

The importance of the discount rate during financial crises and its effectiveness...

[Literature](#), [Russian Literature](#)



Matriculation Number 110004277 The Importance of The Discount Rate during Financial Crises and its Effectiveness in Targeting a Given Interbank Lending Rate In this essay I will briefly describe supply and demand for reserves in the economy to provide some context to the discount window before discussing the implementation of the discount window during the financial crisis of 2007-8 and its overall importance making specific reference to the Federal Reserve and its effect on the interbank lending rate. Firstly, I will outline the market for reserves within the banking sector. Demand for reserves has a downward slope because as the federal funds rate, also known as the interbank overnight loan rate, falls, the opportunity cost of holding higher levels of excess reserves falls so demand for reserves subsequently rises. Supply however is of greater importance in terms of the interplay between discount rate and interbank rate, especially during a financial crisis. Supply is made up of two components; amount of reserves that are supplied by the fed's open market operations, entitled non-borrowed reserves (NBRs) and borrowed reserves (BRs), direct borrowing from the fed, the cost of which is known as the discount rate. Because borrowing federal funds from other banks is a substitute for borrowing from the central banks (taking out discount loans), if the federal funds rate falls below the discount rate, then banks will not borrow from the fed and borrowed reserves will be zero. So as long as the interbank rate remains below discount rate, the supply will equal non- borrowed reserves so the supply curve will be vertical. The reserves market is where the interbank rate is determined through either discount loans or open market operations. I feel

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it is of great importance to emphasise the importance of the discount window and the reasons behind which it was brought into existence. It was initially expected to reduce bank panics by increasing availability of reserves through limiting portfolio risk as well as restricting reductions in bank liquidity during high lending seasonal periods of the year. In addition it would provide a source of liquidity if an unpredictable shortage of deposits arose. In the past, the discount window was a tool of monetary policy but seeing as a bank chooses whether or not it takes a loan from the central bank, the central bank has limited control over it while open market operations are controlled entirely by the central bank. So the discount window became a backup facility to prevent the interbank lending rate from rising too high. The interbank loan market would no doubt function efficiently so long as banks had adequate information and control over one another but during a crisis, this is not the case, and so a reliable source of funds acting as a back up facility is required. In terms of the implications in changes of the discount rate for the interbank rate; by lowering the interest rate to a given level at which banks can borrow from the central bank, the federal reserve for example can encourage lending at a time when credit is in short supply and when banks are very cautious with other. To best explain what happens to interbank lending during a financial crisis and the reason for which most financial institutions turn to the discount window, I will use the global financial crisis as an illustration. When the financial system began to give under the pressure in 2007, ratings agencies started to downgrade bonds backed by subprime mortgages; following this, banks, such as Bear Stearns,

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who had invested heavily in mortgage backed securities had to liquidate various hedge funds. BNP Paribas for example declared that they were to redeem what they had invested in three different investment funds. When this happened, the interbank lending rate shot up and banks became circumspect and unwilling to lend so credit dried up. They began to act with great prudence towards other financial institutions. A substantial drop in the availability of loanable funds meant that the interbank rate rose rapidly as a response. The resulting equilibrium rate will be much higher and much further up the downward sloping demand curve so in order to target a lower interbank rate to encourage lending as well as boost confidence, a shift downwards in the horizontal section of the supply curve (i. e. a larger drop in the discount rate) should result in an equivalent fall in the interbank rate. Borrowed reserves will increase whilst also affecting the interbank rate. So as the diagram shows, following the rise in the federal fund rate, a sharp reduction in the discount rate not only increases the amount of reserves in the economy but also lowers the interbank rate to a more stable level. This is a much more direct route to lowering the interbank rate than would be possible by conducting an open market purchase. The discount window is always at a rate higher than the target interbank rate so that when crises occur and credit that banks desperately need to cover their obligations becomes unaffordable, the option is there to obtain funds from the federal reserve at a rate lower than that of the initial interbank rate. And by doing so, the manoeuvring of the discount rate invariably controls the level at which the interbank rate is set. In this scenario, lowering the discount rate to

a given rate will also lead to a new interbank rate at exactly the same level. As the diagram below shows, interbank rates reached an almost unprecedented peak in September 2008 and in the following months fell to a rate that was vaguely normal partially due to the discount loans that were made available thanks to the Federal Reserve manoeuvring the interbank rate to a level that increased accessibility of funds for firms that were struggling. The central bank's aim is to keep the level of borrowed reserves high and that is what changing the discount rate enable them to do. To conclude, I have briefly outlined the market for reserves in order to contextualise the application of the discount window during financial crises. I have explained its importance within the economy as a lender of last resort and a back up facility. And thirdly I have gone into depth in terms of its effect on the interbank rate following a change in the discount rate made by the Federal Reserve in particular during the financial crisis in 2008. In order to target a given interest rate, I can conclude that the most fruitful way of doing so is via changes in the discount rate which trickle through to a direct effect on the Federal Funds Rate.

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