Chapter VI

Conclusion & Suggestion
The aim of this paper was, at its origin, to explore Intangibles and provide a theoretical survey of current and emerging approaches for their evaluation. The preliminary step for the evaluation of Intangibles was to give a definition of them. We think now a complete definition of Intangibles does encompass the concepts of Intangible Assets, Intellectual Capital, and “Optional Capital.” A second step consisted in a review of an extensive, if necessarily incomplete bibliography of related research that should be contributive to a complete evaluation of Intangibles. Their organization into “Global” and “Asset by Asset” approaches improve their visibility. A third step the discussion of approaches to appreciate their respective contributions. A final review and assessment indicates several promising research areas.

Among Stock Market approaches the “Total Value Creation” method and the “Normalized Earnings” represent works of particular interest. The first one needs to get deeper into the value creation measurement for shareholders, the second one requires to be adjusted and experimented on a wider range, to become a reference approach.

Assets by Asset approaches are only at their early beginnings for the evaluation of Intangibles. As discussed previously, accounting related methods might be disconnected with economic reality. Even if accountancy has to cope with standards applied to Intangible Assets, it must improve
present practices. It is necessary to refine the recording of Intangibles, deepen depreciation techniques and justify them economically. Opening accountancy related fields such as cost control, budgeting, consolidation, pooling... that presently ignore Intangibles, are fruitful ground for future research and experimentation.

The application of the option-pricing theory to the evaluation of all Intangibles merits further explorations and needs to be experiment. For us, *Intangibles are also options*. To that extent the basic point lies beyond methods and measures. Evaluating Intangibles through an optional way could finally suggest that raising uncertainty over tangible and intangible assets is a manner to exercise their real value.

This paper is an overview of some of the critical elements of intellectual property and intangible asset valuation and is intended for two audiences: the person with an interest but relatively little direct experience with intellectual property valuation and the person with deep knowledge of one application but an interest to learn about the implication of valuation across IP issue areas. It combines both academic perspective on IP management issues and a practitioner’s experience in valuing these assets for a number of different business purposes.

For most IP valuation applications there is no hierarchy of methods, and all methods are in principle applicable equally. In addition, most
practitioners would concur that all valuation methods. If applied properly, should converge near a similar valuation estimate. As a consequence, many practitioners suggest employing multiple valuation methods for a given IP asset to demonstrate robustness and completeness of the analysis. In practice this is often difficult as data for multiple methods is often unavailable or the economic characterization of the asset precludes use of a method (i.e., an entrepreneurial IP asset by definition will not have a meaningful replacement cost method application). The field of IP valuation has been evolving as rapidly as the explosion of IP in the economy and the complexity of IP in the legal field. However, while the methods will certainly change over time, the requirements to ground the analysis in the key *Foundation* issues and to *Profile* the business, legal and financial issues will remain critical to IP valuation.

An intangible is defined as something not tangible; something that has no physical existence and incapable of being perceived by the sense of touch, as an incorporeal, immaterial and impalpable thing.

Intangibles are all around the business world. What intangible assets are, have been under a lot of study for more than forty years and still there is no generally accepted approach on how to measure their value or what makes them to increase or decrease. In the need of a known reference to build the theory for intangibles, the accounting theory analogies are still being made even though the intangible asset concept has evolved to a
broader one, intellectual capital (IC). IC still uses an accounting terminology but is studied by a managerial approach.

The presence of an accounting terminology confuses sometimes and allows still trying to explain its behavior from an accounting point of view. That is why concepts like intangible liabilities and intangible capital or equity have appeared trying to explain variations in the intangibles value. It should be considered that IC might not vary because of the existence of intangible liabilities but due to the context where they interact.

Intellectual Capital studies will continue evolving until a generally accepted method is adopted due to the importance of knowing how and what makes intangibles to increase or decrease its value. Knowing the source of IC and why it varies will help management to take decisions and set strategies through the development of their intangibles.

The recent interest of understanding the possible existence of intangible liabilities makes necessary to start from the basics and clarify terminologies.

In accounting a liability is a claim on the assets (therefore decreasing its value) of a company or individual excluding ownership equity. It represents a transfer of assets or services at a specified or determinable date. The firm or individual has little or no discretion to avoid the transfer. Liabilities represent what the business owes to another person or entities
known as creditor and it is also possible that the event causing the obligation has already occurred.

Trying to compare the management term “Intellectual Capital” to the accounting “capital” or “equity” term and applying the Intellectual Capital = Intellectual Assets-Intellectual Liabilities analogy is a misunderstanding of the Intellectual Capital=Intangible Assets concept and evolution explained before.

It would also be a concept misinterpretation trying to explain the decrease of an intangible asset value due to the existence of an intangible liability by the simple inexistence of a creditor that would receive the intangible assets transferred.

The intangible asset variation value is better explained by an appreciation or depreciation due to the context (market forces, speculation, etc.) and the effective or ineffective use/management of them. When concepts like bad public image, bad word-of-mouth, weak strategic planning processes, dangerous work conditions, potential environmental cleanup, potential product tampering or poor corporate reputation are tried to be considered as intangible liabilities it should be noticed that they are only the ineffective use of the intangible asset in some cases and in others are only potential expenses, but in any case a creditor would exist. Neither potential expenses nor ineffective asset use should be considered as intangible liabilities.
liabilities because they differ in their nature. It is understandable that as in accounting the two reasons why an asset varies its value are liabilities and expenses, an analogy for intangible assets might work too, but it doesn’t.

Then, what could be considered as an intangible liability? An immaterial payment promise, which decreases the value of the intangible assets by giving part of them to a creditor.

From a managerial point of view, is possible to address the variation issue considering the context where interrelated conditions occur. It should be considered that as in many other assets, the valuation of an intangible is a matter of perception. Some of the components of the intellectual capital are rational, directly measurable, but others are of an affective and perceptive nature.

The importance of context when valuating IC has been briefly suggested in papers by Rodov and Leliaert (2002). They expressed that management should assign the values they considered appropriate to IC according to the company. Also Chaminade and Johanson (2003) addressed the perception difference regarding to knowledge management in two different companies at two different European countries.

Context should involve time (when the value of IC is measured) and location (depending on the region IC will vary). As tangible assets, the components’ value of IC will vary depending on the moment and the region
where they are. Some assets are more valuable in one region (state, country, hemisphere, etc.) than in other due to perception, resources, supply, demand, fashion, etc. Even for companies with almost everything equal if they are in different regions, the IC value will vary.

So far, the usual method to assign a value for an intangible and identify its variation has been a financial/accounting linear approach, which doesn’t consider the interaction of all the variables that include intangibles, tangibles and the context. It is necessary to address the problem as a dynamic complexity where all the parts interact. Quantitative and qualitative models are needed to understand the behavior of intangibles and their valuation as a change in one part of the system affect the whole system.

IC fits the description of a system, which is a collection of parts organized for a purpose. The purpose of IC is the same as any other asset, to be a source of future benefits with the only difference that has no physical existence. IC as any other system, again, sometimes fails to achieve its purpose due to a lack of proper interaction, design or external disturbance. That is why IC value variations exist.

A system dynamics point of view how the different identified components of IC interact with each other’s as a system and how the context constantly interacts as an input/output source.
Enterprises frequently expend resources, or incur liabilities, on the acquisition, development, maintenance or enhancement of intangible resources such as scientific or technical knowledge, design and implementation of new processes or systems, licences, intellectual property, market knowledge and trademarks (including brand names and publishing titles). Common examples of items encompassed by these broad headings are computer software, patents, copyrights, motion picture films, customer lists, a mortgage servicing rights, fishing licences, import quotas, franchises, customer or supplier relationships, customer loyalty, market share and marketing rights. Goodwill is another example of an item of intangible nature which either arises on acquisition or is internally generated.

Not all the items described in paragraph will meet the definition of an intangible asset, that is, identify is ability, control over a resource and expect-action of future economic benefits flowing to the enterprise. If an item covered by this Standard does not meet the definition of an intangible asset, expenditure to acquire it or generate it internally is recognized as an expense when it is incurred. However, if the item is acquired in an amalgamation in the nature of purchase, it forms part of the goodwill recognized at the date.

Some intangible assets may be contained in or on a physical substance such as a compact disk (in the case of computer software), legal documentation (in the case of a licence or patent) or film (in the case of
The definition of an intangible asset requires that an intangible asset be identifiable. To be identifiable, it is necessary that the intangible asset is clearly distinguished from goodwill. Goodwill arising on an amalgamation in the nature of purchase represents a payment made by the acquirer in anticipation of future economic benefits. The future economic benefits may result from synergy between the identifiable assets acquired or from assets which, individually, do not qualify for recognition in the financial statements.
but for which the acquirer is prepared to make a payment in the amalgamation.

An intangible asset can be clearly distinguished from goodwill if the asset is separable. An asset is separable if the enterprise could rent, sell, exchange or distribute the specific future economic benefits attributable to the asset without also disposing of future economic benefits that flow from other assets used in the same revenue earning activity.

Separability is not a necessary condition for identify is ability since an enterprise may be able to identify an asset in some other way. For example, if an intangible asset is acquired with a group of assets, the transaction may involve the transfer of legal rights that enable an enterprise to identify the intangible asset. Similarly, if an internal project aims to create legal rights for the enterprise, the nature of these rights may assist the enterprise in identifying an underlying internally generated intangible asset. Also, even if an asset generates future economic benefits only in combination with other assets, the asset is identifiable if the enterprise can identify the future economic benefits that will flow from the asset.

An enterprise controls an asset if the enterprise has the power to obtain the future economic benefits flowing from the underlying resource and also can restrict the access of others to those benefits. The capacity of an enterprise to control the future economic benefits from an intangible
asset would normally stem from legal rights that are enforceable in a court of law. In the absence of legal rights, it is more difficult to demonstrate control. However, legal enforceability of a right is not a necessary condition for control since an enterprise may be able to control the future economic benefits in some other way.

Market and technical knowledge may give rise to future economic benefits. An enterprise controls those benefits if, for example, the knowledge is protected by legal rights such as copyrights, a restraint of trade agreement (where permitted) or by a legal duty on employees to maintain confidentiality.

An enterprise may have a team of skilled staff and may be able to identify incremental staff skills leading to future economic benefits from training. The enterprise may also expect that the staff will continue to make their skills available to the enterprise. However, usually an enterprise has insufficient control over the expected future economic benefits arising from a team of skilled staff and from training to consider that these items meet the definition of an intangible asset. For a similar reason, specific management or technical talent is unlikely to meet the definition of an intangible asset, unless it is protected by legal rights to use it and to obtain the future economic benefits expected from it, and it also meets the other parts of the definition.
The future economic benefits flowing from an intangible asset may include revenue from the sale of products or services, cost savings, or other benefits resulting from the use of the asset by the enterprise. For example, the use of intellectual property in a production process may reduce future production costs rather than increase future revenues.

Intellectual capital is recognized as the most important asset of many of the world’s largest and most powerful companies; it is the foundation for the market dominance and continuing profitability of leading corporations. It is often the key objective in mergers and acquisitions and knowledgeable companies are increasingly using licensing routes to transfer these assets to low tax jurisdictions.

Nevertheless, the role of intellectual property rights (IPRs) and intangible assets in business is insufficiently understood. Accounting standards are generally not helpful in representing the worth of IPRs in company accounts and IPRs are often under-valued, under-managed or under-exploited. Despite the importance and complexity of IPRs, there is generally little co-ordination between the different professionals dealing with an organization’s IPR. For a better understanding of the IPRs of a company, some of the questions to be answered should often be:
What are the IPRs used in the business?

What is their value (and hence level of risk)?

Who owns if (could I sue or could someone sue me)?

How may it be better exploited (e.g. licensing in or out of technology)?

At what level do I need to insure the IPR risk?

One of the key factors affecting a company’s success or failure is the degree to which it effectively exploits intellectual capital and values risk. Management obviously need to know the value of the IPR and those risks for the same reason that they need to know the underlying value of the tangible assets; because business managers should know the value of all assets and liabilities under their stewardship and control, to make sure that values are maintained. Exploitation of IPRs can take many forms, ranging from outright sale of an asset, a joint venture or a licensing agreement. Inevitable, exploitation increases the risk assessment.

Valuation is, essentially, a bringing together of the economic concept of value and the legal concept of property. The presence of an asset is a function of its ability to generate a return and the discount rate applied to that return. The cardinal rule of commercial valuation is: the value of something cannot be stated in the abstract; all that can be stated is the value of a thing in a particular place, at a particular time, in particular
circumstances. I adhere to this and the questions ‘to whom?’ and ‘for what purpose?’ must always be asked before a valuation can be carried out.

This rule is particularly significant as far as the valuation of intellectual property rights is concerned. More often than not, there will only be one or two interested parties, and the value to each of them will depend upon their circumstances. Failure to take these circumstances, and those of the owner, into account will result in a meaningless valuation.

For the value of intangible assets, calculating the value of intangible assets is not usually a major problem when they have been formally protected through trademarks, patents or copyright. This is not the case with intangibles such as knowhow, (which can include the talents, skill and knowledge of the workforce), training systems and methods, technical processes, customer lists, distribution networks, etc. These assets may be equally valuable but more difficult to identify in terms of the earnings and profits they generate. With many intangibles, a very careful initial due diligence analysis needs to be undertaken together with IP lawyers and in-house accountants.

There are four main value concepts, namely, owner value, market value, fair value and tax value. Owner value often determines the price in negotiated deals and is often led by a proprietor’s view of value if he were deprived of the property. The basis of market value is the assumption that if
comparable property has fetched a certain price, then the subject property will realize a price something near to it. The fair value concept, in its essence, is the desire to be equitable to both parties. It recognizes that the transaction is not in the open market and that vendor and purchaser have been brought together in a legally binding manner. Tax value has been the subject of case law worldwide since the turn of the century and is an esoteric practice. There are quasi-concepts of value which impinge upon each of these main areas, namely, investment value, liquidation value, and going concern value.

Acceptable methods for the valuation of identifiable intangible assets and intellectual property fall into three broad categories. They are Market based, cost based, or based on estimates of past and future economic benefits.

In an ideal situation, an independent expert will always prefer to determine a market value by reference to comparable market transactions. This is difficult enough when valuing assets such as bricks and mortal because it is never possible to find a transaction that is exactly comparable. In valuing an item of intellectual property, the search for a comparable market transaction becomes almost futile. This is not only due to lack of compatibility, but also because intellectual property is generally not developed to be sold and many sales are usually only a small part of a larger transaction and details are kept extremely confidential. There are other
impediments that limit the usefulness of this method, namely, Special purchasers, different negotiating skills, and the distorting effects of the peaks and troughs of economic cycles. In a nutshell, this summarizes my objection to such statements as ‘this is rule of thumb in the sector’.

**Cost-based methodologies**, such as the “cost to create” or the “cost to replace” a given asset, assume that there is some relationship between cost and value and the approach has very little to commend itself other than ease of use. The method ignores changes in the time value of money and ignores maintenance.

The **methods of valuation flowing from an estimate of past and future economic benefits** (also referred to as the **income methods**) can be broken down into four limbs: 1) capitalization of historic profits, 2) gross profit differential methods, 3) excess profits methods, and 4) the relief from royalty method.

1. The **capitalization of historic profits** arrives at the value of IPR’s by multiplying the maintainable historic profitability of the asset by a multiple that has been assessed after scoring the relative strength of the IPR. For example, a multiple is arrived at after assessing a brand in the light of factors such as leadership, stability, market share, internationality, trend of profitability, marketing and advertising support and protection. While this **capitalization process** recognizes some of the factors which should be
considered, it has major shortcomings, mostly associated with historic earning capability. The method pays little regard to the future.

2. **Gross profit differential methods** are often associated with trade mark and brand valuation. These methods look at the differences in sale prices, adjusted for differences in marketing costs. That is the difference between the margin of the branded and/or patented product and an unbranded or generic product. This formula is used to drive out cash-flows and calculate value. Finding generic equivalents for a patent and identifiable price differences is far more difficult than for a retail brand.

3. The **excess profits method** looks at the current value of the net tangible assets employed as the benchmark for an estimated rate of return. This is used to calculate the profits that are required in order to induce investors to invest into those net tangible assets. Any return over and above those profits required in order to induce investment is considered to be the excess return attributable to the IPRs. While theoretically relying upon future economic benefits from the use of the asset, the method has difficulty in adjusting to alternative uses of the asset.

4. **Relief from royalty** considers what the purchaser could afford, or would be willing to pay, for a licence of similar IPR. The royalty stream is then capitalized reflecting the risk and return relationship of investing in the asset.
Discounted cash flow ("DCF") analysis sits across the last three methodologies and is probably the most comprehensive of appraisal techniques. Potential profits and cash flows need to be assessed carefully and then restated to present value through use of a discount rate, or rates. DCF mathematical modeling allows for the fact that 1 Euro in your pocket today is worth more than 1 Euro next year or 1 Euro the year after. The time value of money is calculated by adjusting expected future returns to today’s monetary values using a discount rate. The discount rate is used to calculate economic value and includes compensation for risk and for expected rates of inflation.

With the asset you are considering, the valuer will need to consider the opening environment of the asset to determine the potential for market revenue growth. The projection of market revenues will be a critical step in the valuation. The potential will need to be assessed by reference to the enduring nature of the asset, and its marketability, and this must subsume consideration of expenses together with an estimate of residual value or terminal value, if any. This method recognizes market conditions, likely performance and potential, and the time value of money. It is illustrative, demonstrating the cash flow potential, or not, of the property and is highly regarded and widely used in the financial community.
The **discount rate** to be applied to the cashflows can be derived from a number of different models, including common sense, build-up method, dividend growth models and the Capital Asset Pricing Model utilizing a weighted average cost of capital. The latter will probably be the preferred option.

These processes lead one nowhere unless due diligence and the valuation process quantifies remaining useful life and decay rates. This will quantify the shortest of the following lives: physical, functional, technological, economic and legal. This process is necessary because, just like any other asset, IPRs have a varying ability to generate economic returns dependant upon these main lives. For example, in the discounted cashflow model, it would not be correct to drive out cashflows for the entire legal length of copyright protection, which may be 70 plus years, when a valuation concerns computer software with only a short economic life span of 1 to 2 years. However, the fact that the legal life of a patent is 20 years may be very important for valuation purposes, as often illustrated in the pharmaceutical sector with generic competitors entering the marketplace at speed to dilute a monopoly position when protection ceases. The message is that when undertaking a valuation using the discounted cashflow modeling, the valuer should never project longer than what is realistic by testing against these major lives.
It must also be acknowledged that in many situations after examining these lives carefully, to produce cashflow forecasts, it is often not credible to forecast beyond say 4 to 5 years. The mathematics modeling allows for this in that at the end of the period when forecasting becomes futile, but clearly the cashflows will not fall ‘off of a cliff’, by a terminal value that is calculated using a modest growth rate, (say inflation) at the steady state year but also discounting this forecast to the valuation date.

While some of the above methods are widely used by the financial community,, it is important to note that valuation is an art more than a science and is an interdisciplinary study drawing upon law, economics, finance, accounting and investment. It is rash to attempt any valuation adopting so-called industry/sector norms in ignorance of the fundamental theoretical framework of valuation. When undertaking IPR valuation, the context is all-important, and the valuer will need to take it into consideration to assign a realistic value to the asset.

**Suggestion**

**The Growing Importance of Intellectual Assets**

Today more than ever companies are actively seeking approaches to convert the “intangible” value of their intellectual assets into revenue, cost savings and other forms of tangible benefits. Some organizations rely on the ability to protect their intellectual property as a means to maintain or gain
competitive advantage. Others depend upon income obtained from intellectual property – such as through licensing – as a source of high-margin revenues. But irrespective of the strategy a firm employs, it is well recognized that more and more of a firm’s current and future value is being attributed to intangible assets. A recent Gartner report [1] stated that, “By 2007, intangible intellectual assets will account for more than 90 per cent of the value of the Global 2000 enterprise, up from 20 per cent in 1978 and 70 per cent in 1998”. Consistent with this view, a November 2002 McKinsey & Co. study found that while the 40 technology and innovations companies studies could add 10-20% to their operating income by better exploiting IP, only a small number even reached the 0.5% mark{2}. Suffice it to say, companies are leaving a wealth of value in their intellectual assets unrealized.

Since the mid-80s there have been discussions around how to quantify the value of an reliably account for intangible assets. The dot.com crash has renewed and expanded these concerns outside of the accounting realm in an effort to explain significant differences between the “book value” of an organization and its market capitalization. In discussing the unique challenges facing those companies who depend on intangible assets for profitability and competitive advantage. FASB (the Financial Accounting Standards Board) states, “traditional financial statements do not capture – and may not be two forms of assets – hard assets and intangible assets.
While approaches to managing hard assets – such as plants, equipment, real estate, etc. – are well-developed, intangible assets have largely been viewed as the most difficult to quantify and the most unmanageable.

Recognizing the role of intangible assets in the economy and the unrealized potential these assets have on current and future value, companies are now seeking to understand the value of their intellectual assets as it relates to market capitalization and how to leverage that capital to its fullest extent. Firms seek to broaden what has been typically been viewed as primarily a legal function to an enterprise wide Intellectual Asset Management (IAM) competency: that is building the culture, framework and decision making capabilities to convert intellectual assets into profits.

**Challenges Facing Corporations**

Many organizations have difficulty understanding and maximizing the value obtained from intellectual assets because they lack visibility into the IP contained within their organization. For example, it is estimated that each year, U.S. companies waste $1 trillion dollars in patent assets[3]. Many IP heavy companies have extracted only a small fraction of their IP portfolio’s true value and are looking to identify new revenue streams while using their intellectual assets to gain a strategic edge over their competitors. Corporations with large patent portfolios also have problems with the various costs tied to managing those intellectual assets. Some of these costs
associated with managing IP, which include prosecution fees, maintenance fees, and application fees, are unnecessary and can be reduced with an IAM solution. While many corporations see the potential in shortening innovation cycles, developing more advanced technologies, and streamlining business processes.

Some companies in an effort to effectively manage and extract as much value as possible from their intellectual assets have sought to develop an intellectual Asset Management (IAM) competency. Large enterprises such as IBM. The Dow Chemical Company Philips, Lucent, and Texas Instruments have significantly increased revenues by successfully managing their intellectual assets. For example,

- Dow chemical Company in a campaign to lower maintenance taxes paid by aligning its intellectual assets with business strategies reduced its annual costs for obtaining and maintaining patents by $1.5 million. By reducing its patent portfolio from 12000 patents to 8500 patents from 1993 to 1999. Dow estimates it saved $40 million in maintenance tax savings[4].

- IBM has increased patent licensing royalty revenues 3,300% from $30 million in 1990 to $1B today. This recurring revenue stream is mostly unrestricted cash flow that represents 1/9 of IMB’s pretax profits and equates to $20B in product sales revenue[5].
Philips Electronics, which receives a significant amount of income from licensing, increased licensing revenue by 45% and filed 35% more patents in 2000 than in 1996[6].

Within the first six months of its new IP licensing strategy, British Telecommunications generated close to $14 million in new licensing revenue by data mining its patent portfolio and unlocking new sources of revenue.

With the trends clearly in sight, the future will require that the success of most company’s overall business strategy will be directly linked to how well they can effectively manage their intellectual assets.

**Cultivating an Intellectual Asset Management Competency Entail**

To build an Intellectual Asset Management competency is to develop the ability to operationally extract value from intellectual assets. As a multi-functional competency, the skills required for successful IAM span a broad range of capabilities including technical and IP subject matter expertise, financial valuation expertise, and business strategy and process knowledge. It involves developing a vision and strategy, implementing best in class processes, and creating an IAM focused organization structure.

Implementing a well-constructed Intellectual Asset Management system plays a critical role in developing an effective and successful IAM
competency. Such a system supports the processes and decision making needed to create, manage and use the estate to its fullest potential. Without a system that provides electronic management of assets, a systematic way of conducting the series of activities required to manage intellectual Property (IP), and tools for strategic analysis of IP data, developing an IAM competency is difficult if not impossible.

In fact, industry analysts and IP professionals predict that by 2005, more than 50 per cent of companies in the pharmaceutical, aerospace, high technology, consumer goods and biomedical sectors will have adopted an Intellectual Asset Management (IAM) system[7]. Such a system should integrate functionalities that have been historically isolated, such as patent searching licensing, and docketing. An enterprise wide central repository should allow sharing of IP information across the organization or between businesses. Analytical tools allow strategic analysis of data and reveal linkages between groups of data previously unknown. An integrated approach that links these functions will enable companies to manage their intellectual property in a way that willfully leverage IAM’s strategic power.

Companies Gain From Implementing an IAM Solution

Maintaining an Intellectual asset management competency presents a broad range of potential benefits to today’s technology and innovation driven companies. These benefits can be categorized into “Direct” and “Indirect”
based on how readily cost-savings and revenue can be attributed to improved IAM.
Direct Benefits

Direct benefits are those that provide an explicit link between intellectual assets and value – e.g., revenue or profits – and are typically considered to have near to mid-term payback periods. From IAM, companies are able to easily identify assets that are not being used within the organization. These assets then are available to be sold, licensed out, abandoned or donated providing direct benefits via new revenue streams from royalty revenue or cost savings from reduced maintenance fees and tax savings. In addition, enhanced agreement and obligation management allows companies to recover uncollected royalty revenue. Finally, those organizations with large patent portfolios can substantially reduce costs by eliminating inefficiencies in their current portfolio management processes.

Indirect benefits are those that are linked to strategy or vision, and often do not readily lend themselves to easy measurement. These benefits are well recognized and accepted, however typically require longer payback periods. These benefits include added value through strategic positioning (i.e. increased market share, blocking of competitors, increase in IP quality), increase in return or R&D dollars invested, support of sophisticated IP value extraction opportunities, and enhanced management of risk.
There are a number of indirect benefits that will enable organizations to achieve greater profitability and strengthen their strategic decision making capabilities after implementing an IAM competency. Integrating the various functions of IP within one enterprise system will allow companies to manage the entire lifecycle of an intellectual asset, from pre-creation to retirement. From the pre-creation stage, a company can assess the competitive landscape to target potentially profitable technologies and focus R&D efforts to obtain patents in those key areas. Once the patents are secured, an IAM system can help an organization decide whether those intellectual assets should be used as a measure to protect current revenue streams, or be licensed out. Tools of an IAM solution can help a company view the IP competitive landscape more clearly to reduce the risk of possible infringement and protect current investments by creating a barrier of entry around key products that are integral to the company’s revenue base.

The costs associated with implementing an intellectual Asset Management software solution include expenses from: software, hardware, services, change management activities, and internal resources.

The enabling technology of the IAM system is important but remains only one component of the complete solution. A sound plan is needed to provide the vision and foundation for an integrated business solution aligning IAM with the business goals and objectives. It is imperative to the efficacy of
the software, therefore, that an optimized and efficient process be put in place that effectively supports the entire IP lifecycle within an organization.

Services include assisting clients in building an IAM organization, developing intellectual asset strategies aligned with business objectives, classifying and analyzing the existing portfolio of assets and executing change management strategies that will firmly establish IAM as a key competency within the organization.

For each IAM deployment, it is important that the client lend key personnel throughout the duration of and after the close of the project. Client personnel are critical to ensure that the company’s specific requirements are being met and that the new system is being properly integrated with legacy systems. After the solution has been implemented, client personnel are important in ensuring uses are properly trained and communication plants are properly developed and executed. In addition, executive sponsorship is critical to the success of an IAM initiative. Therefore, it should be recognized that there is a cost associated with employee time necessary for a successful project from management, IP staff, and IT staff.

The latent value of intellectual assets provides a wealth of opportunities for companies to convert intellectual assets into both top-line and bottom-line financial benefits.]
- Revenue derived from new licensing opportunities
- Revenue recovered from uncollected royalties
- Cost savings derived from increased productivity
- Cost savings from reduced maintenance and filing fees

To reducing maintenance taxes paid the identification of unused assets provides a revenue opportunity for organizations. Unused assets can be sold, licensed-out or donated. Selling or licensing market-ready assets provides direct revenue to the company through sales revenue and through recurring royalty revenue streams. The untapped licensing potential of a company’s intellectual property portfolio can be enormous. For example, British Telecommunication estimates it only uses a quarter of its patents in its existing products while Philips Electronics says that is only uses between 35 and 40 per cent of its intellectual property portfolio[8].

Surprisingly, many companies receive far less in royalty payments than is outlined in the firm’s licensing agreements. All material terms and conditions, both financial and non-financial, are tracked and monitored by the system. As a result, firms are able to easily audit royalty payments to ensure licensee’s continuous compliance with contractual obligations. The following chart outlines, potential royalty revenue that could be recovered through implementation of an agreements management system.
By allowing activities to be management by the system and providing tools to IP professionals to more efficiently perform administrative functions, IP staff (including IP attorneys, IP liaisons and agents, IP support staff and licensing professionals) can spend time performing more value added tasks. Upon implementation of Dennemeyer a direct benefit is realized from increased productivity.

- Electronic disclosure forms produce a time efficient process for submitting invention disclosures.
- Electronic invention analysis functionality improves the flow of potential patents into the patent decision process, enables the optimization of time and effort spent by subject matter experts on IDF evaluations, and allows the easy identification of related disclosures, application and patents relevant to the invention to help reduce rework.
- Business development and licensing management functionality supports the efficient processing and tracking of projects, agreements, leads and opportunities. It also eliminates duplicative efforts or inaccuracies in business development by allowing accurate, timely and comprehensive information to shared with team members.
More efficient licensing processes will also decrease the cycle time for accounts receivables saving the company a substantial amount in interest.

Portfolio classification and visualization tools enable companies to record the strategic importance of each asset in combination with a business strategy. The system allows classification and organizing of these to facilitate searching reporting and efficient archiving. As a result organizations are able to actively, quickly and routinely identify assets that are not being used to protect products, technologies, competitive position or future opportunities. These assets are then available to be sold, donated, abandoned or licensed out. Selling, donating nor abandoning unused assets provides an opportunity to gain immediate savings from reducing maintenance fees paid on assets that are no longer useful.

Invention analysis functionality provides the tools necessary to evaluate the patentability, commercialization potential and business relevance of an invention before it is filed to reduce the amount of unused assets in portfolio overtime. The prevention of unnecessary filings results in savings from reduced filing and issue fees, application preparation fees, prosecution fees and maintenance fees.

A company with roughly 1000 patents in its portfolio with 10% unused assets each year and 10% unnecessary filings each year can save almost
one million dollars in reduced filing, application, prosecution, and maintenance fees in the first year. Many times the cost savings alone from more efficient portfolio management can justify the cost of an IAM implementation.

Building an Intellectual Asset Management competency within the organization provides many long term, indirect benefits. These firms will undergo a transformation in how they do business by implementing long-term methods and systems for extracting value from their intellectual capital. Most of IAM’s true value is realized from the potential indirect benefits, which Dennermeyer classifies into four main categories: Improving Competitive Advantage, Increase in Return on R&D Dollars Invested, Support of Sophisticated Vehicles for IP Monetization, and Management of Risk.

Intellectual assets provide a market differentiator and critical source of competitive advantage. Some organizations use their IP to gain market share, strengthen recognition for innovation leadership, and generate customer loyalty. Others seek to protect innovation that provides them freedom to operate, and thereby manage the risk associated with significant R&D investments. Still others seek to increase shareholder value by being able to articulate the quantifiable future potential in their intellectual assets. Although strategic position and competitive advantage are difficult to
quantify, assisting an organization in moving toward it strategic position or better operationally undeniably benefits an organization.

A number of mechanisms to support organizations in executing strategies to strengthen its IP portfolio and realizing value from IP. As an integrated IPM system, linkages between technologies can be identified and analysis can be performed on large amounts of data that had heretofore been unrelated providing exceptional visibility into an organization’s total IP portfolio. Business and R&D management will have access to tools to understand how an organization’s existing IP maps to business strategy and how key innovation may remain unprotected. Organizations are able to understand the value of an asset, including its use in products, future potential, value in blocking competition, associated revenue potential and alternative value opportunity. Organizations are able to quickly and effectively report and disseminate information about the portfolio and strength of intellectual assets to invention relations and market analysts.

This functionality provides organizations with knowledge about their IP, a critical enabler of using Intellectual assets as a strategic tool.

Portfolio visualization and reporting tools provide visibility into how IP is being deployed in an organization and helps companies to quickly identify areas of strengths or weaknesses where IP might be lacking Intellectual Property, as a legal means to protect others from commercializing the
patented technology, is a key mechanism for companies to ensure a return on dollars invested in R&D. Currently, companies are spending a significant portion or their overall budget to R&D, which totals $200 billion a year for the United States[9]. Even a fractional percentage of improvement can impact a company’s revenue by millions of dollars.

As part of building an IAM competency, it is important that an organization take a holistic approach to extracting value from its IP. In addition to shorter-term direct revenue generating opportunities enables organizations to develop and sustain sophisticated monetization programs such as a license out program, a joint venture and strategic alliance competency, and other tactics such as IP holding companies and structure finance approaches (i.e. project management, lead target identification, opportunity management, and agreement and obligation management), supports the management of sophisticated financial transactions and processes. Such functionality allows organizations to identify the assets available for such opportunities and allows organizations to effectively and efficiently manage these opportunities once they have been formed. Minimize the risk of infringement and reduce wasted R&D efforts, saving the company valuable time and money. Electronic tracking of business development and licensing activities reduces risk by ensuring obligations are paid on time and royalty payments are collected on all license agreements. An integrated system ensures that the organization is made aware of
potential infringement possibilities when pursuing innovation, reducing monies paid to litigation awards. Finally, identification of possible infringers allows proactive enforcement of rights and provides opportunities to achieve revenue from assertions.

Previously the IAM solution market was non-integrated and segmented across functionalities, which severely limited IAM’s potential to be used strategically. With the integration of these systems under one enterprise solution, the strategic value of intellectual property can be more fully realized. Companies such as IBM, Dow, and Lucent have shown the positive impact that well-managed intellectual assets have on corporate profitability. Also, an increasing number of enterprises are carving out new executive-level positions in IP management. This market validation has spawned a proliferation of vendors seeking to provide the complete IAM solution.

As IAM initiatives become more of a corporate priority, the need to financially justify these costs will become increasingly important. In this relatively new market of IAM enterprise, there can be a difficulty in calculating an ROI because of the lack of precedence of previously implemented with measured results. The present study has implications for investor, The Institute of Chartered Accountants of India(ICAI), The Securities and Exchange Board of India (SEBI), Academicians and researchers.
The study enhances the knowledge of investors with the extent to which companies are disclosing their intangible assets information. This intangible assets information can be used by investors in making wise investment decisions. This study also makes investors aware about the significance of evaluating intangible assets of a firm before making investment in it.

This study can be of immense use to the Institute of Chartered Accountants of India and The Securities and Exchange Board of India (SEBI). It may assist them to understand better the factors that affect the extent of disclosure of intangible assets information by companies. They may draw upon this knowledge while formulating future accounting standards and corporate reporting requirements. The study also highlighted that very limited disclosure was made on intangible assets attributes like work-related knowledge, entrepreneurial spirit, human resource accounting, brand valuation, organization structure, networking and information systems, copyright. These findings show that the ICAI should develop an accounting framework to account for those intangible assets that do not have any accounting standards yet. The result of this study confirm that what is lacking is a common accepted framework for intangible assets reporting.

This study has implications for academicians as well. It provides an overview of the evolution of intangible assets reporting over a period of two years 2003-04 and 2007-08, suggesting that there is a growing awareness
of the need to report intangible assets. Further, it provides useful comparative insights into intangible assets reporting, by compare findings using Indian and UK companies data. It can help the researchers as this study can provide a base for further research in the area of intangible assets accounting and reporting.

Intangible assets disclosure is a vital area of research throwing light into various aspects of intangible assets reporting practices of companies. No single thesis can cover such a wide spectrum of intangible assets accounting and reporting practices. Further research is needed to cover the following dimension of intangible assets reporting.

1. Impact of intangible assets disclosure on market capitalization of a company.

2. Impact of intangible assets on the performance of a company

3. Research can be carried out to suggest an appropriate framework for measuring intangible assets.

4. Multi-country comparison of intangible assets disclosure practice can also be done.

5. The transition of Indian economy from production to knowledge podium and the growing software & IT, financial services, business outsourcing, media, healthcare, pharmaceutical industries etc have lead to increasing investments in intangible assets. In present
competitive business world only commodities do not ensure the success of a firm to gain success, a firm must have some competitive advantages (Ali et al, 2008). Intangible assets like skilled employees, knowledge relationships, R&D expenditures, worldwide networks, global customer base, satisfied clients, internet and e-commerce, trademarks, brands, markets, patents, corporate cultures etc create competitive advantages for a firm. Resource based value (RBV) theory and VRIO (Valuable, Rare, intangible resources in creating competitive advantages for a firm.

According to the Indian Accounting Standard (AS-28) an intangible assets is an “Identifiable non-monetary asset without physical substance held for use in production or supply of goods and services for rental to others, or for administrative purpose”. These assets have been regarded as “Soft” assets and “Weightless Wealth” (Guthrie & Petty, 200; Grojer and Johanson, 1999).

6. According to Global Intangible Tracker 2007 (GIT), the most extensive global study ever on intangibles assets by the London based Finance Institute; India is the number three economy in the world with the highest intangible component as a percentage of the total enterprise value (TEV) – value of disclosed and undisclosed tangible and intangible assets. The study also found massive wealth of disclosed and undisclosed intangible assets in India. These undisclosed
intangible assets have widened the gap between the book and market value of companies. There is also shortcoming in the traditional financial reporting model in meeting the information needs of users. The usefulness of these statements as measured by the association between accounting data and capital market values has decreased substantially over the past 20 years (Lev and Zarowin, 1999) Corporate financial reporting needs to evolve to include elements which create value for business such as customer satisfaction, brand valuation, business collaborations, corporate culture, etc.

7. Reporting of intangible assets provides companies with the opportunity to take advantage of increased transparency to capital markets, establishing trustworthiness with stakeholders and to employ a valuable marketing tool (Meer-Kooistra and Zijlstra, 2001). Intangible assets reporting also proves beneficial in diversification and expansion of business, reduction in information asymmetry, lowering borrowing cost (Vergauwen&Alem, 2005), increasing ability to raise capital, enhancing corporate reputation, better allocation of human resources within organization as per their skills and abilities. Measuring and managing intellectual capital improve the decision making capabilities of internal report and annual report users (Guthrie et al 2001). Effective reporting and disclosures of intangible assets also helps in
their better management as there is a famous saying “What gets measured gets managed” (Ayuso, 2003a).

8. Thus the role played by the intangible assets in the value creation for the companies initiated the researcher to venture into such a challenging study.