DYNAMIC DUE DILIGENCE
AN ENTREPRENEURIAL BUSINESS PLANNING METHOD FOR EVALUATING MERGERS AND ACQUISITIONS

Theory, Case Application and General Implications

Kevin Hindle

Principal Lecturer

Director of Innovation & Entrepreneurship Programs

School of Innovation and Enterprise

Swinburne University of Technology Hawthorn Victoria

ABSTRACT

This paper presents a method for conducting dynamic due diligence to evaluate Mergers and Acquisitions; demonstrates its effectiveness in a particular case; and extrapolates its theoretical and practical implications to the general case. It may be called the 'ECIPP' method - an acronym for: Establishing mandates; Creating projections; Identifying issues; Prioritizing procedures and Performing them.

Two established alternative due diligence methods are examined. The prevailing finance-theory-based procedure has the virtues of simplicity and elegance; the vice is abstraction. The prevailing practitioner-based regime has the virtues of thoroughness and concreteness but the vices of rigidity and inefficiency. Resolving the tradeoffs inherent in both static prescriptions provides an opportunity for a dynamic, innovative approach derived from grounded theory and an application of Hindle's (1993) theory of venture renaissance through application of an enhanced paradigm of Entrepreneurial Business Planning. The ECIPP method retains simplicity, concreteness and thoroughness but eliminates abstraction, rigidity and inefficiency.

This is demonstrated in a case. ChildCo's CEO had only one month to complete his M&A evaluation; no expertise or previous experience; severely limited budget for the exercise and had been flatly informed by prevailing M&A experts that what he wanted could not be done. Using the ECIPP method, the CEO and the author did it: on time, within budget and to the satisfaction of a previously skeptical board of one of the world's largest multi-national companies including arguably the world's most professional corporate M&A division.

The replicability logic of the case research permits two generalisations. (1) ECIPP extends the range and utility of Entrepreneurial Business Planning as a management technology, well beyond the constraints to which it is usually confined. (2) The ECIPP method of dynamic due diligence is an innovation worthy of mature consideration and further investigation by theorists and practitioners in the M&A field, in the disciplines of both Finance and Entrepreneurship and, well beyond, in the realms of general management theory, methodology and practice.

1 THE RESEARCH PROBLEM IN CONTENT AND CONTEXT

1.1 INTRODUCTION

This paper presents a method for conducting due diligence to evaluate Mergers and Acquisitions; demonstrates its effectiveness in a particular case; and extrapolates its theoretical and practical implications to the general case.

Currently, my main area of research interest lies in investigating various applications for an underutilized, poorly-understood and little-studied management technology: Entrepreneurial Business Planning (EBP). I am particularly interested in the ability of an enhanced EBP paradigm to effect what I call venture renaissance: the salvation of insolvent ventures and the re-establishment of prematurely mature ventures on a path of rapid growth. My detailed research in these areas is contained in a forthcoming doctoral dissertation (Hindle 1993). One sub-theme to emerge is a focus on using

EBP from the investor's point of view; to evaluate the financial viability of ventures under consideration for debt and/or equity funds provision. When the venture under investment consideration is a potential acquiree, I have found that an adaptation of my enhanced paradigm of Entrepreneurial Business Planning can provide a simple, efficient and comprehensive method for evaluating the financial viability of Mergers and Acquisitions. This paper presents that discovery.

I hope that the paper will be relevant to several audiences. It should be of general interest to: theorists and practitioners in the field of Entrepreneurship; members of the academic and professional finance and accounting community; students of innovation management; venture capital and general business investors; business planners and financial analysts It may be of more particular interest to scholars of mergers and acquisition evaluation methodology. Finally, the paper should find its most attentive and critical audience among practitioners concerned with actually conducting an efficient and cost-effective 'due diligence' investigation into the advisability or otherwise of making a *specific* investment in a *specific* acquisition candidate given *specific* circumstances within *specific* time and budget constraints. Forgive the repetition. It is there for a purpose. From the point of view of an investor needing an aid to decision making, the great problem with both financial theory on M&A and most existing prescriptions for conducting a due diligence investigation is that they are too general. (See, below sections 1.3 and 1.4). They simply do not give sufficient credence to the particular and often unique aspects of a given case: the case the practitioner actually has to evaluate.

The method advocated and demonstrated in this paper provides a remedy against the inefficiency and over-generality inherent in existing paradigms of M&A evaluation.

1.2 RESEARCH PROBLEM, OBJECTIVES AND METHODS

The evaluation decision, whether or not to invest in an acquisition, depends on the establishment and execution of a method for conducting what has come to be known as a 'due diligence' investigation. I propose a five-phase method which differs from existing theoretical and practical prescriptions in the *flexibility* and *efficiency* it provides. The research problem is, then, to test practical and theoretical efficacy of the proposed 'due diligence' method. This translates to two objectives:

(1) applying the method to a specific case (below, part 3);
(2) extrapolating results to a higher level of generality (below, part 4).

The method (due diligence regime) to be tested is fully articulated in sections 1.5 and 2.1-2.6, below. It emerged from grounded theory derived according to the rules established by Glaser and Strauss (1967, passim). The proposed due diligence method is presented as a 'given'. The grounded theory which produced it (Hindle 1993, Chapters 4 and 5) is not discussed except to distinguish the new regime from the prevailing alternatives (see, below, sections 1.3 and 1.4). A case study research strategy, comporting with the methodological principles established by Yin (1984) and Eisenhardt (1989), is deployed to test and refine the new due diligence method and enhance its generic theoretical strength. The conduct of the test case, involving active, iterative co-operation between the researcher/consultant and the change-agent/acquisition-evaluator in the 'real world' context of solving a pressing management problem, is an example of Participatory Action Research as defined by Whyte (1989).

As a necessary preliminary, the three M&A evaluation frameworks are briefly discussed: finance theory; current practice; and the Entrepreneurial Business Planning (EBP) perspective.

1.3 THE PREVAILING THEORETICAL FRAMEWORK AND METHOD - FROM THE DISCIPLINE OF FINANCE

At the macro level, Steiner (1975) provides an analysis of merger motives and their effects on an entire economy. Halpern (1983) furnishes a review of the empirical work on merger benefits and merger theories. Howell (1970) presents a framework for different classifications of mergers and a methodology for analyzing possible merger candidates. Von Bauer (1981) suggests an approach to the evaluation of risk and return requirements for strategic investments like mergers, acquisitions and divestitures. The M&A field is so well-established that it even has its own journal, *Mergers and Acquisitions*. A most interesting article from that journal is Rappaport (1976). He approaches the valuation of the firm from the point of view of *managerial* rather than market expectations about future performance - an approach which is fundamental to the method which I propose in this paper. I value him as my 'anchor' (albeit a tenuous one) connecting my empirical work in the field of Entrepreneurship to the M&A corpus in the traditional Finance literature.

There are studies, such as Mikkelson and Ruback (1985), which analyse empirical data on interfirm investment decision making, including M&A. It is fair to say, though, that, in the established Finance literature, concrete managerial and empirical analyses are rarer than abstract methodological debate. Much of this debate centers upon whether an assessment of the outcome of a merger or acquisition should be based on its effect upon the acquirer's earnings per share or its effect upon market value - i.e. is it a positive NPV investment? The market value school seems to be winning. This is reflected in the general financial textbooks where the theory of mergers and acquisitions is usually rated as a 'special subject' and located towards the rear of the text (see, for example, Philippatos and Sihler 1987; Weston and Brigham 1990). Myers (1976) provides the merger evaluation framework which seems to be most replicated. Resembling Myers, to a greater or lesser extent, the recommended steps in most NPV-oriented methods of M&A evaluation can be summarised as:

(1) Determine the market value of the target's assets.
(2) Perform calculations and estimations of likely future performance[1].
(3) Determine whether the target is likely to be a generator of free cashflows[2].
(4) Develop an appropriate rate for discounting free cashflows.
(5) Obtain the NPV of the project and proceed if positive.

1.4 THE PREVAILING PRACTITIONER FRAMEWORK AND METHOD - FROM THE WORLD OF INVESTMENT DECISION MAKING

I have examined many due diligence methods prescribed for use by various chartered accounting firms and have held conversations with senior practitioners from merchant banks. None of these respondents was anxious to have the jealously-guarded minutiae of their proprietary due diligence procedures aired in a public paper. What I can say is that the differences between practitioner methods that I have examined is more apparent to them than to me. They all seem remarkably similar. All share a laudable, fundamental commitment to comprehensiveness.

One professional was willing to have his company's investment evaluation system exposed to academic debate. I am grateful to Mr. Brian Ball, a senior consultant with the Advent Group, who made available to me (and the readers of this paper) the detail of the due diligence procedure used by his company. The Advent Group is a prominent world-wide venture capitalist. Its Australian affiliate is headquartered in Collins Street, Melbourne. Investing in companies is its business (albeit the taking of minority equity stakes rather than merging or making full-scale acquisitions). The regular, professional performance of due diligence investigations is its staple, daily work. Advent's due diligence method is not only excellent in itself but my examination of several other practitioner methods permits me to say that it is very typical of the genre.

Advent calls the written output of its investment evaluations, 'Deal Qualification Memoranda'. Therefore, its due diligence method is known as the 'DQM Format'. It embraces: ten predetermined, general categories; over 58 predetermined due diligence issues; and 13 predetermined summary factors - not including legal considerations. A breakdown of categories (shown in italics) and issues is: the *Company* (5 DD issues); *Products* (6 DD issues); *Manufacturing* (3 DD issues); *Marketing* (11 DD issues); *Management* (6 DD issues); *Finance* (8+ DD issues); *The Deal* (10 DD issues); *Fund Involvement*

[1] The financial theorists do not tend to elaborate on *how* this might be done. They tend to rest content with the normative prescription that it *ought* to be done and the implied assumption that it *can* be done.

[2] Free cashflow is defined to be cashflow from operations *net of required investment* (in fixed assets, working capital, research and development, etc.).

(3 DD issues); *Risks* (6+ DD issues); *Key Factors* (13 summary factors).

The commitment of the traditional, professional investment community to the concept of predetermination as a maxim of due diligence investigation is typified in Advent's DQM Format. And it is summarized, beautifully and unwittingly, by the title of a commercial seminar on the topic. Advertised in a recent promotional brochure inserted in *The Australian Financial Review* of 12 May, 1993, the seminar's title is: 'Critical Issues in Due Diligence. A practical and comprehensive one day analysis of the due diligence process and the critical issues *every company must address*' [3][italics are mine]. The contents of the seminar look excellent. They should be. The course provider is a seminar company under the auspices of the internationally renowned publication, *Euromoney*. I should certainly like to attend the seminar one day.

However, the central point to extract, is the *mindset* bespoken by the title and design of the seminar. It is the same mindset embodied in all the chartered accountants' DD methods I have reviewed; in the Advent venture capitalist 'DQM Format' and, one might safely suspect, in the methods which preside and prevail in the majority M&A departments of merchant banks and major corporations all over the world. It is a mindset rightly committed to 'not missing anything' but, accordingly, over-committed to pre-determined, detailed scrutiny of everything. At best, this is bound to be inefficient. At worst, it risks being counterproductive.

1.5 THE PROPOSED ALTERNATIVE FRAMEWORK AND METHOD - AN ENTREPRENEURIAL BUSINESS PLANNING APPROACH

It is clear that the general M&A evaluation method, distilled from the realms of finance theory, tends to be painted with a very broad brush whose bristles consist of standard capital budgeting procedures using discounted cashflow analysis techniques based on pre-determined hurdle rates. The virtues are simplicity and elegance; the vice is abstraction. The general due diligence method, distilled from the practice of professional investor organisations, has the virtues of thoroughness and concreteness but the vices of rigidity and inefficiency. Resolving the tradeoffs inherent in the prevailing theory-based and practitioner-based due diligence methods provides an opportunity for an innovative approach.

The alternative method proposed, is the result of considering M&A from an Entrepreneurial Business Planning (EBP) framework. There is no scope in a paper of this size to articulate fully the EBP framework. It can be summarised by four propositions (Hindle 1993, passim).

(1) EBP is a *distinct* technology; not to be confused with other management devices and prescriptions which have the word 'planning' in their title.

(2) EBP is focused on the production of a business plan for a *new* venture (which can be a radical re-conception of an existing venture) about to enter a period of rapid growth and requiring an injection of external capital resources (debt and/or equity) to achieve the milestones along its growth path.

(3) The prime *external* audience of the business plan consists of prospective investors: potential suppliers of the debt and/or equity which the plan demonstrates that the venture requires.

(4) The existing EBP paradigm is weak but an enhanced paradigm makes EBP a powerful management technology, with applications in many areas which transcend the limited environment (startup venture seeks venture capital) from which EBP principles evolved.

A corollary of these four propositions provides the topic of this paper.

(5) When mergers and acquisitions are considered from the investor's point of view but within the EBP framework, it is possible to propose a dynamic due diligence procedure: one which takes its shape from the particularities of the investment being assessed rather than the pre-determined generalities of prevailing theory or practice.

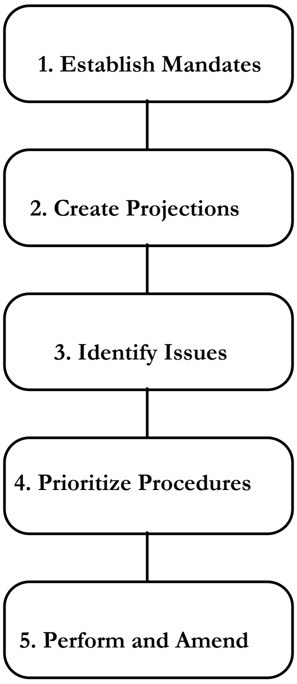
2 A PROPOSED METHOD OF DYNAMIC DUE DILIGENCE

2.1 OVERVIEW: THE 'ECIPP' METHOD

There are five stages to my proposed method for evaluating an acquisition, illustrated as a simple flowchart in Figure 1. The following sections amplify the details of each phase of the method. It may be called the 'ECIPP' method of dynamic due diligence - an acronym formed from the five procedures which comprise it: <u>E</u>stablishing mandates; <u>C</u>reating projections; <u>I</u>dentifying issues; <u>P</u>rioritizing procedures and <u>P</u>erforming them.

[3] The seminar is offered by AIC Conferences Proprietary Limited, (ACN # 003 220 424), a *Euromoney* Company.

FIGURE 1
THE FIVE PHASES OF
DYNAMIC DUE DILIGENCE



2.2 PHASE 1: ESTABLISH FINANCIAL PERFORMANCE MANDATES

The potential acquirer selects those assumptions (within the bounds of commercial reality) which reflect *minimum* performance which the business *must* achieve for it to be a viable investment by the acquirer's standards. For instance, in the ChildCo case, (see, below, part 3) Mr. Able, managing director of the potential acquirer, determined, *inter alia*, that the current price paid by TargetCo (the potential acquiree) to manufacturers for inventory (58% of gross sales) was too high and that he needed to be able to buy at prices averaging no higher than 54% of gross sales. And so on.

The general point is this. On any financial point whatsoever, the potential acquirer is free to state - and build into the forecasting assumptions - its requirements for what must happen if the potential acquiree is to be worth acquiring. Not what is *likely to* happen; or what *could* happen; or anything else. Simply, what *must* happen. There is no pretense about 'research' here. The potential acquirer is being *deliberately* arbitrary and prescriptive. It establishes the benchmark; saying, in effect: 'unless the target business can achieve our requirements in this particular category, it is not worth acquiring'.

2.3 PHASE 2: CREATE 'FIRST ROUND' FINANCIAL PROJECTIONS

After all performance mandates have been articulated, it is time to create a financial model capable of encompassing them, all other relevant data and assumptions to project three integrated, proforma financial statements (income statement, cashflow statement and balance sheet) for each of the next five years. The financial forecasting model employed to do this should be capable of answering 'what if' questions by embracing all effects of later data and assumption changes.[4] Initially, the model generates a 'first round' of projections.

Once the full, *integrated* implications of the assumptions are set before the evaluator's eyes - in the form of mutually interdependent proforma financial statements - he or she can do a preliminary, summary evaluation of the projections as a means of determining whether it is worthwhile proceeding to the third stage of the investigation. Presuming it is worthwhile, the evaluator progresses to phase three.

2.4 PHASE 3: IDENTIFY 'DUE DILIGENCE' ISSUES USING SENSITIVITY ANALYSIS

Now comes the time to challenge and refine the initial assumptions which produced the acceptable 'first round' proforma statements. Having begun by placing the cart before the horse - setting financial targets in the absence of evidence to support their marketing, organisational and strategic credibility - the potential acquirer now proceeds, in three further stages, to put matters in a more realistic perspective.

Using the financial model to perform sensitivity analyses, the evaluator identifies the crucial issues which will affect the acquisition candidate's ability to achieve the 'first round' projected performance. A list of these key issues then becomes an agenda of items requiring the

---

[4] There is no scope in this paper to discuss the details and relative merits of various software packages available for this purpose. The general rule is that one needs a sensitive, highly adaptable and comprehensive financial modelling tool - not a crude simplistic one - or considerable ability in using spreadsheets (such as Microsoft Excel or Lotus 1-2-3) combined with professional skill and acumen in both accounting and finance. In my doctoral dissertation (Hindle 1993), I built a purpose-designed EBP financial forecasting model which is now registered under the name FIPRAL. All financial projections for cases in the dissertation and all financial forecasting conducted for clients of my consulting practice employ FIPRAL for complex financial modelling. It is a good tool but not the only tool for creating the integrated financial proformas required in stage 2 of the dynamic due diligence method.

application of 'due diligence': further detailed investigations which go beyond the initial *assumptions* shaping the financial projections, to identify the strategic, marketing and organisational *issues and risks* which will determine the hard, commercial probabilities of achieving the projected numbers. The issues of highest sensitivity (those for which the smallest changes have the highest impact on desired measures of financial performance) then assume the highest priority for 'due diligence' investigation. It is now possible to *prescribe procedures* for actually performing the indicated due diligence.

2.5 PHASE 4: PRIORITIZE 'DUE DILIGENCE' PROCEDURES: THE DUE DILIGENCE MATRIX

These procedures should be split into two categories: in-house and ex-house. In-house due diligence procedures include all investigations and assessments which can be done by existing staff of the potential acquirer (including desk research, collection of publicly available statistics, interviews with customers of the potential acquiree etc.). Ex-house due diligence procedures include all investigations and assessments which can be performed only by purchasing the expertise of outside suppliers (consultants, marketing researchers etc.). Where ex-house due diligence is indicated, the cost of obtaining desired information must, of course, be weighed against the value of the information - the lowered risk of improved financial assumptions and data.

The prioritized procedures can be incorporated in a due diligence matrix using the above headings. An example is provided in the case discussed in part 3, below.

2.6 PHASE 5: PERFORM PROCEDURES AND AMEND PROJECTIONS

This stage is self-explanatory. Once the due diligence issues and procedures for investigation have been identified, the next step is, obviously, to perform the work and incorporate findings into improved pro forma financial statements.

3 CASE STUDY

Note: for reasons of commercial confidentiality, the names of all corporate protagonists have been stylized. The case is real.

3.1 DEFINING CIRCUMSTANCES OF THE CASE

In January, 1992, Mr. Ron Able, managing director of ChildCo, felt himself caught on the horns of a dilemma. He was convinced that his company had reached the limits of its endogenous growth potential (a turnover of A$15 million yielding very satisfactory after tax profits and generating a healthy free cashflow). Logic indicated the advisability of considering an acquisition as a means of ensuring further growth. However, ChildCo was not master of its own destiny in this matter. ChildCo, an Australian distributor of specialised industrial components, is a fully-owned subsidiary of ParentCo, one of the world's largest multi-national industrial conglomerates, with international headquarters in New York. In assessing the performance and rewarding the management of all its investee companies, ParentCo places a premium on two objectives: rapid growth and generation of abundant cash for remission to head office for deployment in making further acquisitions. The management policy and reporting criteria demanded of every investee company are standardised to facilitate achievement of both major objectives. In particular, ParentCo insists on a balance sheet format which distinguishes cash from all other working capital items and rewards managers for maximizing a ratio called 'Return on Controllable Capital Employed' - ROCCE (pronounced 'Rocky' and revered by the slogan 'Rocky is boss'). 'Controllable Capital Employed' is defined as 'net working capital, less cash, plus controllable fixed assets'. Every subsidiary is required to remit, to head office, all cash not absolutely required for solvency. The pooled cash is then applied to further acquisitions for the Group.

A legitimate summary description of ParentCo and its management philosophy would be: 'a share-price and dividend-payment driven professional acquirer of cash-generating, low-technology industrial companies'. ParentCo jealously guards its central prerogatives : all acquisition decisions in its history have been made centrally; no subsidiary has ever been allowed to make its own acquisition decision. Businesses in the group which either fail to grow or to generate required levels of cash are quickly divested. Mr. Able expressed his dilemma to his immediate superior in the New York head office, Mr. Ian Willing:

> 'Ian, on the one hand ParentCo insists on continued growth and is acquisitions oriented. On the other hand, New York is unlikely to prioritize my circumstances for consideration by the central M&A department because you have told me that they are deeply embroiled in assessing an acquisition whose proportions condemn my situation to minor status. It's not minor to me. Without an acquisition, ChildCo can't grow and central assessment of this company's performance is bound to be unfavourable. Yet, without the unlikely involvement of ParentCo's central M&A division, I'm not permitted to even consider

> an acquisition independently. Can you advise the board of my dilemma and seek their guidance?'

Mr. Willing was understanding. He conveyed an unexpected authorisation for ChildCo to conduct a due diligence investigation on its own and required Mr. Able to present a detailed acquisition analysis to the board in his personal report to New York, scheduled for September, 1992. If the evaluation was judged sound, Mr. Able would be given the cash to make the acquisition. Mr. Able's problem now became a lack of expertise and resources. He had never conducted an acquisition evaluation before and, given his on-going responsibilities, he had limited time and budget to conduct one now. Naturally, he was already appraised, by 'gut feel', market intelligence and talks with appropriate business advisors, of some suitable candidates. He now increased his efforts and, by early August, 1992 his attention was sharply focused on a company called TargetCo.

TargetCo was a successful, well established family company providing a complementary product line to ChildCo's. It currently had a turnover of approximately $A12 million. Its owner, in his late seventies, was keen to sell and had commissioned a firm of chartered accountants to produce an information memorandum and effect the sale. Between January and August, Mr. Able had ever-deepening discussions with TargetCo and its agents and had kept Mr. Willing, in New York, well informed. The more Able became involved the more he liked the 'feel' of the potential acquisition. ChildCo had recently moved to new premises and had facilities and staff quite capable of absorbing TargetCo as a division and effecting both operational synergies and economies of scale.

As against the mere checking of historical data and common-sense verification of various details, though, the performance of a rigorous and appropriate due diligence investigation had not been performed. Time was now brutally short. There was less than one month to the New York meeting. It was looming as a crisis event because, in discussions with many traditional performers of due diligence investigations - mainly Merchant Banks and Chartered Accounting firms, Mr. Able had learned four unpalatable things. First, they all wanted much more time than he had available to conduct a thorough due diligence investigation - none agreed that it could be performed within a month. Second, the fees quoted for the work were, in every case, more than Able's budget would allow. Third, the sheer volume of prefabricated activities contained in the due diligence agenda presented to him by the expert practitioners seemed overwhelming. Fourth, to Able, many of the items in their overwhelming agendas seemed blatantly unnecessary for anyone who had genuine empathy with the industry and markets in which ChildCo and TargetCo operated.

These were the circumstances when I was introduced to Mr. Able by a mutual business acquaintance who knew both of my desire to further research and field testing of the ECIPP due diligence method and Mr. Able's pressing need to conduct an efficient investigation. An arrangement was agreed wherein Mr. Able and I worked closely together using the 5-phase due diligence method, outlined in part 2, above. It was an iterative, productive and intense relationship, characteristic of Participatory Action Research (PAR) as defined by Whyte (1989). PAR is an emerging methodology for advancing scientific knowledge through direct linkages between research and action.

> '... in PAR the researcher combines participant observation with explicitly recognized action objectives and a commitment to carry out the project with the active participation in the research process by some member(s) of the organisation studied'. (Whyte 1989, p. 369).

I am gratefully acknowledge Mr. Able's invaluable co-involvement in producing the generic knowledge which emerged from our mutual work, as he acknowledges what he regards as the efficient solution to a complex problem which emerged from utilizing the 5-stage dynamic due diligence method. Before proceeding to the generic results inferable from the case, I will report and discuss, briefly, some case-specific results of applying the method to the TargetCo acquisition evaluation.

3.2 CASE-SPECIFIC RESULTS OF APPLYING THE DYNAMIC DUE DILIGENCE METHOD

- **Phase 1: Establishing financial performance mandates**

Mr. Able had done considerable preliminary work in examining past trading records and accounts. He knew the market well. He knew the growth requirements for ParentCo subsidiaries. He therefore had a good feel for what TargetCo could and must achieve in sales growth over the forthcoming five financial years. He went on to articulate over 30 financial performance mandates which TargetCo had to be able to meet to become a worthwhile acquisition. To me, all mandates seemed conservative and reasonable - there was no sense of 'asking the impossible'. He even started by projecting sales substantially lower than had been achieved in either of the preceding two financial years.

- **Phase 2: Creating 'first round' financial projections**

With so many input mandates specified, it soon became apparent to Mr. Able that a sophisticated and adaptable financial model was essential for seeing and interpreting the pattern of mutual interdependencies which emerged from them. Using FIPRAL [5], I built for him a financial model which generated, via detailed subsidiary schedules, the three fundamental, integrated statements (P&L, Cashflow and Balance Sheets) and had the capacity to accommodate an infinity of altered assumptions and alternative scenarios. A summary of the core financial data and important ratios and statistics which emerged from the base case scenario (Scenario One) is presented in Table 1.

Mr. Able wrote in his report to New York:

> 'Even a casual perusal of the proforma statements presented in the base case scenario indicates that - if the assumptions can be met - TargetCo is a worthy candidate for acquisition. Given a purchase price of $3,500,000, payback period (with cashflow after interest and tax) comes early in the fifth year. The business generates nearly $4.4 million in remissible cash over the five projected years. Taken with the ability to refund initial investment out of cashflow, the implication of this figure is very heartening. At the end of year five, ChildCo/ParentCo would possess a business which had totally recouped its investment outlay and thereafter - assuming no growth whatsoever - would be capable of turning over an additional $14 million per year, generating additional net after-tax profits of $1.1 million per year and additional net after-tax cashflow of over $1.2 million per year.'

There were other encouraging factors. ParentCo required return on controllable capital employed (ROCCE) of no less than 45%. ROCCE figures in excess of 60% had strong appeal - as did the percentages generated for cashflow as a percentage of sales and most other statistics and ratios. Finally, given an asking price of $3,500,000 and discounting cumulative net worth at the end of year five of the projections, the projected internal rate of return on investment, in the base case scenario, was 16.67%. This exceeded the minimum acceptable rate of return which ParentCo requires from acquisitions in TargetCo's industry. Clearly, TargetCo was worthy of further investigation.

---

[5] See, previous footnote.

TABLE 1

SCENARIO ONE	**Proposed TargetCo Division** **PROJECTION SUMMARY & KEY STATISTICS** **THE 5 YEARS from JULY 1, 1993 to JUNE 30 1998**				
	YEAR 1	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**
PROJECTED FIGURES					
GROSS SALES	10,725,000	11,798,000	12,682,000	13,316,000	13,982,000
COGS	7,645,250	8,267,640	8,796,940	9,088,560	9,388,300
GROSS MARGIN	3,004,675	3,447,774	3,796,286	4,134,228	4,495,826
GENERAL EXPENSES	1,656,975	1,868,847	2,073,399	2,130,658	2,189,919
EBIT	1,347,700	1,578,927	1,722,887	2,003,570	2,305,907
AFTER TAX PROFIT	540,689	676,786	764,070	944,547	1,140,761
CONTROLLABLE CAP. EMP.	2,261,108	2,530,922	2,778,714	2,982,705	3,167,607
TRADING CASHFLOW	1,386,592	1,635,194	1,832,989	2,194,206	2,562,458
INVENTORY (PERIOD END)	2,359,500	2,595,560	2,790,040	2,929,520	3,076,040
NET WORTH	4,040,689	4,717,474	5,481,545	6,426,092	7,566,853
STATISTICS AND RATIOS					
ROCCE %	60%	62%	62%	67%	73%
GROSS MARGIN/SALES %	28%	29%	30%	31%	32%
EBIT/SALES %	13%	13%	14%	15%	16%
A.T. PROFIT/SALES %	5%	6%	6%	7%	8%
TDG CFLOW/SALES %	13%	14%	14%	16%	18%
DEBTOR DAYS (per. end)	60	60	60	60	60
CREDITOR DAYS (per. end)	98	98	97	97	97

- **Phase 3: Identify due diligence issues using sensitivity analysis**

In any application of the ECIPP method, once a sophisticated financial model is built and the base case scenario has been generated, there is an infinity of scenarios which can be generated and an infinity of nuances which can be gleaned from scenario comparisons. The practical question becomes: 'how many outcome scenarios do I test by changing which input assumptions in what combination?' There is no prescribed answer to this question. The generation of alternatives is a matter for judgment. The only obvious 'rules' are: (1) begin by changing only one assumption at a time and observing its effects and (2) test *all* mandates and assumptions to which you suspect performance might be sensitive. The great virtue of having an integrated EBP model at your service is the sheer speed with which sensitivity testing can be performed. Mr. Able and I tested literally hundreds of combinations of altered assumptions in one eight-hour session and recorded the sensitivity of key financial outcomes (profit, cashflow, net worth etc. etc.) to the changes. We soon developed a simulation data base which indicated what outcomes were sensitive to what inputs in what degree.

For Mr. Able, conducting Stage 3 of the acquisition evaluation proved to be a revelation. He was astounded and surprised that many of the input variables to which he thought key financial outcomes would be sensitive could be substantially changed with very marginal effect on overall results. *Vice versa*, he discovered that even slight changes to input assumptions mandates and data which he thought unlikely to have much effect on outcomes, produced significant variations in ultimate results. And, along the way, the process of sensitivity analysis generated a great many managerial insights which were relevant not only to the *future management of a possible TargetCo division*, but to *his current management of ChildCo in the context of ParentCo corporate policy*. One example - call it 'Scenario 2' - will suffice to illustrate the general point.

The acquisition investigation proved very revealing in the area of credit policy costs. ParentCo encourages its subsidiaries to extend payment of creditors for the longest possible time that the market will bear and to record, overtly, the costs of this policy in an account called 'Credit Policy Costs' which could equally well be called 'Inventory Financing Costs'. The idea behind delaying payment, is, of course, to maximise cash available for remission to head office. In keeping with central requirements, current ChildCo practice involves heavy use of rolled-over letters of credit. In the first projected scenario, the figure for credit policy costs was estimated at 7.5% of all credit additions (of more than thirty days duration) made during a financial year. Only inventory purchases were projected to be financed on terms exceeding 30 days.

In the process of evaluation, Able and I developed a strong suspicion that the ParentCo-inspired credit policy, while it had beneficial effects on cashflow generation in the short term, actually penalised the firm's profitability and the longer term growth in net worth. And so it turned out to be. The second scenario, tested the implications of paying promptly, within 30 days, and therefore not having to bear the interest costs of the current policy. By simply changing the one input - from the credit policy currently employed by ChildCo and many other ParentCo subsidiaries to a 'pay all creditors in 30 days assumption' - the contrast in outcomes was dramatic and has profound significance for ParentCo's policies and objectives (see Table 2).

TABLE 2

SCENARIO TWO	**Proposed TargetCo Division** **PROJECTION SUMMARY & KEY STATISTICS** **THE 5 YEARS from JULY 1, 1993 to JUNE 30 1998**				
	YEAR 1	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**
PROJECTED FIGURES					
Sales, COGS, Gross Margin, General Expenses and EBIT are the same as Scenario One					
AFTER TAX PROFIT	795,965	937,044	1,053,440	1,256,823	1,476,570
CONTROLLABLE CAP. EMP.	3,094,854	3,776,032	4,424,331	4,694,395	4,964,903
TRADING CASHFLOW	552,846	1,197,800	1,399,652	2,090,300	2,450,098
INVENTORY (PERIOD END)	2,359,500	2,595,560	2,790,040	2,929,520	3,076,040
NET WORTH	4,295,965	5,233,008	6,286,448	7,543,271	9,019,841
STATISTICS AND RATIOS					
ROCCE %	44%	42%	39%	43%	46%
GROSS MARGIN/SALES %	28%	29%	30%	31%	32%
EBIT/SALES %	13%	13%	14%	15%	16%
A.T. PROFIT/SALES %	7%	8%	8%	9%	11%
TDG CFLOW/SALES %	5%	10%	11%	16%	18%
DEBTOR DAYS (per. end)	60	60	60	60	60
CREDITOR DAYS (per. end)	29	30	30	30	30

Comparing the figures in Table 1 with those in Table 2 demonstrates that the two major objectives of ParentCo for its investee companies - high growth (as measured by increased net worth) and high ability to generate cash - can sometimes be so incompatible as to be mutually contradictory. Scenario One might be called the 'cash focus' option. Scenario Two might be called the 'growth focus' option. Mr. Able started his acquisition quest with one dilemma, now he had another. Scenario One, if implemented, would see him rewarded for high ROCCE, and high generation of remissible cash. But would and should his rewards be any less if he took TargetCo down the path of Scenario Two, earning higher profits every year and finishing, in year five, with a business whose net equity had grown 19.2% greater? The more the figures are compared, the more Mr. Able's managerial situation and ParentCo's two major financial objectives become problematic.

In summary, one simple change produces vastly different results and sends ParentCo a message dreadfully akin to the old cliché: you can't have your cake and eat it. In TargetCo's case, if ParentCo instructs Mr. Able to maximise generation of cash, there is a high price to pay. It is the difference between a projected 20.84% return on investment and a projected 16.67% return on investment (see Figures 2 and 3).

FIGURE 2
IRR SCENARIO ONE - 'CASH FOCUS'

	Investment Outlay	Cumulative Net Worth
YEAR 0	3,500,000	
YEAR 1		4,040,689
YEAR 2		4,717,474
YEAR 3		5,481,545
YEAR 4		6,426,092
YEAR 5		7,566,853
Internal Rate of Return	NET PRESENT VALUE	
16.67%	**3,500,000**	**3,500,000**

FIGURE 3
IRR SCENARIO TWO - 'GROWTH FOCUS'

	Investment Outlay	Cumulative Net Worth
YEAR 0	3,500,000	
YEAR 1		4,295,965
YEAR 2		5,233,008
YEAR 3		6,286,448
YEAR 4		7,543,271
YEAR 5		9,019,841
Internal Rate of Return	NET PRESENT VALUE	
20.84%	**3,500,000**	**3,500,000**

FIGURE 4
THE TARGETCO DUE DILIGENCE MATRIX

KEY FINANCIAL ITEM	CORE DUE DILIGENCE ISSUES	IN-HOUSE DUE DILIGENCE	EX-HOUSE DUE DILIGENCE
GROSS MARGIN IS CRITICAL	CRUCIAL IMPORTANCE OF ONE ITEM The viability of the acquisition hinges on this.	IDENTIFY MAJOR COMPONENT OF GROSS MARGIN DURABILITY. It is stock (inventory) costs.	Guidance from ParentCo.
STOCK (INVENTORY) COSTS	CRUCIAL IMPORTANCE OF ONE ASSUMPTION The largest component of all costs is the cost of Stock. Can my assumption of a reduction from the present cost (58% of gross sales) to 54% be met?	Generate alternative scenarios using the financial model to test sensitivity of business viability to cost movements.	Detailed discussions with suppliers.
SALES FORECASTS	MARKETING ISSUES • Market size • Market shares and nature of competition* • Market growth rate • Nature of demand - segmentation - consumer behaviour • Nature of competition* TargetCo is complacent about competitive threats, especially potential of RivalCo to change policy. ORGANISATIONAL ISSUES • Key Personel CREDIT POLICY ISSUES • Credit Policy Costs • Balancing bad debt risk against lost sales	Desk Data (ABS, Ibis, etc). Interviews Reasonable extrapolation Shadow Shoper Product/customer matrix Interviews/trade assoc. & press It is hard to forecast implications of competitive changes. Interviews / labour market Assess correct credit policy Judgement call fr. trading data	Formal Mktg Research Formal Mktg Research Research customer attitudes to genuinely understand competitive advantages and distinctive competencies.
SALES TAX	IMPACT OF POSSIBLE GST	Monitor political situation & incorporate likely impacts in financial model	
DEBT EQUITY MIX	OPTIMUM CAPITAL STRUCTURE What mixture of debt and equity optimises profits and return on controllable capital employed.		Expand the detail of the current financial model. Use auditors & valuers.
SUMMARY	KNOW BUYERS, COMPETTITORS & SUPPLIERS	All of the above.	Guidance from ParentCo.

• **Phase 4: Prioritize due diligence procedures: The due diligence matrix**

With every such alternative generated, Mr. Able's insights expanded and a data base was built up which enabled the prioritizing of due diligence procedures. Figure 4 contains the due diligence matrix which emerged from the 'first round' forecasting and sensitivity analysis process.

• Column One lists the financial items which sensitivity analysis indicated to be the keys to the viability of the potential acquisition.

• Column Two lists what Able now believed to be the core due diligence issues and risks inherent in challenging the assumptions which produced the relevant financial item.

• Columns Three and Four summarise the in-house and ex-house procedures which could be used to assess risks and improve future rounds of forecasting and projection production.

Mr. Able now felt he had enough information and insight to take to his forthcoming September meeting in New York where he would use the due diligence matrix as a catalyst of discussion with ParentCo senior management. We encompassed all of our investigations to this point in a written report and Mr. Able went to his meeting where his presentation was very well received.

• **Phase 5: Perform procedures and amend projections**

At the New York meeting, it was decided to put the onus for performing the due diligence procedures back on TargetCo itself. Subsequently, milestones and tests on every due diligence issue contained in the matrix were established and a contingency agreement was struck with TargetCo. If the milestones are achieved over one year's trading - and Mr. Able will closely monitor TargetCo's performance and be involved in such matters as negotiating improved supplier contracts - TargetCo will be acquired at a price specified in a performance-related formula. Even if TargetCo does not achieve ParentCo's required milestones and a deal with ChildCo does not eventuate, TargetCo will benefit from *trying* to achieve them and sharing in the insights revealed in all phases of the ECIPP dynamic due diligence method which have been conducted to date. Reciprocally, ChildCo and ParentCo have substantially lowered their risk by deferring the acquisition decision until due diligence issues are actually resolved, in the field, while TargetCo is still under current management. Stage 5 of this particular application of the ECIPP dynamic due diligence method is in progress and is a truly symbiotic affair. At time of writing, May 1993, Mr. Able is closely involved in monitoring TargetCo's progress towards the agreed due diligence milestones.

4 GENERAL IMPLICATIONS

4.1 MAJOR DIFFERENCES FROM EXISTING DUE DILIGENCE METHODS

The ECIPP method of dynamic due diligence which I have proposed and tested differs from the prevailing alternatives - the 'finance theory' method and the 'detailed practitioner' method - in four major respects.

ECIPP differs from the 'finance theory' method in that:

(1) It is precise rather than broad.

(2) The project itself tells the analyst what the hurdle rate is - the analyst does not have to set it *a priori*.

ECIPP differs from the 'detailed practitioner' method in that:

(3) It is efficient because due diligence issues, directly germane to the particular project, are prioritized and 'non-issues' are eliminated from time-wasting consideration.

ECIPP differs from both alternatives in that:

(4) It is neither a 'blanket' theory nor a static set of rigid prescriptions. Iterative and responsive, the ECIPP method moves in resonance with the unique financial dynamics of the specific acquisition target.

When compared to the existing alternatives, the proposed ECIPP method retains simplicity, concreteness and thoroughness but eliminates abstraction, rigidity and inefficiency.[6] It is truly a method of *dynamic* due diligence. The alternatives are static. Each, in its different way, establishes a fixed frame of reference and forces *every* acquisition candidate, regardless of circumstances, into the frame. ECIPP is flexible: it lets each acquisition candidate, as it were, build its own frame of reference. This saves time and money in the evaluation process by concentrating intellectual and physical resources upon a prioritized investigation of demonstrably relevant issues rather than a predetermined investigation of every issue irrespective of relevance.

---

6 To the financial theorists, I freely concede the ECIPP method lacks elegance. It is a very 'down and dirty' affair. This won't bother practitioners.

4.2 THE EXTENT OF ECIPP'S GENERALITY AND APPLICABILITY

The essence of any M&A evaluation is to reach an understanding of the business and financial dynamics of the acquisition candidate. Every candidate and its surrounding circumstances is unique: a 'single setting'. This makes case research, by definition, the most appropriate methodology for both developing and testing M&A evaluation theory and practice.

> 'The case study is a research strategy which focuses on understanding the dynamics present within single settings'. (Eisenhardt 1989, p. 534).

It is not possible to conceive of, for example, a quantitative method for building and testing M&A evaluation theory. What would you survey? Prevailing habits? And what would the survey demonstrate? Attitudes and behaviour, perhaps, but a demonstration of the efficacy and viability of a given M&A evaluation procedure is beyond the capacity of quantitative research techniques. And it lies beyond the scope of such qualitative techniques as depth interviews or focus groups. So, case research is the way to go. But how far can it take you?

The answer is: 'a very long way'.

It is possible to make quite far-reaching and valid generalisations by extrapolating from the single ChildCo case.[7] I will confine myself to two points in justification of the ability to extrapolate broadly from a singular example. First, ChildCo is an example *in extremis*. Mr. Able had only one month to complete his M&A evaluation; no expertise or previous experience; severely limited budget for the exercise and had been flatly informed by prevailing M&A experts that what he wanted - on his budget in his time frame - could not be done. Using the ECIPP method, Mr. Able and I did it: on time, within budget to the satisfaction of a previously skeptical board of one of the world's largest multi-national companies including arguably the world's most professional corporate M&A division.

Second, this extreme case is fraught with potent replication logic. Both Yin (1984) and Eisenhardt (1989) stress the importance of both example extremity and logical replicability to the validity of generalisations extrapolated from case research. It is undeniable that if Able and Hindle, in their extreme circumstances, used ECIPP to advantage, many in less extremity can replicate their use of the method. Furthermore, it is entirely legitimate to hypothesise that many of these will proceed to a successful resolution of their M&A evaluation problem and that they will do so in less time and at less cost than if they employed either of the prevailing alternative methods.

Thus, it is possible to make some valid generalisations.

In terms of the discipline of Entrepreneurship, the demonstrated efficacy of the ECIPP method has significant implications. Most importantly, it extends the range and utility of Entrepreneurial Business Planning as a management technology, well beyond the constraints to which it is usually confined: crude prescriptions for writing a short business plan by an entrepreneur of a startup business seeking venture capital[8].

In summary, the ECIPP method of dynamic due diligence is an innovation worthy of mature consideration and further investigation by theorists and practitioners in the M&A field, in the disciplines of both Finance and Entrepreneurship and, well beyond, in the realms of general management theory, methodology and practice. I commend the method to those who would join me in testing and developing it further.

REFERENCES

Duhaime, I.M. and Thomas, H. 1983, 'Financial Analysis and Strategic Management', *Journal of Economics and Business,* 35, p. 413-40.

Eisenhardt, Kathleen M. 1989, 'Building Theories from Case Study Research', *Academy of Management Review*, Vol. 14, No. 4, p. 532-550.

Glaser, B.G. and Strauss, A.L. 1967, *The Discovery of Grounded Theory: Strategies for Qualitative Research*, Aldine Publishing, Chicago.

Halpern, P. 1983, 'Corporate Acquisitions: A Theory of Special Cases? A Review of Event Studies Applied to Acquisitions', *Journal of Finance*, May, p. 297-317.

Hindle, Kevin 1993, *Venture Renaissance Through Innovative Planning. An Enhanced Paradigm of Entrepreneurial Business Planning. Theory Development, Case Applications and General Implication*s. Doctoral

[7] Of course I would have relished more space than the constraints of this paper provide to articulate both the method and its ChildCo implementation in greater detail as well as to introduce other cases where the method has proved efficacious.

[8] Hindle (1993), Chapter Two, provides a content analysis of the Entrepreneurial Business Planning literature and distills it to obtain and criticise the prevailing EBP paradigm. Chapter Three develops an enhanced EBP paradigm.

Thesis (in progress), Swinburne University of Technology.

Howell, R.A. 1970, 'Plan to Integrate Your Acquisitions', *Harvard Business Review*, November-December, p. 66-70.

Mikkelson, W.H. and Ruback, R.S. 1985, 'An Empirical Analysis of the Interfirm Equity Investment Process', *Journal of Financial Economics*, 14 December, p.p. 524-53.

Myers, S.C. 1976, 'A Framework for Evaluating Mergers', in S.C. Myers (editor), *Modern Developments in Financial Management*, F.A. Praeger, New York.

Philippatos, G.C. and Sihler, W.H. 1987, *Financial Management Text and Cases*, Allyn And Bacon, Boston.

Rappaport, A. 1976, 'Financial Analysis for Mergers and Acquisitions', *Mergers and Acquisitions*, Winter, p. 18-36.

Steiner, P.O. 1975, *Mergers: Motives, Effect, Policies.*, University of Michigan Press, Ann Arbor.

Von Bauer, E.E. 1981, 'Meaningful Risk and Return Criteria for Strategic Investment decisions,' *Mergers and Acquisitions*, Winter, p. 5-17.

Weston, J. Fred and Brigham, Eugene F. 1990, *Essentials of Managerial Finance*, Ninth Edition, the Dryden Press, Chicago.

White, William F. 1989, *Advancing Scientific Knowledge Through Participatory Action Research*, Sociological Forum, Vol. 4, No. 3.

Yin, Robert K. 1984, *Case Study Research. Design and Methods*, Applied Social Research Series, Volume 5, Sage Publications, Beverly Hills.