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Development and Validation of the Perceived Investment Value (PIV) Scale

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Abstract

This study aims to develop a complementary and more comprehensive measurement to assess the nature of investment value affecting consumers' investment behavior. Recent research suggests that consumers may desire and obtain certain outcomes from investments that have not been anticipated in mainstream finance and economics literature. These benefits might be hedonistic or altruistic, self-expressive or emotional and experiential. Yet, while an increasing amount of attention has been paid to this topic, little effort has been made to develop an appropriate measurement scale for the subjective consumer perceptions of investments. To address this gap in the literature, this study introduces the concept of (sic), and develops and validates a measurement scale for the concept. The ultimate 18-item PIV scale parsimoniously represents six perceived investment value dimensions: Economic value—Monetary savings; Economic value—Efficiency; Functional value—Convenience; Emotional value—Emotions and Experiences; Symbolic value—Altruism; and Symbolic value—Esteem. The final measurement scale demonstrates acceptable reliability and validity. Implications related to the developed scale are discussed in terms of their potential to inform a future research agenda.

1. Introduction

The most important assumption of modern finance and microeconomic theories is that the value of investments is embedded in the investment alternatives' transaction-based benefits and sacrifices, specifically the risk-adjusted return. This paradigm treats people as economic actors (*Homo economicus*) and assumes that investment value can be derived by means of profit maximization, rationality, and perfect information. Though some of these assumptions have been relaxed in behavioral finance/economics—explaining why and how people make seemingly irrational or illogical decisions when they spend, invest, save, and borrow money (Barberis & Huang, 2001; Barberis et al., 2001; Belsky & Gilovich, 1999)—the risk/return

framework remains intact in investment research (Keller & Siegrist, 2006). Recent research, however, has begun to recognize that expected financial returns and risks may not entirely determine an investor's willingness to invest in stocks (e.g., Barber & Odean, 2002; Fama & French, 2007). Indeed, Statman (2004) claims that it is no more reasonable to expect individuals to be concerned only about risk and return when compiling an investment portfolio than it is to expect them to be concerned only about cost and nutrition when deciding what to eat.

Recently many studies have adopted consumer behavior theories and techniques to provide a more holistic view of investing, the preferences that affect it, and also financial behaviors in general (Beal et al., 2005; Clark-Murphy & Soutar, 2005; Canova et al., 2005; Hsee et al., 2008; Liang et al., 2009; Lovett & MacDonald, 2005; Meier et al., 1999; Sullivan & Miller, 1996; Wärneryd, 1999). This approach posits that consumers may desire and obtain certain outcomes from investments that have not been anticipated in mainstream finance and economic literature. Those outcomes might include entertainment considerations (Dorn & Sengmueller, 2009); self-expressive benefits (Statman, 2004); self-expressive, emotional, and experiential benefits (Fama & French, 2004); and psychic return (Beal et al., 2005; Cullis et al., 1992). Illustrations were also offered by Nilsson (2009), who compared investment styles among mutual-fund investors and identified a group primarily concerned with the social responsibility of the funds, and Sullivan and Miller (1996), who identified three types of venture capital investor distinguished by economic, hedonistic, and altruistic motives related to their investments.

While research is increasingly contributing to our understanding of the subjective evaluations consumers undertake when considering investing, prior studies address a variety of aspects of those evaluations and some relatively loosely-defined concepts, such as considerations, benefits, and motives. In addition to the abundance of concepts applied to *describe* subjective evaluations of investments, an important limitation of these studies is that

the scales used to *measure* them do not appear to have acquired commonly accepted standards of scale development (Churchill, 1979; Rossiter, 2002). This is a consequence of the fact that appropriate scale development would require constructs that are conceptually well defined. In their absence, the conceptual definition of the construct will not be adequate to indicate how the construct should be measured. Accordingly, there is an obvious need to a) capture these subjective factors within a well-defined concept and b) develop an appropriate measurement scale for the subjective perceptions in relation to investments.

For this purpose, this study adopts a consumer behavior -theoretical concept of perceived value, and develops and validates a measurement scale for the perceptions of expected financial return and other subjective elements to which investment research has increasingly referred. While this study attempts to extend the perspective on consumers' value perceptions, we do not challenge standard finance theory *per se*. Instead this paper aims to develop a complementary and more comprehensive measurement to assess the nature of investment value affecting consumers' behavior. The concept of perceived value has been granted special attention not only because of its importance in current theoretical discourse in both academia and practice, but also because the concept of perceived value seems to be a richer, broader, and more comprehensive measure of consumers' subjective overall evaluation than any mere tradeoff between risk and profit.

2. Research purpose

This study adopts a consumer perspective on value derived from empirical research into how consumers think about value (Gardial et al. 1994; Richins 1994; Woodruff, Schumann, Clemons, Burns, and Gardial 1990; Zeithaml 1988). The aim of the current study is therefore to develop a measurement scale and provide new insight into the concept of perceived value in an investment context, termed PIV. Comprehensive procedures are adopted to develop a measurement scale that will in time enable us to derive a measurement scale for PIV. The scale development procedure follows the accepted methodology established by Churchill

(1979) and augmented by others (e.g., Anderson, J.C. & Gerbing, 1988; Rossiter, 2002). The study addresses two objectives to attain its research goal:

1. Define the concept of PIV.
2. To develop, purify and validate a multi-item scale for measuring consumer perceived value from investing in stocks.

The remainder of this paper is divided into five major sections. The next section (section three) begins with a discussion of the theoretical background followed by a conceptualization of PIV. In section four, the PIV scale development procedures revealed are discussed and an initial pool of scale items is developed. The results of a multi-sample investigation that serves to purify and validate the PIV scale is presented in section five. Finally, in section six, the discussion is presented alongside the limitations of the study and the paper concludes with its implications in section seven.

3. The concept of PIV

The consumer behavior theoretical concept of perceived value is rooted in consumer perceptions—that is, subjective experience and individual bases—making it a subjective view of reality and therefore selective (Antonides & van Raaij, 1998). In psychology, a perception is considered a process by which people select, organize, and interpret sensory stimuli, arranging them to form a meaningful picture of the world (Armstrong & Kotler, 2000; Williams, 1981). The perception is not a pure sensation but the result of becoming aware of, and assigning meaning to, phenomena (McKehnie & Doyle, 1966). As perceived value is characterized as based on perception, it is therefore a *subjective*, *meaningful*, *relativistic*, *comparative,* and *situational experience* (Holbrook, 1999), in the course of which *products are judged to be benefits, and/or sacrifices* (Zeithaml, 1988). Following Olson & Reynolds (2001, p.10), consumers seek *products/services that provide benefits or positive outcomes and/or avoid sacrifices or negative outcomes* (Woodruff, 1997). *The outcomes acquire their meaning and importance from the consumer's personal goals* (Ratneshwar et al., 2001;

Woodruff, 1997*). Value is perceived when the benefits are considered greater than the sacrifices* (Andersson & Narus, 1998; Butz & Goodstein, 1996; Zeithaml, 1988). As the concept of perceived value is considered to be the consumer's subjective overall assessment of utility, it should be conceived of as a *construct consisting of several interrelated dimensions* (e.g., Babin et al., 1994; Holbrook, 1994; Huber et al., 2000; Mattsson, 1991; Sheth et al., 1991; Sweeney & Soutar, 2001).

We believe that the question of how consumers think about value investment context should be approached in similar way. Thus, investment value may include, for instance, the hedonic aspects of entertainment and status (Dorn & Sengmueller; 2009; Statman, 2004). Indeed, the studies by Puustinen & Rintamäki (2010) and Puustinen et al. (2012) show that for some, investing offers emotional value, as when consumers enjoy the excitement of evaluating alternative investments or the search for information on opportunities. For them, the mere act of investing creates positive emotions, such as enjoyment, thrills, stimulation, and excitement, thus the act of investing is appreciated in its own right. On this basis, the outcomes delivered by an investment may be assessed as emotionally rewarding by people who, for example, enjoy activities such as browsing alternative investments, reading investment-related magazines, joining online discussion groups and exchanging opinions on investment issues, taking part in investment-related events, and staying in touch with the progress of the economy and its effects at company and industry level (Puustinen et al., 2012). These examples indicate that investments carry symbolic and experiential personal meanings for a consumer, and provide a background to and justification for the adaptation of the concept of perceived value to an investment context.

In this study, we examine not only value perceptions about the financial returns of stocks but also those that go beyond financial perceptions. We believe that the work by Puustinen et al. (2012) provides a good foundation for extending the traditional economic perspective on the value construct in the non-institutional investment context. First of all, it suggests that

investing may be perceived as a functionally, emotionally, and symbolically rewarding activity. In addition these dimensions are validated through an investigation into modeling of the dimensions of brands (Park et al., 1986) and in the conceptualization of perceived value in marketing contexts (Sheth et al, 1991; Smith & Colgate, 2007) and also in the context of perceived value in retailing (Rintamäki et al., 2007). Finally, these four dimensions (the economic, functional, emotional, and symbolic) also capture the perceptions of expected financial return (economic) but also the self-expressive and altruistic (symbolic), and experiential and hedonistic (emotional) elements to which investment research has increasingly referred.

4. Method

The lack of previous scaling efforts addressing perceived value in the investment context necessitates employing a review of the literature on perceived value in different marketing and consumer research in the development of a comprehensive pool of scale items and the construction of a PIV scale. Following the suggestions by Churchill (1979) the multi-sample (2 samples) investigation served to purify and validate the PIV scale. Accordingly, Sample 1 was conducted to assess the PIV scale and to purify, test, and refine the scale in relation to investment in individual stocks (see Hoyle, 1995).

The purpose of Sample 2 is twofold. First, it is wise to replicate the exploratory factor structure and latent PIV model (second-order factor analysis) with an independent sample, thereby reducing error due to capitalization on chance (Chin & Todd, 1995). Second, to demonstrate the usefulness of the scale, some degree of predictive validity of the PIV measures is shown (Churchill, 1979). The data collection procedures employed in Sample 1 were replicated in Sample 2. Figure 1 summarizes the scale development procedures employed here, and the procedures are discussed in detail below.

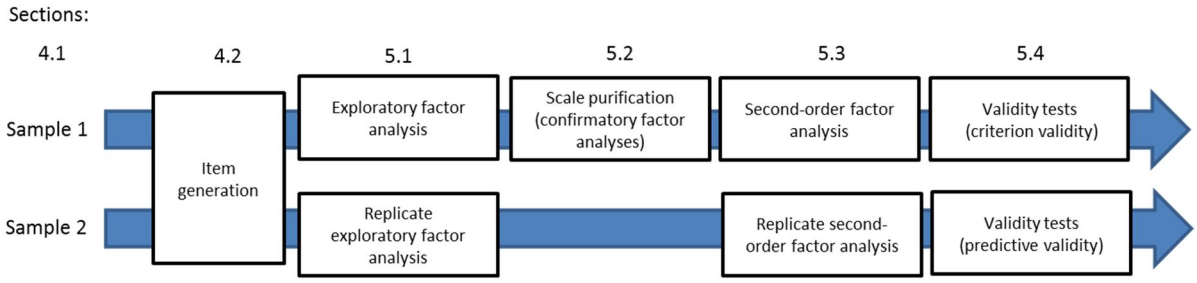

Figure 1. Scale development procedure

4.1. Samples

Conducting Sample 1 involved distributing 2,004 online survey invitations by e-mail to the members of the Federation of Stock Investors on November 23, 2010. A total of 309 e-mails were undelivered because of errors in addresses. The questionnaire included the 24 PIV items and background variables (e.g., socio-demographics). For Sample 1, the respondents were asked to state whether they had experience of an investment in individual stocks. The sample was collected over a three-week period. In total, 300 acceptable responses were received yielding a response rate of 15 %. The characteristics of the respondents are presented in Table 1.

Sample 2 involved distributing 3,113 online survey invitations by e-mail to members of the Federation of Stock Investors who had not participated in Sample 1. In total, 444 completed surveys were returned between May 24 and June 10, 2011, while 368 e-mail messages were undeliverable. Both the sampling procedures and the instructions to respondents that were used for Sample 1 were re-applied. Again, respondents were asked to state whether they had experience of investment in individual stocks. Of the 444 respondents, only six did not have such experience, making the final sample size 438 (response rate: 16 %). The background variables for the validation sample are shown in Table 1. The demographic profile of Sample 2 was highly consistent with that of Sample 1.

Table 1. Respondents' characteristics: Sample 1 (n = 300) /Sample 2 (n = 438)

Characteristics	%	Characteristics	%	Characteristics	%
Age		**Marital status**		**Status**	
18–24	2.0/3.7	Single	14.0/14.1	Entrepreneur	14.7/12.8
25–34	12.3/12.6	Married	63.7/61.9	Management	6.0/5.8
35–44	15,0/14.6	Cohabiting	16.0/15.1	Higher official	25.3/26.5
45–54	18.0/20.3	Divorced	4.0/6.2	Lower official	8.6/11.2
54–64	29.3/26.7	Widowed	2.3/2.7	Employee	7.7/8.4
65–74	21.0/17.3			Student	3.0/4.6
74+	2.3/4.8	**Education**		Pensioner	32.0/27.9
18–24	2.0/3.7	Primary school	4.0/4.8	Unemployed	2.3/3.0
		Vocational qualification	34.7/26.5	House husband/wife	0.3/0.0
Gender		High school	6.0/7.5		
Female	19,0/19.2	University of applied sciences	12.0/16.9		
Male	81.0/80.8	University degree	43.3/44.3		
Characteristics	%	Characteristics	%	Characteristics	%
Monthly gross-income		**Experience in investing in individual stocks**		**Investment assets**	
Below € 2,500	21.7/23.5	Less than a year	0.3/2.5	Less than € 50,000	18.0/20.3
€ 2,501–3,500	29.0/24.2	1–5 years	20.0/21.2	€ 50,001–150, 000	30.7/28.1
€ 3,501– 4,500	19.7/21.9	6–10 years	18.7/14.6	€ 150,001–250,000	17.0/13.9
€ 4,501–5500	14.7/11.6	11-15 years	19.3/17.6	€ 250,001–350,000	11.0/11.6
€ 5,501–6,500	4.7/6.1	16-20 years	9.0/13.0	€ 350,001–450,000	5.3/4.3
Above € 6,500	10.3/12.6	More than 20 years	32.7/31.3	€ 450,001–550,000	3.6/9.9
				More than € 550,000	14.3/16.7

4.2 Item generation

Given the lack of scaling attempts addressing perceived value in the investment context, a categorization based on economic, functional, emotional, and symbolic investment goals suggested by Puustinen et al. (2012) was adopted as a starting point. The relevant items all correspond to one of the four previously defined dimensions: the economic, functional, emotional, and symbolic. Thus, the importance of each of the four dimensions was confirmed, and there were no indications that an additional dimension would be required at this stage.

Since Hardesty and Bearden (2004) and Rossiter (2002) stress the importance of expert judgments to the correct definition of a construct, the authors, one graduate student, and one academic colleague (with expertise in perceived value) critically evaluated all the items paying attention to content validity, representativeness, dimensionality, comprehensibility, unambiguity, and level of abstraction (which should be considered as outcomes). This procedure yielded a conceptual model of perceived investment value with six of its 24 items referring to economic PIV, six to functional PIV, six to emotional PIV, and six to symbolic PIV. Each of these dimensions is briefly defined and discussed in light of theoretical explanations of prior research findings in consumer behavior related research streams. A rating for each statement was captured on a seven-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (7).

4.2.1 Economic PIV

Following Puustinen et al. (2012), the desired economic outcomes included investment goals such as *to invest cost-effectively*, *to earn profit*, and *to increase wealth*. Thus, economic PIV refers to the perceived value gained by investing as the result of putting money into something with an expectation of gain within an expected time. It follows that consumers experience economic value when their monetary needs are met. Economic PIV has a dual characterization: as monetary savings (e.g., Chandon et al., 2000; Petrick, 2002; Rintamäki et al., 2006) and as risk-adjusted return (e.g., Markowitz, 1959; Sharpe, 1964; Sharpe, 1995). Monetary savings reduce the pain of paying (Chandon et al., 2000); therefore, economic value increases when management fees (the monetary price of the investment alternatives) are perceived to be low. The monetary savings element is measured with the following three items: Investing in individual stocks… [MS1] "is an inexpensive way to invest (management fees)" [MS2] "is priced fairly (management fees)" and [MS3] "is reasonably-priced (management fees)"

Risk-adjusted return is understood as a means to gain a profit in a manner accounting for the personal-risk tolerance of the consumer. According to the financial literature (e.g., Fama, 1998; Markowitz, 1959; Sharpe, 1964), when comparing investments, a consumer should compare the same risk measures against each alternative investment in order to get a relative performance perspective. Hence, "risk-adjusted" refers to a ratio of profit to risk, and risk-adjusted return reflects the monetary value of a profit, depending on the consumer's expectations. Here, risk-adjusted return is measured with three items: Investing in individual stocks… [RR1] "increases the value of my assets adequately in view of the risk I bear" [RR2] "is a profitable way to invest in view of the risk I bear" and [RR3] "increases my wealth adequately in view of the risk I bear".

4.2.2 Functional PIV

Functional PIV is the perceived value in investing as the result of convenience and appropriate outcomes of investing. The work by Puustinen et al. (2012) offers illustrations of functional outcomes such as *to save time, to avoid investment-related functional effort,* and *to avoid investment-related cognitive effort.* Accordingly, functional PIV involves convenience and increasing the appropriate outcomes of investments. Convenience refers to a ratio of inputs to outputs, with time and effort being the relevant inputs (Holbrook, 1999; Rintamäki et al., 2006). Farquhar and Rowley (2009, p.434) state that the convenience of a service "is a judgement *(sic)* made by consumers according to their sense of control over management, utilization, and conversion of their time and effort achieving their goals associated with access to and use of service." Accordingly, convenience is dependent on consumers' personal goals, and is therefore valued differently by consumers who prefer to have more leisure time and to dedicate less time to investment matters, and those who enjoy activities such as browsing investment alternatives. On account of this, the PIV scale's items measuring convenience took forms such as "investing in individual stocks is not *unnecessarily* time-consuming" (emphasis added), to reflect that investing may be perceived as time-consuming

by consumers but not as unnecessarily so. Three items were developed for measuring convenience: Investing in individual stocks… [CON1] “is a convenient way to invest,” [CON2] “is an easy way to invest,” and [CON3] “is not unnecessarily time-consuming.”

Functional PIV is also characterized as involving appropriate outcomes. Sheth et al. (1991, p.160) define functional value as the “perceived utility derived from an alternative’s capacity for functional, utilitarian, or physical performance.” Sweeney and Soutar (2001) defined functional value (performance/quality) as the utility derived from the perceived quality and expected performance of the product. In summary, “appropriate outcomes” in investment terms means the investment delivers what is expected. In this work, these appropriate outcomes are captured with three items: Investing in individual stocks… [AO1] “is a sufficiently good way to satisfy requirements I have concerning investing” [AO2] “is an efficient way to invest” and [AO3] “is a well-functioning way to invest”.

4.2.3 Emotional PIV

Emotional value is exemplified as being self-purposeful and self-oriented (Babin et al., 1994; Holbrook, 1999). With regard to more hedonic aspects of investment, Puustinen et al. (2012) found anticipated goals relating to positive experiences, such as *to have investing related experiences* and *to have a hobby (investment-related)*. On the PIV scale, consumers derive emotional value when the act of investing is appreciated in its own right. If compared to economic PIV and functional PIV, emotional PIV is more abstract and more subjective. Emotions and experiences are considered to contribute to emotional PIV. This is also in line with Fehr and Russel (1984) who discovered a two-dimensional emotional space reflecting the pleasure and arousal components of emotions relevant here. Thus, for some, the mere act of investing creates positive emotions, such as enjoyment, thrills, stimulation, and excitement. The emotions aspect is measured with three items: Investing in individual stocks… [EMO1] “gives me pleasure” [EMO2] “is exciting in a good way” and [EMO3] “is entertaining”.

Experiences, in turn, offer emotional value when consumers appreciate the excitement of the investment alternative or information search. Unlike emotions, experiences are pursued actively and can be characterized as play or as a hobby. Experiences include activities such as browsing investment alternatives, reading investment magazines, joining investment forums to exchange opinions on investment issues, and taking part in investment-related events (such as investment cruises). The concept of experiences is measured with three items: Investing in individual stocks… [EXP1] "is a fun hobby" [EXP2] "gives me something interesting to follow up" and [EXP3] "is a nice way to spend time".

4.2.4 Symbolic PIV

Symbolic PIV can be understood from a symbolic interactionist perspective (Belk, 1988; Firat & Venkatesh, 1993; Solomon, 1983), which emphasizes the importance of investment in setting the stage for the multitude of social roles that people play. Investing represents a social act wherein symbolic meanings, social codes, relationships, and the consumer's identity and self may be produced and reproduced as illustrated by Statman (2004). Following Puustinen et al. (2012), symbolic outcomes are illustrated by goals that gain their meanings either through social contexts such as *to express benevolence*, or through personal transformations such as *to develop oneself* and *to improve self-respect*. Illustrations are also offered by Nilsson (2009), who identified a group primarily concerned with the social responsibility of the funds, and Sullivan and Miller (1996), who identified altruistic motives related to their investments. Thus, in the current research, symbolic value has a dual character, comprising altruism and esteem.

Altruism is related to the need to love and be loved, and to providing opportunities to demonstrate one's benevolence. Accordingly, the act of investing can provide a symbolic benefit, for consumers are able to express their personal values by investing. Accordingly, the thought of expressing benevolence through a bequest may be perceived as rewarding in the present even though the actual outcome is obviously expected to occur posthumously. The

following three items are used to measure altruism: Investing in individual stocks… [ALT1] "gives me an opportunity to support my fellow men" [ALT2] "gives me an opportunity to support the well-being of other people" and [ALT3] "gives me an opportunity to express benevolence toward other people".

Enhancement of esteem, in turn, is a benefit experienced when symbolic features derived from investing are attached to the self to define and maintain the concept of self. Consumers who engage in esteem- or status-seeking behavior are characterized as "high self-monitors," who are mainly concerned with how they play their role in terms of the impression they give to others (Browne & Kaldenberg, 1997). Many consumers may invest also because it clearly expands their financial capabilities and the act of investing therefore enhances their status and/or self-esteem, which contribute to symbolic value." Esteem is measured by the means of these three items: Investing in individual stocks… [ET1] "makes me feel valuable" [ET2] "boosts my self-esteem" and [ET3] "increases my self-confidence".

5. Results

5.1 Results of the exploratory factor analyses of Samples 1 and 2

In Sample 1, the psychometric properties of the new PIV scale were assessed using principal component analysis with varimax rotation (SPSS, version 16). Instead of the theorized four factors, the principal component analysis yielded six factors with *eigenvalues* exceeding 1.0 (see Table 2). In all cases Cronbach's alpha exceeded 0.8. Three items (MS1, MS2, and MS3) indicating monetary savings formed an independent factor. Similarly, the items ALT1, ALT2, ALT3, and ET1, ET2, and ET3 formed two independent factors instead of the one factor theorized. Moreover, three items (AO1, AO2, and AO3) indicating appropriate outcomes and theorized as antecedents of functional value (quality and efficiency) (e.g., Smith & Colgate, 2007; Sweeney & Soutar, 2001) are apparently related to risk-adjusted return in an investing context. This is in fact logical, because a risk-adjusted return is probably the dominant utility derived from the appropriate outcomes and performance of the investment. Owing to the

results of the exploratory factor analysis, the items AO1, AO2, and AO3 were included in the EconEF factor. With respect to literature and the results from the EFA, the six factors (see Table 2) explaining PIV were labeled:

1. Economic value—Monetary savings (EconMS)
2. Economic value—Efficiency (EconEF)
3. Functional value—Convenience (FuncCON)
4. Emotional value—Emotions and Experiences (EmotEE)
5. Symbolic value—Altruism (SymbALT)
6. Symbolic value—Esteem (SymbET)

In Sample 2, a replicate EFA (principal component analysis with varimax rotation) yielded the same six factors with *eigenvalues* exceeding 1.0 as in the calibration sample. All 24 items exhibited sufficient factor loadings and communalities. Only three items (MS1, AO3, and ET1) exhibited cross-loadings above .300 (see Table 2). However, their cross-loadings were relatively low, and both factor loadings (MS1 = .804, AO3 = .766, ET1 = .755) and communalities (MS1 = .774, AO3 = .766, ET1 = .725) were relatively high. Since the exploratory factor structure and factor loadings are relatively similar in both samples, all the PIV dimensions are covered and there is no error due to capitalization on chance. In Sample 2, the six factors together account for 79.3% of the total variance and each factor explains at least 5.1% of the total variance fulfilling the minimal requirements (Netemeyer et al., 2003).

Table 2. EFA analysis results

Measures				Sample 2: n = 438, Likert 1-7				Sample 2: Factor loadings > .300	
				(Sample 1: n = 300, Likert 1-7)				(Sample 1 Factor loadings > .300)	
Item	Mean	SD	Cronbach's alpha	EconMS	EconEF	FuncCON	EmotEE	SymbALT	SymbET
MS1	5.594 (5.867)	1.401 (1.369)	.891 (.880)	.804 (.780)	0,304				
MS2	5.082 (5.007)	1.389 (1.445)		.877 (.883)					
MS3	5.068 (4.940)	1.355 (1.418)		.874 (.869)					
RR1*	5.332 (5.367)	1.208 (1.645)	.947 (.938)	(.308)	.811 (.793)				
RR2*	5.317 (5.387)	1.246 (1.135)			.851 (.838)				
RR3	5.244 (5.247)	1.250 (1.207)			.867 (.846)				
AO1	5.463 (5.497)	1.217 (1.158)			.842 (.841)				
AO2	5.648 (5.653)	1.195 (1.136)			.854 (.794)				
AO3*	5.747 (5.780)	1.147 (1.066)			.766 (.755)	0,342			
CON1	5.219 (5.203)	1.593 (1.491)	.819 (.811)			.823 (.839)			
CON2	5.071 (4.977)	1.621 (1.159)				.849 (.812)			
CON3	4.584 (4.520)	1.581 (1.557)				.776 (.772)			
EXP1*	5.772 (5.643)	1.367 (1.345)	.929 (.928)				.846 (.841)		
EXP2*	6.160 (5.410)	1.025 (1.299)					.747 (.762)		
EMO1*	5.438 (6.087)	1.294 (1.028)					.812 (.699)		
EXP3	5.365 (5.317)	1.532 (1.482)					.895 (.878)		
EMO2	5.500 (5.450)	1.322 (1.357)					.832 (.851)		
EMO3	4.929 (4.843)	1.580 (1.527)					.837 (.818)		
ALT1	4.562 (4.493)	1.709 (1.685)	.872 (.862)					.743 (.710)	
ALT2	3.811 (3.870)	1.702 (1.168)						.896 (.899)	
ALT3	3.416 (3.933)	1.641 (1.664)						.896 (.861)	
ET1	3.523 (3.327)	1.670 (1.648)	.900 (.907)					.322 (.358)	.755 (.754)
ET2	4.201 (4.093)	1.605 (1.623)							.915 (.879)
ET3	4.326 (4.247)	1.595 (1.596)							.915 (.882)
* Deleted items with relatively high modification indices in CFA									

5.2 Results of scale purification

The scale purification (Sample 1) procedures relied on an iteration of confirmatory factor analysis (CFA), intended to improve the congeneric measurement properties of the scale (Anderson & Gerbing, 1988; Chin & Todd, 1995; Gerbing & Anderson, 1988). LISREL 8.80 (Jöreskog & Sörbom, 2006) with maximum likelihood estimation was run using the covariance matrix from the samples for input. To achieve the best possible fit to the six factor scale, a step by step examination of modification indices focusing on two constructs with

more than three items (EconEF and EmotEE) was conducted. This was necessary because it is recommended that researchers use at least three indicators (variables) to examine theoretical factor/latent variables (perceived value) when using structural equation modeling (SEM), in order to obtain a more complete and reliable picture than that provided by a single indicator (Raykov & Marcoulides, 2006, 2011). As a result of this process, six items (RR1, RR2, AO3, EXP1, EXP2, EMO1)) were excluded from further analysis (they are greyed out in Table 2). A final confirmatory model was then estimated on the remaining 18 items. The fit of this revised model in sample 1 was good ($\chi_{(120)}^2 = 254.826$, $p < .001$, CFI = .977, GFI = .913, NNFI = .970, RMSEA = .061, $\chi^2/df = 2.12$).

All the fit indices except the significant χ^2 value indicate good fit of the model. However, the $\chi 2$ index is very sensitive to sample size and normality of data. Various studies suggest using a combination of other fit indices to evaluate model fit such as the relative χ^2 (χ^2 / df < 3), RMSEA (<.08) and CFI (>.90) (Browne & Cudeck, 1993; Diamantopoulos & Siguaw, 2000; Hu & Bentler, 1995; Marsh & Hocevar, 1985; Ullman & Bentler, 2004; Hooper, Coughlan & Mullen, 2008). The factor loadings and AVE values were all above 0.50 and CR scores exceeded 0.60, indicating acceptable convergent validity (Hair et al., 2006). The final 18 items parsimoniously represent the six value dimensions, each item taps into a unique facet of each value dimension, and the final scale provides good domain representation.

5.3 Second-order factor model results in Sample 1 and Sample 2

Following Holbrook's (1999) argument that different dimensions of perceived value exist and occur together to varying degrees, it is apparent that for PIV the dimensions are simply different forms manifested by the PIV and that all items on the measurement scale measure PIV, with a certain degree of error. Similarly, different dimensions of PIV represent the same construct with varying degrees of accuracy (see Law et al., 1998). Thus, these dimensions of PIV, namely economic PIV, functional PIV, emotional PIV and symbolic PIV are treated as

unobservable latent variables. Structural equation modeling (SEM) was used for building the second-order factor structure for PIV. For measurement purposes, a multidimensional construct such as PIV can be classified as a latent model (Law et al., 1998), because it is a higher-level construct that underlies its dimensions (see Martin-Ruiz et al., 2008, p.1287).

In order to test the PIV second-order structure of the six value dimensions in Sample 1, the model with the single second-order factor (latent model) was compared with a uni-dimensional model and a second-order factor model with two latent factors (in which economic and other factors are suggested to represent separate dimensions). SEM was conducted using LISREL 8.80 (Jöreskog & Sörbom, 2006) with maximum likelihood estimation to test the fit of these models. The fit of this multidimensional latent model in Sample 1 (see appendix 1) was sufficient ($\chi_{(129)}^2$ = 326.2, p < .001, CFI = .965, GFI = .892, NNFI = .959, RMSEA = .072) and proved significantly superior to a one factor uni-dimensional model (CFI = .588, GFI = .485, NNFI = .533, RMSEA = .260) and to a second-order factor model with two latent factors (CFI = .931, GFI = .839, NNFI = .918, RMSEA = .101) (see Anderson & Gerbing, 1988).

The same form of SEM was used to retest the model's higher-order structure of the six value dimensions in Sample 2. The fit of this multidimensional latent model was again good: $\chi_{(129)}^2$ = 373.575, p < .001, CFI = .970, GFI = .913, NNFI = .964, RMSEA = .066. Both composite reliability and AVEs were higher than the recommended thresholds (see Appendix 2). Additionally, each variable's completely standardized loading on the underlying construct is above 0.6, and each dimension's estimated maximum likelihood loading on the PIV is significant.

In all multidimensional models tested, the error variance was always positive, but generally below 0.5. However, with regard to items CON3, ALT1, ACSI3, and REPUR3 the error variance was above 0.5, but not once above 0.7. In summary, all the final models showed good fit and it can be concluded that the final 18 items parsimoniously represent the

six value dimensions, each item taps into a unique facet of each value dimension, and the final scale provides good domain representation. It can be concluded that the multidimensional PIV scale and its dimensions have good internal consistency (Anderson & Gerbing, 1988).

5.4 Validity of results

To give strength to the validation, the multidimensional PIV scale was tested for criterion validity, which refers to the extent to which it corresponds to another measure. Following the scale development procedure suggested by Churchill (1979) the first sample (Sample 1) has to show the extent to which the scale (PIV) is correlated with theoretically related constructs, thereby establishing evidence of criterion (nomological) validity. Consider criterion validity refers to the extent to which it corresponds to another, but quite similar, construct. We thought satisfaction an ideal construct for this purpose as in fact, perceived value could easily be confused with satisfaction. However, these constructs are distinct.

Unlike satisfaction, PIV is conceptualized as encompassing both the functional benefits (such as economic PIV and functional PIV) and non-functional benefits (such as the emotional PIV and symbolic PIV) of performance. PIV is considered a cognitively based construct that captures any benefit/sacrifice discrepancy in much the same way that disconfirmation does for variations between expectations and perceived performance (Lee & Overby, 2004). Satisfaction, on the other hand, is primarily an affective post-investment evaluation and a response to the overall investment experience (Hunt, 1993; Oliver, 1997; Seiders et al., 2005).

Accordingly, satisfaction in the investment context can be characterized as the degree of overall pleasure felt by the consumer, resulting from the ability of the investment to fulfill the consumer's desires, expectations, and needs in relation to the investment. PIV, in turn, is perceived and evaluated in any phase of the investment experience as the overall appraisal of

the net worth of the investment, based on the consumer's assessment of economic, functional, emotional, and symbolic benefits, and economic, functional, emotional, and symbolic sacrifices in acquiring and utilizing the investment alternative.

To be able to link any satisfaction to PIV, an adaptation of Mägi's (2003) three-item American Customer Satisfaction Index (ACSI) scale by Fornell et al. (1996) was employed. After rewording the ACSI for the purposes of this study, the items were [ACSI1] "How satisfied are you with investing in individual stocks?" (on a seven-point scale anchored with 1– *very dissatisfied* and 7–*very satisfied*); [ACSI2] "How well do individual stock investments match your expectations?" (*not at all–completely*); and [ACSI3] "Imagine a perfect investment alternative: How close to that ideal are stocks?" (*not at all close–very close*). PIV was expected to significantly correlate with ACSI. It was also expected that the PIV would explain a high proportion of the variance in satisfaction. The fit of the PIV–Satisfaction model was sufficient ($\chi_{(182)}^2 = 425.22$, $p < .001$, CFI = .968, GFI = .881, NNFI = .963, RMSEA = .067. Additionally PIV appeared to be strongly correlated with the ACSI construct ($r = 0.878$ $p \geq .001$) with a strong path coefficient explaining 77% of the total variance in overall satisfaction (see Figure 2.)

In Sample 1, discriminant validity was evaluated with the Fornell and Larcker (1981) test, which suggests looking at whether the square root of the AVE for each construct is greater than the correlation with other constructs. The value was in all cases, except the ACSI–EconEF pair, greater than the correlations between the constructs, indicating satisfactory discriminant validity (see Table 3). In the ACSI–EconEF pair the correlation (r = .754) was slightly higher than the respective square root of the AVE indicating some problems in discriminant validity. However, as we deal with perceived value as a second-order factor and EconEF is one sub-construct of perceived value, this is a minor limitation and does not jeopardize the findings of the study.

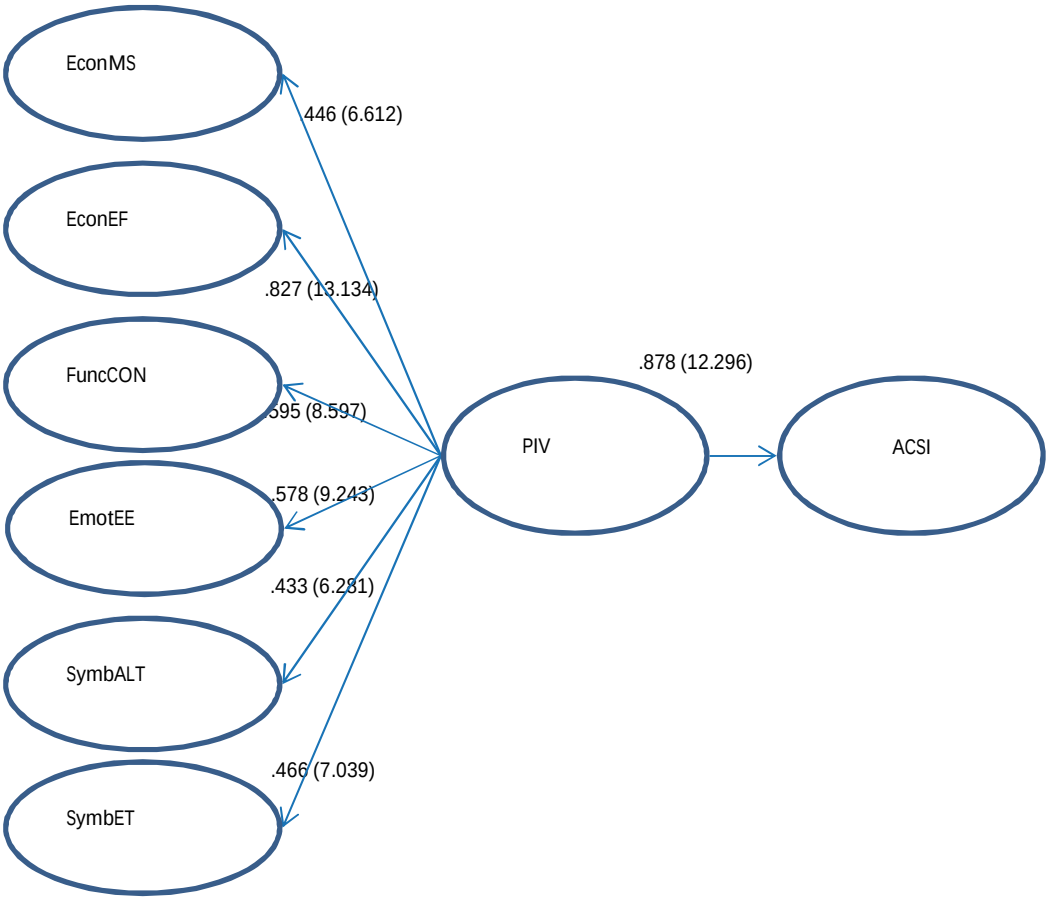

Figure 2. PIV-ACSI model in Sample 1. The numbers represent the standardized path coefficients (*t*-values are shown in parentheses).

Table 3. Discriminant validity (Sample 1). Note: Factor correlations and discriminant validity (square root of AVE displayed on the diagonal)

	EconMS	EconEF	FuncCON	EmotEE	SymbALT	SymbET	ACSI
EconMS	**0.846**						
EconEF	0.452	**0.867**					
FuncCON	0.319	0.482	**0.772**				
EmotEE	0.161	0.461	0.355	**0.883**			
SymbALT	0.08	0.295	0.271	0.400	**0.832**		
SymbET	0.043	0.333	0.188	0.470	0.497	**0.891**	
ACSI	0.404	0.754	0.540	0.450	0.341	0.398	**0.737**

A PIV scale must also predict investment behavior in everyday life. Predictive validity is defined as the ability of a measuring instrument to estimate the behavior of some criterion external to the measuring instrument itself and is shown by the correlation between the instrument and the criterion variable (Nunnally & Bernstein, 1994). To assess the predictive validity of the PIV scale in Sample 2, measures of word-of-mouth and repurchase intention were employed as the criterion variables. Accordingly, there should be a relationship between the PIV scale and the relevant behavioral intentions.

While the satisfaction measure, adopted in Sample 1, has been shown in a number of works to be a reliable predictor of repurchase intentions, for example (Bitner, 1990; LaBarbera & Mazursky, 1983), Petrick (2002) suggests that, while perceived value and satisfaction are both important antecedents of behavioral intentions such as word-of-mouth and repurchase intention, they affect behavioral intentions separately. For example, it can be assumed that some investment (such as mutual funds) can be very satisfying to consumers, who still consider them of poor value on account of, for example, a perception that the costs are high. Since the focus here is on perceived value, it was decided to model the effect of PIV and its dimensions particularly for behavioral intentions, specifically word-of-mouth and repurchase intention.

Repurchase intention can be characterized as a consumer's judgment on investing again in a designated investment option when taking into account their current situation and likely circumstances. Since research has indicated that perceived value is a reliable predictor especially of repurchase intentions (Bitner, 1990), PIV is expected to be positively related to repurchase intention. The scale measuring repurchase intention (alphaREPUR .667) was adapted from the work of Jones and Reynolds (2006, p.120). Since they studied repurchase intentions in a retail context, the items were reworded to be consistent with this study. Accordingly, the items measured on seven-point Likert scales anchored with *strongly disagree* (1) and *strongly agree* (7), are as follows: [REPUR1] "I intend to invest in

individual stocks in the future' [REPUR2] "I will probably invest in individual stocks in the future' and [REPUR3] "It is very unlikely that I will invest in individual stocks in the future" (reversed).

Word-of-mouth, in turn, can be characterized as interpersonal communications in which all of the participants are consumers and not, for example, company representatives. Consumers who actually perceive value will probably recommend investing to other people as well. This reasoning is based on previous research, which suggests that most consumers will react to more than one cue during the service encounter (Bitner, 1990; Patterson & Spreng, 1997). Thus, whereas the word-of-mouth of some consumers may depend entirely on global assessments (satisfaction), other consumers may base their recommendations on specific dimensions of PIV. Previous research suggests that the paths from perceived value to word-of-mouth intentions should be expected to be positive (e.g., Bolton & Drew, 1991; Zeithaml, 1988). In this study, word-of-mouth is defined as positive word-of-mouth, and therefore utilizes the positive word-of-mouth scale (alphaWOM .901) of Jones and Reynolds (2006). The items were reworded to reconcile with the investment context: [WOM1] "I'm likely to say good things about investing in individual stocks" [WOM2] "I would recommend investing in individual stock to my friends and relatives" and [WOM3] "I recommend investing in individual stocks to others". Seven-point Likert scales anchors with *strongly disagree* (1) and *strongly agree* (7)were used.

PIV is significantly correlated with the WOM and REPUR measurement scales. While modification indices concerning SymbPIV are relatively high, the item was retained, because the fit of the PIV-WOM-REPUR model was in other respects good: $\chi_{(244)}^2 = 607.676$, $p < .001$, CFI = .972, GFI = .896, NNFI = .969, RMSEA = .058 (see Figure 3.). In addition, the square root of the AVE was greater than the correlations between the construct indicating satisfactory discriminant validity (see Table 4.). Accordingly, the scale was found to be

reliable and valid in terms of word-of-mouth and repurchase intention. It can be also concluded that the final PIV scale predicts investing behavior in everyday life.

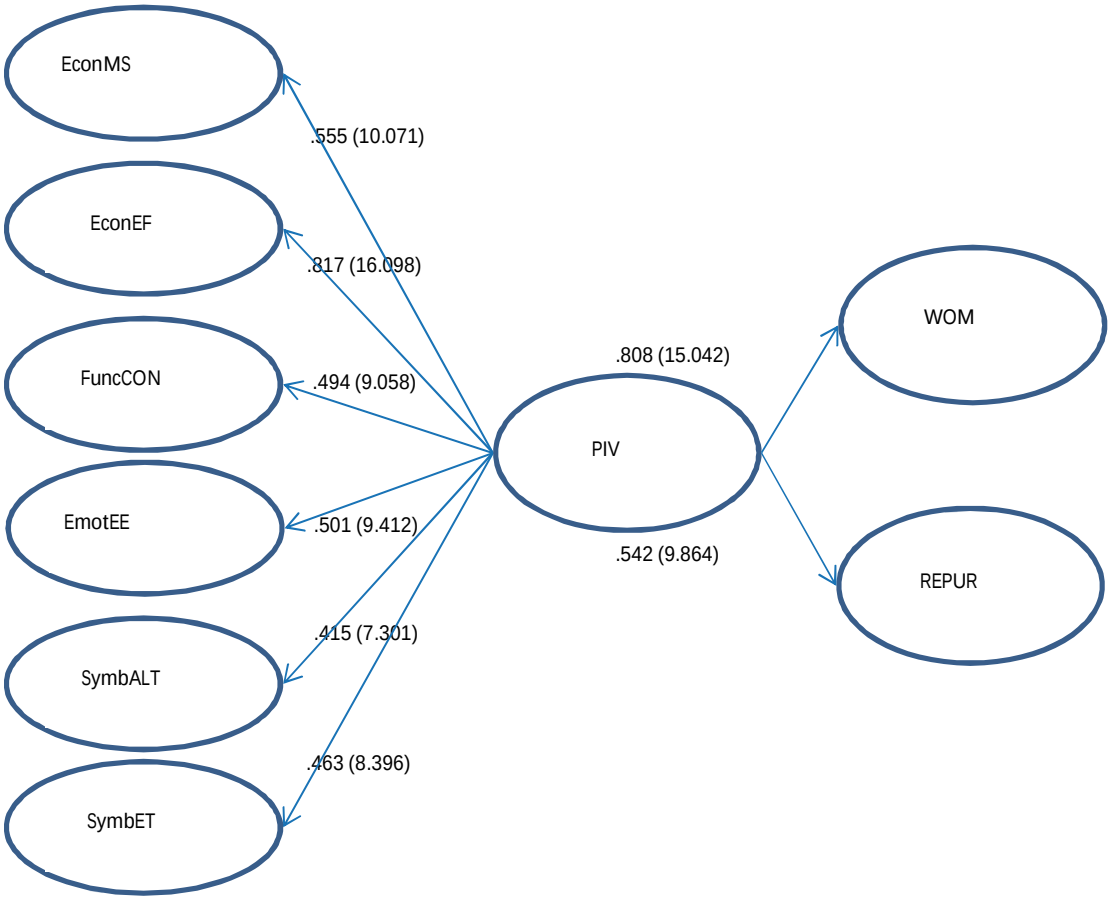

Figure 3. PIV-WOM-REPUR model in Sample 1. The numbers represent the standardized path coefficients (t-values are shown in parentheses).

Table 4. Discriminant validity (Sample 2). Note: Factor correlations and discriminant validity (square root of AVE displayed on the diagonal)

	EconMS	EconEF	FuncCON	EmotEE	SymbALT	SymbET	REPUR	WOM
EconMS	**0.858**							
EconEF	0.508	**0.89**						
FuncCON	0.308	0.403	**0.794**					
EmotEE	0.185	0.377	0.342	**0.862**				
SymbALT	0.225	0.308	0.152	0.271	**0.849**			
SymbET	0.183	0.34	0.180	0.374	0.451	**0.883**		

REPUR	0.443	0.688	0.409	0.378	0.284	0.311	**0.791**	
WOM	0.276	0.412	0.204	0.281	0.210	0.368	0.472	**0.872**

6. Discussion and limitations

The approach in this paper to the concept of value in investment was quite the opposite to the notion of mainstream financial theories, which suggest that it is possible to assess the value of investments objectively. While recent research has begun to recognize the importance of the subjectively defined concept of value (perceived value) in the financial services context (e.g., Maas, 2010; Maas & Graf, 2008), the present research remains, to the best of the authors' knowledge, the first attempt to adopt a comprehensive approach to defining and measuring consumers' value perceptions in the investment context. To summarize, the foregoing conceptualization and measurement of PIV indicates that it is best modeled and measured as a multidimensional construct that includes six types of value (see Table 5). The reliability measures, factor structures, and validity tests indicate that the 18-item PIV scale and its six dimensions have sound and stable psychometric properties.

In terms of reliability and validity, the findings of this research are also subject to several caveats. First, the measures established here originate in the literature and other measurement systems may yield different results. There is also a limitation inherent in the samples, which were drawn from members of the Federation of Stock Investors. Naturally, the choice of sample affects the result. It was concluded that PIV is a multidimensional concept that includes, for example, symbolic or emotional considerations. While the empirical results support this view, it is important to note that these aspects of investment are probably more important to a member of the Federation of Stock Investors than to average investors. The point of this project was to map all possible value dimensions, so it had to leave to future research the question of the extent to which average household consumers would perceive the value dimensions presented here.

7. Implications

Although our research clearly has certain limitations, a sound measurement instrument (Table 5) presented here provides a foundation for future research agendas. First of all, the PIV scale allows us to investigate how the relationships between background variables (age cohorts, gender, religion, education, etc.) and for example subjective discounting rates (such as mental accounts, knowledge of financial matters, and risk-taking attitude) affect the multiple value perceptions presented in this paper. Accordingly, revealing whether there are differences in how respondents perceive dimensions of investment value might be of interest. Moreover, the PIV scale could be relevant for studying cultural influences on the decision-making process around consumer investment, as economic and functional dimensions might be the main drivers of investments in developing countries, whereas in developed markets (e.g., Finland) emotional and symbolic dimension values seem to be important as well.

As the focus was on individual stock investments in our study, the extent to which the results and findings may be extended to all investment options remains to be explored. Accordingly, it would be worth future research replicating the current study with different investment alternatives.

Table 5. The final 18-item PIV measurement tool for future research agendas

PIV dimensions	Definitions	Measures
Economic PIV – monetary savings	*Monetary savings* is perceived economic value that is increased when premiums and management fees (the monetary price) of investment alternative are perceived to be low.	Q1 is an inexpensive way to invest (management fees) Q2 is fairly-priced (management fees)) Q3 is reasonably-priced (management fees)
Economic PIV – efficiency	*Efficiency* is understood as a means to gain appropriate outcomes and profit in view of the personal risk-tolerance of the consumer. Consequently, it means the investment is delivering what is expected.	Q4 is a sufficiently good way to satisfy my requirements for investing Q5 is an efficient way to invest Q6 increases my wealth adequately in view of the risk I bear
Functional PIV – convenience	*Convenience* is the value perceived by the consumer investing as a result of convenience. Convenience can be defined as a ratio of inputs to outputs, with time and effort being the relevant inputs.	Q7 is a convenient way to invest Q8 is an easy way to invest Q9 is not unnecessarily time-consuming
Emotional PIV – emotions and experiences	*Emotions and experiences* is realized when the act of investing is appreciated in its own right. The mere act of investing creates positive emotions, such as entertainment, thrills, and excitement.	Q10 is a nice way spend time Q11 is exiting in a good way Q12 is entertaining
Symbolic PIV – altruism	Investing can provide a symbolic benefit, since consumers are able to express their personal values through investing.	Q13 gives me an opportunity to support my fellow man Q14 gives me an opportunity to support the well-being of other people Q15 gives me an opportunity to express benevolence toward other people
Symbolic PIV – esteem	Esteem is experienced when symbolic features derived from investing are attached to the self in order to define and maintain the concept of self. Investments clearly test consumers' financial capabilities and the act of investing and thus enhance their status and/or self-esteem, which contributes to symbolic value.	Q16 makes me feel valuable Q17 boosts my self-esteem Q18 increases my self-confidence

Other potential scale applications include testing how PIV evolves in the different stages of the investment experience. In other words, do more or less abstract dimensions become more important as, for example, consumers' investment skills improve?

Such future research projects would not only contribute to the PIV concept itself, but would also help us to gain a more comprehensive understanding of investment behavior in general; as today a huge chasm separates traditional investment research and consumers' actual investment processes from whence value ultimately arises. Our findings show the concept of PIV is subjective and multidimensional, and multiple value dimensions explain non-institutional investment behavior better than do economic value items alone. Accordingly, if we accept that the concept of perceived value is applicable to investment, we are probably much closer to the 'true nature of value' in the investment context, that is, that investing is definitely more than an instrument for acquiring a cash return.

To summarize, the PIV scale presented in this study adequately captures both the utilitarian and hedonic aspects of investment decision-making, and adds important sub-dimensions that further explain the complexity of consumer investment behavior to the two-dimensional view of value. In addition to these utilitarian (economic and functional) and hedonic (emotional) dimensions (see Gambetti & Giusberti, 2012) the symbolic dimension of investment is relevant in its own right. Thus, it can be argued that for some consumers, the important role investments play in forming their personal identity establishes that the symbolic meanings of investment are central to value. While these considerations appear anomalous in the face of rationality in the behavioral finance / economics literature and systematic error in, for example, the capital market line in finance / economics literature, these non-economic value components are important factors of value in the consumers' terms and, therefore, definitely explain at least some of the 'irrationality' observed in people's investment decisions that is traditionally ascribed to limitations and difficulties.

References

Anderson, J.C. and Gerbing, D.W. (1988). Structural equation modeling in practice: a review and recommended two-step approach, *Psychological Bulletin*, Vol. 103, 411–423.

Anderson, J.C. and Narus, J.A. (1998). Business marketing: understand what customers value, *Harvard Business Review*, 76 (6), 53–61.

Antonides, G. and van Raaij, F.W. (1998). Consumer behaviour. A. European perspective. Wiley, Chichester.

Armstrong, G. and Kotler, P. (2000). Marketing. Prentice Hall, Englewood Cliffs.

Arndt, J. (1985). On making marketing science more scientific: Role of orientations, paradigms, metaphors, and puzzle solving, *Journal of Marketing*, 49 (3), 11–23.

Babin, B.J., Darden, W.R., and Griffin, M. (1994). Work and/or fun: measuring hedonic and utilitarian shopping value, *Journal of Consumer Research*, 20 (4), 644–656.

Barber, B. and T. Odean. (2002). Online investors: Do the slow die first?, *Review of Financial Studies*, 15 (2), 455–487.

Barberis, N. and Huang, M. (2001) Mental accounting, loss aversion, and individual stock returns, *Journal of Finance*, 56, 1247–1292.

Barberis, N., Huang, M. and Santos, J. (2001). Prospect theory and asset prices, *Quarterly Journal of Economics*, 141, 1–53.

Beal, D.J., Goyen, M., and Phillips, P. (2005). Why do we invest ethically?, *Journal of Investing*, 14, (3), 66–77.

Bearden, W. O., Netemeyer, R. G., and Teel, J. E. (1989). Measurement of consumer susceptibility to interpersonal influence. Journal of Consumer Research, 19, 473–481.

Belk, R.W. (1988). Possessions and the extended self, *Journal of Consumer Research*, 15 (2), 139–168.

Belsky, G. and Gilovich, T. (1999). Why Smart People Make Big Money Mistakes – And How to Correct Them. New York: Simon and Schuster.

Bitner, M. J. (1990). Evaluating Service Encounters: The Effects of Physical Surroundings and Employee Responses. *Journal of Marketing*, 54, 69–82.

Bolton, R.N. and Drew, J.H. (1991). A Multistage Model of Customers' Assessments of Service Quality and Value, *Journal of Consumer Research*, 17 (4), 375–384.

Browne, M. W. and Cudeck, R. (1993). Alternative ways of assessing model fit. In: Bollen, K. A. & Long, J. S. (Eds.) *Testing Structural Equation Models*. pp. 136–162. Beverly Hills, CA: Sage

Browne, B.A. and Kaldenberg, D.O. (1997). Conceptualizing self-monitoring: links to materialism and product involvement, *Journal of Consumer Mark*eting, 14 (1), 31–44.

Butz, H.E. Jr. and Goodstein, L.D. (1996). Measuring customer value: gaining the strategic advantage, *Organizational Dynamics*, 24 (3), 63–78.

Canova, L., Rattazzi, A.M.M., and Webley, P. (2005). The hierarchical structure of saving motives, *Journal of Economic Psychology*, 26 (1), 21–34.

Chandon, P., Wansink, B., and Laurent, G. (2000). A benefit congruency framework of sales promotion effectiveness, Journal of Marketing, 64 (4), 65–81.

Chen, Z. and Dubinsky, A.J. (2003). A Conceptual Model of Perceived Customer Value in E-Commerce: A Preliminary Investigation, *Psychology & Marketing*, 20 (4), 323–347.

Cheng, J. M-S., Wang E. S-T., Lin, J. Y-C., and Vivek, S. D. (2009). Why do customers utilize the internet as a retailing platform?: A view from consumer perceived value, *Asia Pacific Journal of Marketing and Logistics*, 21 (1), 144–160.

Chin, W. and Todd, P. A. (1995). On the use, usefulness and ease of use of structural equation modeling in MIS research: A note of caution, *MIS Quarterly*, 237–246.

Churchill, G. A. (1979). A paradigm for developing better measures of marketing constructs, *Journal of Marketing Research*, 16, 64–73.

Clark-Murphy, M. and Soutar, G. (2005). Individual Investor Preferences: A Segmentation Analysis. *Journal of Behavioral Finance*, 6 (1), 6–14.

Csikszentmihalyi, M. (2000). The costs and benefits of consuming, *Journal of Consumer Research*, 27 (2), 267–272.

Cullis, J.G., Lewis, A., & Winnett, A. (1992). Paying to be good? UK ethical investments. *Kyklos*, 45 (1), 3–23.

Desarbo, W.S., Jedidi, K., and Sinha, I. (2001). Customer value analysis in a heterogeneous market, *Strategic Management Journal*, 22 (9), 845–857.

Diamantopoulos, A. and Siguaw, J. A. (2000) Introducing Lisrel: A Guide for the Uninitiated, London: Sage.

Dorn, D. and Sengmueller, P. (2009). Trading as entertainment?, *Management Science*, 55, 591–603.

Etzioni, A. (1988). The Moral Dimension: Towards a New Economics, The Free Press, New York.

Fama, E. (1998). Market-efficiency, long-term returns, and behavioral finance, *Journal of Finance*, 49 (3), 283–306.

Fama, E. F. and French, K.R. (2007). Disagreement, tastes, and asset prices, *Journal of Financial Economics*, 83 (3), 667–689.

Farquhar J. D., and Rowley J. (2009). Convenience: a services perspective, *Marketing Theory*, 9 (4), 425–438.

Fehr, B., and Russell, J. A (1984). Concept of emotion viewed from a prototype perspective, *Journal of Experimental Psychology*, 113 (3), 464–486.

Firat, F.A. and Venkatesh, A. (1993). Postmodernity: The age of marketing, *International Journal of Research in Marketing*, 10 (3), 227–248.

Fornell, M.D. Johnson, E.W. Anderson, J. Cha, and Bryant, B. E. (1996). The american customer satisfaction index: description, findings, and implications, *Journal of Marketing*, 60 (4), 7–18.

Fornell, C., Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error, *Journal of Marketing Research*, 48, 39–50.

Gallarza, M.G. and Saura, I.G. (2006). Value Dimensions, Perceived Value, Satisfaction and Loyalty: An Investigation of University Students' Travel Behaviour', *Tourism Management*, 27, 437–452.

Gambetti, E., Giusberti, F. (2012). The effect of anger and anxiety traits on investment decisions, *Journal of Economic Psychology*, 33 (6), 1059–1069.

Gerbing D. W. and Anderson, J. C. (1988). An updated paradigm for scale development incorporating unidimensionality and its assessment, *Journal of Marketing Research*, 25, 186–192.

Hair, W. C., Black, B. J., Babin, R. E., Anderson, and Tatham R. L. C. (2006). Multivariate Data Analysis (sixth ed.), Prentice-Hall, New Jersey.

Hardesty, D. M. and Bearden, W. O. (2004). The use of expert judges in scale development: Implications for improving face validity of measures of unobservable constructs, *Journal of Business Research*, 57 (2), 98–107.

Holbrook, M.B. (1999). Introduction to Consumer Value', in M.B. Holbrook (Eds.) Consumer Value. A Framework for Analysis and Research, London: Routledge, 1–28.

Holbrook, M.B. (1994). The nature of customer value: an axiology of services in the consumption experience, in Rust, R.T., Oliver, R.L. (Eds), Service Quality. New Directions in Theory and Practice, Sage, Thousand Oaks, CA, 21–71.

Hooper, D., Coughlan, J. and Mullen, M. R. (2008). Structural Equation Modelling: Guidelines for Determining Model Fit, *The Electronic Journal of Business Research Methods*, (6) 53–60.

Hoyle, R. H. (1995). (Eds.) Structural equation modeling: Concepts, issues, and applications, Thousand Oaks, CA, US: Sage Publications, Inc, xxii, 56-75.

Hsee, C.K., Hastie, R., and Chen, J. (2008). Hedonomics: Bridging decision research with happiness research, *Perspectives on Psychological Science*, 3 (3), 224–243.

Hu, L.-T. and Bentler, P. M. (1995) 'Evaluating Model Fit', in R. H. Hoyle (ed.) Structural Equation Modeling, Thousand Oaks, CA: Sage, pp. 76–99.

Huber, F., Herrmann, A., and Braunstein, C. (2000). Testing the Metric Equivalence of Customer Value: An Empirical Test across Germany and Denmark, Multicultural Marketing Conference, Academy of Marketing Science, September 2000.

Hunt, S.D. (2002). Foundations of marketing theory – Toward a general theory of marketing. New York: M.E. Sharpe,

Jones, M. and Reynolds, K. E. (2006). The role of retailer interest on shopping behavior, *Journal of Retailing*, 82 (2), 115–126.

Jöreskog, K.G. and Sörbom, D. (2006). LISREL 8.80 for Windows [Computer Software]. Lincolnwood, IL: Scientific Software International, Inc.

Keller, C., & Siegrist, M. (2006). Money Attitude Typology and Stock Investment, *Journal of Behavioral Finance*, 7, 88–96.

Laibson, D. (1998). Life-cycle consumption and hyperbolic discount functions, European Economic Review, 42, (3–5), 861–871.

Law, K. S. Wong C-S., and Mobley W. (1998). Toward a Taxonomy of Multidimensional Constructs, *The Academy of Management Review*, 23 (4), 741–755.

Lee, E. J. and Overby, J. W. (2004). Creating Value for Online Shoppers: Implications for Satisfaction and Loyalty, *Journal of Consumer Satisfaction*, Dissatisfaction and Complaining Behavior, 17, 54–67.

Liang, C-J., Wang, W-H., and Farquhar, J-D. (2009). The influence of customer perceptions on financial performance in financial services, *International Journal of Bank Marketing*, 27 (2), 129–149.

Lovett, M. J. and MacDonald, J. B. (2005). How does financial performance affect marketing? Studying the marketing–finance relationship from a dynamic perspective, *Journal of the Academy of Marketing Science*, 33, 476–485.

Maas, P. (2010). How Insurance Broker Create Value: A Functional Approach. *Risk Management and Insurance Review,* 13 (1), 1–20.

Maas, P., & Graf, A. (2008). Customer Value Analysis in Financial Services. *Journal of Financial Services Marketing*, 13 (2), 107–120.

MacCallum, R., Roznowski, M., and Necowitz, L. B. (1992). Model modifications in covariance structure analysis: The problem of capitalization on chance. *Psychological Bulletin*, 111 (3), 490–504.

Marsh, H. W., & Hocevar, D. (1985). Application of confirmatory factor analysis to the study of self-concept: First- and higher order factor models and their invariance across groups. *Psychological Bulletin*, 97, 562–582.

Martin-Ruiz D., Gremler D.D., Washburn J.H., and Cepeda-Carion G. (2008). Service value revisited: specifying a higher-order, formative measure. *Journal of Business Research*, 61, 1278–1291.

Mathwick, C., Malhotra, N., and Rigdon, E. (2002). The effect of dynamite retail experiences on experiential perceptions of value: An internet and catalogue comparison. *Journal of Retailing*, 78 (1), 51–60.

Mattsson, J. (1991). Better Business by the Abc of Values. Lund: Studdentlitteratur.

Markowitz, H. (1959). Portfolio Selection: Efficient Diversification of Investments, New York: John Wiley & Sons.

Meier, K., Kirchler, E., and Hubert, A-C. (1999). Savings and investment decisions within private households: Spouses' dominance in decisions on various forms of investment, *Journal of Economic Psychology*, 20 (5), 499–519.

Modigliani, F. (1988). The role of intergenerational transfers and life cycle saving in the accumulation of wealth, *Journal of Economic Perspectives*, 2 (2), 15–40.

Mägi, A. W. (2003). Share of wallet in retailing: the effects of customer satisfaction, loyalty cards and shopper characteristics. *Journal of Retailing*, 79 (2), 97–106.

Netemeyer, R. G., Bearden, W. O., and Sharma, S. (2003). Scaling Procedures: Issues and Applications. Thousand Oaks, CA: Sage.

Nilsson, J. (2009). Segmenting socially responsible mutual fund investors: The influence of financial return and social responsibility, *International Journal of Bank Marketing*, 27 (1), 5–31.

Nunnally, J. C. and Bernstein, I. H. (1994). Psychometric theory (3rd ed.). New York: McGraw-Hill.

Oliver, R. L. (1997). Satisfaction: A Behavioral Perspective on the Consumer, Irwin/McGraw-Hill, New York.

Olson, J. C. and Reynolds, T. J. (2001). 'The means–end approach to understanding consumer decision making', in T.J. Reynolds and J.C. Olson, Understanding Consumer Decision Making: The Means–End Approach to Marketing and Advertising Strategy, Mahwah, NJ: Lawrence Erlbaum, pp. 3–20.

Patterson, P. G. and Spreng, R. A. (1997). Modelling the relationship between perceived value, satisfaction and repurchase intentions in a business-to-business, service context: an empirical examination, *International Journal of Service Industry Management*, 8 (5), 414–434.

Petrick, J. F. (2002). Development of a multi-dimensional scale for measuring the perceived value of a service, *Journal of Leisure Research*, 34 (2), 119-134.

Puustinen P., Kuusela H., and Rintamäki T. (2012) Investment service providers gaining competitive advantage by focusing on consumers' varying investment goals, *Journal of Financial Services Marketing*, 17, 191–205.

Puustinen P. & Rintamäki T. (2010). Not Just For Profit - Extending The Perspective On Consumers´ Investment Goals. 39th EMAC Conference Proceedings: The Six Senses - The Essentials of Marketing.

Ratneshwar, S., Barsalou, L., Pechmann, C., and Moore, M. (2001). Goal-derived categories: The role of personal and situational goals in category representations, *Journal of Consumer Psychology*, 10 (3), 147–157.

Raykov, T. and Marcoulides, G. A. (2006). A First Course in Structural Equation Modeling (Second Edition). Mahwah, NJ: Lawrence Erlbaum Associates.

Richins, M.L. (1994). Special possessions and the expression of material values. *Journal of Consumer Research*, 21 (3), 522–533.

Rintamäki, T. Kanto, A. J., Kuusela, H., and Spence, M. T. (2006). Decomposing the value of department store shopping into utilitarian, hedonic and social dimensions: Evidence from Finland, *International Journal of Retail & Distribution Management*, 34 (1), 6 – 24.

Rintamäki, T., Kuusela, H., and Mitronen, L. (2007). Identifying competitive customer value propositions in retailing, *Managing Service Quality*, 17 (6), 621–-634.

Rokeach, M. (1973). The Nature of Human Values. New York: The Free Press.

Rossiter, J. R (2002). C-OAR-SE procedure for scale development in marketing, *International Journal of Research in Marketing*, 19, 305–335.

Seiders, K., Voss, G. B., Grewal, D., and Godfrey, A. L. (2005). Do satisfied customers buy more? Examining moderating influences in a retailing context. *Journal of Marketing*, 69, 26–43.

Sharpe, W.F. (1964), Capital asset prices: A theory of market equilibrium under conditions of risk, *Journal of Finance*, 19, 425–442.

Sharpe, W. F. (1995). The styles and performances of large seasoned U.S. mutual funds, 1985–1994. Working paper, Stanford University Business School.

Sheth, J., Newman, B., and Gross, B. (1991). Why we buy what we buy: A theory of consumption values, *Journal of Business Research*, 22 (2), 159–170.

Smith, J. B. and Colgate, M. (2007). Customer value creation: A practical framework, *Journal of Marketing Theory and Practice*, 15 (1), 7–23.

Solomon, M. R. (1983). The role of products as social stimuli: A symbolic interactionism perspective, *Journal of Consumer Research*, 10 (3), 319–329.

Sorokin, P. A. (1950). Altruistic love: A study of American good neighbors and Christian saints. Boston: Beacon Press.

Statman, M. (2004). What do investors want?, *Journal of Portfolio Management*, 30, 153–161.

Sullivan, M. K. and Miller, A. (1996). Segmenting the informal venture capital market: Economic, hedonistic, and altruistic investors, *Journal of Business Research*, 36 (1), 25–35.

Sweeney, J. C. and Soutar, G. N. (2001). Consumer perceived value: the development of a multiple item scale, *Journal of Retailing*, 77 (2), 203–220.

Ullman, J. B. and Bentler, P. M. (2004) 'Structural Equation Modeling', in M. M. Hardy and A. Bryman (eds) Handbook of Data Analysis, London: Sage, pp. 431–58.

Woodruff, R. B. (1997). Customer Value: The Next Source for Competitive Advantage, *Journal of the Academy of Marketing Science*, 25 (2), 139–153.

Wärneryd, K-E. (1999). The Psychology of Saving: A Study of Economic Psychology, Cheltenham, UK: Edward Elgar Publishing.

Zeithaml, V. (1988). Consumer perceptions of price, quality and value: a means-end model and synthesis of evidence, *Journal of Marketing*, 52 (3), 2–22.

Appendices

Appendix 1. Results of PIV latent model and PIV-ACSI model (Sample 1)

		PIV SECOND ORDER MODEL			PIV-ACSI MODEL				
Construct	Item	Item-total correlation	Composite reliability	Average variance extracted	Mean	Standard Deviation	Item-total correlation	Composite reliability	Average variance extracted
EconMS	MS1	.759			5.867	1.369	.763		
	MS2	.902	.883	.716	5.007	1.445	.899	.883	.716
	MS3	.871			4.940	1.418	.872		
EconEF	RR3	.840			5.247	1.207	.850		
	AO1	.956	.900	.751	5.497	1.158	.943	.900	.752
	AO2	.796			5.653	1.136	.802		
FuncCON	CON1	.811			5.203	1.491	.807		
	CON2	.816	.815	.597	4.977	1.159	.823	.815	.596
	CON3	.683			4.520	1.557	.678		
EmotEE	EXP3	.899			5.317	1.482	.902		
	EMO2	.878	.914	.780	5.450	1.357	.878	.914	.780
	EMO3	.871			4.843	1.527	.869		
SymbALT	ALT1	.711			4.493	1.685	.705		
	ALT2	.917	.870	.693	3.870	1.168	.925	.870	.693
	ALT3	.856			3.933	1.664	.851		
SymbET	ET1	.719			3.327	1.648	.719		
	ET2	.917	.918	.793	4.093	1.623	.989	.920	.797
	ET3	.856			4.247	1.596	.938		
ACSI	ACSI1				5.873	.909	.776		
	ACSI2				5.570	.991	.801	.780	.543
	ACSI3				5.143	1.036	.651		

Appendix 2. Results of PIV latent model and PIV-WOM-REPUR model (Sample 2)

		PIV SECOND ORDER MODEL			PIV-WOM-REPUR MODEL				
Construct	Item	Item-total correlation	Composite reliability	Average variance extracted	Mean	Standard Deviation	Item-total correlation	Composite reliability	Average variance extracted
EconMS	MS1	.795			5.594	1.401	.799		
	MS2	.887	.893	.736	5.082	1.389	.887	.893	.736
	MS3	.888			5.068	1.355	.886		
EconEF	PT3	.873			5.244	1.250	.871		
	AO1	.922	.920	.792	5.463	1.217	.924	.920	.792
	AO2	.875			5.648	1.195	.875		
FuncCON	CON1	.892			5.219	1.593	.889		
	CON2	.876	.832	.631	5.071	1.621	.880	.832	.631
	CON3	.574			4.584	1.581	.574		
EmotEE	EXP3	.894			5.365	1.532	.897		
	EMO2	.800	.896	.743	5.500	1.322	.800	.896	.743
	EMO3	.888			4.929	1.580	.886		
SymbALT	ALT1	.678			4.562	1.709	.677		
	ALT2	.954	.883	.720	3.811	1.702	.955	.883	.720
	ALT3	.889			3.416	1.641	.888		
SymbET	ET1	.717			3.523	1.670	.717		
	ET2	.991	.912	.779	4.201	1.605	.992	.912	.779
	ET3	.916			4.326	1.595	.915		
WOM	WOM1				5.258	1.419	.849		
	WOM2				5.137	1.540	.781	.833	.625
	WOM3				4.767	1.648	.740		
REPUR	REPUR1				6.484	0.909	.780		
	REPUR2				6.523	0.891	.922	.904	.760
	REPUR3 (reversed)				5.550	2.274	.907		