

Going online? The motive of firms to borrow from the crowd

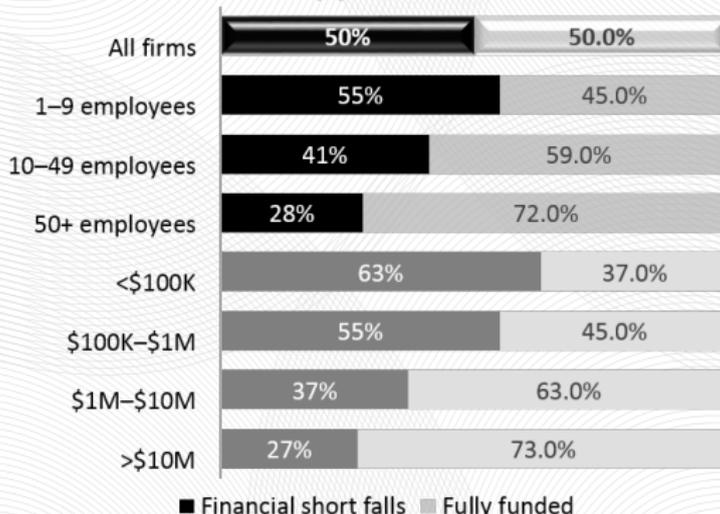
Jieying Li

Stockholm School of Economics
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Financial Innovation Conference, Washington D.C.
December 2nd, 2016

Credit conditions for small businesses remain difficult

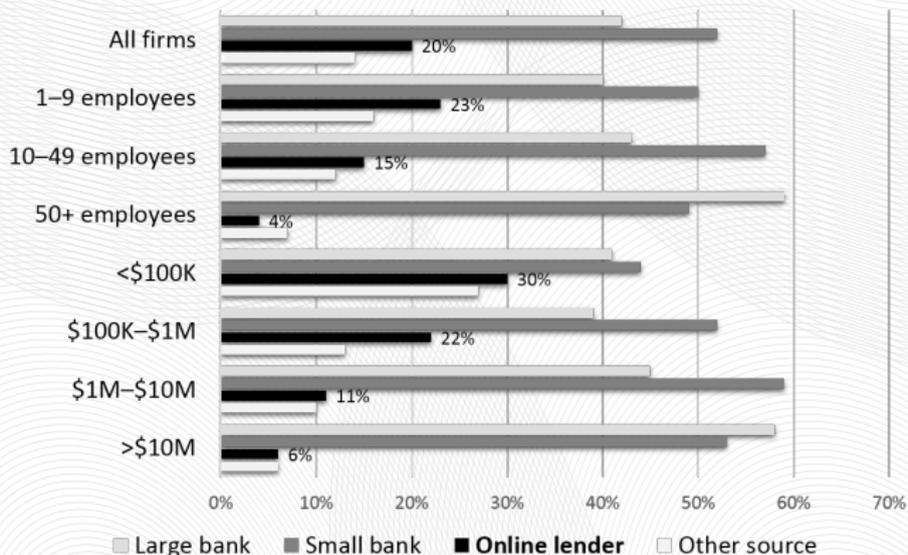
Credit application outcomes



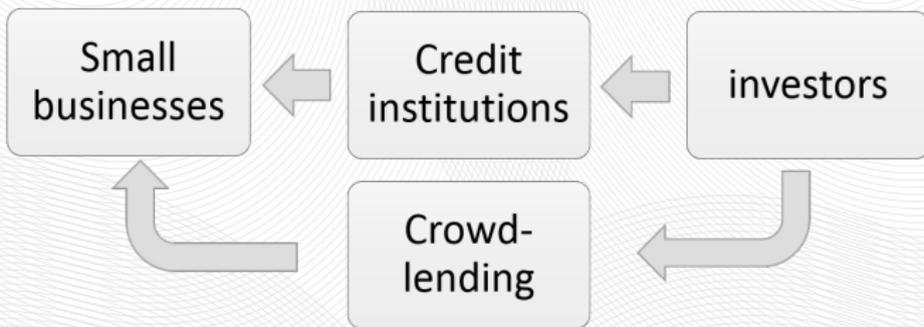
Source: 2015 Small Business Credit Survey: Report on employer firms. Federal Reserve Banks of New York, Atlanta, Boston, Cleveland, Philadelphia, Richmond, St.Louis. March, 2016

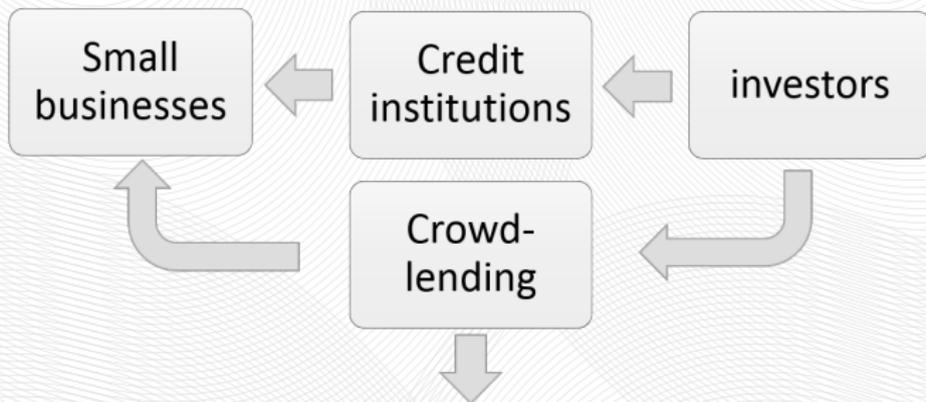
Banks are the dominant credit source but online lending is becoming important, especially for smaller size firms

Credit source by application

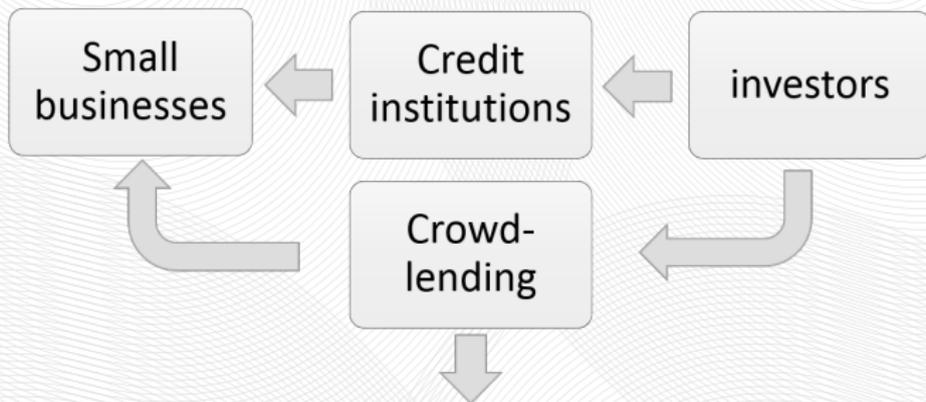




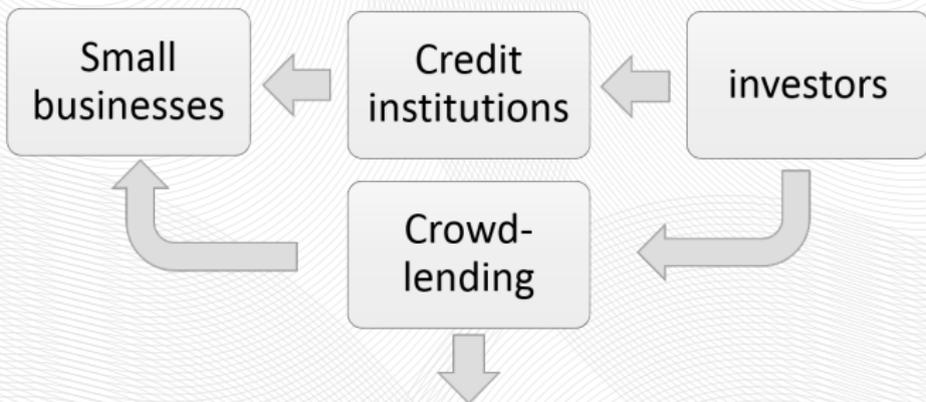




- What type of firms borrow from the crowd?



- What type of firms borrow from the crowd?
- Why do they go to crowdlending platforms for credit?



- What type of firms borrow from the crowd?
- Why do they go to crowdlending platforms for credit?
- How is the loan priced in the crowdlending market?

- Investigate the determinants of a firm's decision to borrow from the crowd

- Investigate the determinants of a firm's decision to borrow from the crowd

Treatment group

- Firms borrowing from the crowd (Toborrow)

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Benchmark group

- Firms borrowing from credit institutions

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 - Exclude public firms

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- Firms borrowing from credit institutions
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 - Exclude public firms
 - Exclude private firms issued corporate bonds

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 - Exclude public firms
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 - Keep firms with increasing debts to credit institutions

- Investigate the determinants of a firm's decision to borrow from the crowd

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- Firms borrowing from the crowd (Toborrow)

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- Private limited liability firms borrowing from credit institutions but without bond issuance

- **Ex ante firm characteristics**

- Investigate the determinants of a firm's decision to borrow from the crowd

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- **Ex ante firm characteristics**
- **Regional factors**

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 - House price growth

- Incorporated in September 2013
- Largest crowdlending to businesses platform in Sweden
- By 1st May, 2016: 68 campaigns, 3000 investors
- Overview of campaigns
 - Firms borrow on average 605,000 SEK, with 19 months maturity
 - Most firms borrow for investment and business expansion, choose to amortize, use personal guarantees other than firm collateral
 - Average interest rate **8.8%**

Overview of firm profile

| Projekt | Bud | Dokument | Varianta tillgrip |
|--|---|---|-------------------|
|  <p>Avslutad 2018-09-02</p> <p>125 000 SEK Lämlöshopp</p> <p>God kundnöjdhet A A C D E</p> <p>Reklamtryck</p> <p>36 månader Uppåt</p> <p>72 Antal bud i detta projekt</p> <p>VILKA ÄR VI? Möbelen AB, AB</p> |  <p>Avslutad 2018-10-14</p> <p>250 000 SEK Lämlöshopp</p> <p>God kundnöjdhet A A C D E</p> <p>Reklamtryck</p> <p>36 månader Uppåt</p> <p>1151 Antal bud i detta projekt</p> <p>VILKA ÄR VI? Kilbände TräVaruslag AB</p> |  <p>Avslutad 2018-03-02</p> <p>600 000 SEK Lämlöshopp</p> <p>God kundnöjdhet A A C D E</p> <p>Reklamtryck</p> <p>12 månader Uppåt</p> <p>1767 Antal bud i detta projekt</p> <p>VILKA ÄR VI? Fligo Flooring Distribution Group AB</p> | |
|  <p>Avslutad 2018-07-07</p> <p>800 000 SEK Lämlöshopp</p> <p>God kundnöjdhet A A C D E</p> <p>Reklamtryck</p> <p>36 månader Uppåt</p> <p>513 Antal bud i detta projekt</p> <p>VILKA ÄR VI? Sofacor (Sweden) AB</p> |  <p>Avslutad 2018-05-19</p> <p>150 000 SEK Lämlöshopp</p> <p>God kundnöjdhet A A C D E</p> <p>Reklamtryck</p> <p>24 månader Uppåt</p> <p>351 Antal bud i detta projekt</p> <p>VILKA ÄR VI? Energy Engineering i Mellåkersområdet AB</p> |  <p>Avslutad 2018-09-07</p> <p>1 500 000 SEK Lämlöshopp</p> <p>God kundnöjdhet A A C D E</p> <p>Reklamtryck</p> <p>24 månader Uppåt</p> <p>837 Antal bud i detta projekt</p> <p>VILKA ÄR VI? Järnblock och Verkstäm</p> | |
|  <p>Avslutad 2018-04-14</p> <p>1 000 000 SEK Lämlöshopp</p> <p>God kundnöjdhet A A C D E</p> <p>Reklamtryck</p> <p>24 månader Uppåt</p> <p>863 Antal bud i detta projekt</p> <p>VILKA ÄR VI? Fluxus AB - 4183 på mail@fluxusgroup.se</p> |  <p>Avslutad 2018-05-07</p> <p>950 000 SEK Lämlöshopp</p> <p>God kundnöjdhet A A C D E</p> <p>Reklamtryck</p> <p>36 månader Uppåt</p> <p>477 Antal bud i detta projekt</p> <p>VILKA ÄR VI? Möbelen Group AB</p> |  <p>Avslutad 2018-10-15</p> <p>500 000 SEK Lämlöshopp</p> <p>God kundnöjdhet A A C D E</p> <p>Reklamtryck</p> <p>12 månader Uppåt</p> <p>275 Antal bud i detta projekt</p> <p>VILKA ÄR VI? Econet AB</p> | |

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- Firm age
- Profitability: ROA
- Investment
- Sales growth
- Debt ratio
- Tangible/Fixed assets
- Cash holdings
- Pledged/Tangible assets

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At municipal level

- Bank branches pc
- Bankruptcy rate
- Criminal rate: total
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At municipal level

- Bank branches pc +/-
- Bankruptcy rate + *
- Criminal rate: total + **
- Criminal rate: economic +
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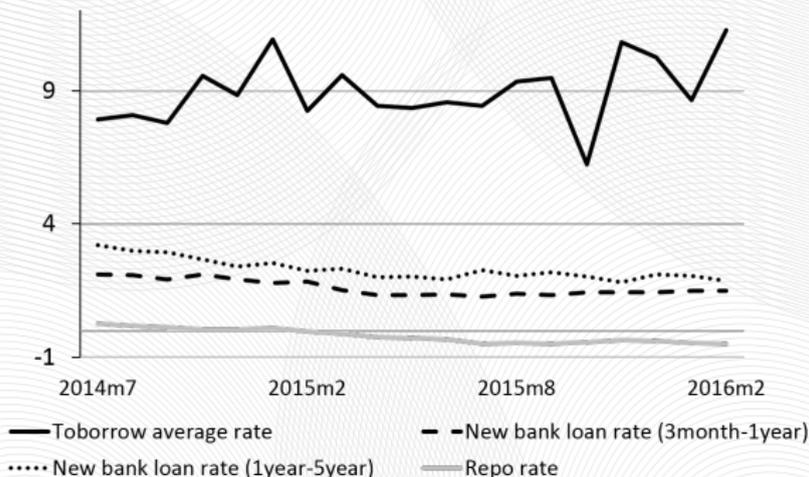
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Average loan rate on Toborrow vs. New bank loan rate
July 2014-February 2016

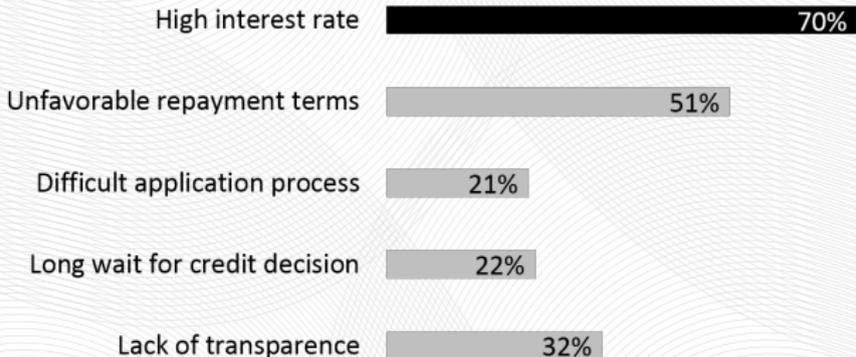


Notes: The new bank loan rates are the average lending rates to all non-financial firms.

Source: Toborrow.se and Financial market statistics Feb 2016 produced by Statistics Sweden on behalf of Sveriges Riksbank.

- Alternative source for cheaper credit?

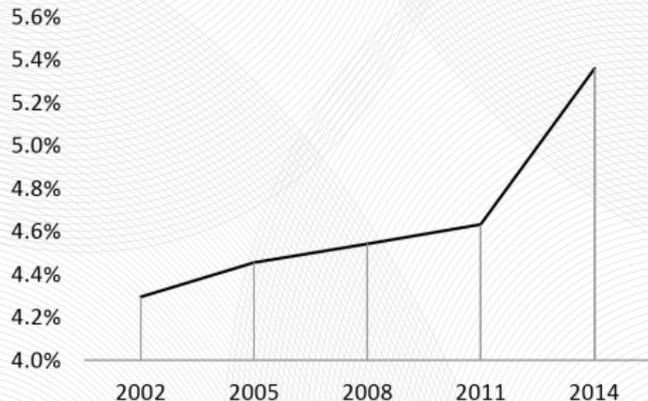
Reasons for dissatisfaction with online lenders



Source: 2015 Small Business Credit Survey: Report on employer firms. Federal Reserve Banks of New York, Atlanta, Boston, Cleveland, Philadelphia, Richmond, St.Louis. March, 2016

- Credit rationed by banks?

Credit supply becomes major obstacle for firms to grow



— Share of small businesses in the past three years, applied for but were not granted loans

Source: The Swedish Agency for Economical and Regional Growth

- Credit rationed by banks?
 - Insufficient collateral is the No.1 reason for credit denial

| Reasons for credit denial | |
|----------------------------------|-----|
| Insufficient collateral | 32% |
| Weak business performance | 30% |
| Low credit score | 28% |
| Insufficient credit history | 28% |
| Other | 27% |
| Unsure | 19% |
| Inadequate documentation | 3% |

Source: 2015 Small Business Credit Survey: Report on employer firms.
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- Credit rationed by banks?
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 - Tightened regulation on the banking sector after the financial crisis
 - Banks are more willing to allocate credit supply to mortgagors considering the booming housing market in Sweden

Determinants of loan price

SWEDISH HOUSE
OF FINANCE





P2P lending to consumers

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 - **Campaign related info**
 - Raising first time?
 - Timing of campaign
 - Length of campaign

$$\text{InterestRate}_i = \alpha + \mathbf{X}_i\beta + \epsilon_i$$

Financial information

- $\ln(\text{sales})$ -
- ROA +
- Debt ratio +
- Current/Total Assets - **
- Firm age +/-
- Quick ratio +/-

$$\text{InterestRate}_i = \alpha + \mathbf{X}_i\beta + \epsilon_i$$

Loan terms and credit info

- Loan size + ***
- Maturity + **
- Collateral -
- Amortization -
- Risk Score + **

$$\text{InterestRate}_i = \alpha + \mathbf{X}_i\beta + \epsilon_i$$

- **Non-financial information**

- **Campaign representative profile**

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- **Campaign related info**

- Raising first time? +
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- Crowdlending is an important alternative financing source for small businesses
 - With high growth rate but lack internal funds and enough collateral
 - Located in regions with higher bankruptcy and criminal rates
- Price of crowdlending loans to businesses are determined by firms' standard financial information

To literature

- Crowdfunding: first direct evidence linked to traditional financial intermediation; lending-based format
- Small business financing: evidence from a new online market
- Lender choice: private vs. public debts for small businesses

To policy

- A reference point for regulating crowdfunding market

“...a **proportionate potential regulatory approach** should be considered, to both promote the growth of crowdfunding, as an alternative source of funding, and ensure market confidence and provide safeguard of the participants.”

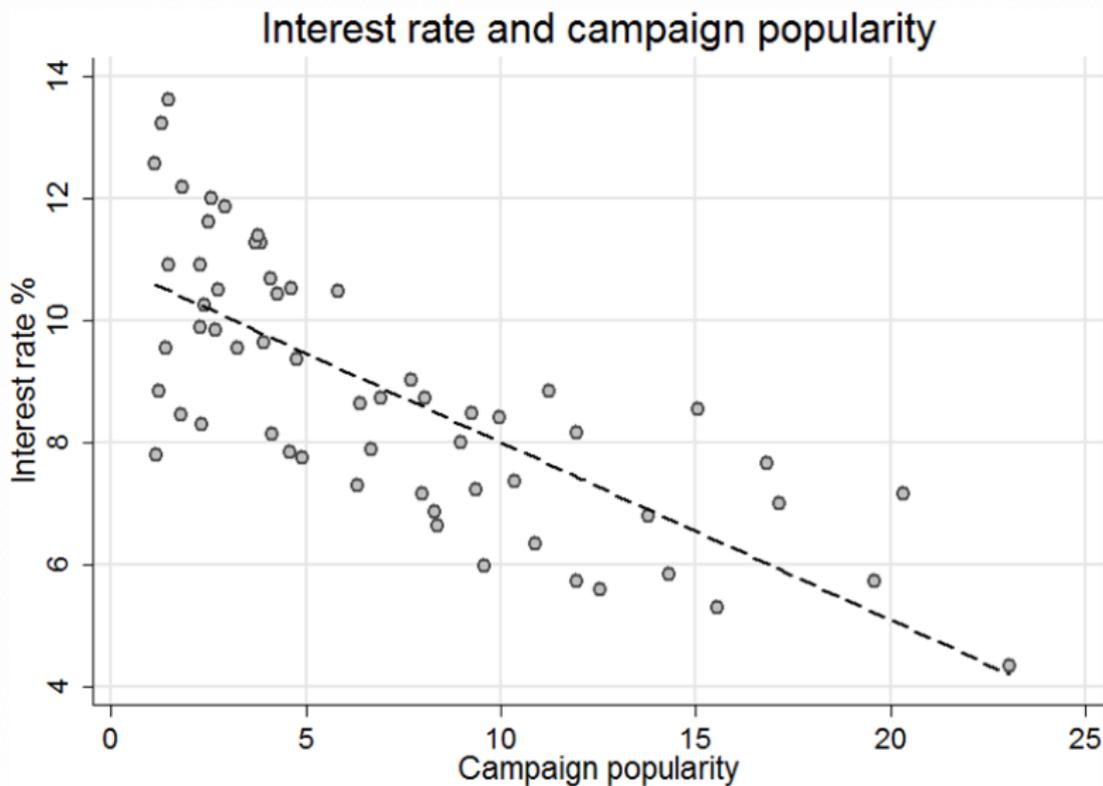
– *Opinion of the European Banking Authority on lending-based crowdfunding, EBA, 26 February 2015*

Thank you!

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Appendix

- Firm registration and financial information: Serrano
- Regional factors at municipal level
 - GDP, geographical category, population, Consumption etc.: Statistics Sweden (SCB) and HUI research institution
 - Criminal rate: Swedish National Council for Crime Prevention
 - Bank branches: Hand-collected
 - Bankruptcy rate: Computed from Serrano
- Project campaigns, loan characteristics and bids: Toborrow



| | Toborrow | FundedByMe | Kameo |
|--------------------------|------------------------------|---------------------------------|-----------------|
| Business model | Debt-based only | Mainly Reward- and equity-based | Debt-based only |
| Investors | Sweden | International | Sweden |
| Borrowers | Sweden | Sweden, Germany | Sweden |
| Registration | 17/09/2013 | 08/11/2011 | 02/10/2014 |
| Pricing model | Discriminatory-price auction | Platform mandated posted price | |
| # campaigns ^a | 68 | 3 | 3 |

^a # campaigns are updated by 1st May, 2016.

Two marketplaces aimed at SMEs:

- Nasdaq OMX First North Bond Market, since 2012
- RänteTorget, launched by AktieTorget in 2013

Issuing costs: bond vs. crowdlending

| Example | First North | Räntetorget | Toborrow |
|----------------------------------|-------------|-------------|----------|
| 2 MSEK loan listing for 3 years | 45,000 | 506,000 | 80,000 |
| 1 MSEK loan listing for 1 year | NA | 185,000 | 20,000 |
| 0.2 MSEK loan listing for 1 year | NA | NA | 4,000 |