

Flying Solo or Hunting in Packs? Understanding the Divergence between Individual and Collective Decisions in Angel Groups

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Abstract. Business angels increasingly operate within organized angel groups, yet how the move from individual to collective decision-making reshapes the evaluation of early-stage ventures remains poorly understood. We study this question using a proprietary longitudinal dataset from the Italian Business Angel Network, covering 4,884 individual evaluation forms submitted by the 38 members of its evaluation committee on 450 investment proposals between 2020 and 2025. The setting offers two rare features: committee members score each venture independently on a ten-criterion rubric before any collective decision, and ventures rejected by the group can still be funded individually by committee members through a *repechage* channel. Comparing the criteria that drive individual evaluations with those that drive collective funding choices, we document a systematic reweighting. Individually, evaluators' investment interest responds most strongly to the founding team and the innovativeness of the solution, and not to the planned use of capital or the clarity of the value proposition. Collectively, the group funds ventures with clear value propositions and penalizes the most innovative proposals, while the weight on the founding team persists. We interpret this pattern as consistent with a justifiability lens: collective funding is more strongly associated with criteria that are codified, comparable, and defensible in front of peers, while criteria associated with individual conviction carry less weight. The findings carry implications for the governance of angel groups as gatekeepers of early-stage technology commercialization, for entrepreneurs preparing staged pitches, and for policies that promote professionalized but innovation-sensitive angel networks.

Keywords: business angels; business angel groups; screening; investment criteria; collective decision-making; entrepreneurial finance

JEL codes: G24; L26; M13; O31

1. Introduction

Business angels (hereafter, BAs) are individuals who invest their own wealth directly in unlisted or private companies with which they have no prior family connection. They are widely acknowledged as the primary source of funding for seed and early-stage ventures, filling the equity gap left by institutional venture capital (Block et al., 2018; Bonini & Capizzi, 2019; Mason & Harrison, 2015). For decades, the portrayal of the angel investor remained centered on the solo archetype: an individual relying on personal networks and idiosyncratic judgment to select deals. The market has since undergone a structural transformation, moving away from its historically fragmented nature toward coordinated and professionalized forms of investment (Gregson et al., 2013; Mason et al., 2016). Organized Business Angel Groups (BAGs) and networks now dominate deal-flow management and selection in many advanced economies (Botelho & Mason, 2024), and their screening practices increasingly shape which early-stage technologies become credible investment opportunities, which ventures reach the market, and which follow-on investors they subsequently attract (Capizzi et al., 2026; Coakley et al., 2025). The technology-transfer stakes are direct: in the network we study, a fifth of the proposals come from biotech, pharma, and healthcare ventures, patents figure centrally among the evaluated signals, and external advisors are typically academic or industry experts.

This transformation raises a question that the literature has left largely unanswered: what happens to the evaluation of an early-stage venture when the decision moves from an individual investor to a group? Individual BAs have traditionally been described as relying on the founding team and on experiential judgment accumulated over an investing career (Huang & Pearce, 2015; Mason & Harrison, 1996; Mitteness et al., 2012). Group decisions, by contrast, must survive discussion among peers. A committee member who wishes to champion a venture must articulate reasons that colleagues can verify and accept, and this requirement privileges criteria that are codified and comparable across proposals - market size, business model structure, documented traction - over tacit, highly complex technical evaluation or experiential judgments that are difficult to communicate, however well founded (Ding et al., 2014; Frey & van de Rijt, 2021; Paul et al., 2007). If this is so, the organizational structure of a BAG

does not simply aggregate members' recorded evaluations: it affects which evaluation criteria can be voiced, defended, and translated into a collective funding decision.

Documenting this reweighting empirically is difficult, for two reasons. First, most of what researchers observe about BAGs is the outcome of the collective process; the individual evaluations that feed into it are rarely recorded (Mason et al., 2017). Second, ventures rejected by a group usually disappear from view, so there is no way to observe what individual investors would have done with the same deal flow - the survivorship problem that pervades entrepreneurial finance research (Croce et al., 2017).

Importantly, our empirical setting does not represent the universe of entrepreneurial ventures, but the population of ventures seeking organized angel finance. This is precisely the stage at which structured screening, collective evaluation, and individual investor discretion become economically meaningful.

The setting we study overcomes both obstacles. Within the Italian Business Angel Network (IBAN), one of the oldest angel networks in Europe, a standing evaluation committee screens the monthly deal flow. Each committee member first evaluates every incoming proposal independently, through a standardized online form that scores the venture on ten criteria - from the innovativeness of the solution and the breadth of the target market to the quality of the action plan, the coherence of the planned use of capital, and the strength of the founding team - and states the member's own overall investment interest. Only afterwards does the group meet, shortlist the top-ranked proposals of the month, hear the founders in person, and decide collectively whether to invest. Crucially, proposals discarded by the group remain visible, and individual committee members sometimes fund them privately, through what we label a *repechage* channel. The same pool of ventures is thus observed under two decision regimes: first through independent individual evaluations by committee members, and then through either a collective funding decision or, after collective rejection, an individual *repechage* decision by committee members.

Our data cover the full evaluation history of this process: 4,884 individual evaluation forms submitted by 38 committee members on 450 ventures between September 2020 and July 2025, matched with the group's screening outcomes and with the funding outcomes of both channels - 60 ventures funded collectively and 41 funded individually after collective rejection. The criterion-level scores allow us to go beyond outcome comparisons and estimate directly which criteria carry weight in individual judgments and which carry weight in collective choices.

The comparison yields a clear pattern. When evaluating individually, committee members' investment interest loads most heavily on the strength of the founding team and on the innovativeness of the solution; the coherence of the planned use of capital and the clarity of the value proposition carry no detectable weight. When the same angels decide collectively which screened ventures to fund, the ordering changes sharply: a clearly articulated value proposition - precisely null in individual evaluations - becomes a leading predictor of collective funding, more innovative proposals are significantly less likely to be funded, and only the weight on the founding team carries over. The innovativeness penalty is not accounted for by evaluator disagreement, which speaks against a simple variance-aversion reading. Ventures rescued individually after collective rejection, in turn, stand out for the strength of their teams, and the rescue channel is associated with the personal wealth, age, and managerial experience of the evaluating members. The funnel-level evidence is consistent: codified project attributes - prototypes, patents, financial projections, external advisors - strongly predict passing the score-based screening, while patents, the most codified signal of all, are if anything negatively associated with the individual funding of ventures.

These results make three contributions. First, to the literature on angel investing, we provide, to our knowledge, one of the first criterion-level comparisons of individual and collective evaluation within the same group of investors, based on recorded evaluations rather than on surveys or retrospective accounts (Carpentier & Suret, 2015; Mason et al., 2017). Second, to research on angel group organization and governance (Arundale & Mason, 2025; Bonini et al., 2018; Botelho & Mason, 2024; Croce et al., 2017), we show that formalized collective screening does not merely add rigor to individual judgment: it systematically reweights evaluation criteria toward those that are communicable and defensible in a group, while innovativeness - strongly associated with individual investors' stated investment interest - receives a negative weight at the collective funding stage. Third, to the

broader debate on the selection environments that early-stage technology ventures face (Capizzi et al., 2026; Kerr et al., 2014), and specifically to the literature on technology transfer and commercialization, we document a specific organizational mechanism - collective justifiability - through which the professionalization of angel finance may tilt capital allocation away from the most novel ventures, and we discuss the governance safeguards that can preserve room for individual conviction inside professionalized groups.

The remainder of the paper proceeds as follows. Section 2 reviews the literature and develops the research questions. Section 3 describes the IBAN evaluation process. Section 4 presents the data, the variables, and the empirical strategy. Section 5 reports the results and robustness checks. Section 6 discusses implications and concludes.

2. Literature background and research questions

2.1 What business angels look for

Research on BAs has evolved from a foundational mapping of an invisible market to a detailed investigation of how early-stage financing decisions are made. The early literature established the identity of the BA as a provider of patient capital filling the gap left by institutional venture capital (Gaston, 1989; Tymes & Krasner, 1983; Wetzel, 1983): high-net-worth individuals with substantial managerial or entrepreneurial experience, motivated by a blend of financial objectives and the desire to remain active in the entrepreneurial process. As the field matured, the focus shifted from who BAs are to how they select investments. A consistent finding across decades of research is the primacy of the founding team. Unlike venture capitalists, who adopt contract-centered evaluation frameworks built on formal due diligence, individual BAs have traditionally relied on relational and experiential assessment of the people behind the project (Capizzi et al., 2025; Cumming & Zhang, 2019; Ibrahim, 2008; Lumme et al., 1998; Mason & Harrison, 1994, 1996; Sohl, 2012; Sudek, 2006; Van Osnabrugge, 2000). Huang and Pearce (2015) show that experienced early-stage investors deliberately privilege judgments about the founders when quantifiable information is thin, and that this reliance on accumulated experiential judgment is an adaptive response to extreme uncertainty rather than a bias, effectively functioning as a primary mechanism to mitigate adverse selection and agency costs when formal control mechanisms are unviable.

The screening stage concentrates this selectivity. Most proposals are eliminated quickly, on the basis of a limited set of decisive shortcomings, before any formal due diligence begins (Carpentier & Suret, 2015; Clark, 2008; Maxwell et al., 2011; Maxwell & Lévesque, 2014). Recent work has begun to unpack the investor-level heterogeneity behind these decisions: psychological attributes shape selection outcomes (Altmeier & Fisch, 2024), and angels with different professional origins evaluate ventures through different lenses (Pelucco & Vismara, 2025). The angel market is thus far from monolithic (Antretter et al., 2020), and the criteria applied to a given venture depend on who evaluates it - and, as we argue next, on the organizational context in which the evaluation takes place.

2.2 Collective decision-making in angel groups

The proliferation of organized groups has fundamentally altered the mechanics of early-stage financing (Botelho & Mason, 2024; Harrison et al., 2015; Mason et al., 2016). BAGs enable investors to pool capital, share the burden of due diligence, and syndicate investments (Arundale & Mason, 2025; Block et al., 2019; Bonini et al., 2018). Within a group, screening is typically delegated to a committee that filters the deal flow before the collective investment decision (Carpentier & Suret, 2015; Croce et al., 2017).

The decisive feature of committee screening, for our purposes, is that its choices must be justified to peers. An individual investing alone answers to no one; a committee member arguing for a venture must supply reasons that colleagues can scrutinize, compare across proposals, and accept as legitimate grounds for a group commitment (Ding et al., 2014; Paul et al., 2007). A long research tradition on accountability shows that decision-makers who expect to justify their choices to an audience shift toward options supported by reasons that the audience will accept - defensible choices rather than privately preferred ones (Lerner & Tetlock, 1999). In an investment

committee, this need for shared justification systematically favors criteria that are codified and verifiable - market size, documented traction, intellectual property, structured financial projections - because such criteria travel well in discussion: they can be checked, benchmarked, and defended ex post (Frey & van de Rijt, 2021; Simmons et al., 2011). Standardized scoring rubrics and formal evaluation templates institutionalize this logic (Blaseg & Hornuf, 2024; Croce et al., 2020). By converting idiosyncratic beliefs into standardized signals, these templates reduce intra-group negotiation frictions, albeit at the potential expense of soft, non-codifiable information. Judgments that rest on an individual's accumulated experience - an assessment of a founding team's quality, a conviction about a technology's promise - are not thereby abandoned, but they become harder to mobilize: they cannot be verified by colleagues, and a group that funds on their basis has little to point to if the investment fails.

We emphasize that this argument concerns the organization of decisions, not the psychology of deciders. Our framework does not assume that BAs reason differently when they sit on a committee. Rather, the collective setting constrains which criteria can be voiced, defended, and acted upon: criteria requiring shared justification crowd out criteria resting on private conviction. The divergence we expect between individual and collective choices is therefore an organizational filtering mechanism that reweights decision criteria toward codifiable signals at the group level - what we call a rationalizing filter - and not a substitution of cognitive processes.

This lens has an important corollary for the type of ventures that professionalized groups select. Highly innovative, early-stage proposals are precisely those for which codified evidence is scarcest: the more novel the technology or the business model, the less an evaluator can point to comparable cases, established metrics, or documented traction (Fisher & Neubert, 2023; Townsend et al., 2018). If collective decisions privilege justifiable criteria, highly novel proposals may be disadvantaged when supporting evidence is difficult to codify, relative to the enthusiasm they generate in individual evaluations. Evidence from adjacent evaluation settings points the same way: selection panels and expert evaluators systematically discount highly novel proposals in R&D project selection and grant review (Boudreau et al., 2016; Criscuolo et al., 2017), and experimental work documents a bias against creative options precisely when uncertainty makes them hard to justify (Mueller et al., 2012). Whether the same penalty arises inside angel groups - where the evaluators are experienced investors selecting with their own money - is an open question that our setting can answer. Individual funding channels, where a single investor's conviction suffices, should show the opposite pattern: a stronger weight on the founding team, for which experienced angels hold private evaluative capacity (Bernstein et al., 2017; Huang & Pearce, 2015), and reduced penalty on novelty.

In Sah and Stiglitz's (1986) framework, while collective screening operates as a hierarchical filter prioritizing Type I error reduction - often at the cost of rejecting viable proposals - the repechage channel injects polyarchival features into the group architecture, allowing parallel individual evaluation to reclaim potential Type II errors. An architecture that keeps rejected proposals visible to individual investors adds a second, independent screen exactly where the first filter's mistakes concentrate. As Section 3 describes, this is the role the repechage channel plays in our setting, and it is what makes the selections of the two channels informative about each filter's logic.

Within this framework, the composition of the founding team is a team-based signal whose evaluation is largely relational, and this extends to the presence of women among the founders. Gender is a socially salient attribute that individual evaluators may weigh - in either direction - through personal heuristics, whereas in a collective setting arguments about founders' gender are difficult to voice as legitimate criteria (Brush et al., 2012; Huang et al., 2021). Whether collective decision-making attenuates or amplifies gendered patterns in funding is therefore an open empirical question, and our setting allows us to observe the same investors' revealed behavior toward female-led teams under both decision regimes.

Empirical evidence comparing how the same pool of investment opportunities is evaluated across organizational layers nonetheless remains scarce. Most studies observe either individual angels or collective outcomes in isolation, and cannot separate what a group decides from what its members would have decided alone (Mason et al., 2017). Our setting tracks the same proposals, and the same evaluators, through both regimes, and the framework developed in this section leads to the two research questions that guide the empirical analysis:

RQ1: *To what extent do collective investment outcomes diverge from individual ones in angel groups, and how does this divergence map into different individual- versus group-level decision criteria?*

RQ2: *Does the transition from individual to collective decision-making reweight evaluation criteria toward more defensible and codified project signals, while reshaping the role of novelty and team-based attributes?*

3. The IBAN evaluation process

The empirical validity of our analysis rests on the organizational architecture of IBAN, whose approximately 180 members include serial entrepreneurs, corporate executives, and professional investors. Deal flow is steady and centralized: entrepreneurs seeking seed or early-stage capital submit their proposals through the IBAN digital platform¹, with a standardized documentation set including executive summary, pitch deck, and preliminary financial projections; over our sample period the committee evaluated on average about eight proposals per month.

The selection process is run by IBAN's internal evaluation committee, a standing body composed of 10 to 20 of the network's members at any point in time (38 distinct members served on it over our sample period, with ordinary turnover). The process unfolds in three stages, summarized in Figure 1; Figure 2 provides a decision-tree representation of the same process, with the venture counts observed in our sample.

[Insert Figures 1 and 2 about here]

3.1 Stage 1: independent evaluation and the monthly shortlist

Each incoming proposal is first evaluated by the committee members individually, through a standardized online form. The form scores the proposal on ten criteria, each on a 1–10 scale: innovativeness and originality of the solution; breadth of the target market; identification of the target user; clarity and concreteness of the value proposition; evidence of competitive advantages; quality of the action plan; clarity and coherence in the planned use of capital; effectiveness in reaching early adopters; clarity of the road map; and strength of the founding team. A final item asks the evaluator to state, on the same scale, how interesting the venture is as an angel investment opportunity. Members complete the form independently and remotely, before any group discussion takes place, thereby isolating baseline individual evaluations from potential social learning, information cascades, or groupthink dynamics that typically contaminate pre-pitch scores. The committee then meets monthly: the top-ranked proposals of the month are actively discussed, and the meeting produces a shortlist, both ranking-based and discussion-based, that is selected for further consideration; in our sample period, the shortlist comprises the three top-ranked proposals of each monthly cohort. The shortlist reflects a capacity-constrained selection of each month's strongest proposals for closer examination, rather than a definitive certification of investment readiness. Crucially, a non-negligible share of discarded ventures subsequently secures funding; as documented below, this empirical feature helps mitigate standard right-censoring and survivorship biases inherent in entrepreneurial selection data.

3.2 Stage 2: live pitch and collective investment decision

The founding teams of shortlisted ventures are invited to present in person to the committee. After these meetings, the committee decides collectively whether to pursue any of the ventures and invest together. This is the stage at which the group's decision logic fully applies: any member advocating an investment must justify the choice in front of peers, and the group commits jointly.

3.3 Stage 3: repechage and individual investment decisions

Proposals discarded by the collective process remain visible to members on the platform. Individual committee members interested in a discarded proposal invite the founding team to a one-to-one meeting and may then invest privately, outside the group's formalized process. Both funding channels therefore involve direct interaction with

¹ See: <https://www.iban.it/proponi-il-tuo-progetto/>

the founders before any commitment: the committee meets the shortlisted teams collectively, and members pursuing rejected proposals meet them individually. This repechage channel institutionalizes the coexistence of collective discipline and individual discretion: by leaving rejected proposals visible, the network preserves room for individual conviction while maintaining the group-level filter. For our purposes, it is the feature that makes the setting a natural laboratory: the same ventures, evaluated by the same investors, can be funded under either a collective or an individual decision regime, and rejection by the group does not remove a venture from observation.

For the empirical analysis, two features of this process are essential. First, the individual criterion scores are recorded before any collective interaction, so they measure individual evaluation uncontaminated by group discussion. Second, deals are tracked in the data whenever a committee member participates in the investment, whether collectively or individually. Third, observed repechage deals are investments by individual committee members - the same investors whose individual evaluations we observe - which is precisely the comparison our research questions require. Consequently, this institutional setup provides an unusually close comparison across decision regimes, holding the pool of ventures and the set of observed committee members largely constant.

4. Data and methodology

4.1 Dataset

Our dataset covers all 450 ventures that sought angel investment through IBAN between September 2020 and July 2025 (for related settings see Bonini et al., 2018, 2019). For each venture we observe the individual evaluation forms submitted by committee members, the monthly ranking outcome, and the funding outcome through either channel. The unit of observation is the individual evaluation form: one evaluator's scoring of one venture. The 450 ventures received 4,884 such evaluations from the 38 committee members active over the period - on average 10.9 evaluations per venture (median 11, ranging from 1 to 21), with each evaluator scoring between 11 and 426 ventures depending on tenure. When the same evaluator scored the same venture more than once (70 cases, typically proposals resubmitted in a later monthly cohort), we keep the most recent evaluation; since forms are always completed for a cohort ahead of that cohort's meeting, the retained evaluations preserve the pre-discussion property described in Section 3.

Of the 450 ventures, 157 passed the monthly screening stage. 60 ventures (13.3% of the sample) were funded by the group following the collective process, while 41 (9.1%) were funded by individual committee members through repechage after collective rejection. The implied group-level rejection rate of 86.7% is in line with prior evidence on angel groups (Croce et al., 2017; Mason et al., 2016).

4.2 Variables

The dependent variable in the funnel-level analysis is a categorical variable (*Outcome*) that tracks each proposal's path through the process. It equals 0 if the venture did not pass the screening stage and was not funded (the baseline category), 1 if it passed the screening stage and proceeded to the collective evaluation, 2 if it was funded by the group following the collective process, and 3 if it did not pass the screening stage but was subsequently funded by individual committee members. Passing the screening corresponds to the committee's monthly shortlist described in Section 3: in our sample period, the shortlisted proposals are the three top-ranked proposals of each monthly cohort by mean total evaluation score, and we measure the screening outcome accordingly.

The independent variables capture, first, attributes of the proposal that are documented, externally verifiable, and comparable across projects - the kind of evidence that is easily mobilized in collective discussion. *Prototype* equals 1 if the venture has developed a prototype, and *Patent* equals 1 if it has registered a patent. *Financial projections* counts the years of financial projections included in the business plan or other documents attached to the proposal, complemented by a dummy (*No projections*) equal to 1 for the 126 ventures whose proposals contain no financial projections at all, since the absence of a codified signal is informative in its own right; projection horizons beyond ten years are rare (five evaluations, with a maximum of twenty years), and capping the variable at ten leaves the estimates unchanged. *Advisor* equals 1 if the project has an external advisor at the time of submission, that is, an

individual outside the core founding team - typically an academic or industry expert - whose recognized standing lends legitimacy to the project or its technology. Although the advisor is relational in origin, it is a documented and verifiable affiliation stated in the proposal and therefore functions as a codified attribute in collective discussion; its behavior in the results, positive in both regimes, is consistent with this dual nature.

A second set of variables describes the people behind the project, whose evaluation is largely relational: *Women*, the share of women among founding team members, and *Founding team size*, the number of team members.

The criterion-level analysis relies on the ten scores of the evaluation form as recorded on each individual evaluation, together with the evaluator's stated overall investment interest. The investment-interest item was collected systematically from 2023 onward and is available for all 3,080 evaluations of the 2023–2025 period.

For the decisions taken by individuals - the initial independent evaluations and the repechage investments - we further control for the characteristics of the evaluating BAs: investment experience (*Experience BA*, equal to 1 for evaluators with more than ten companies in portfolio), personal wealth (*Wealth BA*, equal to 1 for evaluators in the two highest net-worth brackets, 2–5 and 5–10 million euros, the latter being the top bracket in the data), age (in logarithm), gender (*Male BA*), professional background (*Entrepreneur BA*, *Manager BA*, *Consultant BA*), and education (*STEM degree BA*, *MBA BA*). Part of the analysis also controls for the capital requested by the entrepreneurs (*Target capital*); the request is not stated in all proposals, and for ventures that neither passed the screening nor obtained funding, missing requests are recorded as zero, so the corresponding models are reported as robustness in a separate specification. All funnel-level models include industry, region, and cohort-year controls. Table 1 reports definitions and summary statistics for all variables.

[Insert Table 1 about here]

4.3 Empirical strategy

Given the sequential nature of the investment process, we address RQ1 by modeling the venture-level outcome with a sequential logit (Agresti, 2002; Buis, 2007) whose decision tree mirrors the institutional sequence: a venture first passes or fails the monthly screening; conditional on failing, it may be funded individually through repechage; conditional on passing, it may be funded by the group. All three transition probabilities are therefore conditional on reaching the corresponding node, and their marginal effects are directly comparable across transitions (Buis, 2011). Evaluator characteristics enter the transitions governed by individual judgment (screening evaluations and repechage funding) but not the collective funding transition, which reflects the joint decision of the group. Because both funding decisions - collective and individual - are taken after a meeting with the founding team (see Section 3), the comparison between the two channels makes the decision regime more directly observable, while keeping the information environment more comparable than in standard archival settings. Because funding outcomes and project covariates are constant within venture, the informative variation for these models is across the 450 ventures; we therefore cluster standard errors at the venture level throughout, which is the conservative choice, and Section 5.4 reports evaluator-level clustering and score wild-cluster bootstrap over the 38 evaluators as robustness, together with alternative estimators (multinomial logit and inverse probability weighting, IPW).

To address RQ2, the rubric scores allow us to measure the reweighting directly rather than through project-level proxies alone. We first estimate which criteria drive an evaluator's stated investment interest, regressing the standardized investment-interest score on the ten standardized criterion scores with evaluator fixed effects (absorbing individual scoring styles) and venture fixed effects (comparing evaluators of the same venture), and clustering standard errors by evaluator and venture. Because interest and criterion scores are stated by the same rater on the same form, these estimates describe the structure of individual evaluations - which dimensions covary with an evaluator's overall judgment- rather than causal effects of the criteria, and we interpret them accordingly. We then estimate which criteria drive the two discretionary funding decisions at the venture level, with a logit of collective funding among ventures that passed the screening and a logit of repechage funding among rejected ventures, both on the standardized venture-mean criterion scores. Because the monthly shortlist tracks the ranking on the total score, the screening stage largely reflects the rubric itself; the informative comparison is therefore between the criteria that move individual interest and the criteria that move the two funding decisions. We compare

coefficients across the two funding models using seemingly unrelated estimation. To address potential small-sample bias and alternative explanations, we additionally apply penalized (Firth) estimation, test the disagreement-based mechanism directly, and re-estimate the specifications on period-matched subsamples.

5. Results

5.1 Descriptive evidence

Table 2 reports the number of ventures reaching each stage of the process, by year. The investment rate following screening peaks in 2020, the first year of the formalized evaluation process, declines thereafter, and recovers in the most recent years; the repechage rate is comparatively stable (2025 covers investments only through July).

[Insert Table 2 about here]

Table 3 reports the distribution of the sample by industry and geographical area. Information technology is the leading industry (24.9%), followed by biotech, pharma and healthcare (21.3%), services (11.8%), consumer goods (11.1%), and food (10.7%). Most ventures (68.7%) are based in Northern Italy and 6.4% abroad, in line with Italian reports on angel investing and venture capital activity².

[Insert Table 3 about here]

Table 4 compares project and team characteristics across outcomes. Ventures that pass the screening differ from rejected ones in the expected direction on every dimension listed: they are more likely to have a prototype and a patent, carry more developed financial projections, involve external advisors more often, and have larger founding teams and a higher share of women. More interesting are the two funded groups. Compared with ventures funded collectively, ventures funded individually through repechage display markedly lower levels of prototypes, patents, financial projections, and advisor involvement - the codified attributes - while the share of women is comparable and team size is smaller.

[Insert Table 4 about here]

Table 5 takes a first look inside the evaluations themselves, reporting the mean rubric scores by outcome. Scores rise monotonically along the funnel on every criterion, as expected given that the shortlist is score-based. The comparison between the two funded groups is again the informative one: ventures funded collectively outscore repechage ventures on every criterion, with the widest gaps on the execution-related dimensions (road map, 1.27 points; action plan, 1.20) and the narrowest on innovativeness (0.76) and market breadth (0.79). Repechage ventures, for their part, score markedly higher on team strength than the rejected pool they come from (5.12 versus 3.57, the largest of the ten gaps between those two groups), and individual evaluators' stated investment interest in repechage ventures (3.67) clearly exceeds that in the rejected pool (2.65): ventures rescued individually had already attracted above-average individual interest at the evaluation stage.

[Insert Table 5 about here]

5.2 Main models

Table 6 presents the sequential logit results as average marginal effects on the three conditional transition probabilities, estimated on the full sample of 4,884 evaluations of 450 ventures. Column 1 refers to the probability of passing the monthly screening (mean predicted probability 0.35); column 2 to the probability of collective funding conditional on having passed (mean predicted probability 0.42, against a raw venture-level share of $60/157 = 0.38$, the difference reflecting evaluation-level weighting); column 3 to the probability of individual repechage funding conditional on having been rejected (mean predicted probability 0.14, matching the raw share of $41/293$).

² For more information see the IBAN annual report (<https://www.iban.it/category/news/>) and the AIFI VeM report (<https://www.aifi.it/it/venture-capital/>).

Columns 4–6 add the target capital requested by entrepreneurs, which is not stated in all proposals (4,599 evaluations). Standard errors are clustered at the venture level (450 clusters).

[Insert Table 6 about here]

The screening stage (Column 1 of Table 6) - where the outcome varies across all 450 ventures - delivers the following results. Having a prototype raises the probability of passing by 18.2 percentage points, a patent by 11.7 points, an external advisor by 15.7 points, each additional year of financial projections by 4.8 points, and each additional team member by 4.6 points; the share of women is negatively signed but not significant. The two funding transitions (Column 2 and 3 of Table 6) are identified from far fewer ventures and their confidence intervals widen accordingly; we therefore read them jointly with the robustness estimates of Table 9 and, for the criteria themselves, with the venture-level analysis of Section 5.3. With this caveat, the pattern across regimes is consistent: on the collective side, the advisor - a verifiable, documented attribute of the proposal - retains a significant association with collective funding (+14.8 points), and prototypes a marginal one (+16.1 points, $p < 0.10$); on the individual side, repechage funding follows the founding team (+2.2 points per team member, $p < 0.01$) while patents - the most codified signal - are negatively signed and marginally significant (−15.5 points, $p < 0.10$, against a 14-point baseline). The patent asymmetry is confirmed with conventional significance in the multinomial logit and IPW estimates of Table 9, which pool the funding comparisons over larger samples: there, a patent is associated with a 9-to-14-point higher probability of collective funding and an 11-to-19-point lower probability of individual funding, both significant at the 5% level under venture-level clustering in every specification. This contrasting role highlights how patents, as formal technology-transfer signals, serve as primary objective safeguards during collective deliberation, whereas individual angels evaluating rejected proposals rely more heavily on their private assessment of team quality rather than codified IP.

Evaluator characteristics display the complementary asymmetry, and - being evaluator-level variables with genuine within-venture variation - they are estimated more precisely. Essentially none of them predicts the screening outcome - only consultant experience is marginally significant in the baseline, with wealth and consultant experience reaching the 5% level in the target-capital specification - in line with prior evidence on angel groups (Mason et al., 2017). By contrast, wealthier evaluators (+3.6 points), older evaluators (roughly one point per standard deviation of log age), and those with managerial experience in financial institutions (+2.6 points) are associated with a significantly higher conditional probability that rejected ventures are funded individually, while MBA-educated evaluators show a negative association (−4.4 points, $p < 0.10$). Because the funder's identity is not recorded, these coefficients describe the composition of the evaluating panel rather than the individual funder; with that caveat, they indicate that the repechage channel is driven by members with the personal resources and operating experience to back their own judgment against the group's decision.

The share of women in the founding team warrants separate attention, both because gender is a socially salient team attribute and because early-stage gender gaps are a central concern in entrepreneurial finance (Brush et al., 2012; Ewens & Townsend, 2020; Huang et al., 2021). The pattern in our data is an asymmetry between decision regimes. On the collective side, the association is negative in every specification we estimate - −17.9 points in the sequential logit's funding transition, −13.3 points in the multinomial logit, −26.8 points in the inverse-probability-weighted estimates - but its precision varies with the specification: under venture-level clustering it is significant in the IPW model ($p < 0.01$), marginal in the multinomial logit ($p < 0.10$), and not significant in the sequential logit's small funding transition or when passed-but-unfunded ventures are added to the comparison group. On the individual side, the association with repechage funding is small - between −1.2 and +4.9 points across specifications - and never statistically significant. The pattern is therefore one-sided rather than a reversal: the negative association between female founding teams and funding is specific to the collective channel, and does not extend to the individual one. This evidence should not be interpreted as establishing taste-based discrimination or any specific causal mechanism. Rather, we interpret the pattern cautiously and descriptively. It is consistent with the justifiability mechanism operating on an identity-linked team attribute - whatever weight gender carries in individual judgment is reshaped rather than eliminated by the group process - but with 60 collective funding events the data cannot distinguish this account from alternatives, including small-sample variation in the funded groups.

Columns 4, 5 and 6 of Table 6 that report the same models for the sequential logit model, but including the control for target capital, confirm previous results.

Taken together, the funnel-level evidence answers RQ1: collective and individual funding decisions within the same group select systematically different ventures. The divergence is sharpest, and statistically most robust, for patents - rewarded on the collective path and penalized on the individual one - and for the determinants of who rescues: team-rich ventures, picked up by resource-rich evaluating angels. What the funnel-level proxies cannot do, given the venture-level sample sizes, is measure the reweighting of evaluation criteria; that is what we perform with the rubric data analysis.

5.3 Criterion-level evidence

The rubric scores allow us to measure the reweighting directly. Table 7 reports the individual lens: regressions of each evaluator's standardized investment interest on the ten standardized criterion scores over 2023–2025, with evaluator fixed effects (column 1) and evaluator plus venture fixed effects (column 2). The within-venture specification is the most demanding: it asks which criteria explain why one committee member is more positive in the evaluation than colleagues about the same venture.

[Insert Table 7 about here]

Individual investment interest loads most heavily on the strength of the founding team (standardized coefficient 0.175, $p < 0.01$) and the innovativeness of the solution (0.173, $p < 0.01$), followed by the road map (0.154), competitive advantage (0.144), and early-adopter reach (0.126). At the bottom of the ranking, the use-of-capital item (0.005) and the clarity of the value proposition (0.024) are statistically indistinguishable from zero: whatever drives an individual angel's evaluation for a venture, it is not the financial section of the business plan. As noted in Section 4.3, interest and criterion scores come from the same rater and form, so these estimates describe the internal structure of individual evaluations, not causal effects of the criteria. For our purposes the relevant comparison is between the structures of individual and collective evaluation.

Table 8 reports the decision lens: venture-level logits of the two discretionary funding choices on the standardized venture-mean criterion scores - collective funding among the 157 ventures that passed the screening (60 ventures) and repace funding among the 293 rejected ventures (41 ventures) - with average marginal effects alongside. The screening stage is not informative for this comparison, because the shortlist tracks the total-score ranking.

[Insert Table 8 about here]

The collective choice rearranges the individual ordering in two directions. The clarity of the value proposition - not significant in individual evaluations - is positively correlated to collective funding (a one-standard-deviation increase raises the funding probability by 18.2 percentage points, $p < 0.05$). Innovativeness turns significantly negative at the collective level: conditional on the other criteria, a one-standard-deviation more innovative venture is 21.0 percentage points less likely to be funded by the group ($p < 0.05$). This finding is particularly salient for early-stage technology commercialization: radical technological novelty encounters a systematic discount in committee unless translated into a standardized, easily defensible business model. Team strength, by contrast, persists: its marginal effect in the collective model (19.4 points, $p < 0.05$; the logit coefficient is significant at the 10% level) is of the same order as the value proposition's, so the group does not disregard the team - it is the one top-ranked individual criterion that retains weight in committee. In the repace regressions, team strength is the leading and only significant criterion ($p < 0.10$) - individual rescues follow the team.

These estimates survive a battery of small-sample and specification checks. Conditioning on evaluator disagreement - the within-venture standard deviation of total scores, the natural measure of how contested a proposal is - leaves the innovativeness penalty essentially unchanged (-1.12 versus -1.12 in the logit) while disagreement itself does not predict collective funding (coefficient 0.16, $p = 0.52$); a simple aversion to contested, high-variance deals therefore cannot account for the pattern. Firth's penalized logit, appropriate for the modest number of funding events, delivers very similar estimates (innovativeness -1.01, $p < 0.05$; value proposition +0.88,

$p < 0.10$). Restricting the funding models to 2023–2025, the period of the individual-interest data, preserves every sign. Collinearity is not a concern for the coefficients that carry the results (variance inflation factors of 4.1 for innovativeness, 3.3 for the value proposition, and 2.6 for team strength).

Two qualifications are in order. First, the venture-level funding models rest on 60 and 41 funding events respectively; formal cross-model equality tests reject equality for no single criterion at the 5% level (innovativeness comes closest, $p = 0.099$), so the sharp evidence is the contrast between the precisely estimated individual-interest weights (3,080 evaluations) and the collective funding weights, rather than the pairwise comparison of the two small funding models. Second, the collective funding model conditions on having passed the score-based shortlist, so its coefficients describe reweighting among relatively strong proposals; this is the comparison of theoretical interest - it is exactly where the group exercises discretion - but it should not be read as a population-average effect of each criterion.

With these caveats, the criterion-level evidence gives RQ2 a qualified and more precise answer than the question anticipated. The transition from individual to collective decision-making does not uniformly shift weight from team-based to project-based signals - the weight on the founding team persists in committee. What changes is criterion-specific: the collective regime adds weight to the value proposition, the most communicable summary of a business case, and subtracts it from innovativeness, the dimension for which justifying evidence is scarcest. The individual benchmark in Table 7 is, moreover, stated interest: when the same members commit their own money through repechage, their revealed choices reward the team but not innovativeness (Table 8, column 2). Part of this difference plausibly reflects range restriction - repechage choices are made within the rejected pool, whose novelty distribution is compressed - but the asymmetry itself is clear: novelty attracts stated individual interest at the evaluation stage, is not detectably rewarded in individual funding of rejected ventures, and is actively penalized in collective funding among shortlisted ventures. It is the collective penalty, robust to disagreement, to Firth penalization, and to period controls, that distinguishes the group regime.

5.4 Robustness checks

To assess whether the funnel results depend on the sequential structure, Table 9 re-estimates the funding comparisons with a multinomial logit over the three mutually exclusive final outcomes (unfunded, collectively funded, individually funded), with and without evaluator characteristics. Because excluding the 97 passed-but-unfunded ventures from the base category is a choice, a further variant keeps them in it, with very similar results, and the last two columns reweight the two funding regressions by inverse probability of the screening outcome³. Across these specifications the screening-stage results, the team-size association with individual funding, and the evaluator-side pattern carry over, and the opposite-signed association of patents with the two funding channels is significant at the 5% level in all the pooled estimates. The funding-stage coefficients of the projection variables are more sensitive to the specification, and the collective-side gender association varies in precision, though not in sign, as documented in Section 5.2. The criterion-level results of Section 5.3, which rest on their own checks, are unaffected.

[Insert Table 9 about here]

A second set of checks concerns inference. The main models cluster standard errors at the venture level, the conservative choice given that funding outcomes vary only across ventures. Clustering instead on the 38 evaluators - the level at which repeated evaluations are correlated - yields considerably smaller standard errors; we treat those as an upper bound on precision and report them in the replication materials (available upon authors' request), together with score wild-cluster bootstrap inference over the evaluator clusters (999 replications), which confirms the evaluator-clustered significance pattern. Multicollinearity is not a concern in the funnel models, with all variance inflation factors below 3 (for the criterion models, see Section 5.3).

³ The screening propensity is estimated with a logit of the screening outcome on the project-based and team-based signals and the industry, region, and year fixed effects; stabilized weights are computed as $w_i = \bar{p}/p_i$ for ventures that passed the screening and $w_i = (1 - \bar{p})/(1 - p_i)$ for ventures that did not, where p_i is the predicted passing probability for venture i and $\bar{p}$ is the overall screening rate. The reweighting balances the two funding samples on observables only; it is a sensitivity check, not an identification upgrade over the sequential logit.

Finally, excluding the 2020–2021 cohorts, which cover the start-up phase of the formalized process and the pandemic period, leaves the estimates consistent with the main results. As of July 2025, none of the 101 funded ventures has been written off, so a comparison of ex-post performance across the two funding channels is not yet possible; most deals are of 2022–2025 vintage and outcomes are heavily right-censored. The analysis therefore characterizes how the two decision regimes select, not which selects better.

6. Discussion and conclusions

6.1 Theoretical implications

This study opens the internal decision process of an organized angel group to direct observation. By tracking 450 ventures evaluated by the same committee members across individual and collective stages, we document systematic differences in the weights associated with evaluation criteria across the two decision regimes. Individually, angels' investment interest follows the founding team and the innovativeness of the solution, and ignores the planned use of capital and the packaging of the value proposition. Collectively, the same investors fund ventures with clear, well-articulated value propositions and penalize innovativeness, while the weight on the team persists; at the funnel level, patents - the most codified signal - are rewarded on the collective funding path and penalized on the individual one in the pooled estimates. Ventures rescued individually after collective rejection stand out for their teams, and the members who plausibly rescue them are those with the personal wealth and operating experience to act on their own judgment.

The pattern supports an organizational account of how groups decide. What changes is which criteria are mobilized: a collective commitment requires reasons that colleagues can verify and accept (Lerner & Tetlock, 1999), and criteria differ sharply in how well they serve that purpose. The clarity of a value proposition is discussable and comparable across proposals; conviction about a founding team or a novel technology is not. The collective process therefore does not simply reproduce the pattern observed in individual evaluations: it gives greater decision weight to criteria that can be collectively justified, while criteria associated with individual conviction carry less weight in the final funding choice. Its most consequential corollary concerns novelty: because novelty is precisely the attribute for which codified evidence is scarcest, collective filtering penalizes the most innovative proposals relative to the individual investment interest expressed during the evaluation stage. The penalty is not explained by evaluator disagreement, making a simple variance-aversion explanation less consistent with the evidence, and it extends to angel finance, a regularity documented for R&D selection panels and scientific grant review (Boudreau et al., 2016; Criscuolo et al., 2017; Mueller et al., 2012): here the evaluators are experienced investors committing their own capital, and the collective penalty on novelty nonetheless emerges. Professionalization may therefore carry a selection cost: when collective accountability privileges what can be codified and defended, the cost may fall disproportionately on novelty. This potential trade-off is particularly relevant for technology commercialization and early-stage screening, where university spin-offs and science-based ventures operate under extreme technological complexity and severe information asymmetry (Capizzi et al., 2026; Coakley et al., 2025). Early-stage technology ventures rely on institutional mechanisms such as patents and external technical advisors to make highly novel opportunities more understandable and defensible within collective investment processes. However, when screening committees over-index on easily communicable metrics, highly novel technologies may nevertheless be disadvantaged. Angel-group governance therefore becomes a technology-transfer issue: the organizational design of early-stage finance can influence not only which ventures receive capital, but also which forms of technological novelty become investable. Importantly, this pattern should be interpreted within the governance architecture we study. Whether similar dynamics emerge in other angel networks is likely to depend on differences in governance arrangements, sectoral specialization, and the ways technical expertise is incorporated into collective investment decisions. Assessing the generalizability of these findings therefore represents an important avenue for future research.

More broadly, our findings contribute to the literature on angel group organization (Arundale & Mason, 2025; Bonini et al., 2018; Botelho & Mason, 2024; Croce et al., 2017) by identifying what formalized screening does beyond adding rigor, and to research on the financing of new technologies by identifying a channel through which

the institutionalization of informal capital markets (Capizzi et al., 2026; Mason et al., 2016) may tilt early-stage capital allocation toward well-packaged, less novel ventures. It also offers a governance interpretation of the repechage channel itself. The channel adds a second, independent screen exactly where the collective filter's mistakes concentrate (Sah & Stiglitz, 1986): far from being a leak in the group's discipline, it is the institutional safety valve that preserves room for individual conviction - and for the team-rich, less codified ventures our estimates show it rescues - inside a professionalized structure.

6.2 Implications for angel group managers

For those who design and manage angel group processes, the findings carry three practical messages. First, scoring rubrics are not neutral recording devices: the criteria a group codifies are the criteria its collective decisions will weight, and dimensions left to individual judgment will lose traction in committee even when members individually consider them decisive. Groups that wish to keep team quality and novelty in play should give them explicit, discussable form - for instance through structured discussion slots dedicated to the founding team, or a designated member acting as sponsor of high-novelty proposals, charged with articulating the case that individual conviction cannot voice as data. Managers can also establish specialized technology-evaluation subcommittees or leverage academic advisors to translate complex technical novelty into shared, verifiable terms without dampening the underlying innovation. Second, the repechage pattern is informative feedback: ventures that members fund individually after collective rejection reveal systematically what the collective screen underweights - in our data, team strength above all. Monitoring this channel gives managers a running diagnostic on their own filter. Third, the concentration of the negative gender association in the collective regime suggests that collective processes change, rather than remove, the influence of founder demographics; groups committed to unbiased selection should examine both regimes, not only the committee stage.

6.3 Implications for entrepreneurs

For founders, particularly scientific founders and academic entrepreneurs commercializing laboratory breakthroughs, the results give concrete content to the advice that fundraising communication must be staged. The criteria that win an individual champion are not those that survive a committee: individual angels respond to the team and the novelty of the solution, while the collective decision rewards a value proposition that any member can restate and defend, supported by verifiable attributes - prototypes, patents, structured financial projections. Founders should therefore prepare a dual-language case: a relational narrative that builds individual conviction in one-to-one interactions, and a codified version of the same case - clear value proposition, documented traction, coherent capital plan and clear technology transfer benchmarks - for formal collective stages. The asymmetry is sharpest for highly novel ventures, whose founders should anticipate that novelty itself will count against them in committee and compensate with whatever codified evidence the venture's stage allows; where the collective route fails, the individual route remains, and it is reached through the team's credibility. For female-led teams, the observed asymmetry suggests that relying exclusively on the collective route may be particularly risky; cultivating informed individual champions early may help ensure that team quality is voiced and defended during formal stages.

6.4 Policy considerations

Policies supporting the professionalization of angel networks - formal screening committees, standardized evaluation, collective accountability - pursue transparency and rigor, and our evidence confirms that professionalized screening is highly selective and criterion-based. But the same evidence identifies its cost: a systematic penalty on novelty and a reweighting away from the team-based judgment that constitutes much of angels' informational advantage. From a technology transfer policy perspective, this structural discount on novelty suggests that public incentives designed to foster angel investing should avoid rewarding formalization alone; they should also encourage governance features that preserve space for informed individual discretion and high-novelty proposals. The policy implication is not less professionalization but professionalization with safeguards: institutional designs that preserve sanctioned space for individual discretion - of which IBAN's repechage channel is a working example - alongside the collective filter. Networks structured this way retain the legitimacy and

discipline of formal screening while keeping a channel through which unconventional and radically novel technology ventures can still reach capital.

6.5 Limitations and future research

Our results should be read within the scope conditions of the setting. First, the analysis covers a single national network; while IBAN's architecture is what makes the comparison possible, the institutional specifics of other groups - committee size, shortlist rules, the existence of an individual funding channel - will condition how far the magnitudes travel, and replication across networks is a natural next step.

Second, the funding decisions in both channels follow meetings with the founding team, the content of which is not recorded, while the criterion scores predate any interaction with the founders. Unrecorded meeting information can therefore affect the comparison between the two channels only if meetings systematically reveal different information to the committee than to an individual member. The evidence gives no indication of this - repechage decisions track the pre-meeting team scores, and the innovativeness penalty is not explained by evaluator disagreement, the natural marker of proposals whose assessment a meeting would most change - but we cannot rule it out.

Third, the identity of individual funders is not recorded: we know that observed repechage deals involve committee members, but not which ones, so evaluator characteristics in the individual-funding models describe the composition of the evaluating panel rather than the funder. Fourth, funding events involving only network members outside the committee are not tracked, so the unfunded category may include ventures funded elsewhere. Fifth, ours is an observational design: the criterion weights we estimate are associations conditional on the recorded evaluations, and unobserved venture quality may contribute to the funding patterns, although it would need to correlate with the criteria in opposite directions across regimes to produce the asymmetries we document.

Finally, no funded venture has yet been written off, so we cannot assess whether the collective or the individual regime ultimately selects better-performing investments. Our analysis concerns differences in selection logic rather than selection quality: we can conclude only that the two regimes select differently. As outcomes accumulate, the same setting will allow the question that naturally follows this paper: whether the ventures the group's filter discards, and its members rescue, ultimately repay that conviction. Future work could also exploit the technology-transfer texture of the data more finely – for example, by distinguishing academic from industry advisors, or by examining whether patents or broader intellectual property portfolios mitigate the novelty penalty for science-based ventures – questions for which our advisor and patent measures are currently too coarse.

Understanding the interplay between individual judgment and collective process remains essential for decoding how new ventures are selected and how informal capital markets evolve as they organize. This study provides a first criterion-level account of that interplay: groups do not decide as their members do, not because membership changes minds, but because collective decisions answer to a different standard - and entrepreneurs, managers, and policymakers are better served by knowing which standard they face.

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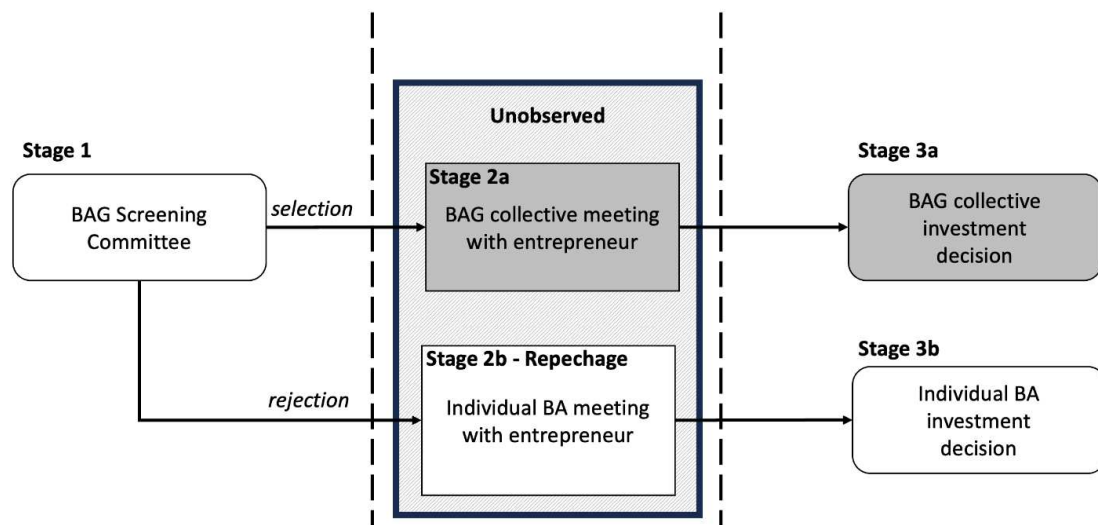
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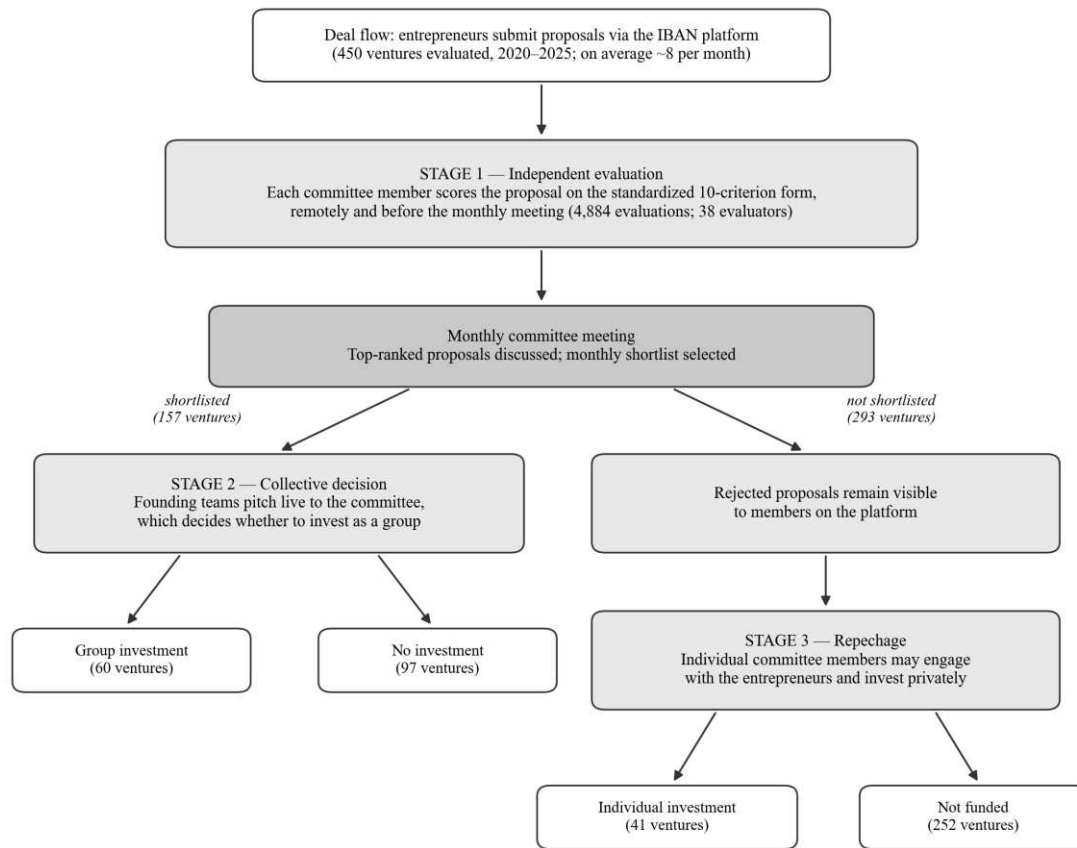
Figures and Tables

Figure 1. The IBAN evaluation and investment process



Note: The figure summarizes the three-stage selection and investment process described in Section 3. Stage 1: the committee’s independent evaluation of incoming proposals and the monthly shortlist. Stage 2a: shortlisted founding teams meet the committee, which decides collectively whether to invest (Stage 3a). Stage 2b: proposals discarded at Stage 1 remain visible to members, and individual committee members may meet the entrepreneurs and invest privately (Stage 3b, repechage). The shaded band marks interactions not recorded in the data. Stages 2a and 3a correspond to the collective channel described in Section 3.2, and Stages 2b and 3b to the repechage channel described in Section 3.3.

Figure 2. Decision-tree representation of the evaluation and investment process



Note: Decision-tree representation of the process in Figure 1, with the venture counts observed in the 2020–2025 sample. Stage 1: committee members evaluate each incoming proposal independently through the standardized online form, before the monthly meeting; the meeting then discusses the top-ranked proposals and selects the monthly shortlist (in the sample period, the three top-ranked proposals by mean total score). Stage 2: shortlisted teams pitch to the committee, which decides whether to invest as a group. Stage 3: rejected proposals remain visible and may be funded by individual committee members (repechage).

Table 1. Variable definitions and summary statistics

Variable	Definition	N	Mean	SD	Min	Median	Max
Outcome	Categorical: 0 = did not pass screening, not funded (baseline); 1 = passed screening; 2 = funded collectively after the collective process; 3 = did not pass screening, subsequently funded individually by committee members (repechage)	4,884	0.936	1.161	0	0	3
Prototype	=1 if the venture has developed a prototype	4,884	0.512	0.500	0	1	1
Patent	=1 if the venture has registered a patent	4,884	0.167	0.373	0	0	1
Financial projections	Years of financial projections in the proposal (0 if none)	4,884	2.812	2.239	0	3	20
No projections	=1 if the proposal contains no financial projections	4,884	0.275	0.446	0	0	1
Women	Share of women among founding team members	4,884	0.194	0.274	0	0	1
Advisor	=1 if the project has one or more external advisors at submission	4,884	0.187	0.390	0	0	1
Founding team size	Number of founding team members (winsorized at 5th/95th pct.)	4,884	4.033	2.708	1	4	10
Experience BA	=1 if the evaluator has more than ten companies in portfolio	4,884	0.153	0.360	0	0	1
Wealth BA	=1 if the evaluator's declared net worth is 2–10 million EUR	4,884	0.269	0.444	0	0	1
Age BA	Age of the evaluator (ln)	4,884	4.005	0.167	3.47	3.99	4.32
Male BA	=1 if the evaluator is male	4,884	0.744	0.437	0	1	1
STEM degree BA	=1 if the evaluator holds a STEM degree	4,884	0.293	0.455	0	0	1
MBA BA	=1 if the evaluator holds an MBA	4,884	0.044	0.205	0	0	1
Entrepreneur BA	=1 if the evaluator has entrepreneurial experience	4,884	0.308	0.462	0	0	1
Manager BA	=1 if the evaluator has experience as a manager in banks, private equity funds, or other financial intermediaries	4,884	0.176	0.381	0	0	1
Consultant BA	=1 if the evaluator has experience as an advisor/consultant	4,884	0.210	0.407	0	0	1
Target capital	Capital requested by the entrepreneurs (millions EUR)	4,599	0.597	1.448	0	0.3	17

Note: The unit of observation is one evaluator's evaluation form for one venture: 4,884 evaluations of 450 ventures by the 38 members of the evaluation committee (mean 10.9 evaluations per venture, median 11, min 1, max 21), September 2020 – July 2025. Evaluator characteristics are measured at the evaluator level and repeated across that evaluator's evaluations. Target capital is not stated in all proposals; for ventures that neither passed the screening nor obtained funding, missing requests are recorded as zero (Section 4.2).

Table 2. Ventures by year and outcome

Year	Rejected, not funded	Funded individually (repechage)	Passed, not funded	Funded collectively	Total
2020	17	1	2	8	28
2021	67	11	27	9	114
2022	43	8	25	4	80
2023	68	12	19	14	113
2024	41	8	13	17	79
2025	16	1	11	8	36
Total	252	41	97	60	450

Note: Venture-level counts by submission-cohort year. “Passed, not funded” ventures cleared the monthly screening shortlist but were not funded by the group. 2025 covers submissions and investments through July.

Table 3. Industry and geographical distribution

Industry	% of ventures	Macro-area	% of ventures
Information technology	24.9	North	68.7
Biotech, pharma and healthcare	21.3	Center	13.6
Services	11.8	South and islands	11.3
Consumer goods	11.1	Abroad	6.4
Food	10.7		
Other industries	20.2		

Note: Venture-level distribution (N = 450). Industry classification follows the IBAN platform taxonomy, harmonized as described in the replication materials.

Table 4. Project and team characteristics by outcome

	Rejected, not funded	Funded individually (repechage)	Passed, not funded	Funded collectively	Total
Prototype	0.363 (0.481)	0.610 (0.488)	0.677 (0.468)	0.796 (0.403)	0.512 (0.500)
Patent	0.122 (0.328)	0.083 (0.276)	0.211 (0.408)	0.325 (0.469)	0.167 (0.373)
Financial projections	2.418 (2.287)	2.245 (1.994)	3.403 (1.935)	3.842 (2.064)	2.812 (2.239)
No projections	0.350 (0.477)	0.328 (0.470)	0.168 (0.374)	0.103 (0.305)	0.275 (0.446)
Women	0.167 (0.283)	0.211 (0.255)	0.245 (0.259)	0.217 (0.257)	0.194 (0.274)
Advisor	0.082 (0.274)	0.219 (0.414)	0.265 (0.442)	0.458 (0.499)	0.187 (0.390)
Founding team size	2.994 (2.341)	4.670 (2.378)	5.523 (2.807)	5.557 (2.216)	4.033 (2.708)

Note: Means with standard deviations in parentheses, at the evaluation level (N = 4,884). Because outcomes and project characteristics are constant within venture, formal comparisons across outcome groups are conducted at the venture level in the regression analyses of Sections 5.2 and 5.3; this table is descriptive.

Table 5. Evaluation-form criterion scores by outcome

Criterion (1–10)	Rejected, not funded	Funded individually (repechage)	Passed, not funded	Funded collectively	Total
Innovativeness	4.25 (2.30)	5.15 (2.19)	5.79 (2.09)	5.91 (1.99)	4.89 (2.33)
Market breadth	4.94 (2.44)	5.85 (2.20)	6.40 (2.10)	6.64 (1.89)	5.57 (2.39)
Target user	4.24 (2.34)	5.20 (2.38)	5.88 (2.24)	6.24 (2.16)	4.95 (2.45)
Value proposition	5.12 (2.28)	6.21 (2.20)	6.70 (2.01)	7.11 (1.92)	5.83 (2.32)
Competitive advantage	3.68 (2.21)	4.69 (2.30)	5.41 (2.15)	5.70 (2.04)	4.42 (2.35)
Action plan	3.10 (2.02)	4.16 (2.21)	4.92 (2.13)	5.36 (2.06)	3.90 (2.27)
Use of capital	3.95 (2.09)	4.99 (2.18)	5.72 (2.12)	6.07 (2.16)	4.71 (2.30)
Early adopters	3.09 (1.98)	4.15 (2.30)	4.85 (2.12)	5.23 (2.07)	3.86 (2.24)
Road map	3.08 (2.05)	4.17 (2.33)	4.96 (2.21)	5.44 (2.21)	3.90 (2.35)
Team strength	3.57 (2.25)	5.12 (2.24)	5.70 (2.09)	6.22 (1.92)	4.53 (2.44)
Investment interest (final scored item)	2.65 (1.85)	3.67 (2.09)	4.32 (2.15)	5.06 (2.06)	3.47 (2.20)

Note: Mean scores with standard deviations in parentheses, at the evaluation level. The ten criteria are the scored items of the committee's standardized evaluation form (Section 3) and are available for all 4,884 evaluations; investment interest - the form's final scored item, the evaluator's overall assessment of the venture as an angel investment opportunity - was collected systematically from 2023 (N = 3,080 evaluations).

Table 6. Sequential logit: average marginal effects on the conditional transition probabilities

	(1) Pass screening	(2) Collective funding passed	(3) Individual funding rejected	(4) Pass screening	(5) Collective funding passed	(6) Individual funding rejected
Prototype	0.182*** (0.038)	0.161* (0.084)	0.087 (0.055)	0.160*** (0.038)	0.128 (0.096)	0.081 (0.055)
Patent	0.117** (0.057)	0.101 (0.088)	-0.155* (0.087)	0.109** (0.048)	0.066 (0.101)	-0.048 (0.072)
Financial projections	0.048*** (0.013)	0.014 (0.027)	-0.009 (0.018)	0.050*** (0.012)	-0.009 (0.022)	-0.002 (0.017)
No projections	0.038 (0.073)	-0.043 (0.164)	0.039 (0.085)	0.040 (0.072)	-0.225 (0.138)	-0.028 (0.077)
Women	-0.050 (0.083)	-0.179 (0.142)	0.015 (0.087)	-0.086 (0.069)	-0.134 (0.183)	-0.012 (0.094)
Advisor	0.157*** (0.047)	0.148** (0.066)	0.094 (0.059)	0.182*** (0.044)	0.121 (0.083)	0.084 (0.066)
Founding team size	0.046*** (0.007)	0.004 (0.014)	0.022*** (0.008)	0.045*** (0.007)	-0.009 (0.017)	0.021** (0.008)
Experience BA	0.012 (0.011)	-	0.001 (0.012)	0.011 (0.011)	-	0.008 (0.013)
Wealth BA	0.016 (0.012)	-	0.036*** (0.010)	0.024** (0.012)	-	0.049*** (0.012)
Age BA	0.014 (0.027)	-	0.057** (0.028)	0.024 (0.030)	-	0.094*** (0.034)
Male BA	-0.002 (0.012)	-	0.008 (0.011)	0.007 (0.012)	-	0.018 (0.013)
STEM degree BA	-0.001 (0.007)	-	0.006 (0.007)	-0.006 (0.007)	-	0.003 (0.008)
MBA BA	-0.032 (0.025)	-	-0.044* (0.023)	-0.040 (0.026)	-	-0.075** (0.030)
Entrepreneur BA	0.007 (0.009)	-	0.009 (0.008)	0.015 (0.010)	-	0.019* (0.010)
Manager BA	-0.013 (0.015)	-	0.026** (0.013)	-0.003 (0.016)	-	0.040** (0.017)
Consultant BA	0.013* (0.007)	-	0.008 (0.007)	0.018** (0.007)	-	0.010 (0.009)
Target capital				0.030** (0.014)	-0.014 (0.016)	0.055** (0.022)
Industry, region, and year controls	Yes	Yes	Yes	Yes	Yes	Yes
N (evaluations)	4,884	4,884	4,884	4,599	4,599	4,599
Log-likelihood	-3,947.6	-3,947.6	-3,947.6	-3,678.7	-3,678.7	-3,678.7
Pseudo-R ²	0.294	0.294	0.294	0.269	0.269	0.269
N clusters (ventures)	450	450	450	424	424	424

Note: Average marginal effects on the conditional transition probabilities of the sequential logit (Buis, 2007, 2011), whose decision tree mirrors the institutional sequence: pass/fail the monthly screening; if rejected, individual (repechage) funding or not; if passed, collective funding or not. Columns 1 and 4: probability of passing the monthly screening (mean predicted probability 0.35). Columns 2 and 5: probability of collective funding conditional on having passed (mean predicted probability 0.42; the raw venture-level share is $60/157 = 0.38$, the difference reflecting evaluation-level weighting). Columns 3 and 6: probability of individual (repechage) funding conditional on rejection (mean predicted probability 0.14; raw share $41/293$). The two funding transitions are identified from 157 and 293 ventures respectively. Evaluator characteristics enter only the individually-governed transitions (screening evaluations and repechage; “-” denotes structural exclusion from the collective transition). All models include industry, geographic, and cohort-year controls: columns 1–3 use the full sets of industry and region dummies; columns 4–6 use industry-group

(information technology; biotech, pharma and healthcare) and macro-area (Northern Italy) indicators together with year effects. Standard errors clustered by venture in parentheses. Fit statistics refer to the underlying sequential logit. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 7. The individual lens: criterion weights in evaluators' investment interest

Criterion (standardized)	(1)	(2)
Innovativeness	0.191*** (0.027)	0.173*** (0.027)
Market breadth	0.113*** (0.027)	0.091*** (0.022)
Target user	0.022 (0.025)	0.037 (0.026)
Value proposition	0.024 (0.027)	0.024 (0.023)
Competitive advantage	0.142*** (0.030)	0.144*** (0.028)
Action plan	0.083*** (0.028)	0.097*** (0.027)
Use of capital	−0.007 (0.018)	0.005 (0.019)
Early adopters	0.141*** (0.021)	0.126*** (0.024)
Road map	0.161*** (0.028)	0.154*** (0.030)
Team strength	0.161*** (0.029)	0.175*** (0.031)
Evaluator fixed effects	Yes	Yes
Venture fixed effects	No	Yes
N (evaluations)	3,080	3,080
Within R ²	0.759	0.612

Note: OLS regressions of the standardized investment-interest score (the form's final scored item) on the ten standardized criterion scores, 2023–2025 evaluations. Because interest and criterion scores are stated by the same rater on the same form, the estimates describe the structure of individual evaluations rather than causal effects of the criteria (Section 4.3). Column 2 includes venture fixed effects, identifying the weights from differences among evaluators of the same venture. Standard errors two-way clustered by evaluator and venture in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 8. The decision lens: criterion weights in collective and individual funding choices

Criterion (std., venture mean)	Collective funding passed (logit)	Individual funding rejected (logit)	Collective funding passed (AME)	Individual funding rejected (AME)
Innovativeness	-1.118** (0.512)	0.025 (0.469)	-0.210** (0.092)	0.002 (0.045)
Market breadth	0.175 (0.467)	0.460 (0.402)	0.033 (0.088)	0.044 (0.039)
Target user	0.402 (0.480)	-0.055 (0.629)	0.075 (0.089)	-0.005 (0.061)
Value proposition	0.969** (0.470)	0.649 (0.442)	0.182** (0.085)	0.063 (0.042)
Competitive advantage	-0.283 (0.719)	-0.263 (0.684)	-0.053 (0.135)	-0.025 (0.066)
Action plan	0.777 (0.707)	0.270 (0.936)	0.146 (0.132)	0.026 (0.091)
Use of capital	-0.393 (0.438)	0.484 (0.391)	-0.074 (0.082)	0.047 (0.037)
Early adopters	-0.022 (0.530)	0.565 (0.648)	-0.004 (0.099)	0.055 (0.061)
Road map	0.198 (0.663)	-0.895 (0.913)	0.037 (0.124)	-0.087 (0.088)
Team strength	1.035* (0.542)	0.869* (0.511)	0.194** (0.096)	0.084* (0.048)
Period controls	Yes	Yes		
N (ventures)	157	293	157	293
Funding events	60	41	60	41
Log-likelihood	-86.7	-92.1		

Note: Venture-level logit regressions of the two discretionary funding decisions on the venture-mean criterion scores, standardized once across all 450 ventures so that coefficients are comparable across columns. Column 1: collective funding among ventures that passed the screening. Column 2: individual (repechage) funding among rejected ventures. Columns 3–4 report the corresponding average marginal effects. Period controls are indicators for the 2020–21 and 2022–23 cohorts. Robust standard errors in parentheses. Cross-model equality tests (seemingly unrelated estimation) reject equality of no single criterion at the 5% level (innovativeness: $p = 0.099$). The estimates are robust to conditioning on within-venture evaluator disagreement, to Firth’s penalized likelihood, and to restricting the sample to 2023–2025 (Section 5.3). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 9. Robustness: multinomial logit and inverse probability weighting

	(1) mlogit: collective	(2) mlogit: individual	(3) mlogit: collective (no BA)	(4) mlogit: individual (no BA)	(5) mlogit: collective (full base)	(6) mlogit: individual (full base)	(7) IPW: collective passed	(8) IPW: individual rejected
Prototype	0.167*** (0.037)	0.027 (0.040)	0.167*** (0.037)	0.027 (0.040)	0.126*** (0.036)	0.018 (0.035)	0.151** (0.061)	0.074 (0.054)
Patent	0.138*** (0.046)	-0.147** (0.061)	0.138*** (0.046)	-0.148** (0.061)	0.093** (0.044)	-0.111** (0.047)	0.140** (0.067)	-0.193** (0.082)
Financial projections	0.046*** (0.009)	-0.018 (0.014)	0.046*** (0.009)	-0.018 (0.014)	0.027*** (0.009)	-0.018 (0.012)	0.029 (0.022)	-0.002 (0.018)
No projections	0.052 (0.059)	0.021 (0.067)	0.052 (0.059)	0.022 (0.067)	-0.002 (0.060)	0.004 (0.056)	-0.014 (0.111)	0.083 (0.084)
Women	-0.133* (0.079)	0.031 (0.066)	-0.133* (0.079)	0.032 (0.066)	-0.106 (0.068)	0.010 (0.052)	-0.268*** (0.101)	0.049 (0.083)
Advisor	0.153*** (0.037)	0.031 (0.041)	0.153*** (0.037)	0.031 (0.041)	0.106*** (0.032)	0.023 (0.033)	0.176*** (0.049)	0.061 (0.061)
Founding team size	0.037*** (0.006)	0.011* (0.006)	0.037*** (0.006)	0.011* (0.006)	0.019*** (0.006)	0.005 (0.005)	0.015 (0.011)	0.020*** (0.007)
Experience BA	0.009 (0.011)	-0.001 (0.009)			0.010 (0.010)	-0.000 (0.007)		-0.000 (0.011)
Wealth BA	0.007 (0.010)	0.024*** (0.008)			0.003 (0.010)	0.020*** (0.007)		0.034*** (0.009)
Age BA	0.016 (0.025)	0.040* (0.024)			0.027 (0.023)	0.044** (0.019)		0.049* (0.028)
Male BA	0.007 (0.011)	0.002 (0.009)			0.009 (0.011)	0.007 (0.008)		0.007 (0.010)
STEM degree BA	-0.011** (0.005)	0.007 (0.006)			-0.013** (0.006)	0.001 (0.005)		0.005 (0.007)
MBA BA	0.001 (0.019)	-0.030* (0.017)			0.006 (0.020)	-0.026* (0.015)		-0.040* (0.023)
Entrepreneur BA	-0.001 (0.008)	0.008 (0.007)			0.001 (0.008)	0.008 (0.005)		0.008 (0.008)
Manager BA	-0.003 (0.013)	0.018* (0.010)			0.001 (0.014)	0.020** (0.009)		0.023* (0.012)
Consultant BA	0.008 (0.006)	0.005 (0.005)			0.008 (0.006)	0.005 (0.005)		0.004 (0.007)
Industry, region, year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N (evaluations)	3,889	3,889	3,889	3,889	4,884	4,884	1,711	3,173

Note: Columns 1–4: average marginal effects from multinomial logits over the three mutually exclusive final outcomes (not funded, the base outcome; funded collectively; funded individually), estimated on evaluations of ventures with a final funding outcome (the 97 passed-but-unfunded ventures are excluded so that the base category contains only screening rejections); columns 3–4 omit evaluator characteristics. Columns 5–6 keep the passed-but-unfunded ventures in the base category (full sample). Columns 7–8: average marginal effects from logits weighted by stabilized inverse-probability-of-screening weights, estimated among passed (column 7) and rejected (column 8) ventures; evaluator characteristics enter the individually-governed decision only. Standard errors clustered by venture in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

