



Quantification of Characteristics of Economic Agents' Decisions in the Crowdfunding Market

Dr Ariel Bergmann, University of Dundee



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UNIVERSITY OF DUNDEE



Prof M Klaes
Prof B Burton
Dr A Bergmann

What does that mean?

The simpler title:

What characteristics do investors care about and how do they value those characteristics?

TARGET SAMPLE

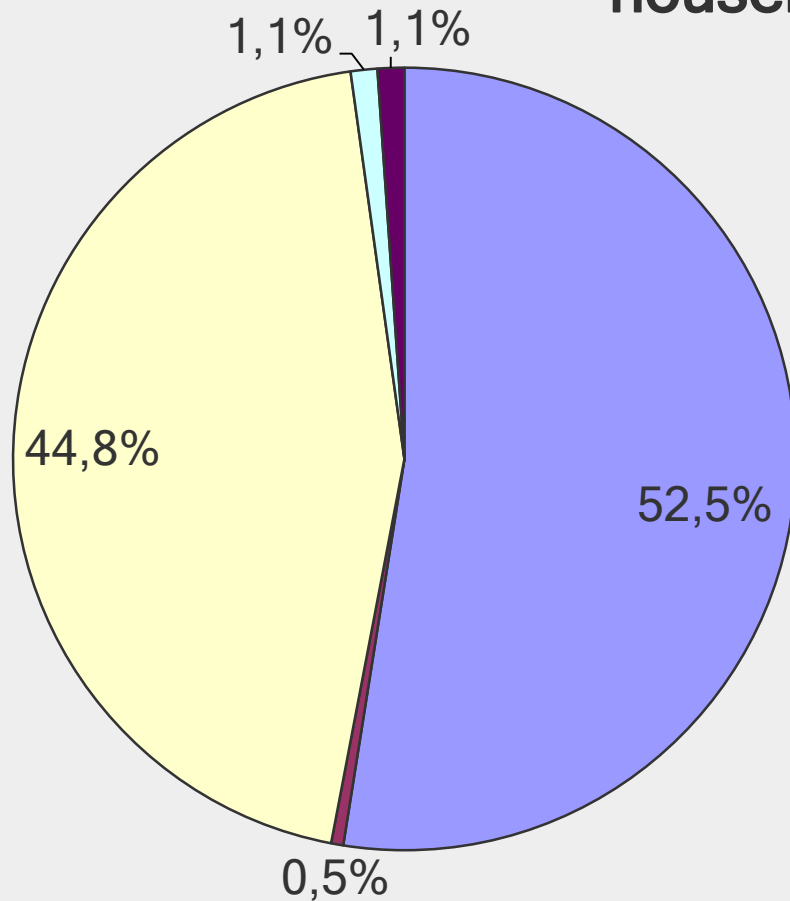
- Potential crowdfund investors
 - Willing to participate in an online survey
 - Household income £20,000 and > /annum
 - Active on social networks
 - Use online banking
 - Participate in household financial decision-making
 - Age: 18 and >

UK PILOT SURVEY

Investing in renewable energy:
The role of personal finance

200 respondents

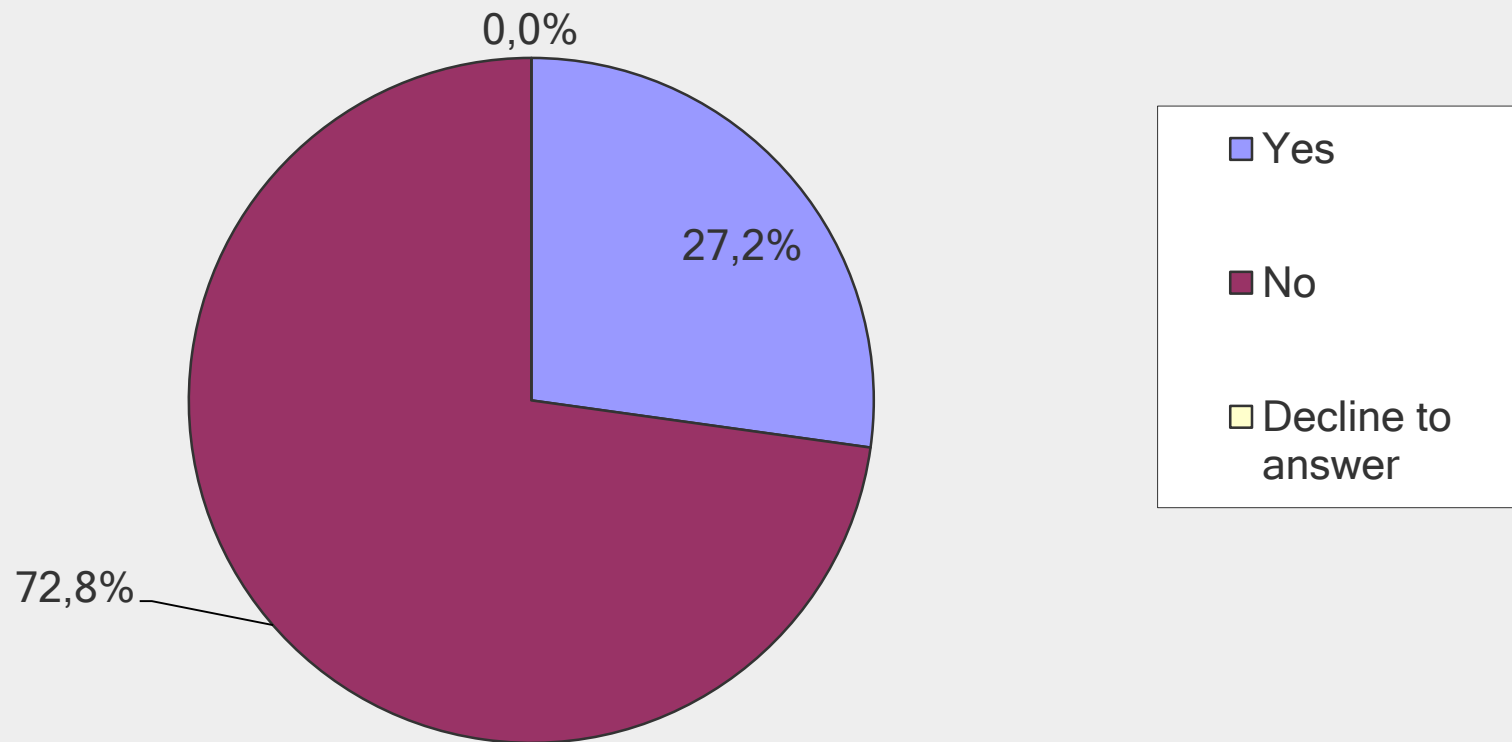
Who makes direct investment decisions for your household?



- Myself
- Other person in household
- Joint with spouse or partner
- Decline to answer
- Other (please specify)

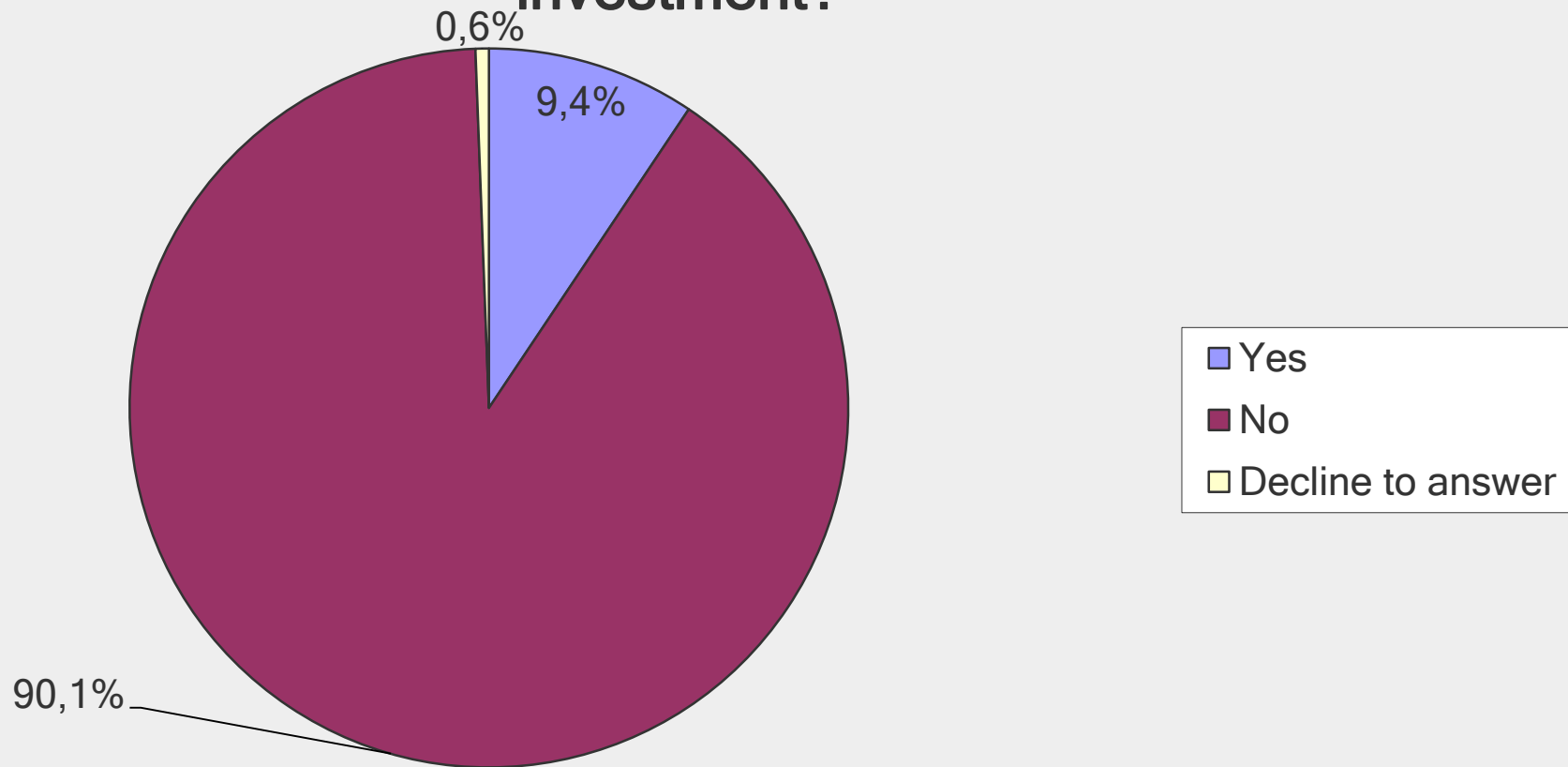
GOOD NEWS - 1

Have you ever considered using crowdfunding to make an investment?



GOOD NEWS - 2

Have you ever used crowdfunding to make an investment?

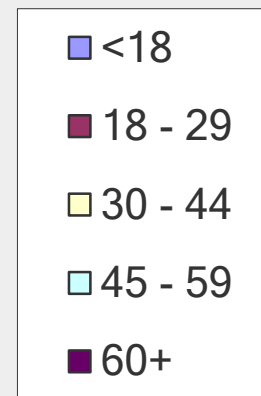
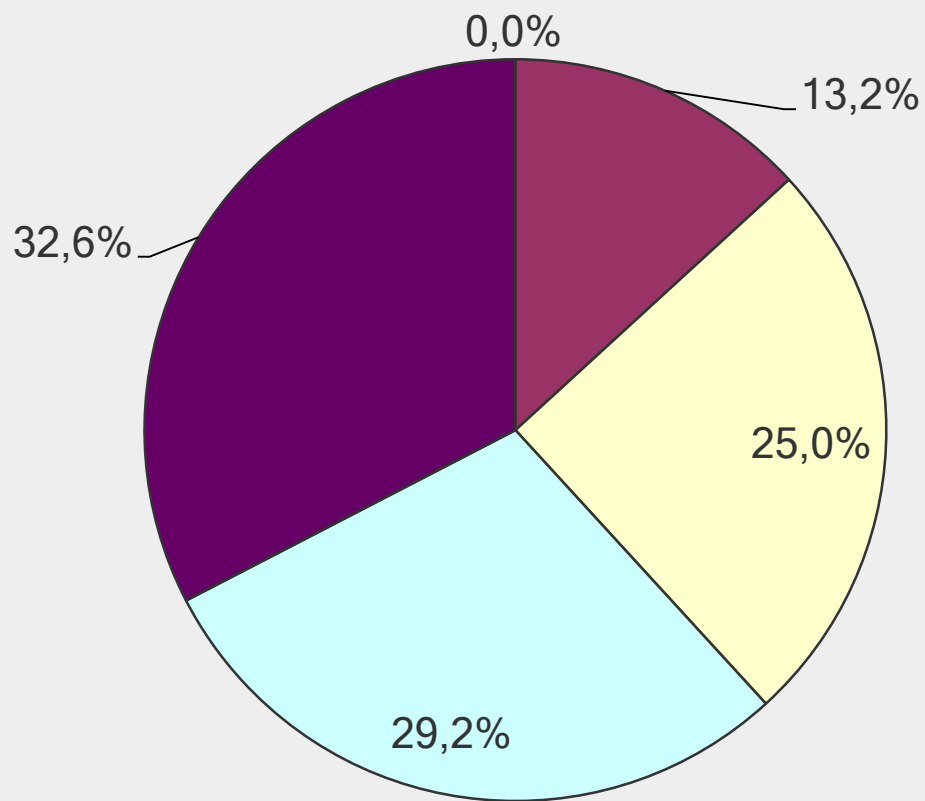


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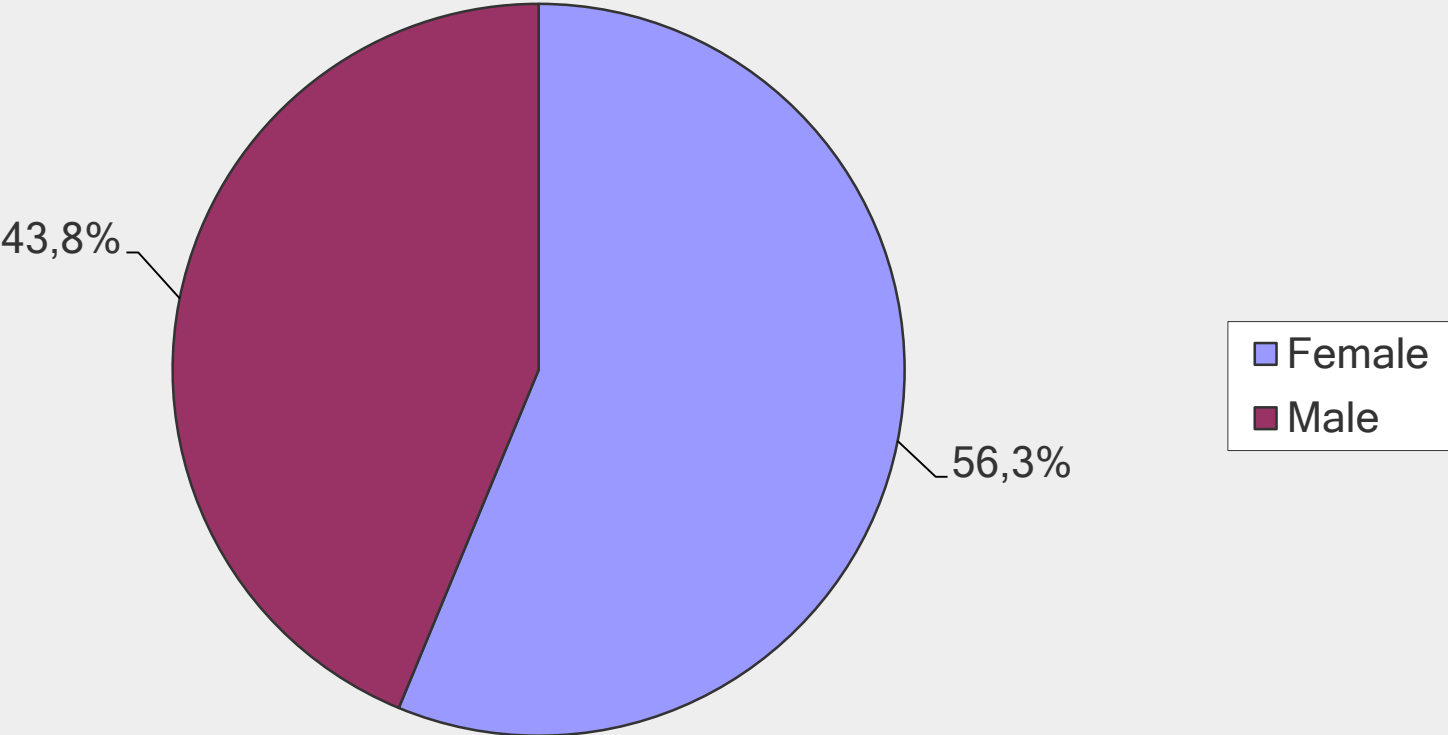
Which of the following words describes your investing style (tick all descriptions that apply):

Answer Options	Response Percent
Novice	44.0%
Experienced	7.6%
Rare	26.6%
Occasional	27.2%
Often	2.2%
High risk	2.2%
Balanced risk	27.2%
Low risk	30.4%
Show me the money!	2.2%
Recreational investor (hobby to play the market)	4.9%
Socially responsible	23.9%
Long-term (greater than 10 years)	16.8%
Intermediate-term (from 2 years up to 10 years)	21.7%
Short-term (less than 2 years)	14.7%
Funding retirement	17.4%
Dream house	6.0%
Other (please specify)	6.0%

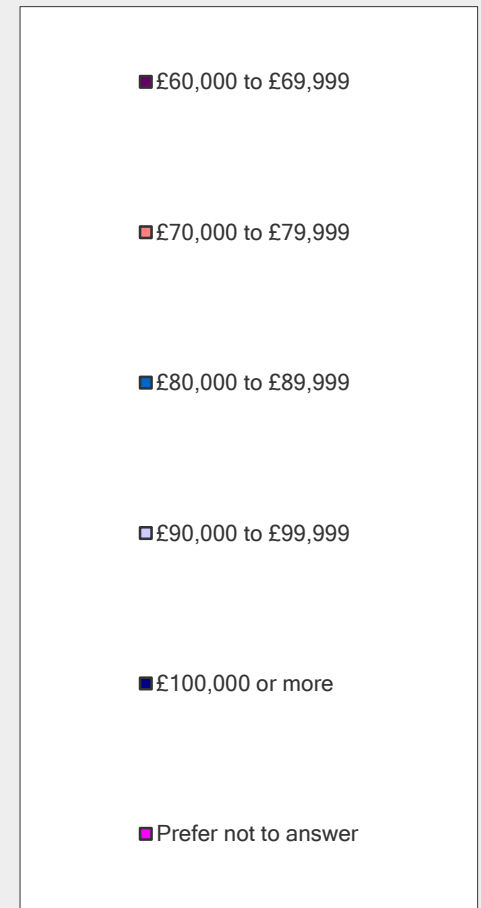
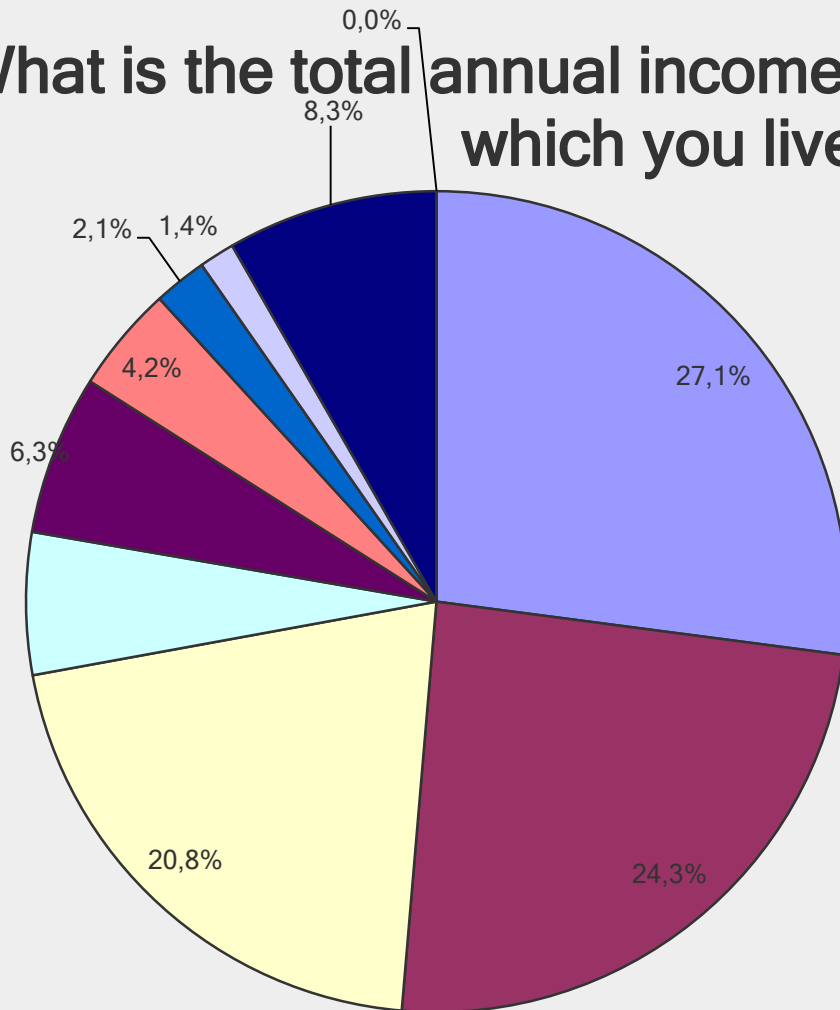
Age



What is your gender?



What is the total annual income of the household in which you live?



Choice Analysis

Investment Characteristics - Variable

Type
of
Investment

- **Project Bonds** - bonds that are directly tied to a specific project (for spending and revenue)
- **Company Bonds** - bonds that are tied to a company (for spending and revenue) and not to a specific project
- **Equity** - partial ownership of the company through common shares
- **Community Shares** - common shares donated to the local community trust for the community's benefit.

Rate of
Return

- 3% per year
- 5% per year
- 7% per year
- 9% per year

Type of
Technology

- A small **hydroelectric** project
- A small **wind turbine** project
- Roof top **solar panel** systems, community-wide
- A **biomass boiler** system to provide heating and hot water to a community

Phase of
Project

- **Start-up** (scoping/permitting/pre-construction)
- **Start of Construction**
- **End of Construction**
- **Operational** (revenue is being collected)

CHOICE CARD

Key Features	Option A Crowdfunded	Option B Crowdfunded	Option C Bank Savings
Technology	Wind	Biomass Boiler	-
Annual Rate of Return	9%	7%	2.5%
Type of Investment	Equity shares	Project Bond	Savings deposit
Phase of project	End of Construction	Operational	-

* 11. In which option would you most likely invest?

- A
- B
- C
- None
- Decline to Answer

* 12. In which option would you be least likely to invest?

- A
- B
- C
- None
- Decline to Answer

CHOICE CARD			
Key Features	Option A Crowdfunded	Option B Crowdfunded	Option C Bank Savings
Technology	Small Hydro	Solar PV	-
Annual Rate of Return	9%	7%	2.5%
Type of Investment	Project Bond	Equity shares	Savings deposit
Phase of project	Permitted	Scoping	-

CHOICE CARD

Key Features

Option A
Crowdfunded

Option B
Crowdfunded

Option C
Bank Savings

Technology

Biomass Boiler

Wind

-

Annual Rate of Return

3%

5%

2.5%

Type of Investment

Company Bond

Community Shares

Savings deposit

Phase of project

End of Construction

Operational

-

CHOICE CARD

Key Features	Option A Crowdfunded	Option B Crowdfunded	Option C Bank Savings
Technology	Small Hydro	Biomass Boiler	-
Annual Rate of Return	5%	9%	2.5%
Type of Investment	Company Bond	Community Shares	Savings deposit
Phase of project	Scoping	Scoping	-

And several more choice cards

Results

Preliminary Results

SUBJECT TO REVISION

NOT FOR QUOTING

www.crowdfundres.eu

05/05/15

24

50 of the 200 respondents had
knowledge of crowdfunding

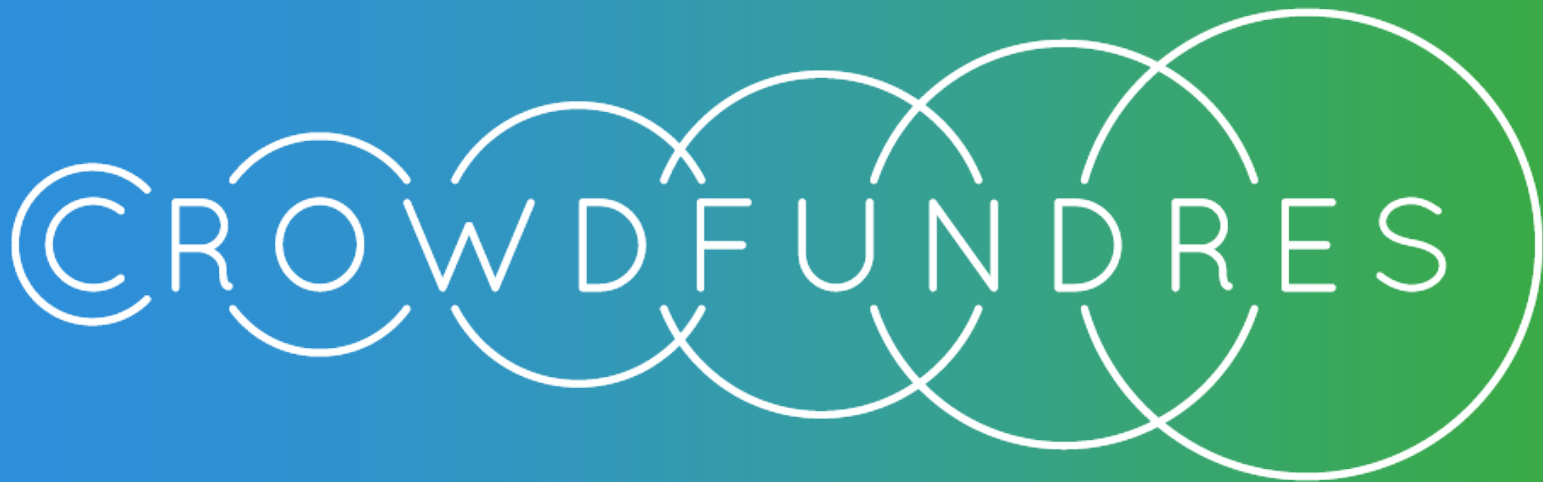
38 of the 50 were usefully surveyed

Next Step

How the characteristics
[technology, project phase, and type of investment]
will impact on investors expected rate of return?

How do those who do not know of crowdfunding
value the characteristics of investments?

THE OTHER 150 RESPONDENTS



Crowdfunding for Renewable Energy Projects: European Survey Results*

*Please cite as *Bergmann, A.; Betz, S.; Burton, B.; Maidonis, T.; Kohl, K.; Klaes, M. 2015. Crowdfunding for Renewable Energy Projects: European Survey Results (November Release), 2nd Renewable Energy Crowdfunding Conference, London: 5 Nov. 2015.*

T. Maidonis
WIP Renewable Energies
thomas.maidonis@wip-munich.de

A. Bergmann, B. Burton, M. Klaes
University of Dundee
m.klaes@dundee.ac.uk

K. Kohl
European Crowdfunding Network
kathrin.kohl@eurocrowd.org



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Main Facts

- **Funding Programme:** Horizon 2020 – Societal Challenges – Secure, clean and efficient energy
- **Work Programme Topic:** LCE-04-2014: Market uptake of existing and emerging renewable electricity, heating and cooling technologies
- **Starting Date:** 01/02/2015
- **Closing Date:** 31/01/2018
- **Budget:** 1.893.002,50 €

Partners



Project objectives

Aim: Contribute to the acceleration of the renewable energy growth in Europe by unleashing the potential of crowdfunding for financing renewable energy projects.

Objectives:

- **Deepen understanding** of adoption of crowdfunding for financing renewable energy projects
- **Analyse the challenges** faced by the application of crowdfunding for renewable energy projects in Europe
- **Develop and apply guidelines** that support more effective practices
- **Help improve the market and regulatory framework in Europe**
- **Promote the crowdfunding concept** and its advantages among those who could contribute or raise funds

Stakeholder Survey

#crowdfundres

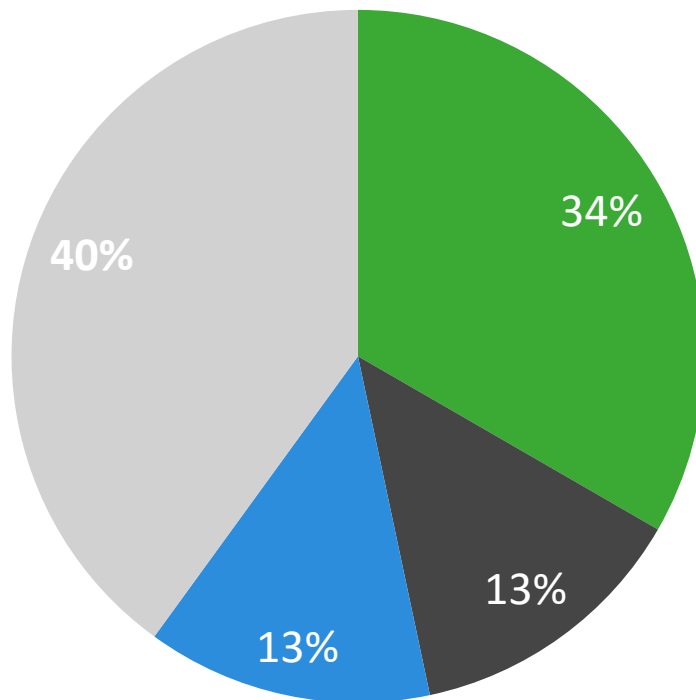
- 3 separately run survey streams and analysis:
 - Developers (WIP)
 - Platforms (ECN)
 - Perceptions of general public (University of Dundee)
- Focus on UK, Belgium, France, Netherlands, Germany, Austria (translation into 4 languages)
- Surveys opened 15 June (closing December)
 - November Release based on October data cut:
 - 113 developers, 21 platforms, 332 individuals
- Note: these are preliminary data, full study to be circulated

Platform Survey

(November 2015 release, 22 platforms)

Platforms hosting RES Projects

Is your crowdfunding platform involved with RES projects?*

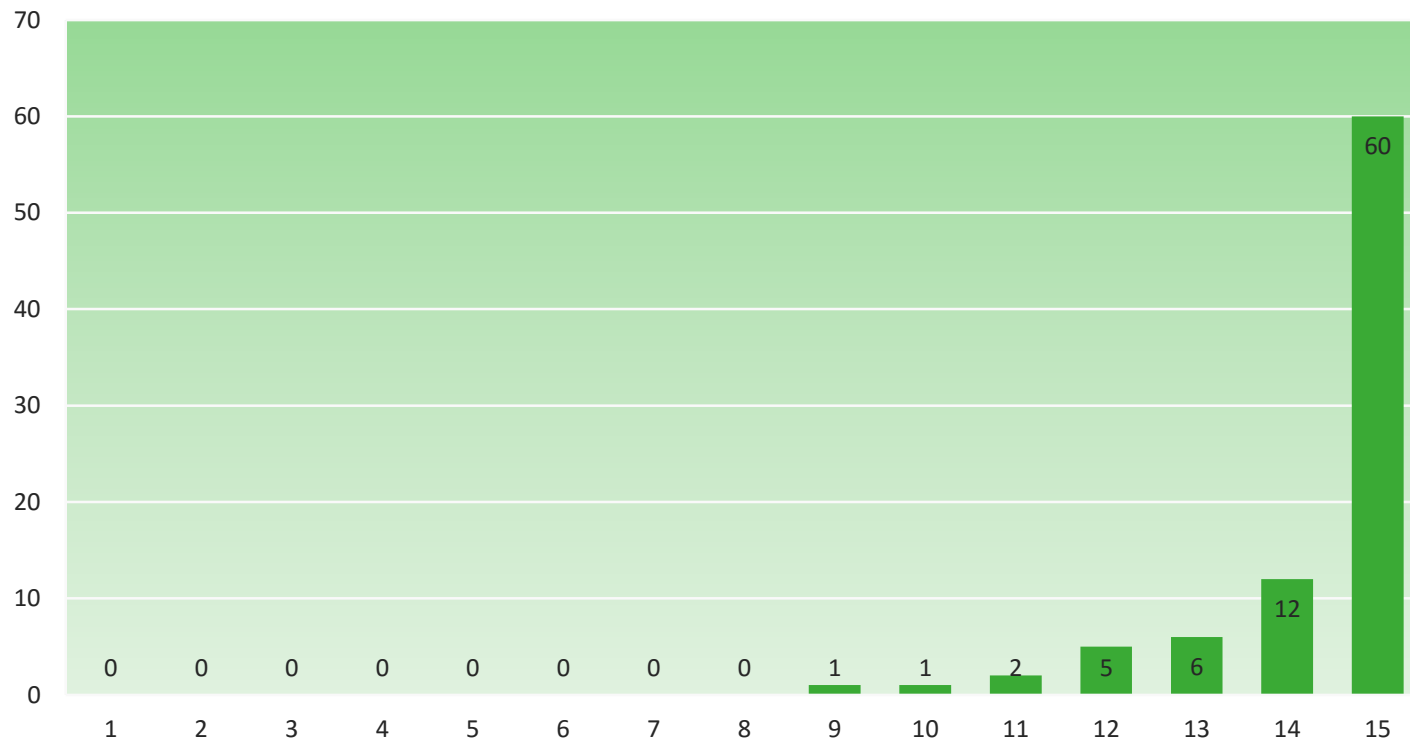


- The Platform has never hosted RES projects, but would host if it had the opportunity.
- The Platform has already hosted RES projects, but it is exceptional
- The Platform has regularly hosted RES projects
- The Platform is specialised in RES projects

*Valid responses: 15 / 21

Platforms: Distribution of RES projects

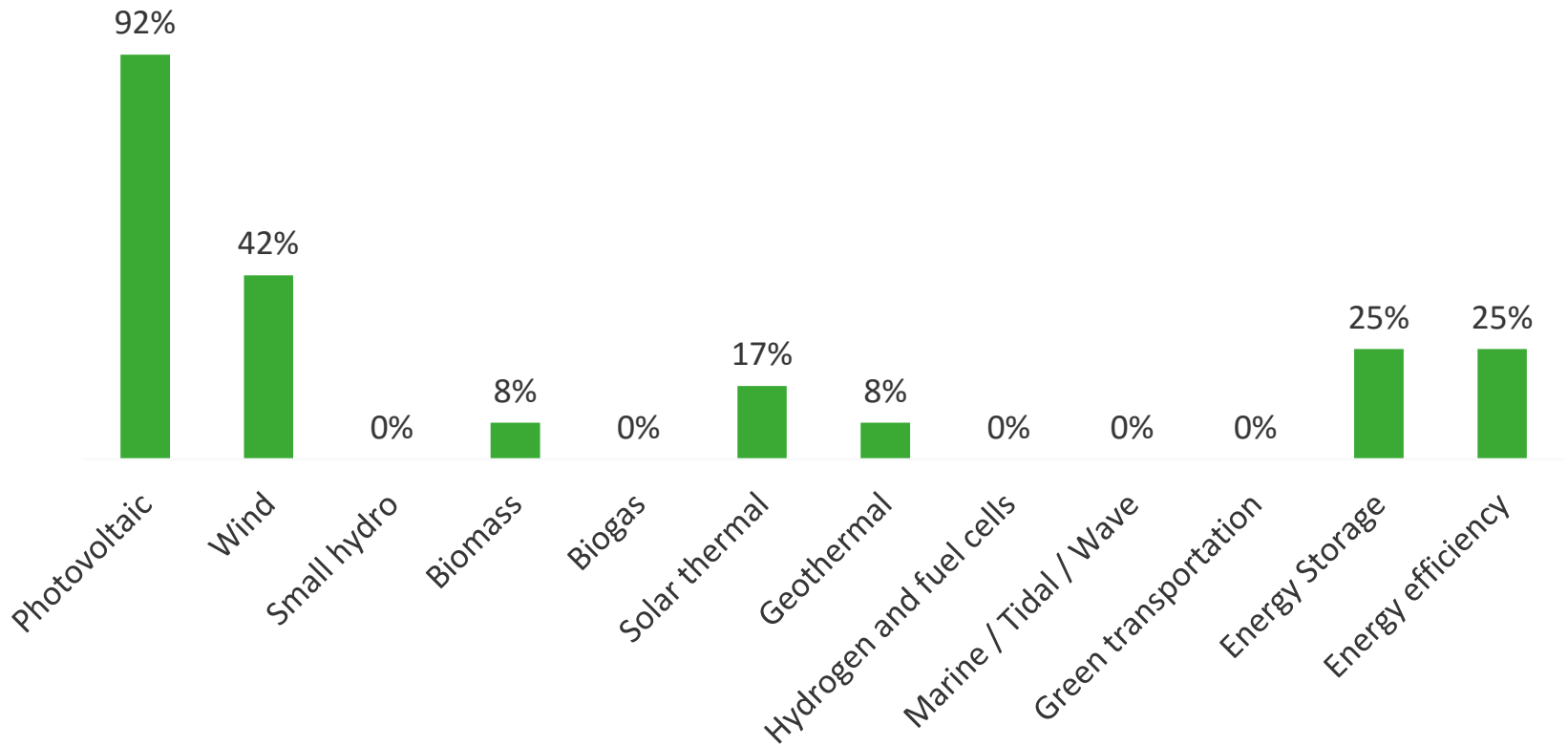
Number of RES projects per platform*



* Valid responses: 15 / 21

RES technologies

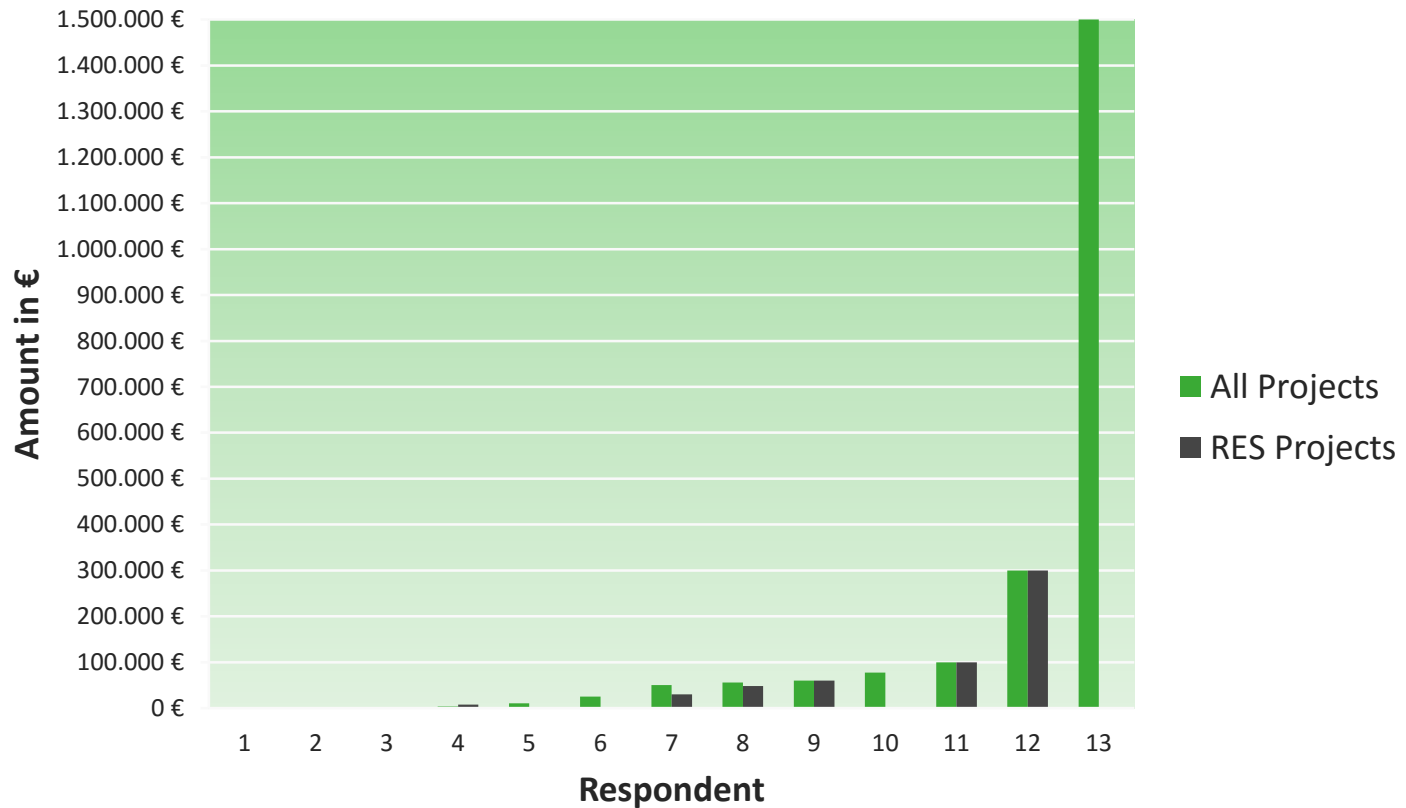
Applied technologies in RES projects*



*Valid responses: 12 / 21; multiple answers possible

Platforms: Financial project scale

Average amount (in €) raised per project



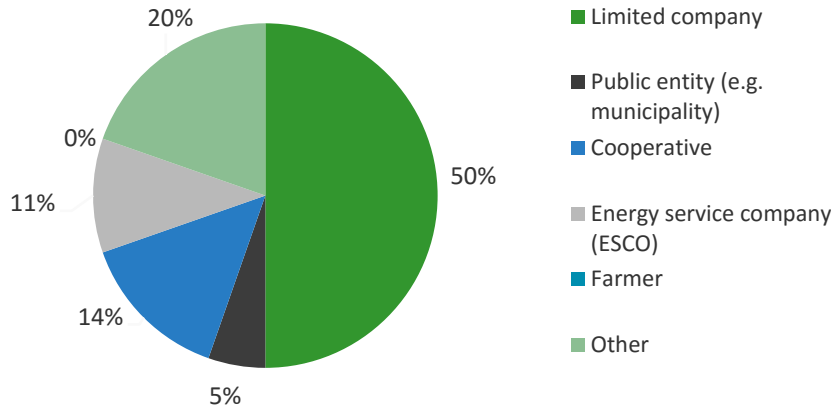
*Valid responses: 13 / 21

RES Project Developer Survey

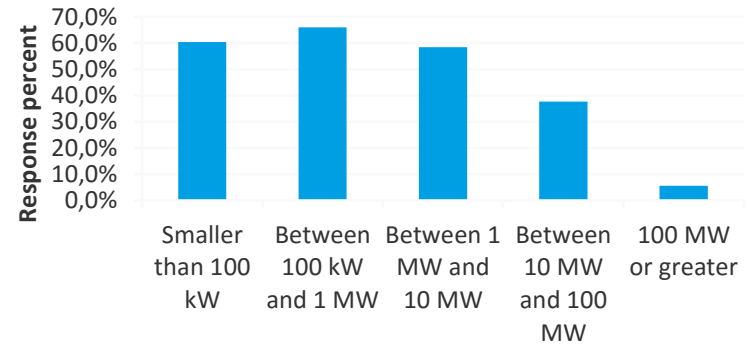
(November 2015 release, 113 developers)

Developers: Profile

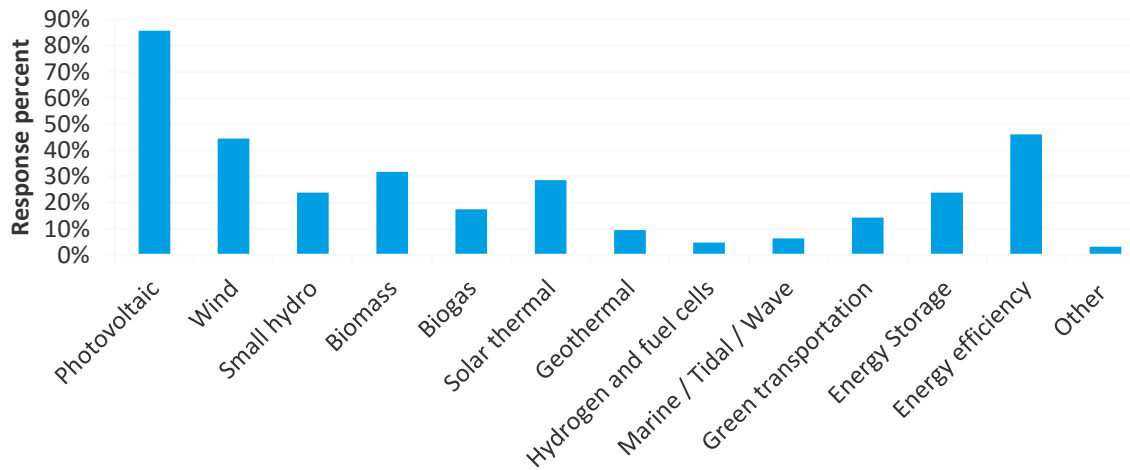
What is your company structure?



What is the size range of your RES projects?



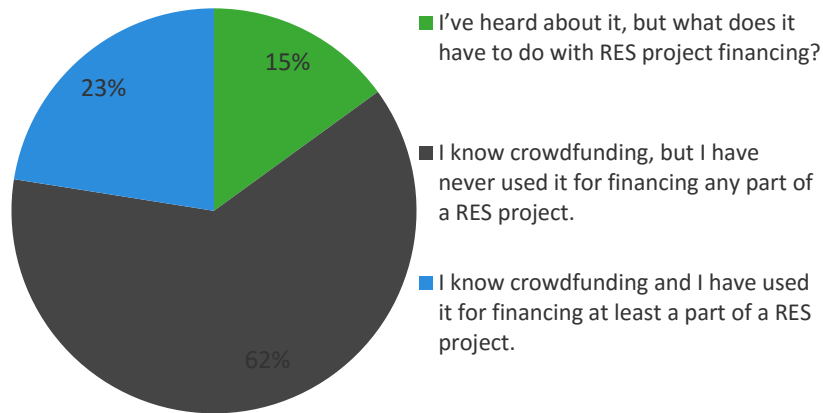
What is the technology focus of your company's RES projects?



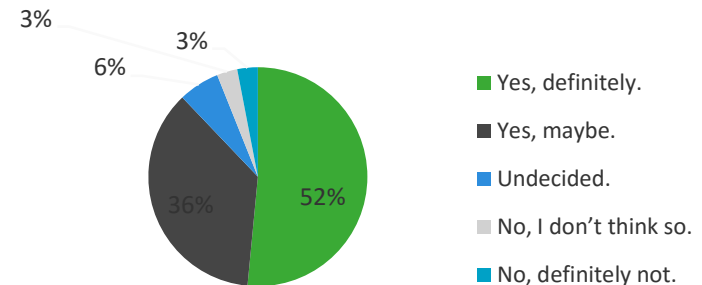
- Other
- Smart Grids
- Clean Coal
- Gas
- Supplier of Silicon Feedstock

Developers: Crowdfunding experience

How familiar are you with crowdfunding?

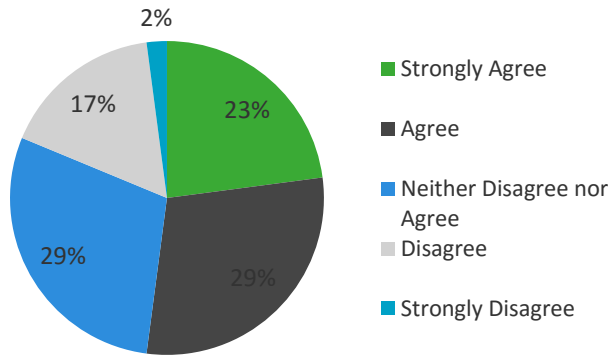


Would you consider using crowdfunding for financing your project (again) in the future?

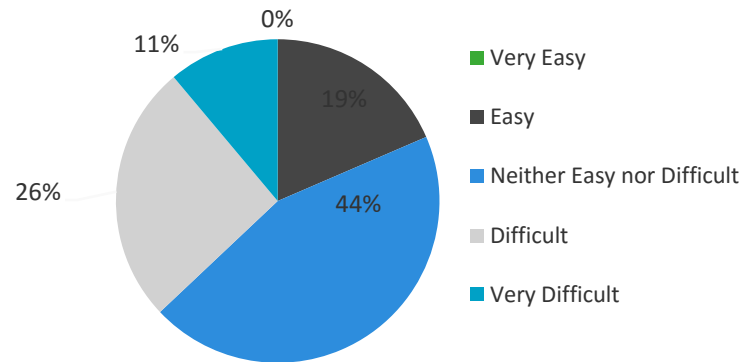


Finance x Crowdfunding

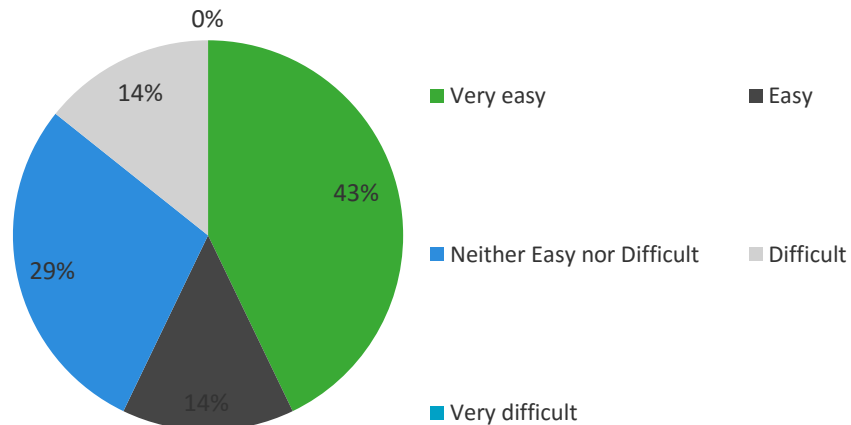
It is currently difficult to get back loans for RES projects:



How difficult did you find the process until your received support from national or European programmes for financing a RES project?



How difficult did you find the process of crowdfunding your RES project?



Survey of the general public

(November 2015 release, 332 respondents)

Public: RES CF Experience

- 68% familiar with crowdfunding *of which:*
- 51% had invested via crowdfunding *of which:*
- 52% had invested in RES via crowdfunding.

Scale of most recent RES Crowdfunding investment (€):

< 100	5
100 - 500	22
500 - 1000	12
1000 - 5000	17
5000 - 10000	3
10000 - 25000	2
25000 - 50000	1
>50000	0

Mid-point average = €2610.48

Public: Intentions

- Plan to invest in RES via crowdfunding in next 3 years:
Yes: 42% Maybe: 51% No: 7%
- Of those who have already invested via crowdfunding:
Yes: 61% Maybe: 33% No: 6%
- Of those who have already invested in RES via crowdfunding:
Yes: 80% Maybe: 14% No: 5%

i.e. familiarity linked with positive attitude

Crowdfunding as alternative to traditional finance

(Mean responses; 5 = Strongly Agree)

	Investments in RES	Investments in General	Diff.
TOTAL	4.40	4.15	0.25**
Familiar with CF: <i>yes (no)</i>	4.42 (4.15)	4.19 (3.54)	
Invested via CF: <i>yes (no)</i>	4.45 (4.36)	4.27 (4.08)	
Invested in RES via CF: <i>yes (no)</i>	4.55 (4.35)	4.27 (4.27)	
Planning to invest in RES: <i>yes (no)</i> <i>[maybe]</i>	4.66 (3.60) [4.26]	4.32 (3.70) [4.05]	

Evidence confirms positive view of CF across Europe, but provides first indication that CF is seen as particularly appropriate for RES:

- (i) Overall difference in means is significant;
- (ii) Pattern consistent across virtually all sub-groups: result is independent of context

Growth prospects

(Mean responses; 5 = Strongly Agree)

'CF will grow over next 5 years':

	Investments in RES	Investments in general	Diff.
TOTAL	4.30	4.09	0.21**
Familiar with CF: <i>yes (no)</i>	4.30 (4.36)	4.10 (4.00)	
Invested via CF: <i>yes (no)</i>	4.47 (4.09)	4.22 (3.90)	
Invested in RES via CF: <i>yes (no)</i>	4.60 (4.09)	4.26 (4.15)	
Planning to invest in RES: <i>yes (no)</i> <i>[maybe]</i>	4.59 (3.91) [4.13]	4.25 (4.00) [3.98]	
UK-based: <i>Yes (no)</i>	4.14 (4.33)	3.86 (4.11)	

Growth in use of CF for RES is seen as significantly more likely than growth in the CF sector as a whole

This is the case for virtually all sub-groups, irrespective of prior experience, familiarity or plans

26/05/2

016

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Summary

- **Cause for optimism for RES CF:**

- i. Propensity to invest in RES via CF strongest amongst those with prior experience*
- ii. CF seen as more appropriate for RES than for investments in general, irrespective of prior familiarity/experience*
- iii. Growth in CF seen as more likely for RES than for investments in general*
- iv. Those who invest in RES via CF do so on the basis of a wide range of potential benefits*