MASTER THESIS FINANCIAL ECONOMICS

THE ROLE OF POLITICAL PREFERENCES IN CAPITAL MARKET PARTICIPATION

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Abstract

In this paper, I investigate the effect of political preferences, used as a proxy for personal values, on capital market participation among local councilors in a conservative-progressive political dimension and a left-wing–right-wing political dimension. Using the collected survey data of 476 local councillors of CDA, D66, PvdA and VVD, I found that local councillors of PvdA (left-wing political preference) and CDA (conservative political preference) are significantly less likely to participate in the capital market compared with local councillors of VVD (right-wing political preference) and D66 (progressive political preference). These results contribute to the academic literature, as they show that political preferences—and with that, personal values—are an important factor in explaining the limited capital market participation puzzle. From a practical standpoint, a higher capital market participation rate is preferable, as it, among other things, increases economic growth, shareholders' protection, and market completeness. This research shows that the participation rate might increase if more financial products are available that are in line with the personal values of those who currently refuse to participate in the capital market.

Keywords: Capital market participation, Personal values, Political preferences, Local councillors

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1. Introduction

According to Investopedia, investing in the capital market is the most rational thing a person can do. Currently, the interest rate on a savings account is less than 0.5%, and even more dramatic, Triodos Bank announced on 21 March 2017 that it has reduced its saving interest rate to 0%. In addition, currently inflation is about 2.15% in the United States (CPI, 2017) and 1.5% in the Netherlands (CPI, 2017). So, investing is in fact the only option to earn some money instead of losing it, as the S&P 500 has had an average return of around 10% each year since 1928. Nevertheless, only half of all U.S. adults hold stocks, and in the Netherlands 60% have placed their entire wealth in a savings account (Elsevier, 16th of May, 2015). More technical, individual capital market participation is much lower than would be predicted by the Consumption Capital Asset Pricing Model (CCAPM) and other models, given the risk-adjusted expected returns from investment. This phenomenon is called the *limited capital market participation puzzle.* In this paper, I try to solve this puzzle. I investigate whether political colour and with it the personal values of local councillors play a vital role in investing behaviour and could explain this phenomenon. The results show that political colour plays an important role in capital market participation. More specific, local councillors of CDA (conservative) and PvdA (left-wing) are less likely to participate in the capital market than local councillors of D66 (progressive) and VVD (right-wing). Furthermore, for those who invest, local councillors of CDA are more likely to invest indirect than local councillors of D66 and local councillors of PvdA are more likely to invest defensive than local councillors of VVD.

The subject and the results of this research are of value as limited capital market participation, particularly among the wealthy, is one of the great puzzles in financial theory as it appears to be so irrational (Campbell, 2006). Investigating this puzzle is important. Limited capital market participation is meaningful beyond simply the satisfaction of our curiosity. In fact, the limited participation phenomenon has far-reaching economic implications and consequences. As a result, interest in this capital market participant puzzle is not confined only to brokers.

Firstly, the participation rate can have a direct effect on the equity premium and asset prices. An understanding of what drives participation can shed light on the equity premium puzzle (Hong et al., 2004). Furthermore, limited capital market participation may lead to market

incompleteness, which affects the behaviour of asset prices in general (Guvenen and Kuruscu, 2006).

Secondly, not investing in the capital market has been found to result in a loss of welfare. It could decrease annual welfare of the non-investor by up to two percent, at least if the investing would be done efficiently (Haliassos and Bertaut, 1995), (Mankiw and Zeldes, 1991).

Thirdly, extensive privatisation in countries ranging from the financially developed to emerging market economies hinges on developing and maintaining a broad base of stockholders. The sources of the reluctance to hold stocks are relevant for maintaining and renewing this broad base of stockholders (Haliassos and Bertaut, 1995). Related to countries' economies, research by Ake and Dehuan (2010) evinces a positive link between the capital market and economic growth for some countries in which the stock market is liquid and highly active.

Fourthly, Giannetti and Koskinen (2010) showed that portfolio investors' participation in the domestic capital market is positively related to investor protection. Hence, if more people in a given country would participate in the capital market, regulation in the market would likely be enhanced, improving the level of shareholder protection in the country.

Lastly, certain policy debates hinge crucially on one's view of why so many households opt not to participate in the capital market. Consider a proposal that would have the government invest some portion of social security tax proceeds into the stock market. If we assume a frictionless model, the optimal household's standard argument suggests that there is nothing to be gained by having the government invest in the market on their behalf. If we assume that households do not participate in the stock market due to frictional cost, the case for these proposals begins to make logical sense (Hong et al., 2004). In relation to policy debates, market participation also influences distribution effects of proposed rates on capital gains (Haliassos and Bertaut, 1995).

Despite the importance of capital market participation and the fact that Dow Jones Industrial Average recently set a new record, capital market participation is declining over the past few years. According to the Gallup's annual Economy and Personal Finance survey (April, 2016),

only 52% of U.S. adults invested in the stock market in 2016—the lowest percentage recorded in the last 17 years.

In light of the importance of this puzzle, it makes sense that numerous studies have been conducted in this area. Several demographic factors are already identified: Wealth, income, gender and education. However, with only demographic characteristics it has proven to be difficult to distinct investors from non-investors. This challenge has roused the interest of researchers in the field of behavioural finance. Researchers have found that, compared to the people not participating in the capital market, investors have been, among other things, more trusting towards other people and less risk averse. However, researchers tend to agree that, despite of all the behavioural explanations, further unknown barriers exist that make capital market participation undesirable for a substantial part of the population. In this research, I add another explanation to answer the question why such a large proportion of people do not invest.

I argue that it is plausible that investors have a taste for assets as consumption goods. Fama and French (2007) disagree with the assumption that investors choose asset holdings based solely on anticipated payoffs and not on their taste. They argue that such tastes could potentially explain diverse phenomena such as socially responsible investing and home bias in asset holdings. I extend this argument to the level of asset classes and hypothesise that a portion of the public is motivated by personal values to stay out of the capital market. In the 1960s, an investor attitude survey demonstrated that a key factor for low market participation is a 'vague sense of prejudice against the stock market'. This factor can refer to a sense that participating in the capital market is not consistent with one's set of personal values (Kaustia and Torstila, 2011).

Unfortunately, measuring personal values is difficult because they are inherently positive constructs that often result in respondents exhibiting little differentiation among the values; instead, they end-pile their ratings toward the positive end of the scale. Such a lack of differentiation may potentially affect the statistical properties of the values and the ability to detect relationships among other variables. Additionally, personal values are relatively abstract concepts, and therefore their measurement has proven to be a formidable task (McCarty and Shrum, 2000). To conclude, a measure that allows the use of hard field data would be preferable over multidimensional values and attitudes inventories (Kaustia and Torstilla, 2011).

To solve this problem, I use political preference as a measure of values, since political preference has been found to associate strongly with personal values; in other words, political preferences are a solid proxy for personal values (Caprara et al., 2006). For example, consider an individual who has sufficient resources to invest in stocks. Supposing he has left-wing political preferences. In general, he should invest in stocks in order to maximise utility according to standard models. However, he might still not invest if he has anti-capital market attitudes that reflect his personal values and are embodied in his left-wing preferences.

To ensure that the participants have a strong connection with a political party, I choose to investigate local councillors. Non-local councillors may not be closely affiliated with a particular political party. As a result, a sample of those non-local councillors who do not clearly support a political party could create noise, because the connection between political preferences and personal values might be less strong. I have therefore decided to focus on local councillors. This measure allows the use of hard field data. The question which political party the local councillor supports is easy to answer, but it is the result of a long deliberation. As this would indirectly result in well-formed answers related to personal values, the political affiliation of local councillors is arguably a good proxy for personal values and therefore a good proxy for investing behaviour.

The opinion described above—that personal values affect investment behavior, in combination with the supposition that the political party choice of local councillors is a strong proxy for personal values—led to the following research question:
The political party choice of local councillors affects capital market participation. In other words, the party choice of local councillors affects their investment behavior in terms of participation in stock, obligations, and/or funds. More specifically, local councillors who support a conservative political party are less likely to participate in the capital market compared with the local councillors of a progressive political party, and the local councillors of a left-wing party are less likely to participate in the capital market compared with the local councillors of a right-wing party, as the personal values linked to a conservative or left-wing party motivate people to stay out of the capital market. As a follow-up question, I investigated if conservative or left-wing political party choice increases defensive investment behavior, which was measured in terms of relatively more investment in obligations than in stocks, and indirect investment behavior, which was measured in terms of relatively more investment in funds than in obligations and stocks.

Research related to this research question, the role of values in general—and political values in particular—in shaping investments, has been underexplored (Hong and Kostovetsky, 2012). Only two studies of high quality have ever been conducted on political orientation or personal values in relation to investment behaviour. Hong and Kostovetsky (2012) use data on the political contributions and stock holdings of U.S. investment managers. They find that fund managers who make campaign donations to Democrats hold less of their portfolios in companies that are socially irresponsible (e.g., tobacco, guns, or companies with bad employee relations or diversity records) in comparison to their Republican counterparts. However, this research does not focus on capital market participation, but on type of assets hold. Nevertheless, it shows that political colour—and therefore personal values—plays a prominent role in investment behaviour. A more closely related study to the aims of this paper is the research by Kaustia and Torstila (2011). Their study investigates political party identification in relation to capital market participation. This research depicts that a moderate left voter in Finland is 17-20% less likely to own stocks than a moderate right voter. This result is controlled for education, wealth, income, age, and gender. This research demonstrates that investment behaviour and political preferences could be related, however my research still adds significant value to this debate in a number of ways.

Firstly, a study in the context of the Dutch political party preferences and market participation has never been done before. Since Kaustia and Torstila's research solely focused on Finland, the theory is more robustly supported by empirical evidence if the same results are confirmed in another country. Secondly, as my research results in data about the specific political party of the participant and capital market participation, it enables me to investigate capital market participation in relation to political party preferences in a left-wing-right-wing spectrum, but also in a conservative-progressive spectrum. Barnea and Schwartz (1998) argue that ideological components should be divided into those two spectrum, instead of only the left-wing-right-wing spectrum. This broad spectrum analysis is a connection that has never been investigated before, however personal values associated with capital market participation have a clear connection with the conservative-progressive preferences. Thirdly, Kaustia and Torstilla do not control their results for numerous factors (risk aversion, return expectations and trust). This is problematic because all those factors are of high importance in limited capital market participation and political preferences, which could result in cofounding (Grinblatt and Keloharju, 2009; Gollier, 2001). Fourthly, Kaustia and Torstila (2011) ask 'normal' people

about their political preferences. In the current political climate two-third of the voters are floating voters, so people who may not be affiliated with a particular political party. Hence, currently are strong political preferences a scarcity (De Volkskrant, 26 November 2016). As a result, a sample of those voters who do not clearly support a political party creates noise. It is therefore important to study a group with strong political preferences as local councillors. Finally, this study also adds value to the current debate by being the first to investigate the equity allocation of local councillors in terms of defensive and indirect investment behaviour.

To investigate this valuable research question, I collected the data of 476 participants, geographically spread over the Netherlands, who filled out the questionnaire through email. All of the participants were local councillors from the four biggest parties (Cristen-Democratisch Appèl (CDA), Volkspartij voor Vrijheid en Democratie (VVD), Partij van de Arbeid (PvdA), Democraten 66 (D66)) since these four parties almost completely cover the two political spectrums (conservative (CDA)-progressive (D66) and left-wing (PvdA)-right-wing(VVD)) and with that the personal values spectrums.

To answer the research questions, I conducted mean similarity tests to find potential differences between investors and non-investors. This enables me to observe if political party preferences, among other characteristics, result in a significant difference on average between investors and non-investors. Furthermore, I conducted probit regressions to find out if political party, and the personal values that go with it, significantly affects capital market participation. Afterwards, I conduct a subsample analysis to further investigate the factors affecting capital market participation. Lastly, I carried out Ordinary Least Squares (OLS) regressions to answer the hypothesis if political party affects defensive (obligations/stocks) and indirect (funds / (obligations + stocks)) investment behaviour.

Overall, the research question that political preferences play a role in capital market participation can be answered with "yes". More specifically, in the conservative-progressive political dimension, which the political parties of CDA (conservative) and D66 (progressive) represent, the probability that local councillors would participate in the capital market decreased significantly if the local councillors supported CDA instead of D66. Furthermore, CDA local councillors were more likely to invest indirectly but were not more likely to invest defensively. In the left-wing–right-wing political dimension, which the political parties of the PvdA (left-wing) and VVD (right-wing) represent, political support for the PvdA decreased

the probability of capital market participation even more significantly in comparison with the local councillors of VVD. Furthermore, PvdA local councillors were more likely to invest defensively but were not more likely to invest indirectly compared with the local councillors of VVD.

As mentioned before, solving the capital market participation puzzle is valuable. The previously described results showed that political party choice and therewith personal values have a strong impact on capital market participation, especially in the left-wing–right-wing political dimension. This suggests that political party choice is an important additional explanation in the quest to solve the puzzle of limited capital market participation.

The conclusion that political choice and therewith the reasoning that personal values that are embodied political preferences are an important reason why some people stay out of the capital market might have an important practical implication. For example, a capital market product that might appeal to those who refuse to participate in the capital market due to personal values could increase their capital market participation.

The rest of the paper is structured as follows. In Chapter 2, I build a theoretical framework for this study. I will use the famous Schwartz's theory of basic human value to structure the personal values as these are linked with political preferences and investment behaviour. Afterwards, I will go through the existing literature related to this topic. In Chapter 3, I will formulate the hypotheses. Afterwards, in Chapter 4, I will explain the data gathering process and describe the collected data. In Chapter 5 the methodology employed to study the hypotheses will be discussed. Chapter 6 presents the results of the analyses and those outcomes will be discussed. I will conclude briefly in Chapter 7.

2. Theoretical Framework

In this chapter, I will explain the value theory, which will serve as a theoretical framework for the political party choice and investment behaviour. Afterwards, I will discuss the current explanations of the limited participation in the capital market.

2.1 Personal values theory

As mentioned in the introduction, this study considers the effect of political preferences on investment behaviour, because political preferences embody personal values (Caprara et al., 2006). Since personal values play a crucial role in this research, it is essential to further elaborate on personal values. In the next sections, I use the Schwartz's (1992) theory of basic values as the foundation for the disquisition of personal values.

2.1.1 Theory of Basic Values

Values have been a central concept in the social sciences since their inception. They are used to characterise cultural groups, societies, and individuals and to explain the motivational bases of attitudes and behaviour. Application of the values construct in the social sciences during the past century suffered from the absence of an agreed-upon conception of basic values. Besides, a content and structure of relations among these values was missing. In 1992, Schwartz developed his theory of an essentially universal set of values with an invariable content and structure. Schwartz's theory of basic value is used in this paper as a basis for understanding personal values and with that as a foundation for the relationship between political party choice and investment behavior (Schwartz, 2012).

2.1.2 Definition of personal values

To begin, a definition of personal values is needed. According to Schwartz (1992), personal values are desired goals that vary in their importance and function as guiding principles in the lives of people. The type of motivational goal is the primary content that distinguishes between different values. Attitudes, beliefs, traits, and norms are related concepts; however, they all significantly differ from values. Attitudes are evaluations of objects as good or bad, desirable or undesirable. Attitudes can evaluate people, events, behaviour, or any object. Values underpin our attitudes; they are the basis for our evaluations. Beliefs are opinions about how true it is that things are related in particular ways (for example, 'I believe poverty is the origin of all evil'). Traits are tendencies towards consistent patterns of thought, feelings, and actions

across time and situations. However, people who exhibit a trait may not value the corresponding goal and those lacking a trait may value the corresponding goal highly. For example, a person may behave obediently yet not value obedience. Norms are standards or rules that tell members of a group or society how they should behave. Our values affect whether we accept or reject particular norms (Schwartz, 2012).

2.1.3 Nature of values

When we think of our values, we think of what is important to us in life. Each of us holds numerous values at varying degrees of importance. The value theory adopts a conception of value that specifies six main features (Schwartz, 2012):

- ❖ Values are beliefs linked inseparably to affect. When values are activated, they become inculcated with feeling.
- ❖ Values refer to desirable goals that motivate action.
- ❖ Values exceed specific actions and situations.
- ❖ Values serve as standards or criteria. Values guide the selection or evaluation of policies, people, and events.
- ❖ Values are ordered by importance relative to one another.
- ❖ The relative importance of multiple values guides action.

As mentioned before, values are distinguished by the type of goal or motivation that they express. The values theory outlines ten values, which are based on the motivation that causes each of them. Values are likely to be universal because they help humans to cope with one or more of three universal requirements of human existence. These requirements of human existence are:

- ❖ Needs of individuals as biological organisms
- ❖ Fundamentals of coordinated social interaction
- ❖ Survival and welfare needs of groups

Individuals cannot cope successfully with these requirements of human existence on their own. Rather, people must articulate appropriate goals to cope with them, communicate with others about them, and gain cooperation in their pursuit. Values are the socially desirable concepts used to represent these goals mentally and the vocabulary used to express them in social interaction. Table 1 lists the ten value types and defines them in terms of their central goals.

The single value item expresses related value concepts and the the origin represents the foundation of the values.

Table 1. The ten values of Schwartz's value theory
This table defines each of the ten values (Self-direction, Stimulation, Hedonism, Achievement, Power, Security, Conformity, Tradition, Benevolence, Universalism) in terms of the broad goal it expresses, related value concepts, and its grounding in universal requirements.

Value	Goal	Single Value Item[1]	Origin
SELF-DIRECTION	Independent thought and action--choosing, creating, exploring	Creativity, freedom, choosing own goals, curious, independent	Derives from organismic needs for control and mastery and interactional requirements of autonomy and independence
STIMULATION	Excitement, novelty, and challenge in life	A varied life, an exciting life, daring	Derive from the organismic need for variety and stimulation in order to maintain an optimal, positive, rather than threatening, level of activation
HEDONISM	Pleasure or sensuous gratification for oneself	Pleasure, enjoying life, self-indulgent	Derive from organismic needs and the pleasure associated with satisfying them.
ACHIEVEMENT	Personal success through demonstrating competence according to social standards.	Ambitious, successful, capable, influential	Derive from the organismic need for the competent performance that generates resources
POWER	Social status and prestige, control or dominance over people and resources.	Authority, wealth, social power	Derive from the organismic need for dominance and control.
SECURITY	Safety, harmony, and stability of society, of relationships, and of self.	Social order, family security, national security, clean, reciprocation of favors	Derive from basic individual and group requirements. Some security values serve primarily individual interests (e.g., clean), others wider group interests (e.g., national security).
CONFORMITY	Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms.	Obedient, self-discipline, politeness, honoring parents and elders	Derive from the requirement that individuals inhibit inclinations that might disrupt and undermine smooth interaction and group functioning.
TRADITION	Respect, commitment, and acceptance of the customs and ideas that one's culture or religion provides.	Respect for tradition, humble, devout, accepting my portion in life	Derive from the requirement for group's solidarity, express its unique worth, and therewith contribute to its survival
BENEVOLENCE	Preserving and enhancing the welfare of those with whom one is in frequent personal contact	Helpful, honest, forgiving, responsible, loyal, true friendship, mature love	Derive from the basic requirement for smooth group functioning and from the organismic need for affiliation
UNIVERSALISM	Understanding, appreciation, tolerance, and protection for the welfare of all people and for nature.	Broadminded, social justice, equality, world at peace, world of beauty, unity with nature, wisdom, protecting the environment	Derive from survival needs of individuals and groups as failure to accept others who are different and treat them justly will lead to life-threatening strife.

2.1.4 The Structure of Value Relations

In addition to identifying ten basic values, the theory explicates the structure of the dynamic relations among them. The basis of the value structure is that actions in pursuit of any value have consequences that conflict with some values, but are consistent with others. For example,

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[1]According to Schwartz (1996), a single value represents a certain value type when actions that express the value or lead to its attainment promote the central goal of the value type.

one action (e.g. taking illegal drugs) could promote one value (daring, exiting – stimulation) and at the same time violate another value (obedient – conformity) (Schwartz, 2012).

The circular structure of Figure 1 portrays the total pattern of relations of conflict and congruity among values.
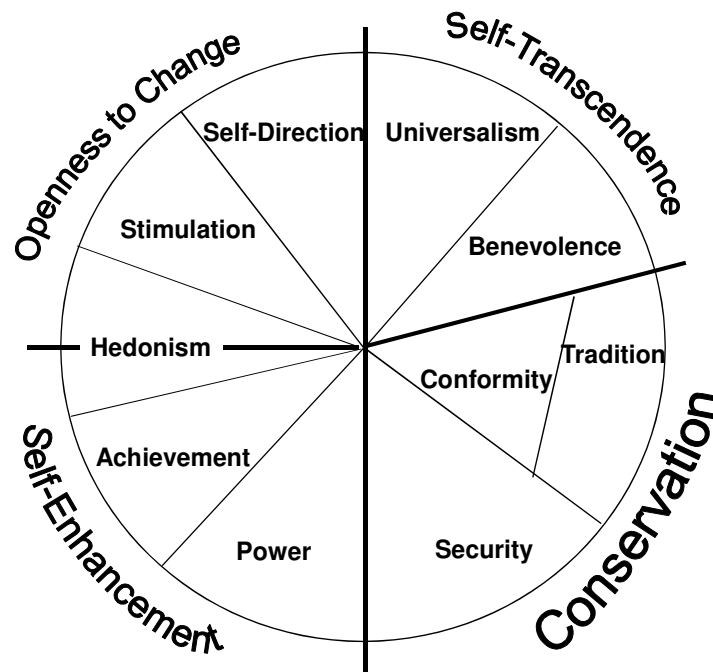

Figure 1. Theoretical model of relations among ten motivational types of value [2]

In Figure 1, values which motivational goals are compatible are located next to each other. The less compatible two values are, the further away a value moves around the circle. Thus, values that are located opposite to each other have conflicting motivational goals. The compatibilities and conflicts of the values enables us to divide the circle into two broader dimension. This results in the value dimension conservation versus openness to change and the value dimension self-transcendence versus self-enhancement. The former expresses a conflict where emphases on own independent thought and action and favouring change contradict submissive self-restriction, preservation of traditional practices, and protection of stability. The latter reflects a conflict where acceptance of others as equals and concern for their welfare rival the pursuit of one's own relative success and dominance over others. (Luotonen, 2009).

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[2] Retrieved from Schwartz, S. H. (2012). An Overview of the Schwartz Theory of Basic Values. *Online Readings in Psychology and Culture, 2(1).*

2.1.5 Evidence for the theory

Studies have assessed this value theory with data from hundreds of samples from 82 countries. The samples include highly diverse geographic, cultural, linguistic, religious, age, gender, and occupational groups, with representative national samples from 37 countries. In these analyses, the opposition of self-transcendence to self-enhancement values and of openness to change to conservation values are virtually universally present. Moreover, each of the ten basic values is distinguished in at least 90% of samples. These findings show that people in most cultures respond to ten types of values as distinct and that the broader value orientations captured by adjacent values are nearly universally acceptable. The study results strongly support the idea that human values form the motivational continuum postulated by the theory (Schwartz, 2012).

2.1.6 Person values affect behaviour

Even if a person emphasises certain values more than others, it seems reasonable to ask whether these values are visible in actual behaviour and, thus, in investment behaviour.

Fortunately, research indicates that values indeed have an important impact on behaviour. Personal values are associated with a large variety of behaviours and behavioural intentions and actions. Results from a study with Danish school teachers regarding their values, environmental attitudes, and purchase of organic foods demonstrate that organic food purchase behaviours are clearly influenced by their personal values (Grunert and Juhl 1995). Furthermore, a study among 239 university students investigate the relationship between value and choice. The students completed a Schwartz Value Survey to determine their personal values. Afterwards, they responded to 10 hypothetical scenarios, each of which presented them with two alternative courses of action. For each scenario, participants rate the attractiveness of each alternative and then indicate which one they would choose. Results suggest that value types determine the choice of alternative. This outcome supports the hypothesis that values may determine potential actions and outcomes. The research also suggested that value types can be structured into the previous discussed value dimensions (Feather, 1995). Moreover, Goodwin et al. (2002) investigate the role of individual values in predicting risky sexual activity. This study assesses the relationship between Schwartz's theory of basic value and sexual behaviour in the context of rising HIV infection. 503 respondents completed Schwartz's portrait values questionnaire and reported their condom use, partnership history, and record of sexual disease. Results indicate that values had a moderate but consistent relationship with sexual behaviour, with riskier sexual activity reported by those scoring highly in openness to

change and self-enhancement. These results clearly suggest that values influence behaviour and actions, like investment behaviour.

2.2 An overview of current explanations

As mentioned before, limited investment has intensive economic consequences. Logically, this has resulted in a quest for explanations. In this section, I will briefly mention the most important demographic and behavioural explanations.

Wealth is the first demographic factor that naturally comes to mind in regards to investment behaviour. The logic behind this relationship is the fixed costs that are involved with capital market participation—wealthier households have more to invest. As a result, the fixed cost is less of a hurdle for them. Based on a simple model of the benefits of capital market participation, Vissing-Jørgensen (2002) estimates that a per period capital market participation cost of just 50 dollars is sufficient to explain half of the capital market nonparticipation (Vissing-Jørgensen, 2002). Income is closely related to wealth, and significantly increase the probability of owning stocks, according to numerous studies (Luotonen, 2009).

Education is another important factor in the determination of capital market participation. A study by Van Rooij et al. (2011) suggests that those with low literacy are much less likely to invest. One interpretation is that education reduces the fixed costs of participating by laying a foundation that allows would-be investors to more readily understand capital market aspects, reducing information costs (Hong et al., 2004). Similarly, Grinblatt, Keloharju and Linnainmaa (2011) identify cognitive ability as a driver of participation and show that individuals with high IQs are more likely to participate in the capital market. The results of Christiansen et al. (2008) study indicates that individuals with a background in economics are more likely to invest. This is because economists know more about economics—hence about the capital market—and this knowledge decreases the fixed costs of participating.

Another obvious demographic factor that influence capital market participation is gender. Gender plays a significant role in capital market participation as women are less likely to invest than men are. There are several explanations, such as that men are more risk-seeking, more overconfident, and more financially literate on average (Barber and Odean, 2001; Almenberg and Dreber, 2015).

Despite of these demographic explanations, it remains apparently difficult to separate investors from non-investors according to demographic characteristics only. For example, Vissing-Jørgensen (2002) reports that a large number of wealthy individuals choose not to participate in the capital market. In addition, it is suggested that many highly educated people do not invest, not only because of a lack of information and interest, but also due to vague prejudice against the capital market (Shiller, 1984). It thus seems reasonable to ask whether personal characteristics might also play a part in investment decisions, and if so, which of these characteristics are the most influential.

According to behavioural finance theory, households consider risk when making investment decisions. Therefore, risk plays an important factor in explaining the limited capital market participation. Vissing-Jorgensen (2002) demonstrates that households that do not participate in the capital market are more risk averse than market participants. Furthermore, Dimmock and Kouwenberg (2010) discover that a measure of loss aversion is correlated with the probability of investing.

Return expectations also have an effect on capital market participation, as expectations of higher capital return results in a higher expected benefit of capital market participation. Research supports the relationship between expectations of capital market returns by individuals and investing (Arrondel et al., 2014).

Another theory is that capital market participation is influenced by political activism. This theory is based on the notion that politically active people follow political news more closely. This increases the likelihood that they are also exposed to economic news. As a result, the costs of gathering information is lower, consequently, they are more likely to participate in the capital market. Research by Bonaparte and Kumar (2012) supports this theory. Their results indicate that politically active individuals spend about 30 minutes more on news daily. As a result, political active people have more knowledge about the economy and the market. Therefore, political active people are 9-25% more likely to participate in the capital market than their than politically neutral counterparts, irrespective of their political affiliation. (Bonaparte and Kumar, 2012).

Trust is another factor that influences capital market participation. In deciding whether to invest, investors factor in the risk of being cheated (for example Enron or Imtech). The perception of this risk is a function of the objective characteristics of the stocks and the subjective characteristics of the investor. Less trusting individuals are less likely to invest and, when they do, they will buy less than those who are more trusting. Based on Dutch and Italian micro data, as well as cross-country data, Guiso, Sapienza and Zingales (2008) suggest that a lack of trust is an important factor in explaining the limited participation puzzle.

How do personal values fit into the picture when talking about capital market participation and the above explanations? Research shows that personal values influence factors that determine capital market participation. Hence, personal values could be an underlying factor influencing the other elements of capital market participation suggested in previous studies.

For example, personal values influence trust, which is an important factor in explaining capital market participation. Research shows that values are important for predicting connections among individuals' social networks and the norms of reciprocity and trustworthiness that arise from them—hence trust. Schwartz (2007) reports that universalism values are among the most important predictors of interpersonal trust. Another characteristic that could suggest a link between the value dimensions and investment behaviour is education. As mentioned before, education is an important factor in determine capital market participation due to information cost. Personal values also have a strong influence on education experiences as the personal values intellectual openness, flexibility, and breadth of perspective essential for self-direction values promote education (Kohn and Schooler, 1983). In contrast, these experiences challenge unquestioning acceptance of prevailing norms, expectations, and traditions, thereby undermining conformity and tradition values (Schwartz, 2012).

These findings reveal that characteristics that are related to capital market participation have also been influenced by personal values. This provides a solid basis for the assertion that personal values could predict capital market participation.

3. Hypotheses

By evaluating the literature on capital market participation, the basis for formulating hypotheses for this study has been established. As mentioned, the purpose is to investigate the role of personal values in the decision to invest, using political preferences as a proxy for personal values. The theoretical framework we use is Schwartz's basic human value theory (1992), as discussed in the previous chapter.

First, I deliberate on the value dimension openness to change and conservation, as mentioned in the previous chapter. I expect that people who have values related to openness to change are more likely to participate in the capital market than people with values that are related to conservation. Openness to change is related to the single values excitement, novelty, gain seeking, freedom, and action choosing, whereas conservation is related to the single values humble, loss aversion, safety, and restraint of actions. Because investing in the capital market is related to action, excitement, gain seeking, and novelty, people which values are related to openness to change are likely to invest in the capital market. At the opposite end of the spectrum, people who have values related to conservation are less likely to invest, as investing is clearly not associated with safety and non-actions. Apart from that, the capital market has negative associations such as excessive bonuses, associations that might conflict with a personal value such as humble. A mismatch between values and actions tends to create cognitive dissonance, which results in capital market aversion (Kaustia and Torstila, 2011). Moreover, I hypothesise that if people with strong conservation values participate in the capital market, they display more defensive investment behaviour in comparison to those who value openness to change, because it conflicts to a lesser degree with personal values such as humble, safety, and security. More specific, I would expect these people to invest relatively more in obligations than in stocks. Furthermore, I hypothesise that if people who value conservation participate in the capital market, they exhibit more indirect investment behaviour than people who value openness to change, because it is related to personal values as restraint of actions. More specific, I would expect these people to invest relatively more in funds than in obligations and stocks.

These personal values are linked with political preferences. More specifically, the value dimension openness to change and conservation are linked with the political dimension conservative versus progressive. This political dimension is defined as the relative emphasis

on the pursuit of universal individual freedom (progressive) versus preservation of the regime and the social structure through law and order (conservation) (Groth, 1974). The results of Barnea and Schwartz (1998) suggest that people with progressive political preferences attribute importance to values that endorse individual autonomy, self-actualization, openness, tolerance, and acceptance of people and life styles that are different or unusual. The researchers note that these are the value types of self-direction and stimulation. Hence, progressive political preferences can be associated with openness to change because that value dimension embodies both self-direction and stimulation. In contrast, people who have conservative political preferences subscribe to values that endorse the protection of the social order and the status quo. According to this research, these are the values grouped as the conservation value dimension. Thus, local councillors from a progressive party are more likely to invest and reveal more offensive and direct investment behaviour than local councillors from a conservative party.

Based on the last municipal election of 2014, the four biggest local parties are VVD, CDA, D66 and PvdA. As displayed below in Figure 2, D66 and CDA are opposites in progressive and conservative terms. Therefore, I hypothesise that D66 local councillors (progressive political preferences) are more likely to invest than CDA local councillors (conservative political preferences). Furthermore, if the local councillors of D66 and CDA invest, I also hypothesise that CDA local councillors exhibit more defensive and indirect investment behaviour.
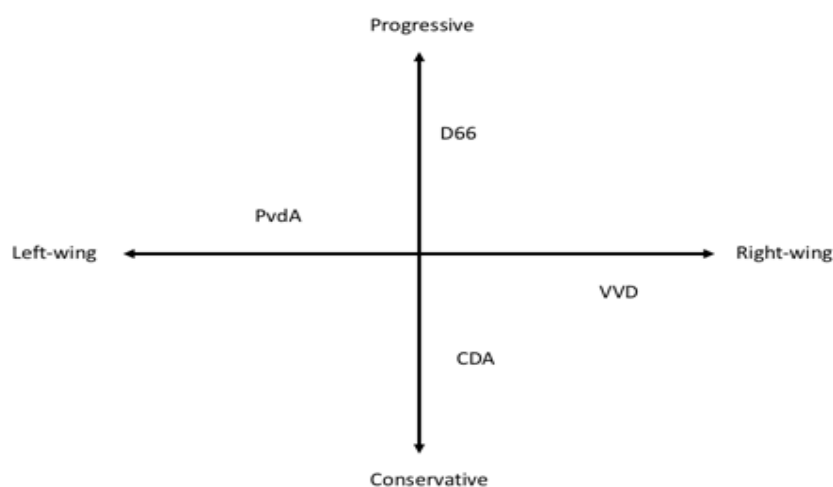

Figure 2: The four biggest political parties in the last municipal elections (2014) placed in a political spectrum[3]

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[3] Based on the work of Dutch political scientist André Krouwel

H₁: CDA's local councillors (conservative political preferences) are less likely to invest (in stock, obligations, or funds) than D66's local councillors (progressive political preferences).

H₂: Of those who invest, CDA's local councillors (conservative political preferences) will invest more defensively (obligations/(obligations + stocks)) in comparison to D66's local councillors (progressive political preferences).

H₃: Of those who invest, CDA's local councillors (conservative political preferences) will invest more indirectly (funds/(funds + obligations + stocks)) than D66's local councillors (progressive political preferences).

Second, the self-enhancement and self-transcendence values should be discussed. I expect that people who have values related to self-transcendence are less likely to participate in the capital market than people who are more self-enhancing. Self-transcendence is related to the single values protection of the welfare of others and honesty, whereas self-enhancement is related to pursuit of wealth and power. As investing in the capital market is not associated with the protection of the welfare of others and with honesty, self-transcendent people are not likely to invest; as previously mentioned, a mismatch between values and actions tends to create cognitive dissonance, which result in capital market aversion. (Kaustia and Torstila, 2011). Investing is associated with pursuit of wealth and power, so self-enhancing people are more likely to invest. Furthermore, I expect that if people with strong self-transcendence values participate in the capital market, they reveal more indirect investment behaviour because this conflicts less seriously with their personal values. Similarly, I expect that people with strong self-transcendence values show more defensive investment behaviour.

These value dimensions (self-transcendence and self-enhancement) are linked with the left-wing versus right-wing political spectrum. The left-wing versus right-wing political dimension is primarily referred to in terms of the distribution of income and other resources among societal members (Barnea and Schwartz, 1998). The left-wing position is strongly associated with an emphasis on equality among individuals, the well-being of all, and corporation and mutual responsibility. Therefore, support for parties that subscribe to a left-wing position should be based on the importance of values that endorse concern for and promotion of the welfare of others, that is, self-transcendence values (Barnea and Schwartz, 1998). The research of Caprara et al. (2006) supports this view by suggesting that centre-left voters are higher than centre-right voters in universalism and benevolence (self-transcendence). The right-wing position is strongly associated with legitimising the unequal distribution of resources in order

to reflect the unique contribution of individuals. It emphasises competitiveness and responsibility only for the self. Support for political parties that subscribe to a right-wing position should be based on the values that endorse attainment of superior status, wealth, and influence for oneself, that is, self-enhancement values (Barnea and Schwartz, 1998). Evidence from Caprara et al. (2006) support these results; the researchers found that right-wing political orientation is strongly associated with the value power and achievement (self-enhancement). Hence, I expect that local councillors of left-wing parties are less likely to invest than local councillors of right-wing parties.

As displayed in the Figure 2, PvdA and VVD are diametrically opposed in left-wing and right-wing terms. Therefore, I hypothesise that PvdA local councillors (left-wing political preferences) are less likely to invest in the capital market than local councillors from VVD (right-wing political preferences). Furthermore, if the local councillors of VVD and PvdA invest, I also hypothesise that PvdA local councillors invest more indirectly and more defensively. These predictions result in the following three hypotheses:

H_4: PvdA's local councillors (left-wing political preferences) are less likely to invest (in stock, obligations, or funds) than VVD's local councillors (right-wing political preferences).
H_5: Of those who invest, PvdA's local councillors (left-wing political preferences) invest more defensively (obligations/(obligations + stocks)) than VVD's local councillors (right-wing political preferences).
H_6: Of those who invest, PvdA's local councillors (left-wing political preferences) invest more indirectly (funds/(funds + obligations + stocks)) than VVD's local councillors (right-wing political preferences).

4. Data

This chapter elaborates on the data gathering process and describes the collected data with descriptive statistics. In the first section is explained who the respondents were, how they were reached and the questions that were asked. Afterwards, I present the collected data with descriptive statistics, were the information is classified according to different groups of investors and non-investors and into local councillors of different political colour.

4.1 The data gathering process

As mentioned before, responses were gathered from the local councillors of CDA, VVD, PvdA and D66. The municipalities were randomly selected from a list derived from the *Centraal Bureau voor Statistiek* (CBS). In order to have a random selection method, one must set up a process or procedure that assures that the different units in the population have an equal probability of being chosen. To this end, one should have a sampling frame, which makes it possible to pick subjects out of a list in which every subject has a known probability of being picked. In this case, I randomly selected 120 from 388 municipalities, the sampling frame. This means that every local councillor has the known probability of 30.93% of being selected. When this sampling frame is not available, the researcher is obligated to use non-probability methods, like convenience sampling. In non-probability sampling, there is a great potential for researcher bias, and the quality of work may suffer due to researcher incompetency and/or lack of experience (Dudovskiy, 2016). Researchers prefer probability sampling and consider it to be more accurate and rigorous (Atkinson, 2011).

For all of the selected municipalities, I searched for the email address of the local councillors of CDA, VVD, PvdA and D66. Because local councillor is a public function, the email addresses are relatively easily gathered. I used an email survey because it saves costs associated with the printing and mailing of survey instruments in addition to saving time and cost by already having the returned survey data in an electronic format (Fricker and Schonlau, 2002). For special populations that are regularly online, the internet has been found to be a useful means of conducting research (Kaplowitz et al., 2004). In the case of municipal councillors, it is safe to assume that they use the internet regularly. In addition, the population is already quite specific, which often results in a higher response rate because the target population feels addressed. In total, I manually collected 1510 email addresses of local councillors.

Around 11:00 a.m. on 6 June 2017, 7 June 2017, and 8 June 2017, I sent an email to the 1510 local councillors, roughly 500 each day. After six days, I sent a reminder, as a reply to the first mail, to all potential respondents. More specifically, the reminders were sent on 12 June 2017, 13 June 2017, and 14 June 2017, also around 11:00 a.m. I closed the response collection one day after I send the reminders. In total, 476 local councillors filled out the questionnaire, resulting in a response rate of 31.52%. The days the emails were sent did not result in a real difference in terms of the response rate. In comparison, the response rate of the research of Kaustia and Torstila (2011) was 10-20%. The representativeness of the sample is difficult to evaluate completely; however, the standard sample-mean tests (t-tests) that I conducted indicate that the sample is representative for the population (all the local councillors of CDA, VVD, PvdA and D66). The standard sample-mean tests for gender, age, and political party choice showed no significant difference between the sample characteristics and population characteristics.

The questionnaire sent to all of the selected local councillors is constructed using the specialised survey software by Qualtrics Research Suite. This is an enterprise online survey software solution that enables you to collect, analyse, and act on relevant data. Through the Erasmus Survey Centre (ESC), I was permitted to use the software.

To construct a good questionnaire, I followed the recommendations of Kelley et al. (2003). According to Kelley et al. (2003), there should be no clutter of unnecessary headings and numbers in the questionnaire. A brief introductory statement could be useful. Similarly, it is good practice to number or otherwise identify individual questions for reference purposes; this is particularly helpful in dealing with queries during the data entry and analysis stage. The questions and answer choices should be presented attractively and neatly. I was consistent in aspects such as wording, and I tried to standardise by using as few question types as possible: in the questionnaire, only three types of questions were used. A key factor that affects the response rate is the length of the questionnaire; questionnaires perceived as long will deter respondents. I therefore asked only 12 simple questions, which could easily be filled out in less than 2 minutes. According to Kelley et al. (2003), to increase the number of respondents that will complete the questionnaire, you should begin with questions that will raise interest. I therefore started with the most interesting questions and concluded with the most private (wealth and income). I predicted that respondents would be less willing to quit the survey due to the private questions because they had already put in the effort to answer all of the previous questions. The language of the survey was Dutch.

The aim of the questionnaire was to chart the determinants of capital market participation that were covered in the literature presented above to control the results. To be able to properly control for the factors potentially affecting participation, and thus, to discover the true effect of political party choice and the personal values they imply, the goal of the questionnaire was to address these factors. For the demographic variables, I collected data concerning age, education, gender, income, location, and wealth. I also collected data concerning personal or behavioural characteristics that have been shown to influence the decision to invest. These factors include expected return, risk attitude, political party, and trust. I did not collect data concerning political activism, as the population consisted solely of local councillors, who were all rather politically active. Hence, this variable was mainly constant among the population.

Age, gender, party choice, expected return of the AEX end 2017, gross income, and municipality are straightforward variables to find out with simple questions that do not require any weighing of different answers from the respondent. The question concerning wealth is somewhat more ambivalent; the issue remains, for example, if real estate (potentially with a mortgage) should be completely included in someone's level of wealth. I decided to use the same question as the DNB Household Survey used for measuring level of wealth: 'What are your (approximate) total assets (including any property)?' The question concerning education could be difficult to categorise because there should be no overflow of options, but on the other hand, every type of education must be covered. I therefore also followed the type of questioning and categorisation used by the DNB Household Survey, namely: 'What is your highest earned degree or diploma?' (Categorical; Geen onderwijs gevolgd/basisonderwijs; VMBO; HAVO/VWO; MBO; HBO; WO;). For capital market participation, I based my questioning on the DNB Household survey, in which the following questioning related to capital market participation is used: 'Are you currently investing in stocks, obligations and/or funds? (Yes or No)'. If yes, I ask for the following specification in the subsequent question: 'What is the percentage distribution between shares, obligations, and/or funds?'

Behavioural characteristics are normally more difficult to measure. However, Guiso et al. (2008) and Kaustia and Torstila (2011) were able to measure trust using the following question: "Generally speaking, do you feel other people can be trusted, or that you can never be too careful?". Respondents could choice between the following answers: yes (1), no opinion (2) and no (3). This type of questioning is also used in the well-established world value survey. In

my questionnaire, I will also use this type of question to measure trust. Risk preference is another known determinant of capital market participation that is more difficult to measure; however, I decided to follow the same formulation as posed by Halko and Kaustia (2012), namely: "How do you see your attitude towards risk? On a scale from 0–10, do you try to avoid risk, or are you completely willing to take on risk?"

In appendix A, the complete questionnaire used in the study is displayed.

4.2 Description of the data

A wide range of information was received from each respondent. As described above, the questionnaire provided me with demographic variables and personal characteristics. Before presenting the data, I should first note that I detected a couple of outliers concerning some variables. Three respondents reported their total wealth to be above 5,000,000 euro. Two respondents reported monthly incomes of above 70,000 euro. Lastly, two respondents reported an expected Amsterdam Exchange (AEX) return of -40% each in 2017. I deleted these outliers, as I believed that they would affect the credibility of this study.

Before analysing the data to confirm or reject the hypotheses, I will present the data to provide a better understanding of them to highlight trends. To this end, I create two intriguing groupings in which the data are presented. The first one arranges the information according to different groups of investors and non-investors, and the second one groups the respondents into local councillors of different political colours. I have chosen these two groupings because these variables are most essential for answering the research question about whether political colour influences capital market participation.

The first table presents the answers which the respondents provided, as number values (age, education, expected return, risk [0–10], income and wealth). These answers are grouped into non-investors/investors and CDA/VVD/PvdA/D66. As the data are partly quantitative, they allow for the comparison of mean and standard deviation. On the other hand, the information is partly qualitative, which allows for the categorisation of the respondents into different groups.

Table 2. Descriptive statistics 1 – Quantitative data

This table presents the answers given by the respondents as number values. In the upper part of the table, the respondents have been grouped according to their investment behaviour, hence investors or non-investors. In the lower part of the table, the grouping is according to political party, hence CDA, D66, PvdA and VVD. Age was reported as a number value by the respondents. Level of education is reported by six categories: WO;HBO;MBO;HAVO or VWO; VMBO; No education or elementary school. Those categories are linked with a number: WO (6), HBO (5), MBO (4), HAVO/VWO (3), VMBO (2), No education or elementary school (1) . Expectations was reported as the expected return of the AEX end 2017. Risk attitude was reported with a scale (0-10). Income and wealth were reported as open questions, where income is reported as gross income and wealth includes property, disregards of a mortgage.

	N	Age (Years)	Education (1-6)	Expected return (in %)	Risk attitude (0-10)	Gross Income (€)	Gross Wealth (€)
Investors and non-investors							
Investors	141						
Mean		53.55	5.37	8.20	5.18	3,685	545, 851
Standard deviation		11.56	0.07	4.64	2.06	2,085	87, 056
Non-investors	318						
Mean		49.85	5.09	8.18	4.43	3,263	357, 535
Standard deviation		13.16	0.06	5.94	2.05	1,621	458, 588
Political party							
CDA	149						
Mean		50.55	4.97	8.02	4.56	3,525	414, 206
Standard deviation		12.30	1.03	5.01	2.18	1,455	389, 371
D66	105						
Mean		51.95	5.33	7.90	4.78	3,546	334, 448
Standard deviation		14.01	1.03	4.79	2.14	1,313	340, 547
PvdA	81						
Mean		50.60	5.20	8.27	4.58	3,069	274, 737
Standard deviation		11.86	0.98	6.73	2.08	1,878	248, 276
VVD	124						
Mean		50.93	5.22	8.52	4.77	3,348	610, 196
Standard deviation		12.98	0.86	5.90	2.13	2,353	107, 598
Total sample	459						
Mean		50.98	5.16	8.19	4.67	3,396	430,604
Standard deviation		12.79	0.99	5.52	2.14	1,789	636,663

Table 2 presents information from the part of the questionnaire where the respondents provided number values, numbers chosen from a scale or categories linked to numbers. In the upper part of the table, a grouping according to investment behavior is made, whereas in the lower part of the table, the data are grouped according to political preferences (CDA, D66, PvdA and VVD).

In looking at the first part of the table, the investor groupings, it seems that the respondents who invest are, on average, older than those in the non-investor group are. Furthermore, investors' risk preferences appear to be higher than those of the non-investors are. The education level is higher for investors than for non-investors as well. Gross income and

especially gross wealth are also higher for investors than for non-investors. All of these variables are in line with the previously found determinants for capital market participation in the literature (Guiso et al., 2012; Van Rooij et al., 2011; Luotonen, 2009; Vissing-Jorgensenk, 2002). Interestingly, investors and non-investors have almost the exact same expected return for the AEX; in the literature, it is stated that investors generally expect higher returns from the stock market (Arrondel et al., 2014). Overall, the data concerning investing behaviour appear to be consistent with previous research, and therefore, the data related to investment behaviour seem credible. However, analyses of the data should strengthen this first observation.

Moving to the latter part of the table, which features the different political groups, it appears that the local councillors of the four parties are quite similar with regards to age, expected return, risk attitude and gross income. However, the education level of CDA's local councillors appears to be lower than those of the local councillors of the PvdA, VVD and D66. As I assume that a relationship exists between the value dimension of conservation versus openness to change and the political dimension of conservative (CDA) versus progressive (D66), characteristics which are correlated with the value dimension should also correlate with the political dimension. As previously mentioned, personal values have a strong influence on education experiences as the personal values intellectual openness, flexibility, and breadth of perspective promote education (Kohn and Schooler, 1983). In contrast, these experiences of education challenge unquestioning acceptance of prevailing norms, expectations, and traditions, thereby undermining conformity and tradition values (Schwartz, 2012). More concrete, research by Verkasalo et al. (2009) indicated that people whose personal values are more in line with conservation than with openness to change are likely to have less education. Because the data presented in the table above suggest that CDA's local councillors (conservative) are, on average, less educated than D66's local councillors (progressive) are, the descriptive statistic is in line with the assumption that the value dimension and political dimension are linked.

The average gross wealth displayed in the table above also indicates a link between the value dimension of self-transcendence versus self-enhancement and the political dimension of left-wing (PvdA) versus right-wing (VVD). Individuals with stronger self-enhancement–related personal values are more eager to pursue wealth than people who feel more connected to self-transcendence values are (Wiklund and Shepherd, 2005). The above data show that on average,

VVD's local councillors (right-wing) have gross wealth of more than 600,000 euro, whereas the PvdA's local councillors (left-wing) have, on average, gross wealth of less than 275,000 euro. Hence, these data indicate that a connection exists between the value dimension of self-transcendence versus self-enhancement and the political dimension of left-wing (PvdA) versus right-wing (VVD), as the characteristic of wealth is correlated with both dimensions in the same direction.

In the second table, the variables were the answers to the questions that had only two answer possibilities (regarding gender, trust, the Randstad, capital market participation). This will be presented in a proportional manner (for example, percent of males, percent of 'trusting participants'), as the data are only qualitative.

Table 3. Descriptive statistics 2 – Qualitative data
This table presents the answers to the questions that only provided two answer possibilities. The respondents are grouped into different categories. The variables with two answer possibilities are displayed on the left side. This includes gender. The variable trusting means that the respondent has indicated being generally trusting towards other people. Another question concerns the location of the respondents, which is divided into the "Randstad" or "Non-Randstad". The Randstad consists of the provinces: Utrecht, Noord-Holland and Zuid-Holland. Investors means that the respondents participate in the capital market.

	Investors	Non-investors	CDA	D66	PvdA	VVD	Total Sample
Male	80%	73.77%	78.95%	80%	69.51%	72.00%	75.69%
Trusting	86.90%	81.06%	80.00%	89.09%	90.24%	76.00%	82.87%
Randstad	40.83%	33.83%	25.78%	48.35%	31.26%	41.35%	36.01%
Investors	100%	0.00%	22.37%	44.55%	17.07%	38.40%	30.92%
Total Sample	30.92%	69.08%	32.41%	23.45%	17.48%	26.65%	100%

The table displays the proportion of males among the investors, non-investors and political parties. There are more male investors than female investors, which is in line with the literature (Barber and Odean, 2001; Almenberg and Dreber, 2015). Table 3 furthermore demonstrates that investors are more trusting than non-investors are, which is also consistent with the previous study literature (Guiso et al., 2008). This could, again, indicate that the collected data related to investing are accurate.

With regards to political parties, we see that D66's and the PvdA's local councillors are more trusting than the local councillors of CDA and VVD are. As previously mentioned, I assume that a connection exists between the political dimension of conservative (CDA) versus progressive (D66) and the value dimension of conservation versus openness to change and the political dimension of left-wing (PvdA) versus right-wing (VVD) and the value dimension of self-transcendence versus self-enhancement. This means that characteristics related to the value dimensions should also correlate with the political dimensions. The previously

mentioned research by Verkasalo et al. (2009) suggested that individuals with personal values linked to openness to change are more trusting than individuals with more conservation-related personal values are. In Table 3, the data suggest that D66's local councillors (progressive) are more trusting than CDA's local councillors (conservative) are, which indicates a connection between this political dimension and the value dimension. A similar reasoning could be used for the value dimension of self-transcendence versus self-enhancement and the political dimension of left-wing (PvdA) versus right-wing (VVD). Research shows that values are important for predicting connections among individuals' social networks and the norms of reciprocity and trustworthiness that arise from them—hence trust. Schwartz (2007) reports that universalism values are among the most important predictors of interpersonal trust. Moreover, Verkasalo et al. (2009) indicates that self-transcendence individuals are more trusting than self-enhancement individuals. The data in the previous table also demonstrate that the PvdA's local councillors (left-wing) are more trusting than VVD's local councillors (right-wing) are. Overall, the data support the assumption that the value dimensions and political dimensions are connected; however, a correlation matrix could support this claim.

For the characteristic of the Randstad, we see that relatively more investors are based in the Randstad. Furthermore, D66's and VVD's local councillors are relatively more represented in the Randstad; on the contrary, the local councillors of CDA are relatively based more outside of the Randstad. As expected in the hypothesis, relatively fewer CDA local councillors invest in the capital market, and relatively more local councillors of VVD and D66 invest in the capital market.

Finally, in the last table of this chapter, I include a correlation matrix showing how the different variables relate to one another. This is especially helpful for seeing if the assumption that the value dimension of self-transcendence versus self-enhancement and the political dimension of left-wing versus right-wing are connected is valid. In addition, it could endorse the assumption that the value dimension of conservation versus openness to change and the political dimension of conservative versus progressive are connected.

Table 4. Correlation matrix
This table shows the correlation coefficients of all the variables received from the questionnaire with each other. The Investors variable expresses whether a respondent has invested in the capital market. CDA variable expresses if the respondent is a local councillor of D66 (0) or CDA (1). The PvdA variable presents if the respondent is a local councillor of VVD (0) or PvdA (1). Expected return was reported as the expected return of the AEX end 2017. The variable trusting means that the respondent has indicated being generally trusting towards other people. Risk attitude is the self-reported risk attitude of the respondents with a scale from 0 to 10. Gender is a dummy variable with female (0) and male (1). The age variable represents the age of the respondent. Level of education is reported by six categories: WO;HBO;MBO;HAVO or VWO; VMBO; Elementary school or no education. The randstad variable expresses if the respondent lives in the Randstad, which consists of the provinces: Utrecht, Noord-Holland and Zuid-Holland. Income and wealth were reported as open questions, where income is reported as gross income and wealth includes property, disregards of a mortgage. *, **, and *** mean that the correlation coefficients are statistically significant on the 5%, 1%, and 0,1% levels, respectively.

	Investors	CDA	PvdA	Expected return	Risk attitude	Education	Trusting	Gender	Age	Gross income	Gross wealth	Randstad
Investors	1											
CDA	**-0.235*****	1	.									
PvdA	**-0.228*****	.	1									
Expected return	0.002	0.003	-0.019	1								
Risk attitude	**0.165*****	-0.051	-0.042	**0.165****	1							
Education	**0.139****	**-0.168****	0.001	-0.033	0.024	1						
Trusting	0.066	**-0.143***	**0.202***	-0.006	0.009	0.086	1					
Gender	0.067	-0.013	-0.027	0.030	0.070	-0.009	0.057	1				
Age	**0.134****	-0.053	-0.013	**0.115***	**-0.127****	**-0.177*****	-0.073	0.061	1			
Gross Income	**0.110***	-0.008	-0.064	0.050	0.104	0.088	0.066	**0.241*****	0.058	1		
Gross Wealth	**0.140***	0.107	**-0.196***	0.046	0.065	-0.098	-0.045	-0.004	**0.249*****	**0.133***	1	
Randstad	0.068	**-0.233*****	-0.112	-0.063	0.027	**0.108***	-0.007	0.028	0.019	0.065	0.063	1

In the correlation matrix, the political party of the local councillors is highly correlated with the capital market participation. The table demonstrates that a significantly negative correlation exists between the CDA dummy and capital market participation in the context of the political dimension of conservative versus progressive. Furthermore, the table suggests that a strong negative relation exists between the PvdA dummy and capital market participation in the context of the political dimension of left-wing versus right-wing. Hence, although this hypothesis should be further investigated, the first signs appear to support my hypothesis.

Furthermore, investing is positively correlated with a higher income, wealth, education, risk attitude and age. Risk attitude especially has a very strong positive correlation with capital market participation. The correlations found in this research between these variables and capital market participation are similar to those found in previous research. This, again, increases the assumed credibility of the collected data concerning capital market participation. On the contrary, although the variables of expected return, gender and trust move in the right direction, the correlation is not significant, which slightly contradicts the previous literature. It is difficult to investigate entirely the reason why these correlations are not as strong as they are in previous research; however, the sample size is probably an important factor. Furthermore, in general, previous research did not investigate capital market participation among local councillors. Therefore, some variables might behave different than expected based on previous research.

Besides investing, the political dimension of conservative (CDA) versus progressive (D66) is also significantly negative correlated with education and trust. In the descriptive statistics, I already discussed the connection between this political dimension, these characteristics and the value dimension of conservation versus openness to change. This table shows that conservative is negatively correlated with education and trust in the political dimension of conservative versus progressive. As conservation is also negatively correlated with education and trust in the value dimension conservation versus openness to change, we can assume that the political dimension of conservative versus progressive is indeed related to the value dimension of conservation versus openness to change. The political dimension is also negatively correlated with the Randstad. This is easily explained, as relatively more local councillors of D66 are based in the Randstad in comparison with CDA.

The political dimension of left-wing (PvdA) versus right-wing (VVD) is, besides capital market participation, positive correlated with trust and negative correlated with wealth. Previously, I discussed the connection between this political dimension, these characteristics and the value dimension of self-transcendence versus self-enhancement. The correlation matrix conforms the assumption that the political dimension of left-wing versus right-wing is connected to the value dimension of self-transcendence versus self-enhancement, as the characteristic of trust is positively correlated with both left-wing (PvdA) and self-transcendence, and the characteristic of wealth is negatively correlated with both left-wing (PvdA) and self-transcendence.

Furthermore, other interesting correlations can also be observed in the correlation matrix. Expected return has a significantly positive correlation with risk attitude, which indicates that a more risk-seeking person also believes that taking a risk (investing) results in high returns. Expected return also has a strong positive correlation with age, which suggests that an older age comes with a higher expected return. Age is strongly negatively correlated with risk attitude. In the literature, age differences in risk preferences were found when participants were offered a choice between a risky and a certain opportunity (capital market vs. banking account) (Mather et al., 2012). Age is negatively correlated with education, which seems remarkable. However, the assumption that most councillors already completed their education could explain this correlation as a higher age would not result in a higher degree. Furthermore, during the past decade, more individuals received their university degrees in The Netherlands. In 1990, only a quarter of the Dutch population had received their degree in higher education. Now it's 45 percent (OESO-report Education at a Glance, 2014). Hence, on average, a local councillor of 40 is more likely to hold a university degree than a local councillor of 60. More obvious positive correlations that require no further explanations are between education and the Randstad, between age and wealth and between income and wealth. Regrettably, a well-known positive correlation between male and gross income also exists in this research.

5. Methodology

Following the elaboration on the data gathering process and a short description of the data in the previous section, here I discuss the methodology employed to further investigate the obtained data and to answer my research question. In the first section of this chapter, I elaborate on the mean similarity tests I conducted to observe differences between investors and non-investors. Afterwards, I discuss the regression analyses I performed to test my hypotheses. This consists of a discussion of the probit model and the OLS model I will apply. In addition, I clarify the tests I executed to see if assumptions for the regressions are satisfied.

5.1 Mean similarity tests

To find potential differences between investors and non-investors, I conduct several mean similarity tests, which can be used to tell whether two samples differ on a given variable or characteristic. This kind of test is useful, for example, if one would like to know whether an average investor is wealthier than an average non-investor (DeCoster, 2006).

More specifically, I test whether the investors differ from the non-investors on the characteristics collected through the questionnaire, namely: conservative (CDA)-progressive (D66), left-wing (PvdA)–right-wing (VVD), age, risk attitude, expected return, trust, gender, education, wealth, income, and Randstad. The test reveals whether the investor and non-investor groups are statistically significantly different from the other for a particular characteristic. This enables me to observe which characteristics result in a significant difference between investors and non-investors, which is relevant to the context of the research question, since questions as is the political choice of the investors significantly different than that of the non-investors and are there (other) characteristics that are significantly different between non-investors and investors can be answered.

For all continuous variables, that is, age, risk attitude, expected return, wealth, and income, I use an independent samples t-test to observe differences among investors and non-investors. For all other types of variables, I use a chi-square test. Since, one of the assumptions of the independent samples t-test is that the variable is continuous; this makes sense, as categorical variables have no mean, and a 'normal' t-test is impossible. I use the following formula to determine the t-statistics in the independent samples t-test, which enables me to understand if

the difference between the non-investors and investors for a particular characteristic is significant.

$$t = \frac{\overline{x_1} - \overline{x_2}}{\sqrt{\dfrac{s_1^2}{n_1} + \dfrac{s_2^2}{n_2}}} \quad\quad (1)$$

Here t represents the t-statistic, of which the size measures if the means of the investors and non-investors for that particular characteristic differ significantly. The $\overline{x_1}$ and $\overline{x_2}$ present the means of the investors and non-investors for a certain characteristic. The s_1^2 and s_2^2 represent the standard error of the particular characteristic for both groups (investors and non-investors).The n_1 and n_2 represent the sample size of the non-investor and investor groups (Moore et al., 2011).

To conduct the independent samples t-test, a number of assumptions should be satisfied. One of them is the previously mentioned assumption that the variables should be continuous. Fortunately, for the categorical variables, I can use the chi-square test for independence. Another assumption that should be satisfied is that the data follows a normal probability distribution. However, it is quite "robust" to violations of normality, meaning that this assumption can be a little violated and still provide valid results. Furthermore, the standard deviation of the sample should be equal; this assumption can be tested by the F-test. If this assumption is not satisfied, the Welch's t-test can be used as it is designed for unequal variances. The two samples should also be independent. This assumption is satisfied because there is no relationship between the individuals in one sample as compared to the other. Lastly, the samples should be simple random samples from their respective population so that each individual in the population has an equal probability of being selected in the sample. This assumption is also satisfied due to my data gathering process, as previously explained.

Regarding the categorical variables, I use the chi-square test for independence to see whether distributions of categorical variables differ from each other. More specifically, it tests if the investor group distribution differs significantly in comparison to the non-investors in terms of

a particular characteristic. The characteristics I investigate with the chi-square test are all of the categorical variables, namely, political party, gender, education, trust, and location.

In order to determine the chi-square test statistic, it is necessary to first compute the expected values. The expected values are computed with the following formula:

*Expected value = (row total * column total)/total number of observations)*   (2)

These expected values *(E)* are then used along with the observed number of cases *(O)* to compute the chi-square test statistic.

$$x^2 = \sum \frac{(O - E)^2}{E}$$ (3)

where x^2 represents the chi-square test statistic, O is the observed cell value, and E is the expected cell value. Furthermore, the degree of freedom is determined by the number of rows minus one times the number of columns minus 1, which enables us to determine the significance of the test statistic (Moore et al., 2011).

To perform the chi-square test statistic, some assumptions must also be satisfied. Fortunately, most assumptions are similar to those behind the independent samples t-tests. For the chi-square test, the sample should also be the result of simple random sampling, and the observations are assumed to be independent of each other. Different from the independent samples t-test is that the number of observations matters, and more specifically, the number of observations per cell. A common rule is five or more in all cells of a 2-by-2 table, and five or more in 80% of cells in larger tables (Moore et al., 2011).

5.2 Regression analyses

Most of my results are obtained through regression analysis, which is based on a linear equation in which the dependent variable is explained by other variables. The dependent variable is the phenomenon studied, in other words capital market participation. The explanatory variables are factors thought to have an impact on this phenomenon, such as education, wealth, and political party choice. Each of the explanatory variables receives an estimated coefficient depicting the magnitude of its impact on the dependent variable.

I conduct regressions to determine if political party (and with that, personal values) affects capital market participation. Subsequently, I carry out an OLS regression to answer the hypothesis that political party choice affects defensive and indirect investment behaviour.

5.2.1 Probit model

To study the determinants of investing, I use binary regressions. This is necessary because the dependent variables are now dummies, receiving either the value of 0 or 1 (investor or non-investor). For instance, the investor dummy obtains the value of 1 if a respondent has invested in stocks, obligations, and/or funds; otherwise, the value is 0. Risk attitude, for example, could be an explanatory variable for capital investment. If the coefficient for risk attitude is positive, the interpretation is that the more the respondent is willing to take risks, the larger the probability that he or she is an investor.

The standard multiple linear regression with a binary dependent variable is called the linear probability model (LPM) because the response probability is linear in the parameters. This model is easy to estimate and interpret, but it has two main drawbacks. First, the fitted probability predicted by LPM can be less than 0 or greater than 1. Second, the LPM assumes constant marginal effect for an independent variable. The probit overcomes these drawbacks (Wooldridge, 2013). Furthermore, Kaustia and Torstila (2008) already used the probit model to investigate the factors influencing capital market participation.

The McFadden R^2 is better suited to a binary choice model than the regular R^2, as there is some evidence that in binary probit and logit regressions, R^2 is more sensitive to misspecification in the error term than the McFadden R^2 or the so-called pseudo-R^2 (Veall and Zimmermann, 1996). The McFadden R^2 is used to assess the explanatory power of the entire regression equation. The higher the value of McFadden R^2, the higher the explanatory power of the regression. The maximum value for McFadden R^2 is 1, which means that the equation is able to explain the dependent variable perfectly, and the minimum value is 0, which means that the equation has no explanatory power.

5.2.1.1 Capital market participation and political preferences

With two probit regression models, I will determine the factors that actually control capital market participation in my sample. In other words, my null hypothesis will be either accepted or rejected based on the results.

In the first probit model, I investigate if my hypothesis that CDA's local councillors (conservative political preferences) participate less in the capital market than D66's local councillors (progressive political preferences) is actually true. I will examine this hypothesis with the following probit model:

$$\Pr(investing) = \Phi(\beta_0 + \beta_1 CDA + \beta_2 Trust + \beta_3 AEXexp + \beta_4 Education + \beta_5 Risk$$
$$+\beta_6 Randstad + \beta_7 Gender + \beta_8 Wealth + \beta_9 Income + \beta_{10} Age) \tag{4}$$

where *investing* is the binary dependent variable explaining the capital market participation of the participant, which equals 1 if the participant invests in the capital market and 0 if not. *Pr* denotes the probability that the respondent participates in the capital market. Φ denotes the cumulative distribution function (CDF) of standard normal random variables, that is, normally distributed (Gaussian) random variables with mean 0 and variance 1. β_0 is the constant. The binary independent variable *CDA* indicates if the respondent is a local councillor of CDA, which then equals 1, and if the local councillor supports D66, it is 0. The variable *AEXexp* indicates, according to the respondent, what the return of the AEX stock markets will be at the end of 2017 in percentage terms. *Education* indicates the highest degree of education the respondent holds. *Risk* represents the risk attitude of the respondents on a scale (0–10). If the local councillor lives in the Randstad is indicated by the *Ranstad* dummy variable. The dummy variable *Gender* indicates if the respondent is a female (0) or male (1). *Wealth* indicates the wealth of the respondents, including any property. The variable *Income* indicates the gross income level of the local councillor. The last variable, *Age*, measures the age of the respondents. If the hypothesis (CDA's local councillors are less likely to invest than D66's local councillors) is correct, then β_1 should be significant and negative based on my hypothesis that the probability that a respondent participates in the capital market decreases if the respondent is a local councillor of CDA instead of D66.

In the second probit regression, I investigate if my hypothesis that PvdA's local councillors (left-wing political preferences) participate less in the capital market than VVD's local councillors (right-wing political preferences) is actually true. I examine this hypothesis with the following probit model:

$$Pr\ (investing\ =\ 1) =\ \Phi(\beta_0 + \beta_1 PvdA + \beta_2 Trust + \beta_3 AEXexp +\ \beta_4 Education +$$
$$\beta_5 Risk + \beta_6 Randstad + \beta_7 Gender +\ \beta_8 Wealth +\ \beta_9 Income + \beta_{10} Age)$$

(5)

This Equation 5 is very similar to Equation 4. The dependent and all of the independent variables are the same as before, except the independent dummy variable for political party. In Equation 4, the independent dummy variable, named *CDA,* is 1 if the respondent is a local councillor of CDA and 0 if the respondent is a local councillor of D66. In Equation 4, this independent dummy variable is called *PvdA*. The dummy variable is 1 if the respondent is a PvdA local councillor and 0 if the respondent is a VVD local councillor. If the hypothesis that PvdA's local councillors are less likely to invest than D66's local councillors is accurate, then β_1 should be significant and negative based on my hypothesis that the probability that a respondent participates in the capital market decreases if the respondent is a local councillor of the PvdA instead of the VVD.

5.2.2 Ordinary Least Squares
In order to study the factors that influence defensive and indirect investment behaviour, I use OLS regressions. OLS are conceptually simple and computationally straightforward. The OLS method minimises the sum of squared residuals, and it leads to a closed-form expression for the estimated value of the unknown parameters β (Lai et al., 1978). In this case, the OLS method is appropriate because the dependent variables are continuous, freely obtaining any values between 0% and 100%. For example, trust could be used as one of the explanatory variables for defensive investment behaviour. If the coefficient for trust turns out to be positive, it means that the more trusting the respondent is, the more likely he or she is investing defensively.

A t-statistic is provided for each coefficient to observe the difference between the statistically significant and insignificant coefficients. The coefficient R^2 is used to assess the explanatory power of the entire regression equation. The higher the value of R^2, the higher the explanatory power of the regression.

5.2.2.1 Defensive investment behaviour and political preferences

I ran two OLS regressions models to observe the defensive investment behaviour of the CDA's local councillors in comparison to the D66's local councillors and the defensive investment behaviour of PvdA's local councillors in comparison to the VVD's local councillors.

In the first OLS regression model, I test the following hypothesis: Of those local councillors who invest, CDA's councillors will invest more defensively in comparison to D66's councillors. Since this regression only focuses on those who invest, I create a subsample that only consists of those who invest, regardless whether they are CDA or D66 councillors. I examine this hypothesis with the following OLS model, using the previously specified subsample:

$$y = \beta_0 + \beta_1 CDA + \beta_2 Trust + \beta_3 AEXexp + \beta_4 Education + \beta_5 Risk + \beta_6 Randstad + \beta_7 Gender + \beta_8 Wealth + \beta_9 Income + \beta_{10} Age + \epsilon \tag{6}$$

where y is the continuous dependent variable represents the defensive investment behavior of the respondent. In words of variables, Equation 6 is very similar to Equation 4. All of the independent variables still represent the same measures. however, this subsample only consists of those CDA and D66 local councillors who invest in the capital market. Besides, this regression contains an error term (ϵ). The dependent variable defensive investment behaviour is measured with the following equation:

$$Defensive\ investment\ behavior = (obligations)/(obligations + stocks) \tag{7}$$

Obligations represent the percentage of investments in obligations in comparison to funds and stocks. *Stocks* represent the percentage of investments in stocks in comparison to funds and obligations. If the hypothesis that for those who invest holds, then CDA's local councillors should be more likely to invest defensively than D66's local councillors, and β_1 should be significant. Moreover, the coefficient should be positive; I hypothesise that if a respondent invests, the probability that the respondent invests more defensively increases if the respondent is a CDA rather than a D66 councillor.

Similarly, to the previous OLS regression model, I test the following hypothesis: Of those local councillors who invest, PvdA's councillors will invest more defensively in comparison to VVD's local councillors. Also similarly to the previous OLS regressions, I create a subsample that only consists of those who invest, irrespective whether they are local councillors of PvdA or VVD. I examine this hypothesis with the following OLS model, using the previously specified subsample:

$$y = \beta_0 + \beta_1 PvdA + \beta_2 Trust + \beta_3 AEXexp + \beta_4 Education + \beta_5 Risk + \beta_6 Randstad + \beta_7 Gender + \beta_8 Wealth + \beta_9 Income + \beta_{10} Age + \epsilon \tag{8}$$

Equation 8 is very similar to Equation 6; the only difference is the dummy independent variable related to political party choice. In Equation 6, the independent dummy variable, named *CDA,* is 1 if the respondent is a local CDA councillor and 0 if the respondent is a local D66 councillor. In Equation 8, this independent dummy variable is called *PvdA*. The dummy variable is 1 if the respondent is a local PvdA councillor and 0 if the respondent is a local VVD councillor. Defensive investment behaviour is measured as described in Equation 7. If the hypothesis is correct that in terms of those who invest, PvdA's local councillors are more likely to invest defensively than VVD's local councillors, then β_1 should be significant. In addition, the coefficient should be positive given the following hypothesis: If a respondent invests, the probability that the respondent invests more defensively increases if the respondent is local councillor of PvdA rather than VVD.

5.2.2.2 Indirect investment behaviour and political preferences

I also run two OLS regression models to observe indirect investment behaviour: first, the CDA's local councillors in comparison to the D66's local councillors, and second, the PvdA's local councillors in comparison to the VVD's local councillors.

In the first OLS regression model, I test the hypothesis that for those local councillors who invest, CDA's councillors will invest more indirectly in comparison to D66's councillors. Since this regression only focuses on those who invest, I again use a subsample; it consists only of those CDA and D66 councillors who invest. This hypothesis is tested with the following OLS model:

$$y = \beta_0 + \beta_1 CDA + \beta_2 Trust + \beta_3 AEXexp + \beta_4 Education + \beta_5 Risk + \beta_6 Randstad + \beta_7 Gender + \beta_8 Wealth + \beta_9 Income + \beta_{10} Age + \epsilon \tag{9}$$

Equation 9 is very similar to Equation 6. All of the independent variables represent the same measures, and the subsample is the same. However, the dependent variable, y, represents the indirect investment behaviour of the respondent. The indirect investment behaviour is measured with the following equation:

$$Indirect\ investment\ behavior = (funds)/(funds + \ obligations + stocks) \tag{10}$$

Here, *funds* represent the percentage of investments in funds in comparison to obligations and stocks. *Obligations* represent the percentage of investment in obligations in comparison to funds and stocks. *Stocks* represent the percentage of investments in stocks in comparison to funds and obligations. If the hypothesis is correct that in terms of those who invest, CDA's local councillors are more likely to invest indirectly than D66's local councillors, then β_1 should be significant. Moreover, the coefficient should be positive based on the following hypothesis: If a respondent invests, the probability that the respondent invests more indirectly increases if the respondent is local CDA councillor rather than a local D66 councillor.

Similar to the previous regression, I test the hypothesis that for those local councillors who invest, PvdA's local councillors will invest more indirectly in comparison to VVD's local councillors. Since this regression only focuses on those who invest, I again use a subsample consisting only of those who invest. This hypothesis is tested with the following OLS model:

$$y = \beta_0 + \beta_1 PvdA + \beta_2 Trust + \beta_3 AEXexp + \beta_4 Education + \beta_5 Risk + \beta_6 Randstad + \beta_7 Gender + \beta_8 Wealth + \beta_9 Income + \beta_{10} Age + \epsilon \tag{11}$$

Equation 11 is very similar to Equation 9 except the variable related to the political party of the local councillor. In Equation 9, this independent dummy variable is called *CDA*. In Equation 11, it is called *PvdA*. The dummy variable is 1 if the respondent is a PvdA local councillor and 0 if the respondent is a VVD local councillor. The hypothesis predicts that PvdA's local councillors are more likely to invest indirectly than VVD's local councillors. If

this hypothesis is correct, β_1 should be significant and the coefficient should be positive, since I hypothesis that if a respondent invests, the probability that he or she invests more indirectly increases if the respondent is local councillor of PvdA as opposed to VVD.

5.2.3 Model testing

To conduct these probit and OLS models, a number of diagnostics tests should be performed to verify if the regression meets the underlying assumptions. If it does not, I will suggest a method to overcome these problems.

The assumption of homoscedasticity (meaning 'same variance') is central to linear regression models. For its part, heteroscedasticity occurs when the variance of the error terms differs across observations; the variance of the errors is no longer constant. The existence of heteroscedasticity is a major concern in the application of regression analysis, including the analysis of variance, as it can invalidate statistical tests of significance that assume that the modelling errors are uncorrelated and uniform.

For OLS, the Breusch-Pagan test is designed to detect any linear form of heteroscedasticity. There is a substantial amount of heteroscedasticity if the p value of the Breusch-Pagan test are lower than alpha (of, for example, 5%), so the hypothesis of constant variances is rejected. If we observe heteroscedasticity, we should use generalised least squares (GLS). This is an extension of the OLS method that allows an efficient estimation of the β parameter when heteroscedasticity is present (Williams, 2015).

For the probit model, heteroscedasticity is nearly impossible to detect as there are almost infinitive number of possibilities. Stata is not capable of running these numerous of tests. Moreover, if heteroscedasticity could be detected, all solutions are too sensitive (Williams, 2009). Hence, I will not test the probit models for heteroscedasticity.

With probit and OLS models, it is assumed that there is little or no multicollinearity in the data. This means that the independent variables are not highly correlated with each other. In practice, there may be a strong or nearly strong linear relationship among explanatory variables. For example, wealth and income could be strongly correlated. Thus, an independence assumption of explanatory variables is no longer valid, which causes a problem of multicollinearity. In the presence of multicollinearity, the OLS and probit estimators could become unstable, which leads to poor prediction and wrong inference about model parameters (Kibria and Banik, 2016).

To test the degree of multicollinearity, I determine the size of the variance inflation factor (VIF). This factor provides an index that measures how much the variance (the square of the estimate's standard deviation) of an estimated regression coefficient is increased because of collinearity. A rule of thumb is that if VIF is greater than 10, then multicollinearity is high (Kutner et al., 2004).

Ridge regression is a technique used when the data suffers from multicollinearity. By adding a degree of bias to the regression estimates, ridge regression reduces the standard errors. The ridge regression has also been used in probit regressions to stabilise the estimates in cases of multicollinearity (Shen and Gao, 2008).

Another assumption behind the regression is that the errors in the regression have a conditional mean of 0, which means that the errors have a mean of 0 and that the regressions are uncorrelated with the errors. This is called exogeneity (Hayashi, 2000, p. 7). When there is no exogeneity, a problem of endogeneity occurs. Two common causes of endogeneity are 1) an uncontrolled confounder influences both independent and dependent variables of a model, and 2) a loop of causality between the independent and dependent variable of a model (Wooldridge, 2013). Fortunately, I believe the probability of endogeneity is very small. As I did a thorough research of possible factors that could influences capital market participation and included those in the models, I suppose that there is no uncontrolled confounder. Besides, I assume participate in capital market does not influences political colour, education, trust, location, risk attitude, income and wealth significantly. Capital market participation could influence expected return, however results indicates that expected return and capital market participation are not strong correlated. Hence, I assume a loop of causality between the independent variables and stock market participation is unlikely.

6. Results

The presentation of the results is divided into four sections. In the first one, I compare investors with non-investors. In the second section, I test my hypothesis by examining whether political party choice influences capital market participation. Afterwards, I test the hypothesis that political party choice influences defensive investment behaviour. Lastly, I investigate if political party influences indirect investment behaviour.

6.1 Compare investors and non-investors

In this section, I compare the respondents who had participated in the capital market to those who had not. I use the independent samples t-test and chi-squared test. This enables me to show the characteristics in which the investors differ from the non-investors.

In Table 5, I run an independent samples t-test for all continuous variables, that is, age, risk attitude, expected return, wealth and income, to observe differences among investors and non-investors. For all other types of variables, I use a chi-squared test.

Table 5. Independent samples t-test

In this table, it is tested whether the average investor differs from the average non-investor on the characteristics received from the continuous type questions. In the group Investors, the respondents have invested either in stocks, obligations or funds. In the group Non-investors, all the respondents who have not invested are included. On the left side of the table, age was reported as a number value by the respondents. Expected return was reported as the expected return of the AEX end 2017. Risk attitude was reported with a scale (0-10). Income and wealth were reported as open questions, where income is reported as gross income and wealth includes property, disregards of a mortgage. The differences in means are presented on the right side of the table. *, **, and *** represent significance on the 5%, 1%, and 0,1% levels, respectively.

	Investors		Non-investors		
	Mean	Standard deviation	Mean	Standard deviation	Difference in means
Expected return[4]	8.20	4.64	8.18	5.94	0.025
Risk attitude	5.18	2.06	4.43	2.05	0.753***
Age	53.55	11.56	49.85	13.16	3.698**
Gross Income	3,685	2,085	3,263	1,621	421,801*
Gross Wealth[5]	545, 851	87, 056	357, 535	458, 588	188,315*

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[4] Expected return does not satisfy the assumption of equal standard deviation. I therefore conducted the welch t-test, which results are displayed in table 5.

[5] Wealth does not satisfy the assumption of equal standard deviation. I therefore conducted the welch t-test, which results are displayed in table 5.

In line with observations from descriptive statistics Table 2 and correlation matrix Table 4, the above Table 5 shows that investors have, on average, a significantly higher risk attitude, age, gross income and gross wealth. All of these results are quite intuitive to understand. As capital market participation is riskier, investors have a higher risk attitude. Vissing-Jørgensen (2002) demonstrated that households which do not participate in the capital market are more risk averse than market participants are. Furthermore, investors have, on average, a significantly higher income and significantly higher wealth. The logic behind this relationship is the fixed costs involved with capital market participation: Wealthier and higher income households have more to invest. As a result, the fixed cost is less of a hurdle for them (Vissing-Jørgensen, 2002). In the correlation matrix, we observed that a higher age is related to higher wealth, and therefore, investors might have, on average, a higher age. The difference between investors and non-investors concerning expected return remains not significant, although research by Arrondel et al. (2014) indicated that the expectations of a higher capital return results in a higher expected benefit of capital market participation.

Regarding the categorical variables, I used the chi-squared test for independence to see whether the distributions of categorical variables differ from one another. More specifically, it tested if the investor group distribution differed significantly in comparison with the non-investors in terms of a particular characteristic. The characteristics I investigated with the chi-squared test were all of the categorical variables, namely political party, gender, education, trust and the Randstad. These results are presented in the table below.

Table 6. Chi-square test for independence

In this table, it is tested whether the average investor differs from the average non-investor on the characteristics received from the categorical type questions. The digit in the cells represent the number of observations for a category split into investors and non-investors. The digit between brackets represent the expected number of observations for a category split into investors and non-investors, determined with formula 2. In the group Investors, the respondents have invested either in stocks, obligations or funds. In the group Non-investors, all the respondents who have not invested are included. On the left side of the table, the political dimension conservative versus progressive is reported as CDA (conservative) or D66 (progressive). The political dimension left-wing – right-wing is reported as PvdA (left-wing) or VVD (right-wing). Education is reported by six categories: WO;HBO;MBO;HAVO or VWO; VMBO; No education or elementary school. Another questions concerning the location of the respondents, which is divided into the 'Randstad' or 'Non-Randstad'. Gender is reported as a choice between female or male. Furthermore, trusting means that the respondent has indicated being generally trusting towards other people. *, **, and *** represent significance on the 5%, 1%, and 0,1% levels, respectively, for the Chi-square test for independence, displayed in the right column.

	Investors	Non-investors	Chi-square statistic
Conservative versus progressive			14.5015***
CDA	34 (48.15)	118 (103.85)	
D66	49 (34.85)	61 (75.15)	
Left-wing versus right-wing			10.7346***
PvdA	14 (24.56)	68 (57.44)	
VVD	48 (37.44)	77 (87.56)	
Education			11.2239*
No education	0 (0.62)	2 (1.38)	
VMBO	1 (2.79)	8 (6.21)	
HAVO and VWO	7 (8.37)	20 (18.63)	
MBO	7 (13.63)	37 (30.37)	
HBO	53 (55.15)	125(122.85)	
WO	77 (64.44)	131 (143.56)	
Randstad			1.7578
Randstad	49 (43.21)	90 (95.79)	
Outside the Randstad	71 (76.79)	176(170.21)	
Gender			2.1162
Male	116(109.75)	239(245.25)	
Female	29 (35.25)	85 (78.75)	
Trust			2.3234
Yes	126(120.16)	261(266.84)	
No opinion	7 (9.31)	23 (20.69)	
No	12 (15.53)	38 (34.47)	

The chi-squared test suggests that our previous observation that the political dimension of conservative versus progressive has a significant influence on capital market participation was accurate. For example, the number of CDA local councillor investors is significantly lower than expected. The chi-squared test strengthens our assumption that the political dimension of left-wing versus right-wing has an impact on capital market participation, as significantly more PvdA local councillors do not participate in the capital market than expected. Hence, these findings support my hypothesis that local councillors with conservative (CDA) or left-wing (PvdA) political preferences are less likely to invest compared with local councillors with progressive (D66) or right-wing (VVD) political preferences.

The chi-squared test also indicates that the education level differs between the investor and non-investor group. The education level of investors is higher than expected. This is in line with previous research by Van Rooij et al. (2011). One explanation for this phenomenon is that education reduces the fixed costs of participating by laying a foundation which allows would-be investors to more readily understand capital market aspects, thus reducing information costs (Hong et al., 2004). Surprising, gender and trust do not differ significantly among the investor and non-investor group.

Overall, based on the independent samples t-test and chi-squared test for independence, we can conclude that for most characteristics (education, income, wealth and risk attitude), the collected data show patterns concerning investment behaviour which are similar to those in previous findings. This means that we could assume that the data have a certain degree of credibility.

6.2 The determinant factors for capital market participation

This section focusses on finding the factors which actually determine capital market participation in my sample. I investigate if CDA's local councillors (with conservative political preferences) participate less in the capital market than D66's local councillors (with progressive political preferences) do and if the PvdA's local councillors (with left-wing political preferences) participate less in the capital market than VVD's local councillors (with right-wing political preferences) do. Afterwards, I divide the respondents into smaller subsamples to see whether the factors determining participation differ from one group of people to the next.

6.2.1 Probit regressions

As discussed in the previous chapter, I used probit regression models. The dependent variable was the dummy variable of investing, where if a local councillor participated in the capital market in the form of funds, obligations or stocks, the dummy variable was 1, and otherwise, the dummy variable was 0. The political party choice was part of the set of explanatory variables, which also consisted of trust, capital market expectations, age, gender, education, the Randstad, wealth and income. I ran eight probit regressions with investing as the dependent variable.

In the first four, only the local councillors of CDA and D66 were included in the regressions to test the conservative-versus-progressive hypothesis. If a local councillor was from CDA, the variable number was 1. For a local councillor from D66, the variable number was 0. The coefficient of political party choice (CDA vs. D66) with investing as the dependent variable had to be significant and negative to conform with the hypothesis. It is important to note that a substantial number of the respondents refused to report their locations and/or their wealth or income due to privacy reasons. This reduced the number of observations. As having more respondents was naturally preferable, I decided to ran four probit regressions, with and without the answers related to location, wealth and income to affect the number of observations. The first one was with political party, expected return, risk attitude, trust, gender and education. This resulted in 212 observations. Afterwards, I added the Randstad variable. This reduced the number of observations to 175, as some respondents believed that adding their locations would reduce the anonymity of the questionnaire. Third, I added wealth variable and income variable but deleted the Randstad variable. This resulted in 147 observations. Lastly, I added all of the dependent variables, which resulted in 121 observations.

This table examines the determinants of capital market participation among local councillors of CDA and D66. The four probit regressions displayed vary due to the number of dependent variables. The dependent variable investing expresses if the respondent holds stock, obligations and/or funds. The dummy variable CDA is 1 if the respondent is a CDA local councillor and 0 if the respondent is a D66 local councillor. Expected return was reported as the expected return of the AEX end 2017. Risk attitude is the self-reported risk attitude of the respondents with a scale from 0 to 10. The trust variable indicates if the respondent has indicated being generally trusting towards other people. Gender is a dummy variable with female (0) and male (1). The age variable represents the age of the respondent. Level of education is reported by six categories: WO;HBO;MBO;HAVO or VWO; VMBO; No education or elementary school. The Randstad variable expresses if the respondent lives in the Randstad, which consists of the provinces: Utrecht, Noord-Holland and Zuid-Holland. Income and wealth were reported as open questions, where income is reported as gross income and wealth includes property, disregards of a mortgage. The z-statistics are in parentheses below the coefficients. *, **, and *** represent significance on the 10%, 5%, and 1% levels, respectively.

	Dependent variable: Investing			
	(1)	(2)	(3)	(4)
CDA	-0.4199**	-0.4545**	-0.4730**	-0.4613
	(-2.13)	(-2.00)	(-2.00)	(-1.64)
Expected return	-0.0037	-0.0182	0.0074	0.0030
	(-0.17)	(-0.72)	(0.30)	(0.10)
Risk attitude	0.2068***	0.2290***	0.2059***	0.2421***
	(4.26)	(4.09)	(3.51)	(3.55)
Trust	0.1655	0.1242	0.3569*	0.2072
	(1.02)	(0.68)	(1.76)	(0.96)
Gender	0.0971	0.1407	-0.0813	0.1039
	(0.36)	(0.44)	(-0.21)	(0.21)
Age	0.0256***	0.0272***	0.0309***	0.0364***
	(3.22)	(3.11)	(2.94)	(3.13)
Education	0.2992***	0.2525**	0.3350***	0.3151**
	(2.89)	(2.21)	(2.63)	(2.32)
Randstad		0.0036		0.1079
		(0.01)		(0.36)
Income			-0.0001	-0.0002
			(-0.79)	(-1.43)
Wealth			-0.0000	0.0000
			(-0.18)	(-0.34)
Constant	-4.3787***	-4.1883***	-2.5523**	-2.4621**
	(-4.59)	(-4.01)	(-2.63)	(-2.57)
Mc Fadden R^2	0.1627	0.1754	0.1877	0.2084
N	212	175	147	121

Table 7 presents the results of the probit regressions, where the dependent variable takes the value of 1 if the respondent in question has participated in the capital market, and the value of 0 otherwise. The Mc Fadden R^2 indicates that the independent variables are able to explain capital market participation to a certain degree. In comparison, the research by Kaustia and Torstila (2011) concerning stock market participation and political preferences was only able to reach a Mc Fadden R^2 of 0.11, whereas this model has an explanatory power of 0.21. Furthermore, we see that more variables result in a higher Mc Fadden R^2. Multicollinearity is not detected for every probit regression.

The CDA dummy variable is used to explain capital market participation. The table displays that the CDA dummy has explanatory power; however, it is not the most essential component of any of the equations. The explanatory power of the CDA dummy decreases if the wealth, income or Randstad variables are added to the equation. An explanation might be that the number of observation drops, and therefore, the power of the CDA dummy drops. Another explanation might be that the correlation between the Randstad variable and the CDA dummy, which was observed in the correlation matrix, reduces the explanatory power. In conclusion, the CDA dummy, and therewith conservative political preferences, reduces the probability of a respondents to participate in the capital market, but other independent variables are more essential. Furthermore, the explanatory power of the CDA dummy decreases if the Randstad, wealth and/or income are added to the equation.

A further look at the table reveals that the factors which most increase the probability of a respondent's being an investor are being willing to take risks, being older and being more highly educated. Being willing to take risks especially results in a higher probability of participation in the capital market. Research by Vissing-Jorgensen (2002) already indicated that households indeed do not participate in the capital market due to risk aversion. Education is an important factor because education reduces the fixed costs of participating by laying a foundation which allows would-be investors to more readily understand capital market aspects, thus reducing information costs (Hong et al., 2004). The impact of age is more unexpected. Previous literature was unable to make a clear connection between age and capital market participation as a higher age normally results in a higher wealth but also in a higher risk aversion.

Trust affects capital market participation at a significant level only in equation 3, where income and wealth are included. The data suggest that more trusting respondents appear to be more likely to invest in the capital market. The reasoning behind this is that in deciding whether to invest, investors factor in the risk of being cheated (as in the cases of Enron or Imtech). The perception of this risk is a function of the objective characteristics of the stocks and the subjective characteristics of the investor. Less trusting individuals are less likely to invest. However, in these regressions, the relationship is not significant in every equation, so no strong conclusion could be derived from this relationship.

Unexpected is that the gender dummy does not have explanatory power for every equation. In previous research, gender played a significant role in capital market participation. Women are less likely to invest than men are. Several explanations exist for this, such as the fact that men are more risk seeking, more overconfident and more financially literate on average (Barber and Odean, 2001; Almenberg and Dreber, 2015). An explanation for the difference between the observations made in this research and previous research might be that the population of local councillors is notably different from the population used in previous research concerning capital market participation. For example, Almenberg and Dreber (2015) used survey data on a random sample of 1,300 individuals that is representative of the Swedish population. In the population of the local councillors, almost a 75 percent are male. This is a remarkable difference from an equally divided population in gender terms. This might influence the results.

Also unexpected is that income and wealth have no significant effect on investing. The previous literature indicated that wealth and income are important factors in capital market participation. The logic behind this relationship is the fixed costs involved with capital market participation: Wealthier households have more to invest. As a result, the fixed cost is less of a hurdle for them. Income is closely related to wealth, and both significantly increase the probability of owning stocks, according to numerous studies (Luotonen, 2009).
Now, it must be recalled that the current research was conducted among local councillors. This is not a real reflection of the Dutch population. Overall, local councillors have higher incomes and higher wealth than the average Dutch citizen has. This could influence the impact which wealth and income have on capital market participation among local councillors.

Expected return also have no significant effect on capital market participation in all four equations. In previous research, expected return had an effect on stock market participation, as

the expectation of a higher capital return results in a higher expected benefit of capital market participation (Arrondel et al., 2014). However, in my sample, expected return are not a factor in relation to capital market participation. The table also suggests living in the Randstad or not plays no significant role in capital market participation. Previous research concerning this variable has not yet been conducted.

In the second probit model, only the local councillors of the PvdA and VVD were included, in line with the left-wing–versus–right-wing hypothesis. If a local councillor was from the PvdA, the variable number was 1. For a local councillor from VVD, the variable number was 0. In this case, the coefficient of the political party choice also needed to be significant and negative to conform with the hypothesis. I, again, ran four regressions, as again a substantial number of the respondents refused to report their locations and/or their wealth or incomes for privacy reason, which effect the number of respondents. The first one was with political party, expected return, risk attitude, trust, gender and education. This resulted in 172 observations. Afterwards, I added the Randstad. This reduced the number of observations to 143. Third, I added wealth and income but deleted the Randstad. This resulted in 125 observations. Lastly, I added all of the dependent variables, which resulted in 104 observations.

Table 8. Probit model explaining capital market participation among local councillors of PvdA and VVD

This table examines the determinants of capital market participation among local councillors of PvdA and VVD. The dependent variable investing expresses if the respondent holds stock, obligations and/or funds. The dummy variable PvdA is 1 if the respondent is a PvdA local councillor and 0 if the respondent is a VVD local councillor. Expected return was reported as the expected return of the AEX end 2017. Risk attitude is the self-reported risk attitude of the respondents with a scale from 0 to 10. The trust variable indicates if the respondent has indicated being generally trusting towards other people. Gender is a dummy variable with female (0) and male (1). The age variable represents the age of the respondent. Level of education is reported by six categories: WO;HBO;MBO;HAVO or VWO; VMBO; No education or elementary school. Income and wealth were reported as open questions, where income is reported as gross income and wealth includes property. The randstad variable expresses if the respondent lives in the Randstad. The z-statistics are in parentheses below the coefficients. *, **, and *** represent significance on the 10%, 5%, and 1% levels, respectively.

	Dependent variable: Investing			
	(1)	(2)	(3)	(4)
PvdA	-0.9148***	-0.8913***	-0.8422**	-0.7924**
	(-3.99)	(-3.46)	(-2.96)	(-2.51)
Expected return	-0.0175	-0.0175	-0.0115	-0.0133
	(-0.92)	(-0.75)	(-0.50)	(-0.47)
Risk attitude	0.0652	0.0409	0.0219	-0.0051
	(1.23)	(0.71)	(0.34)	(-0.07)
Trust	0.2258	0.2384	0.2580	0.2600
	(1.56)	(1.35)	(1.36)	(1.27)
Gender	0.0518	0.1104	-0.0644	0.0516
	(0.21)	(0.42)	(-0.21)	(0.15)
Age	0.0222**	0.0256**	0.0118	0.0126
	(2.31)	(2.40)	(1.02)	(0.99)
Education	0.2354*	0.2463*	0.2733	0.3108
	(1.85)	(1.70)	(1.53)	(1.58)
Randstad		0.0061		0.1055
		(0.03)		(0.37)
Income			0.0001	0.0000
			(1.08)	(0.66)
Wealth			0.0000**	0.0000*
			(2.00)	(1.74)
Constant	-3.1067***	-3.2392***	-3.0168**	-3.1728**
	(-3.05)	(-2.83)	(-2.37)	(-2.27)
Mc Fadden R^2	0.1127	0.1120	0.1541	0.1447
N	172	143	125	104

Table 8 presents the results of the probit regressions, where the dependent variable takes the value of 1 if the respondent in question has participated in the capital market, and the value of 0 otherwise. The Mc Fadden R^2 of 0.1541 indicates that the independent variables are able to explain capital market participation to a certain degree. The probit regressions displayed in Table 8 are to a lesser extent able to explain the capital market participation when compared with the probit regressions in Table 7. This might be the result of fewer observations. Furthermore, we see that the explanatory power of the model decreases if the variable of the Randstad is added. In addition, in these regressions, multicollinearity is not detected.

In this model, the PvdA dummy variable is used to explain capital market participation. In this case, the explanatory power of the PvdA dummy is rather strong. Moreover, it is the most essential component of any of the variables. This indicates that, as expected, the probability of capital market participation strongly drops if a participant is a local councillor of the PvdA (left-wing) instead of VVD (right-wing). Similar to the probit regressions with CDA, the explanatory power of the PvdA dummy decreases if the wealth, income or Randstad variables are added to the equation. An explanation might be, again, that the number of observations drops, and therefore, the power of the PvdA dummy decreases. Another explanation might be that the correlation between the wealth variable and the PvdA dummy, which was observed in the correlation matrix, reduces the explanatory power of the PvdA dummy.

In comparison with the regressions in Table 7, the explanatory power of the previous significant variables decreases. Education and age coefficients are still significant but only in regressions where wealth and income are not included. Risk attitude coefficients are no longer significant in any regression. The risk attitude coefficient remains even insignificant if I exclude the PvdA dummy. The main reason lies in the sample and does not depend on the PvdA dummy.

In these regressions, wealth has a significant effect on investing, which is reasonable because wealthier local councillors have more to invest, so the fixed costs are less of a hurdle for them. Income remains insignificant. Similar to the regressions with the CDA dummy, expected return and the Randstad have no effect on capital market participation in all four equations.

Overall, we can conclude that both the probit models support the hypothesis that local councillors of CDA (conservative political preferences) and PvdA (left-wing political preferences) are less likely to participate in the capital market than local councillors of D66 (progressive political preferences) and VVD (right-wing political preferences). Especially, the effect in the left-wing-right-wing political dimension is strong.

6.2.2 Subsample analysis

In this section, I divide the respondents into different subsamples to see whether the same factors determine participation for seemingly different people. It especially enables me to observe if the important variables in the full sample remain as powerful in the subsamples. Even though the sample sizes might become small, some interesting patterns can be seen.

I ran a two subsample analysis with a different data set. In the first subsample analysis, the data consisted solely of local councillors of CDA and D66. This enabled me to investigate the effect of the political dimension of conservative (CDA) versus progressive (D66) in the different subsamples. In the second subsample analysis, the data consisted of PvdA and VVD local councillors. In this sample, the political dimension of left-wing (PvdA) versus right-wing (VVD) can be further investigated in different subsamples.

In the first subsample analysis, with only the local councillors of CDA and D66, the subsamples I investigated were (1) the ones with higher or median incomes and the ones with an income lower than the median, (2) the ones with higher and median wealth and the ones with lower wealth than the median, (3) the ones with higher and median expected return and the ones with a lower than the median expected return and (4) the ones living in the Randstad and those outside of the Randstad. I did not include gender; as the female group was so small, conclusions could not be derived from these data. In this subsample, I focussed on the CDA dummy, risk attitude, age and education. Because these variables had (sometimes) a significant influence on capital market participation, I thought it would be interesting to see if the influence of these variables changed in different subsamples. Even though the sample sizes became small, some interesting patterns can be seen. For ease of presentation, I now summarise the results, reporting only the coefficients of specific interest for each equation. However, all of the control variables listed in Table 9 were included in each equation.

Table 9. Summarized results of subsample regressions with CDA and D66 local councillors
This table provides a summary of the determinants of capital market participation in different subsamples, only partly reporting the equations. The dependent variable takes the value of 1 if the respondent has participated in the capital market, and 0 otherwise. The CDA dummy variable is 1 if the respondent is CDA and 0 if the respondent is D66. Risk attitude is the self-reported risk attitude of the respondents with a scale from 0 to 10. The age variable represents the age of the respondent. Level of education is reported by six categories: WO;HBO;MBO;HAVO or VWO; VMBO; No education or elementary school. Other factors controlled for in each equation are expected return, trust, randstad, income, and wealth. The z-statistics are in parentheses below the coefficients. *, **, and *** represent significance on the 10%, 5%, and 1% levels, respectively.

| | Dependent variable: Investing | | | | | |
	CDA	Risk attitude	Age	Education	N	McFadden R^2
Income						
Below median	-0.0982 (-0.21)	0.4108*** (3.25)	0.0494** (2.34)	0.5700** (2.47)	53	0.3319
Median or above	-0.7224* (-1.85)	0.1634* (1.87)	0.0305* (1.93)	0.2560 (1.14)	68	0.1979
Wealth						
Below median	-0.5458 (-1.18)	0.3890*** (2.71)	0.0704*** (2.83)	0.2556 (1.04)	47	0.3383
Median or above	-0.4871 (-1.20)	0.2250*** (2.58)	0.0192 (1.20)	0.3105 (1.49)	68	0.1867
Expected return						
Below median	-0.5967 (-1.09)	0.2751** (2.15)	0.0284 (1.36)	0.3356 (1.16)	44	0.1566
Median or above	-0.3557 (-0.97)	0.2233** (2.45)	0.0416*** (2.74)	0.2772 (1.64)	74	0.2595
Location						
Randstad	-0.5637 (-1.02)	0.1101 (0.95)	0.0464* (1.69)	0.4431 (1.12)	36	0.2309
Outside Randstad	-0.5544 (-1.42)	0.3031*** (3.14)	0.0354** (2.50)	0.2754 (1.60)	80	0.1960

In Table 9 is shown how each of the four variables predicts capital market participation in a given subsample. According to Table 9, the influence conservative political preferences is significant only for respondents with higher wealth than the median. In all other subgroups, the CDA dummy variable is not significant. The variable remains consistently negative for all subgroups. Thus, it seems to be a consistent predictor of capital market participation; however, the coefficient in most cases is not significant. The small sample size in the subsamples might be an important factor influencing the significance of the coefficient.

The variable of risk attitude is significant in every subgroup except for the respondents inside the Randstad. Moreover, the coefficient is in every subsample positive, which means that in every subgroup, a higher risk attitude leads to a higher probability of capital market participation. These results suggest that risk attitude is an important and consistent factor in

explaining capital market participation among CDA and D66 local councillors in groups with different characteristics.

The age variable is consistently positive for every subgroup. However, the size of the z-statistic changes in the different subgroups. It is not significant for respondents who have low expected returns, have higher than median wealth and live outside of the Randstad. In the full-sample analysis among CDA and D66 local councillors, age was significant at a p level of 0.01. These subsample analyses suggest that age is still an important factor, but not as strong as the full-sample analysis suggested, as its coefficient is not significant in a number of subgroups. In the previous literature, the effect of age in explaining capital market participation was unclear. It is interesting to observe that the effect of age is strong among the respondents with incomes and wealth below the median. This suggests that wealthier respondents and respondents with higher incomes would be more likely to participate in the capital market, regardless of age. For less wealthy respondents and respondents with lower incomes, age plays an important role in their decision to participate in the capital market.

The education variable is positive for every subgroup. However, although in the full sample the effect of education was significant in every probit regression, in the subsamples, the effect of education is significant only among the respondents with incomes below the median. The minor effect of education in the subsample analysis might stem from the small sample sizes.

In the second subsample analysis, only the answers of the local councillors of the PvdA and VVD are included in the subsample. The subsamples I investigated were (1) the ones with higher or median ages and the ones with below median ages, (2) the ones with higher and median risk attitudes and the ones with below median risk attitudes, (3) the ones with higher and median expected return and the ones with below median expected return, (4) males and females and (5) the ones living in the Randstad and those outside of the Randstad. In this subsample, I focussed on the PvdA dummy, education, income and wealth. Because these variables had (sometimes) a significant influence on capital market participation, I thought it would be interesting to see if the influence of these variables changed in different subsamples. Furthermore, unexpectedly, income was not significant. I therefore also observed income, although it was not significant in the full sample. I summarise the results reporting only the coefficients of the PvdA dummy, education, income and wealth, however, all of the control variables listed in Table 10 were included in each equation.

Table 10. Summarized results of subsample regressions with PvdA and VVD local councillors
This table provides a summary of the determinants of capital market participation in different subsamples, only partly reporting the equations. All specifications are probits where the dependent variable takes the value of 1 if the respondent has participated in the capital market, and 0 otherwise. The PvdA dummy variable is 1 if the respondent is PvdA and 0 if the respondent is VVD. Level of education is reported by six categories: WO;HBO;MBO;HAVO or VWO; VMBO or elementary school; Income and wealth were reported as open questions, where income is reported as gross income and wealth includes property, disregards of a mortgage. Other factors controlled for in each equation are expected return, risk attitude, trust, randstad, age and gender. The z-statistics are in parentheses below the coefficients. *, **, and *** represent significance on the 10%, 5%, and 1% levels, respectively.

| | Dependent variable: Investing | | | | | |
	PvdA	Education	Income	Wealth	N	McFadden R^2
Age						
Below median	-0.5894 (-1.25)	0.0163 (0.06)	0.0001 (1.25)	0.0000* (1.80)	56	0.2868
Median or above	-1.2400** (-2.34)	0.4418 (1.47)	-0.0001 (0.568)	0.0000 (1.40)	48	0.1716
Risk attitude						
Below median	-1.2290** (-2.29)	0.1412 (0.63)	-0.0001 (-0.63)	0.0000 (0.07)	45	0.1457
Median or above	-0.4554 (-1.02)	0.9762*** (2.68)	0.0002* (1.70)	0.000** (2.03)	60	0.2900
Expected return						
Below median	-0.5596 (-1.36)	0.1444 (0.59)	0.0000 (0.04)	0.000 (0.88)	59	0.0977
Median or above	-1.6112** (-2.22)	0.7039 (1.25)	-0.0001 (-0.66)	0.000** (2.17)	45	0.4025
Gender						
Male	-0.8416** (-2.26)	0.4221* (1.60)	0.0001 (0.94)	0.0000 (1.24)	79	0.1594
Female	-0.4765 (-0.65)	-0.2211 (-0.53)	-0.0000 (-0.09)	0.0000 (0.97	26	0.2780
Location						
Randstad	-1.4282** (-2.02)	0.3875 (0.90)	-0.0001 (-0.43)	0.0000* (1.89)	42	0.4022
Outside Randstad	-0.6170 (-1.47)	-0.6084 (1.79)	0.0001 (1.32)	0.0000 (0.54)	62	0.1394

According to Table 10, the influence of the characteristic of being left-wing (PvdA) is significant and negative for the respondents who are older than the median, who have lower risk attitudes than the median, who have higher expected returns than the median, who are male and who live in the Randstad. In every subsample, the sign is negative. This is in line with the hypothesis that PvdA local councillors are less likely to participate in the capital market compared with local councillors of VVD. Interestingly, the effect of the PvdA dummy is

significant in every subsample for one group. This suggests that political colour plays a role among groups with different characteristics; however, the effect is not strong enough that the coefficient is significant in every subsample, probably due to sample size. Furthermore, the PvdA dummy is significant in more subsamples than every other variable is. This result suggests that the PvdA dummy, and therewith political colour in the context of the left-wing-right-wing political dimension, is the most influential variable in explaining capital market participation.

In the full sample, education was significant only at a 0.10 p value in the probit regressions where wealth and income were not included. In the subsample analysis, we see that education has a (strong) significant effect on capital market participation only in the subsample with respondents with above-median risk attitudes. Apparently, a higher education plays a significant role in capital market participation only among respondents with high risk attitudes.

Income did not have a significant impact on capital market in the full-sample regressions, which contradicted the earlier literature (Vissing-Jorgensen, 2002). I therefore decided to see if income played a role in a particular subsample. Besides the subsample of respondents with above-median risk attitudes, income in the subsamples also has no significant impact on capital market participation. A reason for this phenomenon might be that local councilors have different incomes than the sample (US households) used in the study of Vissing-Jorgensen (2002). This could have resulted in different outcomes in this study.

In the regressions with the full sample, wealth had a significantly positive effect on capital market participation. In the subsample analyses, the coefficient of wealth is significant in the subsamples with respondents who have ages below the median, who have risk attitudes above the median, who have expected returns above the median and who are located in the Randstad. Furthermore, we see that the coefficient is positive in every subsample. These results suggest that wealth plays a significant role in capital market participation among groups with different characteristics.

6.3 The determinant factors for defensive investment behaviour
In this section, I explore the factors influencing defensive investment behaviour—more specifically, whether CDA's local councillor investors invest more defensively in comparison with D66's local councillors and if the PvdA's local councillors invest more defensively than

VVD's local councillors do. For this purpose, I ran OLS regressions, as the continuous dependent variable (defensive investment behaviour) could move freely.

In the first two regressions, I used only the information from the CDA and D66 councillors who invested in stock and/or obligations. I conducted a regression with defensive investment behaviour as the dependent variable, which was measured using formula 7. In the hypothesis, it was predicted that CDA's local councillors would invest more defensively; hence, the coefficient of political party choice would be significant and the sign positive. I ran two regressions, one without and one with wealth and income, as a significant number of the respondents refused to answer questions related to wealth and income for privacy reasons. This decreased the number of observations from 73 to 58. Among CDA and D66 local councillors who invest, adding the Randstad did not result in a reduction of observations.

Table 11. OLS model explaining defensive investment behaviour among local councillors of CDA and D66

This table examines the determinants of defensive investment behaviour among local councillors of CDA and D66. The two OLS regressions displayed vary due to the number of dependent variables. The defensive investing variable indicates the relative percentage of obligations a respondent holds in comparison to percentage of stocks. The dummy variable CDA is 1 if the respondent is a CDA local councillor and 0 if the respondent is a D66 local councillor. Expected return was reported as the expected return of the AEX end 2017. Risk attitude is the self-reported risk attitude of the respondents with a scale from 0 to 10. The trust variable indicates if the respondent has indicated being generally trusting towards other people. Gender is a dummy variable with female (0) and male (1). The age variable represents the age of the respondent. Level of education is reported by six categories: WO;HBO;MBO;HAVO or VWO; VMBO; No education or elementary school. The randstad variable expresses if the respondent lives in the Randstad, which consists of the provinces: Utrecht, Noord-Holland and Zuid-Holland. Income and wealth were reported as open questions, where income is reported as gross income and wealth includes property, disregards of a mortgage The t-statistics are in parentheses below the coefficients. *, **, and *** represent significance on the 10%, 5%, and 1% levels, respectively.

	Dependent variable: Defensive investing	
	(1)	(2)
CDA	8.2803	16.8450
	(0.81)	(1.46)
Expected return	-0.50171	-0.6463
	(-0.43)	(-0.49)
Risk attitude	-6.8949**	-6.5171**
	(-2.59)	(-2.26)
Trust	-3.2801	-6.8737
	(-0.35)	(-0.54)
Gender	-11.5288	-24.9973
	(-0.79)	(-1.37)
Age	0.1641	-0.0780
	(0.39)	(-0.15)
Education	-1.5456	1.6124
	(-0.30)	(0.27)
Randstad	11.6971	12.6971
	(1.17)	(1.37)
Income		-0.0006
		(-0.16)
Wealth		-0.0000
		(-0.22)
Constant	86.3601**	-3.2392***
	(2.32)	(-2.83)
R^2	0.1470	0.2130
N	73	58

59

Table 11 presents the results of the OLS regressions, where the dependent variable takes the value of the percentage distribution between obligations and stocks. The R^2 of 0.2130 indicates that the independent variables are able to explain the defensive investment behaviour to a certain degree. We see that the explanatory power increases if wealth and income are added to the equation. Multicollinearity is not detected for every OLS regression. Furthermore, the Cook-Weisberg test for heteroscedasticity indicates that the hypothesis of constant variance cannot be rejected.

Table 11 indicates that although local councillors of CDA are slightly more likely to display defensive investment behaviour—in other words, they hold relatively more obligations—the impact is not significant. I hypothesised that as CDA's local councillors are more conservative than D66's local councillors are; they will invest more save. In other words, they will hold relatively more obligations. The coefficient is not significant and therefore does not support this hypothesis (enough).

Furthermore, we see that risk attitude is the only significant factor that influences defensive investment behaviour in the conservative-versus-progressive sample. Risk attitude was also the most important factor in the previous regressions concerning capital market participation among CDA and D66 local councillors. That a higher risk attitude has a significantly negative influence on defensive investment behaviour appears to be logical, as more defensive investing is less risky and will therefore appeal to more risk-averse local councillors.

All other variables are not significant, although some variables should in theory affect defensive investment behaviour. A higher expected return of the AEX could result in a higher expected payoff of holding stocks and could therefore result in holding more stocks instead of obligations.

For some variables, it is reasonable to assume that they have no effect on defensive investment behaviour. Being more trusting could result in the belief that companies will not engage in any fraud. However, this type of reasoning applies to holding a percent of a company (stocks) just as it does to borrowing money to a company (obligations). Hence, it seems reasonable that this variable has no significant influence on defensive investment behaviour. In addition, for education, the Randstad, gender, income, wealth and age, no rationale exists for why it should affect defensive investment behaviour.

Afterwards, I ran four regressions with the PvdA and VVD councillors who invested. As in the previous regressions, defensive investment behaviour was measured with formula 7. In the hypothesis, it was predicted that the PvdA's local councillors invest more defensively; if the hypothesis is correct, the coefficient of political party is significant, and the sign is positive. I ran four regressions, as a substantial number of the respondents refused to report their locations and/or their wealth or incomes for privacy reasons. As more respondents are naturally preferable, I ran four OLS regressions with different number of observations. The first one was with political party, expected return, risk attitude, trust, gender and education. This resulted in 61 observations. Afterwards, I added the Randstad. This reduced the number of observations to 50. Third, I added wealth and income but deleted the Randstad. This resulted in 42 observations. Lastly, I added all of the dependent variables, which resulted in 35 observations.

Table 12. OLS model explaining defensive investing among local councillors of PvdA and VVD

This table examines the determinants of defensive investment behaviour among local councillors of PvdA and VVD. The four OLS regressions displayed vary due to the number of dependent variables. The defensive investing indicates the relative percentage of obligations a respondent holds in comparison to stocks.
The dummy variable PvdA is 1 if the respondent is a PvdA local councillor and 0 if the respondent is a VVD local councillor. Expected return was reported as the expected return of the AEX end 2017. Risk attitude is the self-reported risk attitude of the respondents with a scale from 0 to 10. The trust variable indicates if the respondent has indicated being generally trusting towards other people. Gender is a dummy variable with female (0) and male (1). The age variable represents the age of the respondent. Level of education is reported by six categories: WO;HBO;MBO;HAVO or VWO; VMBO; No education or elementary school. The Randstad variable expresses if the respondent lives in the Randstad, which consists of the provinces: Utrecht, Noord-Holland and Zuid-Holland. Income and wealth were reported as open questions, where income is reported as gross income and wealth includes property, disregards of a mortgage The t-statistics are in parentheses below the coefficients. *, **, and *** represent significance on the 10%, 5%, and 1% levels, respectively.

	Dependent variable: Defensive investing			
	(1)	(2)	(3)	(4)
PvdA	24.0218* (1.82)	17.5112 (1.15)	31.0273* (1.98)	26.5669 (1.45)
Expected return	-0.7347 (-0.61)	-0.8029 (-0.55)	-2.0635 (-1.61)	-2.1270 (-1.14)
Risk attitude	3.5539 (1.42)	3.0226 (1.04)	4.0608 (1.34)	2.5809 (0.66)
Trust	2.5239 (0.28)	10.2254 (0.98)	-2.6946 (-0.28)	3.1694 (0.27)
Gender	9.2716 (0.70)	-0.8221 (-0.05)	15.7032 (1.02)	4.7384 (0.26)
Age	-0.1564 (-0.29)	-0.2675 (-0.43)	0.9884 (1.45)	0.6402 (0.78)
Education	2.3371 (0.32)	2.0866 (0.26)	1.1630 (0.11)	-3.3048 (-0.25)
Randstad		-13.7745 (-1.08)		-13.5455 (-0.88)
Income			0.0013) (0.57	0.0016 (0.59)
Wealth			0.0000 (-0.90)	0.0000 (-0.48)
Constant	14.9692 (0.39)	28.1382 (0.65)	-35.0139 (-0.23)	-2.2379 (-0.04)
R^2	0.122	0.1488	0.2659	0.2222
N	61	50	42	35

Table 12 presents the results of the OLS regressions, where the dependent variable takes the value of the percentage distribution between obligations and stocks. The OLS regression has an explanatory power of 0.2659. We see that the explanatory power increases if wealth and income are added to the equation; however, it decreases if the Randstad, wealth and income variables are added. Multicollinearity is not detected for every OLS regression. Furthermore, the Cook-Weisberg test for heteroscedasticity indicates that the hypothesis of constant variance cannot be rejected.

Table 12 indicates that the hypothesis that the PvdA's local councillors invest more defensively than VVD's local councillors do is acceptable. The PvdA variable dummy has a significantly positive impact on defensive investment behaviour when the income and wealth variables are not added. Furthermore, the PvdA dummy is the only variable that has a significant effect on the defensive investment behaviour of local councillors. All other variables express no significant influence in all of the OLS regressions.

Some variables should have an effect on defensive investment behaviour, but these effects are not displayed in the above regressions. In the regressions in Table 10, contrary to the regressions in Table 9, risk attitude has no effect on defensive investment behaviour. However, more defensive investing is less risky and should therefore appeal to more risk-averse local councillors. Similarly, to Table 9, expected return play no role; however, as explained before, this situation would be expected.

As explained before, for some variables, it is reasonable to assume that they have no effect on defensive investment behaviour, namely trust, gender, education, the Randstad, income, wealth and age.

Overall, the results suggest that local councillors of CDA (conservative political preferences) and PvdA (left-wing political preferences) are more likely to exhibit defensive investment behavior than local councillors of D66 (progressive political preferences) and VVD (right-wing political preferences). However, in the conservative-progressive political dimension this effect is not significant and conclusions could therefore not be draw. In the left-wing-right-wing political dimension, the effect is significant at a p level of 0.1 in two of the four regressions. Hence, I could cautious conclude that the results support the hypothesis that PvdA local councillors invest more defensive than local councillors of VVD.

6.4 The determinant factors for indirect investment behaviour

Lastly, I study indirect investment behaviour among local councillors. More specifically, I investigate if CDA's local councillors invest more indirectly than D66's local councillors do and if the local councillors of the PvdA invest more indirectly than VVD's local councillors do.

In two regressions, I investigated the indirect investment behaviour among CDA and D66 local councillor investors. The indirect investment behaviour variable was measured with formula 10. In the hypothesis, it was predicted that CDA's councillors will invest more indirectly; hence, the coefficient of political party should be significant, and the sign should be positive. Note that the first regression was without wealth and income, as this affect the number of observations.

Table 13. OLS model explaining indirect investing among local councillors of CDA and D66
This table examines the determinants of indirect investment behaviour among local councillors of CDA and D66. The two OLS regressions displayed vary due to the number of dependent variables. The dependent variable indirect investing indicates the relative percentage distribution of funds in comparison to obligations and stocks. The dummy variable CDA is 1 if the respondent is a CDA local councillor and 0 if the respondent is a D66 local councillor. Expected return was reported as the expected return of the AEX end 2017. Risk attitude is the self-reported risk attitude of the respondents with a scale from 0 to 10. The trust variable indicates if the respondent has indicated being generally trusting towards other people. Gender is a dummy variable with female (0) and male (1). The age variable represents the age of the respondent. Level of education is reported by six categories: WO;HBO;MBO;HAVO or VWO; VMBO; No education or elementary school. The randstad variable expresses if the respondent lives in the Randstad, which consists of the provinces: Utrecht, Noord-Holland and Zuid-Holland. Income and wealth were reported as open questions, where income is reported as gross income and wealth includes property, disregards of a mortgage The t-statistics are in parentheses below the coefficients. *, **, and *** represent significance on the 10%, 5%, and 1% levels, respectively.

	Dependent variable: Indirect investing	
	(1)	(2)
CDA	7.9092*	9.3559*
	(1.82)	(1.76)
Expected return	-0.5226	-0.5433
	(-1.07)	(-0.91)
Risk attitude	-1.2057	-1.3045
	(-1.07)	(-0.99)
Trust	-0.9549	1.4771
	(-0.24)	(0.25)
Gender	6.5868	8.2839
	(1.06)	(0.98)
Age	0.2986*	0.1593
	(1.68)	(0.68)
Education	1.1073	0.6748
	(0.50)	(0.25)
Randstad	2.5382	2.3272
	(0.48)	(0.42)
Income		-0.0021
		(-1.16)
Wealth		0.0000
		(1.38)
Constant	-7.4812	-3.2392***
	(-0.47)	(-2.83)
R^2	0.1558	0.2057
N	74	59

Table 13 presents the results of the OLS regressions, where the dependent variable takes the value of the percentage distribution of funds in comparison to stocks and obligations. The explanatory power of the OLS regression is 0.2057. We see that the explanatory power increases if wealth and income are added to the equation. Multicollinearity is not detected for every OLS regression. Furthermore, the Cook-Weisberg test for heteroscedasticity indicates that the hypothesis of constant variance cannot be rejected.

The results displayed in Table 13 validate the hypothesis that CDA's local councillors invest more indirectly than their D66 counterparts do. The table shows that the CDA dummy variable has a significantly positive effect on the indirect investment behaviour at a p value of 10% in both equations. Although the significance is not very strong, the CDA dummy variable has, besides the constant, the most explanatory power.

All of the other variables have no significant effect on indirect investing behaviour, besides age without wealth and income in the regression. I would expect that the expected return of the AEX have a negative effect on indirect investing. Moreover, I would expect that as stock investments are generally riskier than funds are, respondents with higher risk attitudes would be more likely to invest in stocks instead of funds. Lastly, I would assume that more trusting participants invest their capital in funds, because a fund manager normally controls the assets of the participant, handing over the control of his or her assets to a fund manager is accompanied with a certain level of trust.

For gender, age, education, the Randstad, income and wealth, no strong reasoning exists for why it should affect indirect investment behaviour, and their insignificant effect is therefore expected.

In the last four regressions, I investigated the indirect investment behaviour among PvdA and VVD local councillor investors. In the hypothesis, it was predicted that the PvdA's councillors will invest more indirectly; hence, the coefficient of political party should be significant, and the sign should be positive. As mentioned before, the indirect investment behaviour variable was measured with formula 10. I ran four regressions, as the variables of the Randstad, income and wealth had a substantial impact on the number of observations.

Table 14. OLS model explaining indirect investing among local councillors of PvdA and VVD

This table examines the determinants of indirect investment behaviour among local councillors of PvdA and VVD. The four OLS regressions displayed vary due to the number of dependent variables. The dependent variable indirect investing indicates the relative percentage distribution of funds in comparison to obligations and stocks. The dummy variable PvdA is 1 if the respondent is a PvdA local councillor and 0 if the respondent is a VVD local councillor. Expected return was reported as the expected return of the AEX end 2017. Risk attitude is the self-reported risk attitude of the respondents with a scale from 0 to 10. The trust variable indicates if the respondent has indicated being generally trusting towards other people. Gender is a dummy variable with female (0) and male (1). The age variable represents the age of the respondent. Level of education is reported by six categories: WO;HBO;MBO;HAVO or VWO; VMBO; No education or elementary school. The Randstad variable expresses if the respondent lives in the Randstad, which consists of the provinces: Utrecht, Noord-Holland and Zuid-Holland. Income and wealth were reported as open questions, where income is reported as gross income and wealth includes property, disregards of a mortgage The t-statistics are in parentheses below the coefficients. *, **, and *** represent significance on the 10%, 5%, and 1% levels, respectively.

	Dependent variable: Indirect investing			
	(1)	(2)	(3)	(4)
PvdA	-2.1901	-6.8463	-0.5702	-4.8930
	(-0.34)	(-0.96)	(-0.08)	(-0.73)
Expected return	-0.5397	-1.4407**	-0.1883	-1.4013*
	(-0.93)	(-2.10)	(-0.34)	(-2.04)
Risk attitude	0.8643	1.9817	0.7174	1.9249
	(0.70)	(1.43)	(0.55)	(1.33)
Trust	4.3110	11.5514**	3.4941	10.0608**
	(0.98)	(2.35)	(0.85)	(2.30)
Gender	-0.4372	-1.9646	3.8214	-0.8709
	(-0.07)	(-0.28)	(0.58)	(-0.13)
Age	0.3197	0.4422	0.1130	0.2328
	(1.20)	(1.49)	(0.39)	(0.77)
Education	3.7709	3.6421	5.5994*	5.1220
	(1.04)	(0.95)	(1.28)	(1.07)
Randstad		-7.6755		-6.4530
		(-1.28)		(-1.14)
Income			0.0004*	0.0016
			(1.81)	(1.57)
Wealth			0.0000	0.0000
			(0.36)	(1.55)
Constant	-17.2148	-27.3745	-19.2047	-28.5798
	(-0.92)	(-1.32)	(-1.20)	(-1.28)
R^2	0.0731	0.2025	0.1828	0.3537
N	62	51	42	35

Table 14 presents the results of the OLS regressions, where the dependent variable indicates the relative percentage distribution of funds in comparison to obligations and stocks. With an R^2 of 0.3537, the independent variables are able to explain the indirect investment behaviour to a certain degree. We see that the explanatory power increases if the Randstad, wealth and income are added to the equation. The difference is remarkable. Without wealth, income and the Randstad, R-squared is only 7.31%. With wealth, income and the Randstad, R-squared increases to 35.37%. Multicollinearity is not detected for every OLS regression. Furthermore, the Cook-Weisberg test for heteroscedasticity indicates that the hypothesis of constant variance cannot be rejected.

Table 14 does not support the hypothesis that the PvdA's local councillors invest more indirectly—in other words, they hold relatively more funds in their portfolios in comparison with stocks—than VVD's local councillors do. The coefficient is not significant and is also negative, which indicates that the coefficient is in the 'wrong' direction. A negative coefficient indicates that the local councillors of VVD invest relatively more indirectly in comparison with the PvdA's local councillors. However, because the coefficient is not significant, we should not derive any conclusions.

The variable of expected returns has a significantly negative influence on indirect investment in two of the four regressions. The reasoning behind this might be that participants who expect higher returns from the AEX would invest their capital in stocks instead of funds. Furthermore, trust has a significantly positive influence on indirect investment in two of the four regressions. As explained before, this indicates that more trusting participants invest their capital in funds. Because a fund manager normally controls the assets of the participant, handing over the control of his or her assets to a fund manager might be accompanied with a certain level of trust. Income and education are only significant at a p value of 10% for one of the four regressions, so we should not derive a strong conclusion from these results.

Similar to Table 13, risk attitude has no significant effect on indirect investing, although it seems reasonable that a respondent with a riskier attitude would hold relatively more stock than funds, as stocks are perceived to be riskier assets. The variables of age, the Randstad, gender and wealth have no significant effect on indirect investing, which seems reasonable.

Overall, the results support the hypothesis that CDA local councillors invest more indirect than D66 local councillors. However, the results are only significant at a p level of 0.1, so the support

is not very strong. Furthermore, the results do not support the hypothesis that PvdA local councillors invest more indirect than VVD local councillors. The results even suggest that VVD local councillors invest more indirect than PvdA, however this result is not significant, so no conclusions can be draw from these results.

7. Conclusions

To summarize, in this research, I tried to contribute in to the search for explanations concerning the limited capital market participation puzzle. In my opinion, personal values play an important role in limited capital market participation and, more specifically, the value dimensions of conservation versus openness to change and self-transcendence versus self-enhancement. I believe that people whose personal values are more strongly connected to conservation or self-transcendence instead of openness to change or self-enhancement will be less likely to participate in the capital market, as personal values related to conservation and self-transcendence might conflict more with associations concerning the capital market, like greed or excessive bonuses. Because personal values and therewith these value dimensions are difficult to measure in an accurate manner, I used political preferences as a proxy for these value dimension. This resulted in the following research question: Do political preferences influence capital market participation? Note that I used conservative political preference as a proxy for conservation; progressive political preference as a proxy for openness to change; left-wing political preference as a proxy for self-transcendence; and right-wing political preference as a proxy for self-enhancement. Because strong and stable political preferences were preferable, I sent questionnaires to local councillors—more specifically, to local councillors of CDA, D66, PvdA, and VVD, as these parties reflected the political preferences of conservative (CDA), progressive (D66), left-wing (PvdA), and right-wing (VVD). This resulted in the following hypotheses: CDA local councillors are less likely to participate in the capital market compared with D66 local councillors; meanwhile, PvdA local councillors are less likely to participate in the capital market compared with VVD local councillors. Furthermore, for those who invest, indirect and defensive investment will conflict to a lesser extent with the personal values of CDA and PvdA councillors compared with the local councillors of D66 and VVD. Hence, CDA local councillors invest more defensively and indirectly compared with the local councillors of D66, and PvdA local councillors invest more defensively and indirectly compared with the local councillors of VVD.

Overall, the results suggested that the research question regarding whether political preferences (and there with personal values) play a role in capital market participation can be answered with a "yes." More specifically, the results suggested that the conservative-progressive political dimension, which the political parties of CDA (conservative) and D66 (progressive) represented, plays a role in capital market participation but not as strongly as the left-wing–

right-wing political dimension does, which the political parties of PvdA (left-wing) and VVD (right-wing) represented.

The probability that local councillors would participate in the capital market decreased significantly if the local councillors supported CDA instead of D66. However, this result was not significant if the regression included wealth, income, and Randstad. Furthermore, in the subsample analysis, the effect remained significant in only one subsample at a p level of 0.1. Concerning defensive investment behavior, CDA local councillors were not more likely to invest defensively compared with the local councillors of D66. Finally, the local councillors of CDA were significantly more likely to invest indirectly at a p level of 0.1 compared with the local councillors of D66, which was in line with the hypothesis.

In the left-wing–right-wing political dimension, which the political parties of PvdA (left-wing) and VVD (right-wing) represented, the results supported the hypothesis that political support for PvdA decreased the probability of capital market participation significantly in comparison with the local councillors of VVD. In comparison with the other variables in the regressions, the PvdA dummy had the highest influence on capital market participation. These results held in most subsamples. Furthermore, PvdA local councillors invested more defensively than VVD local councilllors, which was in line with the hypothesis concerning defensive investment behavior. However, this result was significant only at a p level of 0.1 in two of the four regressions. Hence, strong conclusions regarding defensive investment behavior in the left-wing–right-wing dimension could not be derived. The results suggested that PvdA local councillors were not more likely to invest indirectly compared with local councillors of VVD.

As explained in the introduction, solving the capital market participation puzzle is significantly valuable. The previously described results showed that political party choice and therewith personal values have a strong impact on capital market participation. The impact is the strongest in the left-wing–right-wing political dimension, which is related to the self-transcendence versus self-enhancement value dimension. This suggests that political party choice and therewith personal values is an important additional explanation in the quest to solve the puzzle of limited capital market participation.

The conclusion that political choice and therewith the reasoning that personal values that are embodied political preferences are an important reason why some people stay out of the capital

market might have an important practical implication. As mentioned before, limited capital market participation results in, among other things, less welfare, market incompleteness, lower economic growth, and less shareholder protection. Therefore, a higher capital market participation rate is preferable. Because we learned that personal values could decrease the probability of capital market participation, the participation rate might increase if more financial products are available that are in line with the personal values of those who currently refuse to participate in the capital market. A capital market product that might appeal to those who refuse to participate in the capital market due to personal values linked to left-wing political preference is, for example, a stock of a socially responsible company or fund. The tremendous increase in the number of socially responsible mutual funds supports this theory. In 2010, the number of socially responsible mutual funds was 250. In 2014, this number almost doubled to 415.

Although the results are interesting and come with certain academic and practical contributions, the research featured two main limitations. The first limitation concerned the quality of the data. Although I constructed a survey to the best of my ability and used professional software for the construction and distribution of the survey, a response bias might always influence the data derived from a survey. However, the descriptive statistics suggested that the collected data were generally in line with the previous literature related to capital market participation, thus indicating a certain credibility of the data. Furthermore, although I used random sampling, a selection bias might have still occurred. For example, a non-response bias could have arisen in the data collection process. PvdA local councillors might indeed participate less in the capital market compared with VVD local councillors however, it might also be the case that PvdA local councillors who participate in the capital market are less keen to fill out a questionnaire concerning their investment behavior, as they believe this could harm the support of their voters. Left-wing voters, who are perceived to be stronger opponents of the stock market, might feel alienated if their local councillors participate in the capital market. However, the standard sample-mean tests that I conducted indicated that the sample was representative of the population.

Another limitation was the applicability of the results to a wider population. I investigated the local councillors of CDA, D66, PvdA, and VVD because they held strong political preferences; however, local councillors are obviously a very specific population. In general, they are more highly educated, are wealthier, have higher incomes, feature a higher percent of males, and are

more politically active. All of these factors influence capital market participation. As a result, it remained unclear if the derived conclusions could be generalized. I do believe that the results suggest that political preferences are an important factor and should be further investigated in a more diverse population. However, in a more diverse population, e.g., not solely local councillors, political party choice might be a weaker proxy for personal values, as the participants may feel less connected to certain political parties.

This research indicated that political preferences and therewith personal values are an important factor in capital market participation for local councillors and thus deserve further investigation. With regard to the limitations, I believe that further research concerning the effect of personal values on capital market participation with a wider population would be beneficial. However, as mentioned earlier, political preference might not be a strong proxy in a wider population. I therefore suggest that future research measure personal values directly. However, personal values are difficult to measure. Hence, a well-constructed questionnaire or even interviews might be necessary to really assess the personal values of the participants.

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Below is the questionnaire used in the study. Note that the survey was displayed online.

Q1. Van welke gemeente bent u raadslid?

[   ]

Q2. Van welke partij bent u raadslid?

VVD

CDA

D66

PvdA

Anders, namelijk:

[   ]

Q3. Belegt u op dit moment in aandelen, obligaties en/of fondsen?

Ja

Nee; sla vraag 4 over en ga door naar vraag 5

Q4. Wat is de procentuele verdeling van uw beleggingen tussen aandelen, obligaties en/of fondsen?

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

Aandelen

●———————————————————————————————

Obligaties

●———————————————————————————————

Fondsen

●———————————————————————————————

Q5. Wat is volgens u het verwachte rendement van de AEX eind december 2017?

| -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 |

% rendement AEX

Q6. Wat is uw houding tegenover risico? Op een schaal van 0 tot 10, bent u risico mijdend of neemt u graag risico?

Weinig risico   Veel risico
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Houding tegenover risico

Q7. In het algemeen, heeft u het gevoel dat u andere mensen kan vertrouwen?

Ja

Nee

Geen mening

Q8. Geslacht

Man

Vrouw

Q9. Leeftijd

Q10. Wat is uw hoogst behaalde opleiding met diploma?

Geen onderwijs, kleuter-, lager-, of basisonderwijs

VMBO

HAVO/VWO

MBO

HBO

WO

Q11. Wat is (bij benadering) uw totale vermogen? (inclusief eventueel woning)

Q12. Wat is (bij benadering) uw maandelijks netto inkomen?

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