

Cambridge Centre for Alternative Finance

LAW, TRUST, AND THE DEVELOPMENT OF CROWDFUNDING

Raghavendra Rau
University of Cambridge

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Basic question

What determines cross-country crowdfunding volume?

- Crowdfunding is a part of fintech
- FinTech (FSB definition): Any technologically enabled financial innovation that results in new business models, applications, processes, products, or services with an associated material effect on financial markets and institutions and the provision of financial services
- Includes cryptocurrencies, big data analysis, regtech ...

This paper: Restricted to crowdfunding platforms, specifically online marketplace lending, equity, reward, and donation based crowdfunding.

Summarizing the prior literature

The prior literature typically uses limited geographical or business model information to draw inferences.

Examples:

Michels (2012), Zhang, and Liu (2012), Lin, Prabhala, and Viswanathan (2013), and Iyer, Khwaja, Luttmer, and Shue (2016), all use data from Prosper.com

Li and Martin (2016), Mollick and Nanda (2016), and Thürridl and Kamleitner (2016) use data from Kickstarter

Can we generalize from the microdata to the population?

Why is studying the macro picture important?

- There is a large volume of literature that suggests that the expansion of financial systems is important in affecting economic growth and poverty in developing countries (Levine, 2005)
- Incumbents oppose financial development that increases competition (Stigler, 1971, Rajan and Zingales, 2003)
- Crowdfunding offers countries with large unbanked populations last mover advantages in bypassing the formal financial system.
 - Examples of other innovations like crowdfunding are mobile phone penetration (Aker and Mbiti, 2010) and microcredit (Johnson, 1998).

Does crowdfunding have the potential to penetrate financial systems in countries with little formal credit?

Why is studying the macro picture important?

The law and finance literature has argued that

- the extent to which a country's laws protect investor rights, and
- the extent to which those laws are enforced

determines how corporate finance and corporate governance evolves in that country. (LLSV)

But the problem is that both the financial policies studied in the prior literature and the legal regimes have co-evolved over long periods.

Does the legal system in a country really have a *causal* effect on the types of business models and transaction volumes of platforms?

Rajan and Zingales (2003, JFE) say no. Countries with common law systems were not more financially developed in 1913.

How does studying crowdfunding help?

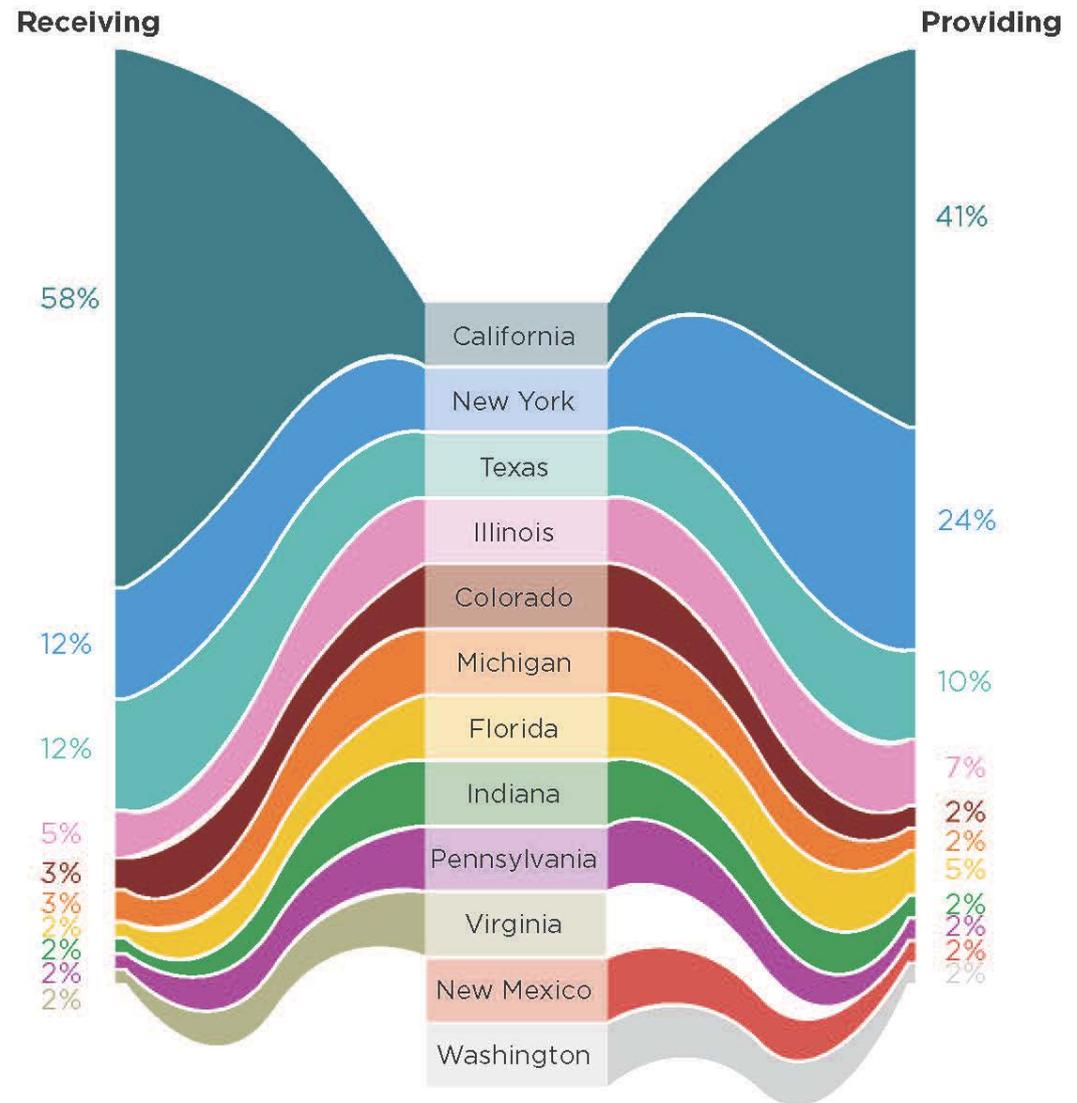
- It is brand new – so legal systems predate the funding models
 - Out of sample test for Rajan and Zingales (2003)
- Funders are geographically distributed and loosely organized.
- Communication is over online open communities
- The industry is relatively unregulated in most countries outside the US.
 - If the borrower defaults in a P2P market, then the lender has almost no recourse.

Major Regulations: US

- **2012: Jumpstart Our Business Startups (JOBS) Act:**
 - Title II crowdfunding amendments that allowed small and emerging businesses to solicit funding actively for up to \$1 million per year from accredited investors, defined as those with a net worth of more than \$1 million or who have earned more than \$200,000 consistently for the last three years.
 - Included investor protection features (investment limits, offering to be made through a registered intermediary)
- Participants in **consumer credit markets** are subject to the authority of federal and state regulations that apply to all aspects of the credit lifecycle. These include long-standing regulations aimed at protecting borrowers from unfair collection practices to misleading advertising and discriminatory practices.
- **Marketplace/P2P lenders** are also subject to SEC requirements to register the notes they issue as securities. These hurdles have limited the number of non-bank creditors who have entered the marketplace.

Major Regulations: US

- **State regulations:** As of August 2017: 36 states have either enacted separate intrastate crowdfunding exemptions or have enacted amendments to their existing blue sky laws to permit some type of intrastate crowdfunding.
 - These exemptions eliminate many of the registration, certification and disclosure requirements of the federal provisions. However, issuers must still reside in the state of the issuance and can only accept funds from intrastate investors.



Major Regulations

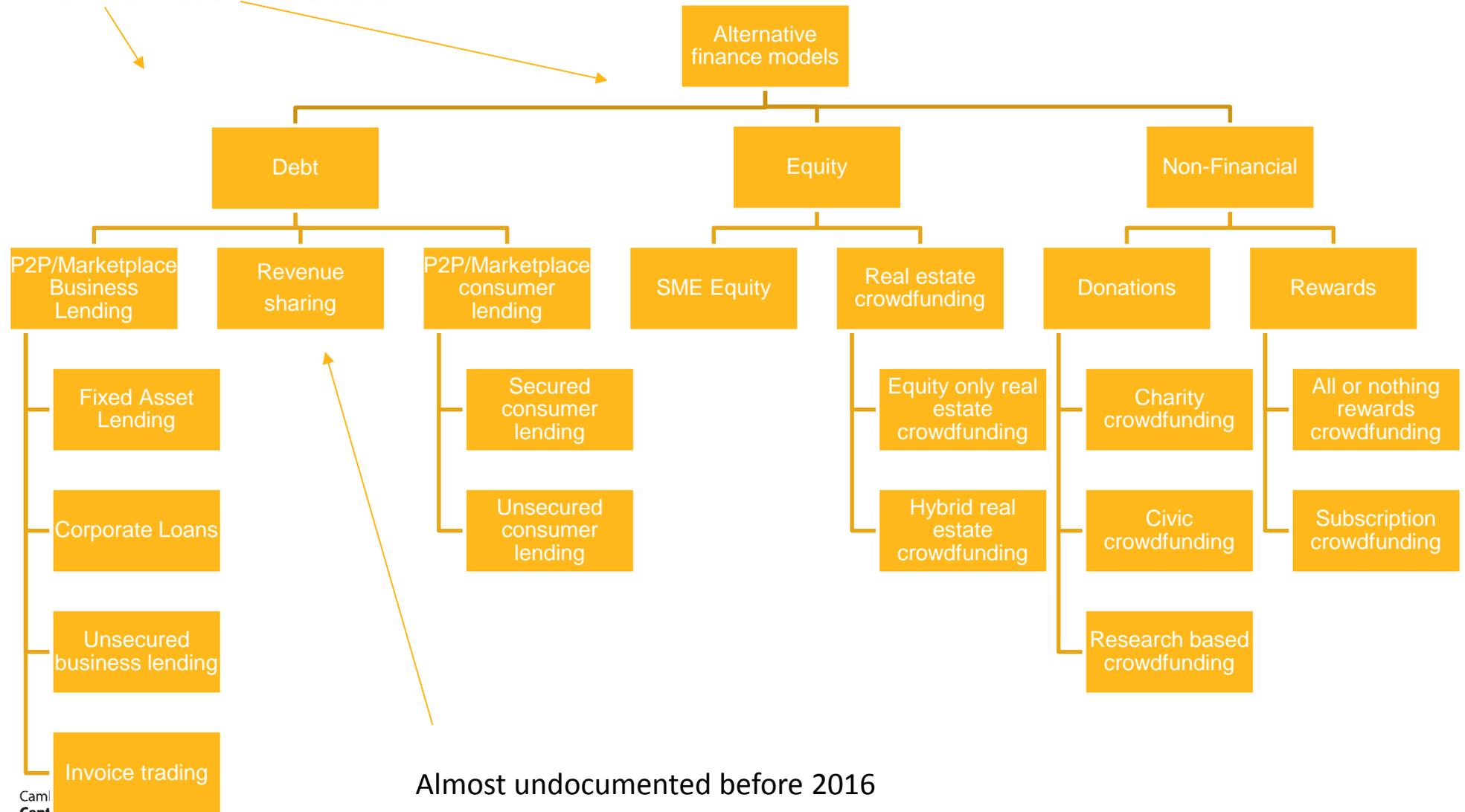
- Mexico: A “Fintech Act” draft is in place but the authorities are currently reviewing comments from the industry and international entities.
- Chile, Peru and Paraguay: Alternative Finance regulations accompanied with regulatory sandbox initiatives being tested.
- China: Administrative Measures for the Online Payment Business of Non-bank Payment Institutions from the People’s Bank (promulgated on 28 December 2015, and took effect on 1 July 2016). The impact of this regulatory document is that third party platforms are required to be licenced, and there is a narrow scope of permitted activities.
- China: Administrative Guidance on the Network-Based Lending Depository Businesses (22 Feb 2017 and 23 August 2017)

A general typology of crowdfunding models

| | Forms of Contribution | Forms of Return | Motivations of Funder |
|--|-------------------------------|--|--|
| Debt-based Crowdfunding/P2P Lending | Loan (Secured or Non-Secured) | Repayment of loan (with or without interest) | Primarily financially driven but can also be due to altruistic reasons |
| Equity-based Crowdfunding | Investment | Financial or material rewards during exit/Profit Sharing | Primarily financially driven/combination of reasons |
| Reward-based Crowdfunding | Donation/Pre-Sell | Material/non-financial rewards and tangible benefits | Combination of intrinsic, social motives as well as rewards |
| Donation-based Crowdfunding | Donation | Non-financial and Intangible Benefits | Intrinsic, social and affinity-based motivations |

More detailed typology

Financial return models



Where does the data come from?

- The Cambridge Centre for Alternative Finance
- Dedicated to the study of new **financial instruments, channels and systems** that emerge outside of the traditional banking and capital markets system
- Four core research themes:
 - I. Alternative instruments and channels
 - II. Alternative credit analytics using new forms of data
 - III. Alternative payment systems (cryptocurrencies and blockchains)
 - IV. Regulatory approaches to alternative finance

A set of global benchmarking surveys

2013: 1st UK Report



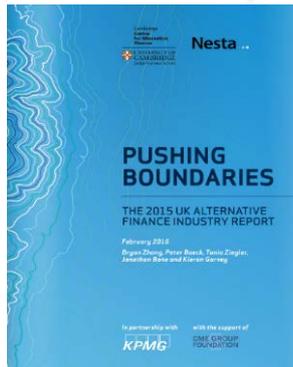
2014: 2nd UK Report



2015: 1st Europe Report



2016: 3rd UK Report



2016: 1st Americas Report



2016: 1st Asia Pacific Report



2016: 2nd European Report



Africa & Middle East Report in February 2017

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Key Findings of Global Online Alternative Finance

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The database of alternative finance has covered more than 1,362 platforms among 157 countries in the world.

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Global Online Alternative Finance Volume Rankings offers data from 2013 to 2015

Rankings

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Key Findings

Global Comparison and Disparities, Startups and Business, Institutionalisation, Gender, Macroeconomic Condition, and Regulation & Policy

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Global Online Alternative Finance Volume Rankings offers data from 2013 to 2015

Rankings

- Total Global Ranking
- Volume Ranking
- Volume per Capita Ranking
- Business Volume Ranking

Key findings

- Global Comparison and Disparities
- Startups and Business
- Institutionalisation
- Gender
- Macroeconomic Condition
- Regulation & Policy

Contact centre

Cambridge Centre for Alternative Finance

10 Trumpington Street
Cambridge
CB2 1QA
UK

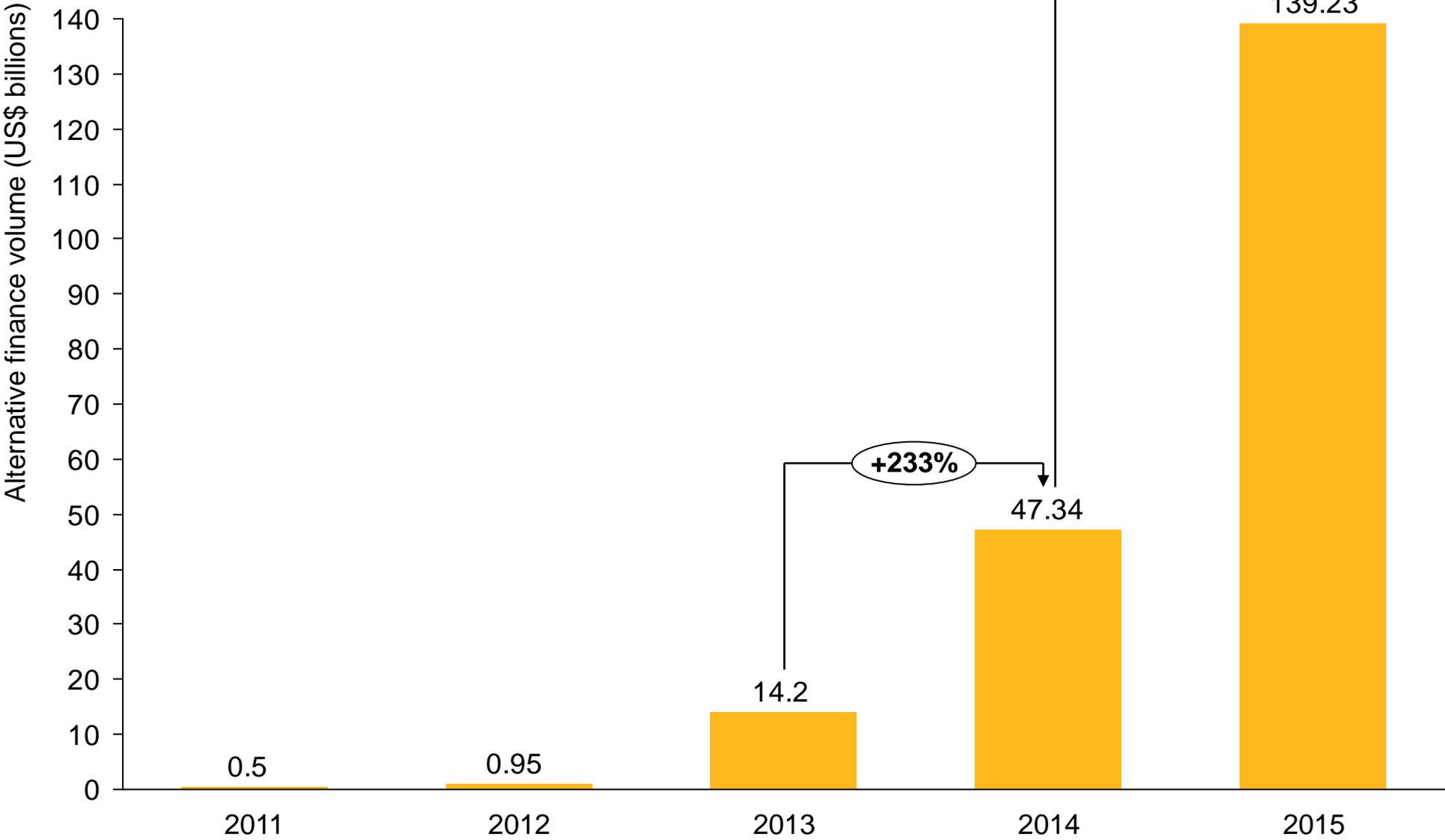
Contact us: +44 (0)1223 339111
Write us: ccaf@bs.cam.ac.uk

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What we did

1. The CCAF research team first created a list of online crowdfunding platforms after contacting national crowdfunding associations and after manually searching websites.
2. The team then communicated directly with the online platforms, explaining the study's objectives and providing a copy of the research proposal and questionnaire.
3. In cases where the survey team could not obtain primary data (or where there were discrepancies in reported data), the team obtained secondary data (from public information, annual reports, and press releases).
4. Finally, the CCAF team used Python scripting and web-scraping methodologies to complement the survey results and confirm reported data volumes by matching against platforms' self-published figures for the past six years. The research team verified all gathered datasets before aggregating.

The global volume on alternative finance platforms



The platforms

The number of unique platforms surveyed

| Area | 2013 | 2014 | 2015 | Total |
|------------------------|------|------|-------|-------|
| ANZAC | 0 | 0 | 40 | 40 |
| Africa and Middle East | 0 | 0 | 182 | 182 |
| Asia (except China) | 0 | 1 | 110 | 111 |
| China | 0 | 0 | 402 | 402 |
| Eastern Europe | 0 | 2 | 31 | 33 |
| Western Europe | 0 | 132 | 289 | 421 |
| UK | 28 | 32 | 83 | 143 |
| Canada and Mexico | 0 | 0 | 37 | 37 |
| USA | 0 | 1 | 122 | 123 |
| South America | 0 | 0 | 65 | 65 |
| Total | 28 | 168 | 1,413 | 1,609 |

2016 – The global final sample

Use only platforms for which data is available in 2015

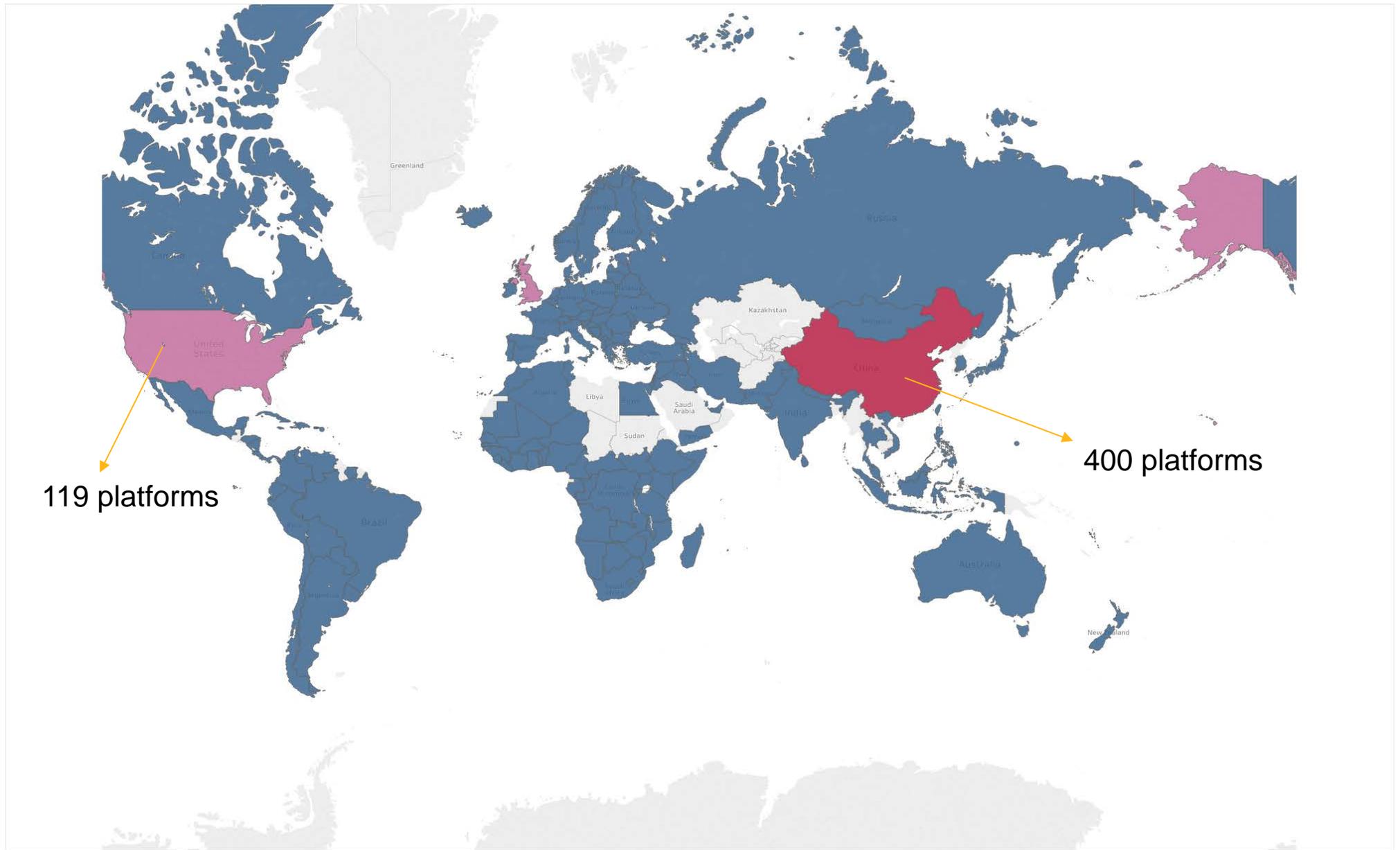
1,362 platforms (some surveyed more than once) in 153 countries

| Top ten countries | Number of platforms |
|-------------------|---------------------|
| China | 400 |
| United States | 119 |
| UK | 83 |
| France | 52 |
| Germany | 34 |
| Spain | 28 |
| Italy | 26 |
| Australia | 29 |
| Netherlands | 25 |
| Canada | 23 |

Dependent variables

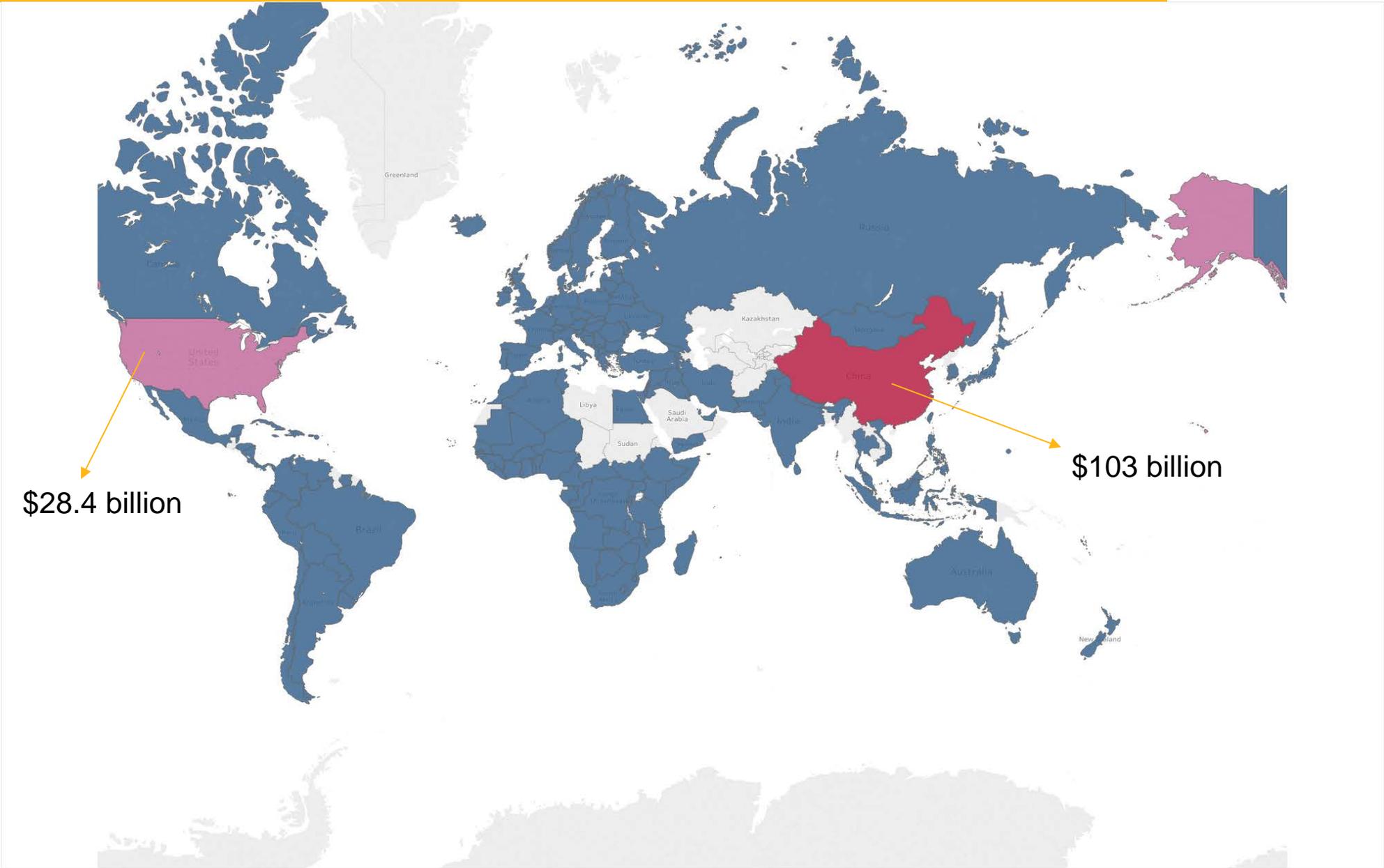
- Overall transaction volume and number of platform business models originating in different countries.
- Split between volumes on financial and non-financial return platforms.
- Cross-country variation in the type of financing on financial-return platforms.

The number of platforms reporting crowdfunding volume



Num Plats
1.0 400.0

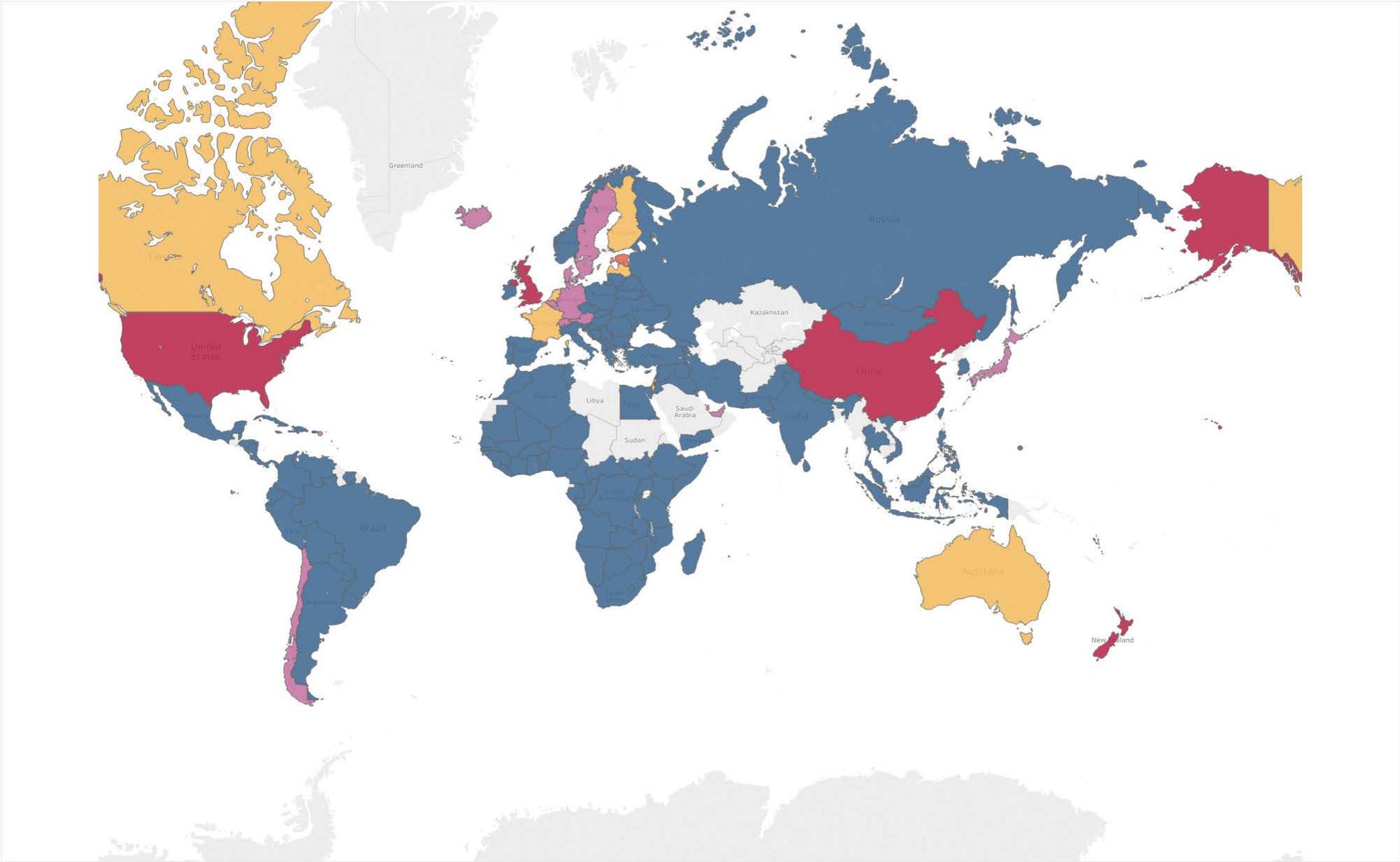
The global volume of crowdfunding



Dependent variables

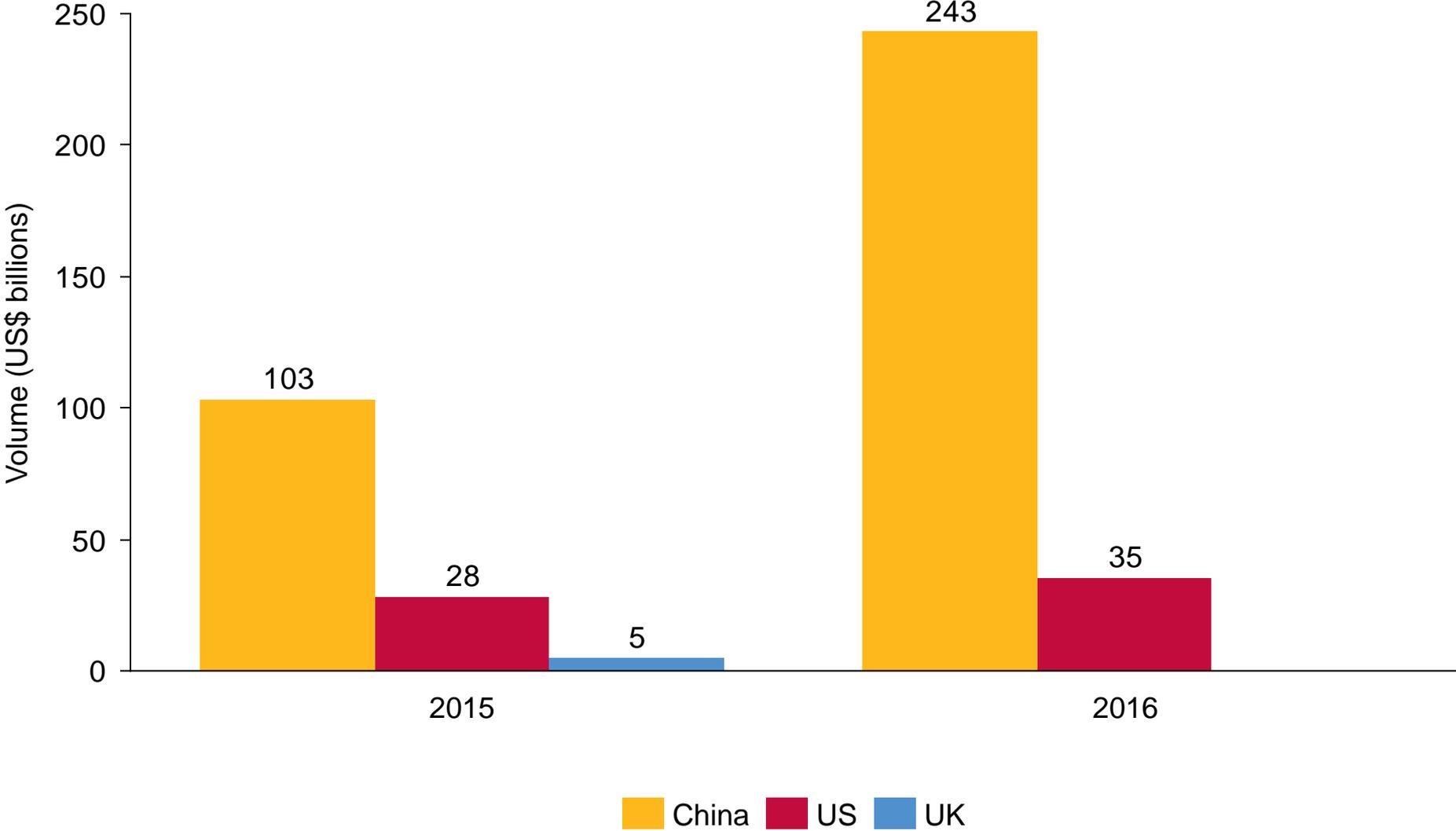
- The primary variable in most of the analyses is the **log(crowdfunding volume (in US\$) per capita+1)** by country.
- Per capita values are computed using either total population or total urban population, both numbers obtained from the World Bank World Development Indicators.

Log(Per capita volume of crowdfunding)



Lnafin
0.000 4.732

The three major countries



Dependent variables

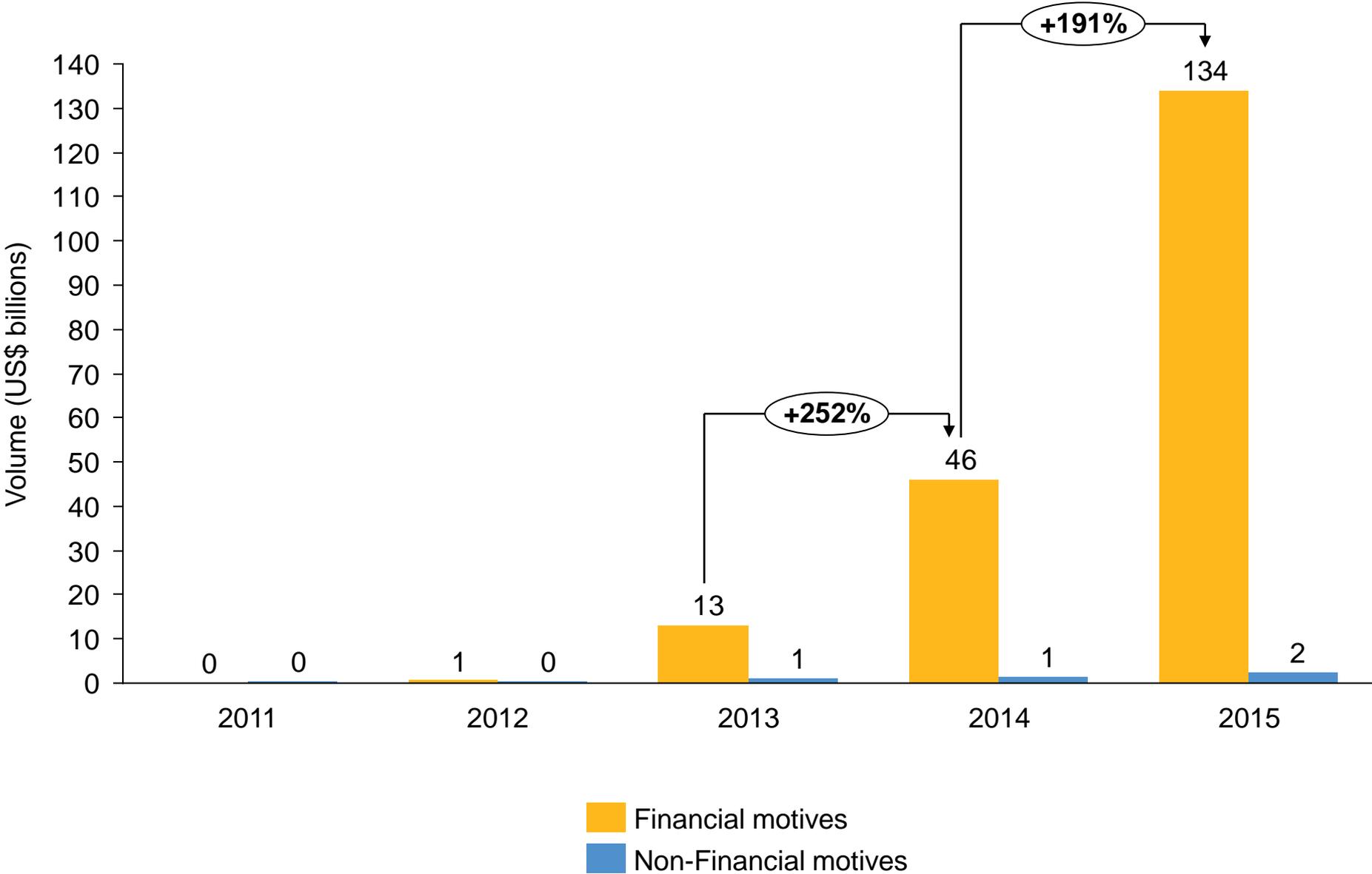
| Markets | Number of platforms | Crowd sourcing finance volume | Business finance volume | Consumer finance volume |
|--|---------------------|-------------------------------|-------------------------|-------------------------|
| Totals | | | | |
| All markets | 1,362 | 139,226.56 | 60,715.94 | 78,510.62 |
| All developed markets | 615 | 35,845.56 | 11,762.70 | 24,082.86 |
| All emerging markets | 747 | 103,381.00 | 48,953.23 | 54,427.77 |
| All emerging markets (excluding China) | 347 | 392.00 | 175.09 | 216.90 |
| All common law countries | 455 | 34,436.86 | 10,840.03 | 23,596.83 |
| All civil law countries | 857 | 104,755.68 | 49,853.21 | 54,902.47 |
| All Islamic law countries | 50 | 34.03 | 22.70 | 11.33 |
| | | | | |
| Proportions of totals | | | | |
| All markets | | | | |
| All developed markets | 41% | 26% | 19% | 31% |
| All emerging markets | 59% | 74% | 81% | 69% |
| All emerging markets (excluding China) | 30% | 0% | 0% | 0% |
| All common law countries | 33% | 25% | 18% | 30% |
| All civil law countries | 63% | 75% | 82% | 70% |
| All Islamic law countries | 4% | 0% | 0% | 0% |

The platforms

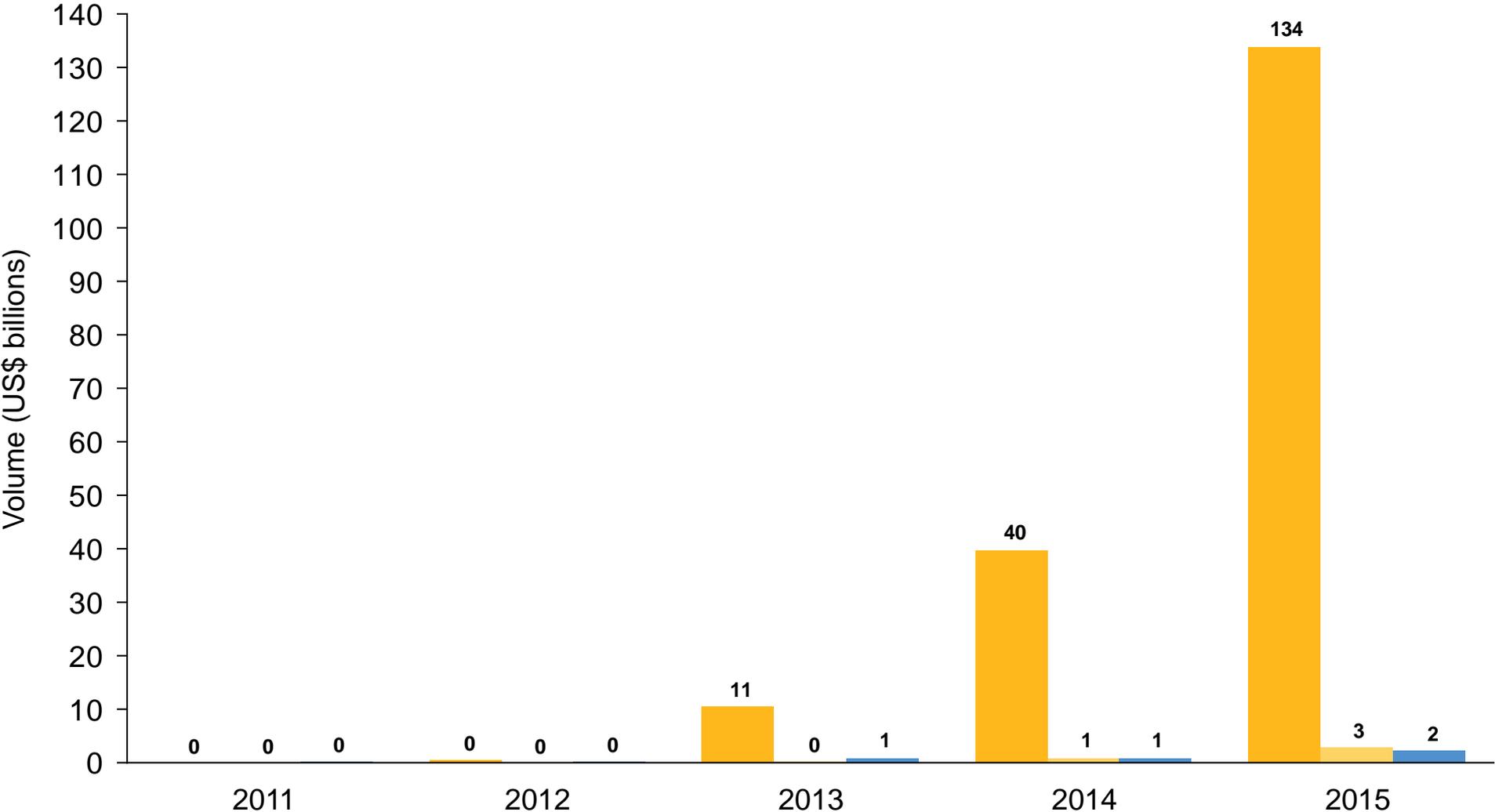
Platform business models

| Region | Type of financing model (Number of platforms) | | |
|------------------------------|---|--------|-------|
| | Debt | Equity | Other |
| Africa | 24% | 7% | 68% |
| Asia (except China) | 29% | 11% | 59% |
| China | 89% | 6% | 5% |
| Australia and New Zealand | 43% | 28% | 30% |
| Europe - Eastern | 13% | 0% | 87% |
| Europe - Western (except UK) | 30% | 25% | 44% |
| United Kingdom (UK) | 53% | 33% | 14% |
| Middle East | 21% | 11% | 68% |
| North America (except USA) | 42% | 14% | 44% |
| USA | 56% | 32% | 12% |
| South America | 17% | 6% | 76% |
| Total | 50% | 15% | 35% |

Who invests on the platforms? (Constant US\$ billions)



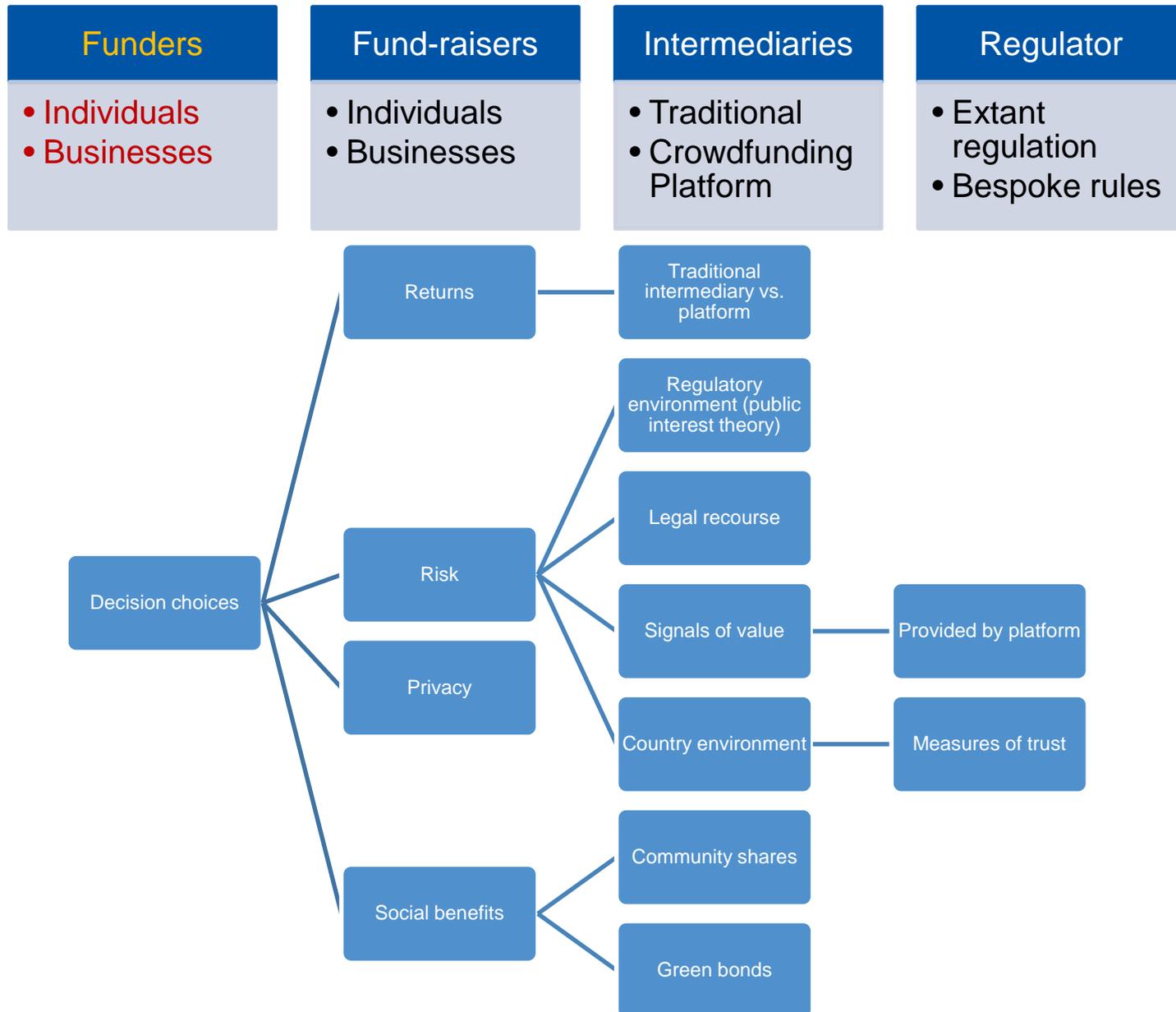
What are the major contract types?



Correlations among dependent variables

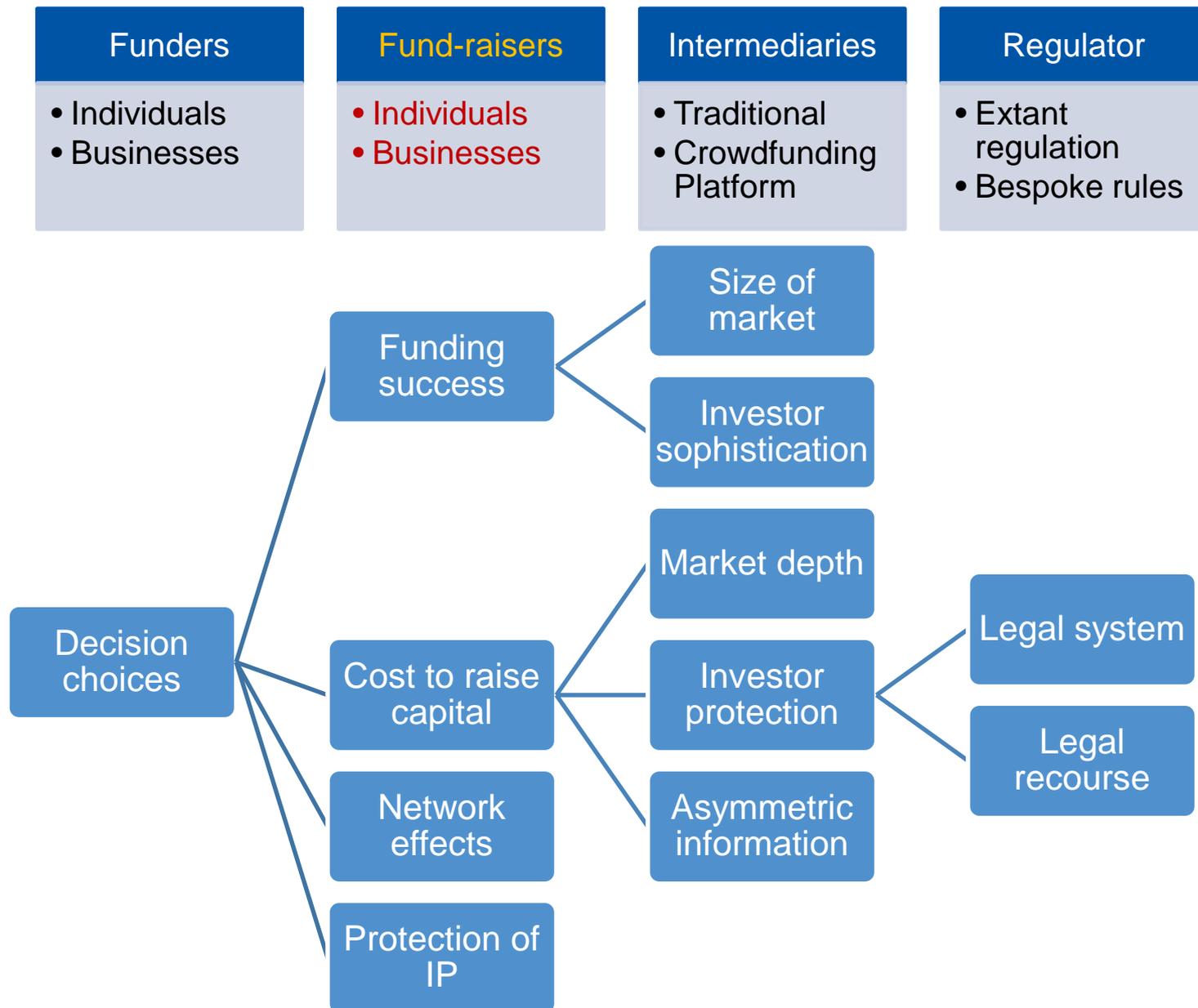
| | Ln(Total volume per capita+1) | Ln(Bus finance volume per capita+1) | Ln(Consumer finance volume per capita+1) | Ln(Fin motive volume per capita+1) | Ln(Non-financial motive volume per capita+1) | Ln(Debt financing volume per capita+1) | Ln(Equity financing volume per capita+1) |
|--|-------------------------------|-------------------------------------|--|------------------------------------|--|--|--|
| Ln(Crowdfunding volume per capita+1) | 1.00 | | | | | | |
| Ln(Business finance volume per capita+1) | 0.94 | 1.00 | | | | | |
| Ln(Consumer finance volume per capita+1) | 0.84 | 0.64 | 1.00 | | | | |
| Ln(Financial motive volume per capita+1) | 0.96 | 0.91 | 0.83 | 1.00 | | | |
| Ln(Non-financial motive volume per capita+1) | 0.67 | 0.58 | 0.59 | 0.45 | 1.00 | | |
| Ln(Debt financing volume per capita+1) | 0.87 | 0.76 | 0.92 | 0.90 | 0.48 | 1.00 | |
| Ln(Equity financing volume per capita+1) | 0.77 | 0.83 | 0.46 | 0.80 | 0.30 | 0.50 | 1.00 |

Framework for thinking about alternative finance



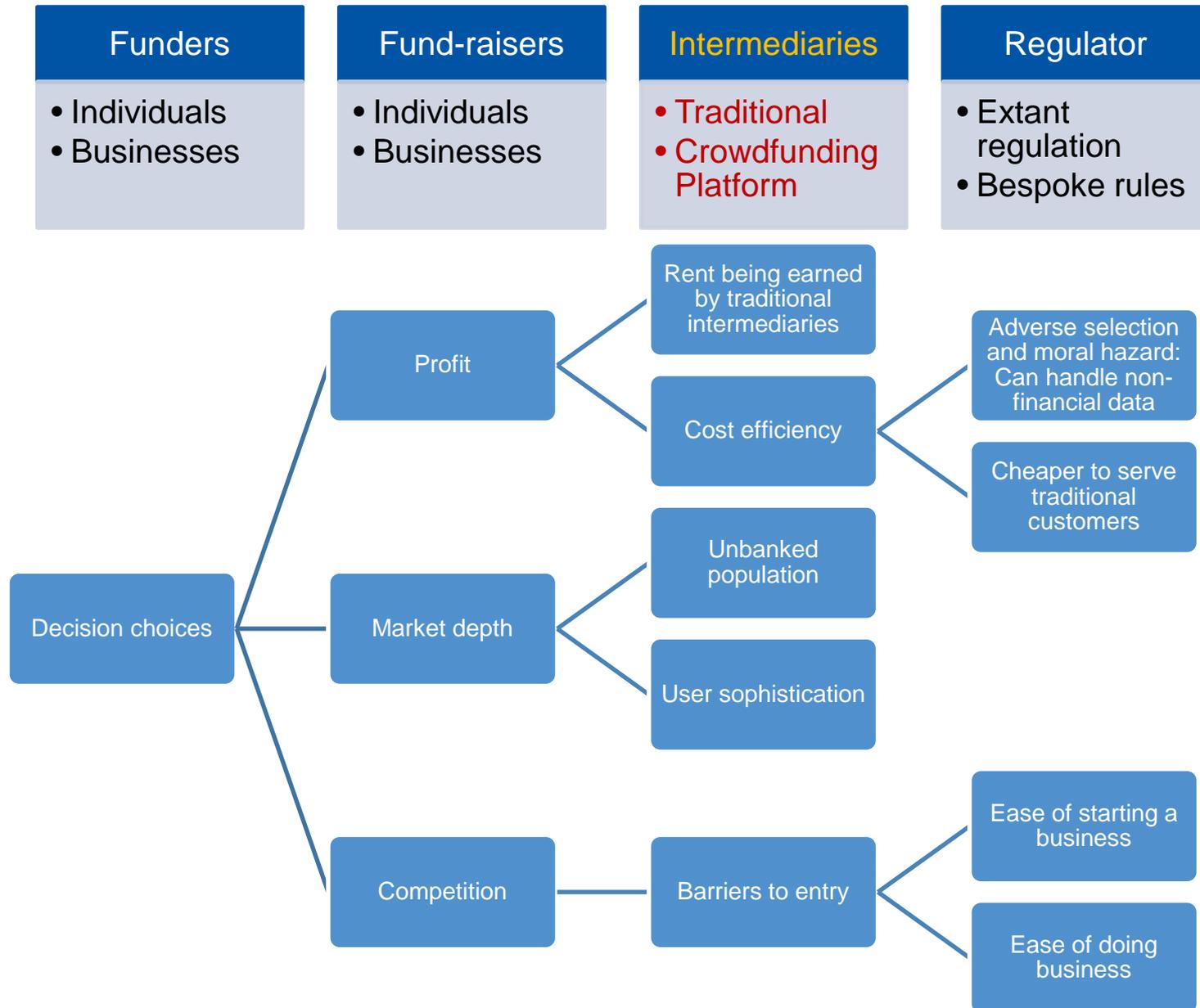
Based on Li, Wang and Yue, WP 2017

Framework for thinking about alternative finance



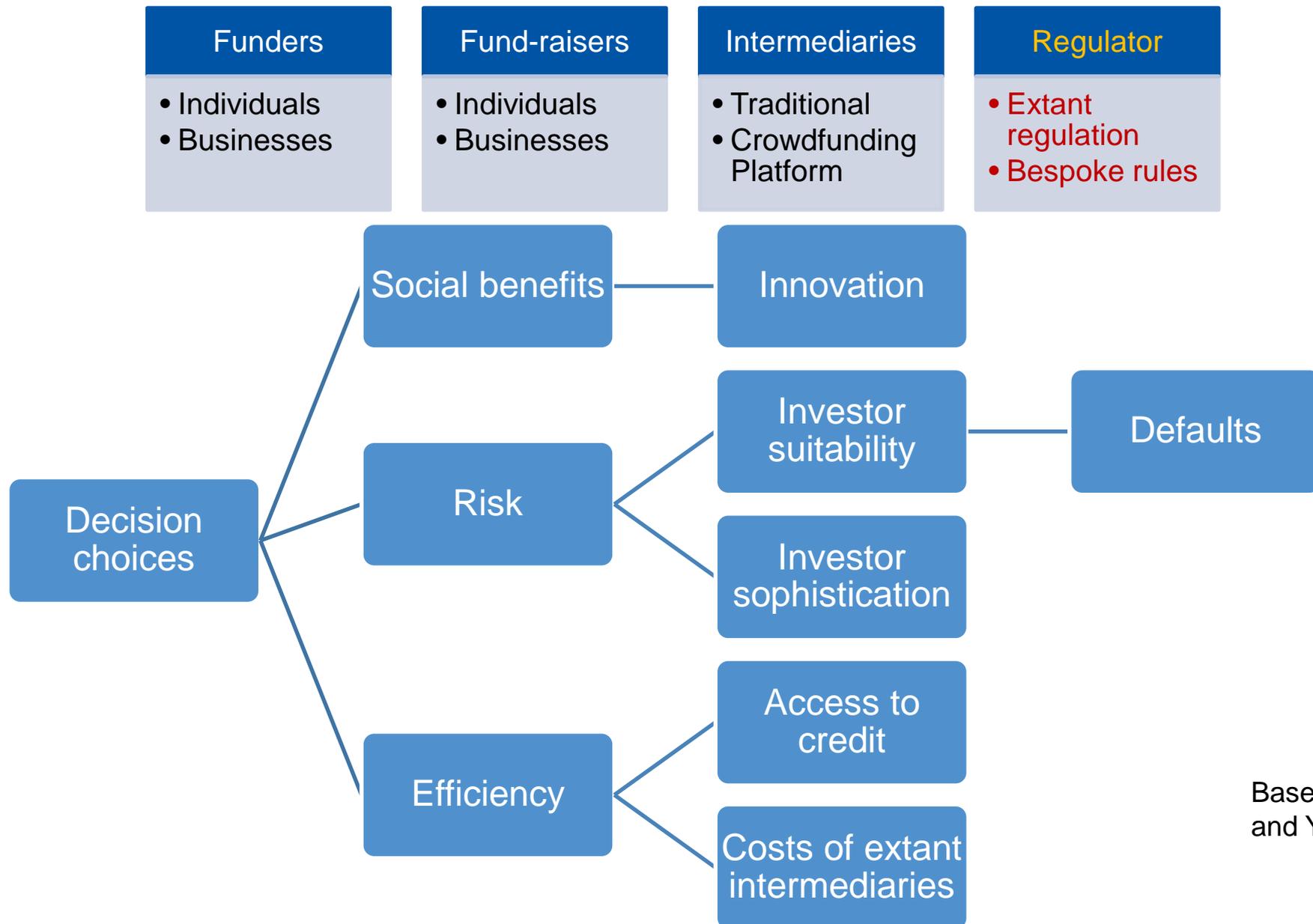
Based on Li, Wang and Yue, WP 2017

Framework for thinking about alternative finance



Based on Li, Wang and Yue, WP 2017

Framework for thinking about alternative finance



Based on Li, Wang and Yue, WP 2017

Big picture: Independent variables

- Law and regulation
- Two demand factors:
 - Platforms act as competition to extant financial intermediaries:
 - Rents earned by the extant financial intermediaries
 - Public choice theory (Stigler, 1971)
 - Politician self-interest theory (Shleifer and Vishny, 2002)
 - Public interest theory (Pigou, 1938)
 - Proxies: Ease of setting up a business and economic rents earned
 - Platforms act as complements to extant financial intermediaries:
 - Financial crisis forced banks to cut back on credit. Platforms stepped in to offer credit.
 - Proxies: Measures of financial depth (such as level of domestic credit to the private sector and stock market cap to GDP)

Platforms as competition to extant intermediaries

- Ease of setting up a business
 - Expect: A negative relationship between the ease of setting up a formal business and the volume of crowdfunding.
 - **Proxies:** Four measures of the ease of doing business including the number of procedures and days for a small- to medium-sized limited liability company to start up and formally operate in the economy's largest business city.
 - Data from the World Bank Doing Business website (Djankov, La Porta, Lopez-De-Silanes, and Shleifer, 2002).

Platforms as competition to extant intermediaries

- Rents earned by extant intermediaries:
 - Expect: A positive relation between the level of rents and overall platform volume.
- **Proxies:** Two measures from the World Bank Global Financial Development Index (GFDI) database – the bank return on assets (ROA) and the Lerner index for banks.
 - Rent variables for financial institutions include measures such as the net interest margin, non-interest income to total income, and return on assets – highly correlated with ROA.
- The Lerner index (a measure of the markup) is a measure of market power in the banking market.

Platforms as complements to extant intermediaries

- **Financial depth:**
- Rajan and Zingales (1998) find that industrial sectors that are relatively more in need of external finance develop disproportionately faster in countries with more developed financial markets
- **Expect: A positive relation between financial depth and overall platform volume.**
- **Proxies: Debt-market financial depth:**
 - Private credit (Ratio of domestic credit to private sector by banks) (World Bank World Development Indicators)
 - Power of creditors to force repayment, gain control of collateral or firm (country ranking for legal rights from WEF data)
 - Level of asymmetric information (WEF country rankings for ethical behavior by firms, strength of auditing and reporting requirements)

Platforms as complements to extant intermediaries

- **Financial depth:**
- Rajan and Zingales (1998) find that industrial sectors that are relatively more in need of external finance develop disproportionately faster in countries with more developed financial markets
- **Expect: A positive relation between financial depth and overall platform volume.**
- **Proxies: Equity market financial depth:**
 - Stock market capitalization as a percentage of GDP, from the GFDI database
 - WEF country rankings for the level of financing through the local equity market, the protection of minority shareholders' interests, the strength of investor protection, and the availability of venture capital.

Big picture: Independent variables

- Supply from funders: User demographics
 - Formal: Proxies
 - Level of financial development of the country
 - Ease of access to the financial system
 - Sophistication of the user base
 - Ease of access to the internet
 - Informal
 - Proxies: Measures of trust towards strangers

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Intercept | -0.943 (0.00) | -0.809 (0.00) | -0.813 (0.00) | -0.882 (0.01) | -0.451 (0.04) | -0.109 (0.61) | -0.478 (0.25) | -0.644 (0.03) | 1.708 (0.06) | 2.100 (0.02) |
| Country prosperity | | | | | | | | | | |
| Ln(GDP per cap+1) | 0.139 (0.00) | 0.118 (0.00) | 0.119 (0.00) | 0.129 (0.00) | 0.040 (0.17) | -0.005 (0.89) | 0.025 (0.55) | 0.041 (0.20) | -0.170 (0.08) | -0.232 (0.02) |
| Developed market indicator | 1.183 (0.00) | 1.056 (0.00) | 1.058 (0.00) | 1.044 (0.00) | 0.944 (0.00) | 0.909 (0.00) | 0.794 (0.00) | 0.755 (0.00) | 0.909 (0.00) | 0.722 (0.00) |
| Legal system within country | | | | | | | | | | |
| Common Law indicator (1 or 0) | | | | 0.063 (0.55) | | -0.091 (0.38) | -0.069 (0.58) | 0.007 (0.96) | -0.009 (0.95) | 0.035 (0.86) |
| Civil Law indicator (1 or 0) | | | | -0.064 (0.54) | | -0.156 (0.08) | -0.099 (0.34) | -0.036 (0.82) | -0.068 (0.60) | -0.011 (0.95) |
| Rule of Law: Percentile Rank | | | | | 0.006 (0.01) | | | | | |
| Control of Corruption: Percentile Rank | | | | | | 0.002 (0.33) | 0.004 (0.12) | 0.003 (0.17) | 0.006 (0.06) | 0.004 (0.17) |
| Regulatory Quality: Percentile Rank | | | | | | 0.007 (0.00) | 0.007 (0.03) | 0.004 (0.06) | 0.003 (0.45) | 0.004 (0.27) |
| Ease of starting a platform | | | | | | | | | | |
| Ease of Doing Business Rank | | | | | | | -0.001 (0.32) | | | -0.006 (0.00) |
| Starting a Business Rank | | | | | | | 0.000 (0.99) | | | 0.004 (0.03) |
| No. days to start a business rank | | | | | | | 0.000 (0.93) | | | -0.003 (0.23) |
| No. procedures to start a business rank | | | | | | | 0.002 (0.22) | | | 0.000 (0.86) |
| Financial system rents | | | | | | | | | | |
| Lerner index | | | | | | | | 0.329 (0.54) | | 0.46 (0.41) |
| Bank return on assets (% , after tax) | | | | | | | | 0.055 (0.16) | | 0.03 (0.41) |
| Financial system access | | | | | | | | | | |
| Financial market development rank | | | | | | | | | 0.004 (0.02) | 0.003 (0.05) |
| Account at a formal financial institution | | | | | | | | | 0.002 (0.48) | 0.003 (0.35) |
| User sophistication | | | | | | | | | | |
| Individuals using Internet (%) rank | | | | | | | | | 0.010 (0.01) | 0.009 (0.00) |
| Higher education and training rank | | | | | | | | | 0.004 (0.04) | 0.003 (0.03) |
| Technological readiness rank | | | | | | | | | -0.011 (0.04) | -0.002 (0.54) |

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|-----------------------------|-------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Country indicator variables | | | | | | | | | | |
| China indicator | | 4.079 (0.00) | 4.078 (0.00) | 4.121 (0.00) | 4.138 (0.00) | 4.208 (0.00) | 4.296 (0.00) | 4.155 (0.00) | 3.957 (0.00) | 4.142 (0.00) |
| UK indicator | | 2.828 (0.00) | 2.823 (0.00) | 2.737 (0.00) | 2.809 (0.00) | 2.756 (0.00) | 2.839 (0.00) | 3.018 (0.00) | 2.673 (0.00) | 3.008 (0.00) |
| US indicator | | 2.954 (0.00) | 2.949 (0.00) | 2.860 (0.00) | 2.975 (0.00) | 2.994 (0.00) | 3.074 (0.00) | 3.151 (0.00) | 2.742 (0.00) | 3.193 (0.00) |
| Western Europe indicator | | | -0.008 (0.98) | | | | | | | |
| Adj R ² | 42.0% | 66.2% | 66.0% | 66.1% | 67.3% | 67.5% | 67.9% | 82.4% | 70.2% | 83.8% |
| N | 146 | 146 | 146 | 146 | 146 | 145 | 126 | 95 | 114 | 86 |

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
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| Intercept | -0.943 (0.00) | -0.809 (0.00) | -0.813 (0.00) | -0.882 (0.01) | -0.451 (0.04) | -0.109 (0.61) | -0.478 (0.25) | -0.644 (0.03) | 1.708 (0.06) | 2.100 (0.02) |
| Country prosperity | | | | | | | | | | |
| Ln(GDP per cap+1) | 0.139 (0.00) | 0.118 (0.00) | 0.119 (0.00) | 0.129 (0.00) | 0.040 (0.17) | -0.005 (0.89) | 0.025 (0.55) | 0.041 (0.20) | -0.170 (0.08) | -0.232 (0.02) |
| Developed market indicator | 1.183 (0.00) | 1.056 (0.00) | 1.058 (0.00) | 1.044 (0.00) | 0.944 (0.00) | 0.909 (0.00) | 0.794 (0.00) | 0.755 (0.00) | 0.909 (0.00) | 0.722 (0.00) |
| Legal system within country | | | | | | | | | | |
| Common Law indicator (1 or 0) | | | | 0.063 (0.55) | | -0.091 (0.38) | -0.069 (0.58) | 0.007 (0.96) | -0.009 (0.95) | 0.035 (0.86) |
| Civil Law indicator (1 or 0) | | | | -0.064 (0.54) | | -0.156 (0.08) | -0.099 (0.34) | -0.036 (0.82) | -0.068 (0.60) | -0.011 (0.95) |
| Rule of Law: Percentile Rank | | | | | 0.006 (0.01) | | | | | |
| Control of Corruption: Percentile Rank | | | | | | 0.002 (0.33) | 0.004 (0.12) | 0.003 (0.17) | 0.006 (0.06) | 0.004 (0.17) |
| Regulatory Quality: Percentile Rank | | | | | | 0.007 (0.00) | 0.007 (0.03) | 0.004 (0.06) | 0.003 (0.45) | 0.004 (0.27) |
| Ease of starting a platform | | | | | | | | | | |
| Ease of Doing Business Rank | | | | | | | -0.001 (0.32) | | | -0.006 (0.00) |
| Starting a Business Rank | | | | | | | 0.000 (0.99) | | | 0.004 (0.03) |
| No. days to start a business rank | | | | | | | 0.000 (0.93) | | | -0.003 (0.23) |
| No. procedures to start a business rank | | | | | | | 0.002 (0.22) | | | 0.000 (0.86) |
| Financial system rents | | | | | | | | | | |
| Lerner index | | | | | | | | 0.329 (0.54) | | 0.46 (0.41) |
| Bank return on assets (% , after tax) | | | | | | | | 0.055 (0.16) | | 0.03 (0.41) |
| Financial system access | | | | | | | | | | |
| Financial market development rank | | | | | | | | | 0.004 (0.02) | 0.003 (0.05) |
| Account at a formal financial institution | | | | | | | | | 0.002 (0.48) | 0.003 (0.35) |
| User sophistication | | | | | | | | | | |
| Individuals using Internet (%) rank | | | | | | | | | 0.010 (0.01) | 0.009 (0.00) |
| Higher education and training rank | | | | | | | | | 0.004 (0.04) | 0.003 (0.03) |
| Technological readiness rank | | | | | | | | | -0.011 (0.04) | -0.002 (0.54) |

GDP per capita does not have much explanatory power

Emerging markets are not using crowdfunding to leap over developed markets

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|---|------------------|------------------|------------------|------------------|------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--------------------------------|
| Intercept | -0.943 (0.00) | -0.809 (0.00) | -0.813 (0.00) | -0.882 (0.01) | -0.451 (0.04) | -0.109 (0.61) | -0.478 (0.25) | -0.644 (0.03) | 1.708 (0.06) | 2.100 (0.02) |
| Country prosperity | | | | | | | | | | |
| Ln(GDP per cap+1) | 0.139 (0.00) | 0.118 (0.00) | 0.119 (0.00) | 0.129 (0.00) | 0.040 (0.17) | -0.005 (0.89) | 0.025 (0.55) | 0.041 (0.20) | -0.170 (0.08) | -0.232 (0.02) |
| Developed market indicator | 1.183 (0.00) | 1.056 (0.00) | 1.058 (0.00) | 1.044 (0.00) | 0.944 (0.00) | 0.909 (0.00) | 0.794 (0.00) | 0.755 (0.00) | 0.909 (0.00) | 0.722 (0.00) |
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| Common Law indicator (1 or 0) | | | | 0.063 (0.55) | | -0.091 (0.38) | -0.069 (0.58) | 0.007 (0.96) | -0.009 (0.95) | 0.035 (0.86) |
| Civil Law indicator (1 or 0) | | | | -0.064 (0.54) | | -0.156 (0.08) | -0.099 (0.34) | -0.036 (0.82) | -0.068 (0.60) | -0.011 (0.95) |
| Rule of Law: Percentile Rank | | | | | | 0.006 (0.01) | | | | |
| Control of Corruption: Percentile Rank | | | | | | | 0.002 (0.33) | 0.004 (0.12) | 0.003 (0.17) | 0.006 (0.06) |
| Regulatory Quality: Percentile Rank | | | | | | | 0.007 (0.00) | 0.007 (0.03) | 0.004 (0.06) | 0.003 (0.45) |
| Ease of starting a platform | | | | | | | | | | |
| Ease of Doing Business Rank | | | | | | | -0.001 (0.32) | | | -0.006 (0.00) |
| Starting a Business Rank | | | | | | | 0.000 (0.99) | | | 0.004 (0.03) |
| No. days to start a business rank | | | | | | | 0.000 (0.93) | | | 0.003 (0.23) |
| No. procedures to start a business rank | | | | | | | 0.002 (0.22) | | | 0.000 (0.86) |
| Financial system rents | | | | | | | | | | |
| Lerner index | | | | | | | | 0.329 (0.54) | | 0.46 (0.41) |
| Bank return on assets (% , after tax) | | | | | | | | 0.055 (0.16) | | 0.03 (0.41) |
| Financial system access | | | | | | | | | | |
| Financial market development rank | | | | | | | | | 0.004 (0.02) | 0.003 (0.05) |
| Account at a formal financial institution | | | | | | | | 0.002 (0.48) | | 0.003 (0.35) |
| User sophistication | | | | | | | | | | |
| Individuals using Internet (%) rank | | | | | | | | | 0.010 (0.01) | 0.009 (0.00) |
| Higher education and training rank | | | | | | | | | 0.004 (0.04) | 0.003 (0.03) |
| Technological readiness rank | | | | | | | | | -0.011 (0.04) | -0.002 (0.54) |

Rule of law appears important everywhere. The more difficult it is to do business, the greater is the alternative finance volume. Bank profitability does not matter.

The better developed the financial market is, the greater is the alternative finance volume.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|-----------------------------|-------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Country indicator variables | | | | | | | | | | |
| China indicator | | 4.079 (0.00) | 4.078 (0.00) | 4.121 (0.00) | 4.138 (0.00) | 4.208 (0.00) | 4.296 (0.00) | 4.155 (0.00) | 3.957 (0.00) | 4.142 (0.00) |
| UK indicator | | 2.828 (0.00) | 2.823 (0.00) | 2.737 (0.00) | 2.809 (0.00) | 2.756 (0.00) | 2.839 (0.00) | 3.018 (0.00) | 2.673 (0.00) | 3.008 (0.00) |
| US indicator | | 2.954 (0.00) | 2.949 (0.00) | 2.860 (0.00) | 2.975 (0.00) | 2.994 (0.00) | 3.074 (0.00) | 3.151 (0.00) | 2.742 (0.00) | 3.193 (0.00) |
| Western Europe indicator | | | -0.008 (0.98) | | | | | | | |
| Adj R ² | 42.0% | 66.2% | 66.0% | 66.1% | 67.3% | 67.5% | 67.9% | 82.4% | 70.2% | 83.8% |
| N | 146 | 146 | 146 | 146 | 146 | 145 | 126 | 95 | 114 | 86 |

And the explanatory power is not too bad

Emerging vs. developed markets

- **Emerging markets**
- China is a big deal
 - The explanatory power of the model jumps from 6.8% to 49.2% on the addition of a China indicator
- Both the control of corruption and the regulatory quality appear to have significant impacts on financing volume – at least one of these two variables is consistently positively related to the volume of crowdfunding across all the models.
- The ease of doing business is negatively related to volume.
- User sophistication matters. The percentage of individuals using the Internet is strongly positively related to the level of crowdfunding.

Debt vs. equity volume

- **Debt Volume**

- Similar to prior results (developed markets; rule of law; ease of doing business; financial system access; user sophistication)
- Strength of auditing and reporting
- Ease of getting credit

- **Equity volume**

- Low explanatory power
- Stock market capitalization (equity market depth) negatively related to equity financing volume
- Protection of minority shareholders, strength of investor protection or availability of venture capital do not appear to matter

Financial vs. non-financial motive volume

- **Financial Motive Volume**
 - Similar to prior results (developed markets; rule of law; financial system access; user sophistication)
- **Non-financial motive volume**
 - When you add level of trust, every other factor becomes insignificant

Conclusions

- Crowd financing is a global phenomenon, with financing across the globe.
- The development of crowdfunding appears to follow standard economic models
- Financing is significantly higher in developed than emerging markets
- Controlling for the level of market development, the rule of law appears significant in explaining the level of crowdfunding volume.
- Weak negative relationship between the ease of doing business and the volume of crowdfunding. However, direct measures of the level of economic rents do not appear to matter.
- Crowdfunding is positively related to the ease of access to the financial system, the sophistication of the user base, and the level of trust individuals have for strangers, all of which relate to the supply of funds from investors.

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