ISSN: 2667-6125

# JOMAES

# JOURNAL OF MANAGEMENT AND ECONOMIC STUDIES

Volume 2
Issue 1
Year 2020

www.jomaes.org

JOMAES JOURNAL OF MANAGEMENT AND ECONOMIC STUDIES

**2020, Vol.2, Issue.1**

## Editor in Chief



## Board of Referees

**SEGUMPAN Reynaldo Gacho (Ph.D.), segumpan@gmail.com**
Department of International Business Administration, College of Applied Sciences – Rustaq Ministry of Higher Education, Rustaq, Sultanate of Oman

**SINGH V.K. (Ph.D.)**, **drvksingh1969@gmail.com**, **drvksingh@gkv.ac.in**
Faculty Of Management Studıes [Fms], Gurukula Kangrı Vıshwavıdyalaya Harıdwar, Uttarakhand, India

**YÜCEL Recai M. (Ph.D.), recaiyucel@mac.com**
Albany New York University / USA,

**YÜKSEL Sedat (Ph.D.), sedatyuksel@gmail.com**
Department of International Business Administration, College of Applied Sciences – Rustaq Ministry of Higher Education, Rustaq, Sultanate of Oman

# Indexing

DRJI | Directory of Research Journals Indexing
ReseachBib – Academic Resource Index
ISI | International Scientific Indexing
RI-ROOTINDEXING
ESJI | Eurasian Scientific Journal Index
ICI Index Copernicus
General Impact Factor

JOMAES JOURNAL OF MANAGEMENT AND ECONOMIC STUDIES

# Contents

2020, Vol.2, Issue.1

Journal of Management and Economic Studies
2020, 2(1): 1-14 DOI: 10.26677/TR1010.2020.424
Journal Homepage: https://www.jomaes.org

# Evaluating The Financial and Other Implications of Lagos' Multi-Year Prepaid Property Leases

**Ndubisi Onwuanyi**
Department of Estate Management, Faculty of Environmental Sciences, University of Benin, Benin City, Nigeria. ndubisi.onwuanyi@uniben.edu
www.orcid.org/0000-0002-8250-3888

**Abstract**

Real estate investment decisions are rationally made. Thus, the parties to a transaction, whether buying, selling or letting, come to agreement upon the conviction that value will be directly received in exchange. This indicates a uniformity of intention and expectation. However, Lagos lettings usually result in an unequal exchange of value. This occurs where a lessor demands and receives multi-year prepayments which deliver direct and premature value while the lessee effectively receives deferred value. This paper evaluates the practice, financial consequences and other implications of such leases. The findings are that the practice is financially disadvantageous to the tenant, but not to the landlord; has the potential to reduce tenants' savings capacity, investible funds and productivity in the economy; slows down the home ownership growth rate, and effectively worsens the housing deficit; and does not promote the well-being, human and social development of tenants. The paper makes two recommendations: first, the deployment of suasion to discourage the practice; and secondly, massively increasing housing supply through multi-pronged public sector interventions to effect the attenuation, and hopefully elimination, of the market conditions which created, and have sustained, multiple rent prepayments.

**Keywords:** Income redistribution; Landlord and tenant, Lagos real estate market; Market failure; Rent prepayment

## 1. INTRODUCTION

Economic decisions are governed by rationality. The parties to a business transaction commonly have the intention and expectation that value will be given and received. The assumed equality of strength amongst the willing parties does not preclude either party from seeking advantage. Each party is in search of what the other possesses and for which both are desirous of making an exchange. Buyer and seller, payer and receiver, both share this motivation no matter the level of scarcity of the article of trade. This scenario, which is in consonance with the principles of rational economic activity, applies to real estate transactions, whether buying, selling or letting. Being involved in a search for value, the parties to a real estate transaction come to an agreement with the understanding that value will be received by both. That being the case, it would not be

possible that transactions between parties who have matching intentions and expectation could produce an outcome whereby value is fully given by one party, but is not fully received by the other. Transactions are generally sealed when the parties are satisfied that value can be received in exchange.

However, a situation of unequal exchange exists in the Lagos real estate market. This occurs in many lettings where a lessor demands and receives multi-year prepayments from tenants. The immediate and easily discernible effect of this entrenched practice is that value is fully and instantly given by one party, but is not equally received by the other, both in theoretical and practical terms. The lessor receives unearned value whilst the lessee receives value in deferral amounting to an unequal exchange. In some cases, the prepayments are for periods ranging from between two to five years and sometimes lengthier. This contradicts the assumed rationality in economic transactions. These demands are made in commercial, residential and industrial property lettings. The mismatch in giving and receiving value, with which this study is concerned, arises only in the letting sub-sector.

Whilst it is difficult to deny that multi-year prepayments are not burdensome to tenants, it cannot be claimed that they are not advantageous to landlords. Concern about the burdensome nature of the practice was recently expressed by Nigeria's Minister of Housing, as reported by Jannah (2018), pointing out the anomaly in one having to spend monies which have not been earned, and will not be, for years to come. The recession in the economy and the impact on disposable incomes of an inflation rate averaging 15% may have been the reason for the minister's intervention and appeal to landlords to start accepting rent in arrear and on a monthly basis. This would mean tenants having to pay rents only after earning and receiving monthly income which is the normal order. The minister's statement suggests that the present practice is abnormal. This abnormal situation must, therefore, have implications and these need to be examined. This paper is an examination of issues of value and other implications of the practice especially for a country in search of human and economic development.

The paper argues that the practice has financial and socio-economic implications. Firstly, prepayments are financially unfavourable to those who are compelled to make them. Secondly, they challenge the logic of economic exchange which is based on the giving and receiving of value by the transacting parties at the same time. Thirdly, they also are unfavourable in respect to tenants' well-being. Fourthly, since an abnormality exists in this situation, implications cannot be ruled out for the economy.

The topic is important because it involves financial loss and gain, usually amongst the "haves" and "have nots", thereby denoting a redistribution of income between transacting parties. Furthermore, it has obvious, but as yet unmeasured effects on the economy. In addition, it is a human developmental issue impacting upon tenants' quality of life, conditions of living, their disposable income and potential to save. Thus, the practice seems to contradict government's claim to having an interest in "eradicating" extreme poverty and empowering the populace to live above the poverty line. Multi-year rent prepayments cannot in any guise advance the attainment of that objective given that an estimated 60%-80% (some times higher) of household income is spent on accommodation. The practice of multi-year rents is, therefore, a burden and threat to the survival of the estimated 80% of Lagos' population who live in rented accommodation. It is a livelihood and liveability problem.

The approach adopted in the study involves the *assessment* of the financial effects of multi-year prepayments from the viewpoints of landlord and tenant. This is done to establish where advantages and disadvantages lie. The calculations are made by use of valuation tables, specifically the compounding and discounting tables. Regarding the other implications of the

practice, economic theory and practice are used to explain the potential effect on the economy and socio-economy.

Following this introduction, there is a rationalisation of rent from the viewpoints of landlord and tenant. This is followed by an overview of the Lagos letting market and advance rent payment practice; a discussion of its many implications follows thereafter. Then conclusions are drawn, followed by recommendations on the issues identified by the study.

This study is about the practice and implications of multiple-year rent prepayments, ranging from two to five years and sometimes longer. The focus is on residential property, although prepayment is practised also in respect of commercial and industrial property. The financial evaluations are made by valuation theory whilst other evaluations are made by secondary data.

## 2. RENT AND ITS RATIONALISATION

Property rent is contractually arranged; it is legally demanded and willingly paid. Motive lies behind the demand for, and the payment of, rent. Both parties in a letting transaction come with a motive. The transaction motive of the landlord is to receive adequate recompense for the service which the property will offer to the tenant. On the other hand, the tenant's motive is to deploy the value in the property to enhance his economic objective(s).The way in which this applies to commercial and industrial property is obvious because they are directly deployed in income production. However, it applies also to residential property which, even though not directly used to produce income, enables the process by meeting the fundamental shelter need of the producer. In computing production costs, the producer's residential shelter costs must feature for the assessment to be comprehensive and rent payment rationalised.

The tenant justifies rent payment by assessing the profitability of the property to him. In this regard, Fraser (1984) explains that prospective tenants rationalise rent payment on the basis of the profitability of occupying a particular location. Where there is evidence of a surplus of expected sales revenue over operating costs, including profit, there is sufficient reason for making a competitive bid for the use of such property.

This is the basis of decisions particularly in regard to business tenancies, a foundation which goes back to the theory of rent as a surplus. Property (land and improvements of land) being a factor input of production, people generally would agree to pay a particular rent for using a facility if at that size of rent their businesses would be profitable (or their motive(s) become achievable. Of course, profitability would be determined after having taken into account all business input (i.e. operating expenses and the tenant-investor's remuneration).If at any point it becomes unprofitable to remain in the premises, the rational response is for the tenant to leave the location.

The tenant's rational expectation is to benefit from value in the premises he intends to occupy. This should be in accordance with the same logic on which his business is run. Thus, if his business earns income on a certain basis, then he should logically pay the rent passing on the same basis. Where the tenant uses a building as residence for which he pays rent out of his monthly salary, the logic should be to pay the rent on the same basis on which he is remunerated in his employment. Normal businesses are run on the basis that they produce or sell goods or render services before receiving payment. For some businesses engaged in the supply of goods on credit terms, there will be a longer waiting period before payment is received from their clients. Besides, it is not normal practice for businesses to be paid years in advance of their production, delivery or sale of goods. Similarly, it is also not the norm for residential tenants, most of whom are in paid employment, to earn years in advance the incomes from which they pay their rents. The objective of the tenant, therefore, is to receive appropriate value which corresponds with the logic of the free market economy where the price mechanism is the basis of

decision-making for all categories of economic actors. The pertinent basis of pricing and the assessment of value in the real estate market is the present value, not a future value which is uncertain. Thus, the apt value which a tenant in annual occupation should pay is one year's rent ***for*** each year of occupation and payable ***in*** each year of occupation. Logically, and equitably, value should be received before payment. But this would be possible if, and only if, rent is paid in arrears.

The landlord has his own motive(s) and justifications. By producing space and putting it out in the market place, the landlord is offering a service to the providers of other services and producers of goods in the economy. Since the landlord usually has no wish to use the property himself, his desire is to get another party to pay him for the use of the provided space. Thus, the landlord is an economic actor guided by the economic motive of earning investment income by satisfying a need. Accommodation is a need which is common to businesses, individuals and households. Landlords supply the space used for production, commercial activities and residence. Property is a long-term investment just as business and production are long-term undertakings. Therefore, a landlord who is astute to his own interests would not demand extortionate terms which make it difficult for the tenant to continue in business as this would constitute a risk to income security and regularity and his need for long-term value realisation. Such a risk would ensue through rent voids and vacancy. Overall, there is justification for making payment on the part of the tenant as there is justification for demanding payment by the landlord. Both parties act willingly to meet the needs of each other.

## 3. THE LAGOS CULTURE OF MULTI-YEAR PREPAID LEASES

Since multi-year prepayments are a characteristic of business and residential tenancies in the Lagos real estate market, it is necessary and important to consider the general features of its letting sub-market.

### 3.1 The Lagos Letting Market

The size of the market is not certain by any means, the absence of accurate and reliable data being the reason. However, six discernible factors suggest a very sizeable market, particularly for residential property, on which this study is focused. First, is the population size of the city which is 21 million (Lagos Bureau of Statistics, 2015). Secondly, between 60%-80% of this population is estimated to live in rented accommodation (Nwokoye, 2018).Thirdly, the city has a substantial housing shortage, estimated respectively at 2.5 million units(Lagos Bureau of Statistics, 2015) and 3 million units (RIRFHUD, 2016). Fourthly, the inadequacy (and unaffordability) of accommodation is reflected in homelessness and numerous informal settlements which as at 2007 numbered over 100 (Akinwuotu, 2015). Fifthly, the proportion of income spent on rent by tenants has been estimated to be as high as 60%. (Aribigbola, 2008).There is no disputing that these conditions suggest potential. Sixthly, even though Lagos has a significant level of poverty, its 2015 annual per capita income at $4,333 was vastly higher than the national average of $2,450 (World Bank, 2014; Kingmakers, 2015).This advantage, is of course, conferred by the city's accommodation of over 50% of Nigeria's commercial activities, comprising businesses, manufacturers, financial institutions as well as small and medium enterprises (Ambode, 2017) which even as at 2014 collectively made a 25% contribution to Nigeria's non-oil GDP(Akabueze,2014).

### 3.2 Rent Prepayment

This is the practice whereby landlords demand that tenants pay in advance, rather than in arrear, the agreed rent on real estate leases. The period of payment is at the very least one year. But more usually the period of advance payment extends to as many as five years or more. These advance payments are made before entry into possession. Upon renewal of the lease, the same arrangement is often maintained. According to Sonaike(2017), "Advance house rent payment is a 'new normal' in the Nigerian property market wherein landlords and property owners demand two to three years house rent from tenants, mainly workers, who are paid salaries on monthly basis and also in arrears". This statement suggests that prepayment is a widespread and entrenched practice. It suggests also that there is an element of abnormality in demanding annual, biennial, triennial, quadrennial and even quinquennial rents from monthly paid tenants.

Money is the reward earned *after* exertion. There is an obvious anomaly in multiple rent prepayment practice since there is no free money to be found anywhere. This means that money which is paid as advance rent comes from somewhere and at a cost. The cost of money is the interest rate, meaning that where money is released from one party to the other, there is a cost involved in the shape and form of interest. The logic is that incomes have to be earned before they can be spent. Prepayment reverses this logic. Landlords, as the receivers of prepayments, present the argument that they suffer a disadvantage in that the practice ties them down to a fixed rent for the period in question. This means that they will not be able to benefit immediately from any rental value appreciation during the subsistence of the prepaid rent. Thus, they view the arrangement as being advantageous to the tenant. But the fact that the landlords were not forced into the arrangement by prospective tenants means that landlords see only advantage, not disadvantage, in prepayments. If a disadvantage exists, then they clearly consider this as being less than the inherent advantage. Nonetheless, as Omidire (2015) reports, Stanbic Real Estate Finance points out that: "The 1-5 year up front rent structure removes the ability for an asset to appreciate or outperform… Landlords think they are securing their income by collecting so many years up front, but instead they are putting a cap on growth of future cash flows, locking them in. If there is an increase in rents, you will be effectively locked into a certain value for up to 5 years. What about escalations? I'll tell you that in a market like Nigeria, escalations of 5%-10%? might not always outperform the market". Obviously, the persistence of prepayment means that landlords do not consider these points as being sufficiently important. But is the "loss" incurred by the landlord greater than the loss of the tenant from prepayment? That issue is considered in section 4 of this paper.

Additionally, the argument has been presented that landlords demand multiple prepayments because of the pressure to repay loans raised to finance their projects: "high interest rate charged by lenders on housing loans and the short period of repaying such loans" (Sonaike, 2017) are the reasons for the advance house rent "demanded by landlords and/or property owners from prospective and even sitting tenants". This position is difficult to sustain for three reasons. First, mortgage installments are not paid in advance. Furthermore, prepayment is practised also by landlords who do not use loans to build and these might well be in the majority considering that mortgages are few and far between. Again, mortgagees do not demand multiple repayments by mortgagors. A mortgagor can come under pressure of foreclosure if he has been irregular in payment and consequently accumulates arrears through the operation of compound interest.

Rents in Nigeria, particularly Lagos, have not always been paid in advance or annually for residential property. The practice was monthly payment in arrears. Multiple rent prepayment for real estate (commercial, residential and industrial) took root in Lagos of the 1970s during Nigeria's first oil boom period. Given the 1970s scenario of rapid urban-rural migration consequent upon the oil boom, Lagos experienced a rapid population growth, leading to accommodation shortages. The availability of petro-dollars and the then military government's

ill-advised, across-the-board increase in salaries of public servants meant a rising money supply and inflation. In the midst of shortages, the oil boom created a rent boom. Landlord's naturally sought to earn more due to rising demand and slow supply.

Before the 1970s, Nigeria was an agrarian economy to whose GDP agricultural production made an average contribution of 64% in the 1960s.The contribution declined to 48% in the 1970s (Izuchukwu,2011) with the coming of the oil boom and consequent neglect of the agricultural sector. Before the 1970s, Nigerians did not have the purchasing power which was to come with the oil boom. Neither did Lagos experience the severe accommodation shortages and infrastructural inadequacies which started to manifest in the same period. Therefore, prepayment practice did not ordinarily exist. It is, however, a fact that before the 1970s, multiple rent prepayment was practised by only oil producing and marketing companies operating in Nigeria such as BP West Africa later BP (Nigeria), Shell, Texaco, Esso and Agip, all foreign. These firms practised advance payments of ten or more years for land taken on long leases for the development of petrol-filling stations, office premises, tank farms and production installations. The companies preferred leases as they did not have a corporate tradition of owning property unlike the situation today. These long-term advance payments were rationalised in part by the long-term nature of their investment. Furthermore, the risk and uncertainty in the oil business did not advise being tied to business locations through property ownership. Thus, leases were preferred and prepayments made for long-term planning. The difference between then and now is that landlords did not demand those payments, rather the oil companies offered to make them.

## 4. FINANCIAL ISSUES ARISING BETWEEN LESSOR AND LESSEE

The most measurable, and therefore, the most direct effects of multiple prepayment are reflected in the post-transaction situations of tenant and landlord. This section explains the financial effects on the transacting parties, whilst the economic and socio-economic impacts are considered in the subsequent section.

Regardless of whether the objective is to buy, sell or lease, the search for value is the basis of real estate transactions. This search is seen to yield results if, and only if, *value in exchange* is received by both parties. In lease transactions, this desire exists on the side of the landlord and his prospective tenant(s).Thus, the desire to obtain value cannot but be the reason for the demand for advance rent payments. But can this be also the reason for the tenant(s) agreeing to pay in advance of enjoyment of the premises? If this is not the case, then one party is getting less value for money. Proof of this assertion is presented in section 3.

The usual response of benefitting landlords and their agents is that the market is ruled by demand and supply. This seems to be an admission that prepayment practice is founded upon, and sustained by, the failure of the industry to increase production in response to demand, and thereby, bring about an equilibrium situation. Furthermore, there is the suggestion that multiple prepayments are opportunistic. Again, the landlords' argument merely confirms the thesis of a delivery of unequal exchange, rather than value in exchange, between the transacting parties.

The easy availability of affordable mortgages which Sonaike (2017) proffers as a solution may not prove to be so. This is because making a lasting impact on a 2015 shortfall of 2.5 million units (which, of course has not been static since 2015) requires a minimum of 200,000 units yearly, which mortgages alone cannot provide. Additionally, there are issues such as access to land, acceptability to lenders of non-statutory land titles which are in the majority, the cost of construction and the level of savings of individuals and households who may choose the route of owner-occupation. In addition, the actuality of poverty amongst a sizeable 1.7 million or 8.5% of the Lagos urban population (NBS, 2018) is exacerbated by a new (2019) national minimum

wage of US$100.00, but which is yet to be implemented as at October 2019 since its approval in May 2019.

It is, therefore, important and necessary to examine how value is practically *received* or *lost,* as the case may be, in transactions involving multiple prepayments between a lessor and a lessee. Four situations are examined. First, how the inequality arises; secondly, how value is lost by the tenant; thirdly, how the landlord may possibly lose some value due to forfeited rent reviews; and lastly, how the inequality in the transaction may be minimised. The compounding and discounting factors are taken from Parry's Valuation and Conversion Tables (Davidson, 1980).

The practice is tantamount to an unequal exchange which implies that there is a loser and a winner. This inequality is displayed in Tables 1, 2 and 3 which consider a transaction between two parties. The assumptions made are as follows: A lease term of 5 years effective 1.1.2018, at an annual rent of N1, 000,000-00 which is payable fully in advance upon taking possession. It is further assumed that the tenant funded the payment from his savings account on which he was earning interest at the rate of 10% per annum. Similarly, the landlord invests the received funds in his savings account at the same rate.

**Table 1: Value Received by Landlord from Rent Prepayment**

| Start | End | Rent Amount (N) | Total Rent Received (N) | Amount of N1 in 5years @ 10% | Value To Landlord | Profit (N) | As % of Total |
|---|---|---|---|---|---|---|---|
| 1.1.18 | 31.12.22 | 1,000,000 | 5,000,000 | 1.6105 | 8,052,500 | 3.052,500 | 61.05 |

The landlord receives the sum of N5million as value in advance for delivering a service(facility) which would give the tenant value over a 5-year period, but the fact of advance payment creates the opportunity of investing the funds to yield N8,052,500 (a profit of 61.05%) over the same period. The extent to which the landlord benefits can clearly be appreciated.

**Table 2: Value Lost by Tenant**

| Sum Borrowed by Tenant(N) | Amount of N1@10% for 5 Years | Cumulative Sum at end of 5 Years |
|---|---|---|
| 5,000,000 | 1.6105 | 8,052,500.00 |
| | Less value paid for: | 5,000,000.00 |
| | Loss incurred by Tenant | 3,052,500.00 |

The loss incurred by the tenant is equivalent to the gain of the landlord. There has, in effect, been a transfer of value equivalent to a redistribution of resources. However, the argument can be made that the landlord also loses out by forfeiting his right to have the rent reviewed every two or three years as is the practice. But this argument assumes that rents can be reviewed only upwards to the advantage of the landlord. It is not impossible, however, for the revision to remain static, be renegotiated or go the other way in a declining market as has been experienced in Lagos since the 2015 recession in Nigeria. Nevertheless, it is necessary to consider the size of the Landlord's potential loss from forfeiting the right to an upward revision and the economic significance of the loss by making a comparison with his actual gain and the tenant's loss. Table 3 assumes that the rent agreed and paid in year one will fall due for an upward revision at the

end of the third year and that the reviewed rent will subsist for the remainder of the lease period. In effect, the landlord has only one opportunity to review the rent upwards.

**Table 3: Landlord's Loss from Forfeited Rent Revision**

| Year of Lease<br><br>1 | Assumed Rent Review<br><br>2 | Rental Value at Start of Each Yr. (10% Growth p.a.<br><br>3 | Rental Value at End of Each Yr. (10 % Growth p.a.<br>4 | Actual Rent Received by Landlord (N)<br><br>5 | Rental Value less Rent Received(Col 4 less Col 5)<br>6 |
|---|---|---|---|---|---|
| Year 1(1.1.2018-31.12.2018) | - | 1,000,000 | 1,100,000 | 1,000,000 | 100,000 |
| Year 2(1.1.2019-31.12.2019) | - | 1,100,000 | 1,210,000 | 1,000,000 | 210,000 |
| Year 3(1.1.2020-31.12.2020) | 31.12.2020 | 1,210,000 | 1,331,000 | 1,000,000 | 331,000 |
| Year 4(1.1.2021-31.12.2021) | - | 1,331,000 | 1,464,100 | 1,000,000 | 464,100 |
| Year 5(1.1.2022-31.12.2022) | - | 1,464.100 | 1,610,510 | 1,000,000 | 610,510 |

It is established in the table that rental value appreciates annually at the rate of 10%, producing a gross benefit of N641,000 which the landlord loses for the first three years(1.1.2018 to 31.12. 2020) because he has received N3,000,000 in advance, rather than annually. Over the same three year-period, the actual receipt of N3,000,000-00 if invested by the landlord at a return rate of 10% produces N3,993,000-00(N3,000,000 multiplied by 1.331 or Amount of N1 @ 10% for 3 years). This return of N993, 000 is larger than the N464, 100 cumulative rental growth not received. Similarly, for the whole term, the cumulative rental growth of N610, 510 is lower than the yield from investing the N5million advance rent (N3.052, 000).Since the lease provides for a rent revision after thee years, the landlord will be entitled to receive N1, 331, 000 for the last two years, but this is only N33, 000 larger than the N200, 000 received as prepayment for the period. If N200, 000 is invested at 10% over 2 years, the yield would be only N242, 000, only N42, 000 larger. Thus, the landlord's gain is far more than his supposed loss.

**4.1 Improving Equity in Prepayment Transactions**

In theory, the inequity can be *eliminated* if payment were to be made daily as the tenant uses the property. This theoretically means that the tenant receives value the same time as the landlord gives value. However, this is cumbersome and impracticable in modern society and for modern businesses which require planning. Nevertheless, it is possible to *lessen* the inequity in by using the present value factor to discount yearly the annual prepaid rents and deducting the cumulative value to arrive at a fair total prepayment which ought to be made by the tenant at the commencement of the lease. Table 3 explains this approach using the same assumptions. It is further assumed for simplicity that rent is to be paid fully at the beginning of each new term.

**Table 4: Reducing Inequity in Multi-Year Prepayment Transactions**

| Year | Rent Paid(N) | Date for Receiving Value | No. of Yrs. | PV factor@ 10% | Adjusted Value(N)Col. 2 * Col. 5 | Difference or Loss of Value by Tenant | As % of Total Payment |
|---|---|---|---|---|---|---|---|
| 1 | 1,000,000 | 1.1.2018 | 0 | 1 | - | - | |
| 2 | 1,000,000 | 1.1.2019 | 1 | 0.9090909 | 909,090.9 | 90,090.09 | |
| 3 | 1,000,000 | 1.1.2020 | 2 | 0.8264463 | 826,446.3 | 173,553.7 | 16.60 |
| 4 | 1,000,000 | 1.1.2021 | 3 | 0.7513148 | 751,314.8 | 248,685.2 | |
| 5 | 1,000,000 | 1.1.2022 | 4 | 0.6830135 | 683,013.5 | 316,986.50 | |
| Totals | 5,000,000 | - | - | - | - | 830,134.5 | |

The overpayment by the tenant is N830, 134.5 which is approximately 17% of the entire prepayment. This is his cumulative loss as a result of paying N5 million in advance at once rather than paying N1 million at the start of each new tenancy. The inequality in advance rent payments will be reduced if there is a provision for mitigating the tenant's loss by deducting it from the prepayment. In this case, rather than paying N5million the equitable amount, if the landlord insists on 5 years' rent, will be N 4,169,865.54(i.e.N5, 000,000-00 less N830, 134.46).Therefore, the tenant loses out where multiple prepayments are demanded of him.

## 5. OTHER ISSUES ARISING

In addition to the *measurable* and *direct* financial effects on the lessor and lessee, there are *potential*, *unintended* socio-economic and human developmental implications for tenants (whether individuals, organisations or households) as well as the economy.

### 5.1 Economic Planning

The payment of rents in advance and for so many years, is likely to lead to a high money supply with implications for the general price level. Considering Lagos' 25% contribution to Nigeria's GDP (Akabueze, 2017), this presents a challenge to monetary policy effectiveness. Controlling the money supply in an economy enables appropriate pricing of the factors of production.

Development is the goal of economic planning. This happens when there is a transformation of society such as leads to improvements to the lives of citizens through uplifting their economic status and quality of life. This is the desire of all progressive societies. Economic planning aims at mobilising and deploying available resources to advantage in order to secure development that is real, effective and sustainable. It is important that each economic sector, real estate inclusive, plays its part in the delivery of economic development.

As the compass to development, economic planning should envisage a system in which factors of production and the various sectors are able to receive their due reward. The price mechanism plays the part of ensuring that (realistic) relative prices form the basis of decisions regarding the production of goods and the distribution of goods and services. The indications are that the practice of prepayment cannot aid the attainment of this objective. Rather, it has some implications at the macroeconomic and microeconomic levels.

It is important that the resources available in an economy are employed in a manner which would work to ensure commensurate returns to all factors and sectors engaged in the production of goods and services. Real estate is a (produced) good and also a (supplied) service. As a produced good, it is deployed in the production of all other goods; whilst as a service it is used in the supply of virtually all services. Its producers and suppliers need to be appropriately rewarded. This comes through payments made by customers whose wants are satisfied. The satisfaction of want is guided by the price mechanism which determines the appropriate reward to economic actors. The reward must be appropriate and realistic. Where, therefore, multiple prepayments occur, the reward for enterprise will tend to be abnormally for the letting sub-market. The returns are abnormal because they *come earlier* and, by the logic of time value are, therefore, *more sizeable* than they ought to be. This unusual situation portends some consequences. For the economy, these would come in the following ways.

First, investment is a function of the level of savings in an economy, particularly the ability to mobilise such savings for investment by the right people and for use in the required sectors. Now, rent prepayments divert resources (earned and unearned incomes and loans) from prepaying tenants to property owners, who may divert such incomes, not to savings or the production of more accommodation, but to consumption. The level of investment would, therefore, be lower because savings levels are lower.

Secondly, these prepayments constitute abnormal pricing. The role of price in economics gives some justification to the definition of economics as the science of pricing. Normal pricing ought to reflect producer and supplier costs, not producer and supplier whims. Prepayments mean that the letting sub-sector of the real estate market is rewarded abnormally because the reward is not the result of increased productivity or efficiency. Ideally, the unusual advantage of prepayments should lead to increased production as more investors are attracted to the sector. That this has not been the case for decades and prepayments have persisted, suggests a situation of market failure. The persistence of prepayments means that all the sectors of the economy are not rewarded on the same basis: the real estate industry (the letting sub-market specifically) is rewarded in advance whilst others, which are no less productive, are not. This is not an ideal situation.

Thirdly, the cumulative effect of prepayments means that funds which otherwise would be out of circulation by being kept as savings or used for productive investments would be diverted from such uses and put into circulation, thereby increasing the money supply. An increasing money supply which is not due to increases in production obviously must impact upon the general price level in the form of rising inflation. This would be especially so because landlords may choose to spend such funds on non-capital goods which do not contribute directly to wealth creation unlike machinery, equipment and buildings. Higher inflation rates portend lower real incomes, a lower standard of living and a greater likelihood of rising poverty and social dislocations.

Fourthly, the implication of an entrenched system of advance payments is that there is a situation of unlicensed, unofficial and, therefore, unauthorised lending of money by tenants to landlords. These sums are undocumented, but would be undoubtedly significant, if aggregated. The payments are not officially captured as loans and give an undue advantage to lessors. Officially, the lending of money is formally done by licensed financial institutions who are guided by law. Advance payments effectively by-pass the extant laws on lending. This widespread practice makes impossible the collation of accurate data on the level of lending in the economy, an important consideration in economic planning and performance appraisal. Again, the lack of data on this and other property market issues is connected with the poor information flow characteristic used by Jones Lang LaSalle (2016) to categorise Nigeria's property market as being opaque, a status which was upgraded to "low transparency" in the most recent survey Jones Lang LaSalle( 2018).

Fifthly, prepayments have an income redistribution effect, albeit unplanned, unofficial and misdirected. The upshot is that "have-nots"(non-property asset owners) transfer their resources to the "haves" (property asset owners). This is unlikely to do anything to reduce Lagos' high poverty rate. Therefore, human and social development is put at risk.

On the smaller scale, prepayments produce behavioural consequences for tenant and landlord, but in different ways. Prepayment practice prevents and discourages savings by tenants. By so doing, it prevents investment. If households do not save and invest, they will find it difficult to build up assets and income for socio-economic upliftment. The unsatisfactory situation of tenants spending a substantial portion of their income on accommodation is made worse by their taking loans to pay rents years in advance for new leases and renewals, thus losing the opportunity to make savings for investment. In Arigbibola's (2008, p126) survey of the city of Akure which has lower average rents and per capita income than Lagos, 37% of the sample of households spent between 30% -60% of their income on rent. More disturbing is the finding that 17.7% respondents spent about 60% to 90%. It boggles the mind what tenants have left to live on, what quality of life they enjoy, and what prospects they have of owning their own homes. It is no wonder that the poverty rate continues to rise.

Furthermore, a high percentage of Lagos residents live in rented accommodation. Research by Adediji (2009) puts the figure at 60% of households whilst Nwokoye as reported by Nweke (2019), estimates that 80% of Lagos' residents occupy rented accommodation, spending about 50% of their incomes on rent. Now, with Lagos having a 2015 estimated population of 21 million (Lagos Bureau of Statistics, 2015) of which 8.5% or 1.7 million people live in poverty (NBS, 2018), this suggests that multiple year prepayment practice is most likely to accentuate human and social problems. Nwokoye (2019) adds that the problem of housing inadequacy is made worse by the unapproved conversion of residential buildings to commercial

use, thus further reducing the numbers of residential accommodation in the market. This is a reflection of weak planning control and inappropriate zoning laws in an environment of rapidly rising population and relatively low supply of new housing.

The receipt of unearned payments by landlords from tenants amounts to a redistribution of income. The income received is more than the value delivered. This is a situation which promotes inequality in society as resources are transferred from predominantly economically unestablished members to principally economically established members. As the recipient of unearned incomes and beneficiary of an unintentional income redistribution, the landlord occupies a privileged position. Depending on his abilities and priorities, he may be motivated either to deploy his financial advantage to more production or go into wasteful spending. The landlord is entitled to enjoy the income from his investment, but not to receive it before the due date.

### 5.2 The Housing Deficit and Economic Development

Residential accommodation (shelter) is a basic human need and its adequacy is vital to good health, well-being and productivity. Lagos has an acute shelter problem as seen in the sizeable housing shortfall and the existence of numerous informal settlements. The housing shortfall in Lagos is given respectively as being between 2.5 and 3 million units according to (Lagos State Bureau of Statistics, 2015) and (RIRFHUD, 2017).To redress this requires the sustained production of over 200,000 units per annum. Now, the bulk of production comes from individuals who invest mainly in build-to-let single unit buildings or flats. In addition, speculative corporate developers produce built-for-sale estates whilst Lagos state has a policy for building estates for sale, but mainly for the middle and lower end. There are also individuals and household who build and occupy their own dwellings after years of living as tenants. Though not officially documented, this category contributes to reducing the housing shortfall. People in this category are able to succeed because of their ability to save in order to buy land, subsequently building in stages and over varying lengths of time, mostly without a mortgage. Some such people who are employed in structured organisations are able to obtain employee loans. The opportunity and capacity to save is the foundation to producing owner-occupied housing. Thus, where individuals and households are faced with committing as much as 60% of their income towards rent, the capacity to save will be severely limited. The implication for economic development is that property being a factor of production, an increase in housing supply will produce an increase in productivity. In the contrary case, economic productivity will slow down because property as a factor input is limitedly available. Thus, the rent prepayment burden, by effectively preventing more production hinders economic productivity and thus slows the rate of economic development.

### 5.3 Social Impact

There are social consequences to tenants to being obliged to pay rents in advance.

First, poverty is a social problem, the basic manifestation of which is an inadequate level of income for sustenance. This instantly implies a low living standard. The high poverty level in Nigeria has been revealed by many recent reports (World Poverty Clock, 2019; World Bank, 2018; IMF, 2018; African Development Bank, 2018). According to The World Poverty Clock over 91 million are living in *abject* poverty (i.e. those living on less than $1.9 per day) whilst the World Bank gives the number living below poverty as 92.1 percent. African Development Bank's estimates that 80% of Nigerians live below the poverty line. The IMF (2018) also reports that Nigerians are getting poorer. Using a poverty measurement yardstick of N2, 000 (or $5), the World Bank estimates that (approximately 90 million persons and half of the estimated total population) live below this level, the worst record amongst the nations of the world. The report also reveals Nigeria as having the greatest numbers of extremely poor people in the world (those living on less than $1.90 per day). Even with the newly approved national minimum wage, the challenge of inadequate disposable income remains, given the disproportionate amount which households spend on rent (Nwokoye, 2019). Thus, a typical household of seven persons which earns N2, 000 (or $165 per month and spends 50% of it on rent, would have only $45 for food and clothing (two other basic needs) and utilities and other expenses. The obvious effect is a low standard of living and the entrapment in poverty. This becomes glaring if it is recalled that the recently approved national minimum wage of N30, 000 per month amounts to approximately only $90.

Secondly, a sizeable segment of the population would become socially excluded. People and households who are unable to cope with prepayments for formal housing will seek alternatives in informal settlements, thereby fuelling the rate and spatial distribution of slum growth. In Lagos, an estimated 65% of the population lives in slums and squatter settlements whilst "some 300,000 plus Nigerians are homeless….due

to state-ordered demolitions and a lack of space" (Borgen Project, 2018). Informal settlements, according to Arimah (2001) are indicative of social exclusion. This situation has been aggravated by state-ordered demolitions of informal settlements and slums without any compensation or resettlement, thus driving the evictees further into poverty. The rent prepayment culture is a driver of the informal settlements which dot the Lagos metropolis, the number of which Akinwotu (2015) estimated at being over 100 as at 2007.

Thirdly, the pressure to meet deadlines for prepayments has the potential of leading people into dishonest behaviour and sharp practices. Thus, the pressure of advance payment is potential driver of corrupt practices and crime in society.

Fourthly, tenants may suffer anxiety as the payment deadline approaches, producing implications for mental and physical health. According to the Borgen Project (2018) "economic inequality has been an ongoing battle in Lagos for years" and prepayment is a factor which accentuates its effects.

In the preceding examinations of the multiple rent prepayment practice in the Lagos letting market, the following have been revealed. First, prepayments prematurely deliver money into the hands of landlords whilst it compels tenants to spend money which they are yet to earn. It is completely tantamount to consumption before production; instantaneous gratification on the part of the landlord, rather than proportionate and gradual gratification. This advantageous situation to the landlord is, however, represents a distortion from the viewpoint of the appropriate reward for a factor of production, which land and buildings comprise.

Furthermore, companies and households who are compelled to make such payments, incur avoidable costs as well as lose liquidity over their funds, probably drawn from savings(meaning forfeited interest) or borrowed at a cost (meaning incurred interest), all of which represent cost since the interest rate is the price of money, no matter how sourced.

Additionally, there is a risk of such prematurely paid money either ending up as idle money (i.e. not put to any productive use) and, therefore, likely to be spent recklessly. The ideal use for such money would be to apply it to produce more housing so that it does not create an inflationary impact in the economy. At the present time, there is, however, no way of knowing how such money is treated by its recipients.

Regarding the economy, prepayments will tend to reduce the level of saving through the implied diversion of potential saving of the paying parties. Again, the potential contribution of payers to reducing the housing shortfall by saving for building their own houses is reduced.

In terms of value for money, prepayments have been shown not to favour the payer whilst it does the receiver. The landlord receives a higher value without doing anything extra for the tenant; the tenant loses value and there is a financial inequality which is not put into consideration at all. It cannot be discountenanced that producer-tenants who have to pay rents in advance will surely try to recover the implied extra (hidden) cost through the pricing of their output. Thus, there is an implied likelihood of higher product and produce prices in the economy. This will mean that the higher rents paid to landlords will be borne ultimately by consumers, not the producer-tenants. The attempt to reduce the inequality (Table 4) appears to solve the problem because the tenant is able to take into account the time value of money as well as the interest rate. This is all well since the approach acknowledges that the interest rate is the cost of money (to which the tenant is committing himself by prepaying the rent) and the basic principle which states that value of an investment is the sum of the present value of expected future income flows. However, this does not satisfactorily solve the problem of inequality. This is because the tenant is burdened and compelled to make an unnecessary and avoidable outlay.

## 6. PRACTICAL IMPLICATIONS

There are implications at the levels of the individual, the society and the economy. Individually, investors in property occupation lose substantial sums to investors in property ownership. At the societal level, those compelled to make prepayments are financially burdened such that they are challenged in terms of progressing towards home ownership and improvement in socio-status, with implications for poverty alleviation policies. At the level of the economy, the money in circulation will tend to rise with implications for the general price level and there is an instantaneous and continuing redistribution of income from the 'haves" to the "have nots'. Rent prepayment practice, being a situation of abnormal pricing, is indicative of market failure which requires government intervention.

## 7. CONCLUSION

This study set out to assess the practice whereby tenants pay rent many years in advance of the actual enjoyment of leased premises. The conclusion is that the practice financially benefits landlords more than tenants. Furthermore, the practice has other disadvantages to tenants and presents difficulties for the economy.

The findings are that the landlord has a cumulative massive gain which is exactly equivalent to the tenant's cumulative loss, suggesting a redistribution of resources. Furthermore, the landlord's loss from a mid-term forfeited rent review is far lower than the gain from the advance payment. In addition, the tenant's loss can be reduced if the prepayments are discounted to present value at the time of payment. Finally, there are economic and socio-economic implications to prepayment practice.

The findings mean that landlords seek advantage in demanding multiple prepayments because they can reinvest these sums to produce substantial returns. This advantage to landlords may constitute a disincentive to their engaging in new production which has the potential of increasing supply, reducing competition, and consequently, rents. It also means that the real estate industry is inefficient by being unable to respond to pent-up demand through greater productivity; that the economy inefficiently and overly rewards producer-landlords regardless of the level of output. Whilst this may be partly due to systemic issues such as access to land and development finance, the persistence of abnormal pricing in the letting market means that the contribution of property to economic development would be sub-optimal. In addition, the absence of data on prevalent rent prepayments is a gap which needs to be filled for effective policy-making. Finally, the practice presents a challenge to poverty alleviation and social and human development policies.

This study recommends that government intervenes in the housing crisis by providing measures of enablement to the private sector whilst also introducing social housing, low cost mortgages and easier access to land. Through these steps, the shortfall can to be reduced to a level where urban residents who seek rented accommodation are not faced with the Hobson's choice of giving value in advance and receiving the same in deferral. This precludes legislation against the practice because such would not only be near impossible to implement as has been the case with rent control legislation, but also, likely to produce unhelpful consequences.

## REFERENCES

Adediji, B. (2009).The State of Lagos Housing Market 2009. Lagos: Roland Igbinoba Real Foundation for Housing and Urban Development. www.rirfhud.com

African Development Bank (2018).African economic outlook 2018. Available at: https://www.afdb.org>afdb

Akabueze (2017). Akabueze, B.I. (2014). Lagos contributes a quarter of Nigeria's gdp-commissioner, *ChannelsTV,* Available at: www.channelstv.com(Accessed 19 July, 2017)

Akinwotu, E. (2015).The forced evictions of Badia east, Lagos: this is not right. *The Guardian*, October 16. Online). Available at: https://www.theguardian.com/cities/2015/oct/16 (Accessed 14 January, 2017)

Ambode, A. (2017). Lagos GDP Hits $131 Billion, *News of Nigeria*, 3 July. (Online). Available at: www.newsofnigeria.com. (Accessed 25 June 2018)

Aribigbola, A. (2011).Housing affordability as a factor in the creation of a Sustainable environment in the developing world: The example of Akure, Nigeria. *Journal of Human Ecology* 35(2)121-131

Arimah, B.C. (2001).Slums as expressions of social exclusion: explaining the prevalence of slums in African countries. OECD International Conference on Social Cohesion and Development, Paris, 20-21, 2011.scholar.google.com

Borgen Project (2018).10 facts about poverty in Lagos. https://borgenproject.org/poverty-lagos-nigeria(Accessed 24 February 2019)

Davidson, A.W. (1980).*Parry's valuation and conversion tables*. London: The Estates Gazette.

Fraser, W.D. (1984). *Principles of property investment and pricing*. London: Macmillan.

IMF (2018).Nigerians got poorer in Muhammadu Buhari's first term-Baba go slow. *The Economist*, 30th May. (Online).Available at: www.the economist.com>Nigeria (Accessed 17 September, 2019).

Izuchukwu, O.I. (2011). Analysis of the contribution of the agricultural sector to Nigerian economic development, *World Review of Business Research* 1(1), 191-200

Jannah, C. (2018).Fashola directs landlords to start collecting rent in arrears. *Daily Post* 6 July.

Available at: http://dailypost.ng/2018/07/06/fashola-directs-landlords(Accessed 24 February 2019)

Jones Lang LaSalle (2016).Global Real Estate Transparency Index 2016Available at: https://www.jll.co.in

Jones Lang LaSalle (2018).Global real estate transparency index 2018. Available at: https://joneslanglasalle.com.cn

Lagos State Bureau of Statistics. (2015). Lagos State Bureau of Statistics. Home. Available at: www.lagosstate.gov.ng (Accessed 17th July 2017).

National Bureau of Statistics (2018).Available at: https://.www.nigerianstat.gov.ng

Nweke, M. (2019).Estate surveyor decries conversion of residential houses to commercial property. *The Sun* (Online). 1st February. Available at: www.sunnewsonline.com

(Accessed 1st February, 2019)

Omidire, D. (2015). Opinion: 6 Challenges facing the Nigerian REIT Industry. Estateintel, 18 February. Available at: https://estateintel.com/opinio(Accessed 8 August, 2019)

Real Foundation for Housing and Urban Development. (2016). State of the Lagos housing market report. Available at: www.rirfhud.com. (Accessed 14th June 2018)

Sonaike, O. (2017).High interest rate, short tenor loans fingered for advance house rent. *Housingnews,* 29 June. (Online). Available at: http://www.housingnews.org.ng/m/high-interest-rate-short-tenor(Accessed 17 April,2019)

World Bank (2019). Nigeria-World bank data. World Bank Group. Available at: www.data.worldbank.org. (Accessed 27the May, 2019)

World Data Lab (2019).The percentage of Nigerians living in extreme poverty could increase by 2030. World poverty clock. Available at: www.worldpoverty.io

Journal of Management and Economic Studies
2020, 2(1): 15-23 DOI: 10.26677/TR1010.2020.425
Journal Homepage: https://www.jomaes.org

# Silence Behavior in Public and Private Higher Learning Institutions in Selangor, Malaysia

**Asma Rina Abdul Rahman**
Faculty of Business & Accountancy, University Selangor (UNISEL), Malaysia
Corresponding Author: asmarina@unisel.edu.my

**Suria Abu Basar**
Faculty of Business & Accountancy, University Selangor (UNISEL), Malaysia
suria@unisel.edu.my

**Aznita Ahmad**
Faculty of Business & Accountancy, University Selangor (UNISEL), Malaysia
aznita@unisel.edu.my

**Noor Ayuernie Ibrahim**
Faculty of Business & Accountancy, University Selangor (UNISEL), Malaysia
noor_ayuernie@yahoo.com

**Abstract**

Silence behavior is a behavioural choice that can deteriorate or improve organisational performance. Silence can convey sharing information or disfavour and opposition, thus becoming a pressure mechanism for both individuals and organisations. This study was conducted to examine the extent of silence behavior and investigate the factors influencing silence behavior among staff in public as well as private universities in Selangor, Malaysia. Based upon a model of employee silence developed by Milliken et al. (2003), a survey was conducted with 136 academic and non-academic staff of public and private higher learning institutions in Selangor. Overall, the respondents reveal that they preferred to remain silence because they are not going to talk about sensitive issue and they need to preserve the dignity of higher management personnel before expressing any sensitive matter. Among the antecedents of silence behavior, the expected of negative impact and management practices have substantial influence. The findings of this study are consistent with the Face Negotiate Theory as the higher management personnel in fear receiving negative feedback from the middle level officers. Besides, fear of retaliation or being marginalized as well as being misunderstood as challenging the status of the higher management makes no one preferred to be as a whistle-blower to report the wrongdoing cases to the higher management. Some of them just ignored the incidence of wrongdoing happened to avoid the negative impact towards them.

**Keywords:** Silent Behavior, Expected of Negative Impact, Management Practice, Face Negotiation Theory.

## 1. INTRODUCTION

Organizational silence is a new concept in the literature and was first introduced in the 2000 by Morrison and Milliken. While Morrison and Milliken (2000) defined the organizational silence as a collective phenomenon that impedes the development of a hazard and a pluralistic organization that hinder organizational change and development, Tangirala and Ramanujam (2008) defined it as not to share with others, and to keep themselves for the employees of businesses or organizations important situations, issues or events. In the context of Social Exchange Theory (Blau, 1964), organizational silence is an important organizational behavior issues that arise in lack of having the relationship equitable social change.

Employees' reluctance to speak up about work-related matters has been linked to many important individual and organizational outcomes such as decreased innovation, failure to address ethical transgressions, stress and depression, lower commitment and job satisfaction (Brinfield, 2013). In addition, withholding information is perceived to be an obstacle to organisational development and change (Dedahanov, Lee and Rhee, 2016), and can influence error correction and innovation (Jahanzeb, Fatima and Malik, 2018). Most of the members in the organisation are aware of the problems that occur in the organisation, but some of them choose not to take any action. Morrison and Milliken (2000) believed that silence is turned into a strong force in organizations but serious studies are not performed in this regard. Morrison and Milliken (2000) have shown that organizational silence is social phenomenon created in an organizational level and is affected by most of organizational features as decision making processes, management, culture and perceptions of employees. Commonly, there are three factors that cause silence behaviour (Milliken, Morrison and Hewlin, 2003). First, fear of being labelled as a negative attitude or cause organisational problems. Second, fear their relationship with chairman will be affected. Third, feel useless to voice their opinions as the action will not change the situation.

In the context of Higher Learning Institution in Malaysia, lots of the wrongdoing cases occurred but some of them are not reported to the top management. For instance, there was a case involving the misappropriation of research's budget allocation from the Ministry of Education by faculty members (Huzaila-Majid and Singaravelloo, 2017). This wrongdoing could be continued to indefinite period if there is no one's act as a whistleblower to report the truth to the top management. This scenario indicates that decision to remain silent is common among staff in the higher learning institutions. The main shortcoming in previous studies is the lack of information about employees' motives to be silent. These issues motivate this research to further discover the decision to remain silent in the Malaysian higher learning institutions environment. A key question that this study poses is why some staff often see things but keep that information to themselves? Fundamentally, what are the factors that associated with silence behavior among staff? This research explores the following objectives:

a) To identify the extent of silence behavior among staff.

b) To examine if there is any significant different in silence behavior among staff in different higher learning institutions.

c) To investigate the factors influencing silence behavior among staff at the higher learning institution.

## 2. LITERATURE REVIEW

There are a variety of reasons behind the fact that individuals cannot speak out their concerns and worries about several issues and problems. Next sub-sections discusses the factors

influencing silence behavior suggested by Milliken et al. (2003) that are taken into consideration in this study.

## 2.1. The Extent of Silence Behavior

Individual's behavior is influenced by what happened in the surrounding (Kiffin-Petersen, 2018). Universities are expected not only to perform education and teaching, but also to be guiding institutions for cultural, economic and social development in order to raise the society's development level. For the accomplishment of these functions of universities, academicians should be able to express their opinions freely, concerning both functioning of universities and scholarly issues. However, findings of current studies demonstrate that academicians are hesitant to share their ideas, opinions and suggestions (Tülübaş and Celep, 2014; Yaman and Ruçlar, 2014). The dominance of bureaucratic mentality at universities might cause critical thinkers to bite back and prevent from expressing their opinions; in other words they retreat into organizational silence. Therefore, this study suggests that:

*$H_1$: The extent of silence behavior among the staff in the higher learning institution is high.*

## 2.2. Difference in Silence Behavior

Demographic dissimilarity between top managers and subordinates among a factor that Bagheri, Zarei and Aeen (2012) hypothesized would increase the likelihood of management holding beliefs that contribute to silence. This variable is also likely to contribute more directly to a climate of silence by affecting the perceptions and beliefs of lower-level employees. Marcus (2000) performed a case study at a community college to examine how a diverse staff experienced the work place. Although findings from this study cannot be generalized, they underscore the importance of understanding how staff of color and women staff may perceive their institution's climate for diversity differently than whites and male staff. These findings are supported by Hurtado, Milem, Clayton-Pedersen and Allen (1998) assertion that racially and ethnically diverse administrators, students, and faculty tend to view the campus climate differently. For this reason, this study include a series of staff demographic profile to shed light on whether there is a difference in silence behavior across staff characteristics. Hence, this study predicts:

*$H_2$: There is a significant difference in the silence behavior among staff in different higher learning institutions.*

## 2.3. Determinants of Silence Behavior

Communication is the process of distributing information (Griffin, 2003). Failure to communicate over will lead problems among the leaders to make right decision making due to lack of essential information from the bottom level (Juhari, 1996). In a bureaucracy organisation, communication must be in line with the government channels (Deverell, Olsson, Wagnsson, Hellman and Johnsson, 2015). The formal communication channels are part of the organisation's structure channelling messages according to rules, customs, and distribution of authority, ranks, and type of tasks in the organisation (Juhari, 1996). In the higher learning institution context, the importance of information for the decision-making process cannot be denied as it involves the national education. Any mistake had been made based on false or incomplete information will affect the students and organisation as well. This study conjectures that:

*$H_3$: Communication skills have a significant influence on the silence behavior.*

In every organisation, individual members have the potential to speak up about important issues, but a growing body of research suggests that they often remain silent instead, out of fear of negative personal and professional consequences (Mohamad Idros, 2014; Yıldız, 2013; Zhang, Tsui and Wang, 2011). According to Face Negotiate Theory developed by Ting-Toomey (1988), it

is important in communication to keep the message in order not to hurt or degrading the presenter or recipient information. Individuals from different cultures often consulted about face (Ting-Toomey, 1988). Based in this discussion, this study predicts that:

*$H_4$: Expected of negative impact has a significant influence on the silence behavior.*

Management practices that are not aligned with organisational goals can have an adverse effect on the organisation (Mawhinney, 2009). Drawing on Organisational Climate Theory (Ashforth, 1985; Schneider and Reichers, 1983), Morrison and Milliken (2000) suggested that managements' implicit beliefs create a climate of silence as a collectively shared experience that is dangerous and/or futile to speak up on critical issues. In the hierarchical organisation, the top management will form the belief that they know better in every way than the subordinates. In addition, subordinates' behavior that express objections to or different ideas from those of a superior are seen as expressions of disrespect for the senior and therefore blameworthy. Due to these rules and credos, many people choose avoidance behavior even when they feel that an issue is important or that they have potentially important information to share (Zhang et al., 2011). Based in this discussion, this study assumes that:

*$H_5$: Management practice has a significant influence on the silence behavior.*

## 3. RESEARCH METHODOLOGY

From the literatures presented in previous section, a conceptual model has been developed based on the Model of Employee Silence by Milliken et al. (2003). The model conjectures that the communication skills, expected of negative impact, and management practice may cause silence behavior among the staff in the higher learning institutions. The sampling frame of this study is the staffs in the higher learning institutions which refer to academic and non-academic staff. The present research employed self-administered questionnaire as an instrument of data gathering. The respondents are selected based on simple random sampling method. For this study, 200 questionnaires were distributed to the staff at four higher learning institutions in Selangor, Malaysia. After collecting back the surveys, only 136 have been returned, making the percentage of return rate is 68%.

### 3.1. Survey Instruments

The survey adapted in the study is composed of questions which determine the issues about which staff remain silent and perceived results of silence. In this form, the survey was composed of 23 questions in total. There are 6 items concerning subjects which staff remains silent, 5 questions concerning communication in the higher learning institution, 6 questions regards to the expected of negative impact, and 6 questions concerning management practice. 5-graded Likert-type scale was used in the study.

## 4. RESULTS AND DISCUSSIONS

### 4.1. Demographic Profile

Table 1 provides a snapshot of the demographic characteristics of the respondents who are grouped into the following profiles such as types of higher learning institutions, gender, education level, and types of staff. Respondents consisted of staff at four higher learning institutions in Selangor, Malaysia which can be categorized as public and private universities. There are 54.4% of respondents from public university, while another 45.6 are from private university. A total of 103 (75.5%) of respondents are female, and 24.3% of the respondents are male. Majority of the respondents have Master Degree as their highest education level. There is

only 12.5% of respondents acquired education up to PhD. Majority of the respondents in this study is an academic staff (61%), and the balance (39%) are non-academic staff.

**Table 1**: Demographic Profile of Respondents

| Variables | Descriptions | Frequencies | Percentages |
|---|---|---|---|
| Types of University | Public University | 74 | 54.4 |
| | Private University | 62 | 45.6 |
| Gender | Male | 33 | 24.3 |
| | Female | 103 | 75.7 |
| Education Level | Degree | 31 | 22.8 |
| | Master Degree | 67 | 49.3 |
| | PhD | 17 | 12.5 |
| | Others | 21 | 15.4 |
| Types of Staff | Academic Staff | 83 | 61.0 |
| | Non-Academic Staff | 53 | 39.0 |

### 4.2. The Extent of Silence Behavior

The first research objective of this study is to identify the extent of silence behavior among staff. Table 2 reveals the results of one sample *t*-test analysis on the extent of silence behavior among staff in the higher learning institutions in Selangor. Result shows that staffs are moderately agreed that they preferred to remain silent and it is statistically significant at the 1%. Hence, this result leads to the acceptance of $H_1$.

Respondents revealed that the main reason for remain silence is they need to preserve the dignity of a higher management before express a sensitive matter. Further, they are not going to talk about sensitive issue in the faculty. Sometimes, they realized something fishy within the faculty, however, they unable to do anything to fix the problem. They also prefer to remain silent rather than express my opinions that can cause my top leader anger. According to the respondents, there is no point to express an opinion because it will not change the situation.

**Table 2**: The Extent of Silence Behavior among Staff

| Variable | n | Mean | One Sample *T*-Test | |
|---|---|---|---|---|
| | | | ***t*-statistic** | ***p* value** |
| Silence Behavior | 136 | 3.288 | **50.152** | **.000***** |

*Note*: Results significantly different at the *** 1 percent level and ** 5 percent level, respectively, using two-tailed tests.

### 4.3. Difference in Silence Behavior among Staff

The second objective is to examine if there is any significant different in silence behavior among staff in different higher learning institutions. Panel A of Table 3 shows that there is a significant different in the extent of silence behavior among staff in different higher learning institutions and it is statistically significant at 1%. Hence, this result leads to the acceptance of $H_2$. The result reveals that staff in the public universities is more prefer to remain silent as compared to staff at the private universities. Perhaps, power distance structure in public organisation automatically introduces restraints against free communication (Rhee et al., 2014). Further, Panel B of Table 3 depicts that there is a significant different in the extent of silence behavior among academic and non-academic staff and it is statistically significant at 5% level. This result leads to the acceptance of $H_2$. The result reveals that non-academic staff is more prefer to remain silent as compared to

an academic staff. This result indirectly indicates that academic staffs are more vocal in express their opinion as this is important especially those involved student's matters.

**Table 3**: Silence Behavior among Staff in Different Higher Learning Institutions

| Demographic Profile | n | Silence Behavior | | Independent Sample t-test | |
|---|---|---|---|---|---|
| | | Mean | SD | F-test | *p* value |
| ***Panel A: Higher Learning Institutions*** | | | | | |
| Private University | 74 | 3.232 | 0.775 | **8.795** | **.003**$^{***}$ |
| Public University | 62 | 3.355 | 0.753 | | |
| ***Panel B: Types of Staff*** | | | | | |
| Academic Staff | 83 | 3.167 | 0.767 | **2.354** | **.019**$^{***}$ |
| Non-Academic Staff | 53 | 3.478 | 0.727 | | |

*Note*: Results significantly different at the $^{***}$ 1 percent level and $^{**}$ 5 percent level, respectively, using two-tailed tests.

## 4.4. Factors Causing Silence Behavior

This section will discuss the results for third objective, i.e. to investigate the factors influencing silence behavior among staff at the higher learning institutions. The summary results of the standard multiple regression analysis on the factors influencing silence behavior is presented in Table 4. The regression of model ($F(3, 136) = 9.767$, $p$ value = .000$^{***}$) is significant at the 1%, and the overall fit of the model is moderate with adjusted $R^2$ is 46.3% of the variation in the silence behavior. This indicates that the predictor variables in the model explained for approximately 46.3% of the total variability in the silence behavior.

Results in the Table 4 show that the expected of negative impact and management practice have a significant influence on the silence behavior among the staff in the higher learning institutions. Therefore, these results lead to the supporting of $H_4$ and $H_5$. Contrary, hypothesis $H_3$ was not supported as a communication skill does not significantly influence the silence behavior among the staff. This finding indicates that the attitudes of higher management who fear receiving negative feedback from their staff contribute to silent behavior. Serving in the higher learning institutions which have high power distance culture makes these staffs are more likely to remain silence. Sometimes, expressing the negative information will be misunderstood as challenging the status of the higher management. The respondents revealed that their higher management did not like members who against them and they also perceived that their higher management will change the information to protect their self-interest.

In addition, the result of this study suggests that management practice create a climate of silence as a respondents' experience that is dangerous and/or pointless to speak up on critical issues. The present study finds that staffs who have fear of punishment of retaliation or being marginalized become reluctant to share information with their higher management. They do not dare to exposed negative information because this action will affect others in the faculty and from their experience; those who deliver negative information will be oblique / discriminated.

**Table 4**: Standard Multiple Regression Results on the Determinants of Silence Behavior

| | Hyp. | Std. Beta Coefficient | *t*-statistic | *p* value |
|---|---|---|---|---|
| Intercept | | | 3.411 | .001$^{***}$ |
| Communication Skill | $H_3$ | -0.018 | -0.226 | .822 |

| | | | | |
|---|---|---|---|---|
| Expected of Negative Impact | $H_4$ | 0.302 | 2.880 | .005*** |
| Management Practice | $H_5$ | 0.166 | 1.598 | .001*** |

| | |
|---|---|
| ***Model Summary:*** | |
| $R^2$ value | 48.2% |
| Adjusted $R^2$ value | 46.3% |
| ***Anova Results***: | |
| F-value | 9.767 |
| Sig. value | .000*** |
| Obs. | 136 |

*Note*: Association is significant at *** 1% level, ** 5% level, respectively, using two-tailed tests.

## 5. CONCLUSION

Silence behavior occurred when the staff deliberately sparing his thoughts, information, and knowledge for enhancing his work at the workplace. Based upon a Model of Employee Silence developed by Milliken et al. (2003), this study identify the extent silence behavior and investigates the factors influencing silence behavior among staff in the higher learning institutions in Selangor, Malaysia. This cross-sectional quantitative study was performed on 136 academic and non-academic staff from public and private universities using survey questionnaire method.

Overall, the staff in the higher learning institutions especially those in public universities and in the position of non-academic staff preferred to remain silence because of they need to preserve the dignity of a higher authority before express a sensitive matter. Besides, they are not going to talk about sensitive issue in the organisation. These findings indicate that power distance orientation in the higher learning institutions fostered silence behavior among its staff. This finding is consistent with that of Rhee, Dedahanov and Lee (2014) who suggested that when leaders frequently use authority and power when dealing with low level subordinates, they will passively withhold ideas regarding solutions to problems.

The result of this study reveals that communication skills do not influence the silence behavior among the staff in the higher learning institutions. Respondents agreed that they need to follow the formal procedure in order to communication with their top management. Even though the information must be communicated by the subordinates to the superiors who are closest to them, they agreed that it is easy for them to express their opinion to their leaders. Perhaps, they did not have any problem in the process of distributing information in their university. With the right information dissemination strategies, the staffs in the higher learning institutions are able to exercise voice and express their ideas, information, and opinions.

Further, the findings of this study indicate that power distance lead the respondents to conceal work-related issues based on fear. As predicted, the relationship between expected of negative impact and management practice was significant towards silence behavior. The findings of this study reveal that in response to the possibility of punishment for retaliation or being marginalized, or that they might be discriminated, the staff concealed their negative information based on fear and self-protection. Finally, the finding of this study is consistent with the Face Negotiate Theory (Ting-Toomey, 1988). The respondents revealed that they preferred to silence because of the attitudes of their high management who fear receiving negative feedback from the faculty members. This indicates that universities' culture often preferred to save their face. Possibly, these are the main reason for the issues raised in the earlier section. No one preferred to be as whistleblower to report the wrongdoing cases to the higher management. Some of them

just ignored the incidence of wrongdoing happened to avoid the negative impact towards them. Fear of retaliation or being marginalized as well as being misunderstood as challenging the status of the high management makes they keep silence about the wrongdoing cases. Besides, the respondents also perceived that their high management will change the information to protect their self-interest. Therefore, it is pointless for them to speak up on wrongdoing issues.

### 5.1. Implications of the Study

The findings in this study have an impact to the theoretical and practical implications. From the theory perspective, the findings of this study support the validity of the applied Model of Employee Silence developed by Milliken et al. (2003). In addition, the results of this study also consistent with the Face Negotiate Theory developed by Ting-Toomey (1988). Even though the model of employee silence has been developed in the past 14 years, but it is still relevant as an approach to investigate the silence behavior among employees. Therefore, for better understanding of the various factors which influence the silence behavior among the staff in the higher learning institutions, the Model of Employee Silence and Face Negotiate Theory can be applied for future research.

In addition, this study offers a practical implication as this study could serve as a guide for Ministry of Education. The findings show that it is difficult to mitigate silence in high-power distance oriented organisation such as public and private universities because these institutions follow a hierarchical position in that at each level of ranks, the staffs responds to directions and order from their top management. In consequences of this result, strategies to encourage the staff to voice out their opinion must be develop in order to effectively mitigate silence behavior. In addition, in order to enhance the role of the employees' voice, the top management in the higher learning institutions should establish a climate of participation by sharing information and involving all level of staff regardless academic or non-academic members in the decision-making process.

## REFERENCES

Ashforth, B. E. (1985). Climate formation: Issues and extensions. *Academy of Management Review*, 10, 837-847.

Bagheri, G., Zarei, R., & Aeen, M. N. (2012). Organizational silence (basic concepts and its development factors). *Ideal Type of Management*, *1*(1), 47-58.

Blau, P. (1964). *Exchange and Power in Social Life*. New York: Wiley

Dedahanov, A. T., Lee, D. H., & Rhee, J. (2016). Silence as a mediator between organizational factors and stress. *Journal of Managerial Psychology*, *31*(8), 1251-1264.

Deverell, E., Olsson, E. K., Wagnsson, C., Hellman, M., & Johnsson, M. (2015). Understanding public agency communication: The case of the Swedish Armed Forces. *Journal of Public Affairs*, *15*(4), 387-396.

Griffin, E. A. (2003). *A First Look at Communication Theory*. (5th Ed.). Boston: McGraw-Hill.

Hurtado, S., Milem, J. F., Clayton-Pedersen, A. R., and Allen, W. (1998). Enhancing campus climates for racial/ethnic diversity: Educational policy and practice. *The Review of Higher Education* ,21(3), 279-302.

Huzaila-Majid, M., & Singaravelloo, K. (2017). Budgetary mismanagement: A qualitative study of the Malaysian Public Sector. *Malaysian Journal of Economic Studies*, 54(2), 255-267.

Jahanzeb, S., Fatima, T., & Malik, M. A. R. (2018). Supervisor ostracism and defensive silence: A differential needs approach. *European Journal of Work and Organizational Psychology*, 1-11.

Juhari, A. (1996) *Asas Pengurusan*. Pulau Pinang: Universiti Sains Malaysia.

Kiffin-Petersen, S. A. (2018). Ashamed of your shame? How discrepancy self-talk and social discourse influence individual shame at work. *Social Functions of Emotion and Talking About Emotion at Work*, 232.

Marcus, L. R. (2000). Staff diversity and the leadership challenge. *Equity and Excellence in Education*, 33(2): 61--67.

Mawhinney, T. C. (2009). Identifying and extinguishing dysfunctional and deadly organizational practices. *Journal of Organizational Behavior Management*, *29*(3-4), 231-256.

Milliken, F. J., Morrison, E. W. & Hewlin, P. F. (2003). An exploratory study of employee silence: Issues those employees don't communicate upward and why? *Journal of Management Studies,* 40(6), 1353-1376.

Mohamad Idros, M. S. (2014). *The silence behavior among cadet officer in National Defence University of Malaysia*. (Unpublished Master Dissertation), National Defence University of Malaysia.

Morrison, E. W. & Milliken, F. J. (2000). Organizational silence: A barrier to change and development in a pluralistic world. *Academy of Management Review*, *25*, 706-725.

Rhee, J., Dedahanov, A. & Lee, D. (2014). Relationships among power distance, collectivism, punishment, and acquiescent, defensive, or prosocial silence. *Social Behavior and Personality*, 42(5), 705-720. Doi: 10.2224/sbp.2014.42.5.705.

Schneider, B., & Reichers, A. E. (1983). On the etiology of climates. *Personnel Psychology*, 36, 19-39.

Tangirala, S. & Ramanujam, P. (2008). Employee silence on critical issues: The cross level effects procedural justice climate. *Personnel Psychology*, 61, 37-68.

Ting-Toomey, S. (1988). *Intercultural Conflict Style: A Face-Negotiation Theory.* Baverly Hill, Calif: Sage.

Yıldız, E. (2013). Enigma of silence in organizations: What happens to whom and why? *Beykent University Journal of Social Sciences*, 6(2), 30-44.

Zhang, A. Y., Tsui, A. S. & Wang, D. X. (2011). Leadership behaviors and group creativity in Chinese organizations: The role of group processes. *The Leadership Quarterly*, 22, 851–862.

Tülübaş, T., & Celep, C. (2014). Causes of faculty members' silence. *Hacettepe University Journal of Education*, 29(1), 280-297.

Yaman, E., & Ruçlar, K. (2014). Organizational silence in universities as the predictor of organizational culture. *Journal of Higher Education & Science*, 4(1), 36-50.

Journal of Management and Economic Studies
2020, 2(1): 24-50 DOI: 10.26677/TR1010.2020.426
Journal Homepage: https://www.jomaes.org

# Can Residential Build to Rent provide a profitable low risk investment option?

**N. Barnett**
School of the built Environment and Architecture, London South Bank University, London

**L. Michael**
School of the Built Environment and Architecture, London South Bank University, London

**Abstract**

Purpose : Recently there has been a refocusing on the yields of investment assets. Accordingly, as risks to income yields rise, this research investigates how residential Build to Rent (BtR) may provide an effectively diversified portfolio. Emergence of this new investment sector requires a comparison between the rate of return of (BtR) and other asset classes. We seek to ascertain how BtR can be used by investors to reduce risk and provide diversification benefits within a mixed-asset portfolio.

Methodology:The research methodology adopted utilised secondary data produced by a reputable research organisation, coupled with personal interviews with major participants within the BtR sector.

Findings: Diversification of assets within an investment portfolio reduces the total risk and volatility of an investment portfolio based upon the Markowitz (1952) Modern Portfolio Theory (MPT) model. Analysis of BtR performance against other traditional asset classes including traditional investment property, proved BtR a valuable inclusion, reducing risk and providing valuable returns.

Discussion:Limited UK based research material on BtR as an investment option for institutions (and individuals), indicates its relatively short history as an investment option. Accordingly, some reliance was placed upon traditional private residential rental data. Despite this, the BtR investment asset in a mixed asset portfolio proved a source of long-term income with low volatility, rating favourably against other selected investment assets.

**Keywords:** Residential build, Low risk, Investment option

## Introduction

Can residential BtR provide a reliable and profitable investment option as a major asset in an investment portfolio? Composition of an investment portfolio is crucial to its success; maximising returns while reducing risk. For decades, a '60-40' portfolio composition of 60% equities and 40% bonds provided an attractive risk-return balance for investors (McMillan, 2019).

Bonds were historically a reliable long-term income choice and many equities flourished under globalisation. However, following the GFC of 2008/09, dominant monetary policy of extensive levels of quantitative easing has resulted in historically low interest rates in the UK. Recently, the U.S. Federal Reserve and European Central Bank took a dovish policy stance keeping rates and

volatility levels low. Nonetheless, Q4 2018, the MSCI Global Equity index fell by 13.7% only to recover by 11.9% in Q1 2019 (MSCI, 2019). Consequently, the '60-40' model is no longer appropriate due to negative real returns on government bonds and has augmented speculative capital into alternative investments, including real estate, in mixed-asset portfolios. A more accurate portfolio ratio today is 40-40-20 (IPD, 2014). Real estate offers a competitive risk-return trade-off and diversifies risk amongst further asset classes.

BtR asset class has little historical performance data or published research. Many returns initially provided to investors were based on forecasts with hard data unavailable and little apparent corroboration amongst academics on a suitable BtR weighting within a typical portfolio. Accordingly, a comprehensive analysis of UK BtR developments is needed to assess capital and rental value performance. With such data, a comparison of equities, bonds and cash equivalent returns is possible. Furthermore, no research exists regarding how BtR can reduce a total portfolio covariance. Whilst much is published on the correlation of mainstream classes, little exists on how BtR behaves. Contemporary and potential risks, and their impacts on diversification benefits of BtR, require investigation to assess suitability as a sustainable investment.

## Literature Review

To ascertain the role BtR can play in expanding real estate allocations within a portfolio, relevant literature regarding real estate as an asset class was scrutinised to assess how particular assets demonstrate differing characteristics and offer diversification benefits to an investor.

Risk (or volatility) is traditionally measured by the standard deviation of returns. Two fundamental types of investment risk are: systematic and unsystematic. Systematic risk (measured by calculating the beta coefficient in the portfolio) impacts the entire market being affected by macroeconomic factors such as inflation, central bank policy changes and global economics. Conversely, unsystematic risk is industry or asset specific and can be minimised within a portfolio through diversification.

Diversification reduces total risk and volatility with the standard approach based on the Markowitz (1952) Modern Portfolio Theory (MPT) model. This empirical formula indicates how investors can maximise returns and reduce risk by selecting two or more assets of low covariance.

Recent inclusion of real estate within a portfolio has provided diversification benefits due to its low correlation with other assets (e.g. stocks, bonds, cash etc). However, the real estate industry comprises many different sectors including, but not limited to, commercial, industrial, logistics, retail and residential. One area which attracted significant attention from an institutional perspective is the UK residential private rented sector (PRS), which focuses solely on residential leasehold property. The PRS has grown rapidly and, at 4.5 million households, now represents 19% of the total market, up from 10% in the 1980s and 1990s (English Housing Survey, 2018), driven by a supply/demand imbalance. UK households are expected to increase by an average 159,000 per year until 2041 (Office for National Statistics, 2018), yet private enterprise completions averaged only 109,765 per year since 2014 (Office for National Statistics, 2019). The corollary being upward pressure on house prices over the long run, with increased mortgage regulation through the Mortgage Market Review (MMR) of 2014 increasing buyer affordability constraints. As a result of this growth, the PRS now forms 47% of all UK institutional investment in real estate (IPF, 2018). This dominance is partially attributed to the relatively stable income stream compared with commercial real estate (CRE) being more directly affected by the business cycle.

This new BtR property investment sector could enhance long-term portfolio diversification. BtR delivers new purpose-built large-scale housing for the private rental sector with the average size of a completed scheme being 133 units, whilst schemes presently under construction average 240

units (Savills, 2019). Over the past five years, BtR activity has received significant media coverage and gained momentum amongst many house builders and investors. Crucially, it also received support in Westminster, with changes in government policy designed to ameliorate the housing shortage. Additionally, BtR investors can benefit from capital growth, and arguably more importantly, rental income and its growth prospects. Subsequently, the volume of BtR developments grew to 140,090 in 2019; an increase of 13% on 2018 (British Property Federation, 2019). However, despite its rapid growth, the BtR asset class is still relatively undeveloped and carries inherent risks.

*Real Estate within a portfolio*

Real estate allocation within a portfolio has been extensively researched using the Modern Portfolio Theory MPT model. Consequently, real estate is regarded an important diversifier and should ideally constitute 15%–40% of an efficiently diversified portfolio (Hartzell, Hekman, & Miles, 1986; Hoesli, Lekander, & Witkiewicz, 2004; Kallberg, Liu, & Grieg, 1996). However, Cheng, Lin, Liu & Zhang (2011) argue in reality, this figure is closer to 3%–5%. Under-allocation towards real estate can be largely explained by the "the fact that they ignore the non-identically-distributed nature of real estate returns and apply MPT by only using unrealistic short-term real estate performance as inputs"(Cheng, et al., 2011). Alternatively, under-allocation could be due to the valuation-based rather than price-based returns compared with other asset classes. Consequently, MacGregor and Nanthakumaran (1992) question the reliability of MPT when including real estate and argue optimal theoretical allocations for property are higher than they should be. However, this research was completed 29 years ago and investor sentiment towards real estate has since improved drastically.

Real estate investment be direct or through an indirect investment vehicle - each offer a differing risk-return trade-off. Baum and Colley (2017) identified a significant level of capital, or higher risk relative to a market benchmark, would need to be employed when investing in direct real estate. Alternatively, indirect real estate investment requires lower capital but carries greater short-term risk (volatility) relative to a direct market benchmark (Baum and Colley,) Can Real Estate Investors Avoid Specific Risk,, due to increased liquidity of listed property investment vehicles and, to a lesser extent, Open Ended Investment Companies. Nonetheless, Mueller and Mueller (2003) and Byrne and Lee (1995) found real estate allocations can (and should) be increased, to improve efficient frontiers substantially. This is further supported by Hoesli, Lekander, and Witkiewicz (2004) who found inclusion of domestic real estate assets in mixed-asset portfolios can reduce a portfolio's risk by 5-10% due to returns being poorly correlated with equities and bonds( Hoesli and Macgregor, 2000).

Whilst many investors utilise indirect investment vehicles (such as REITs), they have offered significantly reduced diversification benefits due to a close correlation with the share market (Heraney and Srianantha kumar, 2012). This view was developed further by Lee and Stephenson (2004) who identified that longer holding periods help alleviate this and real estate should be considered in a mixed-asset context.

Additionally, real estate has proven an effective hedge against inflation, which would encourage higher allocations to this asset class (Case and Wachter, 2011). Studies have shown "real estate returns are positively linked to anticipated inflation but not to inflation shocks" (Hoesli, et al., 2008, p.2) so should be approached with some caution. This pattern of inflation behaviour is supported by Case and Wachter (2011) and Amenc, et al. (2009). Nonetheless, as mentioned previously, real estate behaves differently to equities, so is still a valuable diversifier from an inflation perspective.

Despite these benefits, residential property has been found to be inherently inefficient with low transparency, liquidity and high transaction costs (Hwang, Cho and Shin, 2016). It must be noted however, this particular work focussed on the US real estate market and may not typify the UK. Nevertheless, both countries share similar economic attributes so these inefficiencies may still be applicable. Furthermore, the study reviews residential households rather than institutional investors who may take a longer-term view on liquidity where stability of income can be guaranteed. Nonetheless, UK BtR real estate inefficiencies are considered to assess the viability of including a substantial weighting within an investment portfolio.

*The Private Rental Sector (PRS)*

Research conducted by Miles and McCue (1982) and Eichholtz et al. (1995) found diversification by property type more effective than by geographic region. The PRS is a property type proven to offer diversification benefits for institutional investors (Mansfield, 2000). However, opportunities for market entry have been limited (Alakeson, 2012). As a result, UK PRS is largely unexplored and is isolated to niche areas, such as student accommodation (Thomas, 2017). Consequently, British institutions have invested a significantly smaller proportion of their portfolios in PRS than their European counterparts.

The general consensus amongst academics is significant barriers of entry prevented the PRS from becoming an attractive asset class (Coghill and Hardman, 2015; Mansfield, 2000; Pawson and Milligan, 2013. However, these studies didn't mention the PRS was a significant investment vehicle prior to World War One (WW1). Post WW1, one of the main deterrents was the PRS was associated with higher reputational risk, considering returns were reliant on capital appreciation, as opposed to rental yield (HM Treasury, 2010). This was due to introduction of the Increase of Rent and Mortgage Interest (War Restrictions) Act 1915 which controlled rents to stimulate the housing market. These controls were eventually abolished under the 1988 Housing Act, but continued to carry a stigma amongst investors in the years that followed. Today, England's rent control system is relatively non-existent, contributing toward a dramatic rise in capital entering the market (Moore, 2017). That said, new legislation relating to minimum lease terms on BtR developments may pose some liquidity issues. A recent report by Scanlon and Wilson (2017), examining BtR potential, stated 15 year covenants appear the industry norm which restricts the exit strategy for an investor and thus overall liquidity. Other disincentives for institutional investors included poor liquidity, high management costs, void period risk and unfavourable taxation (Mansfield, 2000). The lack of available large scale PRS stock was problematic for larger investors (IPF, 2018). Higher risks of PRS ultimately demanded higher returns which simply weren't on offer when compared with say commercial and retail (Baum, Commercial Real Estate Investment: A Strategic Approach, 2009).

Notably, research shows UK population growth, lifestyle change and house price affordability contribute towards a noticeable increase in the renting population; providing a ready market for BtR (Moore, 2017). London's rental population has grown 1.45% since 2015, compared to Berlin at 0.31% and Amsterdam at 0.77% (United Nations, 2017). This growing popularity is a phenomenon known as 'Generation Rent' (McKee et al., 2017). The lack of quality private rented housing prompted the UK government to commission the Montague Review to examine potential actions to encourage growth in the sector (Montague , 2012). Most commentators(Hull and Cooke, 2012; Pawson and Wilcox, 2013; Wilson, Russell and Scanlon, 2017) acknowledge that, as a result of the Montague Review, government policy shifted to support growth of the PRS market. The government initially set up the BtR Fund to encourage investment into the sector. This was replaced in 2017 by the Home Building Fund (managed by Home and Communities Agency) supporting small and medium sized BtR developers. The revised National Planning

Policy Framework published in July 2018 was updated in February 2019 and this legislation marks arrival of BtR into the planning mainstream encouraging further development and investment. Perhaps most significant, BtR schemes are exempt affordable housing requirements and can meet their contributions through 'Affordable Housing for Rent' (Wilson and Barton, 2019). This allows entire buildings to be retained under single ownership. Investors can therefore maintain full control over the asset, allowing simplified finance and management costs.

The effectiveness of the Montague Review is still in its infancy and changes to the planning system, in particular, are notoriously slow. In contrast however, an HM Treasury (2010) reported the recent institutional shift in appetite towards PRS investments can be apportioned to poor returns in Commercial Real Estate (CRE) and other sectors. Such low returns in CRE could be temporary, tied to lower interest rates and Brexit uncertainty, but a recent report by Savills (2019) suggest these returns follow a steady decline since the financial crisis in 2008 – as illustrated in Figure 1.

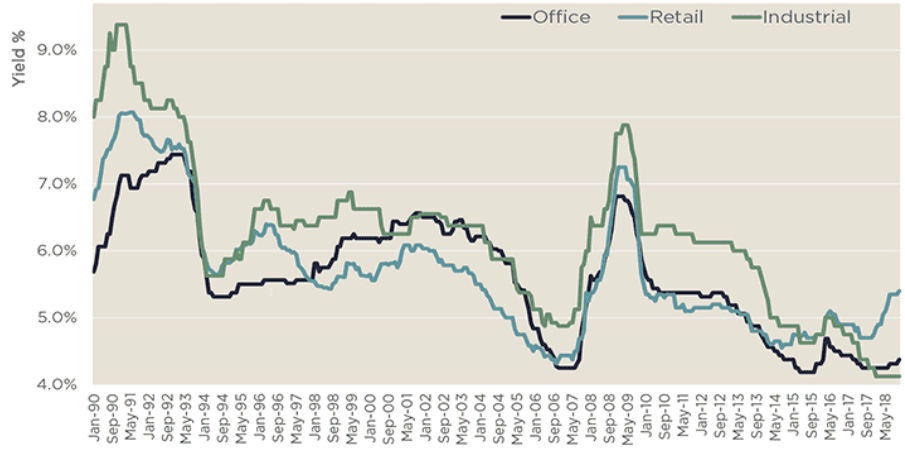



**Figure 1** - Average prime yield across Office, Retail and Industrial (sourced from Savills, 2019)

PRS income yields are considered lower than many asset classes, but also notoriously more stable and reliable (Mueller and Mueller, 2003). Similarly, because of inelastic demand for rental housing, the PRS is more resilient to shocks in the economy, with the 2018 Annual Cyclical Scenario test showing UK residential property prices would fall 33% and UK commercial real estate prices fall 40% (Bank of England, 2018). This stability and consistency of BtR returns is suited to institutional investors (such as pension and insurance funds), where cash flow is more important than price appreciation to meet pension liabilities. Furthermore, Lin and Vandell (2007) found real estate risk decreases when holding periods increase due to high transaction costs involved. Notwithstanding, Collett, et al. (2003) identified holding periods are largely property dependent, as shopping centres, for example, typically have long holding periods due to liquidity issues and value added through extended management. Equally, the nature of PRS and BtR demands a long-term view, but it must be ascertained whether a longer holding period offers sufficient risk-adjusted returns compared with equities and bonds.

There is a lack of reliable UK long-term residential rental value series yet despite this, research (Hoesli et al 1997; Kuenzel and Bjornbak, 2008) shows UK rents have increased in line with inflation. Furthermore, the long run history for rental movements in USA, Germany, Netherlands and Ireland all show inflation matching characteristics (Mansley and Toplas, 2014) and investors generally regard the UK PRS a safe haven for capital. This is also linked to the fact residential rents have historically been much less volatile than house prices (Stephens and Williams, 2012).

Of note also, the PRS has consistently produced healthier risk-adjusted returns with lower volatility than other real estate sectors over most time frames in the past 30 years (British Property Federation, 2013). However, it is possible the British Property Federation (BPF) projects an inflated view of the PRS considering their manifesto is to "promote the interests of all those with a stake in real estate in the UK" (British Property Federation, 2019, p. 1). This paper assesses whether stability and growth potential of the PRS can deliver higher risk-adjusted returns.

*Build to Rent*

With the above in mind, in theory, BtR should be considered an effective diversifier as it taps into the expanding PRS. BtR offers institutional investors potential for long-term income generation and theoretically low volatility compared to other asset classes, including equities and commercial property (Belson, 2015). Thomas (2017) argues this income generation could be jeopardised through increased regulation, a possibility mooted if a Labour government were to gain power. Ultimately, only time will tell the real returns achievable for BtR but this paper assesses the market today and identifies risks that may threaten its long term viability.

Investment managers, Invesco, found BtR schemes are now designed and constructed in a sustainable manner to allow a long life span with low risk of obsolescence (Invesco, 2016). This is further supported by international built asset consultancy firm EC Harris (2013), who calculated a 5-8% discount to IPD data on overall management costs for new BtR properties. Nevertheless, higher quality developments come at greater expense and could result in maintenance issues in the long-term (Davies, 2017). Rugg and Rhodes (2018) found BtR developments include 'extras' such as gyms, dry cleaning, housekeeping services and a 24-hour concierge. This attempts to satisfy tenant demands and reduce turnover to minimise vacancies ensuring a consistent rental income. Colliers International (2018) research found professionally managed BtR schemes command a premium rent of between 9.4 and 9.9% compared with conventional Buy-to-Let properties but, these returns will vary across segments and locations. However, this premium rental proposition fills a market segment of more nomadic, career-focussed professionals able to buy but preferring flexibility that BtR can offer. This improved tenant covenant quality provides a lower risk and more attractive investment proposition. Thus, we seek to understand correlations with other asset classes and whether the higher build cost offers a sufficient risk-return trade-off or investors.

Implementing the BtR model on a national scale could prove problematic. The most successful current PRS schemes are in urban locations, close to good transport links (Alakeson, 2012). Here, prospective tenants typically earn above average incomes and can afford the premium rents BtR developments tend to command. With this in mind, there is an inherent risk, from an investor's perspective, to identify appropriate locations where developments successfully meet the needs of a particular type of tenant. Therefore, it is important to evaluate the contribution that BtR across the UK can make to the investment portfolio and consider whether BtR is isolated to larger cities where rental demands and economies of scale work best, or whether the asset class can be scaled up geographically.

The UK BtR model is still in its infancy, with the first large-scale BtR scheme completed at East Village, Stratford in 2014. However, there are other markets which can be analysed to understand the potential of the BtR model, although these must be contextualised for the U.K. which has its own specific laws, culture, demographics and financial structure. Across Europe, the appetite for BtR (or Multi-family real estate as it is otherwise known) is already well established (Figure 2).

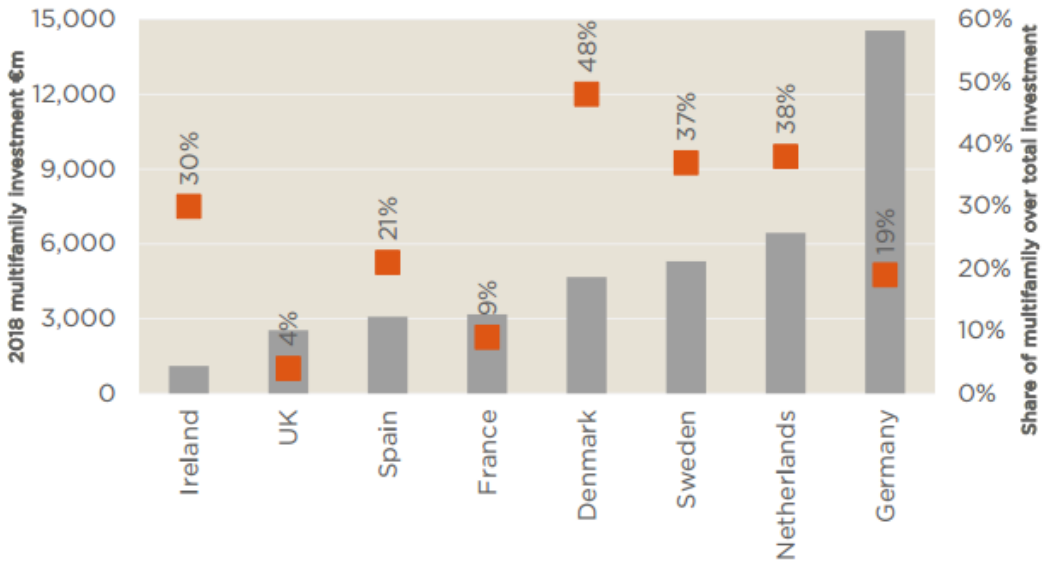



**Figure 2** - European Multifamily investment 2018 (sourced from: Savills, 2019)

In the Netherlands, residential property is the dominant asset class, comprising over 50 per cent of institutional property portfolios (Montezuma, 2006). Capital is pouring into the Dutch PRS, with €6.8 billion invested by institutional, private and international investors in 2018, which was higher than commercial for the first time on record (Savills, 2019). Like the UK, a vast shortage of housing in the Netherlands ensures demand outweighs supply, forcing prices up 8.0% in 2018 (Savills, 2019). However, it should be recognised a much higher proportion of the Netherlands population rents compared to the UK - 30.6% and 20% respectively (Eurostat, 2019; Office for National Statistics, 2019). There are also significant rent controls in the Netherlands favouring a more stable proposition for renters and institutional investors. Accordingly, evidence suggests the UK BtR market can replicate the success of say the Netherlands, but perception of renting will have to improve and legislation change from central government may be required. This could possibly be overcome through effective marketing, selling the lifestyle of quality surroundings which the BtR sector offers. This would highlight social aspects of BtR and the ability to live amongst family-orientated, supportive and like-minded people as opposed to more transient tenants, which can be alienating and disruptive.

Similarly, the 'multi-family' living market is already a well-established market in the US. This sector anticipates 280,000 units to be delivered in 2019 (CBRE, 2019). In financial terms, the US multi-family market comprises 20 per cent of the PRS, having grown from $10bn in Q1, 2009 to just under $80bn in Q3, 2016 (British Property Federation, 2017). Unsurprisingly, UK investors are starting to recognise BtR has huge potential and can be embraced as an active diversification strategy.

Crucially though, inclusion of both residential AND commercial real estate is imperative to maximise diversification benefits. Commercial assets, such as office space, are traditionally favoured by investors due to longer lease structures providing more long-term security, and benefits from full repairing and insuring leases (FRI lease) are attractive. However, one study found "diversification benefits from direct investment in commercial real estate [were] reduced as the value of commercial property dropped along with falls in the value of A-REITS and the share market more generally" (Heaney and Srianantha kumar, 2012, p. 592).. Hence a mixed-asset portfolio is vital and there is an argument for increased allocation of PRS and BtR specifically. Savills (2018) reported a 478% increase in the UK BtR development pipeline over the past five

years. This meteoric rise is impressive but, as the sector matures, the risk premium will narrow and yields will compress.

The academic field has extensively explored both the real estate sector and PRS respectively. There can be little argument against inclusion of PRS assets within a mixed-asset portfolio. The merits are clear that, if managed correctly, PRS can offer significant diversification benefits for investors. From the above literature review it is evident there is need for further research on diversification benefits of BtR within the UK, which is still a relatively new asset class and rapidly evolving. Case studies from Germany and the Netherlands indicate the sector has massive potential, but the UK is a different proposition and needs examination to evaluate whether existing success of the PRS can be replicated with BtR developments. The recent update of the National Planning Policy Framework is likely to increase the appetite for investment, so it is important to provide guidance on returns available and effectiveness of this diversification.

*Research Questions / Hypothesis*

Our overall purpose is to establish whether inclusion of BtR (residential) in an investment portfolio that combines equities, gilts/bonds and CRE will reduce risk and enhance returns. To accomplish this, 25 BtR developments are studied to assess capital and rental growth, the rate of return of mainstream asset classes (equities, bonds and Real Estate Investment Trusts (REITs), is identified and the correlation behaviour and covariance between BtR and these mainstream asset classes to establish optimal allocations for BtR investments within a mixed portfolio. Any issues identified regarding BtR that could jeopardise its long-term viability as an asset class will be investigated and evaluated accordingly.

## Method

*Research Model*

A mixed method research approach was adopted using secondary quantitative and primary qualitative research data to provide a deeper level of insight into the future potential of BtR. Studies show mixed methods research can produce more breadth, depth, and richness compared to either quantitative or qualitative methods alone (Schulze, 2003). The quantitative statistical analysis forms the foundation, with qualitative results providing supporting evidence.

*Quantitative research*

The relationship between returns of BtR developments and other mainstream asset classes was assessed using quantitative data enabling deductive reasoning to provide a clear and definitive answer. Research objectives can be tested and validated using a hard numerical data sample allowing generalisations to be made. This standardised approach allows further research to be conducted using the same methodology and/or calculations and is crucial for BtR research due to the limited number of completed schemes. Conversely, quantitative research sets out a hypothesis whereby historical performance data can be analysed. Although historical data may not be indicative of future results, it will provide an indication of how BtR behaved retrospectively versus other assets.

Analysis of secondary data collected by a third party, was scrutinised differently and compared to other variables. Considering BtR is still relatively immature, and long-term data limited, this provides important results for investors and academics.

Although still in the early stages of development, there are 30,357 completed BtR units across the UK (British Property Federation, 2019). More specifically, the total completed UK BtR schemes is 245 (Savills internal research). Each development was numbered and inserted into Microsoft Excel 'Random Function' to provide a sample of 25 individual developments. This included both

operational and forward funded developments providing an overview of the market. This will eliminate bias that might otherwise arise from selecting individual developments.

Using annual total returns, risk-adjusted performance and portfolio diversification benefits of the twenty five UK BtR developments was assessed. Data obtained should provide a set of statistically robust results which either validates or invalidates the argument for including BtR as a portfolio asset. The data required is obtained from the MSCI database combined with Savills' internal market research (derived from developments Savills are directly involved with), which should cause minimal dilution of the results, is referenced and anonymised.

Additional benchmarks utilised are the FTSE EPRA/NAREIT UK series, FTSE 100 Share Index and ten-year UK government bonds.

*Quantitative Secondary data*

The secondary data obtained by a large market research company allowed access to a large 'cleaned' dataset, allowing a comprehensive analysis of BtR and an established global benchmark.

Fortunately there is little risk of time lag complications with secondary data as information dating back over 5 years simply does not exist.

Key information obtained from the quantitative data includes capital value of BtR developments, total rental values, net income yields for BtR compared with commercial investment performance, correlation analysis between BtR and other assets and a correlation analysis between BtR and property sub sectors.

Standard deviation has been used as the measure of asset performance volatility and provides the range in variation of returns from the average showing either a large spread of data or reveals returns are similar across the developments. A descriptive statistics package is used to determine volatility of asset returns and accordingly whether some asset volatility warrants the higher returns on offer.

Furthermore, the correlation between BtR with equities, bonds and other property sectors will determine whether its inclusion in a portfolio will reduce overall volatility.

Finally, the Sharpe Ratio will be calculated to understand the risk-adjusted asset within the context of a financial portfolio. The Sharpe Ratio measures the return above the risk free rate after adjusting for volatility (risk) and is calculated as follows:

$$\frac{\text{(Average Asset Return – Risk Free Rate)}}{\text{Average Standard Deviation}}$$

This ratio allows a comparison of multiple investments and dissipates volatility. According to the Sharpe ratio, an asset expressing a higher standard deviation is not necessarily unattractive, provided it is accompanied by a proportionally higher return.

Due to immaturity of the BtR sector, residential data is used to give a more accurate long-term representation of behaviour. The correlation coefficient is calculated using the Analysis Toolpak add-in in Microsoft Excel.

*Qualitative research*

Empirical data is crucial in understanding the financial merits of BtR. However, this research is partially exploratory in assessing a relatively immature asset class. Accordingly, qualitative research was used to gauge the experiences and perspectives of professionals in the field about growth potential of BtR.

Qualitative research aligns with the interpretivist paradigm being an inductive process which "reflect[s] some sort of individual phenomenological perspective" (Newman, Benz, & Ridenour, 1999, p. 2). Inductive research involves observing patterns to establish outcomes where a pre-established theory doesn't exist. Although more subjective, this may provide insight into more philosophical issues surrounding BtR, and provide further understanding of potential future risks of BtR and potential optimal asset allocations.

*Population and Sampling*

Interviewees were selected from five disciplines, each involved within development or management of BtR. Five separate interviewees is a reasonable number to ensure high quality results and achieves a diversity expected within the research sample satisfying epistemic community requirements. Five semi-structured interviews (SSIs) surveyed participants' perspectives regarding their experience with BtR. Open-ended questions were asked in the same order and respondents answered in their own time.

The selected interviewees comprised:

Respondent 1) Managing Director of a development consultancy practice directly involved in BtR developments across the South East of England. Over 20 years' experience in the architecture and planning sector.

Respondent 2) Head of Investment for one of the UK's leading housing associations with a growing involvement in the BtR Sector. Over 10 years' experience in real estate investment.

Respondent 3) Director for a leading finance brokerage involved with forward funding BtR developments across the UK. Over 20 years' experience in property finance

Respondent 4) Director for a global real estate consultancy firm, working within a department which specialises in BtR investments.

Respondent 5) CEO of an independent asset management firm with BtR developments included within their portfolio. Over 10 years' experience in asset management.

*Interview Questions*

Five questions were asked:

1. What do you envisage being the main risks of investing in BtR?
2. What allocation do you think is appropriate for Build to Rent within a portfolio?
3. Can BtR, as an investment, be effectively scaled up considering the existing concentration around urban centres?
4. How do you view BtR compared with traditional commercial real estate? Is it a substitute or a complimentary investment?
5. The previous five years has seen BtR develop considerably. How do you foresee this asset class developing further over the next five years?

Interview data was analysed to provide a descriptive summary of participants' perspectives. and interviews transcribed from audio to text.

*Data Analysis*

The interviewee sample size is relatively small, yet data obtained was detailed and informative. Results were interpreted to understand participants' perceptions of BtR. This methodology seeks to "understand, describe, and interpret human behaviour and the meaning individuals make of their experience" (Kivunja & Kuyini, 2017, p. 37). Rigorous and relevant thematic content analysis of the results should provide insight, knowledge and experience of the respondents. Thematic content analysis identifying patterns or themes establishes important or interesting aspects, used to increase understanding of professional sentiment towards BtR. The process followed Braun and Clarke's (2006) six-phase framework for thematic analysis:

Step 1 - Familiarise yourself with the data

Step 2- Generate codes

Step 3- Identify themes

Step 4- Review themes

Step 5- Define themes

Step 6- Write up conclusion

This framework helped ensure material was comprehensively processed enabling large amounts of text to be streamlined and analysed to illustrate and the primary objectives whilst minimising cognitive bias.

*BtR Sampling*

Random sampling removes any selection bias as proven by previous studies(Cuddeback et al., 2004; Keeble et al., 2015). Our sample size may be relatively small (9.8% of all developments) but it allowed detailed information to be obtained for each building, which produced interesting results.

*Returns of BtR*

Lack of a long time series data is frustrating, but expected given the infancy of this asset class. Sufficient information to accurately compare BtR developments over a 5-year period was not available. Savills, (the main source of information for the BtR data) recognised the need for further data, which should emerge over the next 5-10 years BtR, like student accommodation, may be recognised as a stand-alone asset class. Nonetheless, Savills were involved in the majority of BtR transactions in recent years, and this valuable data has been scrutinised.

As previously discussed, management costs for BtR schemes are typically higher than a traditional residential development, due to a focus on providing high quality customer service and premium facilities. We found most developers and investors are factoring in a 24-26% running cost for their developments. Some developers established affiliated management companies to encourage economies of scale and lower overall costs. These impact the Net Initial Yield (NIY) of schemes. Internalisation of property management by developers is a principle addressed in the wider literature, namely by Thomas (2017), and is likely to gain traction in coming years.

Taking all costs into account, the sample mean NIY was 3.85% with median NIY of 3.83%. The majority of these properties are focussed around major centres, with 80% in Greater London. Investing outside of major urban centres is considered riskier by some due to reduced job security and more volatile economic growth (Huston, Rahimzad, & Parsa, 2015). Consequently secondary

locations command much higher Net Initial Yields. These 'second-tier' towns and cities command up to a 32% premium NIY versus central London developments. Growth in secondary locations is important for future BtR as there is a huge market to explore (Cardoso and Meijers, 2017). These regional hubs make a massive contribution to the wider national economy and integrating a mix of suitable tenures could be valuable to developers and investors. Figure 3 demarcates the disparity between yields across the country. As the sector develops and investors take more confidence from other urban centres, yields may compress. This links with increased competition for and supply constraints of land. Furthermore, an influx of completed units may lower average rents, at least in the short-term.

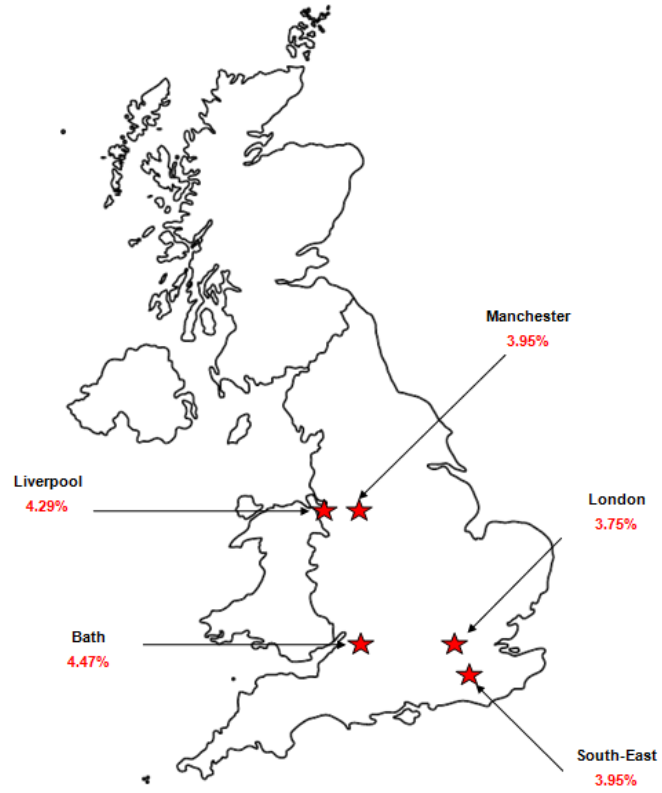



**Figure 3** - Net yields for Build to Rent developments across the UK
Source: Authors' compilation/analysis

Due to stability of income and long-term growth potential BtR appears to offer, investors have flocked to invest. The longer holding period and investment strategy required for BtR coupled with a more illiquid market investment, explained the comparatively low NIY of the sample studied. BtR NIY is lower than other major property sectors (except West End Office) (see Figure 4). This is not necessarily a problem for an institutional investor, as many view it a complimentary or general diversifier to overall real estate exposure.

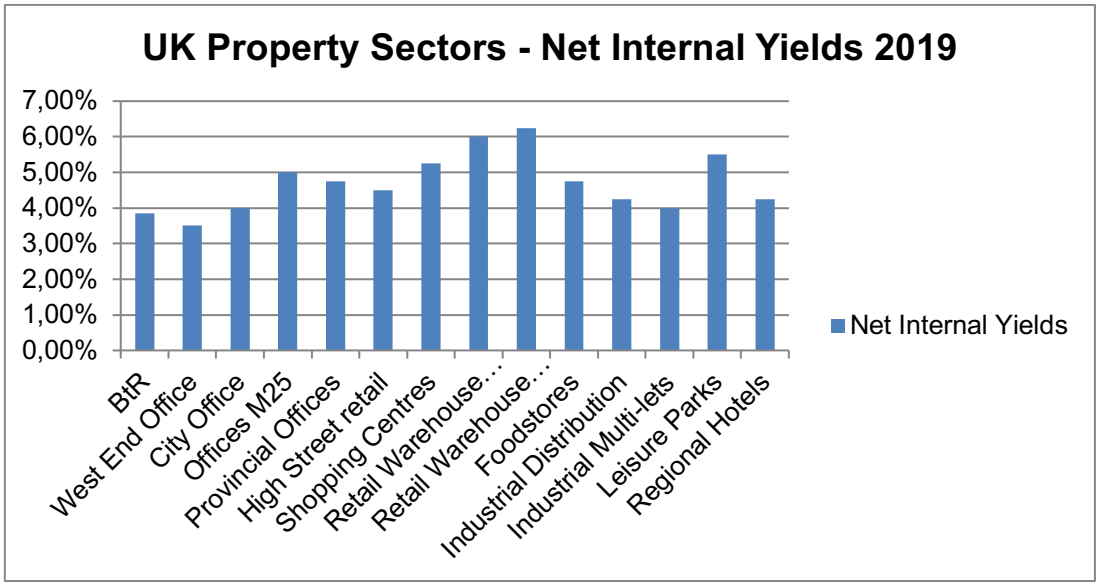



**Figure 4** - UK Property Sectors- Net Internal Yields
Source: Authors' compilation/analysis and Savills, 2019

*Mainstream asset class returns*

A growing interest in investment returns and volatility followed the GFC. Since the Brexit referendum in June 2016, investment markets experienced varying levels of volatility. The logistics real estate sector thrived in recent years, being top property performer over the past 5 years, while retail suffered due to e-commerce. Over a 10-year period however, returns are generally more similar except for retail and 10-year Gilts.

An investor will, ceteris paribus, select investments with lower volatility. **Hata! Başvuru kaynağı bulunamadı.** outlines standard deviations of each property sub-sector and alternative assets. Over the past 5-years, residential proved the second least volatile asset (3.01) behind 10-year Gilt (0.37).

**Table 1** - Standard deviation values for individual asset classes

| **Asset class** | **5-year standard deviation** |
|---|---|
| All | 5.76 |
| Retail | 6.23 |
| Office | 8.62 |
| Industrial | 5.83 |
| Hotel | 3.36 |
| Residential | 3.01 |
| FTSE 100 Index | 11.09 |
| FTSE EPRA Nareit UK | 14.69 |
| UK 10-year Gilt | 0.37 |

Source: Authors' compilation/analysis (Bank of England, 2019; MSCI, 2019; Investing.com, 2019; Investing.com, 2019)

BtR provides long run stable returns to a portfolio. Nonetheless, more volatile investments listed above can still form part of a balanced portfolio.

*Risks of BtR*

Risk-adjusted returns assessed using the Sharpe ratio assessed risk-adjusted performance of UK residential with other direct property sectors over the period December 2014 – December 2018. The risk-adjusted returns (via Sharpe ratio) saw Hotel as best-performed property sector (3.24), ahead of Industrial (2.65) and other property sectors. Residential performed relatively well with a Sharpe ratio of 2.18, generating a level well in excess of the Risk Free Rate. This supports studies by Rugg and Rhodes (2018) who found residential investment performed consistently well in recent years, outstripping other asset classes. Although no specific figures exist for BtR, the residential data is still applicable and demonstrates the suitability of including BtR within a portfolio (Scanlon, Whitehead, Blanc, & Moreno-Tabarez, 2017). Additionally, low vacancy rates compared to traditional commercial investments, further reduce BtR risks (Figure 5).

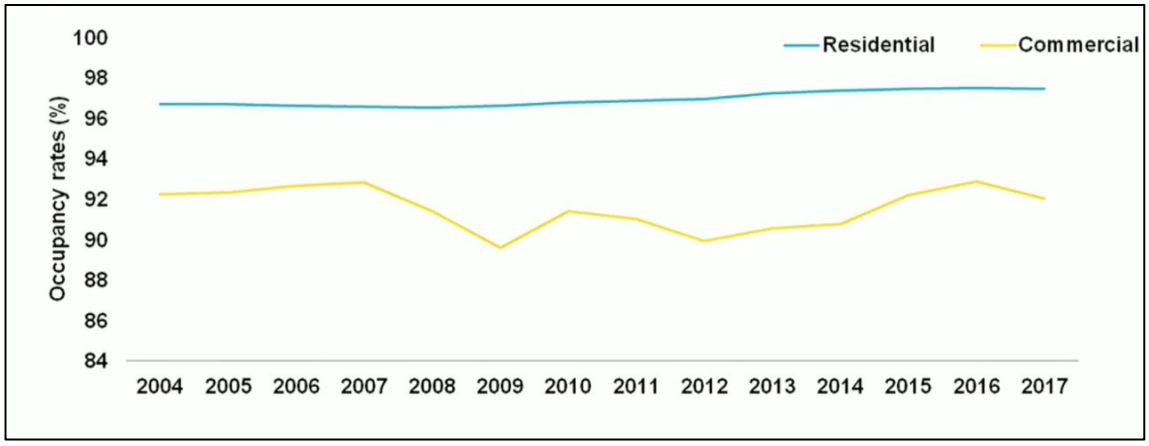



**Figure 5** - Occupancy rates of UK Commercial and Residential property

Source: L&G, 2019**Hata! Başvuru kaynağı bulunamadı.** represents the risk-adjusted performance of UK residential property in mixed-asset portfolio context. This illustrates residential returns as amongst the highest available (8.00%) ahead of both the FTSE 100 (4.36%) and EPRA Nareit (4.21%). Similarly, risks associated with residential property were low (3.01%) particularly when compared with EPRA Nareit (14.69%). Resulting Sharpe ratios show residential delivering the best risk-adjusted performance. Considering BtR exhibits the same characteristics as residential property (and will only carry further stability due to longer tenancy agreements and possibly economies of scale), this is a profound argument for inclusion within a portfolio.

**Table 2** - Risk-adjusted performance analysis of residential property vs. other major assets: 2008-2018

| | 5 year average | Standard deviation | Risk Free Rate | Sharpe Ratio | Rating |
|---|---|---|---|---|---|
| All | 9.90 | 5.76 | 1.445 | 1.47 | 2.00 |
| Residential | 8.00 | 3.01 | 1.445 | 2.18 | 1.00 |
| FTSE 100 Index | 4.36 | 11.09 | 1.445 | 0.26 | 3.00 |
| FTSE EPRA Nareit UK | 4.21 | 14.69 | 1.445 | 0.19 | 5.00 |
| UK 10-year Gilt<br>*Risk Free Rate = 10-yr Gilt as of 31/12/2018 | 1.62 | 0.37 | 1.445 | 0.47 | 4.00 |

Source: Authors' compilation/analysis

Property asset class characteristics and performance can change over time. Diversification benefits of varied property types are indicated within Table 3.

**Table 3** – Correlations indicating diversification benefits of UK residential and other UK property sectors: 2009–2018

| | *All property* | *Retail* | *Office* | *Industrial* | *Hotel* | *Residential* |
|---|---|---|---|---|---|---|
| **All Property** | 1.00 | | | | | |
| **Retail** | 0.90 | 1.00 | | | | |
| **Office** | 0.97 | 0.82 | 1.00 | | | |
| **Industrial** | 0.70 | 0.36 | 0.68 | 1.00 | | |
| **Hotel** | 0.90 | 0.71 | 0.87 | 0.82 | 1.00 | |
| **Residential** | 0.56 | 0.72 | 0.58 | -0.01 | 0.30 | 1.00 |

Source: Authors' compilation/analysis

Characteristics of different asset classes are well-known, although constantly changing. The property portfolio diversification benefits of UK residential are indicated in Tables 3 and 4 by the Pearson 'product-moment correlation coefficient', measured on a standard scale ranging between -1.0 and +1.0.

Table 3 demonstrates residential properties, and therefore BtR, are not significantly correlated with alternative property sectors, (0.56 with all property, and the highest correlation of 0.72 with retail which is undergoing structural disruption due to ecommerce), reflecting diversification benefits of BtR. This is particularly relevant with correlations between retail, office, industrial, hotel and total property (r= 0.90-0.70), reflecting their lack of diversification benefits.

Additionally, **Hata! Başvuru kaynağı bulunamadı.** illustrates correlations with other UK assets. The correlation between residential property with equities (0.20), REITs (0.37) and UK Gilts (0.10) all remain relatively low. Fundamentally, residential inclusion provides a key diversifier in an investment portfolio. Further analysis highlights specific BtR benefits with long-term returns in particular proving attractive.

**Table 4** - Diversification benefits of UK residential and other UK assets: 2009–2018

| | Residential | FTSE 100 Index | FTSE EPRA Nareit UK | UK 10-year Gilt | All Property |
|---|---|---|---|---|---|
| Residential | 1.00 | | | | |
| FTSE 100 Index | 0.19 | 1.00 | | | |
| FTSE EPRA Nareit UK | 0.59 | 0.37 | 1.00 | | |
| UK 10-year Gilt | 0.75 | 0.48 | 0.28 | 1.00 | |
| All Property | 0.56 | -0.28 | 0.24 | 0.18 | 1.00 |

Source: Authors' compilation/analysis

*Optimal asset allocation*

Composition of a portfolio is largely linked to the profile of the investor. Key factors to consider are the investor's goals, age and risk tolerance but with portfolio asset selection, the key is to minimise overall variance whilst maximising returns. A short-sale constraint has been used in our calculations, which means all asset weighting must be greater than or equal to zero.

The standard deviation of all nine assets was compared with total expected return when weightings are adjusted to different levels. This relies on the Covariance Matrix of all assets.

**Table 5** - Covariance matrix of assets

| Portfolio Weights | | 11.11% | 11.11% | 11.11% | 11.11% | 11.11% | 11.11% | 11.11% | 11.11% | 11.11% |
|---|---|---|---|---|---|---|---|---|---|---|
| | | *All* | *Retail* | *Office* | *Industrial* | *Hotel* | *Residential* | *FTSE 100 Index* | *FTSE EPRA Nareit UK* | *UK 10-year Gilt* |
| 11.11% | All | 0.0024 | 0.0023 | 0.0032 | 0.0022 | 0.0018 | 0.0007 | -0.0015 | 0.0017 | 0.0001 |
| 11.11% | Retail | 0.0023 | 0.0027 | 0.0029 | 0.0012 | 0.0015 | 0.0009 | 0.0001 | 0.0024 | 0.0002 |
| 11.11% | Office | 0.0032 | 0.0029 | 0.0047 | 0.0030 | 0.0025 | 0.0010 | -0.0030 | 0.0028 | 0.0001 |
| 11.11% | Industrial | 0.0022 | 0.0012 | 0.0030 | 0.0043 | 0.0023 | 0.0000 | -0.0034 | 0.0001 | -0.0002 |
| 11.11% | Hotel | 0.0018 | 0.0015 | 0.0025 | 0.0023 | 0.0018 | 0.0003 | -0.0013 | 0.0005 | 0.0000 |
| 11.11% | Residential | 0.0007 | 0.0009 | 0.0010 | 0.0000 | 0.0003 | 0.0006 | 0.0005 | 0.0021 | 0.0001 |
| 11.11% | FTSE 100 Index | -0.0015 | 0.0001 | -0.0030 | -0.0034 | -0.0013 | 0.0005 | 0.0117 | 0.0055 | 0.0004 |
| 11.11% | FTSE EPRA Nareit UK | 0.0017 | 0.0024 | 0.0028 | 0.0001 | 0.0005 | 0.0021 | 0.0055 | 0.0197 | 0.0003 |
| 11.11% | UK 10-year Gilt | 0.0001 | 0.0002 | 0.0001 | -0.0002 | 0.0000 | 0.0001 | 0.0004 | 0.0003 | 0.0001 |
| **100.00 %** | | 0.0002 | 0.0002 | 0.0002 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0004 | 0.0000 |

Source - Author compiled

The Covariance Matrix allows a comparison of the relationships between mean values of the different groups. Results of the asset allocation calculations are outlined in Table 5.

**Table 6** - Efficient Frontier for 9 assets within a mixed portfolio

| | | **Min Variance** | | | | | Optimum | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | | 2.75% | 3.50% | 4.50% | 5.50% | 6.50% | 7.50% | 8.50% | 9.97% | 10.50% | 11.50% |
| Standard Deviation | 0 | 0.71% | 0.82% | 1.02% | 1.23% | 1.46% | 1.69% | 1.92% | 2.26% | 2.71% | 4.48% |
| Sharpe Ratio | | 1.84 | 2.51 | 3.00 | 3.29 | 3.47 | 3.59 | 3.68 | 3.77 | 3.34 | 2.24 |
| All | | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Retail | | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Office | | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Industrial | | 5.37% | 9.05% | 10.81% | 12.56% | 14.31% | 16.06% | 17.81% | 20.82% | 40.47% | 77.59% |
| Hotel | | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Residential | | 0.00% | 4.71% | 15.31% | 25.90% | 36.50% | 47.09% | 57.69% | 72.60% | 48.93% | 4.20% |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FTSE 100 Index | | 0.00% | 0.65% | 1.55% | 2.45% | 3.36% | 4.26% | 5.17% | 6.58% | 10.61% | 18.21% |
| FTSE EPRA Nareit UK | | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| UK 10-year Gilt | | 94.63% | 85.59% | 72.34% | 59.08% | 45.83% | 32.58% | 19.33% | 0.00% | 0.00% | 0.00% |
| Risk Premium on Capital Allocation Line* | 1.45% | 4.12% | 4.53% | 5.28% | 6.09% | 6.93% | 7.80% | 8.67% | 9.97% | 11.65% | 18.34% |

*Risk premium on CAL =SD * Sharpe Ratio

:

| | | Min Variance | | | | | Optimum | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | | 2.75% | 3.50% | 4.50% | 5.50% | 6.50% | 7.50% | 8.50% | 9.97% | 10.50% | 11.50% |
| Standard Deviation | 0 | 0.71% | 0.82% | 1.02% | 1.23% | 1.46% | 1.69% | 1.92% | 2.26% | 2.71% | 4.48% |
| Sharpe Ratio | | 1.84 | 2.51 | 3.00 | 3.29 | 3.47 | 3.59 | 3.68 | 3.77 | 3.34 | 2.24 |
| All | | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Retail | | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Office | | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Industrial | | 5.37% | 9.05% | 10.81% | 12.56% | 14.31% | 16.06% | 17.81% | 20.82% | 40.47% | 77.59% |
| Hotel | | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Residential | | 0.00% | 4.71% | 15.31% | 25.90% | 36.50% | 47.09% | 57.69% | 72.60% | 48.93% | 4.20% |
| FTSE 100 Index | | 0.00% | 0.65% | 1.55% | 2.45% | 3.36% | 4.26% | 5.17% | 6.58% | 10.61% | 18.21% |
| FTSE EPRA Nareit UK | | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| UK 10-year Gilt | | 94.63% | 85.59% | 72.34% | 59.08% | 45.83% | 32.58% | 19.33% | 0.00% | 0.00% | 0.00% |
| Risk Premium on Capital Allocation Line* | 1.45% | 4.12% | 4.53% | 5.28% | 6.09% | 6.93% | 7.80% | 8.67% | 9.97% | 11.65% | 18.34% |

*Risk premium on CAL =SD * Sharpe Ratio

Source: Authors' compilation/analysis

These calculations indicate residential property can contribute to a higher return/lower risk portfolio. Maybe not the lowest risk asset of the nine scrutinised but, where mean returns exceed 2.75%, a percentage of capital should be allocated accordingly.

The minimum variance is when standard deviation is 0.71% and a Sharpe ratio of 1.82. However, the optimum allocation of assets is when mean returns are 7.50%, standard deviation is 1.69% and Sharpe ratio at 3.59. All ten scenarios are not hugely diversified insomuch as they include a maximum of four assets that offer the best average returns versus their standard deviations. A greater variety of assets would adversely affect the standard deviation level (risk) all other things remaining equal.

The Efficient Frontier, developed from Modern Portfolio Theory and Harry Markowitz (1952), is a valuable tool representing a series of optimal risk-return relationships and offers visualisation of diversification benefits of different assets. An Efficient Frontier was created containing all nine assets with the Risk Premium on Capital Allocation Line shown in red (Figure ). The Capital allocation Line demonstrates optimal returns when accounting for the risk free rate. Each dot marked on the graph represents the highest return for a given level of risk. The risk averse will typically target a point on the left of the graph (lower-risk, lower-return), while a more aggressive risk strategy will aim for the right side (higher return, higher risk). Any portfolio positioned below the efficient frontier is considered inefficient as the risks are not compensated with a higher return.

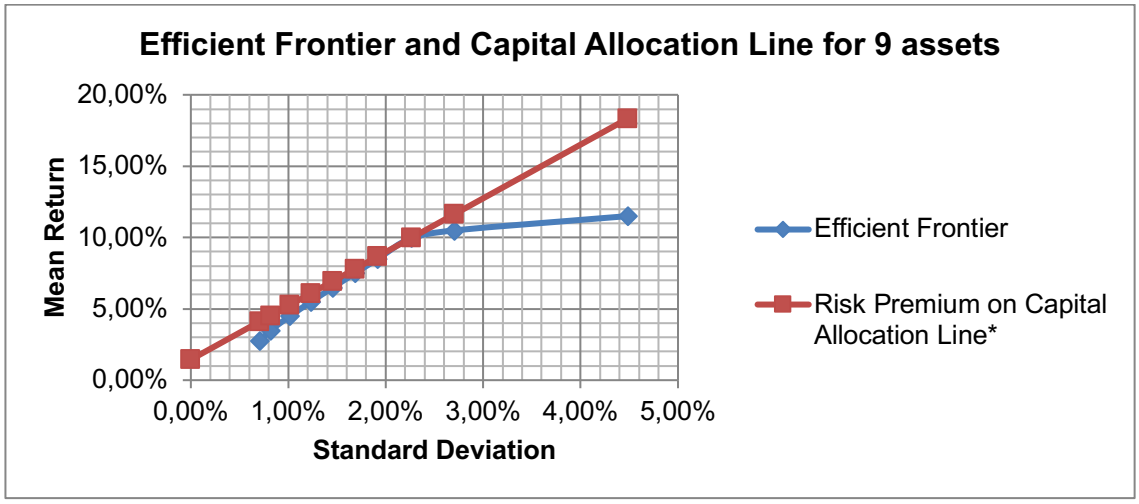



**Figure 6** - Efficient Frontier and Capital Allocation Line for 9 assets
Source: Authors' compilation/analysis

Data analysis indicates the optimal portfolio allocation to residential property is 47.09%. This point on the efficient frontier illustrates the optimal risk-return relationship above which, greater than 10% return, the level of expected risk increases substantially. Analysis was based upon 10 year averages which is considered indicative of risk-return.

Interestingly, within the optimal portfolio, only industrial property warrants inclusion. This demonstrates how sentiment towards property may shift towards lower-levered and lower-risk investments. BtR lends itself towards institutional investment and has potential to challenge, or even displace, the dominance retail and office demanded for so many years.

In summary, whilst past performance doesn't guarantee future performance, this quantitative analysis presents an argument for investing in UK BtR. The interviews provided a qualitative

aspect of more subjective understanding of the position of BtR to reconcile with the quantitative research results.

Interview data examined property professionals' attitudes towards BtR. The somewhat volatile political climate at the moment prompted the interviews to span a two week period to minimise any impact externalities might otherwise have on the respondent's answers. Data has been grouped into 'themes' as per Braun and Clarke's (2006) model.

*Risks of BtR*

A number of risk factors and operational issues are associated with BtR accommodation. Interviewing a range of participants enabled the identification of those issues posing the greatest challenges. One recurring theme was occupancy and rental levels of BtR as the market expands and becomes more competitive. To minimise this developers will likely focus on high quality buildings that operate efficiently helping tenants feel valued and facilitating a sense of community, to reduce turnover rates. The BtR model currently targets the premium end of the market which, as levels of completed stock hit the market, may prove increasingly difficult to achieve. Therefore, there is scope for integrating a more diverse range of tenure types within future BtR developments; this may include affordable rents, premium rents and open market rents. Such a structure may negatively impact profits but simultaneously improve viability thresholds in certain locations.

Another key theme identified was the risk planning could have on BtR reaching its full potential. Two respondents viewed this a major obstacle for those on the 'front-line,' being involved in direct development and investment. To help ameliorate this, a shift is required from both central and local government to ensure more flexibility with section 106 agreements, Community Infrastructure Levy (CIL) and affordable housing contributions. These answers support the Montague Review findings (Montague , 2012).

The political argument was also raised by the same respondents. Perhaps there is bias here (depending where they sit on the political spectrum) as both expressed concern about a possible Labour government and the impact regulation and/or taxation change might have. This potential risk does however correspond with the report by Rob Thomas (2017). From an institutional perspective, it is difficult to diversify away domestically, but an international asset may be incorporated.

Finally, costs of delivering a high-end product capable of achieving premium rents and good occupancy rates could prove problematic according to respondents 4 and 5. This has always been an issue for the PRS as identified by Mansfield (2000), so overcoming it is a fundamental challenge of the BtR sector. Keeping as many aspects of the process (including letting, property management and operations management) under one roof will help ensure costs and quality is monitored. Additionally, as portfolios grow, in-house economies of scale will minimise running costs. Respondent 5 refers to "long term upkeep of the building" which is still relatively unknown. Respondents 1 & 5 advised development costs for some BtR are higher than traditional build to sell, due to greater cost of more durable materials. For more forward-thinking developers, researching potential future cost reductions should be a priority.

*Allocation of BtR*

All respondents provided similar asset allocation levels, ranging between 25%-40%, with respondent 4 refusing to commit to an exact figure. This range is unsurprising as it depends on the risk profile of the investor as to their chosen weighting towards BtR. This supports the empirical research findings which observed an allocation of between 25.90% and 47.09% (assuming a target return of between 5.50% - 7.50%). Conversely, the top end of the range (40%)

would occupy the full weighting of real estate within a portfolio as set out by Hoesli, et al. (2004). Nonetheless, consensus amongst the sample confirmed the reliability and stability of returns of BtR justifies inclusion within a portfolio. The exact weighting would be dictated by the investor's risk profile.

*Scaling up of BtR*

Questioning the 'scaling-up' potential of BtR, received a varied response. The appetite for 'second tier' markets such as Newcastle, Leeds, Bristol and Nottingham continues, with investors seeking to deploy capital in growing locations outside of core major cities. Four of the five interviewed, believe it is driven by lack of available sites in previously established centres (e.g. London and Manchester). This corresponds with the challenge identified by respondents 1 and 2, which is not only the availability of sites (due to planning constraints) but also affordability in both premium and secondary locations. Realistically, this can only be overcome by relaxation of planning laws, or developers purchasing at a higher price; the latter seems unlikely given their existing slim profit margins.

BtR is less established in large regional towns, but all agree towns with an established infrastructure, stable workforce, and strong education background, are suited to BtR. This has already commenced in towns like Crawley and Woking, with Surbiton mentioned as another potential location. Such secondary sites must be identified to future-proof the sector.

*BtR a complimentary investment*

Growing popularity of BtR is well documented in the media and respondents agreed BtR is a positive investment option and a complimentary investment rather than substitute for CRE. The key driver is improved stability, albeit with lower returns than CRE. Respondents 5 and 4 provided greater detail regarding differing characteristics of BtR and CRE, supporting portolio inclusion of both. Due to the uncertain nature of the CRE market at present, Interviewee 1 indicated investors are interested in allocating a greater percentage of capital into BtR projects as opposed to CRE. As BtR evolves and CRE potentially deteriorates, BtR will likely play a greater role in institutional investment.

*Next five years of BtR*

Banks traditionally, only lent on permitted schemes. However, respondents 3 and 5 recognise the emergence of forward funding for BtR transactions proved attractive. Forward funding involves an initial payment to reimburse land cost, monthly instalments throughout construction and final payment upon completion. Lower profit margins are associated with BtR, but reduced selling expenses and interest costs can enhance profitability.

Supporting opinions within the literature review, all respondents agreed BtR will grow as an asset class over the next five years. The rate of growth will largely be dictated by the political and economic climate, which is likely shaped by Brexit (respondent 2). With growth, respondents 3 and 5 believe there will be increased competition looking for a 'slice of the pie'. This seems logical considering how rapidly student accommodation grew over the past 20 years. Consequently, respondents 1, 3, 4 and 5 believe developers will need to focus on first-class service and a customer focused offering. Nonetheless, developers need to control operational costs to remain affordable and financially viable.

*Research Limitations*

One of the shortcomings of this part of the study was the relatively small sample size of BtR developments available (25 out of 245). Although a large amount of data was analysed and

influential individuals from across the industry interviewed, there is a paucity of detailed historical data regarding specific BtR developments. Developers seemed reluctant to share confidential data relating to capital and rental value growth, which is understandable particularly considering the infancy of the asset class. Although the sector has grown rapidly, obtaining enough historical data to accurately compare against other assets would be incredibly difficult and would compromise the investigation. As a result, residential indices were used as a foundation for analysis.

The main quantitative data was sourced from MSCI which, with the current existing BtR data provided the base to prove BtR a valuable and unique asset to reduce portfolio volatility and provide reliable long term investment income. These findings cannot be found in other academic literature.

As more developments are completed, there is opportunity for future research in the consolidated risk and return features of BtR in main cities and provincial centres. Of further interest would be the establishment of BtR as a major asset class within model investment portfolio construction.

Furthermore, portfolio composition is a broad subject and only eight major assets were compared against BtR. A more comprehensive study could consider a larger range of assets for comparison with the possible inclusion of commodities and cryptocurrencies.

## Summary, Conclusion and Recommendations

The BtR construction pipeline is at 36,410, and a period of steady and sustained phase of growth is envisaged (BPF, 2019). The continuing success will depend on factors including taxation, investment and consumer appetite towards premium rental properties. Crucially, the UK Government must resist legislation and taxation with potentially inhibiting effects on future BtR investment. BtR can make a significant contribution towards UK's housing shortage but is reliant on continued support from an institutional perspective.

To conclude, research indicates BtR returns may not equate those of other assets, but it can provide lower risk, more stability and positive longer term investment benefits. Accordingly, it is anticipated an increased institutional participation in BtR accommodation will develop. With the rise of 'Generation Rent' and increased capital investment, BtR will likely migrate from 'alternative property' choice to a mainstream property sector within the next 10 years.

As the market matures and a longer timeframe of data emerges, further analysis can be completed. This should further validate robustness of strategic inclusion of UK BtR schemes in a mixed-asset portfolio. This research has shown BtR as an increasingly institutionalised asset and genuine alternative property sector for investors.

It is also vital for future research to assess the covariance of specific BtR schemes with other assets. However, as addressed already, BtR exhibits very similar characteristics to general residential property with added benefits of longer-tenancies and lower volatility. Accordingly, BtR developments can, and should, comprise a large proportion of residential property assets within a portfolio. The key will be affordability and supply constraints which may limit options available to institutional investors to include them, certainly in the short term.

## References


Alakeson, V. (2012). *Making institutional investment in the private rented sector work.* London: Resolution Foundation.

Amenc, N., Martellini, L., & Ziemann, V. (2009). Inflation-Hedging Properties of Real Assets and Implications for Asset-Liability Management Decisions. *The Journal of Portfolio Management, 35*(4), 94-110. doi:https://doi.org/10.3905/JPM.2009.35.4.094

Baker, S., & Edwards, R. (2012). *How many qualitative interviews is enough?* Southampton: National Center for Research Methods. Retrieved from http://eprints.ncrm.ac.uk/2273/.

Bank of England. (2018). *Financial Stability Report: November 2018. Issue No. 44.* London: Bank of England.

Bank of England. (2019). *Official Bank Rate history*. Retrieved July 10, 2019, from https://www.bankofengland.co.uk/boeapps/database/Bank-Rate.asp

Baum, A. (2009). *Commercial Real Estate Investment: A Strategic Approach* (2nd ed.). London: Estates Gazette Books.

Baum, A., & Colley, N. (2017). Can Real Estate Investors Avoid Specific Risk. *ABACUS, 53*(3), 395-430.

Belson, P. (2015). A task in hand. *Land Journal*, 8-9.

BPF. (2019). *Build to Rent Q2 2019.* London: BPF.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. Retrieved from http://dx.doi.org/10.1191/1478088706qp063oa

British Property Federation. (2013). *Investing in residential property: A British Property Federation guide for asset allocation.* London.

British Property Federation. (2017). *Unlocking the Benefits and Potential of BTR.*

British Property Federation. (2019, April 27). *About the BPF*. Retrieved from BPF.org.uk: https://www.bpf.org.uk/about-bpf

British Property Federation. (2019). *Build to Rent Q1 2019.* London. Retrieved June 12, 2019, from http://tiny.cc/baw57y

Byrne, P., & Lee, S. (1995). Is there a place for property in the multi-asset portfolio? *Journal of Property Finance, 6*(3), 60-83.

Capital Value. (2018). *An analysis of the Dutch residential (investment) market 2018.* Retrieved June 15, 2019, from http://tiny.cc/f0hb8y

Cardoso, R., & Meijers, E. (2017). Secondary Yet Metropolitan? The Challenges of Metropolitan Integration for Second-Tier Cities. *Planning Theory & Practice, 18*(4), 616-635. doi:https://doi.org/10.1080/14649357.2017.1371789

Case, B., & Wachter, S. (2011). Inflation and Real Estate Investments. 11-33.

CBRE. (2019). *U.S. Real Estate Market Outlook.*

Cheng, P., Lin, Z., Liu, Y., & Zhang, Y. (2011). Has Real Estate Come of Age? *Journal of Real Estate Portfolio Management, 17*(3), 243-254.

Coghill, J., & Hardman, J. (2015). Upfront: Valuing Build to Rent. *Property Journal, May/Jun 2015*, 9-11.

Collett, D., Lizieri, C., & Ward, C. (2003). Timing and the Holding Periods of Institutional Real Estate. *Real Estate Economics, 31*(2), 205-222.

Colliers International. (2018, July 9). *Colliers International's Build-to-Rent Rental Insights*. Retrieved April 28, 2019, from Colliers International: https://urlzs.com/raqe

Cuddeback, G., Wilson, E., Orme, J., & Combs-Orme, T. (2004). Detecting and Statistically Correcting Sample Selection Bias. *Journal of Social Service Research, 30*(3), 19-33. doi:10.1300/J079v30n03_02

Davies, B., Snelling, C., Turner, E., & Marquardt, S. (2017). *Lessons from Germany: Tenant power in the rental market.* London: Institute for Public Policy Research.

Davies, J. (2017). Looking to the future. *Property Journal*, 44-45.

EC Harris. (2013). *Build to rent: Pushing the Boundaries.* London: EC Harris. Retrieved from www.echarris.com

Eichholtz, P., Hoesli, M., Macgregor, B., & Nanthakumaran, N. (1995). Real estate portfolio diversification by property type and region. *Journal of Property Finance, 6*(3), 39-59.

English Housing Survey. (2018). *English Housing Survey- Headline Report, 2017-18.* London: Ministry of Housing, Communities & Local Government.

Eurostat. (2019). *Distribution of population by tenure status, type of household and income group - EU-SILC survey.* Retrieved June 15, 2019, from http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_lvho02&lang=en

Fisher, J., & Sirmans, S. (1994). The Role of Commercial Real Estate in a Multi-Asset Portfolio. *Journal of Property Management, 59*(1), 54-55.

Fisher, M., & Bloomfield, J. (2019). Understanding the research process. *Journal of the Australasian Rehabilitation Nurses' Association (JARNA), 22*(1), 22-27.

Guba, E., & Lincoln, Y. (1994). *Handbook of qualitative research* (1 ed.). Thousand Oaks: Sage.

Hartzell, D., Hekman, J., & Miles, M. (1986). Diversification Categories in Investment Real Estate. *Journal of the American Real Estate and Urban Economics Association,, 14*(2), 230-254.

Heaney, R., & Srianthakumar, S. (2012). Time-varying correlation between stock market returns and real estate returns. *Journal of Empirical Finance, 19*(4), 583-594.

HM Treasury. (2010). *Government response to the consultation on investment in the private rented sector.* London. Retrieved April 23, 2019, from https://urlzs.com/JhF1

HM Treasury. (2010). *Investment in the UK private rented sector.* London. Retrieved April 2, 2019, from https://urlzs.com/tkCo

Hoesli, M., & MacGregor, B. (2000). *Property investment: Principles and practice of portfolio management.* Edinburgh: Pearson Education.

Hoesli, M., Bryan, M., Matysiak, G., & Nanthakumaran, N. (1997). The Short-Term Inflation-Hedging Characteristics of U.K. Real Estate. *The Journal of Real Estate Finance and Economics, 15*(1), 27-57.

Hoesli, M., Lekander, J., & Witkiewicz, W. (2004). International Evidence on Real Estate as a Portfolio Diversifier. *Journal of Real Estate Research, 26*(2), 161-206.

Hoesli, M., Lizieri, C., & MacGregor, B. (2008). The Inflation Hedging Characteristics of US and UK Investments: A Multi-Factor Error Correction Approach. *The Journal of Real Estate Finance and Economics, 36*(2), 183-206.

Hull, A., & Cooke, G. (2012). *Together at home: A new strategy for housing.* Institute for Public Policy Research.

Huston, S., Rahimzad, R., & Parsa, A. (2015). 'Smart' sustainable urban regeneration: Institutions, quality and financial innovation. *Cities, 48*, 66-75.

Hwang, S., Cho, Y., & Shin, J. (2016). Does illiquidity matter in residential properties? *Applied Economics, 49*(1), 1-20.

Invesco. (2016). *Whitepaper: UK Private Rented Residential Sector.* London. Retrieved April 20, 2019, from http://tiny.cc/g0zg5y

Investing.com. (2019). *FTSE 100 Total Return*. Retrieved July 20, 2019, from https://uk.investing.com/indices/ftse-100-total-return-historical-data

Investing.com. (2019). *FTSE EPRA/NAREIT UK Total Returns*. Retrieved July 21, 2019, from https://uk.investing.com/indices/ftse-epra-nareit-uk-historical-data

IPD. (2014). *The Asset Owner Real Estate Investment Process: Risk management insights from the MSCI/IPD survey.* London: MSCI.

IPF. (2018). *UK Residential Property: Institutional Attitudes and Investment Survey 2018.* London: IPF Research Programme.

Kallberg, J., Liu, C., & Grieg, W. (1996). The Role of Real Estate in the Portfolio Allocation Process. *Real Estate Economics, 24*(3), 359-377.

Keeble, C., Law, G., Barber, S., & Baxter, P. (2015). Choosing a Method to Reduce Selection Bias: A Tool for Researchers. *Open Journal of Epidemiology, 5*, 155-162. doi:http://dx.doi.org/10.4236/ojepi.2015.53020

Kivunja, C., & Kuyini, A. (2017). Understanding and Applying Research Paradigms in Educational Contexts. *International Journal of Higher Education, 6*(5), 26-41.

Kuenzel, R., & Bjørnbak, B. (2008). The UK Housing Market: Anatomy of a house. *ECFIN Country Focus, 5*(11), 1-10.

L&G. (2019). Build to Rent: a new home for capital. London. Retrieved May 15th, 2019, from https://www.brighttalk.com/webcast/2163/355674/build-to-rent-a-new-home-for-capital

Lee, S., & Stevenson, S. (2004). The Case for REITs in the Mixed-Asset Portfolio in the Short and Long Run. *Journal of Real Estate Portfolio Management, 11*(1), 55-80.

Lin, Z., & Vandell, K. (2007). Illiquidity and Pricing Biases in the Real Estate Market. *Real Estate Economics, 35*(3), 291-330.

MacGregor, B., & Nanthakumaran, N. (1992). The allocation to property in the multi-asset portfolio: The evidence and theory reconsidered. *Journal of Property, 9*(1), 5-32. Retrieved from https://doi.org/10.1080/09599919208724048

MacGregor, B., & Nanthakumaran, N. (1992). The allocation to property in the multi-asset portfolio: The evidence and theory reconsidered. *Journal of Property, 9*(1), 5-32. Retrieved from https://doi.org/10.1080/09599919208724048

Mackenzie, N., & Knipe, S. (2006). Research dilemmas: paradigms, methods and methodology. *Issues In Educational Research, 16*(2), 1-15.

Mansfield, J. (2000). Investment potential within the residential private rented sector. *Property Management, 18*(1), 34-45.

Mansley, N., & Toplas, D. (2014). *The inflation matching characteristics of mixed tenure private housing.* London: Mill Group Ltd.

Markowitz, H. (1952). Portfolio Selection. *The Journal of Finance, 7*(1), 77-91.

Markowitz, H. (1952). Portfolio Selection. *The Journal of Finance, 7*(1), 77-91.

McIntosh, M., & Morse, J. (2015). Situating and Constructing Diversity in Semi-Structured. *Global Qualitative Nursing Research, 2*, 1-12.

McKee, K., Moore, T., Soaita, A., & Crawford, J. (2017). 'Generation Rent' and The Fallacy of Choice. *Internation Journal of Urban and Regional Research, 41*(2), 318-333.

McMillan, D. (2019). Cross-asset relations, correlations and economic implications. *Global Finance Journal, 41*, 60-78.

Miles, M., & McCue, T. (1982). Historic Returns and Institutional Real Estate Portfolios. *Real Estate Economics, 10*(2), 184-199.

Montague , A. (2012). *Review of the barriers to institutional investment in private rented homes.* London: Department for Communities and Local Government.

Montezuma, J. (2006). A Survey of Institutional Investors' Attitudes and Perceptions of Residential Property: The Swiss, Dutch and Swedish Cases. *Housing Studies, 21*(6), 883-908.

Moore, T. (2017). The convergence, divergence and changing geography of regulation in the UK's private rented sector. *International Journal of Housing Policy, 17*(3), 444-456.

MSCI. (2019). *MSCI UK Monthly Property Index - May 2019.* London: MSCI. Retrieved June 30, 2019, from https://www.msci.com/www/ipd-derivatives/derivative-ipd-uk-monthly/0164965629

MSCI. (2019). *MSCI world index*. Retrieved June 19, 2019, from https://www.msci.com/world

MSCI. (2019). *UK Real Estate Quarterly Total Returns - 2009-2019.* London: MSCI.

Mueller, A., & Mueller, G. (2003). Public and Private Real Estate in a Mixed-Asset Portfolio. *Journal of Real Estate Portfolio Management, 9*(3), 193-203.

Newman, I., Benz, C., & Ridenour, C. (1999). *Qualitative-Quantitative Research Methodology: Exploring the Interactive Continuum.* Carbondale, IL: Southern Illinois University Press.

Office for National Statistics. (2018). *Household projections in England: 2016-based.* London: Ministry of Housing, Communities & Local Government.

Office for National Statistics. (2019). *House building; new build dwellings, England: December Quarter 2018.* London: Ministry of Housing, Communities & Local Government.

Office for National Statistics. (2019). *UK private rented sector: 2018.* London: ONS.

Old Mutual Wealth. (2019). *Correlation Matrix for Asset Classes used with the Old Mutual Wealth Investment Tools*. Retrieved June 19, 2019, from https://www.oldmutualwealth.co.uk/Adviser/investment-and-funds/investment-process/strategic-asset-allocation/process-and-assumptions/Correlation-matrix-for-asset-classes-used-within-the-Old-Mutual-Wealth-investment-tools/

Pawson, H., & Milligan, V. (2013). New dawn or chimera? Can institutional financing transform rental housing? *International Journal of Housing Policy, 13*(4), 335-357.

Pawson, H., & Wilcox, S. (2013). *UK Housing Review 2012/13.* Coventry: Chartered Institute of Housing.

Pyhrr, S., Roulac, S., & Born, W. (1999). Real Estate Cycles and Their Strategic Implications for Investors and Portfolio Managers in the Global Economy. *Journal of Real Estate Research, 18*(1), 7-68.

Rugg, J., & Rhodes, D. (2018). *The Evolving Private Rented Sector: Its Contribution and Potential.* York: Centre for Housing Policy.

Savills. (2018). *Investing in Private Rent.* London. Retrieved April 3, 2019, from https://bit.ly/2Ue4nfR

Savills. (2019). *Spotlight - Multifamily & Co-living.* London: Savills.

Savills. (2019). *UK Build to Rent Market Update - January 2019.* London.

Savills. (2019). *UK Commercial Market in Minutes.* London: Savills.

Scanlon, K., & Wilson, J. (2017). *Making the Most of Build to Rent.* London: Future for London.

Scanlon, K., Fernández Arrigoitia, M., & Whitehead, C. (2015). Social housing in Europe. *European Policy Analysis, 17*(1), 1-12.

Scanlon, K., Whitehead, C., Blanc, F., & Moreno-Tabarez, U. (2017). *The role of overseas investors in the London new-build residential market.* LSE London.

Schulze, S. (2003). Views on the combination of quantitative and qualitative research approaches. *Progressio, 25*(2), 8-20.

Stephens, M., & Williams, P. (2012). *Tackling Housing Market Volatility in the UK: a Progress Report.* York: Joseph Rowntree Foundation.

Thomas, R. (2017). Institutional investment in the private rented sector in the UK – coming of age. *Housing Finance International, Winter 2017*, 42-47.

United Nations. (2017). *World Urbanization Prospects 2018.* New York: United Nations-DESA/Population Division.

Wilson, J., Russell, O., & Scanlon, K. (2017). *Making the most of build to rent.* London, UK: LSE Consulting.

Wilson, W., & Barton, C. (2019). *What is affordable housing?* London: The House of Commons Library .

*Appendix - Covariance Matrix*

| Portfolio Weights | | 11.11% | 11.11% | 11.11% | 11.11% | 11.11% | 11.11% | 11.11% | 11.11% | 11.11% |
|---|---|---|---|---|---|---|---|---|---|---|
| | | All | Retail | Office | Industrial | Hotel | Residential | FTSE 100 Index | FTSE EPRA Nareit UK | UK 10-year Gilt |
| 11.11% | All | 0.0024 | 0.0023 | 0.0032 | 0.0022 | 0.0018 | 0.0007 | -0.0015 | 0.0017 | 0.0001 |
| 11.11% | Retail | 0.0023 | 0.0027 | 0.0029 | 0.0012 | 0.0015 | 0.0009 | 0.0001 | 0.0024 | 0.0002 |
| 11.11% | Office | 0.0032 | 0.0029 | 0.0047 | 0.0030 | 0.0025 | 0.0010 | -0.0030 | 0.0028 | 0.0001 |
| 11.11% | Industrial | 0.0022 | 0.0012 | 0.0030 | 0.0043 | 0.0023 | 0.0000 | -0.0034 | 0.0001 | -0.0002 |
| 11.11% | Hotel | 0.0018 | 0.0015 | 0.0025 | 0.0023 | 0.0018 | 0.0003 | -0.0013 | 0.0005 | 0.0000 |
| 11.11% | Residential | 0.0007 | 0.0009 | 0.0010 | 0.0000 | 0.0003 | 0.0006 | 0.0005 | 0.0021 | 0.0001 |
| 11.11% | FTSE 100 Index | -0.0015 | 0.0001 | -0.0030 | -0.0034 | -0.0013 | 0.0005 | 0.0117 | 0.0055 | 0.0004 |
| 11.11% | FTSE EPRA Nareit UK | 0.0017 | 0.0024 | 0.0028 | 0.0001 | 0.0005 | 0.0021 | 0.0055 | 0.0197 | 0.0003 |
| 11.11% | UK 10-year Gilt | 0.0001 | 0.0002 | 0.0001 | -0.0002 | 0.0000 | 0.0001 | 0.0004 | 0.0003 | 0.0001 |
| 100.00% | | 0.0002 | 0.0002 | 0.0002 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0004 | 0.0000 |

*Appendix BtR Sample Data*

| Scheme No. | General Location | Transaction price | Annual rent roll | Rent psq pa. | NIY | Transaction Date |
|---|---|---|---|---|---|---|
| 1 | London | £ 75,000,000 | £ 18,750,000 | £ 26.50 | 4.00% | 2018 |
| 2 | London | £ 96,000,000 | £ 24,242,424 | £ 27.00 | 3.96% | 2017 |
| 3 | London | £ 87,000,000 | £ 23,015,873 | £ 27.00 | 3.78% | 2017 |
| 4 | London | £ 64,000,000 | £ 16,842,105 | £ 27.00 | 3.80% | 2017 |
| 5 | London | £ 70,000,000 | £ 17,948,718 | £ 30.00 | 3.90% | 2019 |
| 6 | London | £ 42,000,000 | £ 10,769,231 | £ 31.00 | 3.90% | 2018 |
| 7 | London | £ 105,000,000 | £ 26,250,000 | £ 23.00 | 4.00% | 2019 |
| 8 | London | £ 67,000,000 | £ 16,750,000 | £ 27.00 | 4.00% | 2017 |
| 9 | London | £ 60,700,000 | £ 16,861,111 | £ 27.00 | 3.60% | 2015 |
| 10 | London | £ 104,000,000 | £ 29,131,653 | £ 30.00 | 3.57% | 2016 |
| 11 | London | £ 63,000,000 | £ 16,449,086 | £ 30.00 | 3.83% | 2016 |
| 12 | London | £ 75,500,000 | £ 23,593,750 | £ 32.00 | 3.20% | 2018 |
| 13 | Manchester | £ 45,000,000 | £ 1,720,000 | £ 31.00 | 3.82% | 2019 |
| 14 | Liverpool | £ 35,000,000 | £ 1,500,000 | £ 32.00 | 4.29% | 2019 |
| 15 | London | £ 59,000,000 | £ 2,250,000 | £ 30.00 | 3.81% | 2019 |
| 16 | London | £ 95,000,000 | £ 20,652,174 | £ 90.00 | 4.60% | 2018 |
| 17 | London | £ 8,400,000 | £ 2,270,270 | £ 32.00 | 3.70% | 2017 |
| 18 | London | £ 43,700,000 | £ 12,485,714 | £ 27.00 | 3.50% | 2017 |
| 19 | London | £ 23,700,000 | £ 6,771,429 | £ 31.00 | 3.50% | 2017 |
| 20 | London | £ 28,900,000 | £ 8,257,143 | £ 45.00 | 3.50% | 2017 |
| 21 | London | £ 91,000,000 | £ 36,400,000 | £ 27.00 | 2.50% | 2018 |
| 22 | Bath | £ 30,000,000 | £ 1,340,000 | £ 27.00 | 4.47% | 2019 |
| 23 | Manchester | £ 29,500,000 | £ 1,200,000 | £ 32.00 | 4.07% | 2019 |
| 24 | South East | £ 58,400,000 | £ 2,750,000 | £ 28.00 | 4.71% | 2019 |
| 25 | London | £ 73,600,000 | £ 3,150,000 | £ 27.00 | 4.28% | 2019 |

Journal of Management and Economic Studies
2020, 2(1): 51-69 DOI: 10.26677/TR1010.2020.427
Journal Homepage: https://www.jomaes.org

# Predicting Solvency of Non-Banking Financial Institutions in Bangladesh by Using Springate & Fulmer Model

**Mohammad Fahad Noor**
Senior Lecturer, Department of Finance, School of Business, Independent University, Bangladesh, Email: fahad@iub.edu.bd

**Sharjana Mustofa**
Graduate Student, School of Business, Independent University, Bangladesh

**Abstract**

Prediction of financial distress is a significant issue for any company. At present Non-Banking Financial Institutions (NBFIs) represent one of the most important parts of a financial system in Bangladesh. NBFIs contribute a lot to the GDP growth of Bangladesh. So, it has become very essential for the companies to predict the insolvency in advance for taking their important decisions for the betterment. The purpose of this paper is to predict the solvency and the factors that have an impact on the solvency by analyzing the financial statements for a period of 5 years(2013 to 2017) of 20 Dhaka Stock Exchange (DSE) listed Non-Banking Financial Institutions (NBFIs) including asset finance or leasing companies, investment finance companies and housing finance companies of Bangladesh by using Fulmer H score model and Springate Z score model. The findings indicate that according to Fulmer Model few sample NBFIs are in risky zone and according to Springate model all the sample NBFIs are in distress zone. The study suggests that according to the context of Bangladesh Fulmer H Score model is more appropriate compared to Springate Z Score model for predicting solvency.

**Keyword:** Solvency, Non- Banking Financial Institution, Z score, H score.

## Introduction:

Non-Banking Financial Institutions (NBFIs) are the financial institutions those do not have full banking license but provide financial services to the people including banking but are not termed as bank because NBFIs are not permitted to perform all the tasks which banks can perform like issuing cheques, pay-orders or demand drafts, receiving demand deposits and involving in foreign exchange financing. NBFIs started their journey by leasing but now they are doing other businesses like term lending, housing finance, merchant banking, equity financing, venture capital financing, giving loans, giving advances for manufacturing and industry, real estate, agriculture, carry on underwriting or taking over businesses or investing or reinvesting in share businesses, bonds, debenture or debenture stocks or securities issued by the government or any regulatory bodies. This industry plays a vital role in the capital market, industrial sector and the real estate sector of Bangladesh. According to Goldsmith (1969), financial development in a country starts with the development of banking institutions. As the development process

proceeds, Non-Banking Financial Institutions (NBFIs) have become prominent alongside the banking sector (Ahammed & Mohammad, 2017). Non-Banking Financial Institutions (NBFIs) are set up to fill a gap in the financial system which helps in rotation of resources, asset distribution and regulation of income in increasing the economic development. NBFIs have become an integral part of development of the financial system of the Bangladesh. Nowadays the weight of NBFIs is more important as their activities in the financial system are increasing day by day and this industry is considered the higher secondary source of providing the financial services behind the banking sector (Eliona & Valbona, 2016). According to Ahmed and Chowdhury (2007), Non-Banking Financial Institutions (NBFIs) intensify the country's financial systems; contribute to the economic development of the country through diversified financial services in the market (Ahmed & Chowdhury, 2007). Islam and Osman (2011) reported that there is a long term as well as stable association between per capita real GDP and the NBFIs investment, trade openness and employment (Islam & Osman, 2011). By creating new marketable securities NBFIs can provide long term financial resources and a strong stimulus to the development of the capital market (Vittas, 1997). In Bangladesh NBFIs are monitored and controlled by Bangladesh Bank under the guideline of Financial Institution Act 1993. At present there are 35 NBFIs in Bangladesh. At the end of December 2018, the total portfolio of Non-Banking Financial Institutions (NBFIs) was tk850 billion (Hasan J. , 2018). NBFIs have contributed a lot to the economy of Bangladesh. So, it has become important to predict the solvency of Non-Banking Financial Institutions (NBFIs) for the sake of the country's economic development.

Solvency is the ability by which it is measured that the company can meet its long-term debt and obligations. When the current liabilities of a country exceed its current asset, the company is called insolvent. Insolvency measures if a company is not able to pay off its debt in the long term. According to Ross, Westerfield, & Jaffe (2007) insolvency is a situation when a firm's operating cash flows are not sufficient to satisfy current obligations. The study of solvency is becoming more relevant and important. When a company becomes solvent, it can achieve its long-term growth and expansion. The large companies across the world are failing and resulting in economic and social problems to the society. Using Financial distress models to predict failure in advance is becoming more essential for most business in their decision- making process. By predicting failure in advance managers can find out the causes and its possible remedies. Predicting Solvency has become a significant concern for corporate governance. Many researchers have studied on solvency throughout the world such as Edmister (1972), Jide Lewis (2013), Sudip Datta, Mai E and Iskandar Datta (1995), Richard Taffler (1983), Arun R & Kasilingam R (2011), S C Bardia, Shweta Kastiya, Garima Bardia (2011), S.Thomas Ng, James M.W.Wong, Jiajie Zhang (2011), Temoudi, Ghourabi, Limam (2011), R.Kasilingam & G.Ramasundaram (2012) and so on. In Bangladesh there are lots of research studies or analysis have been done on banking sector, insurance companies, capital market, ceramic companies, SME, pharmaceutical companies but only one study has been done on the distress level of Non-Banking Financial Institutions (NBFIs) for fifteen NBFIs by Tania Hamid, Farzana Akter & Naharin Binte Rab (2016) using the Altman's Z score Model. They have found that most of the Non-Banking Financial Institutions (NBFIs) have been in the distress zone and failed to attain the minimum score as per Z score model.

In the developing country like Bangladesh the importance of predicting the solvency of NBFIs is essential to stakeholders. That's why this study is conducted for predicting the solvency of Dhaka Stock Exchange (DSE) listed Non-Banking Financial institutions (NBFIs) of Bangladesh using famous Fulmer H-score model and Springate Z-score model. These two models are routinely used to analyze the financial well-being of the companies. This study is covered on twenty listed NBFIs including housing finance companies, asset finance companies and investment finance

companies. The primary objective of this study is to predict the solvency of these twenty NBFIs using Fulmer H score model and Springate Z score model based on financial statement of five years (2013 to 2017) and to comment on usefulness of these two models for predicting solvency of Non-Banking Financial Institutions (NBFIs). Another purpose of this study is to find out the factors that have an impact on solvency position of Non-Banking Financial Institutions (NBFIs) in Bangladesh and to draw a comparison on the performance of five years (2013-2017) of these twenty NBFIs. By doing this study financial distress can be predicted and the main factors of insolvency can be analyzed in advance which should be beneficial for both shareholders and stakeholders because insolvency involves direct and indirect cost for both shareholders and stakeholders.

**Literature Review:**

Solvency prediction has been a major research topic in Finance and accounting. The importance of solvency analysis or predicting solvency has a long history in the literature. Financial longevity of a business is a concern to internal and external stakeholders. Internal stakeholders might be interested in whether skills are transferable while external stakeholders might be concerned directly with their investments and profits (E.Mossman, G.Bell, Swartz, & Turtle, 1998). According to Dugan and Zavgren (1988), a prediction can be made without making a decision, but a decision cannot be made without at least implicitly, making a prediction. Non-Banking Financial Institutions (NBFIs) are getting more competitive sector in Bangladesh. Solvency analysis is the most popular trend to evaluate a NBFI's performance over years or with other companies in the industry. The solvency of NBFIs is major concern in modern economy. The important aspect of long-term solvency is earning power which reflects the recurring ability of a company to generate cash from its operations. Stability in earnings helps company in procurement of funds by way of debt in times of need (S.C.Bardia, 2012). Nowadays big, successful and promising companies are seen going insolvent due to lack of prediction of future financial status. Solvency prediction of NBFIs helps other companies to know the financial status of NBFIs before doing business with them.

In the late 1960's, several studies were developed for several model for failure prediction. Researchers have examined some of these models to identify their ability to predict corporate failure. Al Rawi, Kiani and Vedd (2008) predicted a firm's condition by using Altman's Z score model and found that the firm has increased its debt consequently and facing bankruptcy in near future. Gerantonis et al. (2009) examined the ability of Altman's Z score model to predict failure before it occurs and found that the model considered an accuracy way to predict corporate and financial failure. Hayes, Hodge, Hughes (2010) applied Z score model for 17 U.S. firms from retail industry and found that the model correctly predicted the bankruptcy level of 94%. Mamo (2011) applied this model on 43 banks in Kenya for predicting the financial distress level and the got 80% valid result. Again, the Edward Altman's financial prediction model was proved 90% valid when it was used on non-failed firms (Altman, 1993). Alareeni and Branson (2012) investigated the failure prediction for Jordanian industrial companies to identify the accuracy of Z score model before it occurs and the rate of accuracy of the Z score was 73.40% at first year, at the second year 74.46% and at the third year 70.21%. Jaisheela, B (2015), researched on 27 leasing company of India and found that 22% were in grey zone and 27% had very strong probability to get sick.

In Bangladesh, Tahmina Ahmed and Shah Alam used Z score model on 15 commercial banks found that 7% were in healthy position in 2009 but after 2011 there was none. In 2016 Z score model was applied on 25 conventional and non-conventional commercial banks to predict the solvency and the possibility to be bankrupted by Md. Mostofa, Sonia Rezina and Md. Hasan. Their findings indicated that 20% sample banks were in distress zone and 24% were out of danger. (Md.Mostofa, Rezina, & Md.Hasan, 2016). To predict insolvency and the probability of

bankruptcy Z score model was applied on 53 Dhaka stock Exchange listed Z category companies by Anup Chowdhury and Suborna Barua and according to the result 5 companies were in safe zone and 41 were in danger zone. (Chowdhury & Barua, 2009). A research was conducted on Shadharon Bima Corporation of Bangladesh based on the information of 2007 to 2011 by Kamrul Hasan and Feroza Akter Khanom. The result indicated that long term solvency and liquidity were dissatisfactory to determine the insolvency. (Hasan & Khanom, 2013). In 2016 Altman's Z score model was used to conduct a research on 15 publicly traded Non-Banking Financial Institutions (NBFI's) of Bangladesh based on the information from 2011 to 2015 by Tania Hamid, Farzana Akter and Naharin Binte Rab. Their findings indicated that most of the NBFIs have been in distress zone. They also suggested that Altman's Z score model might not be appropriate for Bangladesh. (Hamid, Akter, & Rab, 2016).

Mohamed (2013) applied Altman's Z score model for predicting bankruptcy of firms listed in NSE and the result indicated that Altman's Z score model was not sufficient to differentiate between failed firms and non-failed firms (Mohammed & Kim-Soon, 2012). Altman's model has limitations in its applicability to different business entities with the same prediction accuracy (Anjum, 2012). According to Doukas (1986) Springate modified Altman's MDA formula for Canadian use (Doukas, 1986). Springate continued Altman's studies and the use of audit analytical for selecting 4 appropriate financial ratios including working capital to total assets, profit before interest and taxes to total assets, profit before tax to current debt and sales to total assets among the 19 ratios which had the best ratio to find out the healthy and bankrupt companies. Then 40 companies were tested by using this Springate model and this model got 92.5% accurate result (Imanzadeh, Maran-Jouri, & Sepehri, 2011). Botheras (1979) tested the Springate model on 50 companies and found 88% accurate result. Again, the model was used on 24 companies with the average asset size of $63.4 million and found the accuracy of 83% (Arasu, Balaji, Kumar, & Thamizhselvi, 2013). For predicting solvency Fulmer's model is considered more reliable and it is proved that it gives more accuracy rate than any other model. The Fulmer Model is reported to have 98% accuracy rate one year before failure and 81% accuracy rate more than one year before insolvency (Fulmer, Moon, Gavin, & Erwin, 1984).

R.Kasilingam and G.Ramasundaram have conducted a study in 2012 on predicting solvency of 25 (2005 to 2009) Non-Banking Financial Institutions (NBFIs) in India using Fulmer and Springate model and concluded that both Fulmer and Springate models show the financial soundness of the NBFIs based on the financial data and the Z and H scores represent the actual solvency status of the company.

**Methodology:**

The methodology used in this research study require key financial data from audited and published annual reports containing balance sheets, profit and loss account statements and cash flow statements of Non-Banking Financial Institutions (NBFIs). The data used in this study is primarily of secondary in nature. Published annual reports of the companies containing audited financial results were collected from the respective company websites and also from Dhaka Stock Exchange (DSE). For this research study famous solvency prediction models Fulmer and Springate models were used.

**Sample Size:**

A total of 100 annual reports of 20 Non-Banking Financial Institutions (NBFIs) for the year of 2013 to 2017 were collected and analyzed for financial data accuracy. So, the sample size for the research is 100. The samples have been selected based on the availability of financial data of different companies from the company websites and Dhaka Stock Exchange (DSE). The sampling technique adopted for the study is convenience sampling.

**Springate Model:**

$Z = 1.03X1 + 3.07X2 + 0.66X3 + 0.4X4$ Failed $Z < 0.862$

Here,

X1 = Working Capital / Total Assets
X2 = Net Income before Interest and Taxes (EBIT) / Total Assets
X3 = Net Income before Taxes (EBIT) / Current Liabilities
X4 = Sales / Total Assets

Fulmer Model:

$H = 5.528v1 + 0.212v2 + 0.073v3 + 1.270v4 – 0.120v5 + 2.335v6 + 0.575v7 + 1.083v8 + 0.894v9 – 6.075$
Failed $H < 0$

Here,

v1 = Retained Earnings / Total Assets
v2 = Sales / Total Assets
v3 = Net Income before Taxes (EBIT) / Equity
v4 = Cash Flow / Total Debt
v5 = Total Debt / Total Assets
v6 = Current Liabilities / Total Assets
v7 = Log Tangible Total Assets
v8 = Working Capital / Total Debt
v9 = Log EBIT / Interest

**Table 1.** The Listed Non-Banking Financial Institutions:

| ***Asset-Finance Company/Leasing Company*** | ***Investment Finance Company*** | ***Housing Finance Company*** |
|---|---|---|
| United Finance | Bangladesh Finance and Investment Company Limited | National Housing Finance and Investment Limited |
| People's Leasing Financial Service Limited | Fareast Finance and Investment Limited | |
| Premier Leasing and Finance Limited | FAS Finance and Investment Limited | |
| IDLC Finance Limited | Islamic Finance and Investment Limited | |
| First Finance Limited | Prime Finance and Investment Limited | |
| Bay Leasing and Investment Limited | Uttara Finance and Investment Limited | |
| Bangladesh Industrial Finance Co. Limited | Union Capital Limited | |
| GSP Finance Company (Bangladesh) Limited | Lanka Bangla Finance Limited | |
| IPDC Finance Limited | Phoenix Finance and Investment Limited | |
| International Leasing and Financial Services Limited | | |

Table 1 shows the sample count of Non-Banking Financial Institutions (NBFIs) based on their classification. For this research purpose Non-Banking Financial Institutions (NBFIs) were divided

into three segments such as Asset or Leasing Finance Company, Investment Finance Company, Housing Finance Company. Total 20 companies, data were used for predicting the solvency of Non-Banking Financial Institutions (NBFIs) among them 10 were Asset or Leasing Finance Companies, 9 were Investment Finance Companies and 1 was Housing Finance Company.

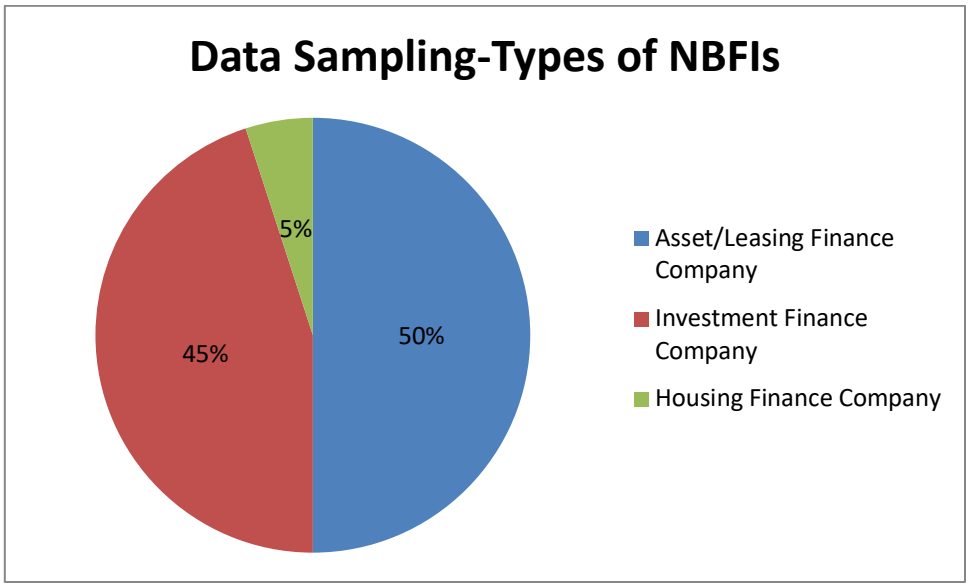



**Figure 1**. Data Sampling-Types of Non-Banking Financial Institutions (NBFIs)

From figure 1, it can be seen that there is 50% of Asset or Leasing Finance Companies, 45% of Investment Finance Companies and the rest 5% of Housing Finance Companies. Among these three segments the sample size is more for Asset or Leasing Finance Companies because they enjoy the huge market share.

**Solvency Analysis:**

Solvency status of the Non-Banking Financial Institutions (NBFIs) has been analyzed using Springate and Fulmer models. Solvency analysis is carried for each category of Non-Banking Financial Institution (NBFI) separately.

**Housing Finance Company:**

In the Housing Finance segment, the company taken for the study purpose is National Housing Finance & Investment Limited (NHFIL). Z scores and H scores have been calculated by using Springate and Fulmer models.

**Table 2.** Z & H Scores of Housing Finance Company

| Z Score | 2017 | 2016 | 2015 | 2014 | 2013 | H Score | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| National Housing Finance & Investment Limited | 0.634 | 0.788 | 0.981 | 0.903 | 0.720 | | 0.755 | 0.621 | -0.06 | 0.064 | 0.351 |

Table 2 shows the Z scores and H scores of the Housing Finance Company. In 2014 and 2015 the Z scores are higher than the required minimum score of 0.862 because in 2014 & 2015 the current liabilities were 2,751,876,313 and 2,991,809,216 respectively which were low compared to the rest of the years 2013, 2016 and 2017. Again, the H scores in 2017, 2016, 2014, 2013 were higher than the required minimum score of 0.

On the other hand, the Z scores of National Housing Finance & Investment Limited (NHFIL) in 2017, 2016 and in 2013 were below the required minimum score of 0.862. The H score of National Housing Finance & Investment Company Limited (NHFIL) in 2015 was also below the required minimum score of 0.

**Table 3.** Z & H Scores of NHFIL (Below the Required Minimum Score)

| Z Score | 2017 | 2016 | 2013 | H Score | 2015 |
|---|---|---|---|---|---|
| National Housing Finance & Investment Limited | 0.634 | 0.788 | 0.720 | | -0.06 |

National Housing Finance and Investment Company (NHFIL) has not performed well in 2013, 2016 and in 2017 according to the Z scores. This is for the current liabilities of those years because the current liabilities of 2013, 2016 and 2017 were 3,412,798,410, 5,210,540,337 and 8,502,288,793 respectively which were high compared to the rest of two years 2014 and 2015. In 2014 and 2015 the current liabilities were 2,751,876,313 and 2,991,809,216 which were low compared to those three years. That's why Z scores of 2014 and 2015 are higher than the required minimum score of 0.862.

The H score of National Housing Finance & Investment Company Limited (NHFIL) in 2015 was also below the required minimum score of 0. This is due to the fact that the cash flow in 2015 was on the negative side. On the other hand Z score of NHFIL in 2015 is higher than the required minimum score of 0.862 as cash flow is not an independent variable required in Springate, the Z score did not report this problem but for predicting the solvency of Housing Finance Company Z and H scores both are considered so it can be said that National Housing Finance and Investment Company (NHFIL) has not performed well in 2013, 2015, 2016 and in 2017 according to the Z and H scores which have been calculated by using Springate and Fulmer models. But the company NHFIL has performed very well in 2014 as the Z and H scores are both higher than the required minimum scores.

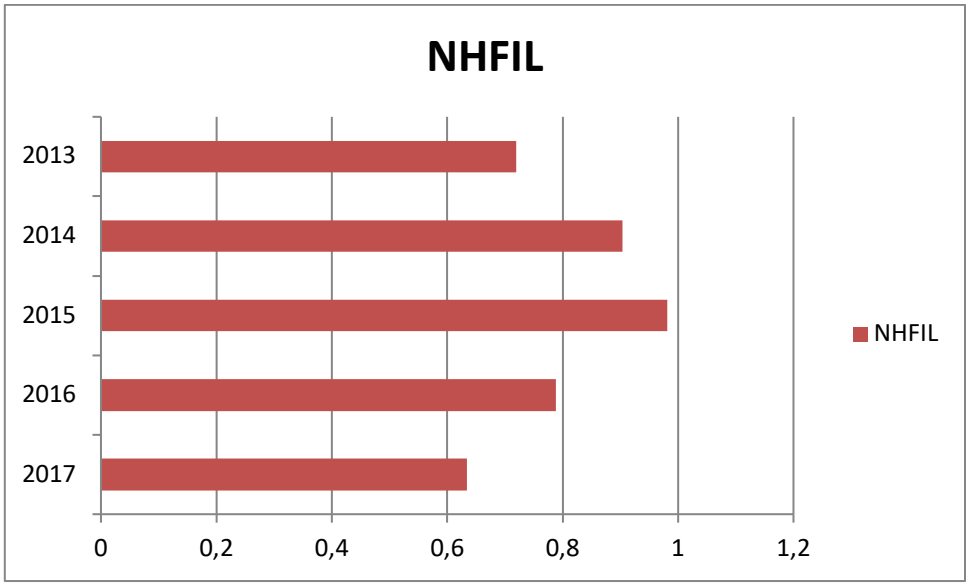



**Figure 2**. Z score of Housing Finance Company (NHFIL)

This graph helps to identify easily the higher and the lower Z scores. According to figure 2, it can be said that in 2015 the Z score of National Housing Finance and investment company (NHFIL) was 0.981 which was higher compared to the rest of the years because in 2015 the current liability was lower than the rest of the four years and in 2017 the Z score of National Housing Finance and investment company (NHFIL) was 0.634 which was lower compared to the rest of the years because in 2017 the current liability was higher than the rest of the four years.

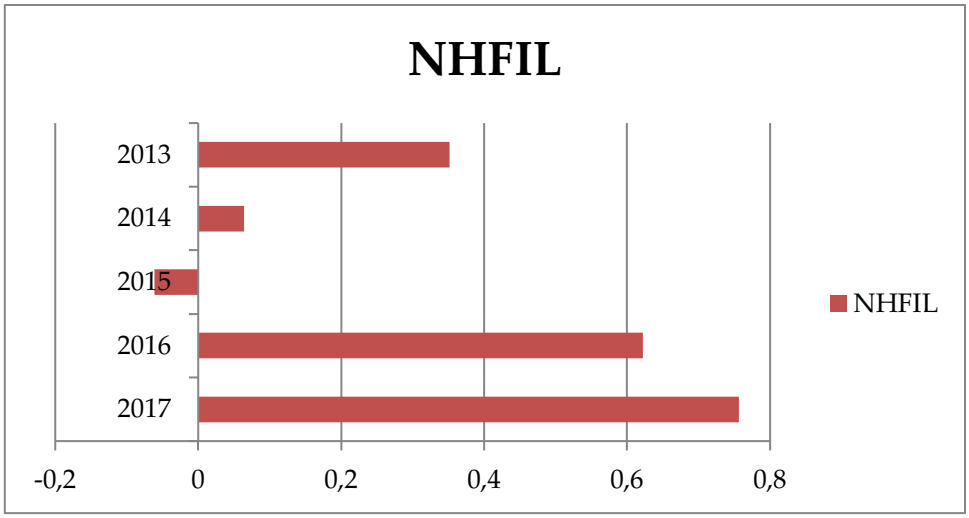



**Figure 3.** H score of Housing Finance Company (NHFIL)

This graph helps to identify easily the higher and the lower H scores. According to figure 3, it can be said that the H score of National Housing Finance and Investment Company (NHFIL) in 2017 was 0.755 which was higher compared to the rest of the four years and in 2015 the H score was on the negative side -0.06 which was lower compared to the rest of the years because the cash flow was on negative side.

**Table 4.** Z & H scores of Investment Finance Companies

| Z Score | 2017 | 2016 | 2015 | 2014 | 2013 | H Score | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FASFIN | 0.441 | 0.512 | 0.447 | 0.492 | 0.656 | | 0.791 | 0.737 | 0.802 | 0.79 | 0.83 |
| LANKA | 0.721 | 0.602 | 0.764 | 0.871 | 0.624 | | 0.956 | 1.056 | 0.895 | 0.42 | 0.58 |
| PRIMEFIN | 0.429 | 0.085 | 0.244 | 0.742 | 0.456 | | -0.16 | 0.242 | 0.751 | 0.69 | 0.90 |
| UNION | 0.677 | 0.802 | 0.796 | 0.740 | 0.468 | | -0.16 | -0.31 | -0.41 | -0.2 | 0.06 |
| UTTARA | 0.532 | 0.578 | 0.758 | 0.491 | 0.632 | | 0.619 | 0.514 | 0.410 | 0.68 | 0.86 |
| BDFinance | 0.731 | 0.795 | 0.771 | 0.748 | 0.813 | | 0.553 | 0.431 | 0.415 | 0.38 | 0.42 |
| Phoenix | 0.710 | 0.716 | 0.654 | 0.664 | 0.70 | | 0.609 | 0.646 | 0.750 | 0.77 | 0.67 |
| FAREAST | 0.439 | 0.763 | 0.871 | 0.947 | 0.879 | | -0.64 | -0.19 | -0.16 | -.15 | -.39 |
| ISLAMIC | 0.461 | 0.509 | 1.036 | 0.753 | 0.732 | | 0.758 | 0.788 | 0.201 | 0.45 | 0.37 |

Table 4 shows the Z and H scores of all the companies under Investment Finance. For the Lanka Bangla Finance the Z score of 2014 is 0.871, for the Fareast the Z score of 2015, 2014 and 2013 are 0.871, 0.947 & 0.879 respectively and for the Islamic Finance the Z score of 2015 is 1.036 which are above the required minimum score of 0.862. On the other side, for the year 2013 to 2017 the H scores of FAS Finance and Investment Limited, Lanka Bangla Finance Limited, Uttara Finance and Investment Limited, Islamic Finance and Investment Limited, Phoenix Finance and Investment Limited, Bangladesh Finance and Investment Company Limited are above the required minimum score of 0. So, it can be said that based on Springate Model in 2014 Lanka Bangla Finance, in 2013 to 2015 Fareast Finance and Investment Company Limited and in 2015 Islamic Finance and Investment Limited have performed well as the Z scores are above the required minimum score 0.862. Based on Fulmer Model from 2013 to 2017 FAS Finance and Investment Limited, Lanka Bangla Finance Limited, Uttara Finance and Investment Limited, Islamic Finance and Investment Limited, Phoenix Finance and Investment Limited, Bangladesh Finance and Investment Company Limited have performed well as the H scores are above the required minimum score 0.

**Table 5.** Z & H Score of Investment Finance Company (Below the Required Minimum Scores)

| **Z Score** | **2017** | **2016** | **2015** | **2014** | **2013** | **H Score** | **2017** | **2016** | **2015** | **2014** | **2013** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FASFIN | 0.441 | 0.512 | 0.447 | 0.492 | 0.656 | | | | | | |
| LANKA | 0.721 | 0.602 | 0.764 | | 0.624 | | | | | | |
| PRIMEFIN | 0.429 | 0.085 | 0.244 | 0.742 | 0.456 | | -0.16 | | | | |
| UNION | 0.677 | 0.802 | 0.796 | 0.740 | 0.468 | | -0.16 | -0.31 | -0.41 | -0.2 | |
| UTTARA | 0.532 | 0.578 | 0.758 | 0.491 | 0.632 | | | | | | |
| BDFinance | 0.731 | 0.795 | 0.771 | 0.748 | 0.813 | | | | | | |
| Phoenix | 0.710 | 0.716 | 0.654 | 0.664 | 0.70 | | | | | | |
| FAREAST | 0.439 | 0.763 | | | | | -0.64 | -0.19 | -0.16 | -.15 | -.39 |
| ISLAMIC | 0.461 | 0.509 | | 0.753 | 0.732 | | | | | | |

From the table 5, it can be said that the separate list of the companies of Z and H scores which are below the required minimum score of 0.862 and 0. The table shows that the Z scores of FAS finance and Investment Limited are below the required minimum scores for 2013 to 2017. The reason that has been worked behind this was the higher current liabilities compared to the other companies under the investment finance. Again, the working capital, EBIT and sales of 2013 to 2017 are lower compared to the other companies. That's why the value of the Z score is low. For

the Lanka Bangla Z scores of 2017, 2016, 2015 and 2013 are below the required minimum score of 0.862 because the current liabilities of 2017, 2016, 2015 and 2013 were 32,357,205,908, 30,044,109,653, 17,590,129,357, 14,405,095,288 respectively which were higher comparatively to the current liability of 2014 because in 2014 the current liability was 10,043,616,801**.** That's why the calculated Z score of 2014 is 0.871 which is above the required minimum score of 0.862 and Z scores of the rest of the four years are below the required minimum score of 0.862. Again in 2014 the Z score of Lanka Bangla Finance is above the required minimum score of 0.862 because the working capital, EBIT and sales are higher compared to the 2013, 2015, 2016 and 2017.

For the Prime Finance and Investment Company Limited, Union Capital Limited, Uttara Finance Limited, Bangladesh Finance and Investment Company Limited and Phoenix Finance and Investment Limited the Z scores of all 5 years are below the required minimum score because their current liabilities were high and the sales, EBIT and working capital are low compared to the other companies. The Z score of the Fareast Company of 2017 and 2016 were below the required minimum score and in 2013 to 2015 the Z scores are above the minimum required scores because the current liabilities of 2013 to 2015 were low compared to the current liabilities of 2016 and 2017 and the sales and EBIT of 2013 to 2015 were low compared to 2016 and 2017. Again, the Z scores of Islamic Finance and Investment Limited for 2017, 2016, 2014 and 2013 are below the required minimum score 0.862 and for 2015 it is above the required minimum score for lower current liabilities compared to the current liabilities of 2017, 2016, 2014 and 2013 and the total assets of 2015 was low compared to the rest of the four years that's why the Z score is high compared to the other years.

According to the Springate Model, Lanka Bangla Finance has performed well in 2014, Fareast Finance and Investment Limited has performed well in 2013 to 2015 and Islamic Finance and Investment Limited has performed well in 2015.

According to the H scores of FAS Finance and Investment Limited, Lanka Bangla Finance Limited, Uttara finance and investment Limited, Phoenix Finance and Investment Limited and Bangladesh Finance and Investment Company Limited have performed well in 5 years 2013 to 2017. Prime finance and investment Limited has performed well in 2013 to 2016 but in 2017 it has not performed well as the H score is below the minimum required score 0. This is due to the following reasons

Net Income before Taxes and Interest (EBIT) was on the negative side.

Retained Earnings was on the negative side.

Union Capital Limited has performed well in 2013 as the H score is the above the required minimum score of 0. But it has not performed well in 2014 to 2017 as the H scores of those four years are below the required minimum scores of 0 because in 2014 to 2017 total liabilities of Union Capital are higher than the total liability of 2013. That's why the H score in 2013 is positive but according to the calculation H scores are negative from 2014 to 2017.

The performance of Fareast Finance and investment Limited was not so well in past 5 years according to the Springate and Fulmer Models. In 2017 the H score is below the required minimum score because the cash flow and the retained earnings are on the negative side. In 2013 the H score was negative because the retained earnings are on negative side. In 2014 to 2016 the H scores become negative because the current liabilities were high that why the calculated v5 is high and the H score is negative which is below the required minimum score 0.

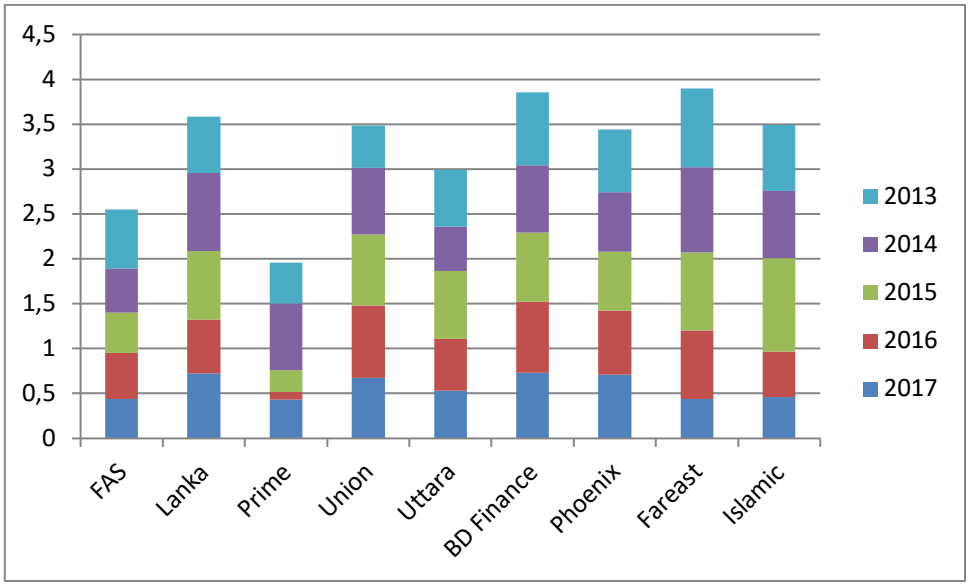



**Figure 4.** Z scores of Investment Finance Companies

Figure 4 helps to identify the higher and lower Z score of the investment company. With the help of this graph the comparison of the performances of all the Investment Finance Companies over years or with the other investment companies can be made easily. From the graph it can be seen that for 2015 the Z score of Islamic Finance and Investment Limited is 1.036 which is higher than other 8 companies and for 2016 the Z score of Prime Finance and Investment Limited is 0.085 which is lower than other 8 companies.

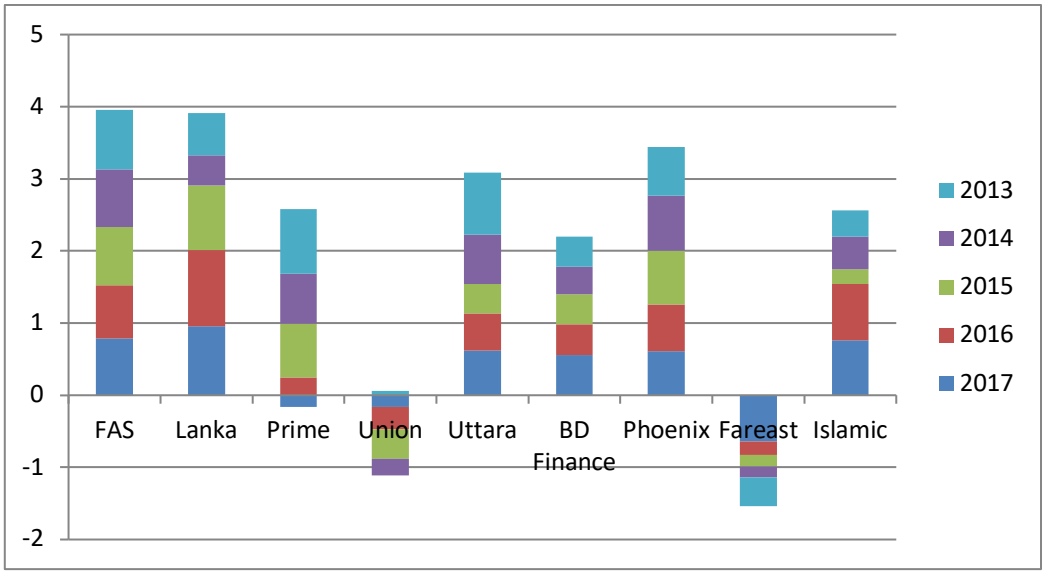



**Figure 5.** H scores of Investment Finance Companies

Figure 5 helps to identify the highest and the lowest H scores of the investment Finance company. The graph shows that for 2016 the H score of Lanka Bangla Finance Limited is 1.056 which is higher than other 8 companies and for 2017 the H score of Fareast Finance and Investment Limited is -0.64 which is lower than other 8 companies. Again, the graph shows that Union Capital Limited and Fareast Finance Limited have not performed well as the H Scores are negative.

**Table 6**. Asset or Leasing Finance Companies

| **Z Score** | **2017** | **2016** | **2015** | **2014** | **2013** | **H Score** | **2017** | **2016** | **2015** | **2014** | **2013** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UNITED | 0.677 | 0.679 | 0.674 | 0.599 | 0.646 | | 0.434 | 0.09 | .316 | 0.41 | 0.47 |
| IPDC | 0.555 | 0.558 | 0.782 | 0.832 | 0.716 | | 0.629 | 0.69 | 1.02 | 0.95 | 0.85 |
| IDLC | 0.686 | 0.741 | 0.474 | 0.480 | 0.509 | | 0.87 | 0.64 | 1.10 | 0.93 | 0.98 |
| GSP | 0.788 | 0.766 | 0.687 | 0.679 | 0.629 | | 0.85 | 0.90 | 0.93 | 0.68 | 0.83 |
| International Leasing | 0.505 | 0.757 | 0.828 | 0.763 | 0.715 | | 0.281 | -.04 | -.29 | -.18 | -.11 |
| FIRST | 0.464 | 0.427 | 0.591 | 0.725 | 0.835 | | 1.45 | 0.64 | 0.37 | 0.37 | 0.32 |
| BIFC | -.960 | -0.13 | 0.09 | 0.453 | 0.461 | | -2.73 | 0.09 | 0.44 | 0.86 | 0.72 |
| PREMIER | 0.369 | 0.367 | 0.316 | 0.486 | -0.30 | | 1.099 | 0.72 | 0.76 | 0.45 | 0.71 |
| BAY Leasing | 0.656 | 0.616 | 0.567 | 0.678 | 0.643 | | 0.768 | 0.73 | 0.81 | 0.85 | 1.13 |
| PLFSL | 0.423 | 0.651 | 0.240 | 0.812 | 0.841 | | 0.020 | -.40 | 0.14 | 0.14 | 0.17 |

From table 6, it can be seen that Z & H scores of all asset or leasing finance companies. According to the calculation based on Springate Model the Z scores of all the asset or leasing finance companies are below the required minimum score 0.862. But the Z scores of IPDC Finance and People's Leasing Financial Service Limited in 2013 and 2014 are nearly the required minimum score 0.862. The Z scores of Bangladesh Industrial Financial Co. Limited are very poor.

From the H scores, according to the calculation based on Fulmer Model all the companies have performed well except international Leasing Financial Service limited in 2013 to 2016, Bangladesh Industrial Finance Co. Limited in 2017 and People's Leasing Financial Service Limited in 2016.

**Table 7.** Z & H Scores of Asset/Leasing Finance Companies (Below the Required Minimum)

| **Z Score** | **2017** | **2016** | **2015** | **2014** | **2013** | **H Score** | **2017** | **2016** | **2015** | **2014** | **2013** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UNITED | 0.677 | 0.679 | 0.674 | 0.599 | 0.646 | | | | | | |
| IPDC | 0.555 | 0.558 | 0.782 | 0.832 | 0.716 | | | | | | |
| IDLC | 0.686 | 0.741 | 0.474 | 0.480 | 0.509 | | | | | | |
| GSP | 0.788 | 0.766 | 0.687 | 0.679 | 0.629 | | | | | | |
| International Leasing | 0.505 | 0.757 | 0.828 | 0.763 | 0.715 | | | -.04 | -.29 | -.18 | -.11 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FIRST | 0.464 | 0.427 | 0.591 | 0.725 | 0.835 | | | | | | |
| BIFC | -.960 | -0.13 | 0.09 | 0.453 | 0.461 | | -2.73 | | | | |
| PREMIER | 0.369 | 0.367 | 0.316 | 0.486 | -0.30 | | | | | | |
| BAY Leasing | 0.656 | 0.616 | 0.567 | 0.678 | 0.643 | | | | | | |
| PLFSL | 0.423 | 0.651 | 0.240 | 0.812 | 0.841 | | | -.40 | | | |

The reasons that work behind the low Z scores are in 2013 to 2017 EBIT and sales were lower than the other companies. That's why the Z score is low and it cannot cross the required minimum score 0.862. For, IPDC Finance Limited, IDLC Finance Limited, GSP Finance Company Limited, International Leasing & Financial Service Limited, First Finance Limited, Premier Leasing & Finance Limited, Bay Leasing & Investment same reason has worked behind the lower Z score than the required minimum score. The Z score of Bangladesh Industrial Finance Co. Limited in 2017 is negative because the current liability of 2017 was higher than the current assets. In 2016 the Z score in negative because EBIT was only on negative side. In 2013 to 2015 the EBIT was low that's why the calculated Z score is low.

Again, according to the calculation of H scores based on Fulmer Model all the companies have performed well except international Leasing Financial Service limited in 2013 to 2016, Bangladesh Industrial Finance Co. Limited in 2017 and People's Leasing Financial Service Limited in 2016. The reasons that work behind the negative H scores are retained earnings, sales and EBIT were low that's why the calculated value of v1, v2, v3 are low and liabilities were high that's why v5 is high and for all the values the calculated H score is low means negative.

The H score of Bangladesh Industrial Finance Co. Limited in 2017 is negative because the retained earnings and the cash flow were on negative side.

The H score of People's Leasing Financial Service Limited in 2016 is negative or below the required minimum score o because the cash flow, EBIT and the retained earnings were on negative side.

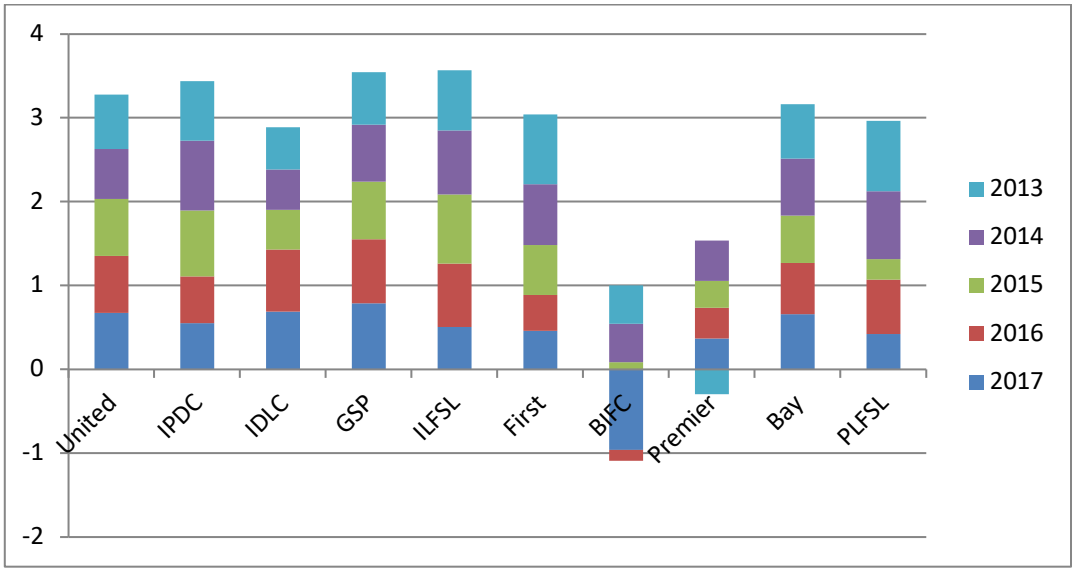



**Figure 6.** Z scores of Asset/Leasing Finance Companies

Figure 6 helps to identify the higher and lower Z scores of the asset or leasing finance company. From the graph it can be said for 2013 the Z score of People's Leasing and Financial Service Limited is 0.841 which is higher than other 9 companies and for 2017 the Z score of Bangladesh Industrial Finance Company Limited is -0.960 which is lower than other 9 companies. The performance of Bangladesh Industrial Finance Co. Limited in 2016, 2017 and Premier Finance and Investment Limited in 2013 is poor as the calculated Z scores are on negative side.

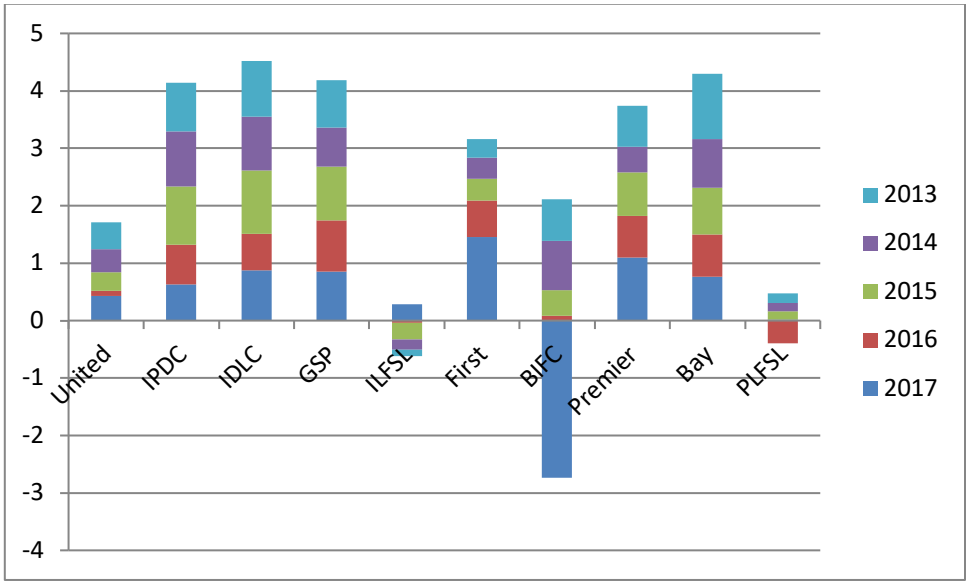



Figure 7. H scores of Asset/Leasing Finance Companies

Figure 7 helps to identify the higher and lower H scores of the asset or leasing finance company. For 2017 the H score of First Finance Limited is 1.45 which is higher than other 9 companies and for 2017 the Z score of Bangladesh Industrial Finance Company Limited is -2.73 which is lower than other 9 companies.

Segment Leaders:

The average value or the mean value of Z and H score of all the five years are taken for further analysis. The following table contains average Z score and average H score of different NBFIs.

**Table 8.** Average Z Scores of 20 listed NBFIs for the period 2013 to 2017

| **Housing Finance Companies** | | **Investment Finance Companies** | | **Asset/Leasing Finance Companies** | |
|---|---|---|---|---|---|
| *Company Name* | *Average Z Scores* | *Company Name* | *Average Z Scores* | *Company Name* | *Average Z Scores* |
| NHFIL | 0.805582504 | FAS | 0.510054201 | UNITED | 0.655052198 |
| | | LANKA | 0.716568252 | IPDC | 0.688462007 |
| | | PRIME | 0.391535515 | IDLC | 0.578306736 |
| | | UNION | 0.696434908 | GSP Finance | 0.709853211 |
| | | UTTARA | 0.598494758 | International Leasing | 0.713558876 |
| | | BD Finance | 0.771549272 | FIRST | 0.608327195 |
| | | PHOENIX | 0.688430886 | BIFC | -0.01722768 |
| | | FAREAST | 0.779994472 | PREMIER | 0.248563784 |
| | | ISLAMIC | 0.698434973 | BAY Leasing | 0.632095211 |
| | | | | PLFSL | 0.593367577 |

From the table 8, it is evident that the Z scores of National Housing Finance and Investment Limited (NHFIL) from housing finance segment, Fareast Finance and Investment Company from investment finance segment and International Leasing Financial Service Limited from asset or leasing segment are 0.805582504, 0.779994472, 0.713558876 respectively. So, it can be easily said according to the average Z scores that these three companies lead the market.

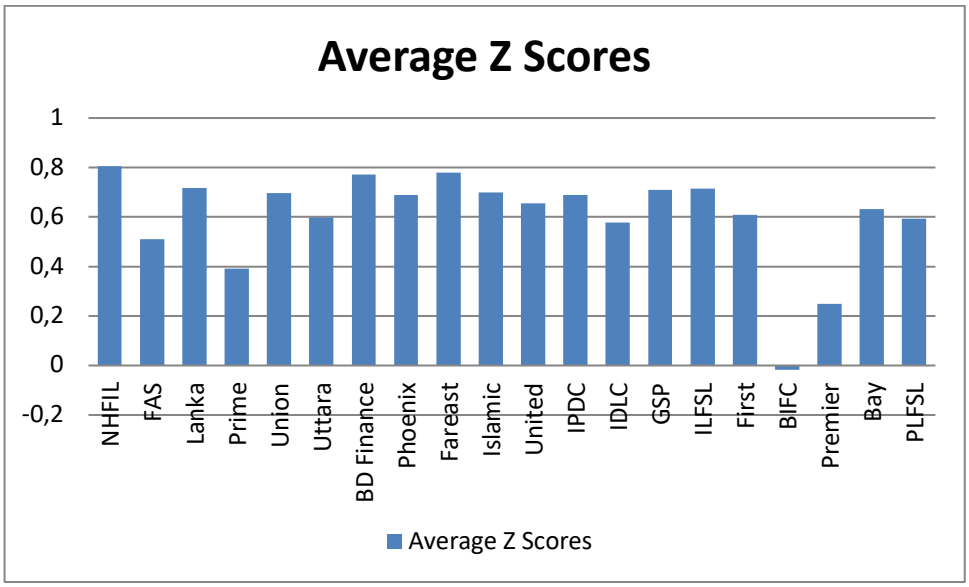



Figure 8. Average Z Scores of 20 listed NBFIs

From the figure 8, it is evident that National Housing Finance and Investment Limited (NHFIL), Fareast Finance and Investment Company and International Leasing Financial Service Limited are the leaders in Housing Finance, Investment Finance and Asset Finance segment respectively according to the average Z scores of the Springate Model. This means that these companies have very high level of solvency when compared to others based on average Z scores. Again, when a comparison is made between the 20 companies, it is easily understood from the graph that National Housing Finance Limited (NHFIL) has performed very well and the performance of Bangladesh Industrial Finance Co. Limited is poor among the 20 Non-Banking Financial Institutions based on the calculated average Z scores by using Springate Model.

**Table 9.** Average H Scores of 20 listed NBFIs for the period 2013 to 2017

| **Housing Finance Companies** | | **Investment Finance Companies** | | **Asset/Leasing Finance Companies** | |
|---|---|---|---|---|---|
| *Company Name* | *Average H Scores* | *Company Name* | *Average H Scores* | *Company Name* | *Average H Scores* |
| NHFIL | 0.805582504 | FAS | 0.790687338 | UNITED | 0.343257697 |
| | | LANKA | 0.781836521 | IPDC | 0.827506085 |
| | | PRIME | 0.48408727 | IDLC | 0.904300548 |
| | | UNION | -0.209266625 | GSP Finance | 0.836741524 |
| | | UTTARA | 0.617595136 | International Leasing | -0.067513127 |
| | | BD Finance | 0.439477335 | FIRST | 0.631438914 |
| | | PHOENIX | 0.688661666 | BIFC | -0.124469703 |
| | | FAREAST | -0.306767546 | PREMIER | 0.748572807 |
| | | ISLAMIC | 0.513311264 | BAY Leasing | 0.858743765 |

| | | | | | |
|---|---|---|---|---|---|
| | | | | PLFSL | 0.014397184 |

From the table 9, it is evident that the average H scores of National Housing Finance and Investment Company (NHFIL) from housing finance segment, FAS Finance and Investment Company from investment segment and Bay Leasing and Investment Limited from asset or leasing finance segment are 0.346322917, 0.790687338, 0.858743765 respectively. So, it can be easily said that these three companies lead the market according to the average H scores based on Fulmer Model.

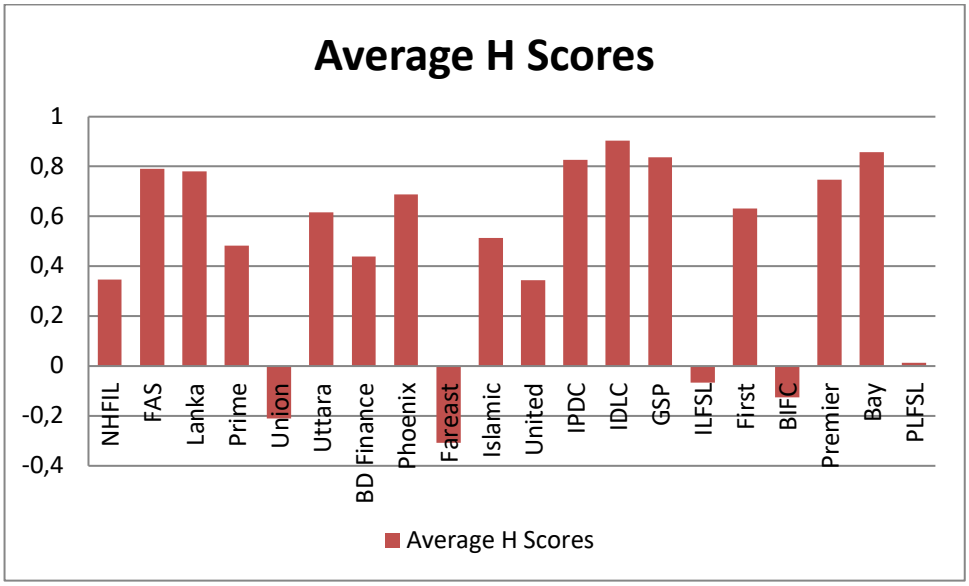



**Figure 9**: Average H Scores of 20 listed NBFIs

From the figure 9, National Housing Finance and Investment Company (NHFIL), FAS Finance and Investment Company and Bay Leasing and Investment Limited are leaders in Housing Finance, Investment Finance and Asset Finance respectively according to the average H scores of the Fulmer Model. This means that these companies have very high level of solvency when compared to others based on average H scores. Again, when a comparison is made between the 20 companies, it is understood from the graph that Bay Leasing and Investment Limited has performed very well and Fareast Finance and the performance of Investment Limited is poor among the 20 Non-Banking Financial Institutions based on the calculated average H scores by using Fulmer Model.

**Findings of the Study:**

The main purpose of this study is to predict the solvency of listed Non-Banking Financial Institutions (NBFIs) and also find out the factors that have an impact on solvency. With the help of this study two things can be understood. First of all, a comparison can be made of a NBFI's performance over years or with other NBFIs in an industry. From the Z scores of National Housing Finance and Investment Limited and from the performance of NHFIL over the years it can be easily understood that the performance is not so good but according to the H scores it has performed well.

Again, among 20 listed NBFIs National Housing Finance and Investment Limited has performed well based on the average Z scores. According to H scores among 20 listed Non-Banking Financial Institutions IDLC Finance Limited has performed very well as it has the highest H score.

In addition, based on Z scores no company can attain the minimum Z score 0.862 as per Springate Z score model. So according to Springate Z score model these 20 companies are insolvent or in risky zone. However, according to Fulmer H score model based on H scores except Union Capital Limited, Fareast Finance and Investment Limited, Bangladesh Industrial Finance Co. Limited and International Leasing and Financial Services Limited are insolvent as they have failed to attain the minimum H score but the rest 16 companies are solvent or in out of danger.

Both Springate and Fulmer models demonstrate the financial conditions of the companies based on the financial data but the results are different for both models. Fulmer model has identified few companies are insolvent while Springate model has indicated that all the companies are insolvent.

**Limitations:**

The Research has been conducted on Predicting Solvency of listed Non-Banking Financial Institutions (NBFIs) of Bangladesh based on last five years (2013 to 2017) using Springate and Fulmer Models. There are 23 listed Non-Banking Financial Institutions in Bangladesh. But in this paper 20 listed Non-Banking financial institutions have been covered. Because of the shortage of the information of other three NBFIs Delta Brac Housing Finance Corporation Limited, MIDAS Financing Limited and Investment Corporation of Bangladesh Limited (ICB) have not been included in this paper. So, it was a limitation of this study.

**Conclusion:**

The main focus of this study is to find out the financial solvency of publicly traded Non-Banking Financial Institutions (NBFIs). This study is effective for the both shareholders and the stakeholders in making decisions for future investments. From all the findings and analysis of twenty Non-Banking Financial Institutions (NBFIs) using Springate Z score model and Fulmer H score model, it can be understood that according to Z scores these twenty NBFIs are insolvent though some of them are nationally or internationally known for their outstanding performances and for their contribution to the economic development of our country. Again, Fulmer H score model gives the opposite result that sixteen Non-Banking Financial Institutions are solvent out of twenty companies. So, it can be concluded that may be Springate Z score model is not appropriate for Bangladesh. Fulmer H score model is more appropriate for our country for predicting solvency because in Fulmer model more variables are used compare to Springate Model.

**References**

Ahammed, S., & Mohammad, S. A. (2017, July-August). Operational Performance of Non-Bank Financial Institutions in Bangladesh: A Study on Lanka Bangla Finance Ltd. *Journal of Economics and Finance, 8*, 67-73.

Ahmed, M. N., & Chowdhury, M. I. (2007, March). Non-Bank Financial Institutions in Bangladesh: An Analytical Review. *Working Paper Series: WP 0709, Bangladesh Bank*.

Ahmed, T., & Alam, S. (2015, Novemver-December). Prediction of Financial Distress in Banking Companies of Bangladesh and a Need for Regulation by FRC. *The Cost and Management, 43(6)*, 13-19.

Alareeni, B., & Branson, J. (2012). Predicting Listed Companies Failure in Jordan Using Altman Models: A Case Study. *International Journal of Business and Management, 8(1)*.

Altman, E. (1993). Corporate Financial Distressand Bankruptcy. *John Wiley & Sons, Inc.*

Anjum, S. (2012). Business Bankruptcy Prediction models: A Significant Study of the Altman's Z-score Model. *Asian Journal of Management Research, 3(1)*, 212-219.

Arasu, D. R., Balaji, D. C., Kumar, D. S., & Thamizhselvi, N. (2013). Applicability of Fulmer and Springate models for predicting financial distress of firms in the finance sector– An Empirical analysis. *Elk Asia Pacific Journal of Finance and risk management, 4(1)*.

Bardi, S. C., Kastiya, S., & Bardi, G. (2011, January). Inferential Statistics as a Measureof Judging the Short-Term Solvency:An Empirical Study of FivePharmaceutical Companies in India. *The IUP Journal of Accounting Research and Audit Practices, 10(1)*, 69-80.

Botheras. (1979). Use of a Business Failure Prediction Model for Evaluating Potential and Existing Credit Risk. *MBA Reserch Project, Simon Fraser University*.

Chowdhury, A., & Barua, S. (2009). Rationalities of Z-category shares in Dhaka stock exchange: are they in financial distress risk? *Brac University Journal, 6(1)*.

Datta, S., E, M., & Datta, I. (1995, April). Corporate Partial Acquisitions, Total Firm Valuation and The Effect of Financing Method. *Journal of Banking and Finance, 19(1)*, 97-115.

Doukas, J. (1986). Bankers Versus Bankruptcy Prediction Models: An Empirical Investigation. *Applied Economics*, 479-493.

Dugan, M. T., & Zavgren, C. V. (1988). Bankruptcy Prediction Research: A Valuable Instructional Tool. *Issues in Accounting Education, 3(1)*, 48-64.

E.Mossman, C., G.Bell, G., Swartz, L., & Turtle, H. (1998, May). An Empirical Comparison of Bankruptcy Models. *The Financial Review, 33(2)*.

Edmister, R. O. (1972, March). An Empirical Test of Financial Ratio Analysis for Small Business Failure Prediction. *The Journal of Financial and Quantitative Analysis, 7(2)*, 1477-1493.

Eliona, G., & Valbona, B. (2016). The Determinants of Non-Banking Financial Institutions Profitability. *Research Journal of Finance and Accounting, 7(20)*, 5-10.

Fulmer, J., Moon, J., Gavin, T., & Erwin, M. (1984). A Bankruptcy Classification Model for Small Firms. *Journal of Commercial Bank Lending*.

Gerantonis, N., Vergos, K., & Christopoulos, A. G. (2009, October). Can Altman Z-score Models Predict BusinessFailures in Greece? *Research Journal of International*, 21-28.

Goldsmith, R. (1969). Financial Structure and Development, Yale University Press, London.

Hamid, T., Akter, F., & Rab, N. B. (2016). Prediction of Financial Distress of Non-Bank Financial Institutions of Bangladesh using Altman's Z Score Model. *International Journal of Business and Management, 11(12)*, 261-270.

Hasan, J. (2018, December 15). NBFIs in Tight Corner. *Financial Express*.

Hasan, K., & Khanom, F. A. (2013). Performance Evaluation of Public Sector General Insurance Company in Bangladesh- A Case Study on SBC. *European Journal of Business and Management, 5(25)*.

Hayes, S. K., Hodge, K. A., & Hughes, L. W. (2010, October). A Study of the Efficacy of Altman's Z To Predict Bankruptcy of Specialty Retail Firms Doing Business in Contemporary Time. *Economics & Business Journal, 3(1)*, 122-134.

Imanzadeh, P., Maran-Jouri, M., & Sepehri, P. (2011). A Study of the Application of Springate A study of Application of Springate and Zmijewski Bankruptcy Prediction Models in Firms Accepted in Tehran Stock Exchange. *Australian Journal of Basic and Applied Sciences, 5(11)*, 1546-1550.

Islam, M. A., & Osman, J. B. (2011). Development Impact of Non-Bank Financial Intermediarieson Economic Growthin Malaysia: An Empirical Investigation. *International Journal of Business and Social Science, 2(14)*, 187-198.

Jaisheela, B. (2015, January). A Study of Financial Health of Leasing Companies: Z Score Analysis. *Journal of Business Administration and Management Sciences Research, 4(1)*, 015-019.

Kasilingam, R., & Ramasundaram, G. (2012, April-September). Predicting Solvency of Non-Banking Financial Institutions in India. *Journal of Services Research, 12*, 1-25.

Lewis, J. (2013). A Contingent Claims Approach to Measuring Insolvency Risk: An Empirical Assessment of the Impact of the Global Financial Crisis Onjamaica and its Financial Sector. *Business, Finance & Economics in Emerging Economics, 8(2)*, 1-22.

Mamo, A. Q. (2011). Applicability of Altman (1968) Model in Predicting Financial Distress of Commercial Banks in Kanya. *MBA Research Project*.

Md.Mostofa, Rezina, S., & Md.Hasan. (2016, January). Predicting the Financial Distress in the Banking Industry of Bangladesh: A Case Study on Private Commercial Banks. *Australian Academy of Accounting and Finance Review, 2(1).*

Mohammed, A. A., & Kim-Soon, N. (2012, July). Using Altman's Model and Current Ratio to Assess the Financial Status of Companies Quoted In the Malaysian Stock Exchange. *International Journal of Scientific and Research Publications, 2(7).*

R., A., & R, K. (2011, January-March). Predicting Solvency: Indian IT Companies. *SCMS Journal of Indian Management, 8(1)*, 81-95.

Rawi, K. A., Kiani, R., & Vedd, R. R. (2008, July). The Use Of Altman Equation For Bankruptcy Prediction In An Industrial Firm (Case Study) . *International Business & Economics Research Journal, 7(7)*.

Ross, S. A., Westerfield, R. W., & Jaffe, J. (2007). *Modern Financial Management 8th Edition.*

S.C.Bardia. (2012, January). Predicting Financial Distress and Evaluating Long-Term Solvency: An Empirical Study. *The IUP Journal of Accounting Research & Audit Practices, 11(1)*, 47-61.

S.Thomas, M.W.Wong, J., & Zhang, J. (2011, October). Applying Z-score Model to Distinguish Insolvent Construction Companies in China. *Habitat International, 35(4)*, 599-607.

Springate, G. (1978). Predicting the Possibility of Failure in a Canadian firm: A Discriminant Analysis.

Taffler, R. (1983). The Assessment of Company Solvency and Performance Using a Statistical Model. *Accounting and Business Research, 13(52)*, 195-308.

Telmoudi, F., Ghourabi, M. E., & Limam, M. (2011). Rst–Gcbr-Clustering-Based Rga–SVM Model for Corporate Failure Prediction. *Intelligent Systems in Accounting, Finance and Management*, 105-120.

Vittas, D. (1997, November). The Role of Non-Bank Financial Intermediaries in Egypt and other MENA countries. *World Bank Policy Research Working Paper*, 1-34.

Journal of Management and Economic Studies
2020, 2(1): 70-78 DOI: 10.26677/TR1010.2020.428
Journal Homepage: https://www.jomaes.org

# Factors related to the term "Halal" affecting the Purchase Intention of Non-Muslim Consumers in Bangladesh

**Abul Khair Jyote**, Independent University, Bangladesh, akj.iub@iub.edu.bd

**Dhritiparna Kundu**, Independent University, Bangladesh, dhritiparnakundu@gmail.com

**Abstract**

The Halal concept commonly concerns Muslim consumers. But nowadays, it is also being attractive for non-Muslim customers. The rising anxiety on health, a halal diet business strategy nowadays has huge budding in taking non-Muslim as a target audience as well. General consumers are not only adopting this concept for the religious value; but also, they prefer it for its hygiene, cleanliness and the quality of food. For that reason, this product concept is creating hyped in Bangladesh. At this moment general consumers are aware of environmental pollution, adulterated food products, animal welfare. Hence, they like to prefer trustworthy sources for product consumption which will help them to care about society. As a result, Local companies are taking this advantage and creating hype by offering Halal items. Mostly every religion's people like to buy halal items for adopting the safe side. Because they believe that for the religious promise companies will maintain the product quality which will safe to consume. Now, many renowned brands that are offering Halal product lines to attract customers in Bangladesh. As Bangladesh is a Muslim country, easily this concept is being appreciable to everyone. Moreover, after considering the rising demand for Halal products Bangladesh government has currently providing certification for Halal food manufacturing and food outlets facilities inside the country (Nisha and Iqbal, 2017).

However, the data has been collected through the structured close-ended questionnaire survey consisting of 121 non-Muslim communities in Bangladesh. The analysis supported Halal awareness, Halal certification; marketing promotion and Brand were constructively correlated with the purchase intention. The time duration of the data collection was more than two weeks. Basically, the aim of this study is to identify the factors which affect the purchase intention of non-Muslim consumers to buy Halal items in Bangladesh.

**Keywords**: Halal awareness, Halal certification, quality product, purchase intention, Bangladesh.

## Introduction

Halal, which signifies "admissible" or "permitted" in Arabic, is basically a lifestyle and isn't exclusively restricted to the kinds of food that a Muslim is permitted to devour. However, nourishment is a fundamental part of the sustenance expected to have a significant existence. In Islam Halal is not just a concept or ritual, it's like how can people prepare the food by maintaining safety, hygiene, and healthiness (Golnaz, Zainalabidin, Mad Nasir & Eddie Chiew, 2010). Besides, Halal food represents healthy eating. And people can able to live a healthy life, who usually

follow this idea. Nowadays, people become more conscious of their daily life. Today, Halal is no longer an insignificant strict commitment or recognition yet is considered as the standard of decision for Muslims just as non-Muslims around the world (Golnaz et al., 2010). Not only the Muslim but also non-Muslim people all over the world have knowledge about the Halal concept. And they also get an idea about the good side of it. As per Canadian Agri-Food Trade Service Report (2008), there is a huge demand for Halal goods in a number of non-Muslim states forever group of customers. Halal items are also being very popular in Bangladesh because of the trustworthiness of religious issues.

**Literature Review**

The halal market is assessed to be worth US$580 billion every year internationally and the halal nourishment ventures evaluated development rate is 7%annually (Aziz and Chok, 2013). Basically, the halal growth status can be connected to religious rituals and beliefs that it is disinfectant, healthier, and delicious (Burgmann, 2007). Now, people consider the halal logo as the symbol of quality items with religious fulfillment (Burgmann, 2007; Aziz and Chok, 2013). Today, non-Muslim consumers are also adopting halal products, because they believe that by this concept people being humanitarian to animal treatment. Because of religious belief, general people trust that halal products are more hygienic and safer to consume (Golnaz et al., 2010).

This article develops a conceptual framework, which represents the correlation between the halal awareness, halal certification, food product quality, marketing promotion, and brand with purchase intention of halal products in Bangladesh. Each variable has been selected by the analysis of previous studies.

**Halal Awareness**

Nowadays, Bangladesh has seen a rising interest for Halal items and administrations as its Muslim population has gotten progressively mindful of their strict command and that's just the beginning touchy to non-Halal items and administrations (Rahman et al., 2014; Nisha and Iqbal, 2017). As a result, halal items are increasing day by day in the Bangladeshi market. According to the previous study, just halal labeling of the halal product is may not refer to Halalization. The flavor, color, and ingredients selection are also should be included in this process to make it more authentic (Ismail and Ehsan, 2008). As non-Muslim people have limited knowledge about halal food, they just consider the label and logo too by any halal items. Because, they think that halal food is more hygienic, wholesome and taster because of its quality maintaining process (Aziz and Chok, 2013). According to previous studies, for the awareness about quality foods, non-Muslim people are being motivated to purchase halal items. So, it can be said that people's purchase intention of halal items depends on the awareness about quality food (Aziz and Chok, 2013).

**Halal Certification**

According to a previous study Islamic finance is creating at a noteworthy pace and the utilization of Halal-certified items and administrations has gotten an incredible showing power all over the world (Nisha and Iqbal, 2017). Furthermore, Halal documentation refers to the authorized recognition of the arranged process of research, slaughtering, cleaning, management and other related supervision practices by the conventional body (Aziz and Chok, 2013). In South Asia, Muslim countries are growing rapidly and most of the country is following the halal business concept (Nisha and Iqbal, 2017). By representing the hygienic and wholesomeness this concept being popular day by day. For that reason, different brands are using the halal symbol on their product's packaging to make it trustworthy to the customers. At this moment, ensuring the utilization of Halal items and services is a focal part of the social personality of Southeast Asian Muslims (Iqbal and Nisha, 2016). As being a Muslim state Bangladeshi business industry is also

following the Halal concept. Bangladeshi consumers have a strong awareness of halal items (Nisha and Iqbal, 2017). Basically, qualified halal items are an obligation for the Muslim as part of religious requirements. But interestingly, Muslim and non-Muslim people both are preferring halal items for their daily consumption purpose (Aziz and Chok, 2013). Because, they consider halal food more nutritious, healthy, clean and well prepare. With the help of social media and traditional books, people are getting an idea about the halal concept, that is why non-Muslim people are also being interested in it. For that reason, halal certification is necessary. But Muslims in Bangladesh think that only advertisement and promotional campaign is not enough to make the people aware of halal items. Now, Bangladesh is taking various steps to make the concept authorized (Islam and Chowdhury, 2018). There is observational proof to help the reason that non-Muslims are worried about food hygiene, which positively impacts the possibility of their attitude on the halal product (Golnaz et al., 2010; Aziz and Chok, 2013). The previous study shows that the certification of halal food is being trustworthy to non-Muslim customers and they feel positive to buy those items which are authorized by Government. So, it is proven that authorized halal products are influencing non- Muslim consumer's buying perception (Golnaz et al., 2010; Aziz and Chok, 2013).

**Product quality**

For a consumer quality product is the main concern before purchase. Product quality or food quality refers to physical creation aspects such as taste, appearance, and other qualities (Aziz and Chok, 2013). Moreover, Quality is an attractive trait of an item or service that is required by the consumers (Canavari, Castellini & Spadoni, 2010). Additionally, purchaser acknowledgment is regularly the way to progress the extent that the food maintenance strategy is concerned. The general rules in Islam express the particular thought processes behind the halal idea (Lampila and Lähteenmäki, 2007). Not only for religious value, but also the purposes also include preserving life, to safeguard upcoming generations, and to maintain self-esteem and truthfulness (Muhammad, Norhaziah, Nuradli and Hartini, 2007). With the help of a halal concept, the producer can ensure quality products. And for that reason, general people nowadays are relying on halal food. As a result, the Halal concept being acceptable and trustworthy for non-Muslims; because it representing the quality product in front of everyone. As indicated by Newberry, Klemz, and Boshoff (2003), product quality is viewed as one parameter in foreseeing purchase intention. So it can say that product quality has a positive correlation with consumer's purchase intention. Because only this factor can able to change the whole purchasing scenario.

**Marketing promotion**

To communicate with consumer promotion is the best way which can help to achieve the goal (Aziz and Chok, 2013). Nowadays, with the help of social media people have an idea about many products and services. With the help of media activation now non-Muslims also have an idea about the halal concept. As per Christian (1994), the marketing mix can impact a firm's focused position. Advancement is a helpful promoting apparatus (Kotler and Armstrong, 2006), which may impact buy among customers. With the end goal of the present investigation, food product promotion is characterized as the showcasing and deals advancements utilized on the halal food logo or as halal food bundling intended to lure purchasers to buy an item at the purpose of-offer (Hawkes, 2004). Advancements may comprise premium offers, for example, giveaways and rivalries; premium supports; what's more, animation and celebrity advancements (Hawkes, 2004; Aziz, and Chok, 2013). Basically, advertising promotion has a particular job in making brand awareness, create favorable brand frames of mind and invigorate purchasing goals (Belch and Belch, 1998; Rossiter and Percy, 1997; Aziz, and Chok, 2013). After analysis of the previous studies, it can be said that marketing promotion helps the consumer to make a better decision about the purchase.

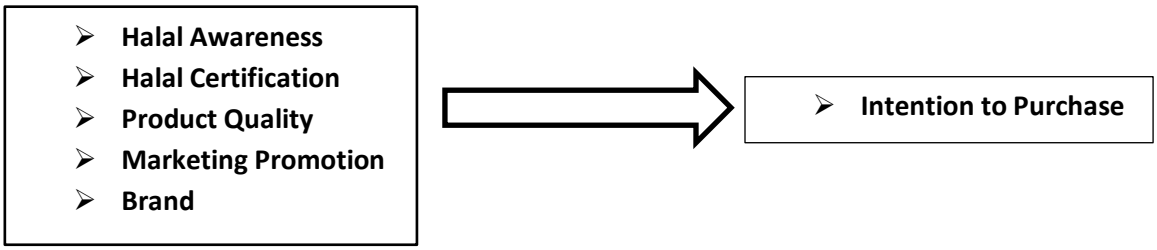
**Brand:**

To buy a product and service brand name creates a trustworthy and faithful situation. Before buy products or service customers think about it because a particular amount they have to pay for that product. As indicated by Dodds and Monroe (1985), the brand name has outward quality cues. Brand names as a rundown develop for quality since it has to surmise quality dependent on brand name (Han, 1989; Aziz, and Chok, 2013). A specific brand may not exclusively be spoken to by a name or images. It speaks to customers' discernment and notion toward the item and service, which intends to the buyers' point of view. (Kotler and Amstrong, 2006; Aziz, and Chok, 2013). According to previous studies, the brand name has a strong motivation power which can influence customer's buying attitude (Alreck & Settle, 1999; Ataman & Ulengin, 2003; Aziz, and Chok, 2013). Customers' expectation to buy an item or service can be impacted by an uplifting frame of mind toward the brand itself (Laroche & Brisoux, 1989; Aziz, and Chok, 2013). According to Theory plan behavior, consumers would choose a brand that is similar to its characteristics. For example, if any renowned brand promoted that they are adopting the halal concepts in their product, then they can successfully able to influence the customer to buy their products frequently (Aziz, and Chok, 2013).

**Intention to purchase**

Customer purchase intention depends on consumer attitude. The previous study suggested that purchase intention is known as a sentiment of client that was persuaded to buy item or service which make the client fulfilled or see the distinction of item from others (HSU and NGAMNATE, 2018, citing Keller, 2001). In the context of this study, it is anticipated that people carry on as indicated by an anticipated system as recommended by Ajzen (1989) in buying halal food. Thusly, attitude toward behavior, which started from an aggregate conduct conviction, for example, the conviction that the item is halal, may prompt great dispositions, for example, having the expectation to buy. The subjective norm is another capacity of conviction, which is seen as a social strain to draw in or not to participate in that specific conduct (Aziz & Chok, 2013). A previous study shows that non-Muslim customer's attitude towards halal food and items varies from time to time. But for brand awareness and marketing promotions are growing rapidly. So, halal segmentation and non-Muslims people's usage of halal items are also increasing rapidly (Golnaz et al., 2010). So, it can be said that non-Muslim people's purchase intentions positively influenced by the brand, marketing promotion, halal awareness, and halal certification.

**Conceptual Framework:**




**Methodology**

The purpose of the study is to identify the elements that influencing purchase intention about halal products. To achieve this reason, we tried an examination demonstrate by making a questionnaire survey to gather information. We prepared a questionnaire with the help of Google Doc. After preparing it we shared the questionnaire link to our personal social media account. And we have also requested some admin who has their own social media pages. Our target audience is mostly non-Muslims people in Bangladesh who are regularly connected with social

networking sites and following and watching different brand promotional activities on a regular basis.

The five-point Likert scale was selected for data measurement purposes. The questions are ranging from "Strongly Disagree" =1, "Disagree" =2, "Neutral" =3, "Agree" =4 and "Strongly Agree"=5. The research questions cover two parts. There are five demographic questions, where we have asked participants' gender, age, religion, profession, income, the education-related question to gather basic information about participants. Then we have asked the variable related questions. Like- Halal Awareness, Halal certification, Product quality, Marketing promotion, Brand, etc. which consider independent variables. And we have included thirteen questions in the questionnaire which we have adopted (Shaari and Arifin, 2009). Additionally, Consumer purchase intention in considers as a dependent variable in this study. And we have selected six questions for the questionnaire arrangement purpose, which we have adopted from (Lada, Tanakinjal, and Amin, 2009). We have assured the participants that we will keep their personal information confidential. And it was mention that this data will only use for academic research purposes. The quantitative data collection method was selected because of the short time period. We have collected data from 121 participants which took one week to gather information. Our sample was Bangladeshi non-Muslim people who have an idea about the halal concept and using these kinds of products and services on a regular basis. The sample size was not so large because of the sort time period. Moreover, for the data analysis purpose, descriptive analysis, reliability test, Pearson, superman, and regression analysis has been used to identify the correlation; strengths and weakness between variables.

**Data analysis and result**

**Descriptive analysis**

In this study, the sample size was 121 who are non-Muslim. In the sample there were 108 Hindu, 7 were Christian and 6 people follow Atheism and Buddhism. Here, 54 were female study and 67 who have an idea about Halal products and regularly using it. Mostly, 77.7% of people are belonging to 18-25 years old. Moreover, 91 respondents were students from the total respondents, and 51.2% of participants have no regular income source. And 91.1% of participants were unmarried. After analysis, the whole scenario it can be said that not only the mature and well income people; but also the young generation have the awareness about fresh food and they like to buy Halal items to consider in fresh and wholesome. Additionally, they have a limited income that is why they do not want to take any risk to experience bad services. For that reason, they like to go for Halal zone to think about health benefits.

**Reliability Analysis**

The Reliability test is directed to gauge inner consistency. The unwavering reliability coefficient of 0.7 is satisfactory, more than 0.8 is great and more than 0.9 is viewed as Excellent (George and Mallery, n.d.; quoted in Namdeo and Rout, 2017). Here, in the reliability test, Cronbach's alpha value is showing the inner consistency of dependent and independent variables. The analysis shows Product quality, marketing promotion, and Brand value is more than 0.8 which expresses good consistency. On the other hand, Halal awareness, Halal certification, and Intention to purchase Cronbach's alpha value are more than 0.9 which shows excellent internal consistency.

**Pearson analysis**

Pearson analysis identifies the positive and negative relationships between variables. Here, Halal certification .571, Halal awareness .659, Marketing promotion .581, Product quality .433 and Brand value is .366 which represents the positive relationship between variables. On the other hand, the p-esteem is 0.000, which is under 0.01. Along these lines, the null hypothesis in this

exploration can be rejected and it tends to be presumed that there is a positive connection between the independent variables and the dependent variable. **Spearman analysis:**

This analysis usually helps to reveal the correlation strength between variables. Here, Brand and product quality's values are .322 and.308, which represents a week correlation with the intention to purchase. On the other hand, marketing promotion represents a moderate relationship. And Halal certification, Halal awareness value is .652 which reveals a strong correlation with the dependent variable. So, it can be said that non-Muslim people in Bangladesh do not feel any quality difference between Halal and non-Halal items. Moreover, here the Brands are also inactive to provide Halal items to their customers.

**Regression Analysis**

Regression investigation gives the thought regarding connections among factors and it additionally demonstrates how much they impact one another. In this study, the $R^2$ value is .446 and the adjusted $R^2$ value is .432 which shows how much the dependent variable is clarified by all the independent variables together. Spearman's relationship coefficient can run in an incentive from −1 to +1. The bigger the supreme estimation of the coefficient, the more grounded the connection between the factors. Positive esteem shows a positive connection, while negative esteem demonstrates a negative connection among variables. Here, the P-value of items quality =.158, Brand = .388 and Marketing promotion = .468 which represents the moderate relationship between variables. On the other hand, Halal awareness and Halal certification's value is .000 which reveals a significant correlation with the intention to purchase. So, it is proven again that non-Muslim people in Bangladesh cannot find the difference in Halal product's quality. Moreover, the brands are not aware of Halal food's marketing promotion.

**Findings, limitations, and recommendation for further research**

The data analysis shows the positive relationship between independent and supporting variables. If we consider descriptive analysis; then we can see that, 51.2% which is half of the participants who have no regular income and other 48.8% who have a stable income source. So, it can be said that both employed and unemployed people have a general idea about halal food. And they are using those products and services on a daily basis. On the other hand, 90% of participants were unmarried. So it is also safe to say that, not only married family-oriented people but also young unmarried citizens in Bangladesh are using Halal items for leading a healthy life.

On the other side, if we consider the reliability and regression analysis then it's showing that Brand and Food quality has a week relationship with intention to purchase. So it can say that non-Muslim people in Bangladesh cannot feel any difference between Halal and non-Halal items. So it can be assumed that most brands are unaware of the halal food process. And most employees are not well trained here to process halal items. For that reason, people cannot find any difference in food processing. As a result, the quality assurance level is zero here. On the other side, the analysis part shows that Brand and marketing promotion has also a moderate relationship with purchase intention. So it can assume that renowned brands in Bangladesh are not introducing and promoting halal items and services. For that reason, people in Bangladesh have a limited idea of halal items. As a Muslim country, Bangladeshi brands need to increase awareness about halal items and services by promoting this concept. Also, the Government should encourage different brands in Bangladesh to introduce and promote the halal concepts to leading a healthy life. Also, Companies should arrange talk shows, seminars, and campaigns for teaching the benefits of halal consumption. Oppositely, governments and organizations should offer different training, so that employees become skilled in food processing by following the halal concept.

There were some limitations to this study. We believe that, as we have used a qualitative data collection method which is not enough for this study. For the in-depth analysis, we need to collect qualitative data as well. Because, if we can make some people's face to face interviews who are non-Muslim and consume halal items on a daily basis. Moreover, the time duration for this study was two months, which is considered a cross-sectional study. If we get more time than the result could be different and more positive.

Alternatively, our sample size was 121 which is not enough to get a proper result. On the other side, as Bangladesh is a Muslim state that is why it was very difficult to get non-Muslim participants who have a complete idea about the halal concept. Even some participants had no idea about the halal concept. For that reason, it was difficult to gather appropriate data. Moreover, People do not have an idea about any significant brands or companies who are offering halal items on a regularity basis. They just buy a product after see the halal logo or stamp. So that reason, they have no faith in the companies that are selling halal items in Bangladesh. So, a recommendation it can be said that the Government should take necessary steps to maintain the food quality through the halal process. And every company should introduce halal food and service sections with proper information chart. So that, not only Muslims but also non-Muslim customers can feel the interest to buy this kind of product for their better health purpose. In this way, people in Bangladesh can maintain the quality of products to obey religious factors. On the other side, non-Muslim people will also get the benefit to consume quality products through the halal concept.

**Conclusion**

Respondents who participated in this study have shown a positive attitude about halal food. And it is also proven that non-Muslim people in Bangladesh cannot feel any difference between halal and non-halal items. So, it can be said that the food processing system needs to be monitored. Besides, there is a scarcity of skilled labor in Bangladesh. So it can be assumed that for that reason people cannot feel any difference between halal and non-halal items. Moreover, according to the analysis part, brand and product quality has a week relationship with consumers' purchase intention. So, it can be assumed that in Bangladesh there have not any significant brands that are seriously promoting halal goods. For that reason, non-Muslim people in Bangladesh are unaware of the halal brand. Additionally, some brands do not maintain the quality for that reason most people cannot feel any difference. As a result, they buy items that are frequently available. However, our study has given proof of the presence of halal awareness among the non-Muslim people group in Bangladesh. Also, this study highlights the correlation with consumers' purchase intention towards halal foods. And it is proven that non-Muslim people in Bangladesh have a positive assertiveness with halal items and services. So it can be said that, if different companies in Bangladesh offer a halal section with hyped promotional activities then non-Muslim people will also being dependent on halal items. Because in Bangladesh most of the company does not maintain proper hygiene, On top of that harmful chemical, preservative, and colors, etc. is continuously using in the food items to make it long-lasting. For that, reason, if a brand is offering quality food, not only Muslims but also non-Muslim, will be attracted to halal items and services.

**References**

Alreck, P. L., & Settle, R. B. (1999). Strategies for building consumer brand preference. *Journal of product & brand management*, *8*(2), 130-144.

Ataman, B., & Ülengin, B. (2003). A note on the effect of brand image on sales. *Journal of Product & Brand Management*, *12*(4), 237-250.

Aziz, Y. A., & Chok, N. V. (2013). The role of Halal awareness, Halal certification, and marketing components in determining Halal purchase intention among non-Muslims in Malaysia: A structural equation modeling approach. *Journal of International Food & Agribusiness Marketing*, *25*(1), 1-23.

Belch, G. E., & Belch, M. A. (2003). *Advertising and promotion: An integrated marketing communications perspective*. The McGraw− Hill.

Burgmann, T. (2007). Growing Muslim population pushing companies to produce products they can eat. *The Star*.

Canadian Agri-Food Trade Service,Global Halal Food Market Brief. June 2008. http://www.ats-sea.agr.gc.ca/africa/4491_e.htm

Canavari, M., Castellini, A., & Spadoni, R. (2010). Challenges in marketing quality food products.

Christian, G. (1994). From Marketing Mix to Relationship Marketing. Towards a Paradigm Shift in Marketing. *Management decision*, *32*(2), 4-20.

Dodds, W. B., & Monroe, K. B. (1985). The effect of brand and price information on subjective product evaluations. *ACR North American Advances*.

George, D., & Mallery, M. (2003). *Using SPSS for Windows step by step: a simple guide and reference*. 4th ed. London: Pearson Education.

Golnaz, R., Zainalabidin, M., Mad Nasir, S., & Eddie Chiew, F. C. (2010). Non-Muslims' awareness of Halal principles and related food products in Malaysia. *International Food Research Journal*, *17*(3), 667-674.

Han, C. M. (1989). Country image: halo or summary construct?. *Journal of marketing research*, *26*(2), 222-229.

Hawkes, C., & World Health Organization. (2004). Marketing food to children: the global regulatory environment.

HSU, Y., & NGAMNATE, N. (2018). Factors Affecting Electronic Word-of-Mouth (E-WOM) Usage on the Customer Purchase Intention: An Investigation on Beauty Market. *International Journal of Business and Social Science*, *9*(4).

Islam, M. M., & Chowdhury, M. A. F. (2018). Consumers' buying decision process toward halal product: a study in Bangladesh. *International Journal of Business Innovation and Research*, *16*(3), 285-301.

Ismail, Z., & Ehsan, A. H. (2008). Halal nutraceutical market: issues and challenges. In *Proceedings of the Asian Forum on Business Education 2008 on Contemporary Issues in doing Business in Asia, 3-4 December*. University of Malaya.

Kotler, P., & Armstrong, G. (2006). Principles of marketing 11th ed.

Lada, S., Harvey Tanakinjal, G., & Amin, H. (2009). Predicting intention to choose halal products using theory of reasoned action. *International Journal of Islamic and Middle Eastern Finance and Management*, *2*(1), 66-76.

Lampila, P., & Lähteenmäki, L. (2007). Consumers' attitudes towards high pressure freezing of food. *British food journal*, *109*(10), 838-851.

Lane Keller, K. (2001). Mastering the marketing communications mix: Micro and macro perspectives on integrated marketing communication programs.

Laroche, M., & Brisoux, J. E. (1989). Incorporating competition into consumer behavior models: the case of the attitude-intention relationship. *Journal of economic psychology*, *10*(3), 343-362.

Muhammad, N., Norhaziah, N., Nuradli, R., & Hartini, M. (2007). Halal Branding: An Exploratory Research among consumers in Malaysia. *Available at nuradli. com*.

Newberry, C. R., Klemz, B. R., & Boshoff, C. (2003). Managerial implications of predicting purchase behavior from purchase intentions: a retail patronage case study. *Journal of Services Marketing*, *17*(6), 609-620.

Nisha, N., & Iqbal, M. (2017). Halal Ecosystem: Prospect For Growth In Bangladesh. *International Journal of Business and Society*, *18*(S1), 205-222.

Percy, L., & Rossiter, J. R. (1997). *Advertising communications and promotion management*. (2nd ed.), New York, NY: McGraw-Hill.

Rahman, M. M., Khatun, M., Rahman, M. H., & Ansary, N. P. (2014). Food safety issues in Islam. *Health, Safety and Environment*, *235*(1371), 1-14.

Shaari, J. A. N., & Arifin, N. S. (2009). Dimension of halal purchase intention: A preliminary study.International Review of Business Research Papers, 6(4), 444–456.