



## "Beat the market!" or "Take care of your savings": Can language in bank advertisements influence women's attitudes towards finance? An experimental comparison of different - inclusive - languages to counter the gender gap in finance

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### ABSTRACT

Women tend to invest less than men and are less likely to accumulate wealth over time. Research suggests that financial discourse in the media predominantly targets men (Prast et al., 2018), potentially contributing to gender disparities in investment behaviour. We present two experimental studies conducted in Italy to examine whether modifying financial discourses can enhance women's engagement with investments. Study 1 ( $N = 401$  workers) tested the impact of different types of metaphors (stereotypically masculine vs stereotypically feminine vs neutral) used in financial advertising, on attitudes and intentional behaviours. Study 2 ( $N = 206$  workers) explored the effects of a mixed-inclusive language, using both masculine and feminine metaphors simultaneously. Results indicate that mixed-inclusive communication improves both attitudes and behavioural intentions in women and men.

The gender gap in financial behaviour has attracted growing attention from scholars across various disciplines. Research shows that women are less likely to invest or manage their finances independently or in pursuit of personal goals (Manzi et al., *in review*). Furthermore, they tend to display more negative attitudes towards money and, as result, engage in less effective financial behaviours (e.g. Sesini et al., 2023; Lusardi & Mitchell, 2008).

Women's lower participation in the stock market and preference for less risky portfolio increase their risk of poverty compared to men, making them more vulnerable to financial setbacks throughout their lives. As highlighted by the UN World Social Report (2020) the gender gap in poverty becomes specially pronounced after the age of 65. In later life, financial disadvantage is not only the result lower lifetime earnings but is further compounded by additional expenses, such as disability or caregiving. On average, women live 3.7 years longer than men and are more likely to require care in old age. Consequently, they require greater retirement savings and must ensure financial sustainability over a longer period. Furthermore, women lacking financial independence face a heightened risk of financial abuse (Alkan et al., 2021) and have limited

means to escape from abusive relationships.

It is essential to examine the factors contributing to women's continued disengagement from financial matters and to develop effective interventions aimed at changing their attitudes and improving their financial behaviours.

In this context, Prast and colleagues (2018) demonstrate that financial discourse is gendered as it predominantly relies on masculine metaphors. Building on their findings, we examine the role of communicative processes in finance and investigate whether targeted communication can enhance women's attitudes towards financial markets and increase their intention to invest. We hypothesise that using less masculine metaphorical language in financial advertising can foster more positive attitudes among women and strengthen their investment intentions.

### 1. The gendered nature of attitudes toward financial markets and financial behaviours

Attitudes towards money can be defined as the set of perceptions,

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meanings and values individuals attribute to it (Sesini & Lozza, 2023). In other words, how individuals think about and value money shapes their overall financial attitude. Money management involves a wide range of behaviours related to the use of economic and financial resources, including credit management, financial planning, investing, saving, spending and insurance (Lea et al., 1995; Parrotta & Johnson, 1998). Extensive research has documented gender differences in both financial attitudes and behaviours (Sesini et al., 2023).

Regarding financial attitudes, men are more likely to view money as a symbol of power and prestige (e.g. Furtner et al., 2021; Furtner, 2020; Hanashiro et al., 2004; Lay & Furnham, 2018; Pereira & Coelho, 2019; Watson et al., 2004). They also perceive money as a means of demonstrating achievement, impressing others (Bonsu, 2008; Lemrová et al., 2014; Oleson, 2004; Tumendemberel et al., 2020), and signalling wealth (Tynaliiev & Erdener, 2019). Compared to women, men tend to exhibit a stronger attachment to money, accompanied by stronger desire for more income (Walczak & Pieńkowska-Kamieniecka, 2018) and a higher perceived competence in financial management (Roberts & Sepulveda, 1999).

In contrast, the literature shows that women hold ambivalent attitudes toward money. On one hand, they tend to associate money with negative emotions and are more likely to view it as a source of anxiety and worry (Bandelj et al., 2021; Furnham & Grover, 2019; Furtner et al., 2021; Hayhoe et al., 2012; Oleson, 2004; Pereira & Coelho, 2019; Rimple, 2020; Simanjuntak & Ambar, 2016). Women also frequently express frustration when discussing financial matters (Falahati & Paim, 2012; Tomek et al., 2013). On the other hand, they perceive money as a source of security (Fenton-O'Creevy & Furnham, 2021). Consistently, women tend to be more future-oriented and express greater concern about financial security than men (e.g., Bonsu, 2008; Hanashiro et al., 2004; Lim et al., 2003; Rimple, 2020).

Consequently, the literature also points to gender differences in money management practices and financial behaviour. Women are generally more cautious and more likely to adopt a careful approach to financial decision-making (Hayhoe et al., 2000; 2012; Kadoya & Khan, 2020; Lind et al., 2020), whereas men demonstrate greater adherence to financial practices (e.g. O'Neill & Xiao, 2006). Furthermore, extensive research suggests that men are more likely than women to display confidence in financial matters and to engage in riskier, wealth-expressive behaviours (Bernaola et al., 2021; Furnham & Grover, 2020).

Although the literature has clearly demonstrated gender differences in financial attitudes and behaviours, there is still little evidence on effective interventions to address this disparity.

This study examines communication processes, particularly the language commonly used in financial advertising, as a potential factor contributing to women's disengagement from financial matters. We investigate whether adopting more inclusive language, especially in metaphorical framing, can improve women's attitudes towards financial markets and enhance their behavioural intentions to invest.

## 2. The effects of language and metaphors on the gendering financial matters

Gender is one of the most salient social categories. Individuals are typically classified as male or female based on biological characteristics, and most cultural systems establish distinct social roles and prescriptive expectations according to gender (Maccoby, 1988).

Social psychology holds that gender stereotypes are learned through social context, where individuals internalize cultural prescription and expectations about gender roles (Eagly & Karau, 2002; Eagly & Steffen, 1984; Friedan, 1963). It has also examined the indirect communicative processes through which stereotypical content is transmitted across generations. Particularly through non-verbal cues and implicit meanings embedded in discourse that indirectly transmit gender stereotypes. As Robin Lakoff noted in *Language and Women's Place*, "Language uses us

as much as we use language" (1975, pg. 1). Among the various forms of communication, metaphors are powerful linguistic tools implicated in the transmission of gender stereotypes and prescriptions.

According to Conceptual Metaphor Theory individuals use conceptual metaphors, often unconsciously, to make abstract concepts more tangible and relatable (Conceptual Metaphor Theory, CMT; Lakoff & Johnson, 1980). Metaphors reflect cognition, as people form mental representations of the physical world based on their everyday experiences. For example, people may associate sensations of heat or cold to help them define the concept of friendliness (Williams & Bargh, 2008). In other words, metaphors are useful linguistic devices that reveal how people think about social constructs. They form cognitive representations of the physical world, based on their everyday interactions with it, and use these with concepts of concrete origin (e.g. height, heaviness, warmth) to understand abstract concepts (e.g. power, importance, friendliness; Landau et al., 2010).

Importantly, there is a bidirectional influence between metaphors and concrete concepts: Metaphors, thus abstract concepts, influence the cognitive structure of concrete concepts, just as concrete experiences shape abstract conceptualization (Lakens, Semin & Foroni, 2011; Lee & Schwarz, 2010; 2012). As Hines (2000) proposed, the metaphor of "women as dessert" exemplifies how metaphors reinforce gender stereotypes, framing women as "sweet and desirable" rather than as autonomous individuals.

Studies have shown that gendered metaphorical concepts are acquired at very early stages of life, such as the association of angular shapes with masculinity and rounded shapes with femininity (Bem, 1981). These metaphorical gender associations are pervasive. For example, from birth, boys are often clothed in blue and girls in pink. These colours are metaphorically linked to the gender categories through their perceived qualities, "delicate" shades are associated with femininity, and "strong" colours with masculinity, perpetuating gender stereotypes (Eichstedt et al., 2002).

Advertisers often use metaphorical attributes to signal whether a product is intended primarily for men or women, while manufacturers incorporate these metaphors to make their products more attractive to the targeted gender group. Additionally, studies have shown that the use of gendered metaphors in discourse may influence women's perception of career suitability, either attracting or discouraging them from certain fields. For example, Dragusin (2014) has shown that written medical discourse is characterized by "war" metaphors, which reinforce masculinity within the profession and contribute to women's sense of exclusion from the field.

Building on this research, emerging studies are investigating how language used in the financial context employs metaphors that predominantly invoke dimensions considered masculine (Prast et al., 2018), which may discourage women from engaging with financial matters.

Analysing Dutch financial newspapers, Prast and colleagues (2018) selected articles published during both market crash periods and stable periods to compare the language used by the newspapers. Their study assessed the degree of masculinity in metaphor use within stock market reporting. They found that the financial language predominantly relies on masculine metaphors and concepts, such as "Beat the market", "Build your portfolio", "Dominate the market"; rather than metaphors such as "Sew your portfolio"; "Take care of your interests". Thus, financial discourse is shaped by metaphorical and implicit content that is more familiar to men than to women. These authors propose that gender differences in financial management are the result of stereotypes conveyed through such gendered metaphors in financial discourse, reinforcing the idea that men, and not women, are in charge of managing money and finances. They further hypothesized that changing the language used in financial advertising, particularly by introducing feminine metaphors in this type of communication, could increase the participation of women in the financial market. The present study aims to provide empirical evidence for this unexplored hypothesis.

### 3. The current research

We analyse whether the metaphors contained in promotional messages might influence the attitudes and behavioural intentions of potential female investors.

Specifically, we tested whether changing the metaphors used in financial communication could make the topic of finance - or money management - more accessible to women and whether, as a result of a more 'inclusive' language, they would express a greater intention to invest. The proposed linear model predicts main effects of both the experimental conditions and participants' gender on attitudes toward and interest in financial markets, as well as on behavioural intentions to invest. The experimental conditions - which distinguish participants exposed to male, female, neutral, or mixed metaphors - along with the binary classification of participants' gender, impact their evaluations of financial markets and their investment intentions. Furthermore, the model assumes that the error variance remains constant across all participants, regardless of the experimental condition or gender, ensuring that any variability unexplained by the model is random.

We hypothesize that the use of feminine metaphors or neutral language that does not reinforce the gendered view of finance might enhance women's attitudes and behavioural intention toward financial matters (Hp1).

In Study 1, we tested whether the presentation of promotional messages containing metaphors that recall stereotypically masculine, feminine or neutral language could influence men's and women's attitudes and intentions toward investments. We hypothesized that using neutral language or feminine metaphors would enhance women's positive attitudes and intentions toward investments (Hp2). Additionally, we explored potential fluctuations in men's attitudes and intentions toward investments in response to feminine and neutral metaphors.

In Study 2, we expand on the results of Study 1 and investigate possible effects of a mixed-language condition (i.e. in which both masculine and feminine metaphors were used at the same time) on women's attitudes and behavioural intentions. We hypothesize that male and female participants exposed to mixed language promotional messages would exhibit more positive attitudes and a greater intention to invest than those exposed to promotional messages containing only masculine or feminine metaphors (Hp3). This study aims to identify a practical linguistic strategy to avoid gender-exclusive communication in financial matters.

## 4. Study 1

### 4.1. Materials and methods

**Participants and design.** The data were collected in Italy via an anonymous online survey, using both social network advertising and partial snowball sampling method. In both cases participants were generally informed that the study aimed to investigate effective financial communication, but they were only made aware of the specific objectives at the end of the study, during the debriefing process. The sample size adequacy ( $N = 210$ ) was established by using Power Analysis (Cohen, 1969) and G\*Power Version 3.1.9.7 (Faul et al., 2007). The analysis conducted involved participants to perform an ANOVA using the following parameters - Effect size  $f = 0.25$ ,  $\alpha = 0.05$ , Power = 0.95. We thus collected data from 401 participants. Participants were recruited through the researchers' pool of acquaintances, word of mouth, and online social networks. 58.2 % of participants were women (age  $M = 39.58$ ,  $SD = 14.61$ ), the majority held a high school diploma (54.1 %) and without having conducted studies of an economic nature (only 23.9 % had conducted studies of an economic nature). 95.7 % has a monthly personal income (see Table 1). Participants were randomly assigned to one of the three conditions presented (promotional message with masculine, feminine or neutral metaphors).

**Procedure.** Participants were informed that they would be taking

**Table 1**

Sociodemographic characteristics of the sample (Study 1).

Sociodemographic Variables	
<i>Age</i>	
mean (SD)	39.58 (14.61)
range	17 - 80
<i>Gender, n (%)</i>	
Female	228 (56.9 %)
Male	164 (40.9 %)
<i>Education, n (%)</i>	
Middle school	19 (4.7 %)
High school	217 (54.1 %)
Degree	138 (34.4 %)
Post-graduate	27 (6.7 %)
<i>Type of education, n (%)</i>	
Economic studies	96 (23.9 %)
Non-economics studies	305 (76.1 %)
<i>Main source of income, n (%)</i>	
None	17 (4.2 %)
From self-employment	74 (18.5 %)
From employment	291 (72.6 %)
From pension	6 (1.5 %)
Other	12 (3 %)

part in a study on effective communication in finance, without specifying the true purpose of the study. After providing written consent, participants were asked for key demographic information before being presented with a promotional message. Depending on the assigned condition, the message used language that invoked stereotypically masculine, feminine or neutral metaphors. The promotional messages in the three conditions were developed based on Prast and colleagues (2018) analysis of financial language and with the supervision of a professional expert in inclusive communication and advertising language.

In the masculine metaphors promotional message condition, participants were exposed to phrases such as: "Choose the best competitive solution to increase your wealth over time. Build a portfolio effectively to increase the value of your savings". In the stereotypically feminine promotional message condition, they encountered phrases such as: "Choose the best solution to make your assets grow over time. Sew a tailor-made portfolio for you, to make your savings flourish and grow at their best". In the neutral promotional message condition, no reference was made to the stereotypically gender-associated metaphors: "Choose the most effective solution to grow your wealth over time. Design an ideal investment portfolio for you to best grow your savings".

After reading the promotional message, participants rated their attitudes toward financial markets, including intimidation and perceived threat, using a 10-item scale (Ford & colleagues, 2007; e.g. "Financial markets are full of pitfalls"). Responses were recorded on a Likert scale from 1 (completely disagree) to 5 (completely agree); Cronbach's  $\alpha = 0.83$ .

Next, participants were asked to indicate how much they would invest in investment funds in the coming months ("Indicate how much you would like to invest in investment funds in the coming months"). Responses were recorded 5-point Likert scale (from "Not at all" to "Very much").

Finally, we investigated behavioural intention to invest using a single-item measure "If you had money, would you make financial investments?". Response options were "Yes" = 1, "No" = 0.

At the end of the study, participants received a debriefing revealing the purpose of the study to investigate the attitudes of men and women towards finance, following exposure to promotional messages with manipulated language.

**Data Analysis and Results.** We analyzed the effect of experimental conditions on participants' attitudes using two ANOVAs with post-hoc tests where attitudes were the outcome variables, and the experimental condition and participants' gender were treated as fixed factors. We then included the two-way interaction term between participants' gender and condition. Finally, we controlled for participants' field of

study (whether it was in economics or another discipline) by adding this variable as a fixed effect. We analysed the effect of experimental condition on behavioural intentions using a chi-square ( $X^2$ ) test with gender as a layer variable.

**Intimidation and perceived threat of financial markets.** The ANOVA showed no significant effect of experimental condition, although it revealed a significant main effect of participant gender  $F(1, 385) = 36.582, p < .001, \eta^2 = 0.09$ . As expected, female participants reported higher intimidation toward financial markets ( $M = 3.59, SD = 0.70$ ), compared to male participants ( $M = 3.09, SD = 0.92$ ). The interaction term between gender and conditions was significant  $F(2, 385) = 3.502, p = .03, \eta^2 = 0.02$ . Unexpectedly, Tukey post-hoc test revealed that the experimental condition effect was significant only for male participants. Male participants reported lower intimidation toward financial markets when exposed to the feminine metaphors promotional message ( $M = 2.85, SD = 0.98$ ), compared to when exposed to the masculine metaphors promotional message ( $M = 3.23, SD = 0.84$ ) or neutral ( $M = 3.22, SD = 0.91$ ) see Fig. 1 and Table 2.

When controlling for participants' field of study (economic vs non-economics) we found a significant direct effect of this variable  $F(1, 384) = 9.50, p = .042, \eta^2 = 0.02$ . As expected, participants who had studied economics reported feeling less intimidated by financial markets ( $M = 3.14, SD = 0.90$ ) compared to those who had not ( $M = 3.46, SD = 0.81$ ).

**Intention to invest.** A significant difference in the intention to invest was found among female participants ( $X^2 = 11.816; df = 2; p = .003$ ), but not among male participants (Table 2). Analysing adjusted residuals, we found that female participants were more likely to indicate that they intended to invest when exposed to the feminine metaphors promotional message, compared to when exposed to the masculine metaphors promotional message or neutral. Thus, in line with our hypothesis, feminine metaphors seem to improve women's behavioural intentions to invest.

The results of this first study confirmed what has been proposed by Prast and colleagues (2018) that stereotypically feminine language enhances women's behavioural intentions to invest. Neutral language did not increase women's behavioural intentions to invest in financial markets. Stereotypically feminine language may strengthen women's sense of identification, thereby facilitating behavioural change. It has already been demonstrated in other fields of research (e.g. blood donation, aerobic classes, attending sport events) that when one's identity is salient, it fosters people's participation in certain activities (Rise et al., 2010). This finding aligns with previous literature showing a positive link between gender identity and consumer behaviours (Palan, 2001) Neutral language, being *gender* probably fails to activate the gender identification necessary to foster behavioural change in women. Overall, neutral language appears to be ineffective, particularly in contexts where gender dynamics play a central role.

Unexpectedly, we found that feminine metaphors have a positive

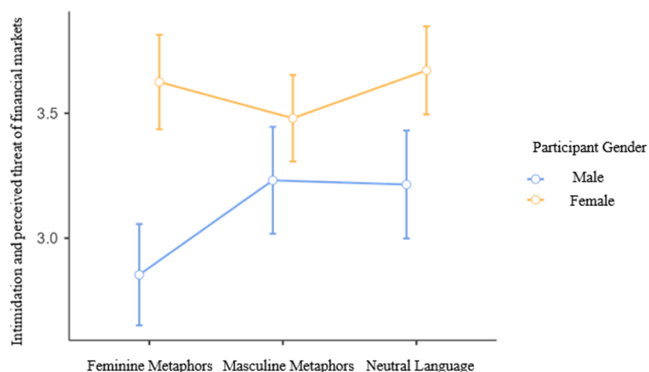


Fig. 1. Means and significant differences for the main variables by condition;  $p = .02$  (Study 1).

Table 2 Results analysis of variance and chi-square (Study 1).

Predictors	Intimidation		
	$F(df)$	$p$	$\eta^2$
Condition	2.094(2.385)	.125	.011
Gender	36.58(1.385)	< 0.001	.09
Gender*	3.502(2.385)	.03	.02

Predictors	Gender	Intention to invest		
		$X^2 (N)$ Yes	$X^2 (N)$ No	$p$ -value
Feminine	Female	52	16	.003
Masculine	Female	50	32	
Neutral	Female	38	40	

Condition	Gender	Intention to invest		
		$X^2 (N)$ Yes	$X^2 (N)$ No	$p$ -value
Feminine	Male	43	16	.44
Masculine	Male	36	17	
Neutral	Male	32	20	

Note: Feminine = Feminine Metaphors promotional message; Masculine = Masculine Metaphors promotional message; Neutral = Neutral Metaphors promotional message.

impact on men's attitudes, but not on women's. Indeed, feminine language, stereotypically associated with warmth, may have fostered a sense of ease for men, thereby enhancing their positive attitudes. Conversely, for women, these metaphors may be so typical that they merely reinforce pre-existing associations, thus having a limited effect on their attitudes.

Based on these findings, we could suggest using the stereotypically feminine promotional message to increase women's participation in the financial market. However, this approach would reinforce gender stereotypical communication and beliefs. We designed a second experiment to replicate the findings of Study 1 while testing a strategy that would mitigate the effects of gender stereotypes in language, and, in this case financial communication. This would allow us to find a more effective way to increase women's participation in the financial market without reinforcing gender stereotypes in communication. Given the lack of a significant effect on attitudes in Study 1's findings, we also introduced a new measure of attitudes in Study 2 that assesses positive aspects, such as interest, rather than negative ones, such as intimidation. Finally, in Study 2, we assessed behavioural intention using a Likert scale.

## 5. Study 2

### 5.1. Materials and methods

**Participants and design.** The design and procedure were similar to those of Study 1, but the neutral language scenario was replaced with a mixed-language scenario. We collected data from 206 participants (46.5 % women; age  $M = 34.50, SD = 8.85$ ) using the Prolific platform, which facilitated the selection of a pool of users voluntarily registered on the platform based on specific demographic characteristics. Prolific has been recognized as one of the most reliable platforms offering high-quality respondent samples (Douglas et al. 2023; Peer et al., 2022). We specifically requested Prolific to select an Italian user base, as Study 2 was also conducted in Italy. Participants were presented with a questionnaire constructed via the Qualtrics platform which randomly distributed the experimental conditions presented (promotional message with masculine, feminine or mixed metaphors). The sample size adequacy was established by using sensitivity analysis through G\*Power Version 3.1.9.7 (Faul et al., 2007).

The majority of participants held a graduate-level education (51 %), and most of them had not studied economics or a related field (79.7 %). Most participants had a personal monthly income (87.1 %, see Table 3).

**Procedure.** Participants were informed that they would be taking

**Table 3**  
Sociodemographic characteristics of the sample (Study 2).

Sociodemographic Variables	
<b>Age</b>	
mean (SD)	34.63 (8.93)
range	25 - 65
<b>Gender, n (%)</b>	
Female	98 (47.6 %)
Male	108 (52.4 %)
<b>Education, n (%)</b>	
Middle school	1 (0.5 %)
High school	64 (31.1 %)
Degree	105 (51 %)
Post-graduate	36 (17.5 %)
<b>Type of education, n (%)</b>	
Economic studies	44 (21.4 %)
Non-economics studies	162 (78.6 %)
<b>Main source of income, n (%)</b>	
None	27 (13.1 %)
From self-employment	42 (20.4 %)
From employment	121 (58.7 %)
From pension	2 (1 %)
Other	14 (6.8 %)

part in a study on effective communication in finance. After providing written consent to take part in the research, participants were asked for key demographic information and were then presented with a promotional message. Depending on the assigned condition, the message used language that invoked stereotypically masculine, feminine or mixed-gender metaphors.

The stereotypically masculine and feminine promotional messages were identical to those used in Study 1. However, the mixed promotional message included sentences such as: "Choose the best competitive solution to make your earnings grow over time. Build a tailor-made portfolio for you, to make your savings flourish by increasing their value".

After reading the promotional message, participants rated their attitudes towards financial markets through the same scale used in Study 1 (the intimidation and perceived threat of financial markets by Ford & colleagues, 2007; Cronbach's  $\alpha = 0.86$ ). Additionally, we added an 8-item scale by Farrell and colleagues (2016) to assess interest in financial markets (e.g. "I am interested in how financial markets work") on a Likert scale ranging from 1 (completely disagree) to 5 (completely agree; Cronbach's  $\alpha = 0.81$ ).

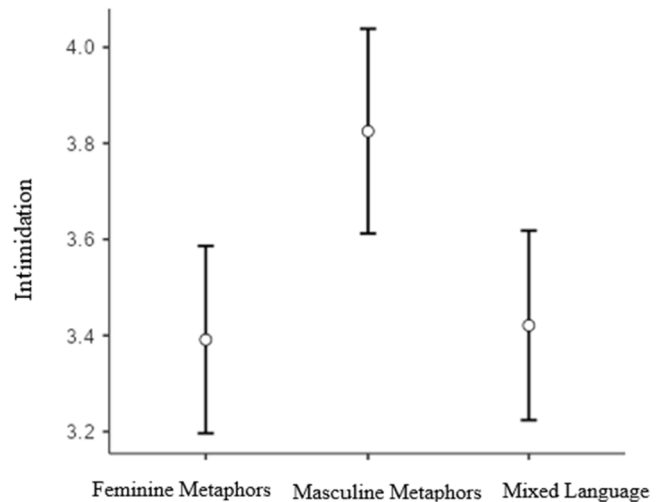
Finally, participants indicated how much they would invest in investment funds in the coming months ("Indicate how much you would like to invest in investment funds in the coming months"). Participants had to indicate their intention to invest on a 5-point Likert scale (from "Not at all" to "Very much").

As in Study 1, at the end of the study, the participants received a debriefing revealing the purpose of the study to investigate the attitudes of men and women towards finance, following promotional messages with manipulated language.

**Data analysis and results.** We conducted an analysis of variance (ANOVA) with the same procedure as in Study 1.

**Intimidation and perceived threat of financial markets.** The ANOVA revealed significant effects of participant gender  $F(1, 200) = 31.97, p < .001, \eta^2 = 0.14$ . As in Study 1, the results showed, that females' participants ( $M = 2.16, SD = 0.79$ ) reported less positive attitudes toward financial markets compared to male participants ( $M = 2.81, SD = 0.89$ ). The ANOVA also revealed significant effects of experimental condition  $F(2, 200) = 3.72, p = .03, \eta^2 = 0.04$  (Fig. 2). However, post-hoc Tukey tests showed no significant differences between experimental groups. The interaction term between gender and condition was not significant. Additionally, controlling for field of study did not alter the observed effect.

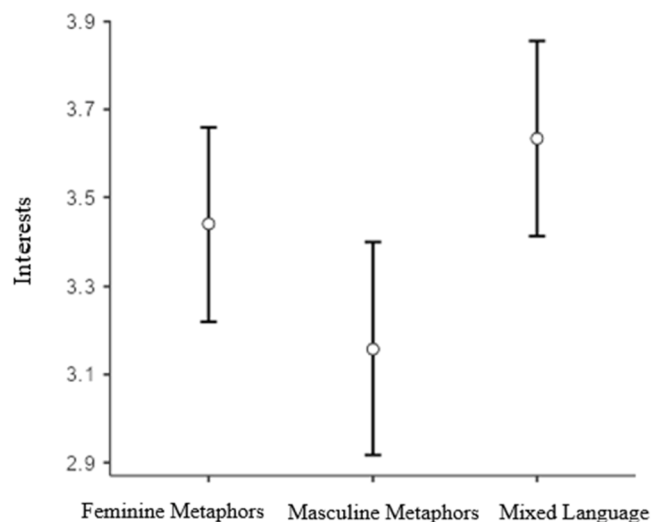
**Interests in financial markets.** The ANOVA again showed significant effects of participant gender  $F(1, 200) = 9.11, p = .003, \eta^2 = 0.04$  with male participants ( $M = 3.64, SD = 0.90$ ) displaying more interest toward



**Fig. 2.** Means and significant differences for the variable Intimidation and perceived threat of financial markets considering the main effect of the experimental condition;  $p = .003$  (Study 2).

financial matters compared to females ( $M = 3.24, SD = 0.99$ ). The ANOVA also revealed significant effects of experimental condition  $F(2, 200) = 3.13, p < .05, \eta^2 = 0.03$  (Fig. 3). Post-hoc analyses revealed that in the mixed-language condition ( $M = 3.65, SD = 0.84$ ), both male and female participants, reported greater interest in financial markets compared to those in the condition with masculine metaphors ( $M = 3.25, SD = 1.00$ ). The interaction term between gender and condition was not significant. When controlling for field of study we found a significant direct effect of this variable  $F(1, 199) = 10.77, p = .001, \eta^2 = 0.05$  and the above effect of gender and condition remained unvaried.

**Behavioural intention in investing in investment funds.** The ANOVA revealed significant effects of experimental condition  $F(2, 202) = 3.05, p = .05, \eta^2 = 0.03$  (Fig. 4). Post-hoc revealed that participants in the mixed condition ( $M = 3.39, SD = 1.29$ ) significantly differed from those in the masculine metaphors condition ( $M = 2.86, SD = 1.21$ ). We again found a significant effect of participant gender  $F(1, 202) = 10.38, p < .001, \eta^2 = 0.05$ . The results showed that female participants had lower behavioural intention to invest ( $M = 2.83, SD = 1.32$ ) than male participants ( $M = 3.39, SD = 1.18$ ). When controlling for field of study, we



**Fig. 3.** Means and significant differences for the variable Interests in financial markets considering the main effect of the experimental condition;  $p = .018$  (Study 2).

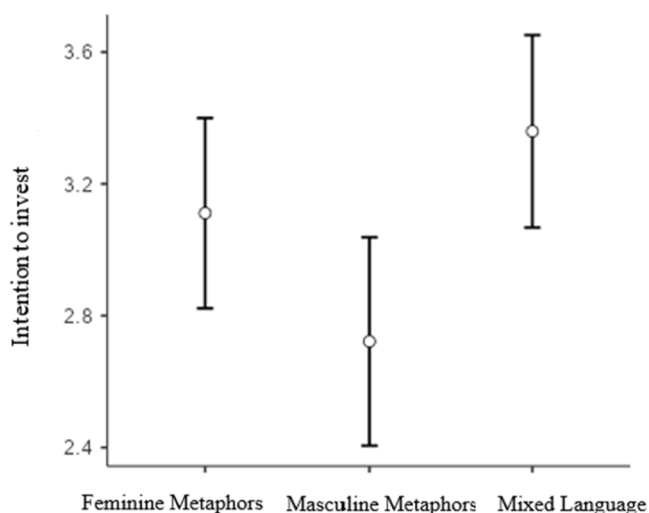


Fig. 4. Means and significant differences for the variable Behavioural intention in investing in investment funds considering the main effect of the experimental condition;  $p = .05$  (Study 2).

found a significant direct effect of this variable  $F(1, 196) = 6.41, p = .01, \eta^2 = 0.03$  and the above effect of gender and condition remained unvaried.

Consistent with our hypothesis, these findings indicate that mixed-inclusive communication enhances both attitudes and behavioural intentions of both women and men (see Table 4).

The results of Study 2 delved into the effects of the language used in financial promotional messages and demonstrated that mixed-language enhances he attitudes and behavioural intentions of both men and women (see Table 5 for a summary of the results of Studies 1 and 2). This approach allows greater identification with gender without becoming exclusionary and achieving a more inclusive effect.

6. Discussion and conclusion

The gender gap in effective money management is a concerning issue, as it heightens the risk of poverty and abuse for women. This study aimed to advance understanding of the factors that may prevent women from effectively managing their assets and to identify effective interventions to close this gap. Specifically, we examined the role of metaphors in bank financial advertising, focusing on their impact within the communication process and building on the work of Prast and colleagues (2018). Metaphors have been shown to have the effect of evoking mental imagery, making individuals imagine themselves engaging in an activity (Briggs, 2022). Thus, metaphors can be effective in influencing the reader if they ‘borrow’ emotional content from something familiar to them or, in the case of activities, they can readily imagine being involved in Briggs, (2022). Since metaphors used in financial discourses often invoke dimensions of masculinity (Prast et al., 2018), we tested the hypothesis that modifying the metaphors in bank financial investment advertisements (in a feminine or neutral form - Study 1- or in a feminine and mixed form - Study 2) should benefit women’s attitudes and behavioural intentions towards financial

investment.

The results of Study 1 partially confirmed our hypothesis and, showing that while feminine metaphors increased women’s investment intentions, they did not improve their attitudes. To further investigate these findings, we conducted a second study, incorporating a new measure of attitudes and introducing a less gendered communication option: a mixed-language form which combined both masculine and feminine metaphors. The findings of Study 2 were notable, as the mixed-language form was found to increase both men’s and women’s attitudes and behavioural intentions towards financial markets. These results raise several considerations.

Firstly, it seems that the use of biased masculine language is not only inappropriate when addressing women, but also when addressing a male target group. In fact, men also seem to take a more favourable position toward investment when exposed to mixed-language. This finding aligns with other studies showing that men also benefit from the use of gender-fair language forms (Manzi et al., in review). Another notable finding is that the use of neutral forms does not appear to have a positive effect. Consistent with the studies by Martin and Mason (2022), we can hypothesise that excessively neutral language is depersonalised and therefore ineffective in terms of communication.

Although the neutral condition was designed to avoid masculine connotations and offer a more inclusive framing, its failure to increase women’s investment intentions may indicate that neutrality alone is not sufficient to counteract the impact of gendered financial discourse. As discussed by Eckert and McConnell-Ginet (2013), neutral language often operates within systems that are already implicitly gendered and thus may preserve the status quo rather than challenge it. In our context, this could mean that participants—particularly women—did not perceive the neutral message as fundamentally different from conventional financial communication, which tends to align with male norms.

Furthermore, neutral language may lack the gender identity salience required to produce a meaningful shift in attitudes. Without cues that affirm the relevance of investing to one’s identity, neutral language might be perceived as impersonal or detached. Research on gender-fair and inclusive language suggests that gender identity salience is a key factor in shifting attitudes and intentions (Manzi et al. 2025; Stahlberg et al., 2007).”

Another possible explanation, consistent with the study by Lindqvist and colleagues (2019), is that the neutral language may evoke a more masculine than feminine association in the reader. On the other hand, mixed-language forms do not reinforce gender stereotypes and are a valuable alternative to gender-biased. Mixed-language forms may also be effective gender minorities, including non-binary individuals. Applying these research findings to gender minorities is an important research objective that warrants further exploration.

Finally, both studies point to a practical approach to engaging women in the financial sector: language and communication. Experimental studies have demonstrated that gender-fair language influences women’s career choices (Chatard et al., 2007); and enhances the perceived accessibility of careers and relative self-efficacy (Vervecken & Hannover, 2015). Gender-fair language reduces perceived disparities in success between men and women in the same occupational role (Vervecken & Hannover, 2015) and increases women’s intention to pursue these positions (Horvath et al., 2016). Existing literature extensively documents the benefits of gender-fair language in encouraging

Table 4 Results analysis of variance (Study 2).

Predictors	Intimidation			Interests			Intention to invest		
	F(df)	p	$\eta^2$	F(df)	p	$\eta^2$	F(df)	p	$\eta^2$
Condition	3.72 (2.200)	0.003	.04	3.13 (2.200)	< 0.05	.03	3.05 (2.202)	0.05	.03
Gender	31.97 (1.200)	< 0.001	.14	9.11 (1.200)	0.003	.04	10.38 (1.202)	< 0.001	.05
Gender* Condition	0.363(2.200)	.70	.004	0.57(2.200)	.57	.006	0.28(2.202)	.75	.003

**Table 5**  
Summary on the results of Studies 1 and 2.

Predictors		Intimidation		
		F(df)	p	η <sup>2</sup>
Condition		2.094(2.385)	.125	.011
Gender		36.58(1.385)	< 0.001	.09
Gender*Condition		3.502(2.385)	.03	.02

Predictors		Intention to invest		
Condition	Gender	X <sup>2</sup> (N) Yes	X <sup>2</sup> (N) No	p-value
Feminine	Female	52	16	.003
Masculine		50	32	
Neutral		38	40	

Condition	Gender	X <sup>2</sup> (N) Yes	X <sup>2</sup> (N) No	p-value
Feminine	Male	43	16	.44
Masculine		36	17	
Neutral		32	20	

Predictors	Intimidation			Interests			Intention to invest		
	F(df)	p	η <sup>2</sup>	F(df)	p	η <sup>2</sup>	F(df)	p	η <sup>2</sup>
Condition	3.72 (2.200)	0.003	.04	3.13 (2.200)	< 0.05	.03	3.05 (2.202)	0.05	.03
Gender	31.97 (1.200)	< 0.001	.14	9.11 (1.200)	0.003	.04	10.38 (1.202)	< 0.001	.05
Gender*									
Condition	0.363(2.200)	.70	.004	0.57(2.200)	.57	.006	0.28(2.202)	.75	.003

women to pursue specific professions. In this study, we have expanded this literature by testing the positive effect not only of gender-fair language, but also of gender-fair metaphors. Applying them to an unexplored field where a significant gender gap urgently calls for effective and immediate intervention.

One limitation of these studies is the cultural context in which they were carried out. Since the reference culture is a key factor in the perception of cultural snapshots. Indeed, cultural norms and values shaping gender roles and financial behaviour can vary considerably across countries. This cultural dimension influences not only individuals' financial attitudes and behaviours but also how language—and its metaphorical content—is interpreted and processed.

Cross-cultural research by Kosakowska-Berezecka and colleagues (2023) indicates that Italy remains one of the few countries where a marked and deeply rooted distinction persists in how men and women perceive their respective gender roles. In particular, Italian women tend to attribute significantly lower levels of agency to themselves compared to men. The prevalence of such traditional gender views (see also ISTAT, 2023; Caricati et al., 2022) may have influenced our results, as Italian participants may have been especially sensitive to gender cues in language.

However, we can also hypothesise that similar findings might emerge in other cultural contexts. As well documented by Eckert and McConnell-Ginet (2013), the use of gendered metaphors is widespread, and Napp's (2023) study shows that gender stereotypes are significantly more pronounced in the language of more economically developed countries. Future research should aim to replicate these findings across a range of countries to assess whether they also hold true in more gender-equitable societies.

Cross-cultural comparisons may also help determine whether gendered metaphors have differential impacts in other cultural contexts and whether the observed relationship between language, financial attitudes, and behavioural intentions is moderated by cultural-level variables.

Sample selection may have introduced bias, as both the snowball method and the Prolific platform can result in a self-selected sample or participants who may not accurately represent the broader population. In addition, the manipulated promotional messages used in the experiments present a further limitation. Specifically, the study relied on a single stimulus for the experimental manipulation; future research should replicate these findings using a broader sampling approach for

the experimental manipulation (Wells & Windschitl, 1999).

Among the limitations of these studies, it should be noted that although we included participants' field of study (i.e., whether they had studied economics) in our analysis, other potential confounding variables were not fully controlled. Specifically, participants' personality traits, overall educational background, and prior investment experience may influence both the comprehension of financial content and the impact of language framing. For example, individuals with previous financial experiences may be less susceptible to metaphorical influence, whereas those with less familiarity with the financial world may rely more heavily on stylistic cues to form impressions. Future research should take these factors, such as prior financial behaviour, into account in order to disentangle the effects of gender from other aspects related to individual differences.

These findings have practical implications beyond academic research. The positive effects of mixed-inclusive language suggest that it may be an effective strategy for fostering financial engagement across genders and should be explored further in behavioural and longitudinal studies. The ineffectiveness of neutral language underscores the importance of identity-relevant communication. However, given the cultural specificity of our findings, effective communication strategies should be carefully calibrated to the particular cultural context in which they are implemented.

Our findings provide concrete guidance to various stakeholders who are motivated to better involve women in more effective money management. In particular, banks and institutions responsible for disseminating financial education should benefit from the results of this study and develop communications that are as gender-balanced as possible. Moreover, this study paves the way for future research. Future studies should explore the effects of stock market metaphors on variables such as return expectations and portfolio choices. Additionally, future research should aim to analyse behavioural changes over time to determine whether these effects are sustainable in the long term. Beyond assessing the effectiveness of mixed or inclusive language for non-binary individuals and other gender minorities, future research could also explore whether inclusive language has a comparable impact on other individual factors, such as age, education level, or family background.

In conclusion, this research not only demonstrates the central role of media narratives on finance but also provides valuable guidance for reducing the gender gap.

## 7. Informed consent

All study participants provided informed consent prior to participation in the study.

## CRedit authorship contribution statement

**Valeria Amata Giannella:** Writing – review & editing, Writing – original draft, Visualization, Validation, Software, Methodology, Investigation, Data curation. **Claudia Manzi:** Writing – original draft, Supervision, Project administration, Investigation, Formal analysis. **Eleonora Crapolicchio:** Writing – original draft. **Henriette Prast:** Writing – original draft, Visualization.

## Declaration of Interest Statement

The author(s) declared no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

## Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.socec.2025.102399.

## Data availability

Data will be made available on request.

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