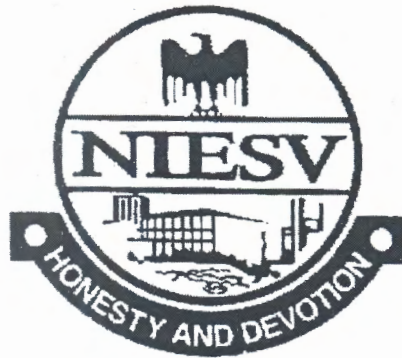


THE NIGERIAN INSTITUTION OF ESTATE SURVEYORS AND VALUERS



PROFESSIONAL QUALIFYING EXAMINATION
LECTURE NOTES 3rd Edition
Adult Route To Membership Of Niesv, 2016



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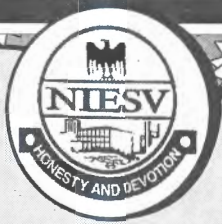
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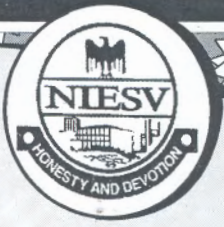
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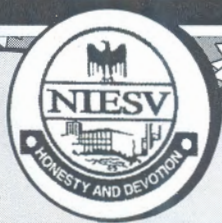
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Preface to the 1st Edition

The idea to commence a Adult route to membership of NIESV was considered by the Council in 2013 at Uyo-Akwa-Ibom State Council Meeting. A committee was formed to look into modalities for recruiting mature Estate Surveyors into the profession. The outcome of this Committee is the manifestation of this Lecture Notes. The Membership Committee ensures that candidates with a Degree or HND in Estate Management and Valuation, who have attained the age of at least 50 years and have been in practice for over two decades should be allowed to apply for this special route.

Scholars and practitioners are engaged to prepare lecture notes for the task tailored in line with our Professional Examination syllabuses. I am particularly grateful to this group of researchers who did not only provide educative and teaching materials on relevant areas of our practice, but did it with a dispatch. Thank you for this outstanding task.

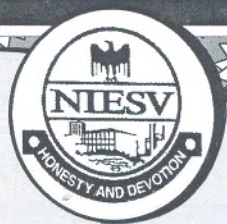
The President of NIESV, Olorogun James Omeru has been very supportive in ensuring that success of this lofty project is achieved. He particularly chaired a meeting of a group of Land Administrators in Benin City in 2013 and promised to put an end to non-professionals heading our State and National Ministries of Lands in Nigeria.

The programme is intended to bring mature members of profession into our membership cadre through a well formulated and rigorous training over a specified period.

This particular edition covers Principles of Valuation, Building Construction Professional Practice, Advanced Valuation I and II, and Professional Report Writing.

*Dr. B.J. Patunola Ajayi
Chairman, NIESV Membership Committee,
Abuja, FCT-Nigeria*





Preface to the 2nd Edition

The success of the first edition of this book propels the Membership Committee of the NIESV to search for an improvement and an introduction of new topics in this edition Emerging Global challenges in Real Estate Surveying and Valuation Practice call for learning new topics to solve them. this edition includes International Financial Reporting Standards, Land Administration and Management, Property Rating and Taxation and other contemporary topics.

Additional member was invited to contribute chapters to this edition to augment the existing pool of discussions and enriching this edition.

The enthusiasm displayed by these energetic and brilliant contributors is not only to be appreciated but the promptness in responding to the submission of topics covered are invaluable commendable. I appreciate the contributions and support of our amiable President Olorogun James Omeru, for his effort in seeing to the successful production of the book and training that subsequently followed.

*Thank you Almighty God for making an idea of a young guy from far away Bauchi a reality and sparing our lives to this moment.
Thankyou all.*

Dr. B.J. Patunola Ajayi
*Chairman, NIESV Membership Committee
Abuja, FCT, Nigeria.*





Preface to this Edition

After the successful conduct of the two Adult Route to Membership Programmes which produced dozens of qualified Estate Surveyors and Valuers, this edition seek to build on the success of the previous ones. This is a major programme to the organized under my watch as the First Second Vice President of NIEVS.

The only way to bridge the gap existing in the public offices in Nigeria and replacing the quacks heading our State Ministry of Lands is through this programme as noted by the council of the Institution. The contemporary issues discussed in this edition will expose candidates to challenge in real estate industry. I am highly optimistic that after this training, participants will gain tremendous knowledge which they will find very useful in the their various offices and thereby advance the course of the profession.

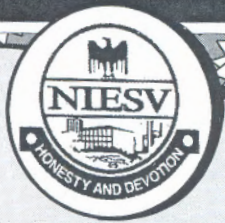
I appreciate the contribution of the President of NIEVS, in person of Dr. Patun-Ola Ajayi. I also acknowledge and commend the effort of scholars like is organised as a continuation of the previous ones. This is the only programme to be organized under me as the First Second Vice President of NIEVS. I appreciate the contribution of the President of NIEVS, in person of Dr. Patun-Ola Ajayi. I also appreciate the efforts of the contributors of the topics covered in this publications like **ESV. Adedayo Adebayo, ESV. Iroham C.O, ESV. Olurotimi Kemiki, ESV. Salau L. Tunde and ESV. Bamidele Ogunleye** who contributed the topics covered in this publications.

Thank you and God bless.

ESV Rowland Abunta, FNIVS

1st Vice President, and Chairman of Membership Committee, NIEVS.





Forward

It was brought to my notice recently that the current Directors of Lands in some States of the Federation are now registered Estate Surveyors and Valuers. This development is note-worthy considering the fact that these registered professionals are products of the previous programmes we have conducted. With this good news, the cardinal aim of starting Abdul-Route to Membership of NIESV has been achieved.

The effort of the First Vice President of NIESV, EVS Rowland Abunta, FMVS in ensuring the successful completion of this treatise and the continuation of this programme is acknowledged and commendable. the scholars, who contributed topics to these books also deserve our gratitude as they have put in their best to treat and present courses hitherto considered complicated in a simplistic form, for quicker understanding. The time they devoted to writing the topics lecturing/examining the candidates is also noted and appreciated.

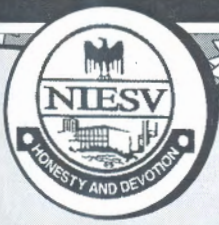
The best way to keep up with swift in the practice of our profession globally, is through the training and re-training of members and that is what this programme is tailored to achieve.

It is my firm belief that Estate Surveyors and Valuers in practice and their colleague in the classroom, will find this publication as valuable as a fountain, through which they can tap new knowledge.

Thankyou all

*Dr. Patunola Ajayi (FNISV)
President, the Nigerian Institution of Estate Surveyors and Valuers.*





List of Contributors

The Nigerian Institution of Estate Surveyors and Valuers (NIESV) is grateful to the following scholars for contributing to the writing of chapters of this book. Their efforts shall be recognised for providing a selfless service to the Institution. Thankyou.

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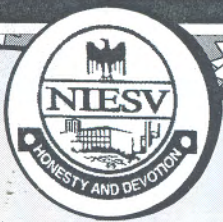
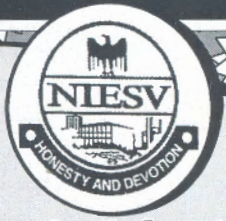


Table of Contents

| <u>CONTENT</u> | <u>PAGE</u> |
|--|-------------|
| Preface 1st Edition _____ | i |
| Preface 2nd Edition _____ | ii |
| Preface to this Edition _____ | iii |
| Forward _____ | iv |
| List of Contributors _____ | v |
| Table of Contents _____ | vi |
| Chapter 1 : Introduction to Valuation _____ | 01-13 |
| Chapter 2: Principles of Property Valuation _____ | 14 - 32 |
| Chapter 3: Building Opening Finishers & Services _____ | 34 - 39 |
| Chapter 4: Estate Surveyor & Valuers in Public & Private Sector _____ | 40 - 45 |
| Chapter 5: Building Construction _____ | 46 - 56 |
| Chapter 6: A Study on IPMS. _____ | 57 - 64 |
| Chapter 7: Land law and Land Administration in Nigeria _____ | 65 - 79 |
| Chapter 8: Land Information System _____ | 80 - 90 |
| Chapter 9: Registration of Title to Land _____ | 91 - 97 |
| Chapter 10: Plant and Machinery Valuation _____ | 98 - 136 |
| Chapter 11: Professional Practice _____ | 137 - 142 |
| Chapter 12: Legal Studies NLSLC _____ | 143 - 154 |
| Chapter 13: Pedagogy (IPSAS), (IFRS) & IVS. _____ | 155 - 178 |
| Chapter 14: Professional Ethics and Professionalism _____ | 179 - 190 |
| Chapter 15: Professional Report Writing _____ | 191 - 209 |
| Chapter 16: Property Management and Maintenance _____ | 210 - 217 |
| Chapter 17: Property Rating as a Source or Revenue for Local & State Gov't. _____ | 218 - 233 |





A premium is a sum of money that is paid by a lessee at the commencement or during the period of a lease in order to get consideration for a reduction in rent. At a low rent signifies a rent below full rental value (rack rent), and the other benefits will be, as a rule, financial, having the same effect as a reduction in rent.

Examples relating to the existence of premium are the tenant paying for repairs that would normally be the landlord's responsibility, and the tenant financing the extension of the property without being charged an increase in rent. A premium is often paid on the grant or renewal of a lease, but there may be more than one premium, payable at anytime during the lease term. It entails a cash gain coupled with a loss of rent for the landlord because the usual result of charging a premium will be a letting at less than FRV. The landlord is therefore selling part of his income. The tenant will be paying a lump sum in return for a lease at a rent below the FRV, effectively buying a profit rent. The payment of a premium has many advantages to the tenant. It could be concluded that premiums will usually be paid where there is a seller's market, that is, where there is or there exists a competition among prospective tenants to secure an agreement with the prospective landlord.

Although the amount of the premium will reflect the discounting of future income, into an immediate lump sum receivable instead of a future flow of income, this is often more attractive due to the 'time value of money'. The landlord may prefer a lump sum in order to meet an immediate expense or to make any kind of cash investment. Receipt of a lump sum immediately may reduce the diminishing effect that inflation has on the value of future income in real terms, especially if rent review periods are longer than is favourable to the landlord. A premium should increase the landlord's security of income. Once the tenant has paid a premium, he has invested money in his occupation of the premises in expectation of making an actual or notional profit rent. As a result, he is more likely to remain in occupation of the premises and should be a more reliable tenant. Some of the risk attached to the investment from the landlord's point of view may be reduced. A premium may be used as a loss or deduction to be made from profits when being assessed for income tax or capital gains tax. Paying a premium may be advantageous to a tenant when his financial circumstances are such that he prefers to part with capital in order to reduce his future recurring expenses. However, the landlord will usually enjoy the greater benefits, and premiums will only usually be paid when the property in question attracts many prospective tenants.

In discussing premium it should be stated here that this is an aspect of Landlord and Tenant Valuation. The income approach to property valuation principally centres particularly on the relationship between landlord and tenant. We will examine several of the valuation problems raised by this relationship.

Valuation Technique

From the lessor's point of view, the receipt of a premium has the advantages of securing an immediate capital sum, which may have certain tax advantages and increasing the security of his income from the property in so far as a tenant is perhaps more likely to

default when purchasing the full rental value.

From the lessee's point of view, it is also possible for a premium to produce certain tax advantages. Where a premium is paid, the lessor regards the transaction as part of his income for the period of the lease; and from the lessee's view point, he is investing money in the property, by purchasing a profit rent:

The capital invested by the lessee depreciates as the term runs out; therefore, provisions must be made for a sinking fund. Hence, the valuation problem may take one of two forms:

1. What premium should be paid in consideration of a specified reduction in rent?
2. What reduction should be made in the rent in consideration of a specified premium?

A lessee may request a specified deduction in rent per annum upon the granting of a lease, the premium to be paid should be equivalent to the capital value of the annual profit rent.

Question: Mr. Babaginda has been granted a 14-year lease of a shop having a net rack rental value of N3, 000 per annum. He has agreed to pay N2, 000 per annum subject to the immediate payment of a premium. Calculate the premium. Assume a yield of 7% and tax liability of 40K in the Naira.

Solution:

| | |
|--------------------------------|------------|
| Net rack rental value | =N3,000 pa |
| Less Rent to be paid per annum | =N2,000 |
| Profit rent per annum | =N1,000 |

YP for 14yrs @7% and 2.5% (tax 40k in N)

(Remember the Dual rate formular affected by a tax factor

$$= YP = \frac{1}{i + s(1/1-x)}$$

$$= YP = \frac{1}{i + i/(1+i)^n (1/1-x)}$$

$$= YP = \frac{1}{0.07 + 0.025/(1.025)^{14} (1/1-0.4)}$$

$$YP = \frac{1}{0.07 + 0.025/(1.025)^{14} (100/60)}$$

$$YP = 5.852$$

Premium = N5, 852

Alternatively the premium may be agreed and the reduction in rent per annum will need to be calculated. The lessee will forgo a capital sum and he will expect in return a reduction in rent totalling:

1. The interest foregone on the premium at the leasehold rate of interest i and
2. A sum sufficient to recover the initial capital outlay by means of a sinking fund (adjusted for tax liabilities) at the time the lease expires $s(1/1-x)$, so as to result to a total of $i + s(1/1-x)$.

This is the annual equivalent of the premium or the annuity N1 will purchase. The reduction may be calculated as Premium x Annuity N1 will purchase or more conveniently: Premium/YP for the term of the lease.



Question: A lock up store is to be let on a 14-year full repairing and insuring lease having a net rack rental value of N2,400 per annum. The tenant has agreed to pay a premium of N4,000 at the commencement of the lease. Calculate the rent per annum to be paid assume a yield of 7% and a tax liability of 40K in the Naira is

envisaged

Solution:

| | |
|--|------------------|
| Net rack rental value | =N2400 per annum |
| Less reduction in rent | |
| Annual equivalent of the premium | |
| = <u>4,000</u> | |
| YP 14yrs @7% and 2.5% net (tax 40k in N) = 5.852 | =N684 |

Rent to be paid per annum = =N1,716

There may be circumstances where the tenant agrees to pay a premium at a future date. In order to calculate the reduction in rent per annum, the present cost of the future premium may be determined and the annual equivalent then found.

Question: Chief Okoro has been granted a 14-year full repairing and insuring lease of premises having a net rack rental value per annum of N4,000. The tenant has agreed to pay a premium of N6,000 in 5 years time. Calculate the rent per annum he should pay assuming a yield of 8% and a tax liability of 40K in the Naira.

Solution:

| | |
|-------------------------------------|--------------|
| Net rack rental value | =N4,000 p.a. |
| Less reduction in rent | |
| Present cost of premium= | |
| N6,000 x PV of N1 in 5 years @ 2.5% | |
| =N6,000 X 0.884 = N5,304 | |

| | |
|---|--------|
| Annual equivalent = <u>N5,304</u> | |
| YP 14yrs @ 8% and 2.5% (tax 40K in Naira) | |
| = <u>N5,304</u> | |
| 5.528 | = N960 |
| Rent to be paid per annum | N3,040 |

Where a tenant has a liability to pay a premium at a known future date, he may provide for this by investing a capital sum or by an annual sinking fund. In either of the cases, the rate of interest for investment to provide the capital sum should be a low-risk-free rate, that is, an accumulative rate of interest sum as low as 2.5% or 3% net.

For instance considering the previous example where a tenant agreed to pay a premium of N6,000 in 5 years time, this may be provided by investment of an initial capital sum or an annual sinking fund.

Hence, (i) initial capital sum = N6,000 x PV of N1 in 5 yrs @2.5%
= N6,000 x 0.884 = N5,304

(ii) Annual sinking fund = N6,000 x Annual Sinking fund to provide N1 in 5yrs @ 2.5% = N6,000 x 0.190 = N1140

However the value of the future premium to the landlord at the commencement of the lease is N6,000 deferred by a remunerative rate of interest that is N6,000 x PV of N1 in 5 yrs @ 8%

$$=N6,000 \times 0.681 = N4086$$

It is usual however to calculate the premium or rent from the tenants view point.

Virtual Rent And Costs In Use

Virtual or sitting rent is the term applied to the true annual cost of premises to a lessee. It is the rent paid together with the annual equivalent of any capital sums he may have expended on the premises from time to time. It should be noted that when a person expends capital on property in which he has only a terminable interest, such capital invested would have been invested elsewhere and would have borne interest at a fair rate percent but also that an annual sinking fund ought to be provided to replace this capital by the time the party's interest in the property expires. For instance if a lessee whose term has thirty years still to run spends N5,000 on improvements to the property, not only will the expenditure cost him interest on the N5,000 throughout the term but he ought also to provide for the replacement of the N5,000 by the time his lease runs out in 30 years time. The annual amount of interest and sinking fund on the sum in question is known as its annual equivalent and can be found by either multiplying the capital sum by the annuity which N1 will purchase or by dividing it by the appropriate figure of years purchase for the period which the lease still has to run. The effect of either method is to spread the expenditure over the term and show its true annual cost to the lessee. The rate percent at which interest on capital is allowed will be that which might reasonably be expected from a security of similar type to the property in question.

Question: What is the annual equivalent of a capital sum of N5,000 expended on property by a Alhaji Deji whose term has still thirty years to run assuming interest on capital at 7 percent

Solution:

Capital Expenditure = N5,000

YP 30 yrs @ 7% & 2.5% (tax 40k in N) = 8.47

N5,000

8.47

Equivalent annual cost = N590.32

Capital expenditure by a lessee may be of two principal types

(i) A premium paid on taking up of a lease

(ii) Alterations, improvements and other capital works to the property itself

In either case the annual equivalent of the capital sum or sums expended must be added to the rent actually paid in order to find the lessee's virtual or sitting rent. However, in regards to the second scenario, the capital sum expended must be spread over the number of years still remaining for the lease at the time when the expenditure was made, since this is the period over which the lessee should be providing a sinking fund for the replacement of the sum in question.

Additions or improvements to a property such as the building of a garage or the putting in a new shop in front are clearly capital expenditure but a large sum spent on internal and external decorations and repairs after a lessee has been in possession for a number of years may properly be regarded as merely accrued annual repairs. On the other hand if a lessee spends a considerable sum on repairs immediately after taken up a lease, it may be assumed that the rent reserved was lower on the condition of the premises and that the expenditure made is in form of a premium which should be spread over the

term of the lease in calculating the sitting rent.

When a lessee carries out alterations to a property he may have to enter into a covenant with his landlord that he will restore the premises to their original form at the end of the lease. The estimated cost of this work must be considered in calculating virtual rent. The lessee will not only lose interest on this sum during the term but he should be setting aside a sinking fund to provide for it and this will form part of the annual equivalent cost of the premises to him. Where premises are used for a trade, business or profession a tenant who makes an improvement to the property may be entitled to a compensation for it at the end of his tenancy under the terms of the Landlord/Tenant agreement or he may be entitled to a new lease on the expiration of the present term under the Landlord/Tenant agreement at a rent which excludes the value of the improvement. Where either is the case it is not necessary to provide for setting aside of a sinking fund for whole or part of the expenditure incurred.

Repairs, rates and other outgoings which the lessee pays are not usually taken into consideration in finding the virtual rent or annual equivalent cost of the premises to him. Hence, virtual rent is usually on the same basis as net rent. The two main justifications for calculating virtual rent are:

- (i) To enable the lessee have knowledge of the annual cost of his occupation
- (ii) To enable a prospective occupier decide between alternatives

A prominent method which allows comparison to be made between/amongst alternatives is that of "Cost in Use".

Cost in Use which seems similar to the Virtual rent needs to be differentiated in various areas. For instance virtual rent represents the annual cost of occupying a property while Cost in Use seems to indicate the same thing it is applicable to any item of capital expenditure. Virtual rent is computed on a net basis and as such ignores items such as repairing cost whereas cost in use takes into consideration costs of repairs and other similar costs of outgoings. Cost in Use considers various costs in such a way that all annual costs are put in consideration ranging from cost of lighting and heating, additional labour costs incurred due to preference to a poorly laid out factory, additional handling cost incurred for preference to particular designs and installations. Cost in use is principally used for comparison amongst alternatives. This comparison takes note of the initial purchase costs and the running cost. A method adopted in this comparison would be to capitalize the anticipated running cost during the estimated life of the facility together with any anticipated capital expenses in the future and to add to this figure the original cost of procurement. The total cost of each alternative is compared before decision is made. Another method adopted is to calculate the annual equivalent of all the capital costs and add same to the total running cost.

Surrender And Renewal Of Leases

When the tenancy/lease of a lessee is about to expire the occupier or tenant of the premises will often be anxious to still remain in occupation. This is usually to continue with the goodwill they have established in the premises over certain period of time particularly as a business outfit. Other reasons that alluded could be considerable expenses involved in moving business, fear of loss of trade and consequently loss of profit. Due to the attachment in such premises resulting from occupation in the past years the lessee may decide to surrender the balance of his present term in exchange for the grant of a new lease based on either the current term or condition or for some other agreed term and condition. For any of the scenario the questions that might be answered are: What is the appropriate premium payable to the lessor by the lessee to enjoy the proposed extension or renewal and what new rent supposing the lessee does



not wish to pay a premium in lieu of the old rent.

The premise behind these enquiries are that for the lessee to be interested in surrendering and renewing his existing lease there is a latent benefit accruing to him. If the true rental value of the premises exceeds the rent reserved under the present lease, the lessee has to compensate the lessor for the proposed extension. How the compensation is been handled is a matter of negotiation between the lessee and lessor. The agreement could be in the form of the fresh lease being granted at the same rent and on the same term as at present this might entail the lessee paying a premium to the lessor or the payment of a capital sum in consideration of the lessee paying an increased rent throughout the proposed new term. There may also be an agreement of the payment of a certain sum as premium and also an increased rent throughout the term with the addition obligation on the lessee to make some capital improvement to the premises when the new lease is granted. The landlord on his own part will likely accede to the offer of renewal of lease as landlords are also anxious to retain good/cool tenants and tend to avoid void. Landlords do commence negotiation for a new lease a few years to the end of the existing lease.

Where tenant decides to give up an existing lease to enable negotiation of a new lease, it is called surrender. In surrender the current lease is yet to expire whereas a new negotiation for a longer term is entered into. This is referred to as **Surrender and Renewal (S&R)**. S&R arises from the landlord as well as from the tenant's point of view, comparing their present situation with that under the proposed lease

The valuer can be called upon to act on behalf of any of the party either the lessee or the lessor hence; it is good for valuers to be conversant with the calculation from the point of view of both parties. The lessee should however be credited with the improved value of the property for the unexpired term of the existing lease. For instance if the balance of the lessee's term is ten years and he is occupying the premises at a profit rent of N8,000 a year, it is obvious he has a valuable interest in the property which he will be giving up in exchange for the new lease. He is therefore entitled to have the value of the surrendered portion of his term set off against any benefits which he may derive from the proposed extension. Hence, whether the calculation is made from the lessor's or lessee's point of view the principle involved in the calculation is that:

- (i) Estimating the value of the party's interest in the property, assuming no alteration in the present term was made; and
- (ii) Estimating the value of the party's interest assuming that the proposed renewal or extension was granted.

The difference between these two figures should indicate the extent to which the lessee will gain or the lessor loses by the proposed extension. The figures derived are seldom a matter of precise mathematical calculations. Estimates made from the lessor's standpoint and that made from the lessee's standpoint are not usually alike, hence a need for negotiation between both parties. The valuer notwithstanding his client is advisable to look at his calculations on both standpoints as this will put him in a vantage point of advising his client appropriately.

even though most times the balance of the lease which the lessee is willing to surrender is usually a short one the incidence of income tax on sinking fund should not be discarded in valuing his interest under the existing lease and ultimately considered in valuing the proposed new lease. **TENANTS' POINT OF VIEW**

Under the existing lease, a profit rent is enjoyed by the tenant. So that the surrender of the lease by the tenant would imply that a surrender of a valuable leasehold interest in the property has been made by him. The tenant will also be enjoying a profit rent in the

new arrangement. However a premium is likely to be demanded by the landlord. The tenant would reasonably be expected to be compensated by a reduction in rent under the proposed lease. The amount of such compensation would be determined by the value of the leasehold interest surrendered. There is therefore the need to determine the value of the tenant's existing lease as well as that of the value of the proposed lease.

Landlords' Point Of View

Considering the fact that the landlord anticipates reversion to full rental value at the expiration of the existing lease, the landlord would not easily or readily agree to any indiscriminate extension of the tenant's existing profit rent. He would for instance like to compare his position under the existing tenancy with his position under the proposed tenancy to ensure that he is not worse off by the proposed extension. There is therefore the need to value the present interest of the landlord as well as the proposed interest for the purpose of comparison.

Valuers' Role

Just as earlier stated a valuer acting for either or both parties would therefore consider the position of both parties under the present and proposed tenancy so as to be well informed and destroy any bias or prejudice in carrying out his statutory role. This will involve at least four separate valuations for every problem on surrender and renewal valuation.

Principles Involved In The Calculation Of Surrender And Renewal

1. Calculations should be made from the point of view of both parties, i.e., the lessor and lessee's points of view, with the lessee being credited with the improved value of the property for the unexpired term of the existing lease.
2. The valuer should estimate the value of the parties' interest in the property, assuming no surrender was proposed during the present term
3. Estimate the value of the parties' interest, assuming that the proposed renewal or extensions were granted.
4. The difference between these two figures (i.e 2 & 3 above) should indicate the extent to which the lessee will gain or the lessor will lose by the proposed extension.

Question: *Alhaji Umaru holding a shop on a repairing lease for 40 years, of which six years are unexpired, desires to surrender his lease and to obtain a fresh lease for 40 years at the same rent. The rent reserved under the present lease is N10, 000 per annum while the rack rent is N25, 000 per annum. Calculate a reasonable premium that can be negotiated between both parties. (Assume 8% & 2.5% with a tax factor of 40%)*

Solution:

(A) Lessee's Point of View:

Proposed Interests

| | | |
|-----------------------------------|------|--------------|
| Profit rent | | N15,000 p.a. |
| YP 40 years @ 8% & 2.5% (40% tax) | 9.55 | |
| CV | | N143,250 |

Present Interest



| | | |
|--------------------------------------|-----------------------|--|
| Profit rent | N15,000 | |
| YP 6 years @ 8% & 2.5% (40% tax) | 2.93 | |
| CV | <u>N43,950</u> | |
| Hence, the gain to the Lessee | <u>N99,300</u> | |

(B) Lessor's Point of View

Present Interest

| | | |
|--|---------|------------------------|
| Next 6 years rent reserved | N10,000 | |
| YP 6 years @ 6% (due to more security) | 4.92 | N49,200 |
| Reversion to full rental value | N25,000 | |
| YP per deferred 6 years @ 7% | 9.52 | <u>N238,000</u> |
| CV | | <u>N287,200</u> |

Proposed Interests

| | | |
|--------------------------------------|---------|------------------------|
| Next 40 years proposed rent | N10,000 | |
| YP 40 years @ 6% | 15.046 | N150,460 |
| Reversion to full rental value | N25,000 | |
| YP per deferred 40 years @ 7% | 0.954 | N23,850 |
| CV | | <u>N174,310</u> |
| Hence, the loss to the lessor | | <u>N112,890</u> |

For a conclusive premium agreeable by both parties to pay the average amount from both the gain accruing to the lessee and the loss accruing to the lessor can inform the decision. Thus, the premium payable =

$$\frac{N99,300 + N112,890}{2}$$

2

Premium Payable = N106,095

Question: Assume in the preceding question that instead of paying a premium, the lessee should pay an increased rent in the new term of lease. What should be the appropriate rent payable

Solution:

(A) Lessee's Point of View:

| | |
|--|-------------------------|
| Full rental value | = N25,000 |
| Deduct annual equivalent of value of present interest = (This can be seen above: N43,950) | |
| <u>N43,950</u> | |
| YP 40 years @ 8% & 2.5% (40% tax) | 9.55 = <u>N4,602</u> |
| Reasonable rent for new lease | = <u>N20,398</u> |

(B) Lessor's Point of View:

| | |
|--|-----------------------|
| Value of present interest (as seen above) | N287,200 |
| Deduct value of proposed reversion to N25,000 (as seen above) | <u>N23,850</u> |
| Value of proposed term | N263,350 |
| Divided by YP 40 years @ 6.5% | <u>14.22</u> |
| Reasonable rent for new lease | <u>N18,520</u> |
| To arrive at a consensus the appropriate rent payable will be an average of both parties view points | |
| Thus: <u>N20,398 + N18,520</u> | = N19,495 |

2

There are instances where the lessee has to make an expenditure on the property/premises in consideration for an extension of an existing lease. The value

ascribed to the property/premises will definitely revert to the lessor at reversion; hence the lessee should be given credit for the value due to his expenditure which will revert to the lessor at the end of the term. Such sums expended must be taken into consideration when considering the cost of the new lease to the lessee.

Question:

A property used for banking hall in a city centre is held on a lease having 8 years unexpired terms at N27, 000 per annum. The present rental value is N40, 000 per annum. The lessee is willing to spend N100, 000 for improvements and alterations affecting only the interior of the building which will increase the rental value by N16, 000 per annum on the condition that the lessor will accept a surrender of the present lease and grant a new lease for a term of 30 years. The lessee is left with the option of paying either a fair rent under the new lease or a premium. The lessor will appreciate a rent of N25, 000 per annum in the new covenant which must enforce the carrying out of the improvements and the payment of a reasonable premium. Advise the lessee of the appropriate premium to pay if the new rent is N25, 000 p.a? (Assume freehold yield @8%)

Solution:

(A) Lessee's point of view

| | | | |
|-----------------------------------|----------------|-----------------------|------------------|
| Proposed Interest | | | |
| Rental Value | N40,000 | | |
| Add value due to outlay | <u>N16,000</u> | | |
| | | N56,000 | |
| Head rent | | N25,000 | |
| Profit rent | | N31,000 | |
| YP 30yrs @ 10% & 2.5% (40% tax) | | <u>7.25</u> | |
| | | N224,750 | |
| Deduct expenditure on improvement | | <u>N100,000</u> | |
| | | N124,750 | Present Interest |
| Rental Value | N40,000 | | |
| Rent paid | N27,000 | | |
| Profit rent | N13,000 | | |
| YP 8yrs @ 10% & 2.5% (40% tax) | <u>3.44</u> | | |
| | | N44,720 | |
| Gain to lessee | | <u>N80,030</u> | |

(B) Lessor's point of view

| | | | |
|------------------|-------------|----------|--|
| Present Interest | | | |
| First 8 years | N27,000 | | |
| YP 8yrs @ 8% | <u>5.75</u> | | |
| | | N155,250 | |

Reversion

| | | | |
|--|--------------|-----------------|--|
| Reversion to rental value after improvements | N56,000 | | |
| YP in perp @ 9% | <u>11.11</u> | | |
| | | N622,160 | |
| Deduct cost of improvements | | <u>N100,000</u> | |
| | | N522,160 | |
| PVN1 in 8 years @ 9% | <u>0.502</u> | | |
| | | N262,124 | |
| Value of present interest | | N417,374 | |



| | | | |
|--------------------------------|--------------|----------|----------------|
| Proposed Interest | | | |
| First 30 years | N25,000 | | |
| YP 30yrs @ 8% | <u>11.26</u> | N281,500 | |
| Reversion to full rental value | N56,000 | | |
| YP Perp deffered 30yrs @9% | <u>0.84</u> | N47,040 | |
| | | | N328,540 |
| Loss to lessor | | | N88,834 |

In a situation where a fair rent is to be determined and not the payment of premium, the analysis will be as follows:

(A) Lessee's point of view

| | | | |
|---|---------|----------------|---------------------|
| Rental value after embarking on the improvement | | | N56,000 |
| Deduct annual equivalent of improvement cost | | N100,000 | |
| Present Interest | | | |
| Profit rent | N13,000 | | |
| YP 8 years @ 10% & 2.5% (tax 40%) | 3.44 | <u>N44,720</u> | |
| | | N144,720 | |
| Divided by YP 30yrs @ 10% & 2.5% (Tax 40%) | | 7.25 | <u>N19,961</u> |
| Appropriate rent for new lease | | | N36,039 p.a. |

(B) Lessor's point of view

| | | | |
|---|--|--|----------------|
| Value of present interest (as shown above) | | | N417,374 |
| Deduct value of proposed reversion to Full rental value after embarking on improvement (As shown above) | | | <u>N47,040</u> |
| Value of proposed term | | | N370,334 |
| Divided by YP 30yrs @ 8% | | | 11.26 |
| Appropriate rent for new lease | | | N32,889 |

Assumption:

Lets assume that both parties agreed on non-payment of premium but rather rents are being made to be just as much as the

It is observed that the envisaged improvement will result to an increase in rent that depicts about 16% returns which is obviously greater than the rate of interest expected from the property when let at its rack rent. It is therefore advisable for the lessor to embark on the improvement himself if he has the means.

Valuation Of Varying Income

It is obvious that rents collected on properties don't continue forever. After the expiration of certain number of years there is need for a re-negotiation of rent to reflect the realities in the property market. This clause either inserted in the lease agreement particularly for the long leases or a need for renogiation after the expiration of an ongoing lease. There are instances where concessions are made between landlord and tenant. For instance a new tenant coming to start up a business in a property could be considered for certain number of years to get grounds and cliente after which the landlord will enforce the collection of the rack rent when such tenant has been established. The inflationary trend in the economy is another vital factor that causes

the variation in rental values so as to meet current economic realities. This inflationary issue in the economy dissuades landlords from going into long lease agreement with tenants who prefer short leases where rent could be reviewed to accommodate the economic realities. However, the tenants don't feel secured in short lease arrangement as that might threaten their security of occupation. In a bid to satisfy the interest of both parties, long lease covenants are made with a provisor of rental increase for specific future dates. There are also provisions for rent review clauses fixed in advance in a predetermined manner even if a predetermined rental increment is not stated from the onset.

An example on ways of valuing varying income will suffice.

Question:

Value a freehold property to be let for 15 years at N20, 000 in the first five years and subsequently an addition of N10, 000 increment in rent is made in the review after every five years

Solution:

| | | | |
|-----------------------------|-------------|--|-----------------|
| First five years | | | |
| Rent reserved | N20,000 | | |
| YP 5yrs @ 8% | <u>3.99</u> | | |
| | | | N79,800 |
| Second five years | | | |
| Rent reserved | N30,000 | | |
| YP 5yrs @ 9% | <u>3.89</u> | | |
| PV N1 5yrs @ 9% | 0.65 | | |
| YP 5yrs @9% deffered 5yrs | 2.53 | | |
| | | | N75,900 |
| Third five years | | | |
| Rent reserved | N40,000 | | |
| YP 5yrs @ 10% | <u>3.79</u> | | |
| PV N1 10yrs @ 10% | 0.3855 | | |
| YP 5yrs @10% deferred 10yrs | 1.46 | | |
| | | | N58,400 |
| Reversion to perpetuity | | | |
| Rent reserved | N50,000 | | |
| YP perp @ 11% | <u>9.09</u> | | |
| PV N1 15yrs @ 11% | 0.2090 | | |
| YP perp @11% deffered 15yrs | 1.8998 | | |
| | | | N94,990 |
| CAPITAL VALUE | | | N309,090 |

Varying and Deferred Income during Lease Period

In a leasehold interest there are also times when varying income does exist. This is primarily experienced in two ways: when the rent payable to the lessor is regularly reviewed during the period of the lease and when rent receivable from the sub-lessee is reviewed during the sublease period.

Question:

A shop facility has been let by Chief Okon on a full repairing and insuring lease having 14 years unexpired term. The rent reserved for the next 7 years is N20, 000 per annum after which a review of N25, 000 p.a. will be made for the remaining



part of the term. The premises has immediately been sublet which expires 2 days before the expiration of the head lease. The rent reserved for the first 7 years is N23, 000 p.a. after which a rent of N30, 000 p.a. will be charged the sub-lessee. The current rack rent is N35, 000 p.a. Value the leasehold and subleasehold interest (Assume freehold yield to be 6%)

Solution:

Leasehold Interest

| | | | |
|-------------------------------------|------|---------|----------------|
| First 7 years | | | |
| Rent received | | N23,000 | |
| Less rent paid | | N20,000 | |
| Profit rent p.a. | | N3,000 | |
| YP 7 years @7% & 2.5% net (tax 40%) | 3.44 | | |
| | | | N10,320 |
| Second 7 years | | | |
| Rent received | | N30,000 | |
| Less rent paid | | N25,000 | |
| Profit rent p.a. | | N5,000 | |
| YP 7 years @8% & 2.5% net (tax 40%) | 3.32 | | |
| PVN1 7yrs @ 8% | | 0.5835 | |
| YP 7 years @8% & 2.5% net (tax 40%) | | | |
| Deferred 7 yrs | | 1.9372 | |
| | | | N9,686 |
| | | | N20,006 |

Capital Value

Sub- leasehold Interest

| | | | |
|-------------------------------------|------|---------|----------------|
| First 7 years | | | |
| Rack rent | | N35,000 | |
| Less rent paid | | N20,000 | |
| Profit rent p.a. | | N15,000 | |
| YP 7 years @8% & 2.5% net (tax 40%) | 3.32 | | |
| | | | N49,800 |
| Second 7 years | | | |
| Rack rent | | N35,000 | |
| Less rent paid | | N25,000 | |
| Profit rent p.a. | | N10,000 | |
| YP 7 years @9% & 2.5% net (tax 40%) | 3.22 | | |
| PVN1 7yrs @ 9% | | 0.5470 | |
| YP 7 years @9% & 2.5% net (tax 40%) | | | |
| Deferred 7 yrs | | 1.7613 | |
| | | | N17,613 |
| | | | N67,413 |

Capital Value

Valuation For Mortgage Purposes

A mortgage is a security created by a contract for the payment of a debt already due or to be due or of a present or future advance affected by the means of an actual or executing conveyance of real or personal property. The mortgaged property is charged with the payment of the money secured, redeemable at law only according to strict legal conditions of the conveyance, but redeemable in equity independent of such conditions



and enforceable in default of payment by foreclosure.

Essential Elements in a Mortgage

1. A transfer of property or an interest in property by the mortgagor to the mortgagee;
2. The transfer is made as a security for payment of money or grant of money's worth;
3. On repayment of the grant, the mortgage property shall be transferred (released) to the mortgagor having paid all the charges (capital and interest), this therefore means that the interest in that property granted to the mortgagee shall cease
4. In default of compliance by the mortgagor, will the expressed or implied conditions and terms in the mortgage deed (contract) enforced.
5. The mortgage deed (document) contains the promise under seal that the loan will be repaid on an agreed date or by agreed instalments. The covenant also contains the promise to pay interest at a stipulated rate. **Mortgage Repayment could be arranged in one of two (2) ways**

- **Interests only method:**

This method is normally used for relatively short term loans. The capital is repaid in a lump sum at maturity, ie, @ the end of the mortgage period. Alternatively, repayment may be arranged in tranches, spaced over the mortgage period. For instance a 30 year mortgage may be divided into 3-capital repayment period of after 10years, after 20years and at maturity with interest calculated only on the capital at risk ie the outstanding capital.

- **Annuity method of repayment:**

By this method, an annual amount is repaid periodically, usually monthly or yearly over the period of the loan to cover both interest and capital repayment. This arrangement ensures that some capital is returned or repaid at the end of each year so that the amount on capital outstanding reduces year by year. As such, interest on capital decreases and more of the equal instalments is available to repay the capital outstanding. The return on capital for each year is calculated on capital outstanding only (ie capital at risk). This method assumes no change in the level of interest rate and it is the method usually adopted by primary mortgage institutions.

In time past, fixed interest mortgages were predominant. Nowadays, because of the effect of inflation, variable interest mortgage is becoming more popular. Mortgage could be upward of 30years on a variety of terms to suit the needs of individual project and borrower. It could cover both the development period (ie bridging/short term) and long term.

(Details of mortgage repayment such as the Constant Amortizing loan and (CAM) and the Fully Amortizing Constant Payment Mortgage Loan (CPM) etc are topics best apt for lectures in property finance)

Analysis involved in a Mortgage Transaction

APPROACH A: The amount of mortgage to be advanced in a particular transaction can traditionally be limited by 2-criteria:

- 1. The sum advanced must be a fraction of the OMV of the property mortgaged usually 2/3 or 75%.
- 2. The net income from the property must exceed the interest (under interest only repayment) or

(APPROACH B): for interest and capital repayment (in annuity method repayment).

Question:

Mr. Bolaji wishes to take a mortgage with his property a 5bedroom detached house in Victoria Island Lagos. Comparable property currently let for N3.5million PA net with a yield of 5% on freehold rack rental basis. Advice the morgagee on the maximum amount to advance. The mortgage grants 25year term @a rate of 12.5% PA

Solution:

(Under Approach A)

(A) Capital Value Analysis

| | | |
|-------------------------------|--------------------|---|
| Net Income | N3,500,000 p.a. | ∴ |
| YP in perp @ 5% | 20 | |
| ECV | N70,000,000 | |
| Advance 2/3 of N70,000,000 | | |
| Recommended Loan (Say) | N46,500,000 | |

(B) Rental Income Analysis

| | |
|--|--------------|
| Mortgage value | N46,500,000 |
| Annual interest | |
| (Assuming interest only repayment) @ 12.5% | <u>0.125</u> |
| Annual interest @ 12.5% | N5,812,500 |

Based on the policy of the mortgagee, the net income generated by the property cannot service the recommended mortgage loan of N46,500,000. The loan to be advanced to Mr. Bolaji should therefore be reduced. To obtain the maximum loan to be given, we work backward from the rent receivable which must be at least 12.5% of the loan that should be advanced. i.e. if N3,500,000 represents 12.5% of the maximum loan to disburse, what should the amount be?

0.125X = N3,500,000

X = N3,500,000 / 0.125 = **N28,000,000**

Hence, N28,000,000 represents the maximum amount that N3,500,000 annual rent can support or service for a 25year mortgage term @ 12.5% interest under the interest only repayment system even though N28,000,000 represents just 40% of the estimated capital value of the property.

In Approach B under the annuity system or method which allows for periodic repayment of both interest and capital, a much lower figure can be advanced as loan.

APPROACH B: Mortgage usually stipulates that repayment on borrowed funds be made at regular intervals and at an equal amount/sum.

- Let M=amount on mortgage, P=annual repayment.
- Assuming the mortgagee advances M to the mortgagor for a period of 'n' years (n=n integer).
- The mortgagor, not just parts with M but also the amount of interest (i) which M could have accumulated to over the period.
- (ie, the total amount advanced or forgone is M+accrued interest in n years.

From the mortgagors point of view, the annual repayment (P) by the mortgagor at the end of the period would accumulate to an amount at i compound interest. What is that amount/ we therefore apply the following formula to arrive at that amount

Annual Repayment $P = M \frac{((1+i)^n \times i)}{(1+i)^n - 1}$

Mortgage $M = P \frac{(1+i)^n - 1}{(1+i)^n \times i}$



M= Mortgage loan sum

P= Annual Repayment

$$P = \frac{MAi}{A-1}$$

$$M = \frac{P(A-1)}{Ai}$$

Question:

A prospective mortgagor can afford N250,000 annual repayment. If the mortgage is over 25 years and at the rate of 10%PA. What is the maximum amount he can borrow?

Solution:

$$P = N250,000$$

$$i = 10\%$$

$$M = ?$$

$$n = 25 \text{ years}$$

$$M = P \frac{(1+i)^n - 1}{(1+i)^n \times i}$$

$$M = \frac{250000(1.1)^{25} - 1}{(1.1)^{25} \times 0.1}$$

$$\frac{250000((10.8347) - 1)}{1.0835}$$

$$= \frac{250000((10.8347) - 1)}{1.0835}$$

$$\frac{250000(9.8347)}{1.0835}$$

Maximum amount that can be borrowed = N2,269,198

Question:

A mortgage institution is prepared to advance a N10million mortgage to their client who is prepared to repay over a period of 20 years and at an interest rate of 15%. What will be his annual repayment (P)?

Solution:

$$M = N10,000,000$$

$$i = 15\%$$

$$n = 20 \text{ years}$$

$$P = M \frac{((1+i)^n \times i)}{(1+i)^n - 1}$$

$$P = \frac{10,000,000(1.15)^{20} \times 0.15}{(1.15)^{20} - 1}$$

$$P = \frac{10,000,000(16.3665) \times 0.15}{(16.3665) - 1}$$

$$P = \frac{10,000,000(16.3665) \times 0.15}{(16.3665) - 1}$$

$$p = \frac{10,000,000(2.4550)}{(15.3665)}$$

$$10,000,000 \times 0.1597$$

Annual repayment = N1,597,631



APPROACH C: Approach C is to use the mortgage instalment table which gives the monthly instalment to redeem every N100 of borrowed capital over a period of n years at a given rate of compound interest. It is computed on a fixed annual basis without allowing for interest to compound on each monthly instalment.

The formula for the table is adopted from the formula 'annuity N1 will purchase single rate basis'.

The mortgage instalment formula is:

$$\frac{(i+s) 100}{12}$$

Where

i = interest received on the capital outlay ie, the remunerative rate on each N1 (return on capital)

s = replacement/return of capital over a given known period ie, the annual sinking fund to replace the capital invested (return of capital or amortization)

Question:

Mr. Okafor borrowed N100, 000 from a mortgage bank to purchase a house for his occupation. Interest is to be 10% and the loan repayment is over 25 years. Without the use of valuation table, calculate what Mr. Okafor will pay monthly to the bank

Solution:

Using the mortgage instalment formula

$$\frac{(i+s) 100}{12}$$

s = sinking fund of the single rate

$$\frac{0.1 + \left(\frac{0.1}{(1.1)^{25} - 1} \right) \times 100}{12}$$

$$\frac{0.1 + 0.010168}{12}$$

$$\frac{0.110168 \times 100}{12}$$

$$0.918$$

x1000 (remaining multiple of N100, 000 or better still discard the 100 in the formula and multiply the amount outrightly)

$$0.918 \times 1000$$

Monthly repayment for 25 yrs @ 10% = N918

Note that:

1. In the calculation above, compounding is on an annual basis that is why we divide by 12. The annual instalment, dividing by 12 does allow for compound interest each month.

2. The calculation is on single rate basis ie interest only system without provision for capital recovery.

3. Using this method, it is possible to calculate the amount of capital outstanding at a particular time by multiplying the annual repayment by the YP for the unexpired term of the mortgage period.

Question:

Madam Jegede borrowed N60, 000, 000 over 25 years at 10.5% compound interest. The annual repayment was N6, 864, 400. What capital will be outstanding after 10 years?

Solution:

Capital outstanding = Annual repayment x YP for the unexpired term

$$= N6,864,400 \times 1/i + s$$

$$N6,864,400 \times 1/0.105 + \frac{0.105}{(1.105)^{15} - 1}$$

$$\text{Capital outstanding} = N6,864,400 \times 7.40 = N50,796,560$$

Contemporary Valuation Models

Critics have looked at the traditional valuation methods and raised eyebrow on its absence of implicit non-growth potentials. Perhaps it is believed not to give a good representation of the property market and also isolates property investment from other types of investments. The crux of the matter is how to properly account for growth which is inevitable and assess the correct yield with reference to the methodology in the other forms of investment. Amongst the contemporary models are:

- Equated Yield Analysis
- Rational Valuation Model
- Real Value Approaches
- Real Value/Equated Yield Model

Certain variables are germane in the study of these growth explicit models. Hence the inputs of these variables are very essential. They are:

- The equated yield (e)
- The growth rate in rentals (g)
- The review period in years (t)
- The inflation risk free yield (i)
- All risk yield (k)

The Equated Yield: This is the inflation prone target yield. This yield as a general note is subject to the vagaries of inflationary measures. It tends to capture the growth in future income and is described as the conventional internal rate of return benchmarked at a little higher yield than the most secured government gilts of a little above 2% or 3%.

Growth Rate in Rentals: This is the envisage growth pattern in rentals usually on an annual basis to capture the practical reality in the property market over time. Hence interval changes in incremental income on property. This results to an annual rate of incremental income on property investment.

Review Period in Years: A pattern of periodic changes in rental evidence to capture the present realities in the property market. This could be predetermined biennially, once in three years, five years as the case may be.

The inflation risk free yield: This is also known as the inflation proof yield. This yield is said to act on a totally inflation proof income and as such regarded as the real return on such investment. It has the assumption that the rent represents the true value of the investment and cannot be eroded by the powers of inflation as the rent on its own has the propensity to review to a new one thereby cancelling the effect of inflation.

All Risk Yield: This can be regarded as the market capitalization yield. This yield invariably is submerged in the conventional valuation methods as they capture all events in the market. It is said to make provisions also for the growth pattern experienced in rental value however in an implicit manner.

These variables have certain connectivity as one can be derived from the other using certain mathematical models. For instance given this formular:

$$e-K = (ASF@e)((1+g)^t - 1)$$

Other variables can be derived

$$e-K = (ASF@e)((1+g)^t - 1)$$

$$(e-K)/(ASF@e) + 1 = (1+g)^t$$

$$(e-k) (((1+e)^t - 1)/e) + 1 = (1+g)^t$$

t

$$\sqrt[t]{(e-k) (((1+e)^t - 1)/e) + 1} = 1+g$$

$$g=t$$

$$\sqrt[t]{(e-k) (((1+e)^t - 1)/e) + 1} - 1$$

Question:

A freehold shop property let on a 25 year lease with provision for 3 yearly rent reviews at N150, 000 has just been sold for N3, 000, 000. Redemption yield on gilts is 10%. What is the implied growth rate?

Solution:

$$k = 150,000 / 3,000,000 = 0.05 = 5\%$$

$$e = 10\% + 2 = 12\%$$

$$t = 3 \text{ yrs}$$

$$g=t$$

$$\sqrt[t]{(e-k) (((1+e)^t - 1)/e) + 1} - 1$$

$$g=3$$

$$\sqrt[3]{((0.12-0.05) (((1+0.12)^3 - 1)/0.12) + 1) - 1}$$

$$3$$

$$\sqrt[3]{((0.07) (((1.12)^3 - 1)/0.12) + 1) - 1}$$

$$3$$

$$\sqrt[3]{((0.07) ((0.404928)/0.12) + 1) - 1}$$

$$3$$

$$\sqrt[3]{((0.07) (3.3744) + 1) - 1}$$

$$3$$

$$\sqrt[3]{(0.236208 + 1) - 1}$$

$$3$$

$$\sqrt[3]{(1.236208) - 1}$$

$$(1.0732) - 1$$

$$g = 0.0732 = 7.32\%$$

Also

$$((1+g) \left(\frac{1}{1+e}\right)) = \left(\frac{1}{1+i}\right)$$

$$(1+g)(1+i) = (1+e)$$

$$i = \left(\frac{(1+e)}{(1+g)} - 1\right)$$

$$g = \left(\frac{(1+e)}{(1+i)} - 1\right)$$

$$e = \left(\frac{(1+g)(1+i)}{1} - 1\right)$$

$$i = \left(\frac{(1+e)}{(1+g)} - 1\right)$$

$$i = \left(\frac{(1+0.12)}{(1+0.0732)} - 1\right)$$

$$1.04361 - 1$$

$$i = 0.04361 \text{ or } 4.361\%$$

There is also the 3 -YP formula which is expressed as follows in deducing unknown variables:

$$(1+g)^t = \frac{\text{YP perp @ K} - \text{YP tyrs @ e}}{\text{YP perp @ K} \times \text{PV tyrs @ e}}$$

(Further studies on the contemporary valuation models will go indepth in valuing properties using the various variables in line with the prescribed models).