The Ethics of Consumer Credit: Balancing Wrongful Inclusion and Wrongful Exclusion

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**Abstract**

*Banks can make two kinds of mistakes when assessing credit applications: first, to exclude applicants who are creditworthy, and second, to grant credit to uncreditworthy applicants. I argue that banks have obligations to avoid both kinds of mistakes, but for different reasons. Each mistake of wrongful exclusion is a rights violation, whereas mistakes of wrongful inclusion are only wrong in the aggregate, once their number infringes the claims of shareholders, bondholders, and depositors, or financial stability is threatened. I argue, however, that it is not in the self-interest of banks to minimise either mistakes of wrongful exclusion or inclusion. Modern portfolio theory and the availability of securitisation imply that there is an economically optimal level of mistakes of both wrongful inclusion and exclusion, and the economically optimal level exceeds what is required of banks. Therefore, financial regulation and supervision are required in order to make the credit system meet its obligations towards customers. But regulators face normative trade-offs. I distinguish a trade-off between mistakes of wrongful inclusion and exclusion, and a trade-off between the groups of applicants that will foreseeably be wrongfully excluded. I illustrate the second kind of trade-off by discussing the distributive impact of Loan-to-Value and Debt-to-Income ratios.*

# Introduction[[1]](#footnote-1)

Perhaps in an ideal world, banks[[2]](#footnote-2) would grant credit to all creditworthy applicants, and deny credit to all those who would default on their debt. But even the most developed credit systems, such as that in the US, fall far short of this ideal. On the one hand, banks often give credit to applicants who later default. At the height of the financial crisis, US banks wrote off more than 6% of their consumer loan portfolios in a single quarter.[[3]](#footnote-3) US households were more than 30 days in arrears on almost 12% of loans by volume.[[4]](#footnote-4) On the other hand, banks deny credit to many applicants who could in fact service it. One third of US Americans who wanted credit last year did not get credit—either because they were rejected, or because they were discouraged from even applying. But the share of the excluded who could have serviced their debt is difficult to gauge, because estimates hinge on a counter-factual: if they had been granted credit, would these applicants have repaid? In section 1, I will say more about the magnitude of wrongful inclusion and exclusion. I focus throughout on the US example, which is special in some respects, including the lack of a developed rental market, and some features of its legal system concerning defaults on mortgages. Much of my discussion does, however, also apply to other developed countries, such as European countries.

My concern in this paper is normative: How should we think about the ethics of credit inclusion and exclusion? In particular, I focus on the following two questions. First, what are the relative weights of the obligations to avoid mistakes of wrongful inclusion and to avoid mistakes of wrongful exclusion? Second, what are the moral trade-offs involved in regulating banks to meet those obligations?

In section 2, I argue that banks have obligations to avoid mistakes of wrongful exclusion—denying credit to applicants who could service their credit—as well as obligations to avoid wrongful inclusion—granting credit to applicants who will default. Since these obligations can conflict, their relative weights pose an important ethical question. My view is that each mistake of wrongful exclusion infringes the rights of applicants, but individual mistakes of wrongful inclusion do not. Hence considered *in isolation*, avoiding a mistake of wrongful exclusion trumps avoiding a mistake of wrongful inclusion. *In the aggreg*ate, however, mistakes of wrongful inclusion can also lead to severe rights violations, namely when they threaten the rights of shareholders, bondholders, or depositors, or even threaten financial stability. Hence banks have the dual obligation to provide creditworthy applicants with credit, and to avoid over-borrowing. Meeting this dual obligation is the social purpose of banks concerning consumer credit.

In section 3, I introduce the problem that banks’ self-interest is at odds with their social purpose. The reason is that it is profitable for banks to allow for more mistakes of wrongful inclusion and wrongful exclusion than they ought. Banks may be tempted to allow mistakes of wrongful inclusion for two reasons. First, borrowers in arrears are the most profitable customers, as they pay hefty surcharges. Second, securitisation and the too-big-to-fail problem allow banks to pass on some of the costs of wrongful inclusion to other banks or society at large. Banks are also tempted to allow for mistakes of wrongful exclusion. I draw on some basic portfolio theory to show that banks may fare best if they deny credit to a large group of applicants who they know to be almost entirely creditworthy, as long as they cannot identify the few that might not be.

In section 4, I present a solution to the problem that banks’ social purpose and their self-interest are misaligned. I argue that financial regulation can steer banks toward their social purpose. However, crafting regulation is not a merely technical exercise. Financial regulators face moral trade-offs, of two kinds. The first is due to the fact that minimizing mistakes of wrongful inclusion leads to an increase in the number of mistakes of wrongful exclusion, and vice versa. Hence, regulators need to decide how to balance mistakes of wrongful inclusion and mistakes of wrongful exclusion. The second kind of trade-off concerns how to allocate the burdens of wrongful exclusion. For instance, regulators have several tools at their disposal to limit the growth of mortgage borrowing, each of which may be sufficient to avoid financial instability. The moral trade-off arises because depending on which tool regulators choose, different groups of people are excluded from credit. In effect, regulators decide who bears the burden of exclusion from credit on behalf of everyone’s interest in financial stability.

In section 5, I give an example of this latter kind of regulatory trade-off. In some circumstances, safeguarding financial stability requires slowing down the growth of mortgage credit. Financial regulators have so-called macro-prudential tools at their disposal to steer the growth of mortgage credit. I show that which kind of macro-prudential policy regulators adopt has distributive consequences by determining who is foreseeably wrongfully excluded from credit.

# 1 The magnitude of mistakes of wrongful inclusion and exclusion

Mistakes of wrongful inclusion and wrongful exclusion are more common than one might think. Very roughly, 5%-10% of consumer credit granted in developed countries like the US will either not be repaid at all, or will only be repaid after missed payments from borrowers, an indication that households experience financial stress. Large differences in default rates emerge between types of credit and over time. Consider the quarterly charge-off rate on residential mortgage loans. The charge-off rate concerns the proportion of a bank’s loan portfolio that is “written off” in a given quarter.[[5]](#footnote-5) As figure A shows, at the height of the recent global financial crisis, US banks wrote off as much as 2.7% of their residential mortgage portfolios in a single quarter. In 2016, this figure had fallen to a more savoury 0.1% per quarter. For consumer credit excluding mortgages, such as credit card debt, car loans, and student loans, charge-off rates increased to 6.6% in the worst quarter of the crisis. Similar to mortgage credit, charge-off rates on consumer loans fell substantially, yet stood still at more than 2% per quarter in 2016.

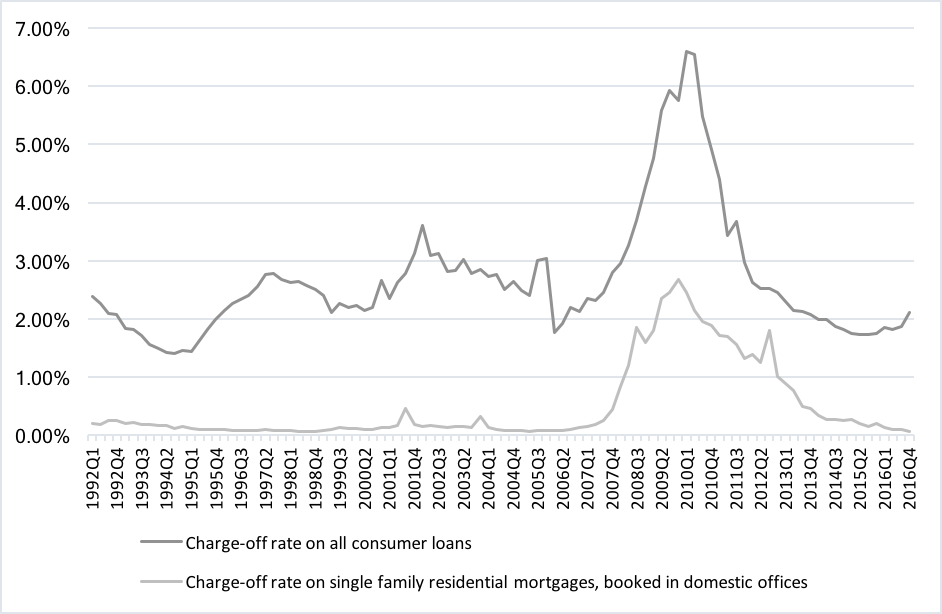


Figure A: Charge-off rates on consumer loans for US banks, 1992-2007[[6]](#footnote-6)

Charge-off rates capture only the most severe cases of wrongful inclusion, because they measure only loans banks have essentially given up on. Many more borrowers struggle to service their credit commitments, but eventually succeed in repaying, and are therefore not included in this statistic. This group is better captured by the delinquency rate, the proportion of the loan portfolio where payments were at least 30 days overdue in any given quarter.[[7]](#footnote-7) At the height of the financial crisis, the delinquency rate on residential mortgages was 11.5%. In 2016, the delinquency rate on residential mortgages had fallen, but still stood at 4.2%. It is also noteworthy that in 2013, 4.1% of US citizens had declared bankruptcy at some point during the last 5 years.[[8]](#footnote-8)

The magnitude of mistakes of wrongful exclusion is more difficult to gauge, because it involves assessing a counterfactual: Would applicants have repaid had they been granted credit? As an upper estimate, we can consider the magnitude of exclusion from credit, not all of which is wrongful. 48% of US citizens wanted some kind of credit in 2016. Two thirds of this group obtained credit, but one third did not get the credit they sought.[[9]](#footnote-9) The main reason consumers did not get credit is that it was denied (63% of unsuccessful participants). There is another large group, however, who was discouraged from even applying for credit (37%).[[10]](#footnote-10)

Clearly, not all cases of exclusion from credit are cases of wrongful exclusion. But there is ample evidence that many of them are. One way to get around the problem of assessing counterfactuals is to study how entrepreneurs who cannot obtain credit put to use capital injections, for instance through inheritance. If they invest their inheritance into their business and run it successfully, this suggests that they could have done equally well with borrowed money and serviced their credit contract. In the US, a study found that all else being equal, owning more assets makes switches into self-employment more likely.[[11]](#footnote-11) This result suggests that lack of access to capital stifles entrepreneurial activity.[[12]](#footnote-12) But it does not yet follow from these results that entrepreneurs are wrongfully excluded, because we don’t know whether these businesses succeed. Alternatively, people who become entrepreneurs because they receive an inheritance or additional credit due to raising house prices may squander their capital. Unfortunately, the cited studies do not track the success rates of the businesses. But we have complementary data from the US that sheds light on how additional capital affects the success rates of businesses. One study shows that if business owners inherit $150,000, the probability that they remain sole proprietors increases significantly. At the same time, the receipts of enterprises that survived five years increase by almost 20%.[[13]](#footnote-13) Hence an injection with capital increases both the likelihood that businesses survive and their profitability. But it still does not follow that entrepreneurs are wrongfully excluded from credit. Perhaps people who receive large inheritances are better entrepreneurs? By contrast, there is evidence that the wealthy are not the better entrepreneurs.[[14]](#footnote-14) Again using US data, another study concludes that higher survival rates of enterprises run by wealthier people are caused by liquidity constraints on poorer entrepreneurs. Taken together, these studies suggest that a sizable share of entrepreneurs lacking access to credit are wrongfully excluded.

The studies we have considered so far apply to credit for small businesses. Do the observations from these studies carry over to consumer credit? There is evidence of wrongful exclusion in US consumption contexts. One study compares trade-offs that high- and low-income buyers make between initial outlay and operating costs when buying air conditioners.[[15]](#footnote-15) The study finds that high-income buyers pay less for air conditioning in the long run than low-income buyers. The reason is that low-income buyers chose cheaper models with higher operating costs. Taking operating costs into account, low-income buyers pay substantially more for air conditioning, even though they are more price-sensitive. The major reason the study identifies is liquidity constraints. Since low-income buyers manage to meet the substantially higher overall costs of cheap air conditioners, they would also be able to service a consumption credit to buy a more expensive model, with only some of the savings due to lower running costs eaten up by interest payments.

Credit exclusion has also been studied in the US housing market.[[16]](#footnote-16) A third of US families rent rather than own. Renting families are not more geographically mobile than buying families—if anything, the opposite holds. Similar to the air-conditioning case, buying houses in the US is generally cheaper in the long run. Moreover, in the US, buying generally opens up opportunities to live in higher quality property and neighbourhoods. Why do low-income families rent nevertheless? The study suggests that low-income households often do not have access to mortgage credit: Only eight percent of renting families would be able to secure a conventional mortgage. Many of these households must be wrongfully excluded, since a) renting is usually more expensive in the long run than buying a place of similar quality, and b) most of these households manage to make regular rent payments.

In sum, there is ample evidence that mistakes of wrongful inclusion and exclusion are made in significant numbers. Roughly, 5-10% of borrowers are wrongfully included. Wrongful exclusion is more difficult to quantify. Again very roughly, fewer than one third and most likely more than just a few percent of people wanting credit (roughly 50% of the population in any given year) are wrongfully excluded in the US.

# 2 The obligations of banks concerning wrongful inclusion and exclusion

In this section, I will argue that banks have obligations to provide creditworthy applicants with credit, and to prevent over-borrowing. This view implies that banks have obligations to avoid mistakes of wrongful exclusion and inclusion.

We need to draw two distinctions. First, let’s differentiate between creditworthy applicants and applicants who are not creditworthy. For our purposes, applicants are creditworthy if they are willing and able to service the credit contract they seek to conclude. Second, let’s differentiate between applicants who are granted credit and applicants who are rejected. Combining the cases leads to four cases, as illustrated in figure B.

|  |  |  |
| --- | --- | --- |
|  | **Accepted** | **Rejected** |
| **Creditworthy** | Rightful inclusion | Wrongful exclusion |
| **Not Creditworthy** | Wrongful inclusion | Rightful Exclusion |

Figure B

I will take it for granted that it is permissible for banks to rightfully include and to rightfully exclude applicants. Some will disagree. For instance, if credit were inherently bad, granting credit even to creditworthy applicants might be impermissible. I will set aside this possibility here. Similarly, I will set aside suggestions that rightful exclusion might be impermissible because banks should lend regardless of whether applicants are creditworthy.[[17]](#footnote-17) I am sympathetic to the idea that in market economies based on private property, uncreditworthy applicants have some claim to support in becoming creditworthy. But, as I have argued elsewhere,[[18]](#footnote-18) this support should not come in the form of lower access barriers to credit, and the corresponding duty should fall on the state, not on banks. In sum, I maintain, in line with common sense, that it is permissible for banks to accept borrowers who are creditworthy, and to reject borrowers who are not creditworthy.

I want to focus on the moral status of the two remaining cases, those of wrongful exclusion and of wrongful inclusion. Can banks be faulted for allowing either of these mistakes? Initially, you may be moved by the liberal thought that banks, at least if they are privately operated, should be allowed to run their business as they see fit. If so, they do not have an obligation to service or to reject any applicant, creditworthy or not. By contrast, I will argue that banks have obligations to avoid wrongful inclusion and exclusion. There are different ways to argue for this view. For instance, one might ground such an obligation in the fiduciary duties of banks, or in a general duty of businesses to benefit customers and avoid harm.

My preferred way of arguing for the conclusion that banks have obligations to avoid wrongful exclusion and inclusion appeals to a right to credit, which I have argued for elsewhere.[[19]](#footnote-19) The right to credit includes a claim-right of creditworthy citizens to obtain credit at reasonable rates. To summarize the argument briefly: Private property is inherently exclusionary, because it prohibits everyone else from controlling the things you own, and vice versa. Enforcing property rights requires the coercive power of the state, and exercising the state’s coercive power needs to be legitimised. To render the coercive force of the state legitimate, non-owners need to have sufficient reason to accept a duty to respect others’ property rights. But—and this is the core of the argument—non-owners lack sufficient reason to accept such a duty unless a right to credit mitigates the exclusionary character of private property. The reason is that a private property system that does not acknowledge a right to credit imposes an unnecessary burden on the citizens excluded from credit. Withholding credit from creditworthy citizens limits their economic agency beyond what is required to safeguard the advantages of private property. Hence, capitalist societies, which are based on private property, should recognise a right to credit.

If we recognize that citizens have a right to credit, we need to acknowledge a normative asymmetry between mistakes of wrongful exclusion and inclusion. Cases of wrongful exclusion infringe upon a right of citizens—the right to credit. By contrast, individual mistakes of wrongful inclusion are not similarly serious rights violations. Since rights generally trump lesser normative considerations, one might think that banks should put all their efforts into avoiding mistakes of wrongful exclusion, even if this leads to a large number of mistakes of wrongful inclusion.

But this would be too quick. If the number of mistakes of wrongful inclusion made by a bank reaches a certain threshold, the bank’s economic viability is threatened. Shareholders, bondholders, and depositors have moral claims on the management of the bank to take their interests into account. Moreover, failing banks, if they are systemically important or interconnected with other banks, threaten financial stability, lead to increased interest rates for creditworthy borrowers, or even to a freeze of credit markets. Since exercising the right to credit requires a functioning credit system, the right to credit implies an indirect right that mistakes of wrongful inclusion be limited. Hence rights are in play regarding both wrongful exclusion and inclusion. But the asymmetry persists: every mistake of wrongful exclusion is a violation of the right to credit. Mistakes of wrongful inclusion only infringe rights of shareholders, bondholders, depositors and applicants cumulatively.

I have argued that citizens have rights not to be wrongfully excluded, and that wrongful inclusion be limited. But why does the obligation to avoid mistakes of wrongful exclusion and inclusion fall on banks? Recall that my argument for the right to credit stems from the need to justify the enforcement of private property rights by the state. The right to credit partially mitigates the exclusionary character of private property. Hence, ensuring that creditworthy citizens have access to credit is in the first instance the state’s business.

But there is no need for the state to discharge the duty itself.[[20]](#footnote-20) The state needs to ensure that people can exercise their right to credit, but does not need to act as the counterpart in credit transactions itself. As long as private companies provide credit consistent with the right to credit, they may act as counterparts in credit transactions instead. Private hospitals provide serve a similar function vis à vis citizen’s right to health care. By operating in the domain of healthcare, hospitals acquire obligations to provide care consistent with the requirements of citizens’ rights. Hospitals need to meet high standards of quality of care, facilities, and clinical quality, for instance. From a normative perspective, meeting these standards provides hospitals with their ‘licence to operate’. Another way of expressing the thought that a private company has acquired obligations towards its customers is to say that it is required to pursue a social purpose. The social purpose private hospitals are required to pursue is to provide high quality health care for patients.

The obligation of banks to avoid mistakes of wrongful exclusion and inclusion is similarly grounded. In the first instance, the obligation to provide creditworthy citizens with credit falls on the state. By operating in the domain of consumer finance, banks acquire obligations to operate consistently with citizens’ right to credit. For instance, banks need to meet quality standards in conducting credit assessments and in designing their products. The social purpose that banks are required to pursue in the domain of consumer credit is to avoid mistakes of wrongful exclusion and, derivatively, to avoid mistakes of wrongful inclusion.

Applying this description of banks’ obligations in practice gives rise to interesting challenges. I have said above that applicants are creditworthy if they are able and willing to service the credit contract they seek to conclude. But at the time banks and applicants negotiate a credit contract, it is unknown whether applicants are in fact creditworthy. First, an applicant’s ability to repay can be undermined by future calamities. Second, an applicant’s will to repay can be weakened by unforeseen developments, or may have been feigned in the first place. This opens up a gap between the decision of the bank whether or not to grant an applicant credit, which needs to be made *ex ante*, and the knowledge required to discharge the obligation to avoid mistakes of wrongful inclusion and exclusion, which can only be had *ex post*. This gap implies that what is required of banks in practice is to exercise care and judgment in assessing an applicants’ creditworthiness, and to act on their best judgment.[[21]](#footnote-21) As we’ll see in the next section, it is not always in the self-interest of banks to do so.

In sum, I have argued that banks have obligations both to avoid mistakes of wrongful exclusion and inclusion. These obligations can be grounded in the right to credit. On this view, mistakes of wrongful exclusion are rights violations, whereas mistakes of wrongful inclusion infringe rights only in the aggregate, insofar as they undermine the claims of shareholders, bondholders, depositors, or threaten financial stability.

# 3 The need for financial regulation

It might at first seem that the moral obligations of banks are benignly in sync with their financial self-interest. If so, self-interest should propel banks to keep mistakes of wrongful inclusion and exclusion to the bare minimum. But this is not the case. In section 1, we saw that mistakes of wrongful exclusion and inclusion are not uncommon. I will argue that the frequency of these mistakes should not come as a surprise, because it is in fact not in the interest of banks to minimize mistakes of wrongful exclusion and inclusion. In this section, we will take a closer look at the economics of wrongful inclusion and exclusion, revealing that banks face temptations to allow both kinds of mistakes. Therefore, we need financial regulation and supervision to steer banks toward their social purpose.

Consider mistakes of wrongful exclusion. It is important to realize that the economic goal of banks is to build up a profitable loan portfolio. Accepting the most creditworthy applicants is not the best strategy to reach this goal. The key insight is that accepting the most creditworthy applicants does not lead to an optimal portfolio.[[22]](#footnote-22) To see this, consider three applicants: Anne, Bettina and Caspar. All three apply for a private unsecured loan from CleverBank. CleverBank assesses their creditworthiness as follows: Anne and Bettina will service their loan with a probability of 90%, while Caspar will service his loan with a probability of 85%. If CleverBank wants to select two out of three applicants, which ones should it accept? If CleverBank were to select the most creditworthy applicants, it would accept Anne and Bettina, and reject Caspar. But CleverBank would maximize its expected profits by diversifying its loan portfolio, rather than by selecting the most creditworthy applicants. And diversification might well require a different decision on the part of the bank.

To see this last point, I will add some simplifying assumptions. Suppose that the risk that an applicant defaults is entirely due to the possibility that they are laid off, and that each applicant will only be laid off if their employer closes down. Against the backdrop of this additional piece of information, we can read the credit assessments by CleverBank as a reflection of the probability that the employers of Anne, Bettina, or Caspar will go out of business. The probability scores suggest that the most likely outcome is that all employers will stay in business, with Caspar’s employer being a bit more likely to go bankrupt than Bettina’s and Anne’s employers.

Now here is the rub: Anne and Bettina work for the same employer, AlphaBeta, a clothing manufacturer, whereas Caspar works for a different employer, Delta, a competing clothing manufacturer. Hence the risks that either of them defaults are not independent. In fact, the risks that Anne and Bettina default are highly correlated: if AlphaBeta goes out of business—and only then—both will default on their loan. Let’s suppose that if either AlphaBeta or Delta goes out of business, the other company is going to survive with certainty. Then the risk that Bettina or Anne default is highly *inversely* correlated with the risk that Caspar defaults, to the extent that if either Anne or Bettina defaults, Caspar will repay with certainty, and vice versa.

If so, lending to Anne *or* Bettina *and* Caspar looks more attractive from the bank’s perspective than lending to Anne *and* Bettina. The reason is that in the latter case, the bank faces a 10% risk of losing the principal on both loans. By contrast, in the former case, the risk that the bank loses the principal on both loans is zero, because at least one of the two borrowers in the portfolio will keep their job with certainty. The example illustrates a general fact about the economic incentives faced by banks. Banks are not concerned about the prospects of an individual loan. Instead, they are concerned about the impact that granting a loan will have on the riskiness of their overall portfolio.

The portfolio perspective explains why, in some cases, banks may refuse to lend to the most creditworthy applicants. An insight about the economics of consumer credit helps give a more complete picture of why banks tend to allow for mistakes of wrongful exclusion. Banks have a strong incentive to be cautious in granting credit. That is because they stand to lose more when they grant credit that is not repaid than they forfeit when they deny credit to someone who is creditworthy. The reason is that banks only stand to gain fixed interest payments, which are usually small compared to the principal sum of money loaned to applicants. To illustrate, suppose that CleverBank receives ten credit applications. Let’s assume that nine out of ten applicants are creditworthy, but that one applicant is not. If the bank cannot identify in advance which of the ten applicants is uncreditworthy, it may well deny credit to all ten applicants, because the interest that the nine creditworthy applicants can afford may not make up for losing the principal in the tenth case.

In sum, taking a portfolio perspective explains why banks have an incentive not to select the most creditworthy applicants, but instead tend to select applicants that fit best with the bank’s existing loan portfolio. Furthermore, banks are naturally cautious and hence tend to tolerate mistakes of wrongful exclusion, because interest payments are small compared to the principal at stake.

Let’s consider mistakes of wrongful inclusion. Above, I argued that the structure of credit contracts gives banks a strong incentive to err on the side of caution, thereby allowing for mistakes of wrongful *ex*clusion. How, then, can banks at the same time face incentives to allow for mistakes of wrongful *in*clusion?

Part of the answer is that while banks take a hit if borrowers ultimately fail to repay, they stand to benefit if borrowers are merely late on their payments. If borrowers get into arrears, they incur fees, which are an important source of income for banks. In fact, it is an open secret that banks target borrowers who are likely to miss their payment deadlines in order to benefit from charges.[[23]](#footnote-23)

There are also two systemic reasons why banks allow for mistakes of wrongful inclusion. Both of these systemic reasons rely on the ability of banks to push some of the default risk onto other parties. The first systemic reason is that the division of labour in the financial system reduces banks’ incentives to avoid mistakes of wrongful inclusion.[[24]](#footnote-24) Banks that initially grant loans to applicants, so-called primary lenders, can sell those loans to other financial institutions, passing on the risk of default. The income of primary lenders is largely determined by the volume of credit they grant. Since the risk of default matters little for primary lenders, the incentive to avoid mistakes of wrongful inclusion decreases.

This mechanism became apparent during the global financial crisis of 2007-8. The crisis was triggered by falling house prices, but falling house prices do not automatically lead to higher default rates. Borrowers have an interest in continuing to pay off their mortgage as long as the value of their property is higher than the value of their mortgage.[[25]](#footnote-25) The sensitivity of default rates to falling house prices thus depends on the mortgage volume relative to the value of the house, an indicator we will return to in section 5. If this so-called loan-to-value ratio stands at 80%, house prices can fall 20% before borrowers have an incentive to default on their mortgage. Hence, falling house prices lead to defaults only if primary lenders do not require borrowers to contribute sufficient equity. Prior to the financial crisis, it was common in the US to grant mortgages without requiring borrowers to contribute any equity at all. The readiness of loan originators to provide households with zero equity mortgages is partly explained by their ability to pass on default risk to other financial institutions.

The second systemic reason is that some banks are too big, or too interconnected, to fail.[[26]](#footnote-26) Banks that are systemically important in one of these two ways can count on government support if they run into financial distress. This prospect weakens banks’ incentive to avoid mistakes of wrongful inclusion, because they can push some of the default risk onto taxpayers.

In sum, there are two main sources of incentives for banks to allow for mistakes of wrongful inclusion. First, risky borrowers, some of whom will turn out not to be creditworthy, increase profits by paying fees for late payments. Second, banks can push some default risk onto other financial institutions and onto taxpayers.

One complication concerning mistakes of wrongful inclusion is worth noting: While banks can make mistakes of wrongful exclusion all by themselves, mistakes of wrongful inclusion require the contribution of applicants willing to take out more credit than they can service. An explanation of why mistakes of wrongful inclusion occur thus needs to account for why borrowers enter credit contracts that they won’t be able to service. Boudewijn de Bruin has argued that prior to the global financial crisis of 2007-8, many sub-prime borrowers in the US should have known that they did not qualify for a mortgage.[[27]](#footnote-27) This gives rise to a puzzle: Why do borrowers take out credit, even though they have access to good evidence that they won’t be able to repay? I want to suggest two reasons.

The first is that consumer credit is often used by less well-off households as a last resort to meet urgent expenditures. In the UK, a third of households have no savings at all, and 13% have savings under £1,500.[[28]](#footnote-28) This means that the breakdown of a household appliance or an unexpected traffic fine can prompt the need to borrow. In such situations, considerations of creditworthiness may seem less urgent. Rather than declaring bankruptcy, households gamble for redemption, in the hope that future income will enable them to pay off their debt. The second reason why people take out credit they cannot repay is low financial literacy. Studies of financial literacy consistently find that people fail to understand basic financial concepts such as interest rates.[[29]](#footnote-29) Lack of financial literacy can be exploited by financial institutions to sell products to customers that do not benefit them.

I have argued that economic self-interest does not propel banks to minimise mistakes of wrongful exclusion or wrongful inclusion. Thus, if they only act out of self-interest, banks will fail to properly discharge their obligation to provide creditworthy citizens with credit at reasonable interest rates, and to prevent over-borrowing. Financial regulators, however, can steer banks to fulfil their obligations. Thus, financial regulation and supervision are needed to compel banks to fulfil their social purpose.

# 4 Two kinds of normative trade-offs in minimizing mistakes of wrongful inclusion and exclusion

Let’s take stock. I have argued that the social purpose of banks is to grant credit to creditworthy citizens, and to avoid over-borrowing. We have also seen that banks’ economic self-interest is not aligned with their obligations. Hence, financial regulation and supervision are needed to steer banks toward their social purpose. In this section, I discuss the normative decisions regulators and supervisors face when they craft guidelines and legislation. My key point is that the task of regulators and supervisors is not merely technical, but highly enmeshed in normative considerations. In particular, regulators and supervisors need to resolve two kinds of normative trade-offs. The first trade-off concerns striking a balance between mistakes of wrongful exclusion and mistakes of wrongful inclusion. This trade-off comes about because of the uncertainty surrounding individual loan decisions. Once this balance is struck, a second trade-off emerges, concerning which kinds of applicants will foreseeably be wrongfully excluded. Let me discuss these two kinds of trade-off in turn.

The trade-off between avoiding mistakes of wrongful inclusion and avoiding mistakes of wrongful exclusion comes about because of the uncertainty surrounding individual loan decisions. Avoiding either mistakes of wrongful inclusion or wrongful exclusion altogether would lead to a sharp increase in mistakes of the respective other kind. Minimising the risk of wrongful inclusion would make the number of mistakes of wrongful exclusion shoot up, disregarding applicants’ claims to credit. Minimising the risk of wrongful exclusion would make the number of mistakes of wrongful inclusion shoot up, threatening the financial viability of banks.

The structure of this trade-off is familiar from criminal sentencing. The two types of mistakes judges can make are to let a guilty person pose as innocent, it is often hard to know with certainty whether an accused is guilty. Making sure that no culprit ever goes unpunished would therefore require lowering the bar for sufficient evidence such that many innocent people would be sentenced unjustly. Unfortunately, ensuring that no innocent person is ever wrongly convicted would lead to a very high number of criminals escaping sentencing.

To strike an appropriate balance between mistakes of wrongful exclusion and inclusion, it is crucial to determine the relative strength of the claims of applicants not to be wrongfully excluded and not to be wrongfully included. In criminal sentencing, we have erected high bars for proving guilt, recognizing the right of the accused to due process. We thereby affirm the priority of avoiding wrongful convictions over avoiding undeserved acquittals. On the view presented in section 2, a similar asymmetry applies in the case of credit assessments. Mistakes of wrongful exclusion are rights violations, and therefore of first-order normative importance. This implies that banks should be required to meet high standards of accountability for making credit decisions. In practice, this should include granting comprehensive access to data on credit decisions to regulators and NGOs so that they can screen for discrimination. Banks should be expected to use state-of-the-art techniques in credit assessment, and to develop mechanisms to ensure that their assessments are apt and fair. While banks should be free to specialize in serving select customer groups, they should jointly monitor whether there are customer groups that are currently unserved, and devise strategies to close these service gaps.

# By contrast, mistakes of wrongful inclusion are only impermissible once they reach a certain threshold, beyond which they undermine the claims of shareholders, bondholders, depositors, and threaten to undermine financial stability. Therefore, banks should not be held accountable for individual mistakes of wrongful inclusion. Banks should instead be required to obtain meaningful consent from customers. Meaningful consent requires, of course, actual consent. But meaningful consent also requires more than that. Banks need to satisfy a number of conditions that make the credit contract they enter normatively binding.[[30]](#footnote-30)

# These conditions must be reflected in the products banks offer. For instance, consider so-called zero percent interest credit cards. These credit cards allow users to borrow money interest free for a couple of months by making payments with their credit card. After this period, interest rates rise sharply. It turns out that a large proportion of users run into spiralling debt once the interest-free period ends. This is because many customers over-borrow in the interest-free period, leading to mistakes of wrongful inclusion. Such patterns of wrongful inclusion should in the very least raise warning flags for banks and regulators, which make for the beginning of an argument to discontinue such products.

As long as the conditions ensuring meaningful consent are met, banks should not be held accountable for *individual* cases of wrongful inclusion. The reason is that mistakes of wrongful inclusion only lead to rights violations insofar as they undermine financial stability, and a small number of mistakes of wrongful inclusion does not lead to financial instability. However, banks have an obligation to keep the level of mistakes of wrongful inclusion below the threshold that begins to threaten financial stability.

Similar to the case of avoiding mistakes of wrongful exclusion, regulators play an important role in preventing banks from surpassing the permissibility threshold for mistakes of wrongful inclusion. The most important piece of regulation concerns the equity requirements set out by the so-called *Basel rules*.[[31]](#footnote-31) The main rationale for capital requirements is that banks have an incentive to finance themselves with large amounts of debt relative to equity. This allows banks to run the same operations with a smaller amount of equity, resulting in higher returns for shareholders in good times. Less equity also means that shareholders lose more in bad times. But due to the problem of too-big-to-fail, systemically important banks can expect assistance from the government. Capital requirements call on banks to hold a certain amount of equity relative to the loans they make and other assets.[[32]](#footnote-32) Stricter capital requirements reduce the risk that banks fail, but also compel banks to raise more equity to grant the same amount of loans, which may increase borrowing costs. Hence a normative trade-off arises in balancing higher lending costs against potential risks of financial crises.[[33]](#footnote-33) In sum, the first kind of normative trade-off concerns balancing mistakes of wrongful exclusion and wrongful inclusion.

Another normative trade-off arises once this balance has been struck. This second kind of normative trade-off concerns *which* *group of applicants* will be excluded from credit. This trade-off is a direct consequence of the peculiar nature of the obligation of banks to avoid mistakes of wrongful inclusion. Banks are obligated to keep the level of mistakes of wrongful inclusion below the threshold that would threaten bank failure. Because assessments of creditworthiness are uncertain, staying below the threshold foreseeably involves denying credit to applicants who are in fact creditworthy. But different rules and guidelines in conducting credit assessments lead to the wrongful exclusion of different groups of applicants. The trade-off, then, consists in balancing the interests of different groups of applicants.

Let me explain how regulators run into this second kind of trade-off in practice. To simplify, assume that keeping banks below the permissibility threshold of mistakes of wrongful inclusion requires slowing the growth of mortgage credit by 10%. Regulators can achieve this goal by imposing rules on banks not to lend to certain kinds of borrowers with heightened default risks. But there is no single best way of identifying borrowers who pose heightened risks. Moreover, whether any borrower will default is to a large part due to the performance of the overall economy. Hence any set of rules that sufficiently slows credit growth to keep banks below the permissibility threshold will drastically reduce the likelihood that the remaining borrowers default.

In sum, whether any borrower is creditworthy depends in large part on the ability of regulators to safeguard financial stability, which in turn requires enforcing rules that wrongfully exclude certain borrowers. My creditworthiness may therefore depend on excluding you from credit, or yours on my being denied credit. In the following section, I will discuss an example of such a trade-off.

# 5 A stylized example of a normative trade-off in macro-prudential regulation

In this section, I will illustrate the second kind of normative trade-off introduced above by considering the impact of two different tools to curb mortgage lending on mistakes of wrongful inclusion and wrongful exclusion.[[34]](#footnote-34)

To safeguard financial stability, regulators seek to keep the overall level of private credit within a safe range. One way of reacting to overheating credit markets is to increase interest rates, because higher interest rates increase borrowing costs and thereby decrease credit growth. The distributive effects of interest rate adjustments have been discussed by political philosophers.[[35]](#footnote-35) But adjusting interest rates is a blunt tool to slow credit growth, and it is not always available. In times of recession, central banks may want to keep interest rates low to promote economic recovery. So-called *macro-prudential tools* promise to curb the growth of credit without undermining economic growth.[[36]](#footnote-36) Macro-prudential tools aim to reign in credit growth before it reaches dangerously high levels by constraining the ability of banks to extend loans. Indeed, expansive periods in the credit cycle regularly precede financial crises.[[37]](#footnote-37) Mortgage credit is the most important component of private credit, and falling house prices are a common trigger of financial crises. Advocates of macro-prudential tools maintain that they can improve financial stability by curbing credit cycles.[[38]](#footnote-38)

In section 3, I have already mentioned one macro-prudential tool, namely caps on *loan-to-value* ratios (LTV). Applied to mortgage credit, LTV requirements compel banks to restrict credit for borrowers who cannot contribute sufficient equity. Consider Ike and Sam, who would both like to buy a home in the Washington area. Ike has a higher income than Sam, but lower savings. Hence, Ike is more likely to lose access to credit due to an LTV cap than Sam. For example, an LTV cap of 60% would limit credit to $180,000 for a house worth $300,000. If Ike’s savings are below $120,000, and Sam’s are above $120,000, Sam will be able to obtain credit, while Ike will not.

Requiring certain *Debt-to-income* ratios (DTI) is another macro-prudential tool. DTI requirements compel banks to restrict credit for borrowers who do not earn sufficient income. They restrict access to credit to borrowers whose disposable income is larger than a certain multiple of their mortgage payments. For example, a DTI cap of 30% would exclude borrowers from credit who need to pay more than 30% of their yearly income to service their loan. For a yearly gross income of $50,000, this means that the costs of the mortgage must not exceed $1,250 per month. Since Sam has a lower income than Ike, he is more likely to lose access to a mortgage due to DTI ratios than Ike. Hence LTV and DTI caps exclude different groups of applicants from credit.

Assume that a certain LTV cap is equally beneficial to financial stability as a certain DTI cap. What would be the distributive consequences of imposing caps on LTV or DTI ratios? First, note that if macro-prudential tools are successful in safeguarding financial stability, their success results from reducing the number of mistakes of wrongful inclusion. Second, both instruments are rather blunt, in that they exclude applicants from access to mortgage credit regardless of their specific financial situation. Hence we should expect caps on LTV and DTI caps both to lead to significant numbers of mistakes of wrongful exclusion.  
  
But LTV and DTI caps wrongfully exclude different groups of borrowers from access to mortgage credit, as Sam and Ike illustrate. Caps on LTV ratios privilege savings-rich applicants like Sam, whereas caps on DTI ratios privilege income-rich borrowers like Ike. There are also subtler differences in the distributive effects of these two macro-prudential tools. For example, a cap on the LTV ratio makes it more difficult for people from economically depressed areas to take job offers in richer areas than a cap on the DTI ratio. The reason is that if someone takes a job in a rich area, their income immediately increases, allowing them to meet DTI caps. By contrast, savings need to be built up over time. Therefore, LTV ratios might hamper social mobility more than DTI ratios.

The precise way in which caps on LTV and DTI ratios are imposed also makes a difference for distributive justice. First, consider a medium LTV cap that is imposed equally on all applicants. Second, consider a somewhat stricter LTV cap to be imposed in 90% of cases, and a more lenient LTV cap to be imposed in the remaining 10%. Both policies should have similar effects on financial stability. In the second case, the stricter cap on most mortgages would increase resilience to downward pressure on house prices, cancelling out the adverse effect on financial stability of the small number of more precarious borrowers. But the first and second version differ in how they distribute the burdens of limiting the number of mistakes of wrongful inclusion. In the first version, all mistakes of wrongful exclusion fall on the least wealthy applicants. In the second version, some of these less wealthy households can get a mortgage, as mortgage lenders can use their prerogative to grant 10% of applicants mortgages even if they do not meet strict LTV caps. This suggests that policies to safeguard financial stability can impose burdens progressively, with better-off borrowers shouldering more of the burden for financial stability than worse-off borrowers.

In sum, the choice of macro-prudential tools influences which borrowers face financial exclusion. Depending on whether LTV or DTI caps are applied, safeguarding financial stability falls either more heavily on savings-rich applicants like Sam or on income-rich applicants like Ike. Moreover, the precise ways in which macro-prudential tools are implemented matter, too. Rather than a single standard for all borrowers, it is possible to impose differentiated standards which impose progressively stricter rules the better off applicants are.

# Conclusion

I have argued for three main claims: First, banks have obligations to avoid mistakes of wrongful exclusion and inclusion. Banks have an obligation to avoid mistakes of wrongful exclusion grounded in the right to credit, and an obligation to avoid mistakes of wrongful inclusion based on the duty to safeguard financial stability. This dual obligation is, if you will, the social purpose of banks with regard to consumer credit. Second, regulation and supervision are needed to steer banks toward their social purpose. Third, regulators and supervisors face two kinds of normative trade-offs: to strike a balance between mistakes of wrongful exclusion and inclusion, and to determine which borrowers will bear the lion’s share of wrongful exclusion.

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1. Thanks to Boudewijn de Bruin, Joachim Helfer, Jens van’t Klooster, Kate Vredenburgh, Melissa Fernandez, and participants at the “Forum Wirtschaftsphilosophie” in March 2017 at the Humboldt University Berlin for written comments and discussions. Thanks as well to Martin O’Neill and Richard Holton for comments on an earlier version of this material. [↑](#footnote-ref-1)
2. I am interested in all financial institutions offering credit to consumers. This includes many creditors who do not have bank licences, including lenders specialised in car-loans, student loans, and payday lenders. For brevity, I use the term ‘banks’. [↑](#footnote-ref-2)
3. (Federal Financial Institutions Examination Council 2017). [↑](#footnote-ref-3)
4. (Federal Financial Institutions Examination Council 2017) . [↑](#footnote-ref-4)
5. More precisely, charge-off rates capture the value of loans removed from the books of a bank and charged against loss reserves, measured net of recoveries as a percentage of average loans and annualized. [↑](#footnote-ref-5)
6. Data Source: (Federal Financial Institutions Examination Council 2017) [↑](#footnote-ref-6)
7. Delinquent loans are those past due thirty days or more and still accruing interest as well as those in nonaccrual status. They are measured as a percentage of end-of-period loans. [↑](#footnote-ref-7)
8. (Bricker 2014, 29) [↑](#footnote-ref-8)
9. (Federal Reserve Bank of New York 2017) [↑](#footnote-ref-9)
10. (Federal Reserve Bank of New York 2017) [↑](#footnote-ref-10)
11. (Evans and Leighton 1989). [↑](#footnote-ref-11)
12. Studies in other countries support this result. One UK study finds that an inheritance of £10,000 doubles a typical British youth’s likelihood of setting up a business. The authors of the study conducted interviews with potential entrepreneurs, finding that raising capital is their principal problem. Another study showed that a 10% rise in the value of housing assets increased the number of start-ups by five percent in the UK. [↑](#footnote-ref-12)
13. (Holtz-Eakin, Joulfaian, and Rosen 1993) [↑](#footnote-ref-13)
14. (Evans and Jovanovic 1989) [↑](#footnote-ref-14)
15. (Hausman 1979) [↑](#footnote-ref-15)
16. (Savage 2009; Tighe and Mueller 2013, ch. 15) [↑](#footnote-ref-16)
17. See for instance Muhammad Yunus’ call for a human right to credit—philosophically discussed by Marek Hudon (2008). Yunus promotes an unconditional right to small amounts of credit. Moreover, Yunus’ justification is based on the alleged ability of credit to alleviate extreme poverty. His argument falls short because access to credit is not an effective means of escaping extreme poverty, as others have shown (Sorell 2015). See also Kimberley Brownlee and Zofia Stemplowska’s proposed right to financial inclusion (2015), which includes a right to being granted credit unconditionally. [↑](#footnote-ref-17)
18. (Meyer forthcoming) [↑](#footnote-ref-18)
19. (Meyer forthcoming) [↑](#footnote-ref-19)
20. (McMahon 2012). [↑](#footnote-ref-20)
21. (Thomas, Edelman, and Crook 2002) [↑](#footnote-ref-21)
22. (Beck and De La Torre 2007) [↑](#footnote-ref-22)
23. (Armstrong and Vickers 2012) [↑](#footnote-ref-23)
24. (De Bruin 2014, ch. 7) [↑](#footnote-ref-24)
25. (Admati and Hellwig 2013) [↑](#footnote-ref-25)
26. (Ueda and Weder di Mauro 2013; Afonso, Santos, and Traina 2014; Gofman n.d.) [↑](#footnote-ref-26)
27. (De Bruin 2014, chs. 3-4) [↑](#footnote-ref-27)
28. (The Money Charity 2016, 4) [↑](#footnote-ref-28)
29. (Lusardi and Mitchell 2014) [↑](#footnote-ref-29)
30. (Barry 2011; Wollner draft) [↑](#footnote-ref-30)
31. (Allen and Wood 2006; Barth, Caprio, and Levine 2006; Rochet 2009; Mason 2004; Admati and Hellwig 2013) [↑](#footnote-ref-31)
32. In addition, the new Basel III rules also introduce a leverage ratio, which is the ratio of equity to non-risk-weighted assets. [↑](#footnote-ref-32)
33. (James 2012; Linarelli 2015) [↑](#footnote-ref-33)
34. (Minsky 1982, 1991; Kindleberger 2011; Borio 2011; Caprio 2012) [↑](#footnote-ref-34)
35. (Reddy 2007; Fontan, Claveau, and Dietsch 2016) [↑](#footnote-ref-35)
36. Borio 2011, Mendicino and Punzi 2014, Rubio and Carrasco-Gallego 2014. (Borio 2011; Mendicino and Punzi 2014; Rubio and Carrasco-Gallego 2014) [↑](#footnote-ref-36)
37. (Rubio and Carrasco-Gallego 2014, 12ff) [↑](#footnote-ref-37)
38. (Aikman, Haldane, and Nelson 2015) [↑](#footnote-ref-38)