe, and Asia showed signs of recovery. M&A activity escalated globally due to low interest rates until 2008. The collapse of equity markets during the 2008 leverage crisis caused this wave to end.

From the above examples, it is clear that there are necessary macroeconomic conditions that sustain growth in M&A. The required conditions to sustain growth in M&A are healthy equity and credit markets. Conversely, shocks to credit markets, crashes in equity markets, economic slowdowns, and the introduction of legislation that inhibits acquisitions are macroeconomic events that can end waves of M&A activity.

2.7 M&A Beyond the Leverage Crisis

This section looks at trends in M&A activity beyond the 2007 leverage crisis. According to a report by MergerMarket (2012), a research firm that specializes in developing business tools for M&A, in 2008 annual global M&A volume slowed to US\$ 2.4 trillion. This figure represents a decrease of over 30% in dollar volume relative to the previous year. Following that, annual volume continued to decrease until hitting a low point in 2009. Following 2009, deal size and volume increased through 2010, peaking in 2011 leading to a total annual global deal volume of US \$ 2.2 trillion in 2011 making it M&A’s strongest year after the leverage crisis. The table below illustrates the volume of deals by quarter from 2008 until the end of 2011 (MergerMarket, 2012).

Global M&A Volume 2008-2011

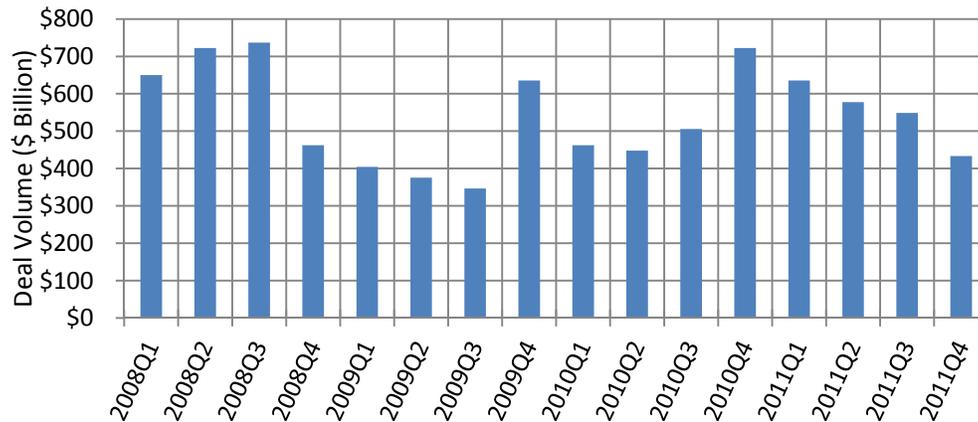


Figure 2: Global M&A Deal Volume 2008-2011 (MergerMarket, 2012)

The United States is still the most active market in 2011 for M&A with 37.7% of global dollar. In terms of transaction values, the average global transaction value EBITDA multiple for 2011 is 12.6, down from 14.9 in 2010 and a peak of 22.9 in 2008 (MergerMarket, 2012).

2.8 Conclusion

In summary, annual global M&A volume has been rising since 2009. If equity markets continue to recover, interest rates stay low, and creditors are willing to take on more risk, M&A volume would be expected to continue to recover. The next section looks at the role of VARs and defines their function, trends in operational structure, and the effect shifts in market forces have had on their value proposition over the past two decades. Following the discussion on VARs, the analysis chapter examines M&A involving VARs as targets in acquisitions and identifies firms that are expanding their capabilities to take advantage of the next phase of economic growth.

3: The Role of VARs in IT Distribution

This section analyses the historical value of VARs in hardware and software distribution. This section begins with an explanation of the operational characteristics of VARs by identifying how they differ from other types of retailers and service providers and how they create value for their customers. After that, the strengths and weaknesses of current resellers are compared to resellers a decade ago. Lastly, an assessment of current market conditions is used to project the future impact of market forces on resellers.

3.1 Value Added Resellers

VARs are companies that purchase products or services and resell them to customers or distributors as a bundled package. An example of this would be an accounting system and a point-of-sale system that work together, but are manufactured separately. Resellers combine these products as a package and create a benefit to consumers, who would otherwise have to source them independently and lack expertise in integrating them.

The bundles offered by VARs can contain products or services made up of one or more of the following: implementation, customization, training, and installation. Adding services to their product offerings allows VARs to differentiate themselves from product-only providers. Also, being an implementer of multiple bundled products allows customers to integrate a wide variety of services from a single source.

Sometimes VARs are confused with retailers or implementers. The distinction between retailers and resellers is that retailers are sellers of goods while resellers provide services and integration support in addition to selling goods. The next section will identify the size of the market for hardware and software VARs and identify how they can enhance operating efficiency through acquisitions.

According to the “VAR500” list, current market leaders in the global VAR space are IBM, DELL, HP, CDW, and Tech Data. All of these companies have deviated from pure reselling due to the erosion of margins in reselling over the past decade. They have managed to maintain profitability over the past decade and lead their industry by diversifying into service-based

offerings to customers. The following section identifies sources of value, financial characteristics, and the effects of trends within the IT industry on VARs (Caponi, 2011).

3.2 The VAR IT Industry

This section looks at the overall growth characteristics of the VAR industry in hardware and software distribution. The North American IT reselling market grew 6% over the 2009-2010 period from \$402.1 billion to \$428.1 billion. Projections for 2011 set expectations for growth at around 30% due to demand that was not addressed as a side effect of the cost cutting measures caused by the leverage crisis (Whiting, 2011).

Expected areas of growth in IT are: consulting, managed services, software sales, and hardware. Verticals that will be leading drivers of growth are: health care, financial services, and manufacturing. Additionally, over one third of resellers will offer cloud-based services, data migration to cloud services, and cloud service aggregation. Projections state that cloud computing service revenues will grow by 50% in 2011. Suggested reasons for not adopting cloud service models are security and pricing issues. The details of cloud computing and its impact on the VAR industry is discussed later in this chapter (Whiting, 2011).

3.2.1 Financial Characteristics of Firms

This section contains a brief cross section of VARs and analyses differences in their financials. The table below contains financial data on four firms. These firms are discussed in the analysis chapter where they are the targets of acquisitions.

Table 1: Select Financial Data For Acquiring Firms (Bureau van Dijk, 2012)

Select Financial Data				
Firm	Xeta Inc.	INX	Bell Microproducts Inc.	Birdgepoint Inc.
Market Capitalization (\$ million)	44.4	73.2	455.0	612.0
Enterprise Value (\$ million)	38.5	45.9	455	946
Reporting Year	2010	2009	2009	2011
Operating Revenue (\$ million)	86	312	3,021	5,244
Cost of Goods Sold (\$ million)	62	244	2,714	4,845
Other Operating Expenses (\$ million)	21	67	263	301
Gross Profit Margin (\$ million)	23	68	307	399
Earnings (EBITDA) (\$ million)	3	14	55	145
Net Profits (\$ million)	2	1	9	57
Employees	467	470	1,910	6,176
Total Assets (\$ million)	58	109	782	1,506
Current Liabilities (\$ million)	22.6	67.4	643.4	955.4
Current Assets (\$ million)	7.5	97.7	795.7	1144.8
Asset Turnover (x)	2.4	7.47	14.15	9.32
Net Profit Margin (%)	2.63	0.46	0.29	1.09
Collection Period (days)	75	74	52	39
Credit Period (days)	42	58	42	53

In the table above, firms with larger market capitalizations have better collection terms with creditors and customers. This is likely a result of larger firms being able to negotiate more favourable credit terms. In addition, net profit margins appear to decrease as firms increase in market capitalization. This second point is counter-intuitive because it is generally understood that larger firms are able to negotiate more favourable terms with lenders, customers, and suppliers. Further, this is particularly surprising as pricing pressure from customers is causing margins to erode and an increase in the minimum effective size of firms.

Table 2: Relative Comparison of Financial Ratios for Target Firms

Relative Ratios				
Firm	Xeta Inc.	INX	Bell Microproducts Inc.	Birdgepoint Inc.
Market Capitalization (%)	100%	165%	1025%	1379%
Enterprise Value (%)	100%	119%	1182%	2457%
Earnings (EBITDA) (%)	100%	468%	1814%	4804%
Total Assets (%)	100%	187%	1342%	2583%
Net Profits (%)	100%	64%	389%	2536%
Net Profit Margin (%)	100%	17%	11%	41%

To give a better idea of how the financial fundamentals of firms scale relative to one another, the table above lists scaled data in the previous table relative to the size of Xeta Inc., the smallest firm in the sample. It can be seen that market cap, net profits, and enterprise value scale relatively close to one another. However, earnings scale at double the rate that the previously mentioned metrics do. This observation, combined with net profit margins that decline with scale, is a potential indication that the costs of selling in this industry increase at a greater rate than other factors at this point in time. A cause for this inverted relationship between other factors and net profit margin could be that recent changes in market demand are causing larger firms to suffer due to a lack of agility in shifting to new products or services. It is important to note that the previous three years have been a period of high volatility, and that care should be exercised when basing conclusions on the above results. The next section looks at the strengths and weaknesses of resellers today relative to resellers a decade ago.

3.2.2 SWOT of Early VARs vs. Today's VARs

This section illustrates the current state of distress that resellers are experiencing in 2012 by comparing the strengths of VARs today with VARs of the 1990s and early 2000s. The distress that the entire industry endures is due to the erosion of their value proposition caused by the introduction of more cost effective alternatives such as cloud services and preconfigured hardware. The value that resellers add to products through an understanding of how to bundle products has been eroded as a result of customers gaining access to information about pricing and bundling through the internet. In addition, the introduction of direct-distribution manufacturers has cut out resellers from certain distribution channels. The following section looks at the

strengths, weaknesses, opportunities, and threats (SWOT) to the value of resellers to assess the current state of VARs (Urbanski, 2008).

3.2.2.1 Strengths

The strengths of VARs in the 1990s came from customers not knowing how to integrate software and hardware components. The value proposition of resellers was based upon a knowledge asymmetry between them and their customers regarding the sourcing and bundling of products together. In addition to this, there were fewer choices of suppliers, which made the industry less competitive. As well, geography worked in favour of resellers due to the need to have local support and distribution. The strength of the early VARs came from their customers having little choice and little understanding.

The strength of resellers today comes from knowledge of packaging IT products together in areas where there is still information asymmetry between suppliers and consumers such as in integrated telecom services. In this case, understanding how off-the-shelf telecom services operate with a variety of other business systems allows resellers to create a value proposition. In addition to product integration services, resellers have branding, distribution networks, and technical sales and support teams. These resources are strengths because they can be adapted to a variety of technical applications.

3.2.2.2 Weaknesses

The weaknesses of early VARs were their susceptibility to competition from other firms and their lack of diversified revenue streams. Due to high margins, VARs did not have a strong incentive to diversify. The VAR industry has been hit hardest by decreasing margins due to customer pressure and low sales over the period from 2008-2010. Downstream pricing pressure has come from the internet providing customers access to a wider variety of suppliers, better pricing information, and direct sales from manufacturers. Additionally, resellers face pressure from having a small number of customers to negotiate pricing. For example, less than 35% of VARs have over 100 customers and 25% have 10 or less customers. Having fewer customers reduces a reseller's ability to set price and protect margins (Whiting, 2011).

Another weakness of resellers is their size. The resellers that are included in this report are relatively large firms with market capitalizations of up to US \$4 billion and over 4,500 employees. Large size prevents a firm from responding to abrupt changes in demand for services and volume due to the relatively greater effort required to retrain sales and service staff in larger

firms. An example of this that is hurting resellers would be the current shift in customer preferences from product-based IT solutions to service-based IT solutions (Bureau van Dijk, 2012).

In addition to customer pressure, there is pressure from competitors who offer fully integrated solutions or managed online solutions at a fraction of the cost of on-site solutions. Competitors with more diversified revenue streams are better equipped to weather recessions as well as recover from them. In response to pressure from competitors, all resellers covered in this analysis have shifted to service based offerings to the same degree.

3.2.2.3 Opportunities

The early resellers enjoyed large margins that allowed them to merge into vertically integrated producers of services and products. Companies such as DELL and HP are examples of resellers that grew through expansions into providers of fully integrated IT solutions.

Thinning margins on product sales are causing the minimum effective scale (MES) for a firm within the industry to increase. Current resellers have an incentive to merge into larger firms. As discussed in the previous section, smaller firms are particularly sensitive to fluctuations in sales to customers. As well, forecasts for 2012 state that there is likely to be further consolidation among resellers affecting 20-50% of firms (Burke, 2012).

In addition to merging with another firm, resellers can add value by shifting from hardware and software sales to providing managed services such as shifting IT storage infrastructure to the cloud. Cloud services are the most likely addition in reseller offerings to succeed due to the high cost of alternatives to customers, ease of implementation, and high margins in service-based solutions (Ingram Micro, 2008). Additionally there are over 10,000 providers of these services; which puts pricing power in the hands of the reseller.

Another opportunity to strengthen a reseller's strategic position is to expand its service offering through aggregating online services (PaaS, SaaS, etc.) and selling them as a package tied to a service agreement. This is a logical progression for resellers because they have expertise in bundling and reselling. This allows resellers to exploit an information asymmetry with their current customer base and apply their existing resources (sales force, branding, etc.) to services. The mechanics of managed services and online services and the role of resellers in them are discussed in the next chapter.

3.2.2.4 Threats

Early resellers were able to exploit information asymmetries that were systematic. Their only major threat came in the form of increased competition from other resellers expanding into their territory.

Today, the greatest threat to resellers comes from substitution as emerging alternative distribution channels remove them from the distribution chain. For software sales, the emergence of ‘app stores’ cut resellers out of distribution channel to personal computers, mobile phones, and tablet computers. For the sale of servers and other hardware that used to be configured by resellers, manufacturers can now deliver preconfigured hardware directly to customers.

Completely integrated technologies, such as hardware suppliers that offer configuration services, eliminate opportunities for intermediaries to add value by exploiting gaps in knowledge asymmetries. Solutions from companies such as Sage and Google provide a complete suite of integrated software that run through a web browser. In addition to controlling the integrated solution, these companies also provide training and data migration expertise. The growth and impact of these services on resellers is discussed in the following section.

3.2.3 Historical Performance of Top Public Firms

This section gives a summary of the performance of a few of the top publicly traded VARs selected from the top of the “VAR500” list (Caponi, 2011). The performance metrics that are compared are the growth of revenue and assets and how they scale with market capitalization. Over the past decade, VARs have suffered from low profit margins, almost all of which are below 1%. The only exception to low returns is CSC Inc., which has a market capitalization approaching US \$4 billion. These resellers do not offer core services beyond reselling of goods. For resellers that also offer consulting and integration services, margins are significantly higher.

Table 3: Size to Earnings Comparison of Large Resellers (Bureau van Dijk, 2012)

	Market Cap (most recent) (\$ million)	Average Operating Revenue (2001-2011) (\$ million)	Average Profit Margin (%) (2001-2011)
Pomroy Inc.	60	696	-0.29
Tech Data Inc.	1,862	21,522	0.64
Ingram Micro Inc.	2,452	30,054	0.70
CSC Inc.	3,641	14,785	5.39

In terms of growth in assets and revenue, smaller firms have also suffered over the 2001-2011 period (see table below). It is important to note that even with average annual growth in revenue of 7%, profit margins have averaged less than 1% over the decade. These findings suggest that growth in assets and revenue are barely keeping pace with shrinking margins.

Table 4: Size to Growth Comparison of Large Resellers (Bureau van Dijk, 2012)

	Market Cap (most recent) (\$ million)	Average Asset Growth (2001-2011) (%)	Average Revenue Growth (2001-2011) (%)
Pomroy Inc.	60	-7%	-2%
Tech Data Inc.	1,862	7%	6%
Ingram Micro Inc.	2,452	7%	6%
CSC Inc.	3,641	2%	4%

3.3 Software Distribution

The volume of boxed software unit volume declined more than 45% from 1997 to 2007. In dollar volume this translates to a decrease from US \$40 billion to US \$27 billion (Kern, 2009). The following sections give a brief history of software distribution to gauge the impact of shifts in distribution on resellers. An analysis of shifts in hardware distribution is not included because channel distribution of hardware has not undergone shifts of the same magnitude that software has over the past decade.

3.3.1 Boxed / Direct Downloads

Forecasts for 2012 are projecting enterprise application sales of US \$120.4 billion in 2012, up 4.5% from 2011. Software sales through traditional channels (boxed or direct download) will make up 89% of software sales with the remaining 11% sold through emerging software as a service (SaaS) channels. Looking forward, sales of SaaS are projected to grow to over 16% of total software sales by 2015. Presently, according to a survey by The Gilwell Group, 57% of resellers surveyed are effectively using the direct download channel to sell software to consumers (Gilwell Group, LLC., 2009). As well, estimates state that by 2015 over 70% of software sales and delivery will be online (IDC, 2012).

3.3.2 SaaS

This section discusses the state of the SaaS industry in terms of adoption rate, industry size, benefits, problems, and the effect of SaaS distribution on resellers. Software as a service is a

service-based model for distributed software running on a cloud infrastructure. The sale of software comes in the form of subscription to a service, where payment is based upon usage. Services running in the cloud are accessible from any Internet connected device capable of running a web browser. As a result, customers only pay for what they use, have minimal on-site hardware, and can scale their solution with known costs. According to the Gilwell Group, LLC. (2009), the overall effect on sales is a decrease in up-front costs followed by an increase in service fees. In addition to an increase in service fees, there is also an increase in sales volume caused by a lower initial purchase cost due to only paying for services and functionality that is used with this distribution model. Therefore, resellers are able to service a greater number of customers and make higher margins. As a result, the market can support a lower number of resellers.

In 2008 sales of SaaS were over US\$ 6.4 billion, a 27% increase over 2007. Looking forward, sales for 2012 are projected to grow to over US\$15 billion. In 2008, there were over 1,000 companies with SaaS products including all major software vendors. Growth of that magnitude through the recession is being driven by SaaS allowing for tighter control of initial costs and maintenance (Gilwell Group, LLC., 2009).

For resellers, the benefits of shifting to reselling services are lower initial purchase costs to customers and steady cash flows. As well, resellers can still charge the same rates for integration, training, and other services as they did for product-based sales. The downside to resellers in this situation is that the sales process and commission plans do not work with low cost services in the same way that they do with product sales. Looking into the future, market research firm Gilwell Group, LLC., (2009) states that, “The resellers that will dominate this market will be sales and service oriented rather than product and installation focused.”

3.3.3 Industry Drivers

This section covers trends in the technology industry that are driving software sales away from resellers outside of shifts in software distribution. The utility of resellers is directly affected by the increased use of tablet computers and lightweight computer hardware and a decrease in the volume of sales of desktop and laptop computers. This section also measures growth in these areas and discusses pressure that these trends put on resellers.

3.3.3.1 Desktop Sales / Laptop Sales

Desktop and laptop sales are projected to decrease into the near future as growing sales of netbooks and tablets displace them. For desktop sales, Forrester research projects a decrease from 18.7 million units 2011 down to 15.7 million units in 2015 (Gillett, 2012). In terms of market share for desktops sold, this represents a more significant drop from 45% in 2008 to 18% in 2015. The study states that an “onslaught of tablet devices will lead to a computer revolution”. To facilitate this revolution services will need to shift the burden of processing and data storage to the cloud. Shifting computing infrastructure to the cloud puts pressure on traditional resellers, as discussed earlier. The next section will discuss the growth of the tablet computing market, cloud computing, and its effect on resellers.

3.3.3.2 App Stores / Tablet Sales

Sales of tablets and the growth of app stores are eroding the value of VARs. In the ‘app store’ model, software goes directly from the author to the end user with the app store taking a small margin on a large number of transactions. Gartner projects tablet sales to reach over 119 million units worldwide in 2012, an increase of 98% over 2011. Volume projections for 2016 are for over 330 million tablets to be sold in that year alone and contributing to a total of 760 million units in operation (Gartner, 2011). Further, the forecast for app store revenue is over US \$15 billion in 2011 from 8.2 billion app purchases, which represents a 190% increase in revenue over 2010. By 2014, revenue projections are over \$58 billion. The adoption of tablets is an indirect driver of the adoption of SaaS based services because they are capable of using services as thin clients through their browsers. According to a Forrester Research forecast, the adoption rate of tablets will surpass laptops by 2016 (Gillett, 2012).

For resellers to take advantage of trends toward lower performance hardware, such as tablets, their business needs to shift towards the sale of web services. This can come in the form of providing fully integrated service consulting on the sale of tablets and thin clients, consulting on transitioning to service-based IT, and establishing long-term service-based arrangements. Therefore, there are many ways for VARs to come up with innovative methods of capturing these emerging revenue streams. Two prominent methods discussed in this chapter are a partial shift in resources toward a service-based sales or a refined focus on reselling by merging into more operationally efficient firms.

3.4 Summary of state of VARs in IT Distribution

In summary, over the past decade numerous factors have emerged that are adversely affecting the value of VARs. According to a survey by Gilwell Group, LLC. (2009), 57% of resellers surveyed are effectively using the direct download, SaaS, and PaaS channels to sell software. Therefore, resellers are actively adding resources to take advantage of service-based revenue streams. In addition to adding alternative streams of revenue, their strong sales histories and relationship-based selling make them strong candidates for acquisition. The following chapter discusses the method used for developing a data set and the criteria used for analysis.

4: Methods

This chapter discusses the method used in selecting the transactions for the data set analysed in the following chapter.

4.1 Defining a Value Added Reseller

The first criterion for the data set is whether the target is a reseller. This point may seem redundant but it is important to differentiate pure resellers from targets that have widely diversified service offerings. In the SWOT analysis of the previous chapter, one of the weaknesses that affect all pure resellers is the vulnerability of their revenue due to a focus on product sales. As well, firms that offer a wide variety of services will have financials that reflect more stable sources of revenue and higher net profits that come from such services. Further, including resellers that are highly diversified would make the analysis less useful because the data would include activities outside of reselling. Therefore, companies such as DELL, HP, and IBM that have wide service offerings are not included in the data set, even though they do function as resellers of IT goods.

The resellers targeted in the analysis section all share similar functional and financial characteristics. Functionally, their core business is reselling and they do not provide service-based solutions. Financially, their undiversified revenue stream makes them particularly vulnerable to fluctuations in buyer behaviour. In addition, due to the competitive nature of their industry they have low profit margins. A combination of low profit margins and exposure to buyer preferences makes them ideal candidates for acquisition by similar firms looking to broaden their market geographically or reduce competition within established territories.

4.2 Public Firms Only

The second criterion for acceptance into the data set is that the target must be a publicly traded firm at the time of deal announcement. The reason for only including public targets is that their historical financial data will be readily available. In addition to data availability, this data is also more likely to be more accurate than for private firms due to filing regulations for publicly traded firms. Public transaction data will also include the price paid for the firm, which will allow

for analysis of the structure of deals as well as trends in purchases. The following analysis chapter summarizes trends in financials amongst target firms as well as the transaction structure.

4.3 Valuations

The valuation methodology used in the analysis is the multiples method with earnings before interest, depreciation, and amortization (EBITDA) as the key financial metric. The multiples method has been chosen because it is most useful for comparing transactions involving firms within the same industry relative to one another. In addition, industry average EBITDA multiples are published for most industries and can be used as a benchmark. As well, EBITDA multiples are easy to calculate and compare if the companies being compared have large overlaps in functionality and geography.

4.4 Geography

The selected transactions will be limited to within the United States (US). The transactions are restricted to the US because it is the most liquid and therefore prices will be fairer than in less liquid markets.

4.5 Date Range

Lastly, all of the transactions in the data set must occur over the 2010-2012 period. The purpose of the analysis is to identify current trends. Therefore, the analysis is limited to the period since 2010 where equity market recovery and GDP growth reached levels that can sustain a healthy environment for M&A. To support this, in section 2.7, it is observed that annual M&A volume has been increasing over that period.

5: M&A amongst Value Added Resellers

This chapter builds on the preceding chapters by looking at trends in the deal structure and purpose of recent acquisitions amongst resellers. The analysis begins with a cross section of several acquisitions involving a public target firm. Public targets are used because detailed public records of their financials are freely available and comparable.

5.1 Market Analysis

This section contains a detailed description of current market conditions and cites forecasts about the future health of the market for M&A. In a previous chapter, leading and current indicators of the health of M&A is tied to GDP growth and healthy equity markets. This section looks at GDP growth over the past two years as well as forecasts to gain insight into to emerging trends in M&A. This section concludes with an assessment of the current health of equity markets as well as projections from analysts.

To measure the recovery of equity markets, a broad look at the performance of the entire market is used. The Vanguard Total Stock Market ETF represents 99.5% or more of the total market capitalization of the Nasdaq and NYSE and is therefore a relevant indicator of equity market conditions. The fund hit a low of \$34.11 in March of 2009 and has since recovered to \$69.70. This increase marks a strong recovery toward the index's pre-2009 high of \$77.30.

In addition to equity markets and GDP, interest rates also affect M&A activity due to their effect on the rate of return on acquisitions as well as the ease of leverage. Generally, equity is considered to be more expensive than debt as a means of generating capital. However, the cost of debt increases incrementally with each issue of new debt as well as if there is an increase in interest rates. As interest rates increase, the optimized ratio of debt to equity will contain less debt and as interest rates decrease, it will shift towards more debt. Therefore, low interest rates encourage M&A by facilitating more highly leveraged capital structures. The prime-lending rate in the US, which is indirectly connected to the interest rate on debt issues, was cut in half in 2008 from 6.5% in January to 3.25% the following month. Rates have not been this low since August of 1955 and have been locked in at 3.25% since 2008. According to SignalTrend Inc. (2012), there is an expectation that interest rates will stay at 3.25% through to the end of 2013 and

increase at some point in 2014. The sensitivity analysis section of the next chapter includes a section that analyses the sensitivity of acquisitions to increases in interest rates. In summary, if healthy GDP growth and equity markets continue to persist and interest rates do not increase, it would be reasonable to expect M&A activity to continue to recover as well.

5.2 Analysis of VAR M&A Transactions

This section attempts to identify trends in transactions amongst a select group of VARs over the past two years. The analysis looks at transactions where the target is a VAR and the buyer is either another VAR or a private equity firm that is doing a roll-up of resellers. The transactions are analysed in terms of price, deal structure, multiples analysis, and the relative size of the firms. The following table summarizes the four transactions that will be discussed in this chapter.

Table 5: Trends in Select Transactions 2009-2012 (CapitalIQ, 2012)

Deal	1	2	3	4
Target	INX Inc.	XETA Inc.	Brightpoint Inc.	Bell Microproducts Inc.
Buyer	Presidio Inc.	Paetec Inc.	Ingram Micro Inc.	Avnet Inc.
Target Data				
Reporting Year	2009	2010	2011	2009
Close Date	7/6/2010	9/2/2011	2/7/2012	7/6/2010
Net Profit Margin (%)	0.46	2.63	1.09	0.29
Target Market Cap (\$ million)	73.2	44.4	612	455
Target EBITDA (\$ million)	14.1	3.01	144.6	54.6
Buyer Data				
Reporting Year	2011	2011	2011	2011
Primary Function	VAR	VAR	Service Provider	Service Provider
Buyer Market Cap (\$ million)	N/A	790	2,162	4,776
Buyer / Seller Market Cap	N/A	18	4	10
Buyer EV (\$ million)	N/A	1,893	2,293	5,814
Buyer EBITDA (\$ million)	56	254	517	1,085
Operating Revenue (\$ million)	1,100	1,263	36,300	26,534
Net Profit Margin (%)	4.76	-3.62	1.07	3.28
Transaction / Valuation Data				
	1	2	3	4

Total Net Transaction Value	146.6	63.3	818.6	586.9
Implied Enterprise Value/EBITDA	49	15.4	6.8	10.9
Implied Equity Value/Book Value	2	1.6	2.3	7.1
Implied Enterprise Value	146.6	63.3	818.6	586.9
Implied Equity Value	90.2	58.6	647.4	225.1
Offer per Share	8.7	5.4	8.9	6.9
Target Stock Premium % - 1 Month Prior	26.1	69.2	96.1	54.2
Transaction Debt Component (\$ million)	0	0	190	342
Merger Direction	Horizontal	Horizontal	Vertical	Vertical

5.2.1 Presidio Acquires INX Inc.

With revenues of over US\$1.1 billion, Presidio is a leading provider of data centre, unified telecom, security, and mobility products and services. They have agreements to distribute products and services from IBM, HP, VMWare, Cisco, and a number of other providers. In the wake of the leverage crisis, Presidio has acquired INX, Coleman Technology, and Bluewater Communications. All of the acquired companies have similar functionality and distribution agreements to Presidio. This section looks at nature of these acquisitions as well as a detailed look at the INX Inc.

Prior to acquisition, INX Inc. distributed cloud services and telecom solutions from Cisco, EMC, VMWare, NetApp and VCE. Presidio offered products and services from all of these providers prior to the acquisition. According to INX's year 2011 10-K filing, its net profit margin peaked in 2007 at 1.64% followed by a low in 2008 of -4.22% on earnings (EBITDA) of US \$207 million and US \$256 million respectively. Acquisitions of VocalMash, AccessFlow, and NetTeks by INX had an adverse effect on net profitability in 2008. Gross profits grew from 2006 to 2009 from 19.86% to 23.14% respectively through the leverage crisis. As of December 30, 2011 INX's market capitalization was US\$ 88.8 million.

In November of 2011 Presidio Inc. purchased all outstanding shares of INX Inc. for \$8.75 per share, or US \$146.6 million on the October 31, 2011 share price on 9.715 million shares. Presidio delisted INX after the transaction took place. According to Presidio, the acquisition of INX brought their total staff to 1,800 employees operating out of 45 offices, up from 1,200 employees earlier that year as reported in a press release by Presidio following their acquisition of

Coleman Technology. Their acquisition of INX marked the fifth acquisition in a series that also includes Ficomp, Network Information Systems (NIS), and Solarcom.

At the time of sale, the enterprise value of INX was US \$45.875 million. The implied enterprise value of US \$146.6 million of INX was 49 multiplied by INX's EBITDA. Therefore, Presidio was willing to pay a significant premium for INX relative to the industry median multiple of 7.23 (Valmetrics, 2007).

5.2.2 Paetec Holdings Corporation Acquires Xeta Technologies

Paetec Holdings provides small to medium businesses with integrated data and telecom solutions. Their market capitalization is US \$790 million, as of November 30th, 2011. They have over 4,500 employees operating in every state in the US through which they offer broadband Internet and a variety of other telecom services through a wholly owned fibre optic backbone. From 2006 until 2010 net profitability suffered with a period low in 2008 of -25.35% and a high in 2006 of 2.77%. As seen in the previous transaction, the profitability of resellers in the IT industry is low and sensitive to economic downturns. Profitability in 2008 was adversely affected by a charge of over US \$529 million in depreciation and amortization. The average of the depreciation charges for the 2006-2010 period outside of the 2008 anomaly is US \$122 million. Operating revenues grew steadily through this period (including 2008) from US \$586 million to US \$1,623 million.

The acquisition of Xeta Inc. marks the fourth acquisition by Paetec in a series in the wake of the leverage crisis. Other acquisitions in the series include US Energy Partners, a New York based ethanol energy plant operating company, McLeodUSA, an Iowa-based wireless telecom operator, and Cavalier Telephone, a local telecom service provider in Virginia. Unlike the acquisitions made by Presidio in the previous section, these mergers signal Paetec's interest in diversifying revenue sources and increasing its offerings to customers.

Prior to acquisition, Xeta Technologies, like Paetec, was a provider of data and telecom solutions. It distributed products and provided services from Avaya, Mitel, Samsung, Polycom, Microsoft, and a number of other vendors. With a market capitalization of US \$59,288 million and 467 employees as of May 2011, Xeta had around 13 times smaller in terms of market capitalization than Paetec. According to Xeta's year 2011 10-K filing, its net profit margin peaked in 2008 at 4.01% followed by a low in 2009 of -23.70% on earnings of US \$86 million and US \$71 million respectively. Average net profits for the 2006-2010 period, excluding 2009, were 3.0%. Growth of gross profits remained relatively steady from 2006 until 2010 rising from

US \$14.8 million to US \$23.5 million. Average depreciation and amortization over the same period was US \$910 thousand with the anomalous year 2009 entry removed. The anomalous depreciation and amortization charge of US \$19.1 million in 2009 is over 20 times larger than the average for the period and is the source of the strongly negative reported net profits for that year.

On September 2nd of 2011 Paetec Inc. purchased all outstanding shares of Xeta Inc. for \$5.50 per share, or US \$63 million. The share price on August 2nd, 2011 was US \$3.84 prior to the announcement of the deal. Part of the US \$63 million consideration is \$1.5 million in debt. The analysis of the sensitivity of the debt component of this deal appears later in this chapter. Following the close of the deal Xeta continues to function as a subsidiary of Paetec Holdings Corporation and delisted from the NASDAQ.

The purchase price of US \$63 million represents the value of outstanding shares at the time of sale plus a 63.6% premium. At the time of sale, the enterprise value of Xeta was US \$38.5 million. The implied enterprise value of US \$63.3 million of Xeta was 15.4 multiplied by Xeta's EBITDA. Therefore, Paetec was willing to pay a premium for Xeta relative to the industry median multiple of 7.23 (Valmetrics, 2007).

5.2.3 Ingram Micro Acquires Brightpoint Inc.

Ingram Micro Inc. is an Indiana-based distributor of IT and telecom products. They have 15,500 employees and their distribution network supplies these products globally. Their market capitalization is US \$2.612 billion, as of July 5th, 2012. From 2007 until 2011, profitability has been weak, falling between a period low of -1.11% in 2009 and high of 1.27% in 2011. Over the period average net profits were 0.65%. As seen in the previous deals, the profitability of resellers in the IT industry is low and sensitive to economic downturns. Profitability in 2009 was adversely affected by a charge of over US \$811 million in depreciation and amortization. The average of the depreciation charges for the 2007-2011 period outside of the 2009 anomaly is US \$61 million. Operating revenues grew steadily through the period (including 2009) from US \$35.0 billion to US \$36.3 billion.

The acquisition of Brightpoint Inc. marks the third acquisition by Ingram in a series in the wake of the leverage crisis. The other acquisitions in the series are Computacenter Distribution Ltd., a UK based distributor of wholesale computer components, Specialist Distribution Group, another UK-based wholesaler of computer components. Similar to the acquisitions made by Presidio, these mergers signal Ingram's interest in diversifying geographically and acquiring

firms with similar product offerings. Mint Global lists Brightpoint and Ingram Micro as direct competitors presently.

Brightpoint, like Ingram, is a provider of data and telecom solutions. It distributes and supports wireless products and services, provides global logistics, and inventory and software management solutions. It has three functional segments operating in North and South America, Europe and the Middle East, and Asia Pacific, where it provides products and services to mobile carriers, retailers, and resellers of goods. With a market capitalization of US \$612 million and over 6,100 employees, Brightpoint has a market capitalization that is 4.3 times smaller than Ingram. According to Brightpoint's 2011 10-K filing, its net profit margin hit a low in 2008 of -6.97% followed by a peak in 2010 at 1.44% on earnings of US \$93 million and US \$103 million respectively. Average net profits for the 2007-2011 period, excluding 2009, were 1.2%. Growth of gross profits remained relatively steady from 2009 until 2011 after a collapse in 2008 rising from US \$292 million to US \$399 million. Average depreciation and amortization over the same period was US \$35.3 million if the anomalous year 2009 entry is removed. The anomalous depreciation and amortization charge of US \$361.6 million in 2009 is over 10 times larger than the average for the period and is the source of the strongly negative reported net profits for that year.

On February 7th, 2012 Ingram offered to purchase all outstanding shares of Brightpoint Inc. for \$9 per share, or US \$878.6 million. The share price on June 29th, 2011 was \$5.41 USD prior to the announcement of the deal. As well, the US \$878.6 million consideration is net of US \$190 million of Brightpoint's debt. The analysis of the sensitivity of the debt component of this deal appears later in this chapter. As of July, 2012, this deal has not closed and Brightpoint continues to function as security traded on the NASDAQ.

The purchase price of US \$878.6 million represents the value of outstanding shares at the time of sale plus a 66.359% premium. At the time of sale, the enterprise value of Brightpoint was US \$637 million. The implied enterprise value of US \$818.6 million of Brightpoint was 6.8 multiplied by Brightpoint's EBITDA. Therefore, Ingram paid roughly the industry average for Brightpoint which is 7.23 (Valmetrics, 2007).

5.2.4 Avnet Acquires BELL Microproducts Inc.

Avnet Inc. is an Arizona-based distributor of integrated enterprise computing systems and semiconductors. They distribute systems, IT components, and software as well as offering logistics, configuration, and engineering design services. They offer products from over 300

manufacturers to over 100,000 customers made up of a variety of manufactures as well as VARs. Their market capitalization is US \$4.667 billion, as of July 5th, 2012. They have over 17,600 employees operating worldwide. From 2007 until 2011, profitability was weak, falling between a period low of -6.75% in 2009 and high of 3.86% in 2008. Over the period, average net profits were 1.44%. As seen in the previously analysed deals, the profitability of resellers in the IT industry is low and sensitive to economic downturns. Profitability in 2009 was adversely affected by a charge of over US \$1.474 billion in depreciation and amortization. The average of the depreciation charges for the 2007-2011 period outside of the 2009 anomaly is US \$61 million. Operating revenues grew steadily through the period (including 2009) from US \$15.7 billion to US \$26.5 billion.

The acquisition of Bell Microproducts Inc. marks the third acquisition in a series of ten acquisitions since mid-2010 by Avnet Inc. The other acquisitions in the series are Tallard Technologies Inc, of Florida and Amosdec SAS of Latin America, both of which are wholesalers of electronics that will help expand Avnet's reach into Latin America. As well, Pinnacle Data Systems Inc. of Ohio, a manufacturer of customized computer equipment, as well as Round2, which recycles IT products have also been acquired. Similar to the acquisitions made by Presidio, these mergers signal Avnet's interest in strengthening its distribution network, particularly in Latin American. In addition to geographic expansion, Avnet has demonstrated that it is interested in acquiring firms specializing in manufacturing and distribution. The acquisition of Bell Microproducts by Avnet is downstream vertical integration.

Prior to acquisition by Avnet, Bell Microproducts Inc. was primarily a reseller of IT products. It distributed and supported data storage products, computer peripherals, and software products from over 400 product lines in addition to its own proprietary brands. It had operating units in North and South America, Africa, and the Middle East that have been integrated with Avnet's operating units in those areas. With a market capitalization of US \$612 million and over 1,900 employees as of December 2009, the market capitalization of Bell Microproducts Inc. was 7.6 times smaller than Avnet Inc. According to Bell Microproducts' year 2009 10-K filing, its net profit margin peaked in 2009 at 0.29% preceded by a low in 2008 of -2.29% on earnings of US \$55 million and US \$-13 million respectively. Average net profits for the 2005-2009 period was -0.89%. Growth of gross profits remained relatively steady from 2005 until 2009 rising from US \$216 million to US \$307 million. Average depreciation and amortization over the same period was US \$9.6 million if the anomalous year 2008 entry is removed. The anomalous

depreciation and amortization charge of US \$63.3 million in 2008 is over 6 times larger than the average for the period and is the source of the strongly negative reported net profits for that year.

On July 6th, 2010 Avnet Inc purchased all outstanding shares of Bell Microproducts Inc. for \$7 per share, for a deal value of US \$592 million. The share price on March 26th, 2010 was US \$5.38 prior to the announcement of the deal. The consideration is structured as US \$252 million in cash and Avnet assumes US \$342 million of Bell Microproducts' net debt. The analysis of the sensitivity of the debt component of this deal appears later in this chapter. Bell Microproducts' business units have been integrated into similar units within Avnet and the company has delisted from the NASDAQ.

The purchase price of US \$592.2 million represents the value of outstanding shares at the time of sale plus a 30.1% premium. At the time of sale, the enterprise value of Bell was US \$454.8 million. The implied enterprise value of US \$586.9 million of Bell was 10.9 multiplied by Bell's EBITDA. Therefore, Avnet was willing to pay a premium for Bell relative to the industry median multiple of 7.23 (Valmetrics, 2007).

5.3 Trends in Transactions and Valuations

This section identifies trends among the four previously listed transactions. The analysis is done by analysing trends in valuations, deal structure, and in geography. The results from this analysis create the summary of trends in the following chapter.

In Table 5 in section 5.2, buyers are 8-10x larger than their targets in terms of market capitalization. Buyers are also more profitable, on average, than their targets due to being higher above the minimum effective operating size than smaller firms. In addition, the two largest buyers offer a broad range of services in addition to being resellers and all of the targets firms, with the exception of Xeta, are less profitable than their acquirer is. If one looks at the detailed financials of any of the targets, it is clear that during the recession, the smaller firms suffered significantly greater negative net earnings relative to the larger firms during the peak of the recession. All of the targets are core resellers and have limited service offerings outside of reselling. The transaction prices in the data set have EBITDA multiples of between 6.8 and 49 which suggests that certain buyers are willing to pay significant premiums for these targets. The high multiples observed could be the result of strategic buyers willing to pay a premium for the tight synergies that exist between the buyers and sellers in addition to a decrease in competition. Additionally, a sample of 301 M&A transactions over from 2009-2012 in the technology distribution industry yielded an average implied enterprise value EBITDA multiple of 11.07 (CapitalIQ, 2012), which

is more than double the value of a sample of general technology firms provided by SeekingAlpha.com (2011). In summary, some buyers in this industry are willing to pay high premiums for acquisitions.

5.4 Trends in Geography

This section examines the differences in geography covered by buyers and targets to determine whether buyers are interested in geographic expansion or reinforcing their presence in existing territories. The table below summarizes the geographic regions covered by the buyers and sellers covered in section 5.2.

Table 6: Trends in Geography in Select Transactions 2009-2012 (Bureau van Dijk, 2012)

Buyer vs. Seller Geography				
Buyer	Presidio	Paetec Inc.	Ingram Micro	Avnet Inc.
Target	INX	Xeta Inc.	Birdgepoint Inc.	Bell Microproducts Inc.
Geography				
North America	Both	Both	Both	Both
South America	-	-	Both	Both
Latin America	-	-	Both	Both
Europe	-	-	Both	Both
Asia-Pacific	-	-	Both	Acquirer
Africa	-	-	Both	Acquirer
Middle East	-	-	Both	Acquirer

Referring to section 2.1, geographic expansion into new markets, or growing presence in established markets are potential motivations for mergers and acquisitions. From the data in the Table 6, it is clear that acquirers of resellers are interested in reinforcing operations within their current territories. This is likely due to acquirers being more interested in restructuring operations within these areas to increase profitability, rather than expanding into new territories where less overlap will reduce the impact of the acquisition on the operating costs of the joined firms.

5.5 Trends in size

This section identifies trends in the relative size of the firms in the data set. As discussed in section 2.1, “firm size impacts profitability through two very distinct mechanisms: bargaining

power and operational efficiency." (Moatti, Dussauge, & Ananad, 2003) Table 7 shows that the relative market capitalizations of targets fall between 5% and 25% of acquiring firms.

Table 7: Trends in Size in Select Transactions 2009-2012 (Bureau van Dijk, 2012)

Deal	1	2	3	4
Buyer	Presidio	Paetec Inc.	Ingram Micro	Avnet Inc.
Target	INX	Xeta Inc.	Birdgepoint Inc.	Bell Microproducts Inc.
Buyer Market Cap	N/A	790	2,162	4,776
Buyer / Seller Market Cap	N/A	18	4	10
Buyer Net Profit Margin (%)	4.76	-3.62	1.07	3.28
Target Net Profit Margin (%)	0.46	2.63	1.09	0.29
Buyer / Seller Net Profit Margin (%)	10.3	-1.4	1.0	11.3

In the section 5.3, EBITDA values are compared to enterprise values to give some insight into how the scale of the targets relate to their earnings. In the data presented in Table 8, the earnings of buyers scale relatively linearly with their size. Therefore, the data supports the idea that there are operational advantages to an increase in size among these firms.

Table 8: Trends in Earnings Amongst Buyers in Select Transactions 2009-2012(Bureau van Dijk, 2012)

Deal	1	2	3	4
Buyer	Presidio	Paetec Inc.	Avnet Inc.	Ingram Micro
Buyer EV	N/A	1,893	5,814	2,293
Buyer EBITDA	56	254	1,085	517
Buyer Earnings / EV	N/A	13%	19%	23%

5.6 Deal Structure

As discussed in section 2.2, the structure of consideration of a deal reflects the current economic conditions as well as the capital structure of the acquirer and target. This section analyses the deal structures of the four transactions discussed in section 5.2.

The sample set of deals in section 5.2 is restricted to public target companies due to data availability. A side effect of constraining our sample set to public firms is that all consideration is exchanged for the equity value plus a control premium. Further, the only way to pay shareholders

for public companies is all cash or a mix of free cash and cash generated from debt issues or equity sales. Table 9 shows the transaction size and the structure of the consideration.

Table 9: Trends in Deal Structure in Select Transactions 2009-2012(Bureau van Dijk, 2012)

Transaction Data	1	2	3	4
Buyer	Presidio	Paetec Inc.	Ingram Micro	Avnet Inc.
Target	INX	Xeta Inc.	Birdgepoint Inc.	Bell Microproducts Inc.
Deal Value (\$ million)	85	63	879	592
Transaction Debt Component (\$ million)	0	0	190	342
% Debt	0%	0%	22%	58%
Other consideration	None	None	None	None

As discussed in chapter 2.2, paying in cash is the preferred consideration for targets due to its perfect liquidity and the limitations for recourse it puts on the acquirer. The debt component of the two larger transactions is notable due to the cost of debt and the low profitability of the firms prior to the merger. The low profitability of the targets prior to acquisition is a likely driver for the target firms to seek acquisition. From the acquirer's perspective, the low profitability of the targets makes a positive return challenging unless significant value can be unlocked in the targets. This is especially true in the third and fourth transactions where the return on the investment also has to cover the cost of the debt used to finance the transaction.

On the surface, the two transactions that include a debt component appear to be unprofitable due to the cost of debt to finance them being greater than the net profits resulting from their ownership. The likely purpose of using debt in these transactions is to initially operate the acquisition at a loss and unlock value through restructuring the operations of the target to generate a return on the capital invested. The reorganization that a target goes through following an acquisition typically involves selling off redundant cost centres and attempting to magnify synergies between revenue centres. A likely reason for the failure of 70-90% of mergers and acquisitions is an overestimation of the benefits and an underestimation of the consequences of engaging (M. Wolfe, 2012). The next section discusses the profitability of the transactions that include a debt component as operational efficiency increases.

5.6.1 Deal Sensitivity Analysis

This section looks at the third and fourth transactions discussed in the previous chapter to assess the impact of increases in the cost of debt and increases in operational efficiency on the profitability of the combined firm. First, the book value for the cost of debt is used to calculate the minimum increase in operational efficiency that is required to cover the cost of the debt used to finance the transaction. After that, comparisons of a variety of costs of debt are measured against variable increases in operational efficiency to illustrate the sensitivity of operational gains against changes in the firm's cost of debt.

Table 10: Deal Sensitivity Analysis to Operating Efficiency in Select Transactions 2009-2012 (Bureau van Dijk, 2012)

Transaction Data	1	2
Buyer	Ingram Micro	Avnet Inc.
Target	Birdgepoint Inc.	Bell Microproducts Inc.
Deal Value (\$ million)	879	592
Transaction Cash Component (\$ million)	689	250
Transaction Debt Component (\$ million)	190	342
% Debt	22%	58%

Target Data		
Total Revenues (\$ million)	5,244	3,021
Cost of Goods Sold (\$ million)	(4,845)	2,714
Other Operating Items (\$ million)	(254)	(263)
EBITDA (\$ million)	145	55
Net Profits	49	8
Profit Margin	1.09%	0.29%

Breakdown of Cost of Debt		
Cost of Debt*	4.3%	4.3%
Debt Cost (\$ million)	-8.17	-14.706

Benefit from Varying Increase In Operational Efficiency minus Cost of Debt (\$ million)		
2%	(3)	(9)
4%	+2	(4)
6%	+7	+1
8%	+12	+6
10%	+17	+12

Effect of a 6% increase in operational efficiency as a result of merging		
EBITDA (\$ million)	152	56
Net Profits (\$ million)	56	9
Profit Margin	1.25%	0.33%

In the first transaction listed in Table 10, a minimum gain in operational efficiency of 4% is required to decrease operating expenses sufficiently to free up cash flows to cover the cost of the debt used to finance the acquisition. In the second case an operational efficiency increase of 6% is required. These results do not tell much about what happens when the cost of capital changes, however, tables 11 and 12 illustrate the increasing the cost of debt. As discussed in Chapter 2, interest rates are at a level that has not been seen since the 1950s. Therefore, the potential effect of an increase in interest rates should be taken into consideration.

Table 11: Deal Sensitivity Analysis to Operating Efficiency and Cost of Debt in Ingram Micro's purchase of Brightpoint Inc.

		Increase In Operational Efficiency				
		+2%	+4%	+6%	+8%	+10%
Cost of Debt	3.0%	-0.6	4.5	9.6	14.6	19.7
	4.0%	-2.5	2.6	7.7	12.7	17.8
	5.0%	-4.4	0.7	5.8	10.8	15.9
	6.0%	-6.3	-1.2	3.9	8.9	14.0
	7.0%	-8.2	-3.1	2.0	7.0	12.1
	8.0%	-10.1	-5.0	0.1	5.1	10.2
	9.0%	-12.0	-6.9	-1.8	3.2	8.3

Table 12: Deal Sensitivity Analysis to Operating Efficiency and Cost of Debt in Avnet's purchase of Bell Microproducts Inc.

		Increase In Operational Efficiency				
		+2%	+4%	+6%	+8%	+10%
Cost of Debt	3.0%	-5.0	0.3	5.5	10.8	16.1
	4.0%	-8.4	-3.1	2.1	7.4	12.7
	5.0%	-11.8	-6.6	-1.3	4.0	9.2
	6.0%	-15.3	-10.0	-4.7	0.6	5.8
	7.0%	-18.7	-13.4	-8.1	-2.9	2.4
	8.0%	-22.1	-16.8	-11.6	-6.3	-1.0

9.0%	-25.5	-20.2	-15.0	-9.7	-4.4
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For the first transaction above, the cost of debt can increase +0.7% up to a value of 5% without the cost of debt causing the transaction to have an overall negative value. Conversely, in the second transaction, the benefits of merging are wiped out by any increase in the cost of debt unless operational efficiency also increases. It is important to consider these factors when assessing a potential acquisition because the profit and operating margins on resellers are so thin that subtle shifts in the cost of capital can quickly wipe out any value that has been created. The next chapter builds on the findings in this chapter and attempts to summarize the trends observed among these acquisitions.

6: Summary of Findings of M&A by VARs

Presently, changes in the distribution of hardware and software are eroding the traditional value proposition of resellers. In order to survive, resellers are taking advantage of economies of scale through acquisitions to increase operational efficiency and size. Through the analysis performed in the previous chapter, it is clear that firms are making acquisitions to enhance operational efficiency by reinforcing their presence in existing markets.

The focus of this chapter is to summarize the findings of the preceding chapters and develop a structure for the analysis of targets and acquirers. First, a summary of trends among targets provides insight for buyers and targets for generating synergies. Lastly, a summary of desirable characteristics for buyers is presented.

6.1 Summary of Targets

For target firms, Kagermann, Christensen, & Johnson (2008) state that there are four elements that must be considered when analysing a potential acquisition. The elements they propose are the creation of value for customers, an increase in profitability for the firm, an increase in resources to deliver value, and overall process improvements across business units.

The first element in assessing the value of a potential acquisition is the increase in value that it will create for customers. Value to customers of VARs comes from combining interoperable products, providing a wide variety of products to meet a variety of customer needs. Given the lack of differentiation between resellers and the comparability of pricing across resellers, additional value to customers is going to come from new product and service offerings. Therefore, to satisfy the customer value element, an acquisition of a firm with expertise in emerging services such as cloud computing would make a potential acquisition more valuable to customers than one that overlaps exactly with current service offerings if all other factors are equal. To measure the value that a potential acquisition will create for customers, it is important to understand the needs of customers, the service offerings that they are interested in adopting, and the support that those services will require.

The second element that Kagermann et al. (2008) use to measure the potential value of a target is its effect on the profitability of the buyer. Profitability is likely to be the most sensitive

element and strongest driver of acquisitions amongst resellers due to the low profitability of large firms and negative profitability of small firms. As mentioned in the section 3.5, the minimum effective scale of these firms is increasing and as a result, profitability is decreasing. To gauge the impact of an acquisition on profitability, the deal structure, projections for organic growth, and utility of free capital will all need to be taken into consideration.

The third element mentioned is resources. The greatest resources that resellers have are their service and sales teams and more specifically, their product expertise. In the analysis chapter, it was established that the strategic purpose of the acquisitions is to reinforce their presence within their existing territories by capturing' market share from competitors within those territories. For that reason, when searching for a target and considering resources, the resulting integrated sales and service teams should be considered. To measure the impact of an acquisition on these resources, the projected demand of the combined market will have to be measured against the capabilities and strengths of the combined service and sales teams.

The last element to take into consideration when contemplating a potential acquisition is the increase in process efficiency across business units. This is mentioned last because this is a measurement of the impact of an acquisition on the frictions between all business units. The profitability and resource elements are driven by an increase in profit centres being supported by a relatively smaller administration structure than prior to acquisition. As a result, the deployment of goods and services needs to function more efficiently. A higher density of sales and service providers will allow for deeper relationships with customers and a wider variety of service offerings. To measure the impact of an acquisition on process efficiency, it would be useful to perform a sensitivity analysis on the strain that an increase in profit centres will put on the supporting business units. However, detailed data on activity costs would be required to enable an estimation of this impact.

6.2 Summary of Acquirers

This section uses the elements suggest by Kagermann et al. (2008) in the previous section from the perspective of a firm that is looking to be acquired. The first element mentioned that is used to measure the value of a potential acquisition is the increase in value that it will create for the buyer's customers. Value is created for the buyer's customers if the target provides a wider variety of products or has unique capabilities working with the products already available from the acquirer. Therefore, targets that are interested in being acquired should focus on expanding their product offerings and specializing in products that are offered by their larger competitors.

The second element for measuring the value of a potential target is the effect of an acquisition on profitability. Large firms are looking to increase profitability through increases in operational efficiency by acquiring smaller firms with strong sales. Therefore, targets should focus on boosting sales because redundant operating units will likely be sold after the acquisition. Additionally, acquirers will be looking for access to new customers. Therefore, firms that are interested in being acquired should also focus on expanding their market outside of the customer base of their competitors. However, the market should not extend outside of the geographic area covered by the operations of the buyer. In section 5.4, the influence of geography is discussed and buyers appear to only be interested in targets that operate in areas that they already compete in.

The third element mentioned is resources. As mentioned above, the greatest resources that resellers have are their service and sales teams. Prior to an acquisition, these teams will likely be preserved while redundant operations units will be sold. To maximize the value of a target's resources to a potential buyer, a firm could focus on building a sales force that has a higher return on the operating capital invested in them by recruiting strong personnel from other firms.

The last element to take into consideration when contemplating a potential acquisition is the increase in process efficiency across business units. To maximize the value of this element to a potential buyer, tight operating synergies between both firms should be developed. Additionally, according to Muddle (2003), "...size was also associated with post-acquisition performance improvements. Therefore, larger acquirers were more able to reduce costs than other acquirers..." Therefore, for targets to increase the operational gains on both sides of the transaction, they should seek to be acquired by the largest firm that fits the other criteria mentioned in this section.

7: Recommendations and Conclusions

7.1 Validity of Analysis

The analysis is valid because it identifies the financial and operational components of buyers and sellers using audited financial data and academic theory to analyse trends in acquisitions amongst resellers. However, M&A in general fails to create value in 70-90% of transactions. This low success rate is due to overly optimistic projections for value creation and understated potential for failure. Further, this should be taken into consideration when assessing buyers and sellers.

7.2 Weaknesses in Analysis

The greatest weakness in the assessment comes from the small sample size that it is based upon. As well, the data only includes public firms, which does not provide a good analogue of what is happening amongst private firms. To determine what is happening amongst private firms, a liquidity discount would need to be applied to the transaction values and audited earnings data would have to be used to generate the valuations.

7.3 Conclusion and Summary

As the market for IT distribution shifts towards hosted services and lightweight applications, VARs will continue to come under pressure to reorganize into larger firms. If the economy continues to recover over the next two years and global interest rates remain low, it is reasonable to expect M&A activity to continue to recover. From the transactions observed in this report, buyers will be focused on building strategic synergies in terms of products, services, and geography. Moving forward through to 2014, North American VARs will focus on growth through a balance of expansion into service-based offerings and acquisitions in existing territories.

7.3.1 M&A Summary

As noted in section 2.6, the firms that get the most out of acquisitions act early in growth cycles when valuations are depressed. In section 2.7 it is noted that valuations have declined from

2009-2012, which could be interpreted as an indication that valuations are depressed. However, it is likely impossible to forecast the point in time when valuations will begin to rise. Further, firms that act too early in a recovery period may lock up capital that could generate greater utility by being used to ride out an extended recovery period or finance an acquisition at a lower premium.

7.3.2 Strategic Vs. Financial Buyers

Buyers in this increasingly competitive industry are decreasing competition and scaling up production through strategic acquisitions. As a result, certain buyers are willing to pay a significant premium to acquire resellers. As market forces continue to squeeze the profits margins of resellers, acquisitions will continue to be strategic in nature.

7.3.3 Geography

From the geographic analysis in section 5.4, it is clear that buyers are making purchases within their established territories. If a firm is interested in becoming acquired, it would be wise to start searching for a buyer amongst its direct competitors where there are strong overlaps in products and services to encourage strategic buying behaviour.

7.3.4 Valuations

The earnings of resellers are growing steadily but there is no indication of potential for high growth. Therefore, a valuation method based upon current earnings will be a logical starting point for developing a comparable transaction value. However, strategic buyers are willing to bid prices far beyond average book values to capture synergies. As well, book value has very limited power in producing accurate valuations of service-based companies such as resellers.

7.3.5 Expected EBITDA Multiples

The transactions analysed in chapter 5 had transaction values based on EBITDA that are in the range of 6.8-49. A cross section of technology stocks that include Microsoft, Best Buy, DELL, and HP have an average EV/EBITDA of 5.25 (SeekingAlpha.com, 2011). Therefore, resellers are presently selling at a larger premium relative to other segments of the tech sector in an effort to achieve long-term revenue growth by capturing market share.

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