

Banking Financial Management and Financial Markets Assignment

Task Description: *“Critical evaluation and analyses of profitability ratios , capitalisation, asset quality and liquidity ratios of a bank plus a critical discussion on a financial instrument, how is it priced, traded or exchanged in international financial markets”*

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Introduction

Barclays is a public company in banking and financial services industry, headquartered in London. Initially, this bank started its business as part of GOLDSMITH banking business in 1960 in United Kingdom. And now there are 328 years of operating in over than 50 countries. Barclays bank has primary listing in London Stock Exchange (FTSE 100 Index) and also its shares are traded on New York Stock Exchange. The most remarkable change was in 1982 when this bank changed from Barclays Bank Limited to Barclays Bank Plc. In 1986 this bank apart from its traditional services established an investment banking services and operations. Barclays offers a wide range of products and services on retail banking, corporate and investments banking as well as on wealth management, services that are accessible from individuals, small businesses and large ones, public and private institutions, government etc. John McFarlane is the chairman of Barclays group since in 23 April 2015. In the same time Antony Jenkins(The chief executive) was dismissed, then Jes Staley became the Chief executive of Barclays Group. Barclays is very well known as the major sponsorship of Premier League since in 2001. Barclays Group have faced many accusation the last decade, starting with the breaking international laws for money laundering in one of its branch in France. Furthermore in 2012 Barclays group was forced by HMRC to pay the amount of £500 million taxes which it have tried to avoid before. HMRC noticed two schemes made by Barclays in order to avoid tax payments. Also it was accused for manipulating electricity market in US and the FERC forced it to pay 299 million as a fine. Despite the fact that it was included in some scandals in 2016 it saw a very successful strategic progress which was reflected in its profit. This success was followed by a considerable loss in 2017 and the reason for this loss was due to tax changes by Trump. The Guardian “Barclays reports £1.9bn loss amid Trump tax changes”. In July 2017 Barclays was awarded as the “Best Investment bank In the UK” by Euromoney Awards for Excellence (Investmentbank.barclays.com).As stated by the chairman David Walker their goal to achieve in 2014 was being “GO-to Bank” for all of the clients, stakeholders, colleagues and customers. This chairman started with an innovative way of measuring performance with what is called Balance Scorecard. In 2015 Ashok Vaswani was appointed as head of Barclays UK who was responsible for the establishing the Ring-fencing bank. Very big changes happened in this year. The board of directors decided to sell some of the retail banking operations outside of the UK and some of Private Banking businesses in Geneva and Monaco. And the reason for these actions declared on their annual report was for better control while the funds released will be used to strength their capital.(Annual report of Barclays 2015).Due to many uncertainties that the economy was facing in 2016 Barclays decided to focus on credit risk. The vote of UK to leave the EU was cited in their 2016 report as a major reason to have an eye on credit risk. In 2017 they sold the remaining shareholding of Barclays Africa Group limited. There are other considerable changes during the period of 2013-2017 but they will be discussed both with their effects in the analyses of this course work. The chosen competitor is Royal Bank of Scotland. It is founded in 1727 in Edinburgh and now is one of the biggest bank in Scotland. It has more than 700 branches including many branches in London .

Key Ratios and Analyses.

1-Profitability Ratios

Barclays	2013	2014	2015	2016	2017	RBS 2017
ROE (%)	2.03	1.28	0.94	3.96	(1.35)	2.88
ROA(%)	0.096	0.062	0.055	0.23	(0.078)	0.19
NIM(%)	0.88	0.889	1.12	0.86	0.86	1.2

Profitability ratios Tab 1.

Profitability ratios are some of financial indicators that suggest how the company is generating earnings by using its assets and equity. If there is an increase in these ratios, this indicates that the business is performing well. Three of profitability ratios are Return on equity, return on assets and net interest margin. Return on Equity (ROE) is calculated as net income divided by total equity. Return on Assets (ROA) is equal to net income divided by total assets. The last one is net interest margin calculated as Net Interest Income (Interest income-interest expense) divided by total assets. By observing the table above it can be noticed that return on equity has slightly changed over the years, decreasing and increasing. The highest Return on Equity is achieved in 2016 to approximately 4% which means that for every 1 dollar that shareholders have invested they return is 4 pence. Meanwhile, in 2017 there is a negative ratio. This means that in that year this bank faced a loss. As long as the major operating activity for a bank is making loans and in this way it is expected that their major income comes from interest on loans and expenses comes from interest payments on customer deposits. Therefore, in the first sight this loss can be related to possible decreases tax loss on loans or possible increases in their interest expenses. On the other hand, by having a look at NIM ratio there is obvious that this ratio is a positive result which means that the loss is not related to Barclay's major operating activity. ROE and ROA take into consideration the whole income generated by this bank not only the interest income. As long as NIM is positive and ROE and ROA are negative this means that there was a loss which is not due to interest margins but it is related to other activities which indicates furthermore that there are other important activities or operations on which a bank tends to ensure their income. By observing Barclays income statement for all over the years it is obvious that year by year all the items of income statement changed slightly decreasing or increasing but with no big effect on profitability. The only items that changed considerably were taxation expense from 993 million to 2240 million pound. This is related to the tax loss due to tax changes by Donald Trump reported by an article on the Guardian where it stated that Barclays bank reported 1.9 bn loss amid to these changes. This loss is also cause by a loss on profit after tax in respect of discontinued operations. It changed from 591 million profit in 2016 to a 2195 million pounds loss in 2017. As mentioned above interest income is the major income for a bank. NIM calculated as Net Interest Income divided by total assets is a good measure to evaluate the bank operating activity or their stability in their major operations. Based on the last five years annual reports it can easily be seen that NIM ratio is almost the

same from 2013-2017. It was 0.88 and it stayed at this level all over this period despite the year 2015 when it increased slightly to 1.12%. This is a metric that shows the stability of Barclays Bank operating activity. Comparing with Royal Bank of Scotland all these profitability ratios of Barclays are lower than RBS. Meanwhile it is a bit difficult to compare NIM to a benchmark or to compare with the industry average because even within the same sector, nowadays many banks ensure their earnings from fees and charges on their services offered to customers and interest margin does not have an impact on these incomes.

2-Asset Quality

Barclays	2013	2014	2015	2016	2017	RBS 2017
Provision for Loan Loss Ratio(%)	0.42	0.23	0.62	0.23	0.17	0.0018
Loans Ratio(%)	35.25	34.6	39.3	36	35.4	51.5

Asset Quality Tab 2.

Asset quality as the name suggests is a financial term related to the quality of the loans or other interest earnings financial instruments. Simply put, the quality of a loan refers to the fact if the borrowers will give the principal and interest to the bank or not. Managers relate this term with the credit risk. Since loans are the main focus of a bank managers try to manage the risk of what is called bad debt. It is difficult to assess the credit risk but generally it is calculated as the overall ability of borrowers to pay the debt. For instance, when assessing customer's credibility the bank takes into consideration some of the factors like, credit history of this customer, the capital and capacity to pay the interest and principal, the collateral etc. Even in cases of a bond or debt securities if the bank is the investors they should evaluate the credit risk of this particular bond. In case of Barclays this report will discuss two of the asset quality measures. One of them is Provision for Loan Loss ratio which is an item included in income statement as a minus which means that this is an expense. This expense is left aside as a prediction or as an allowance for loans that can be not collected. Banks lend money to a high variety of customers including from personal loans to the largest companies and businesses. Therefore, it is difficult to predict exactly the ability and willingness of the borrowers to pay the money back. Banks use or set aside this reserve as an expense to ensure that they are assessing accurately as much as possible their performance and financial position. Provision for Loan Loss ratio is calculated as Provision for loan loss ratio (included in financial statement) divided by total loans (part of assets in a bank's balance sheet). Different banks can use different terms for provisions for loan losses. In cases of Barclays bank this provision is called "Provision for UK customer redress" while the major competitor Royal Bank of Scotland uses another term which is "Loss on Redemption of Own Debt". For example in 2013 this ratio is 0.42% which means that from total loans only 0.42% are considered as risky to collect. It decreases and increases over these 5 years but in slight fluctuations. Even the highest increase was from 2014 to 2015 up to 0.62 it was not a high ratio. On the other hand when considering Barclays with its competitor there is

noticeable a big difference between them. The provision for loan loss ratio for Barclays far outweighs the Royal Bank of Scotland PLL ratio.

Provision for loan loss ratio in RBS is only 0.0018% which means that from all loans only 0.0018% is considered uncollectable. In cases of comparing to the industry average there is not 100% accurate measure. The reason is because as the **Casu et al (2006)** suggest some of the banks are conservative so they keep a large or above the average reserve for loan losses in order to understate their account earnings while on the other hand there are some banks more aggressive which tends to keep lower reserve as a provision for loan losses because in this way they overstate their accounting earnings and incomes. By observing the income statement of these two banks in detail it can be seen the big difference that they have in their loss on redemption of their own debt. In Barclays this provision is 700 million pound while in RBS it is only 7 million pound. Anyway, based on the suggestion from the author above the provision for loan losses in Barclays is in a normal level and almost stable during the years which is a good indicator if Barclays consider itself conservative bank.

Loan ratio is a financial metric which shows the proportion of loans in total assets that the bank possess. This ratio is calculated as total loans divided by total assets. As long as Barclays is a bank it is expected that the percentage of loans should be in a high level since it is the major assets that the bank ensure its income. This can be witnessed by having a look at the table above which shows that loans make a high proportion of total assets. For example in 2013 35.25% of Barclays assets consisted on loans while this percentage did not changed considerably during the years. The highest % was in 2015 at approximately 40%. While RBS has a higher Loan ratio. Almost half of Royal Bank of Scotland assets consist on loans while for Barclays is 36% on average. This difference can be explained as a difference in the way banks diversify their assets. It is because Barclays makes less loans than RBS but see fees, commissions and charges on different services as profit seeking while RBS tend to rely its income more in loans. This can be witnessed while having a look at their income statement. Barclays has a Net Fee and Commission Income of 6814 million pounds while RBS has 2455 million in these incomes. This difference on the loan ratio can be explained also by the NIM ratio because knowing that NIM represents the loan activity and seeing that NIM is bigger for RBS, this justify the Loan ratio to be more than half of its assets.

3-Leverage Ratio

Barclays	2013	2014	2015	2016	2017	RBS 2017
Equity to Assets Ratio(%)	4.7	4.8	5.88	5.9	5.8	6.6

Leverage Ratio Tab 3.

Equity to assets ratio is a measure to show how much of the total assets is owned by shareholders, which means that how much of the total assets are not leveraged. Generally speaking the higher this ratio the less leveraged is the company but this is not to say that is good in all the cases. It depends a lot on the industry. In Barclays's case it is related to a

banking industry. As long as the major assets are made by loans and major liabilities are made by customer deposits it is expected a low Equity to Assets ratio. Making loans and taking deposits is their major operation. In this case the figures calculated above are in small proportions which are justified by what is mentioned above. When comparing within the last five years period this ratio stayed almost the same and the difference with the RBS is invisible, roughly 1%. This indicates that this is a healthy and normal leverage ratio.

4-Regulations and Requirements

Barclays	2013	2014	2015	2016	2017	RBS 2017
Common Equity Tier 1 Ratio(%)	9.1	10.3	11.4	12.4	13.3	15.9
Total capital Tier 1 Ratio (%)	15.0	16.5	18.6	19.6	20.7	21.3
LCR (%)	96	124	133	131	154	140

Pillar 3 Tab 4.

The table above consists on some important requirements and regulations that a bank should follow. These requirements are very important and there are many reasons why these criterias should be followed by banks. Firstly, if a company bankrupt it does not affect the total economy while if it happen in a bank it affect the financial system, consequently the economy. Secondly, these requirements are used to protect customers because if a bank bankrupt the customer will lose their deposits. One of these requirements is Common Equity Tier 1 ratio which is calculated as Common Equity divided by Risk weighted assets and it is calculated by the bank itself and disclosed on their Pillar 3 Disclosures. During the gap 2013-2017 Common equity tier 1 ratio increased slightly year by year. When comparing to RBS it is small difference between them. RBS Common Equity tier one ratios is about 16%.

Total capital tier one ratio is a wider measure because it includes common equity plus preferred stocks. In this way it should be a little bit greater than the first ratio. This is witnessed by the calculation in the table above. The same trend was followed by this ratio increasing slightly during this five year period while is almost the same with RBS Ratio. If comparing to the minimum of 10.5% capital requirement it is evident that Barclays do not only respect this requirement but its ratio is bigger than the minimum during the whole period of five years data.

LCR defined as Liquidity Coverage Ratio is a requirement that consists on assets that are highly liquid held by banks or financial institutions to meet the short term financial obligations. The reason why they use highly liquid assets to measure these ratios is because these assets can be converted easily, quickly and with no extra costs into cash. This ratio is calculated as Total High Liquid Assets divided by Net Cash outflows within the period of 30 days. This measure started to be required since in 2011 starting from 60% but in 2015 the regulators decided the minimum requirement of 100%. According to Barclays's case it is evident that this bank did not only meet the requirements but it exceeds them. In 2017 LCR

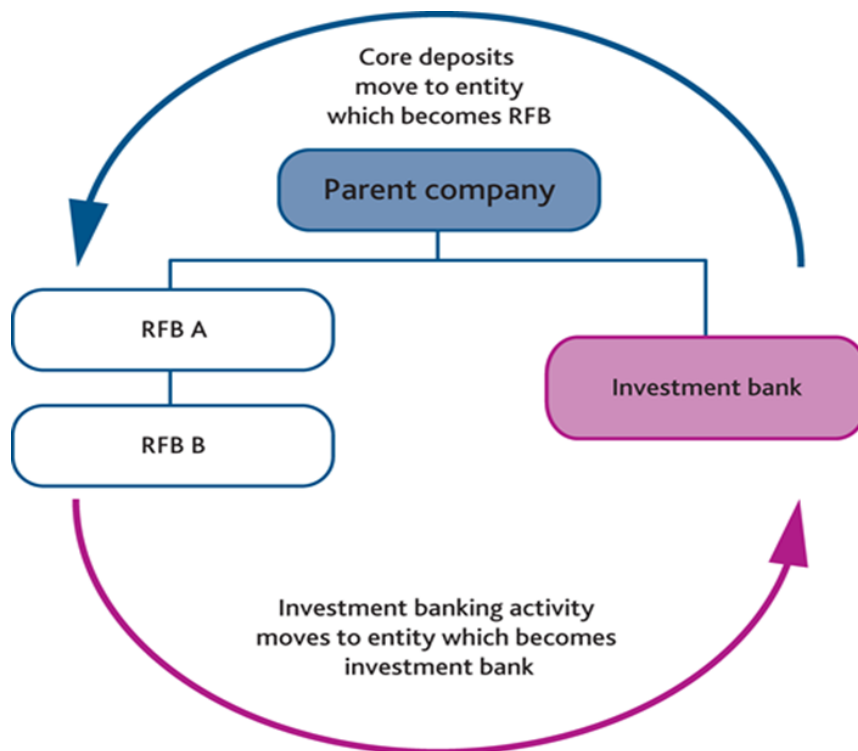
for Barclays was 54% bigger than the minimum requirement. Royal Bank of Scotland as well exceeds this benchmark considerably with 40% more but 10% less than Barclays.

Contemporary and future Issues in banking and financial industry.

Nowadays banks have increased considerably the variety of services and products that they offer, starting from taking deposits from a wide range of customers, lending mortgage loans, making payments and transfers, investing in financial markets, investment banking etc. As long as these services are different, the risk that they have is different as a consequence. But, when evaluating the risk of the banks these risks are estimated within the bank or the group. This is not an efficient measure since some of the services or products are affected by the risks of other services and products. To avoid this phenomenon the government of UK represent a new approach called Ring-Fencing.

Ring-fencing is related to the last regulation introduced through the act of 2013 in Financial Services as recommended by the Independent Commission on Banking that will be applied by the large UK banks from 1 January 2019. This consists on dividing the bank sector into two parts, Retail banking and investment banking. All details for ring-fencing rules, amendments, schemes are represented in Financial Services(Act)2013 which is an article by www.legislation.gov.uk

According to an article from Bank of England which represents the structural reform, the purpose of ring-fencing approach is to protect the UK retail banks from the failures that may happen within the group or in other financial markets. This approach will result in dividing the services like taking deposits, lending loans and overdrafts, making payments and transfers from investment banking and other operating activities in financial markets. In this way even if there is a crisis in investment banking the day to day bank activities will not be affected. Financial System in UK is very large. If a business bankrupt this will not affect everyone but if a bank bankrupt the domino effect will take place. One clear example is the global financial crisis which affected everyone by increasing the number of unemployed population, decreasing the salaries etc. Since it is very difficult to avoid the risk entirely it would be easier to manage the risk separately. To implement this strategy all the banks including Barclays and RBS will have to transfer their customers to a new part of banking. Related to the way this approach affects the customers depends on the variety of them. They may face changes on their account details or payment system etc but all the banks will communicate all the changes needed to be applied. The picture below illustrates the new structure of Banks in UK after 1 January 2019.



Source: Bank of England.co.uk :Ring-Fencing,(2016)

Climate change is a big issue nowadays which can affect every one of us but few people can imagine that this phenomenon could affect financial system. But, on reality there are three types of risk that Bank of England suggests in one article about climate change and financial risks related to it.

Physical risk: Climate change is driven by human-being and the consequences of it will affect them considerably. Droughts, storms, flooding etc are becoming a routine nowadays and people need to protect themselves and their wealth from these weather events. They need to protect their cars, their properties etc, therefore people will see insurance companies as the best protector. By facing this, insurance companies need to pay out more due to the fact that weather insurance claims will increase. This leads to a higher insurance premium that customers need to pay. On the other hand even if people do not insure their property, in cases of these weather conditions they will need to pay too much for the damages.

Transition risk: Increasing awareness of governments to move to a more eco-friendly economy can be followed by some risks in financial stability. Bank of England simplifies this relation in a clear example. It's report if government policies about energy companies will follow the changes of Paris Agreement 2/3 of the fossil fuels in the world will not be burned. This will lead to sufficient changes in the gas, oil, coal investments value that are held by insurance companies and different banks.

Liability risk: As illustrated in this article assuming that investors have invested in a business which is likely to face a loss due to severe weather conditions. The point is that if these companies have not provided investors with information about threats from possible financial risks from these weather events, investors have the right to claim against this company.

Digitization: “Will cash die out?” this is an article from the Bank of England to represent the effects of digitization in financial and banking industry. Due to the information technology and digitization nowadays people have a wider choice how to make payments, transfers etc. Contactless card are one clear example of it. In the first sight, fairly, people may think that this event affect the cash to decrease. But, Bank of England provides us a surprising fact. In one of its reports it stated that today there are more cash on circulation than one decade ago. According to it, today there are £70 billion in circulation, almost twice than one decade ago. This amount of cash includes cash in consumer’s pockets, cash in ATM machines, illegal cash held overseas etc. As the technology is being developed day by day it is expected an increase in new innovative payment methods and they will become very popular but on the other hand as the article about digitization suggest people will continue to prefer cash in the future due to some reasons that include: convenience, easy and fast way to make payments, privacy and anonymous issues because cash payments stays anonymous, etc.

Bond Market

Ryland (2009) defines the bond as a financial instrument which is a tradable long term debt security issued by the borrower and held by the investor where the borrower agree to make periodic payments of interest during the period plus the principal on maturity. It is a type of fixed income investment.

How it works

Many times companies need to borrow money to finance their investments in new projects, to keep ongoing on their operating activities, to refinance the existed debt that they need to pay quickly or to meet they liquidity needs etc. This particular company that is the issuer, issue the bond in form of an agreement which contains the coupon rate that will be paid periodically and the maturity when they have to pay the principal that in bond’s case is called face value of the bond. The coupon rate is the return for the bondholders. As mentioned above the bond is issued with a face value which is £100 in UK and \$1000 in the USA while the coupon rate is decided by the issuer while market price depends on market interest rate (**Agar.C,2005**) . Bondholders do not have any official control, they cannot vote for implementing any new strategy, choosing directors but this does not mean definitely bondholders do not have any influence on the company. **Arnold(2013)** suggest that in some circumstances bondholders can influence on the company and one of these cases can happen when the company exceed a certain solvency or liquidity ratio and other case can be when bondholders take a charge over a certain building as e security for lending their money because in this way managers and directors are restricted to use these funds on that certain building. The company should respect the scheduled payments even in problematic years, otherwise the lenders will force the company to sell its assets in order to make the payment of the debt. Another feature of bonds is the fact they are tradable. This means that lenders can buy bond on primary market and in cases that they do not want to wait until maturity they can sell this bond in secondary market.

Elements of a bond

Face value which is the amount of money on which the issuer calculate the coupon rate. It is also the worth of a bond in its maturity.

Coupon rate is the interest rate that the issuer has to pay on calculated on the face value of the certain bond.

Coupon date is the date in which the issuer has to pay the interest rate and this dates are generally annual payments or semi-annual.

Maturity date is the date when the contracts ends and the issuer will pay the principal of the bond to the investor which in other words is the face value of this bond.

Issue price is the price that the bond issuer sells it.

Three main categories of bonds (Based on types of issuers)

Corporate bonds are bonds issued by companies in cases that they need money to invest for further expansion or to pay their immediate financial obligations. Corporate bonds include call provisions which give the opportunity to issuer to buy back the bonds and in this way they favour the issuer in cases that the interest rates have decreased because they can buy a bond with lower interest rate while they sold it and used to pay higher interest rate and consequently they reduce their cost of borrowing (**Agar.C,2005**). It should be said that call provisions are in favour of issuers while in perspective of holders this is a disfavour since they may lose the benefits from interest in a long term. If the call provision is exercised the bondholders lose the future interest earnings that they could earn until the maturity of the bond. The risk that these type of bonds have are justified by higher interest rate, therefore, bonds with call provisions are more profitable than the normal ones.

Municipal bonds are bonds issued by states and municipalities. These bonds are excluded by government or local taxes so this is the reason why people with high income taxes see these type of bonds attractive and convenient.

Government bonds issued by governments and these bonds finance the government expenditures or government budget deficit. According to **Staub-Bisang (2012)**, immediately after financial crisis in 2008 many debt problems were caused by many Eurozone governments and as a consequence the performance of these bonds fluctuated considerably. This phenomenon was characterized by an increase of bond's returns in peripheral countries because of credit position uncertainties of individual governments while in powerful countries where the safety of government bonds were higher the profitability of government bonds decreased. As stated by **Staub-Bisang(2012)** this decrease in return from bonds was evident in Germany and Netherland.

Variety of Bonds

Coupon bonds which are the most common bonds and pay interest periodically calculated on their face value and in the maturity issuers pay the principal and the last interest payment.

Zero coupon bonds as the name suggest issuers of these bonds do not have to pay interest on these bonds but these bonds are issued at a discount rate. **Cuthbertson and Nitzsche (2014)** define this type of bond as single pay-out bond whose maturity is more than one year while the price of zero-coupon bonds is determined by the supply of these bonds which includes the borrowers and the demands for these bonds which include the lenders of their money.

Convertible bonds are those types of bonds that their holders can convert them into shares. For example if the share price increases they can convert these bonds into shares since it is an attractive conversion (**Agar.C,2005**). This author suggest that conversion ratios is calculated as below.

$$\text{Conversion ratio} = \frac{\text{Bond Face Value}}{\text{Share price at issue date} * \text{Conversion price at issue date} (\%)}$$

A simple example could be: An UK company issue a bond with the face value of £100, with a maturity of 10 years, coupon rate 5% and a convertible ratio 100 shares. In the end of the year 9 the investor would receive 100£ which is the face value of the bond and £5 the last interest payments. In this way the total amount the investor could receive is 105 pound. Assuming that shares are being trade at a price of 1.5 pound per share. These 100 shares would be worth 150 pound which is more than the bonds return in the last year. In that way in investor's perspective it is worth it to convert this bond into shares. As recommended by **Agar(2005)**, conversion price represents the minimum share price that the investors could choose to cover the opportunity cost if they would held the bond until the maturity. By analysing this it is evident that if the current share price is bigger than conversion price it is worth it to convert this particular bond into shares.

Junk bonds are bonds featured by a high level of risk, consequently highly profitable and are issued by companies which need an immediate raise on their capital. Since these bonds are high risky investors seek for a higher return to compensate this risk.

International Bond Market

International bond market is made of bonds issued by governments, companies or any organisation outside their own country. International are becoming more popular way of fulfilling financial needs day by day and they are typical in cases of pension funds, mutual funds, medium to big size banks and foreign governments while large international banks are the managers of sales on new international bonds (**J.Wild and L.Wild,2015**).

There are two types of international bonds:

- **Eurobonds** which are issued by foreign companies but they are dominated in their own currency. For example, if a UK company issue bonds in any country of Europe like Germany, Spain etc, denominated in pound currency but not available in UK bond market allows the issuer will receive the money in pound and will pay the interest in pound as well. According to **J.Wild and L.Wild (2015)** 75-80% of international bonds are Eurobonds due to the fact that the foreign governments on

which they are sold do not need to regulate them and as a consequence because of these regulation's absences issuing these bonds becomes less costly. North America and Europe are well-know and traditional market for these bonds

- **Foreign Bonds** are bonds sold outside their own country but in this case they are traded in the currency of the country on which they are traded. For instance, a bond issued by a European company in UK bond market is dominated in pound and the borrower will receive the money on pound and pay the interest in this currency. As long as these bonds are traded in the pound currency these foreign bonds should meet the same regulations and the requirements that the same industry in UK need to meet. As mentioned by **J.Wild and L.Wild (2015)** due to regulatory requirements they are more rare varying from 20-25% of international bonds.

Since interest rate is the return on bonds it becomes the driving force on investor decision to invest in bonds. In developed countries companies and governments need less capital than companies in emerging markets to expand their business or public projects. This leads to a high interest rate in emerging countries due to the high risk that characterize these bonds and low interest rate in developed countries due to the low risky bonds. On the other hand, in issuer's perspective they want lower interest rate to pay. The melting point of these two interested parties in international bond market. Borrowers from emerging markets can exploit the developed markets where interest rates are lower while investors from developed markets can buy bonds on emerging markets where interest rates are higher.

Secured bonds versus unsecured bonds

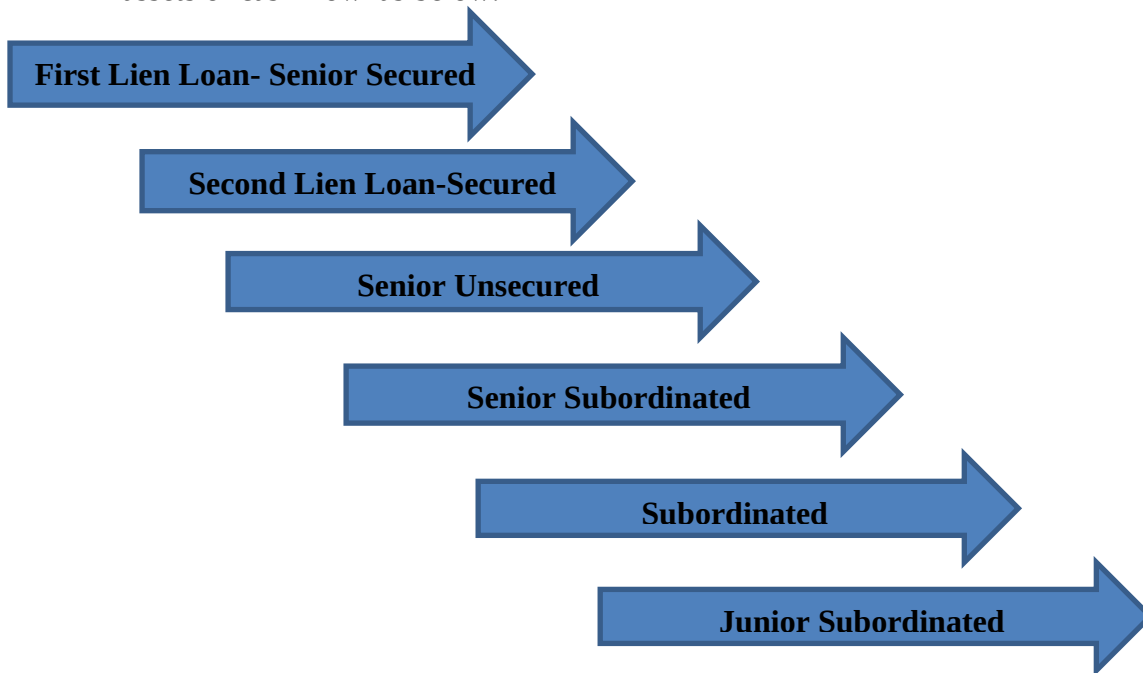
A *secured bond* is a bond that uses an asset as a collateral in cases of default in payments of interest and principal of the bond. By selling these assets the issuer make the payment of interest and face value of the bond.

Unsecured bonds are bonds which are more risky since the payment of interest and principal depends only on issuer's ability to pay. Holders of secured bonds stay on queue of collecting their money before than holders of unsecured bonds but unsecured bonds are more profitable due to the risk they have.

Seniority bonds versus Subordinated Bonds

As long as there is a wide variety of bonds it is expected a variety in priority of payments. *Seniority of a bond* is related to the rank that bondholders belong in terms of claims on the cash flow or assets when the firm bankrupt or has difficulty to meet its financial obligations. The bondholder who has the highest ranking is the first to give their money back. On the other hand *subordinated bonds* are related to lenders that have the lowest ranking on claiming on the firm's assets or cash flow. Simply put, they are the last in queue to be paid back if the company default or does not have enough liquidity to pay the debt. The higher the risk, the higher the profit. This well-known relevance explains the reason why subordinated bonds are characterised by higher interest rate, consequently more profitable than seniority bonds.

An article by **Analystprep/CFA** study notes determines the queue of claiming on firm's assets or cash flow as below.



Bond pricing and rating.

As other financial instruments bonds are characterized by a certain price. As **Agar (2005)** suggest bond price is calculated as the present value of the future coupon and face value cash flows from this bond which is discounted at a current yield to maturity while this price will fluctuate following the trend of the yield requirements changes in the bond market.

$$P_0 = \frac{C_1}{(1 + K_D)^1} + \frac{C_2}{(1 + K_D)^2} + \dots + \frac{C_n + FV_n}{(1 + K_D)^n}$$

Where:

$C_1, C_2 \dots, C_n$ is the coupon rate,

K_d is the discount rate in the market,

FV_n is the face value/principal or the par value of the bond.

Agar(2005) mention three cases how this phenomenon can affect bondholder's return.

- If the bond is bought at a price above its face value or in other words at a premium the coupon rate will be greater than the yield to maturity but if the bondholders hold the bond till the maturity they will face a capital loss.
- If the bond is bought at a price below its face value or in other words at a discount the coupon rate will be lower than the yield to maturity and in order to have a capital gain the bondholders should hold this bond till the maturity because in this way they ensure that the yield they were supposed to receive in their purchased date is achieved.

- If bondholders bought the bond at its face value this means that the coupon rate is equal to the yield to maturity so this indicates that the bond would be sold at a coupon rate that could ensure that it was sold at its face value or just below it.

As other financial instruments bond is characterized by risk. In company's perspective bonds are higher risky because it is a compulsory financial obligations that they need to pay. Meanwhile in Investor's perspective it is less risky because they know that they will get the money back. But this is not to say that investors will not face some risks while investing in bonds. One risk is the case when the company default. Below are listed some of the other bond's risks.

- Liquidity risk which is related to the fact that due to its low liquidity it cannot be sold at its face value.
- Call risk: As mentioned above sometimes if the issuer has the call option which means that he/she can buy back the bond before the maturity and the holder of these bond would lose some future interest earnings.
- Market risk is related to the fact that as explained above market price of a certain bond is determined by market trend on interest rates. This price fluctuates following the changes in the market but it should be said that this is considered as a risk only if the investor prefer to sell the bond in the second market before the maturity.

Agar,C (2005)

Conclusion

According to financial and banking system there is no final way to stop financial crisis but it should be said that today financial system is safer. This point of view is supported by Bank of England which explains the reasons in an article about global financial system. After the financial crisis of 2007-2008 G20 decided to establish the Financial Stability Board made of leaders and governors from 20 core countries while the role of this institution is to look after financial stability issues, making recommendations, implementing new strategies such as implementing and changing capital requirements etc. Bank of England compare the capital requirement with the suspension on a motorbike. In the same way that suspension on a motorbike protect or soften the bumps on their way, the same way can be followed by banks. The more capital a bank keep , the easier is for the bank to withstand the crisis. This is not to say that capital is the best and final solution against financial crisis or shocks. At least due to many changes in financial industry the spread effect of any possible financial crisis is lower than it was in 2007-2008. In financial crisis of that period the responsibility of that crisis stayed anonymous. No one was accused as responsible for it and were people by themselves who suffered from it because public fund were seen as the only solution to bail out UK financial industry companies. Meanwhile, if a bank bankrupt today there is no big effect on customers. In cases of bankruptcy, Financial Services Compensation Scheme gives the opportunity to customers to claim to be refunded up to 85000 pound. Also, innovative strategies make it simple to be protected or soften the financial crisis.

According to Bond Market to conclude it can be said that bonds are a popular way of financing and investing as well and they are becoming more attractive day by day. It cannot be said that they are the best way of investing/financing due to the limitations discussed above.

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