Jacob Diny
Prof. Schoofs
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Comparison of Usury/Interest and Asymmetric Information

Throughout human history, many people lent and borrowed money. With the lending and borrowing of money came the idea of interest and usury. Interest is a fee paid for the use of someone else's money, and usury meaning the illegal practice of charging an unreasonable interest rate. Many philosophers throughout history gave their ideas about usury. Amongst those philosophers were Aristotle and St. Thomas Aquinas. Each had their own idea of usury. Aristotle thought any kind of interest was usury and it was unnatural (p. 15 Rima). and St. Thomas "condemns most interest charges on loans as usury and and as unjust" unless there is a delay in repayment or if there is restitution of stolen money. (Rima p. 20). As human history progressed, lending capital with interest became widely acceptable and the attitudes towards the interest rate and its regulations continued to evolve. The discussion shifted from whether interest rates are moral to how interest (usury) should be dealt with to help economic growth. Adam Smith made his contribution to the interest discussion in *The Wealth of Nations.* Adam Smith published his book in 1776 and in it he proposed a way to prevent negative lending practices like the ones that helped lead to the financial collapse in 2008. Smith had many ideas about stock lent at interest. Comparing Smith's ideas on stock lent at interest to today's theories on interest will provide an insight into his reasoning along with allowing for the comparison of Smith's

ideas to the 2008 recession, what lead to the recession, and how Smith would have viewed the financial system before and after the recession.

There are some differences between the financial system in Adam Smith's time versus the financial system today. Knowing the difference will allow for a better comparison between Smith's discussion on interest rates and relating that to the 2008 collapse and modern discussion about interest rates. One difference is there was no central bank that determined the interest rate like there is today. The government used usury laws to place a cap on interest. (Temin and Voth, 2008). Second, banks' lending money faced different challenges. In the 18th century, it was harder to discover information of the riskiness of a loan. Bankers could not as easily predict how risky of a venture the borrow was going into. They would have to rely on their own knowledge and the information the potential borrower gives them. Today's banks have a multitude of ways to determine a potential borrower's riskiness. There is more information about a borrower's past finances, income, the potential for a market and the probability of the investment making a profit. Technology and advances in the record keeping have allowed banks to make better decisions due to higher quality information. Another difference between the banking systems is today the federal government guarantees an amount up 250,000 dollars in a bank account. In 18th century Europe the government did not insure the banks or customers deposits in a bank. Another difference in the financial system is the use of credit rating agencies. The rating agencies in modern times rate corporations and investments on their riskiness, reliability and liquidity. The safer (more secure) investments and corporations received higher ratings. Meaning they were less likely to either default or lose money. On the other hand, a low rating meant the investment or corporation came with a

high risk. This will be important to note for later in the paper. Other than these differences, banks were identical in the lending of money, giving interest to depositors, and allowing for deposits.

With the discussion of interest going on through the centuries, Adam Smith added his own arguments for interest. Adam Smith argued that interest is the rent paid by the borrow for the use of lenders current goods. (Smith et. al. 1981) Adam Smith does not bring up money because he believes money is used for the exchange of goods. Therefore, the borrower is "renting" the goods produced now. Smith further articulates that a capital can be lent to two kinds of people; first someone who will only use it to spend, and second a person who will use it to add additional products in the future (Smith et. al. 1981). Of the two people who would borrow capital, lenders will only lend to the latter unless it is a farmer. For these reasons, according to Smith, interest rate should exist and why it exists. Smith's arguments are resemble the modern concept of the Time Preference of Consumption. The time preference of consumption is the measure of utility a person receives when they consume today versus saving for future consumption. In modern times, time preference is used to try and determine the real market rate. Smith alluded to time preference because of his statement that interest is "rent payed by borrowers to use lenders share of the current output" (Smith et. al. 1981, p. 351). Meaning, the borrow had a time preference for current consumption and the lender had a time preference for future consumption, so the borrow is paying a rent to use the lenders current consumption. An important note to consider is Smith did not explicitly say that the lender preferred future consumption. He only articulated that the lender had free capital available and the borrower had a need for current consumption. The time preference of the lender is

assumed. The assumption has its basis in the fact that the lender had idle capital. If the lender wanted to consume more goods in the present, then they would not have the idle capital. Instead they would use it all in the current period. Smith did not explicitly use time preference, however when comparing his rhetoric to modern economic thought, it can be inferred that Smith had some notion of time preference.

In addition to arguing why there is interest, Smith discussed why, in his view, the interest rate would increase or decrease naturally and not for the same reasons the market sees diminishing returns. According to Smith, the amount of capital available along with the increase or decrease in the annual produce determine the interest rate (Smith et. al. 1981) This determination of interest rate is exact analysis used in the money supply and money demanded view on interest rates. In the money supply and demand model of interest rates, when money supply increases, the interest rate decrease. When money demand increases, the interest rate increases. Smith explains this in terms of competition and loan flow. First, loans flow when "person A could lend capital to person W, who then purchases from person B who lends it to person X..." (Smith et. al. 1981 p. 351-352). With this flow of a loan, three different lenders will receive interest, giving them more capital to lend out next period. With the increase in capital "the profits which can be made by employing them necessarily diminish" (Smith et. al. 1981 p. 352). The reason for this reduction is competition. There is more capital for the same amount of people who need it. If the annual produce remains the same, the demand for capital will remain the same while the supply increases. In other words, the receiving of interest will increase the money supply in an economy. As stated above, an increase in the money supply will decrease the interest rate. Smith articulates that exactly. Another way Smith argues will decrease interest is if annual

produce increases, but the supply of money does not. This will cause a decrease in the money demanded because it will take less to buy the same amount as before. Smith succeeded in explaining how the money supply and demand decreases the rate of interest.

However, one failure of Smith's is he fails to recognize that the money supply and demand can also increase the interest rate. Smith only looks at how it decreases the interest rate. This may seem insignificant, but it is a critical error in Smith's analysis. By not recognizing that decrease in the money supply and an increase in money demanded will increase the interest rate, Smith fails to provide a complete analysis on interest rates. If the error was not corrected, it could prove disastrous because governments would have a partial understanding of the effects of monetary policy. This could lead to potential recessions due to the lack of knowledge.

Along with the time preference of consumption, the concept of the time value theory of money is indirectly brought up in Smith's analysis of the increase in gold and silver from the discovery of the Spanish West Indies. The evaluation of currency worked differently in Smith's time versus today. Currency was gold and silver. It was not float currency like today. With float currency, the interest rate is used to determine the time value of money. The time value of money theory states that an amount of money in the present is worth more than the same amount of money in the future. The reasoning behind it is a person can earn interest on the money if they have it today. With the currency being gold or silver, its current or future value is not determined by the interest rate as shown in Smith's *Wealth of Nations* Book II: Chapter IV. However, Smith indirectly demonstrates a time value theory of money. Smith states "any increase in the quantity of silver, while that of the commodities circulated by means of it remained the same, could have no other effect than to diminish

the value of that metal" (Smith et. al. 1981 p. 355). Meaning with an increase in the quantity of silver, the current value of an amount of money has more purchasing power than a future value. The problem surfaces if the quantity of silver remains the same. There would be no difference in the purchasing power of an amount of money in one period versus the next period. Therefore, the time value of money is indirectly brought up by Adam Smith.

Creditors today use a formula to determine the rate of interest on loans of capital. That formula is the risk-free rate plus an inflation premium plus a default risk plus a liquidity premium and plus a maturity risk premium. Smith did not present a formula for the determination of interest. However, it can be inferred that Smith noticed parts of the modern formula even if it is not explicit. First, it can be inferred that Smith recognized a risk-free rate that is the government rate. The inference come from multiple statements made by Smith. Smith wanted to set a cap on the interest rate to prevent usury among other reasons. He reasoned that setting the cap below the "lowest market rate, or the price which is commonly paid for the use of money by those who can give the most undoubted security" (Smith et. al. 1981 p. 356). From this statement one can infer that the lowest market rate would be the risk-free rate because it is the minimum rate a creditor would lend capital with smallest risk. Smith recognized the government rate as the risk-free rate because his observations showed the government was charged the least amount in terms of interest. Smith also recognized the need for a risk premium. Smith explicitly states this when he said "the debtor must pay [the lender] for the risk which he runs by accepting the full value of the use" (Smith et. al. 1981 p. 358). This proves Smith saw risk as a variable in the determination of the interest rate. One thing Smith did not show was the specific break

down in the risk and an inflation premium. He only saw the risk-free rate and some arbitrary risk. Missing the specific components of risk made Smith's analysis incomplete and affected his view of usury laws. If Smith recognized all parts of the modern formula, then he would have not made an argument for a cap on interest. The reason being instead of including some arbitrary risk that generalizes for most of the population, the interest would have been charged on an individual basis. Which in turn could prevent some of the non-sober people from receiving loans.

To reduce the risk taking of creditors, Smith proposed usury laws that would set a maximum rate of interest. These laws put forward by Smith differ greatly from today's usury laws. Today's usury laws are meant to protect the consumer. They vary state by state, however most states say the default interest rate is five percent unless otherwise agreed upon in a contract. Part of the reason for the usury laws is asymmetric information. Creditors know more about what a fair interest rate is then the average American citizen. Meaning creditors have more information on interest rates than the average American citizen. With the asymmetric information, creditor would charge a higher interest than what is necessary. The debtor would assumedly have no knowledge that they could negotiate for a lower interest rate. The usury laws try to control this effect of asymmetric information. The purpose of Smith's usury laws was to also try and control the asymmetric information problem. However, instead of protecting the consumers, it was to protect the nation and the banks. Smith recognized that people over value gains and under value losses (Smith et al., 1981 p. 125). Under a high limit on the interest rate, creditors would only lend to "prodigals and projectors" even if they had a higher risk (Smith et al., 1981, p. 358). Prodigals being people who spend money recklessly, and projectors being like

entrepreneurs. The reason creditors would lend to prodigals and projectors is they would be able to offer higher returns on capital because they would be taking higher risks. In addition, the projectors could earn a greater amount of profit. The issue is asymmetric information. Only the debtors know how they will spend the money and the likelihood of success. Especially with the limitations of the financial system in the 18th century as stated earlier. Since the debtor knows the risk involved and the creditor does not, they are passing along the risk of the project to the bank exactly like Smith explains people do to insurers in chapter 10 (Smith et al 1981). The creditors would not know the extent of the risk, therefore may not be able to charge an appropriately high interest. Furthermore, Smith wants the "sober people" to have the capital because they have a higher chance of creating a profit. Sober people being people of wealth and who are cautious. There is less asymmetric information between sober people and creditors because the "sober people" have proved themselves successful in business and usually already own a business. Both the usury laws of today and Smith's proposal for usury laws try to prevent the abuse of asymmetric information as one of their goals.

There are some limitations to Smith's usury laws that hold back the economy when comparing them to modern usury laws. The most significant limitation is the goal of preventing projectors to receive capital. Throughout history, projectors are the people who significantly improved technology and transformed the market. With limiting their access to capital, England would be left behind in terms of economic growth because the status quo would remain the same. There would be no large advancements in technology or new industries being created. Stagnating England's economy. Modern laws do not have this same limitation because they only try to protect consumers and allow creditors to set

interest at a level agreeable between the debtor and the creditor. A different limitation of Smith's usury laws is it does not prevent asymmetric information. Smith assumes creditors will not lend capital to prodigals or projectors if there is a limit on the rate of interest. However, in an effort to receive capital, a projector could only communicate the necessary information needed to obtain the capital. In other words, Smith's usury laws could make the asymmetric information problem worse.

Smith's usury laws and discussion about interest were trying to determine why people borrow capital and set interest, and how to prevent crisis arising from capital lending. Unfortunately, crisis still happen. One major example of a financial crisis based on some of the topics discussed by Smith was the 2008 crisis. The 2008 crisis started in the financial sector and spread from there. The times leading up the crisis, the cause of the crisis, and the government response will be looked at. The logic of the government will be compared to Smith's logic for interest rates and usury. Given the information above, Smith's possible views on the crisis will be analyzed and how his views relate to the causes of the recession. It is important to understand the differences in the financial system and the factors that plays in the following analysis.

An understanding of the 2008 financial crisis is needed to better comprehend how it relates to Smith's discussions. A precursor to the 2008 financial crisis was deregulation of the banking system and other financial markets over the years leading up to 2008 (Murray et al. 2017 p. 182). The deregulation allowed for financial institutions to create the mortgage backed securities and offer subprime mortgages when they previously were unable to. The cause of the financial crisis was a housing bubble burst. The creation of the housing bubble started with mortgage back securitized (MBS). MBS's were a bundle of

mortgages that a bank would put together and sell to an investor. The banks were willing to sell the MBS for two reason. The first is time preference. Banks want the interest and the principal payment of the mortgage as soon as possible. The MBS allowed this to happen and allowed the bank to hand out more mortgages because their money was not all tied up in loans. The second reason banks would sell them is they could make a profit on them faster than they would waiting for a mortgage to mature. The issue with this process is asymmetric information (Beltran and Thomas 2010). Since banks passed on the risk to the investors, they could make subprime mortgages. The investors would have no way of knowing about the subprime mortgages.

In addition to the asymmetric information problem from the bank to the investor, there was an asymmetric information problem with the credit rating agencies. As stated in the beginning of the paper, credit rating agencies rate investments on their riskiness. With the MBS however, the credit rating agencies may not have known how risky the MBS truly were; especially if the banks included subprime mortgages. Therefore, the investors had absolutely no way of knowing all the information on the MBS.

The financial system collapsed because housing prices stopped increasing. This led to the subprime mortgages defaulting and the MBS were no longer safe. In addition, insurance companies lost money because of Collateralized Debt Obligations (CDOs). CDOs were insurance bought by holders of the MBS. If the MBSs could no longer pay, the insurance companies had to pay out the CDOs.

After the financial crisis, the FED and government did multiple things to fix the issue and prevent the problem from happening again. First, the Fed eased its monetary policy to try and stimulate growth along with bailing out certain companies (Bernake, 2012). To

prevent future collapses, the government passed more regulations such as the Dodd-Frank Act.

Smith would have disagreed with the deregulation of the financial market. Smith wanted to enforce usury laws to try and limit the risks creditors would take. He wanted only the sober people to receive capital because he believed they would make a profit and not the waste the money. He would have wanted more regulation not less. No decrease in regulations would have eliminated the recession of 2008 and there would be no further discussion. In addition, Smith's usury laws would not have fixed the asymmetric information problem. They could have potentially made it worse. The reason they could have made it worse is because banks would still give subprime mortgages. The interest's rates though would be the same as a safe mortgage. Making it more difficult for the credit rating agencies if they would have done their job properly.

The logic behind the Feds easing monetary policy is it would raise the money supply thus lowering interest rates. It would raise the money supply because the Fed would allow banks to borrow at a lower rate and extend the duration of the loan. Allowing banks to increase their lending. This would increase the money supply because there will be more capital to lend. The interest rate will decrease with the increase in money supply. The logic here corresponds with Smith's logic that an increase in the money supply will decrease the interest rate. The cause behind the increase in money supply is slightly different. This can be attributed to the difference in the financial systems of the 18th century and modern day.

Smith would have agreed with the logic behind the increase regulation. Smith understood people with excess current capital will lend it out for some return. His goal was not to prevent this action, but to mitigate the risk. The Dodd-Frank act and other

regulations put forth after the 2008 financial crisis were designed to prevent the same kind of scenario from happening again along with mitigating future risk (Guynn et. al 2010). One way the new regulations accomplished their goal is to set up the Financial Stability Oversight Committee. The committees focus is to identify unstable trends in the financial markets and unnecessary risks. (Guynn et. al. 2010) Smith would have agreed with all the regulations because he believed in the mitigation of risk and the tight control of who capital should be lent to.

Throughout history, lots of work has been done about interest rates, usury, and anything relating to the concepts. Adam Smith contributed to this literature in his book *An Inquiry into the Nature and Causes of the Wealth of Nations.* In the book, inferences of many modern concepts can be made. Smith describes time preference in his explanation of why interest rates exists. Time preference may not be fully explained in his work, however the part of the idea of the time preference surfaces. In addition, Smith talks extensively about interest and usury; including the level of interest, the determinants of interest, and the use of usury laws to prevent risky uses of capital. In addition, other analysis in Smith's writings can be used to help explain his view on usury. Specifically, Smith's determination that people over value gains and under value losses. All these analyzes are Smith's contribution to the literature on interest rate. Smith's logic behind his analyzes can be compared to the 2008 financial crisis and the logic behind the monetary and fiscal policy decisions made by the government and its entities. Smith would have agreed with some, but not all the logic. The most important part that Smith would have disagreed with is the deregulation that occurred before the crisis.

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