TURNING THE ART OF RETAIL LEASE EVALUATION INTO A SCIENCE

PART 1: DEFINING AND UNDERSTANDING THE PROBLEM AND THE CONSEQUENCES

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ABSTRACT

Valuation of retail leases is increasingly inaccurate as industry moves away from substantive analysis. While simplification is partly understandable, the vast oversimplification that has occurred is disastrous for the retail sector, the economy, and the environment.

Current practice excludes from the retail lease valuation process every applicable valuation, economic, legal and accounting concept/analysis that contributes to consistent, robust and accurate valuations. Key concepts ignored include: 'market value', 'effective rent', 'reasonable rent'; matching Supply & Demand (willing landlord/willing tenant); Contract Law (fully informed parties); auditing, accountability, business goodwill, and IFRS 16 guidelines.

Primary factors/problems contributing to this oversimplification include the:

1. Nature of the evidence: it is non-homogeneous in ways that make it difficult to compare;
2. Imbalance of information access and market power between landlords and tenants;
3. Differing levels of knowledge/skill of each valuer and conflicts of interest; and
4. Lack of analysis tools incorporating structured methods and built-in checks/balances to overcome problems 1-3.

Using actual case studies, this paper describes several (typical) flawed valuations and explores how the first retail lease analysis product in the world uses a 'Body of Evidence' approach and multiple analysis methods to overcome these problems.

KEYWORDS: Retail Market Rent, Retail Market Value, Profits Method, Comparison Method, Supply & Demand, Body of Evidence

INTRODUCTION AND BACKGROUND

1. Curent rent evaluations using the Comparison Method on a simple dollar per square metre or per square foot (UOM) basis offer basic rudimentary analysis. The Comparison Method alone has limited checks and balances, is subject to conjecture and manipulation, as well as to the ignorance of stakeholders. In most cases, arguments are mounted **using only landlord metrics against landlord metrics, often only supplied by landlords, and there is limited scrutiny. It is patently clear in all definitions, legislation and case law that tenant/business or demand metrics are required.**

2. In 2021, an international colleague mentioned that in 1523 early practitioners were incorporating demand/business metrics in the agricultural sector. However, this is not prevalent today; industry and professions (as well as academia) have adopted an easier basis of comparison (dollar per UOM). In fact, it seems they have abandoned economic, accounting, business finance, and statistical evaluation in favour of a simplistic evaluation using 'space' only, as in surveying. Space (built using 'property capital') is an easily accessible and quantifiable landlord metric, whereas tenant/business metrics are more complex and require more sophisticated analysis tools. Consequently, they are put in the "too hard" basket and mostly ignored.

3. It should be noted that land (property) is relatively generic, and static; it can be used for different purposes, e.g., to grow crops (carrots, potatoes spinach), for orchards, or for grazing cattle or sheep, but the produce is specific, much like retail businesses. It is the use of the land, the business taking place upon/in it, that brings differentiation – and complexity – to the equation. Entrepreneurship, ingenuity, methods, systems, input costs, employment, etc., all come from 'business capital'. After accounting for all business operating expenses, including owners salaries and amortization of capital investments, the leftover or surplus is what pays rent. *Very little intelligence is needed in property capital; it sits in business capital.*

4. If one expands this overuse of landlord metrics into market rent / market value concepts, and Micro Economics (aka 'Supply and Demand'), and Contract Law (requiring 'Offer' and 'Acceptance'), the need to incorporate tenant metrics for analysis purposes becomes even more clear. *If using only landlord derived data, **there is no basis of comparison***; and no way to "test" outcomes. Hence mistakes and manipulation become common.

5. In economics terms, comparing 'supply metrics' against other 'supply metrics' makes no sense; they

are simply numbers, "unchecked" and "untested", unless compared against demand metrics.

6. In legal terms, providing "Offer" metrics without the test of actual "Acceptance" metrics.

7. In accounting terms, using metrics without any audit or review much less accountability; in effect accepting a degree of "mystery" surrounding any outcomes.

8. In valuation/appraisal or surveying terms, using "willing seller" criteria without concern for the "willing buyer" side of the equation; or "willing landlord" criteria without "willing tenant" criteria.

9. Although the author has been using complex evaluation methods with checks and balances in his work for many years, and incorporating economics and business economics into property economics, most valuers do not do this; they either lack the skills, motivation and/or tools to undertake such an analysis. (See case studies below.)

10. While the author's discovery of Fitzherbert, J. and A., Bertherlet, T. (1523) whose works link highly specific Business Capital to more generic Land capital, is relatively recent, he has built his Body of Knowledge with the help of a very few other researchers in a variety of disciplines. These include Adam Smith[1] (1776) and David Ricardo (1817).

11. After Ricardo (1817), there is little research available until the 90s when articles by Don Gilbert (1993, 1995), Malcom Macrae (1996), Alan Millington (1996) Spike Boydell (1998, 2001) start appearing. Most academics, including Crosby, N. (2006, 2007), Boydell, Millington, and others, describe and highlight the problems, but none have explored causation or offered solutions.

12. Boydell, S. (1998) and Millington, A. (1996) (academics) tease out the Profits Method as does Macrae (1996) (not academic), whereas Gilbert discussed its limitations (PRRES 2016).

13. A new software product, GEM Lease Analytics™ *does* offer solutions. It provides a fully automated system – from inputs, to analysis, to delivery of results (graphs, report and tables) and payment – designed to "Evaluate a Reasonable Rent for a specific (ONE) Retail Lease". It is being marketed as a "Value Discovery" or "Decision Support" tool, even though it might prove to be a fully-fledged Automated Valuation Model (AVM) and could become the International Standard..

HOW DID VALUATION PRACTICE EVOLVE FROM 1523 TO EXCLUDE THE FUNDAMENTAL ECONOMICS OF PROPERTY?

The starting point must be 1523. In the first known book on Property Economics, the authors, Fitzherbert, J. and A., Bertherlet, T., present examples of linking and comparing crop yields and the carrying capacity of fields for different types of animals, their respective outputs, and hence the indicative value(s) of the land. Tangentially, they also consider different input costs to build houses, barns, fences and so on. In other words, they were considering the *business metrics/economics* required for different *uses* of a parcel of land.

In 1523, these practitioners, with actual 'feet on the ground' experience and a working knowledge in their areas of expertise were closer to understanding 'market value', it appears, than many industry practitioners of today. Academia also seems to be quite removed from the Business Economics side of the equation. WHY?

Adam Smith (1776) and David Ricardo (1817) touched on these things. Smith says *"price paid for the use of the land, is naturally a monopoly price. It is not at all proportioned to what the landlord may have laid out upon the improvement of the land, or to what he can afford to take; but to **what the farmer can afford to give"***.

Ricardo's "law of rent" refers to the return land ought to gain for its use in production. According to Wikipedia[2], Ricardo believed the law applies in both the rural and urban context. Ricardo refers to three tiers of land productivity, whereby different returns can be expected from different tiers as each is suitable to different uses. Although Ricardo's urban hypothesis is more obscure, he proffers that "labour will not

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[1] "The rent of land, therefore, considered as the price paid for the use of the land, is naturally a monopoly price. It is not at all proportioned to what the landlord may have laid out upon the improvement of the land, or to what he can afford to take; but to what the farmer can afford to give." — Adam Smith, An Inquiry into the Nature and Causes of the Wealth of Nations, Book I, Chapter XI "Of the Rent of Land"
[2] https://en.wikipedia.org/wiki/Law_of_rent

work for no wages" and that "business requires a return on its capital".

However, these principles are *not embedded in modern valuation appraisal practice*, even though retail business models clearly have differing capital and labour requirements, operating expenses, etc., and lease tenure varies according to contract, hence capacity to amortise capital investments differs, as does the capacity to pay rent (Smith, A. 1776).

Current practice contains no economic reference points and/or testing of 'market rent' to calculate 'market value' for either the Subject or Comparable leases. There are no checks and balances on the demand/business side of an argument.

Current practice uses landlord (supply) metrics, and compares them to other landlord metrics, usually without disclosing incentives. Incentives and poorly evaluated rents generally serve to prop up rents, which inflates market value. And market value is further distorted by using incorrect risk metrics (aka, incorrect multipliers). This causes an exponential increase (as it is a double multiplier) to the resultant 'market value', with no 'demand' checks and balances. **Corrections in a market come with a crash; and this cycle applies to residential and other markets in addition to retail.**

Unfortunately, the use of these incredibly basic landlord metrics (rent per square metre) is widespread and prevalent even when they are provided by tenant representatives and industry experts, who should know better. The analyses are elementary (and open to corruption) to the point where industry professionals are either blissfully ignorant in regard to what they are doing, or wilfully negligent.

At least practitioners in Australia do generally compare lease rents for the same retail business capital, whereas overseas this is not often the case.

Understanding these principles is vital to matching 'business capital' to 'property capital' to determine what "price" the rent should be. GEM Lease Analytics™ has all these principles built into it. It incorporates demand metrics on a lease-by-lease basis for a sample of leases across an industry segment, "tests" this Body of Evidence in multiple ways, and provides a variety of checks and balances, including the use of industry-standard Benchmarks and mathematical adjustments to facilitate accurate comparisons.

GEM LEASE ANALYTICS™
A Structured "Value Discovery' Software Tool for ALL Stakeholders That Excludes Tenant Assets from Rent as Required by IFRS 16

GEM Lease Analytics^{TM} software examines a 'Body of Evidence', including actual retail lease evidence, industry benchmarks and financial data, to investigate what constitutes a reasonable rent for a specific retail lease and business.

The software uses 'effective rent' evidence (actual rent being paid, adjusted for any incentives that may have been provided) collected from multiple sources – landlord, tenant, valuer/appraiser – which is then tested for its relevance along with other data inputs such as industry benchmarks, data averages, the results of a Profits Method analysis, etc. There are a maximum of six "tests" forming each analysis, with up to 16 data points, which are presented in colour-coded graphs. Each test flows into the next to form a complete picture of the logic and reasoning process followed by the analysis of what rent might be.

Imagine justifying a $100,000 rental increase or reduction using only one benchmark or rates per UOM (e.g., $1000, or $850 per square metre/foot), even when the subject site is half as efficient as other comparables?

The software only allows like business models to be compared with like, e.g., dentists with dentists, pharmacy with pharmacy, butcher with butcher, etc., which follows principles the author was referred to established in 1523 that have been explored and revived by: Willington, P. (1987); Gilbert, D. (1993 – 2024); Millington, A. (1996), Macrae, M. (1996), and Boydell (1998).

GEM Lease Analytics™ is a 'Software as a Service' (SaaS) platform that offers / shows:

- A straightforward, step-by-step process to collect data, it uses several analysis methodologies to interrogate and cross-reference the 'Body of Evidence' collected.

- The software requires straightforward inputs that are readily available and easy to explain to external parties, such as a Judge. All reports are clearly written, concise and explain in layman's

terms the analysis methods employed and what an outcome means.

- All data used in an analysis is *for business models the same or very similar to that of the Subject business, e.g., fast food to fast food, or doctors to doctors. Together, these form a 'Body of Evidence' (which includes a "reasonable rent" analysis) that is relevant to **and linked back to the actual business whose lease is being evaluated**, using "willing landlord / tenant" comparison criteria that are valid even if the comparables are <u>not</u> in the same proximate (geographic) area.*

- The results are clearly presented in a series of graphs showing where the lease being analysed (the 'Subject') sits in each specific data series, with respect to key metrics from comparable leases of similar businesses. Industry benchmarks, averages and proprietary algorithms add powerful points of reference. A detailed report examines the results and explains the implications for the parties. A table of data entered is provided.

- There are 4-6 Steps in the process (depending on the options selected) and outputs in the Graphs Report are colour coded to make it easy to follow the logic of each argument.

- Step One has several methods to "test" the tenant for being a reasonable hypothetical operator. It was introduced as a check and balance, to preclude specious arguments such as landlords claiming the tenant is "incompetent" not the rent too high.

- Step Two is used for Shopping Centre tenants to test whether the landlord of the Centre is operating it at least to "average" competence levels,

- Step Three uses the estimated future maintainable sales of each comparable site (shown on graphs as Landlord 1, 2, 3 or Tenant 1, 2, etc., to maintain anonymity), displaying it as sales per UOM for each data set. Step Four also uses 'Future Maintainable Sales' to calculate and display the Occupancy Cost for each data set. Of course a user must still make adjustments for the lease and the period ahead.

- Steps Three and Four present both landlord and tenant metrics against one another and in relation all other points of reference. The software can also run and present landlord-only or tenant-only arguments (on separate reports),or be used to audit an expert's opinion or a rental determination to test it for relevance and/or veracity.

- Steps Five and Six standardize all the evidence, mathematically adjusting it so that one can see each evidence set as if it were trading out of the same size of leased premise as the Subject and had the same Future Maintainable Sales (FMS) as the Subject. This "apples to apples" comparison allows one to make an *informed decision as to whether the lease is appropriate going forwards* (Gilbert, D., 1993).

- The analysis starts with the actual rent/M^2 of each site, showing them as annualized rents. For illustration purposes, let us assume that the Subject has Future Maintainable Sales (FMS) of $1.0 million and is trading out of a 250 square metre shop for which the landlord wants $380/M^2 rent, or $95,000/year, which is an Occupancy Cost of 9.5%. Comparables collected include a 500 square metre shop with $250/M^2 rent and a 200 square metre shop with $450/M^2 rent. Step Five uses the actual rent/M2 of each comparable and multiplies it by the 250 square metre shop leased by the Subject, showing *equivalent annual rents* for these comparables as $125,000 and $90,000. This makes it possible to make a meaningful comparison between these non-homogeneous sites.

- Step Six performs a similar type of calculation to standardize the Occupancy Costs of the comparable evidence, starting with their actual rent/M2 (which, based on data required by the software, represents the *'effective rent'* per M^2 and adjusting it by the Subject's FMS. In the example above, the first comparable has an Occupancy Cost of 12.5% and the second 9%.

- Because Steps Five and Six use the same starting data (effective rent/M^2) and multiply it by a uniform number representing key Subject metrics, the graphs they produce *are identical;* by rotating between, one can use what is effectively a snap-shot of that **highly specific retail shop's lease rental market**, and link it to the *subject premises*

In effect, Steps Five and Six represent a sophisticated Demand Curve of tested evidence. On the graphs, one can clearly identify potential intersection points, which are potential informed,

tested Supply Points, where the Demand Curve (if drawn) would intersect. These intersection points (usually a small range) of equilibrium represent the definition of '*Market Rent'; that is, rent based on informed outcomes, which match a willing, informed Landlord and willing, informed Tenant to an individual shop, whereby the rent itself is standardized to the shop whose lease is being evaluated.

GEM Lease Analytics™ performs an *exact simulation that matches Valuation Appraisal to Micro Economics. Coincidently one might argue, it is the point in legal terms where Offer and Acceptance might be considered.*

Extrapolating the Demand Curve out, each piece of "tested" evidence is homogenous insofar as a pharmacy is always being compared to pharmacy, a supermarket to a supermarket, jewelry with jewelry, café with café, etc., but each data point itself is non-homogenous. In general, one sees higher value / higher trading / more efficient (or perhaps smaller, more productive) locations congregating on the left hand side ('LHS') of the graphs, and each specific piece of evidence, benchmark, average, result of P & L Eval (a Profits Method analysis) and the "GEM Lease Eval" (a proprietary, weighted average analysis) including the Subject premises both (existing and proposed rent), all clearly presented via colour-coded graphs. In the main this *Body of Evidence* becomes the Demand Curve of "tested" evidence, which is matched and linked to the highly *specific* Subject business in its *specific* location.

Each data point of comparable evidence is part of a *body of evidence* "tested" for its relevance; each comparable is homogeneous in terms of business type (e.g., margins/mark-ups, capital investment required, labour costs, most business operating expenses, etc.), but has its own trading opportunity from a non-homogeneous location.

Steps Two and Three test each piece of evidence in its own proximate location on its own merit, and it is tested against *arms-length criteria*; but Steps Five and Six *make specific adjustments* so as to link those comparable data sources to the premises whose lease is being evaluated itself and allow direct, meaningful comparisons.

Current valuation 'methodology' uses a range of rents, often "engineered" or misrepresented. Without checks and balances, valuers/appraisers can run any specious argument they please to persuade someone relying on this 'expert' opinion or determination that the rent is reasonable. But this (subjective) method *does not actually discover 'Market Rent' as it is defined.* With GEM Lease Analytics™, all metrics used are "tested" against landlord *and tenant "reasonableness" considerations* and then linked back to the lease whose rent is being evaluated, for verification against Statutory Requirements or IVS 40.1.

GEM Lease Analytics™ can also be used to audit and review any rental opinion / determination for its veracity. It analyses far more data points than most Retail Valuers can, and does so more accurately and in greater detail; it also explains how each analysis is relevant and why.

What is most relevant to the analysis is that the "business capital" metrics of tenants (dentists, doctors, frock shops, discount department stores, jewelry shops, bakeries, cinemas, supermarkets, pizza takeaway, restaurants, fruit and veg, etc.), with the same or similar input costs (labour, capital investment, amortization, mark-ups, margins, etc.), are being tested against non-homogeneous landlord/owner metrics *that have been properly adjusted for incentives and standardized so that they can be readily compared. And they do not need to be in the same proximate area; as long as evidence is "tested" for its reasonableness.*

Each data set goes through thousands of iterations with millions of probabilities. New data or a new assumption can be added, calculations redone, and updated reports produced in less than a second. This level of detail and analysis process can only be done effectively with a high degree of automation, which is what GEM Lease Analytics™ provides.

Raw data for use with the software is easily available from landlord and tenant databases or at significant cost by discovering leases, although the latter is a hit and miss affair in Australia. Even if leases have been registered, they often have incorrect business names/addresses or missing data, making it nearly impossible to identify a specific lease. Add to that the (common) practice of using 'Faced Rent' on the lease – with incentives buried in side-agreements – and you have evidence that has effectively been "engineered" in favour of landlords.

However, many landlords and tenants have no real idea as to what constitutes a reasonable rent. By collecting pertinent evidence, and analysing and presenting it clearly, GEM Lease Analytics™ provides

a common language to the tenant and landlord. It gives them a basis for negotiating a lease outcome that justifies the business investment and leaves an appropriate surplus for the landlord's rent (as necessary for IFRS 16 compliance).

At the end of the process, both parties have a comprehensive record of the arguments presented for later reference, or use in mediation, etc. Without GEM Lease Analytics™ there is *no other way* to run these arguments and *present them clearly and succinctly*.

Over time, accounting standards, laws and regulations have sought to improve and standardise lease information. In 2005, the Financial Accounting Standards Board (FASB) initiated a project to improve accounting for leases; it was implemented in 2019 (but curtailed to Reporting Entities). Leases had been considered a "straight-line" expense on an Income Statement, but FASB and IASB agreed that a lease is both an asset *and* a liability. (*IFRS 16 Leases, January 2016 – Project Summary and Feedback Statement*).

The current valuation system (upon which property "values" are based and supported) primarily compares landlord metrics to landlord metrics and fails to properly incorporate tenant metrics. This systemic failure makes the evaluation and quantification of *RISK to property income streams* highly subjective. In doing so, it contributes to the distortion and misallocation of resources (both financial and physical).

Any valuation system that fails to properly quantify and consider tenant metrics at an individual level, lease by lease, will contribute to the boom/bust cycles which are, quite simply, the result of accumulated errors and/or maladjustments over time. This is an international problem.

The principles of the new IAS under IFRS 16, the Australian Unfair Contracts Terms, and various State Tenancy Laws, are still in their infancy. Using GEM Analytics™, and more importantly the effective rents being charged/paid, and the checks and balances it employs, will facilitate compliance by with the standards and legislation by all parties. **GEM™ looks beyond the 'headline numbers' and covers every quantifiable aspect of valuing retail property. Without this "Value Discovery" tool, there is no way to evaluate reliably whether a lease is an asset or a liability on a business balance sheet.**

Most research papers in the Reference Section present symptoms and cover some aspects of causation that distort the retail market; but there is limited / no research to quantify, explain and offer solutions for:

    a. High overall rents;

    b. Low yields with high multipliers; and

    c. Conflicting impact on market value.

For example, in his PhD thesis (Boydell, S. 1998, p 42-43) Boydell writes that the disclosure of turnover by retailers to landlords to quantify and charge percentage rents, gives the landlord 'insider information' about the tenant. This allows the landlord to press the tenant for maximum possible rent within the acceptable model of occupancy cost ratios irrespective of economic trading conditions. He concluded that this *"substantially supports the concept of business value in shopping centres"*. It follows that *"it is easy for the appraiser to naively include business value into the valuation of regional shopping centres by (possibly) incorrectly capitalizing the 'business' element"*.

Yes, there are legal solutions, but legal outcomes in Australia are tepid despite good legislation, and at best, expensive to pursue.

CURRENT METHODOLOGY AND THE NEED TO INNOVATE

To illustrate the problem of industry behaviour, a recent example of metrics used in a peer review of a Rental Determination is presented below, without identifying the parties involved. It shows how a Determining Valuer has taken a range of numbers, provided little explanation as to their relevance, and no coherent discussion of his decision-making criteria / methodolgy, to arrive the 'market rent' for the tenant, which flows on into market value (sic).

The left-hand side (LHS) of Table 1 below, in black, shows the Comparable evidence provided by the Determining Valuer. Although leases were for the same specific profession (business category) they could be a collection of numbers illustrating hundreds, if not thousands, of defective rental valuations and/or tens of thousands of lease negotiations.

The evidence presented in Table 1 is basic in form and format, but it is typical of the data used to present and evaluate lease rental data in 'expert' rental opinions or determinations.

Valuer's Evidence	Area (M²)	Gross Rent	Incentives per M²	Effective Rent per M²	Annual Gross Rent (NOT provided by Valuer)	Annual Gross Rent (Standardised to 80M² Subject Site)	Occ. Cost (Based on Subject's Future Maintainable Income)	Location Type
Expert's Valuation Criteria						**Using Portion of GEM Lease Analytics™ Evaluation Methods & Criteria**		
Expert's Site 1	250	$965	$0	$965	$241,250	$77,200	22.0%	Regional Centre
Expert's Site 2	70	$930	$0	$930	$65,100	$74,400	21.3%	Supermarket Anchored
Expert's Site 3	90	$830	$90	$740	$66,600	$59,200	17.0%	Supermarket Anchored
Expert's Site 4	200	$770	$40	$730	$146,000	$58,400	16.7%	Triple Supermarket Anchored
Expert's Site 5	170	$685	$0	$685	$116,450	$54,800	15.7%	Supermarket Anchored
Expert's Site 6	80	$800	$170	$630	$50,400	$50,400	14.4%	Supermarket Anchored
Expert's Site 7	110	$320	$0	$320	$35,200	$25,600	7.3%	**Most Comparable**
Expert's Site 8	110	$730	$160	$570	$62,700	$45,600	13.1%	Supermarket Anchored
Rent as Determined	*80*			*$875*		*$70,000*	*20.0%*	*Ignored all Criteria*

Table 1 (evidence slightly altered to obscure source)

Not only was the narrative in this Determination (sic) very basic, it also did not match the submission. In fact, the Determining Valuer unwittingly opened himself up to *Judicial Review* as he has not complied with his Agreement to determine *current market rent* as defined or under the specific Australian legislation.

Any Determination can be tested. In this case, a "peer review" was performed. It found that the evidence (provided) was incomplete and none of it had been tested for its relevance. All comparables were superior/vastly superior to the Subject business. The Subject premises had no business synergies in its trade area, and significant competition has been overlaid on its location since lease commencement.

Even the evidence for the business/site with the lowest rent was superior. It had two/three FTE practicing professionals, each generating on average $450k/year. The Subject site only had one practicing FTE, with provision for a second, but new competition had prevented expanding.

The Valuer has ignored supply-demand criteria, the legal concept of 'offer and acceptance' and/or 'willing landlord' 'willing tenant', as well as the explicit requirements in Australian tenancy law.

Even if some of the evidence is relevant, how is it matched to the lease itself being evaluated / determined? What adjustments ought the Valuer to have made for the impediments of the existing site? What were his reasons for arriving at his conclusion?

Without considering any of these factors, and without explaining any additional methodologies used, how did the valuer determine that $875/M^2 was the current 'market rent', from a range of $320/M^2 to $965/M^2? The reason why this "old school" valuer used the "number" that he did (and sought to justify it), was to keep the rent for the next five-year term unchanged.

If one looks at the blue figures on the right-hand side (RHS) of Table 1 (provided by a GEM Lease Analytics™) one can see the range of evidence *standardized back to the Subject lease*; it equates to $25,600 to $77,200 per annum effective gross rent or between 7.3% to a 22.0% occupancy cost (based on the future maintainable practice income). For reference, the industry standard occupancy cost Benchmarks for this type of business ranges between 7-9%.

At $70,000 per annum rent and therefore a 20.0% occupancy cost, the Valuer has valued the businesses' assets into the value of the property (Boydell, 1998). Only the comparable with the lowest rent per square metre has an occupancy cost within the Industry Benchmark range and, as already discussed, that business produces 2-3 times more revenue than the Subject. The most applicable comparable supported far better arms-length evidence and industry benchmarks at the lowest rent.

If only landlord metrics are compared to landlord metrics, without being checked against demand points, they are not only incomplete, they are also specious, or even fraudulent. No wonder the property industry experiences such incredible booms and busts.

Business Capital is subsidizing Property Capital, and this misallocation of capital has led to a huge oversupply of shopping centre / retail assets. In 2017, T. Durden reported that 25% of existing malls in the USA were to be demolished in the next 5 years. This is an astounding figure that carries with it enormous economic, social and environmental consequences (embedded Greenhouse Gasses).

A second example shows a submission made by a Valuer employed by a branded international firm on behalf of the landlord. This international firm sells, leases, manages and values property, which raises obvious questions as to what conflicts of interest might be involved in this case.

The task here was matching a capital-intensive entertainment industry business to the property capital. Firstly, the 'permitted uses' of the comparables were different; although both are similarly labour and capital intensive, one has much lower margins which means sales ought to be much higher to cover costs, and to amortize capital over the time certain of a lease. Table 2 details the evidence.

Evidence	Lease Start	Area	Tenure	Annual Rent Increase	Incentives	Rent/M^2 on lease	Annual Gross Rent per lease
Landlord Evid. 1	Jan-21	2,400	10+10+10	Omitted	Not disclosed	$380	$920,000
Landlord Evid. 2	Mar-21	2,000	10+10+10	Omitted	Not disclosed	$340	$690,000
Landlord Evid. 3	Jan-19	1,725	10+10	Omitted	Not disclosed	$510	$880,000
Landlord Evid. 4	Jan-19	2,750	8	Omitted	Not disclosed	$420	$1,150,000
Landlord Evid. 5	Jan-Feb-19	6,250	8+8	Omitted	Not disclosed	$280	$1,750,000
Landlord Evid. 6	Feb-19	5,900	12	Omitted	Not disclosed	$490	$2,900,000

| Landlord Evid. 7 | Mar-19 | 5,700 | 16 | Omitted | Not disclosed | $350 | $2,000,000 |
| Landlord Evid. 8 | Feb-18 | 2,500 | 12 | Omitted | Not disclosed | $450 | $1,100,000 |

Table 2 (evidence slightly altered to obscure source)

From this range of data, which included incentives, the landlord's Valuer took a "number" from the top of the range, did no "testing" to check the appropriateness of the evidence, made no adjustments for the premises whose lease was up for an option renewal, and multiplied it by the floor area.

The Valuer making the submission then deducted an arbitrary sum (5%) for incentives, even though this is below known incentives in this industry of 20+%. Notwithstanding the actual incentive amount, incentives distort markets by spreading higher rents over a shorter (initial) portion of a lease which impacts on cash-flows in the latter part of a lease. When inflated rent and operating expenses are added into the property 'value' using high risk multipliers, the outcome acts as a double multiplier and hence inflates the market value.

In effect, as Professor Spike Boydell's PhD Thesis outlines (1998), landlord rent has and now *incorporates increasing amounst of business capital and tenant goodwill into the rent.* When will Valuers start "testing" lease rental occupancy costs for their reasonableness and start using *business risk rates (circa 16.0% for major retailers and 40.0% and higher for restaurants, cafes, butcher shops, etc.)* and apply them to that part of the rent in their valuations / appraisals (Macrae, 1996)?

By not having to test any business/demand metrics, the outcomes are effectively "engineered" to suggest that no change is needed, with most people none the wiser. This is how business capital repeatedly gets shifted to landlord/property capital.

In the matter above, having gained substantive knowledge from the discipline introduced by using GEM Lease Analytics™ – which facilitates the collection of standard evidence sets – the client was able to negotiate a $2.0 million dollar benefit in a quite substantial $6.0 million fitout (refit of business capital) for a subsequent lease he negotiated. In other words, the client was able to define the boundaries between landlord capital and business capital to structure his new lease.

GEM LEASE ANALYTICS™ STEPS FIVE AND SIX: A STANDARD SUPPLY-DEMAND CURVE

The graphs created by Steps Five and Six of GEM Lease Analytics™ equate to a Standard Supply-Demand Curve refer to Figure 1 below.

The rules/explanation for Micro Economic theory are as follows:

1. Price of homogeneous product eg. butter, carrots, beef, gold, coal, etc., is shown on vertical axis or Y-axis;

2. Quantity is shown on X-axis;

3. When price is at its highest, demand is at its lowest; as price falls, demand increases. This relationship is shown on the graph created by the Y-Axis and X-Axis;

4. When price is low, there is limited or no interest to supply a good or service. As price increases, more producers/manufacturer/builders/developers will enter the market to supply the good or service;

5. The equilibrium point where Supply = Demand is at where Price Y meets Quantity X.
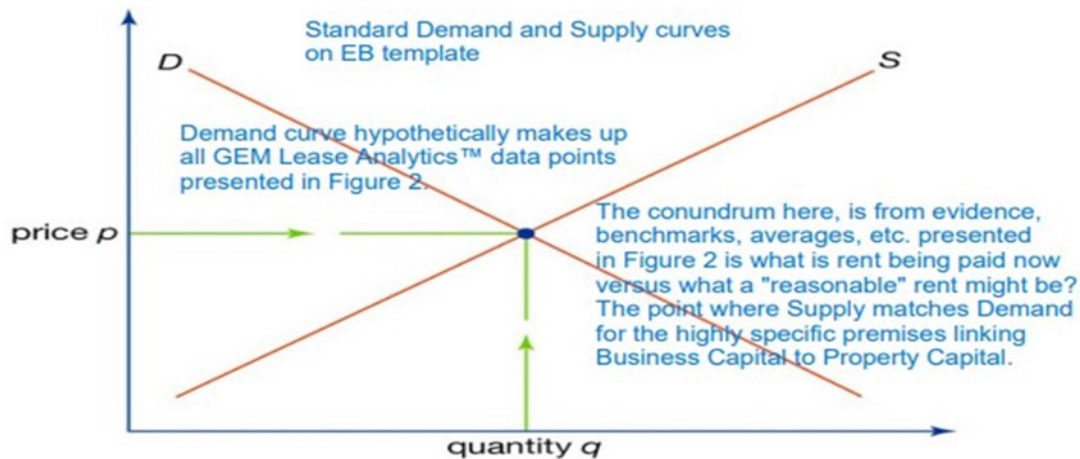
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Figure 1. A standard Encyclopedia Britannica Demand-Supply curve

Notes linking a Standard Demand-Supply curve to GEM Lease Analytics™

A. A willing buyer or renter must be able to buy/fund/pay for a property and/or lease. However, if the market is "engineered" or "contrived", by whatever means (e.g., unbalanced evidence. Government subsidies, etc.) it is difficult to know where Supply = Demand.

B. For proper evaluation purposes, evidence used must result from arms-length transactions, the opportunity cost of money be set at reasonable levels, and checks and balances employed to 'test' that the data is relevant and/or reasonable.

C. In Figure 2, which shows the graph that results from Step Five of the GEM Lease Analytics™ retail lease rental modelling, all data points combined depict a Demand Curve based on two Data Series, either rent per UOM (per square metre / square foot) which is presented by a red line, or *exactly the same range of data* mathematically adjusted/standardised to the same floor area of the Subject shop whose lease is being evaluated and shown as an annualized gross effective rent for a 300M² shop trading at the same level as the subject shop.
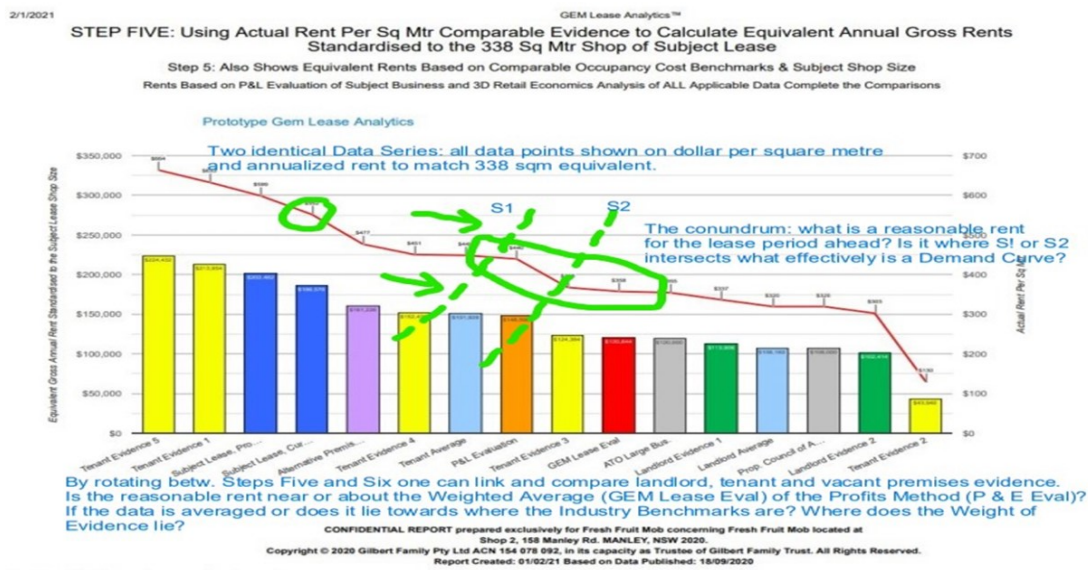
Figure 2. GEM Lease Anslytics™ Steps Five and Six depict a Demand Curve

Whilst *each data point* (whether it represents landlord evidence, tenant evidence, expert evidence, a

suitable vacant shop, etc.) is for a homogeneus business product, e.g., retail premises for book shops or pharmacies or supermarkets or hardware stores, the price or "value" of each data point is matched to a real "Supplier" of retail space. Together, these data points comprise a Demand Curve based on *annual gross effective rental costs,* adjusted for known incentives.

As a Demand Curve, the higher-priced rents congregate towards the LHS (and typically there are fewer of them); one can reasonaby assume these would represent higher "value" locations or smaller, more efficient shops (assuming they all represent arms-length evidence and have been sufficiently "tested"). The lower-priced stores congregate towards the RHS and might represent catchments that are oversaturated with the Subject's retail offer, or premises that are too large for efficient use.

Intersperced with the actual "tested" comparable evidence (as performed in Steps 1-4 of the analysis) are pivotal checks and balances, e.g., Industry Benchmarks[3] for the Subject's business, the result of GEM Lease Analytics™ "P & L Eval" (a Profits Method analysis), and "GEM™ Lease Eval" (a propritary, Weighted Average method). These provide key "Demand" points which balance the "Supply" points and suggest reasons for how and where the other evidence is congregating.

Combined on the same data series, all these points, *including the leased shop's current (if relevant) and asking rent,* become a Body of Evidence which indicate what a "reasonable" rent for the Subject lease might be. To show these, the Author has added in Supply Curves S1 and S2 showing the most probable region where the Subject tenant might contemplate enterining into a lease.

CONCLUSIONS

The importance of this level of analysis cannot be understated. It is pivotal not only for the Subject tenant, but for the retail industry as a whole *because it is the basis for all calculations of property values*. Valuers MUST try to get it right; hence it supports that it become The International Standard.

What is one searching for? What is one trying to predict? Surely the Valuer should be trying to reach an informed conclusion as to where "willing, informed Landlords and Tenants" would reach agreement, thus defining Market Rent. It is possible to find the point where "Supply" equals "Demand" for this highly specific business that must dynamically adapt to its marketplace, in a mostly static floor space that represents "sunk costs".

In legal terminology, the appropriate rent under the lease's terms, for this type of business, represents the meeting of the "minds" of a willing landlord and willing tenant, free from duress, misrepresentation, etc., i.e. willing *informed* parties.

But how does one do this when comparing such non-homogeneous (imperfect) evidence, with different sites, different locations, different sizes, different efficiency levels, different frontage depth ratios, different competition profiles, etc.? With so many factors to weigh, one needs a tool to facilitate comparison, to help each party justify its case; one that compares a broader "Body of Evidence" that provides guidance as to the reasonable rent, and may also raise red flags indicating that this lease and this business are NOT a good match.

What the GEM Lease Analytics™ Six-Step methodology does really well is to standardise, link and compare real, non-homogeneous evidence, using thoroughly tested data metrics *that relate directly to the lease whose rent is being evaluated*. (Step Six will be considered in Part II of this paper). This allows, for example, the parties to a rental dispute to test each other's evidence in multiple analyses and use the results to discuss and negotiate what a suitable rent might be, and decide whether or not to proceed.

Retail rental opinions and determinations are extremely challenging to get right; they are *not an exact science*. However, with the use of GEM Lease Analytics™ as a "value discovery" or "decision support" tool, one removes or resolves significant ambiguity and provides meaningful guidance to facilitate better outcomes in a profession that is sorely in need of a more scientific approach.

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[3] GEM Lease Analytics™ has some 600 benchmarks programmed into it, from landlord tenant industry sources, here and overseas with significant overlap representing the same or similar metrics and even range of metrics

Attachment A: Full Mock-up of GEM Method™

GLOSSARY OF TERMS

Australian Bureau of Statistics	ABS
National Association of Romanian Valuers	ANEVAR
Australian Property Institute, 6 Campion St, Deakin ACT 2600	API
Application Service Provider eg. Oracle, IBM, Microsoft, Amazon	ASP
Asian Real Estate Society	ASRES
Australian Taxation Office – small business benchmarks	ATO
Automated Valuation Model	AVM
Within the context of Occupancy Costs, can be from a wide range of informed sources including Professional Associations (e.g. Dental Practitioners; Medical; Optometry; Food and Beverage); the Australian Taxation Office; PRACDEV Key Indicators (old but still relevant); Property Council of Australia; International Shopping Centre Council; a franchise group's or large retail organization's own records, average occupancy costs from a company's Annual Financial Statements, BiZStatsUSA. Benchmarks are problematic unless they provide a credible range that removes extremes, e.g., businesses with very low sales that are not viable; or those with unusually high gross profit which might be attributable to Goodwill; etc. GEM Lease Analytics™ contains some 600 Benchmark from which users can pick to justify their arguments. It also allows user-supplied Benchmarks.	Benchmarks (applicable to AU)
A range of comparable evidence used to evaluate a reasonable rent. The concept of using a '*range*' or *'Body of Evidence'* is critical because retail evidence is imperfect. Therefore, a wider range of "tested" evidence, including comparables and 3ʳᵈ-party benchmarks, linked back to a premises whose rent is being evaluated, and adjusted for the actual metrics of the shop, mathematically and statistically removes the nuances and imperfections of the evidence for comparison purposes.	Body of Evidence
'A body of knowledge (BOK or BoK) is the complete set of concepts, terms and activities that make up a professional domain, as defined by the relevant learned society or professional association. It is a type of knowledge representation by any knowledge organisation.' In this highly specific field very little has been written about Worldwide. https://en.wikipedia.org/wiki/Body_of_knowledge	BoK
China Appraisal Society	CAS
Most widely used method to evaluate market rent (or used as a basis of comparison between leases), but easily open to manipulation (innocent or intended). The formula is simply: annual rent / floor area = rate per unit of measurement (metres or feet). **It assumes** that the evidence is the result at arm's length negotiations, by fully-informed parties, with adjustments made for -incentives, such that the data is directly comparable to subject (lease) being evaluated. As such, comparable evidence must exclude business assets and/or business goodwill or Super Profit from the calculations.	Comparison Method

'Supply' *and 'Demand'* in economic terms; 'Willing Landlord' *and 'Willing Tenant'* for market rent; 'Offer' *and 'Acceptance'* in the making of a contract; *Both aspects of each statement must be represented in the process in order to achieve a proper valuation.*	Criteria used to evaluate data points for valuation purposes
International Valuation White Paper entitled, *The Valuation of Real Estate Serving as Collateral for Securitized, Instruments*, issued in July 2006 which reads in part: *"The Valuer should investigate …. about prospective contractual rent…[to ascertain] that the data is indeed accurate. Estimates…which are unrealizable, are engineered rents;* **valuations based on engineered rents will not result in Market Value**" *[emphasis added].*	Engineered Rents / Engineering
The rent stated on the lease document, usually monthly. However, this figure does NOT include any incentives offered to the tenant at the outset of the lease, such as a rent-free period or free shop fit-out. After such incentives are taken into account throughout the lease period, one arrives at the *Effective Rent* being paid. This should also be the Market Rent that is used to calculate the Market Value of the property.	Face Rent *vs* Effective Rent
Financial Accounting Standards Board, 401 Merritt 7 P.O. Box 5116. Norwalk, Connecticut 06856-5116, USA	FASB
An informed projection of what a businesses' future maintainable sales might be for the lease period ahead.	Future Maintainable Sales
'Full Time Equivalent' working staff member who works 38 hours per week.	FTE
When a given asset may have debt (acquired at a lower cost or price than one pays for equivalent capital), which underpins shareholder (aka the beneficial owners) equity to bolster returns. This can and does occur until the cost of debt increases and returns possibly go in the opposite direction. If a property asset is overpriced or overvalued, and underpinned by debt, a flight by shareholders can and will exaggerate a compression in share prices. Seen most recently in the GFC.	Gearing / Leverage
'GEM Lease Analytics™ examines actual retail lease evidence, industry benchmarks and financial data to investigate what constitutes a 'reasonable rent' for a specific retail lease and business using sophisticated programming described in this paper https://3dretaileconomics.com.au/	GEM Lease Analytics™
Global Financial Crisis (2007 – 2009)	GFC
Headline Price refers to what people are paying for an asset, e.g., the average price of apartments or houses in a given area, or average rent per UOM, where no "in-depth" analysis has been done to ascertain contributing factors. Many factors could be "engineering" or masking the real value of asset, or the understanding of its real value. Headline Analysis implies that persons speaking with supposed authority on the "price" of a given asset may have limited knowledge or understanding regarding real asset values.	Headline Price / Headline Analysis
International Accounting Standards	IAS

International Accounting Standards Board	IASB
'An invention is a unique or novel device, method, composition or process. The invention process is a process within an overall engineering and product development process. It may be an improvement upon a machine or product or a new process for creating an object or a result. An invention that achieves a completely unique function or result may be a radical breakthrough. Such works are novel and not obvious to others skilled in the same field ……… ' https://en.wikipedia.org/wiki/Invention	Invention
Intellectual Property	IP
International Valuation Standards (Council), 1 King Street, London, EC2V 8AU, United Kingdom	IVS(C)
Key Performance Indicator	KPI
Left Hand Side	LHS
IVS 40.1. *'Market rent is the estimated amount for which an interest in real property should be leased on the valuation date between a willing lessor and a willing lessee on appropriate lease terms in an arm's length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion.'*	Market Rent (Gilbert, D. 1995, 2003)
IVS 30.1 *'Market Value is the estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm's length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion.'*	Market Value
A measure for something; a means of deriving a quantitative measurement	Metric, performance metric (noun)
Supply and Demand Curves: The Body of Evidence displayed in Steps Five and Six of GEM Lease Analytics™ uniquely emulates the behaviour of typical Supply and Demand curves. For the first time, one can visually link and match better "value" premises – perhaps smaller, more efficient and better located – on LHS of the graph, with premises on the RHS that are larger, but maybe not as well-located. Market Rent for the Subject premise will be an intersecting point where parties may agree to a "reasonable rent". Linking the quite complicated comparison criteria of retail premises (Property Economics) to Supply & Demand (Micro Economics) represents a major breakthrough.	Micro Economics (Supply & Demand) Represented by graphs in GEM Lease Analytics™
Net Tangible Asset value	NTA
Gross rent divided by a business's turnover (sales) and expressed as a percentage.	Occupancy Costs
Amount an uninformed person will pay for an asset. Underlying value has not necessarily been properly determined.	Price
Secondary method to evaluate market rent; essentially accountancy based. It tends to be based on 'historical' accounting figures taken from the business Profit & Loss statement so is limited to the "business in situ". It does not compare the business to any wider 'body of evidence' and does not make	Profits Method

allowance for Future Maintainable Sales	
Pacific Rim Real Estate Society	PRRES
Real Estate Investment Trust	REIT; (A-REIT), etc.
Right Hand Side	RHS
Royal Institution of Chartered Surveyors, 12 Great George Street (Parliament Square), London SW1P 3AD, United Kingdom.	RICS
Software as a Service	SaaS
Small and Medium Sized business, defined in Australia as a business having a turnover of less than AU$10 million.	SME
Finance industry, academics, valuers / appraisers, real estate practitioners, investment advisors, lessors, lessees, franchise industry	Stakeholders
Unit of Measure (usually 'square metres' or 'square feet')	UOM
Australian analytics company who collects, processes and presents key data about all classes of Australian retail shopping centres.	URBIS/Urbis JHD
The opposite of 'Price' as defined above. Requires that a person or persons be fully informed about the value or market value of an asset, i.e., that they have done appropriate Market Research.	Market Value / Value
World Association of Valuation Organisations, WAVO Secretariat, 110 Middle Road, Singapore 188968	WAVO

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ACKNOWLEGEMENTS