ECONOMICS OF DEBT COLLECTION: ENFORCEMENT OF CONSUMER CREDIT CONTRACTS

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Debt collection

- Debt collection is the primary mechanism of enforcing unsecured debt contracts in consumer credit markets.
- It comprises all activities of creditors in the process of trying to recover the debts owed to them.
- It is important because consumer credit markets are large and affect millions of people:
  - Total unsecured consumer debt stands at around $3 trillion.
  - About 30 million of American consumers had accounts subject to collections at the end of 2011.

Debt collection

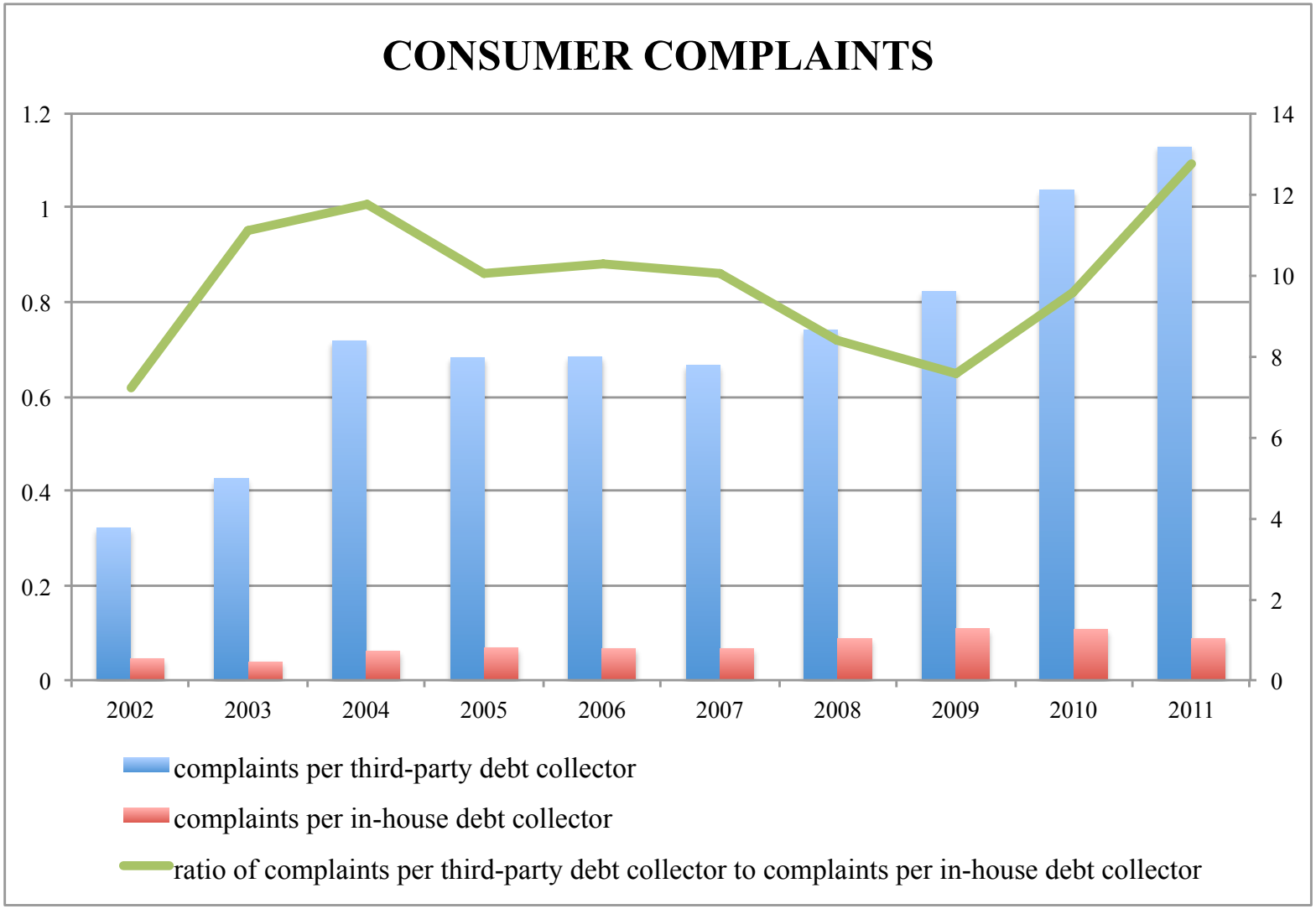
- There are two types of debt collection:
  - first-party, or in-house, collections (when creditors collect on their own);
  - third-party collections (when creditors outsource debt collection to a third party).
- Most debt collection, at least in the U.S., is done via third-party agencies.

Our goal

- The fact that most debt collection is outsourced to third-party agencies is puzzling.
- A variety of informational, technological and legal reasons suggest that first-party collections should be more efficient than third-party collections.
- Our goal is to propose a simple model in which debt collection agencies can create value for creditors, even if the latter have technological advantages over them.

Related literature

- Most research focuses on credit supply and bankruptcy.
- There has been little research on creditor protection mechanisms in consumer credit markets.
- Papers that investigate the institutional structure of the debt collection industry and the process of consumer default:
  - Hunt (2007), Hynes (2008), Hynes, Dawsey, and Ausubel (2009)
- Only one empirical paper studies the effect of debt collectors on credit supply:
  - Fedaseyeu (2013)
- Common agency: Bernheim and Whinston (1985, 1986), Prat and Rustichini (2003).


CONSUMER COMPLAINTS
1.2
1
0.8
0.6
0.4
0.2
0
14
12
10
8
6
4
2
0
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
complaints per third-party debt collector
complaints per in-house debt collector
ratio of complaints per third-party debt collector to complaints per in-house debt collector

Basic empirical facts

- Third-party debt collectors use harsher debt collection practices than original creditors.
- In the area of debt collection, original creditors are less restricted than third-party agencies.
  - In particular, the main federal law that regulates debt collection explicitly excludes original creditors from its coverage.
- Creditors do not transfer all information about the borrower to third-party agencies and thus enjoy informational advantages over them.

Basic empirical facts

- The debt collection industry is large and yet unconcentrated.
  - It employs 140,000 people across 4,200 agencies and collects about $55 billion annually.
  - More than 90 percent of collections firms have fewer than 50 employees.

Basic model setup: agents

- Two periods.
- Mass 1 of borrowers whose total demand for credit is Q in both periods.
- Each period fraction γ of borrowers default.
- N banks, all of them charge the same interest rate r (we will later endogenize supply and demand and also the interest rate).
- n collection agencies, each charges a fee equal to share f of the amount collected; f is the same for all agencies.
- The discount rate is β.

Basic model setup: collection practices

- Banks decide whether to collect on their own or whether to delegate debt collection to third-party agencies (no partial delegation).
- If a bank delegates debt collection, it hires exactly k agencies, $k \leq n$.
- We consider only symmetric equilibria: k is the same for all banks that hire third-party agencies.
- Debt collection practices can be either harsh or lenient. Harsh practices yield higher recoveries: $h > l$.

Basic model setup: consumer demand

- When consumers are indifferent between banks, they allocate their demand equally across them.
- Borrowers who faced lenient debt collection practices in the first period do not switch banks in the second period.
- Borrowers who faced harsh debt collection practices in the first period switch to a different bank in the second period with probability ρ.
- Switching borrowers are equally likely to choose any of the remaining banks.

Model setup: banks' payoffs

- In the first period, the profit is

$$\pi_i^1 = (1-\gamma) r \frac{1}{N} Q - \gamma(1-\lambda_i^1) \frac{1}{N} Q,$$

where λ_i^1 is the harshness of collection methods chosen by bank i in the first period, $i \in \{1, \ldots, N\}$, $\lambda_i^1 \in \{l, h\}$.

Model setup: banks' payoffs

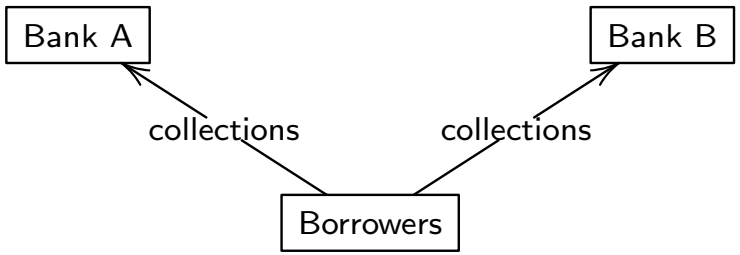
- In the second period, the profit is

$$\pi_i^2 = (1-\gamma) r Q_i^2(\lambda_i^1; \lambda_{-i}^1) - \gamma(1-\lambda_i^2) Q_i^2(\lambda_i^1; \lambda_{-i}^1),$$

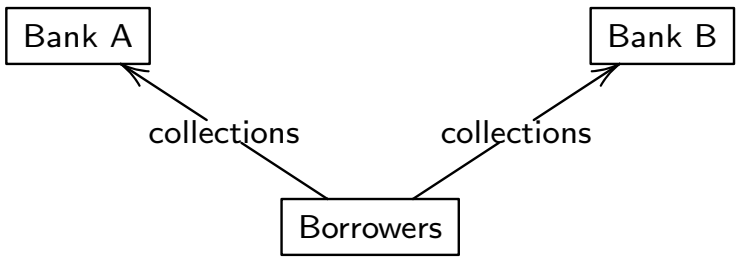
where:

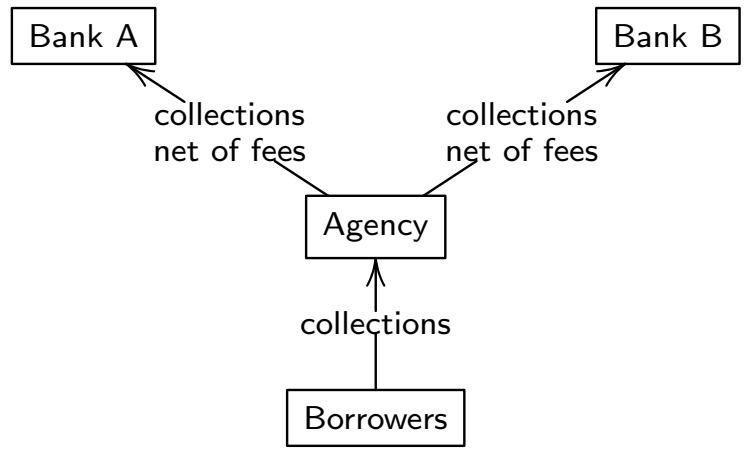
  - λ_i^t is the harshness of collection methods chosen by bank i in period t, $i \in \{1, \ldots, N\}$, $t \in \{1, 2\}$, $\lambda_i^t \in \{l, h\}$ and λ_{-i}^t is the set of debt collection practices chosen by the other banks in period t;
  - Q_i^2 is the amount of credit that borrowers demand from bank i, $i \in \{1, \ldots, N\}$, in the second period, which is determined by the debt collection practices used in the previous period.

Basic intuition

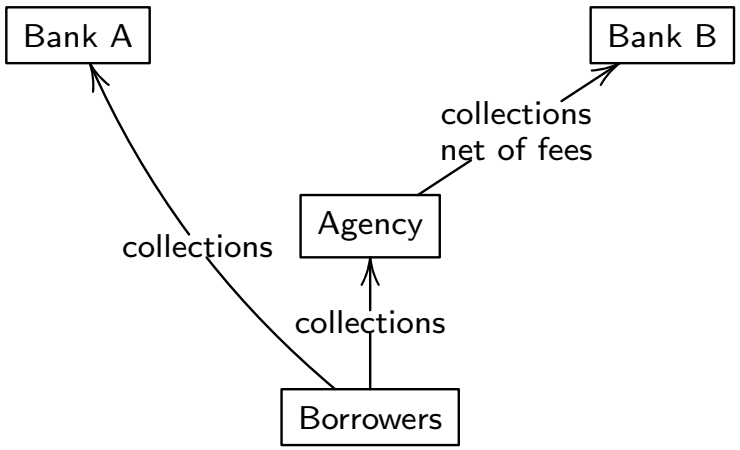


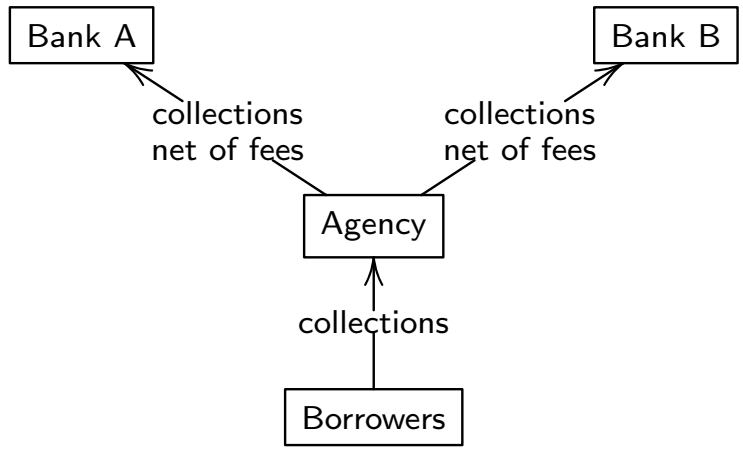
Basic intuition





Basic intuition





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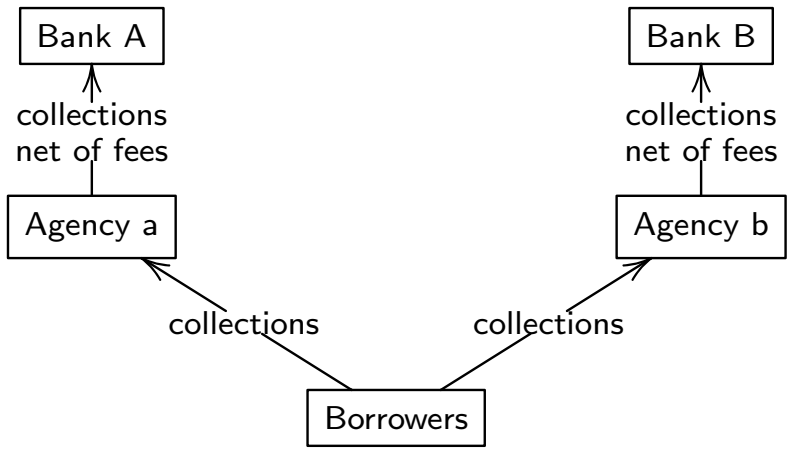
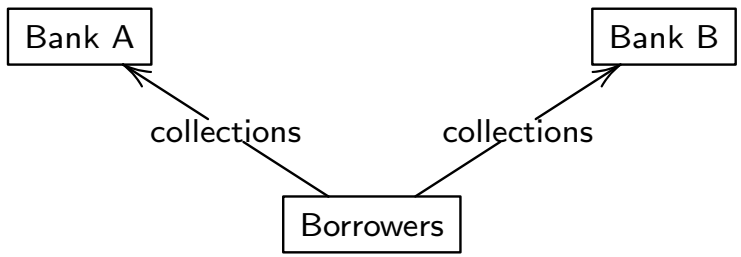


Basic intuition



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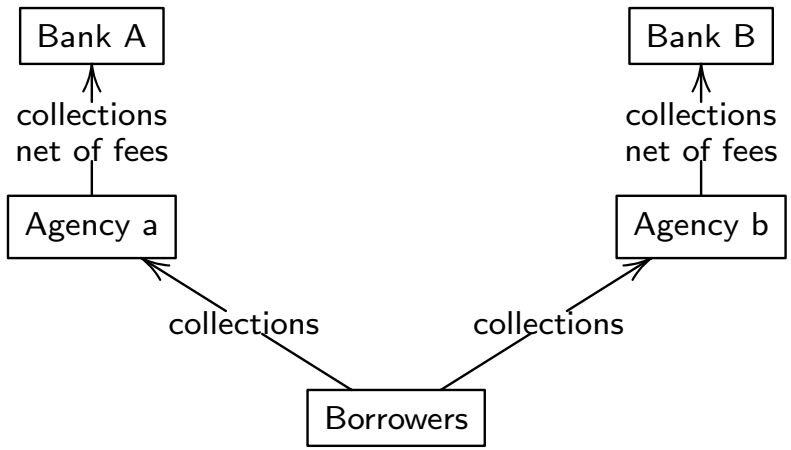
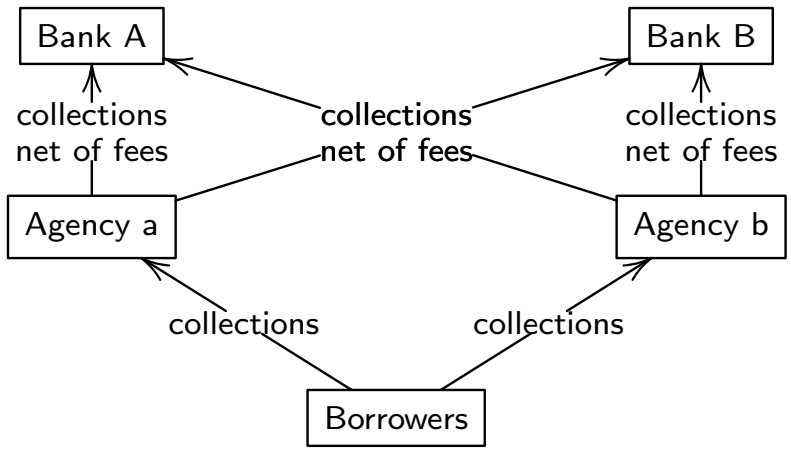
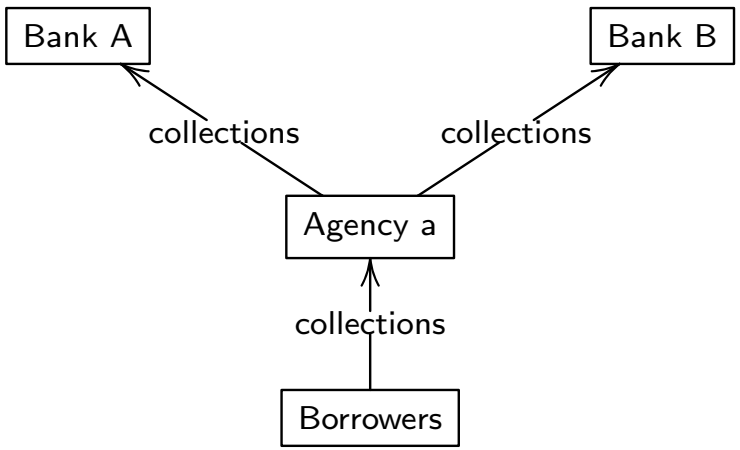
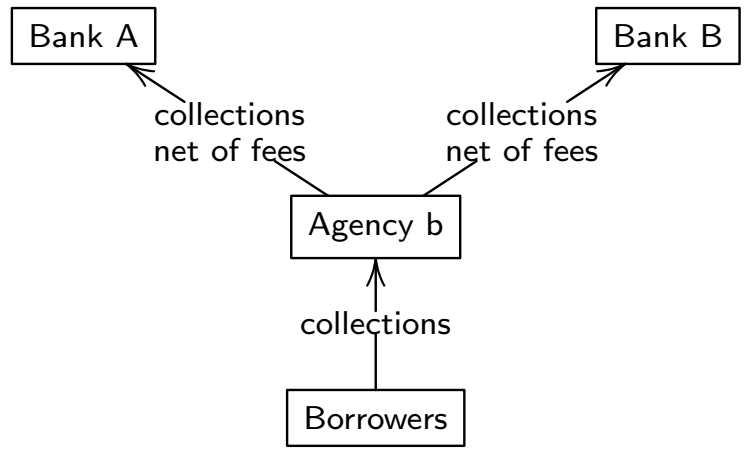


Basic intuition



Basic intuition





Proposition 1: Part (i)

Assume that $\beta\rho r(1-\gamma) - \beta\rho\gamma(1-h) > \gamma(h-l)$. Then,

- In the absence of third-party debt collection agencies (if all banks have to collect on their own), all banks use lenient debt collection practices in the first period.

Proposition 1: Part (ii)

- If third-party debt collection agencies exist, then there exists a symmetric subgame perfect Nash equilibrium in pure strategies in which all banks delegate debt collection to third-party debt collection agencies and the agencies use harsh debt collection practices in both periods if the following restrictions are satisfied:

$$f < \frac{\gamma(h-l) - \beta\rho\left[r(1-\gamma) - \gamma(1-h)\right]\frac{n-k}{k}}{\gamma h(1+\beta)};$$

$$\frac{n-k}{nk} < \frac{h-l}{\beta\rho h};$$

$$1 - \frac{1}{n} + \frac{1}{kN} > \frac{h-l}{\beta\rho h}.$$

Discussion

- The equilibrium in part (*ii*) is not unique (because the equilibrium described in part (*i*) always exists).
- However, the equilibrium with debt collection agencies, when it exists, maximizes the banking industry's total profits.
- Thus, by coordinating on this equilibrium, banks can maximize their profits and essentially "offload the blame" onto third-party debt collection agencies.

Some corollaries

- Corollary 1: Third-party debt collection agencies use harsher debt collection practices than banks.
- Corollary 2: In order to sustain the delegated equilibrium, the fee charged by third-party agencies must be sufficiently small.
- Corollary 3: In order to sustain the delegated equilibrium, the number of agencies that each bank hires, k, must be sufficiently close to the total number of third-party agencies, n.

Some corollaries

- Corollary 4: If the banking industry becomes more concentrated, then the delegated equilibrium can be sustained with a more concentrated debt collection industry.
- Corollary 5: The delegated equilibrium is easier to sustain if the banking industry is more concentrated.

Endogenous demand and supply: setup

- Borrowers' default probability is uniformly distributed between 0 and 1.
- No private information: each borrower's default probability is observable.
- Each borrower can demand 1 unit of credit.

Endogenous demand and supply: setup

- Borrowers' utility is given by

$$U(\gamma) = 1 - r(1-\gamma) - \theta\hat{\lambda}\gamma,$$

where $\hat{\lambda}$ is the harshness of collection efforts that the borrower faces and θ is the "dislike" parameter (it determines the disutility of borrowers from being collected upon).

Endogenous demand and supply: setup

- Banks earn positive profits that depend on the amount of credit they provide (otherwise, they have no incentive to care about retaining borrowers).
- We capture this by assuming that banks charge their borrowers a mark-up over the interest that would prevail under perfect competition among banks.
- This mark-up is denoted by α.

Endogenous demand and supply: results

- The equilibrium in which debt collection is delegated to third-party agencies exists under essentially the same conditions as before.
- Borrower welfare in the equilibrium with debt collection agencies can be higher or lower than borrower welfare in the equilibrium without debt collection agencies, depending on parameter values.
- This happens because harsher debt collection practices used by third-party agencies, while increasing borrowers' disutility from collections, also increase the supply of credit.

Conclusion

- We propose a simple model that can explain many empirical facts about debt collection.
- By coordinating on an equilibrium in which they outsource debt collection to third-party agencies, banks can maximize their profits while "offloading the blame" on those agencies.
- Third-party debt collection agencies will use harsher debt collection practices than banks.
- These harsher practices also increase the supply of credit, and their effect on borrower welfare is therefore unclear.