

# The American spirit: The performativity of folk economics in global financial markets

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## Abstract

Inspired by Austin's conceptualisation of utterances as performative, that is, they do things rather than merely represent, research has shown how scientific theories can become performative in financial markets. Research also shows that brokerage and investment work is as much about using everyday knowledge of markets as it is about performing scientific theories. We investigate whether and how this knowledge or what Swedberg calls 'folk economics' can also be performative. We focus on Borsa Istanbul, an emerging market where market actors perform what we call 'the American Spirit' – a ubiquitous folk theory that frames and plots the Turkish market as one that moves in tandem with American and other developed markets – and in the process become better market forecasters. Our findings have implications for the study of folk economics and performativity in global economy and finance.

## Keywords

Folk economics, folk theories, performativity, narrative economics, finance, globalization

## Introduction

Performativity studies on financial markets (Braun, 2016, MacKenzie, 2006, Muellerleile, 2013) demonstrate the symbolic and material evolution of finance practice towards the financial economics' fundamental axioms that investors are informed and rational; this is generally embodied in finance professionals performing scientific theories in their marketing, brokerage and investment

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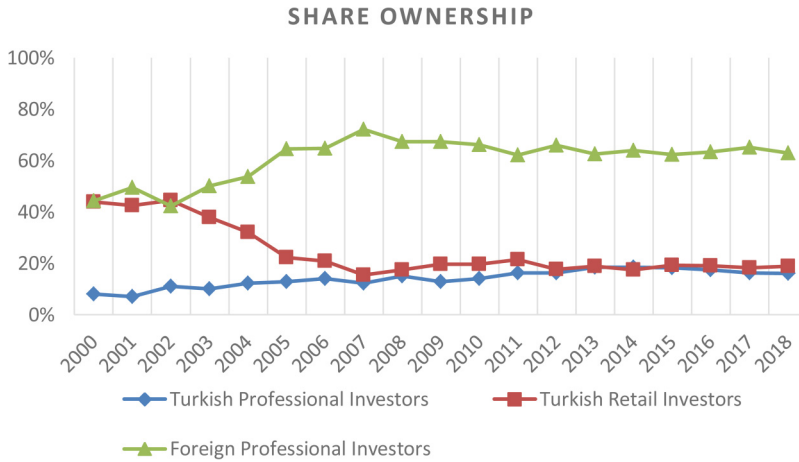
work for investment organisations. One question that remains is *whether* and *how* other theories may come to perform market processes and outcomes just as scientific theories do in financial markets (Caliskan and Callon, 2010). As studies on lay (i.e., retail) investors (Harrington, 2008, Roscoe, 2015) and finance professionals (Davis, 2005, Thompson, 2013) demonstrate, financial knowledge comes from not only financial economics or ‘episteme’ but also ‘folk economics’, that is ‘everyday knowledge’ of markets and the economy found ‘in the household and the workplace’ (Swedberg, 2018). This discourages us from privileging scientific knowledge over everyday knowledge in the study of ‘economic performativity’ in financial markets (Lansing, 2012). We therefore turn our attention to workplaces, where financial analysts, brokers, retail and professional investors perform everyday knowledge of markets and specific ‘folk theories’ (Rip, 2006) in what Caliskan and Callon (2010) describe as ‘market maintenance’ work, such as marketing, brokerage, and investment.

Our exploration took place in an emerging market context, that is, Borsa Istanbul. Over the last two decades, the bulk of the trading volume in Borsa Istanbul (over 70%) has been generated by Turkish retail investors owning only a fraction of the shares (less than 20%) – the remainder owned by global and local professional investors (see Figures 1 and 2). This ownership and trading profile is typical of emerging markets (Barber et al., 2007), unlike those in developed markets, which are dominated professional investors (Davis, 2005). This has also made Borsa Istanbul one of the fastest stock markets in the world (see Figure 3). As such, Borsa Istanbul constitutes an instrumental case to study folk economics and its theories, which may co-exist with those of financial economics and have ‘performative effects’ (MacKenzie, 2006), given the magnitude of lay investor activity. Our data is unique as we have *in-situ* observations on how lay and professional investors and their brokers interpreted and predicted the course of markets with their naturally occurring utterances on the past and future trajectory of markets. We analyse this utterance dataset in relation to how market actors theorized on markets and performed these theories in their market maintenance work.

We find that our interlocutors irrespective of their market identity theorised the Turkish market as a global market that moves in tandem with developed country markets. Moreover, they performed this theory in their marketing, brokerage and investment work. We call this theory a folk theory because we find its origins not in financial economics but in the ‘everyday knowledge’



**Figure 1.** % of annual trading volume by investor type in Borsa Istanbul. Source: Turkish Capital Market Institutions annual reports.



**Figure 2.** % of share ownership by investor type in Borsa Istanbul.  
Source: Turkish Capital Market Institutions annual reports.



**Figure 3.** Share turnover ratios by investor type in Borsa Istanbul.  
Sources: World Bank, Turkish Capital Market Institutions. Ratios show the proportion of trading volume to share ownership and calculated according to Barber et al. (2007, 430). Borsa Istanbul (160%) led its peer countries in Europe and Central Asia (109%) and the world (128%) in turnover in the same period (Source: World Bank).

and ‘experiences’ (Swedberg, 2018) of our interlocutors concerning the increasing links of Turkey’s economy and market with the global economy in the 2000s when we conducted our research. We call this folk theory *the American Spirit* firstly because in its ‘performance’ (Callon, 2007), our interlocutors heavily relied on the US market and economy as ‘actants’ (Czarniawska, 2004) that they theorized to move the Turkish market. Our interlocutors referred to these US actants with the metonym “Amerikan [American]” (e.g., “Amerikan datasi [data on the US economy]”). Secondly, this folk theory was widely performed, and thus had ‘generic

performativity' (MacKenzie, 2006) in Borsa Istanbul. As such, the word *spirit* in the American Spirit represents a 'particular way of thinking [...] behaving [...] that is typical of a particular group of people, an activity, a time or a place' (Cambridge Dictionary Online, n.d.), that is, lay and professional investors and finance professionals and their marketing, brokerage and investment work in Borsa Istanbul at the time of our research.

We also demonstrate that the American Spirit as a folk theory was performative in an 'effective' sense too – namely, a theory having an 'effect on the economic process in question' (MacKenzie, 2006). Our interlocutors' market predictions heavily relied on this folk theory and, when performed, the American Spirit increased their accuracy. We also note the econometric evidence generated by financial economics on Borsa Istanbul's connectivity with US markets, and demonstrate how the American Spirit's performance constituted, to use MacKenzie's (2006) words, not just a 'camera' but also an 'engine' of this market reality in Borsa Istanbul.

Our findings demonstrate how mundane market maintenance work (Caliskan and Callon, 2010) may feature the performance and performativity of folk theories on any aspect of the economy, whose origins are in actors' historical and everyday experiences, independent of what financial economics theorises and finds about the phenomenon in question. In the next section, we review the literature on performativity in financial markets and introduce folk economics to extend its scope. Then, we introduce our methodology and present our findings. Drawing on our findings, we expand our discussion on the differences between folk and scientific theorisations on the economy, and discuss the implications for the performance and performativity of scientific and folk theories. We conclude with our findings' broader implications for the study of folk economics, its performance and performativity.

## Scientific theories, performativity, and folk economics

The performativity research on economics not only demonstrates how economics as a specific form of discourse has come to be involved 'in the analysis and transformation [and] configuration of the markets' but also shows how these 'illocutionary effects' have come about with the right felicitous conditions (Callon, 2007). In the case of financial markets, the performativity literature demonstrates the felicitous conditions to be generally concerning the successful incorporation of specific scientific models, such as Black-Scholes on options-contract pricing, into what are called 'socio-technical arrangements' or actants (e.g., option traders) (MacKenzie, 2006, Muellerleile, 2013). These are assemblages of human and non-human actors, theories, and texts that act and are acted on by other socio-technical arrangements. As a model is widely inscribed into socio-technical arrangements in a market, these arrangements' specific calculative devices and acts perform the market; the model does not describe market reality, it performs it (Callon, 2007).

As Callon states (2007: 323), any 'statement' when once inscribed into socio-technical arrangements enacting the world accordingly are prone to refutations or 'overflows' by 'the entities that they assemble'. Such 'misfires' are 'the general rule' in the performativity of statements (Callon, 2010: 164). What is then more interesting is the exploration of the 'performance' process or 'perlocutionary effects' – that is, how statements by academic and practitioner economists come to be inscribed in socio-technical arrangements, and provide the felicitous conditions for their 'illocutionary effects' (Callon, 2010: 164). This exploration can also show why performance of a theory is not just a self-fulfilling prophecy of beliefs or arbitrary ideas. The actual strong performativity of these statements or the 'verisimilitude' that they have in real markets is a matter of further research, bearing in mind the overflows and opposing or cooperating 'co-performations' by other socio-technical arrangements (Callon, 2007).

As MacKenzie (2005) describes it, financial markets are highly 'scientised and technologised'. In workplaces and sites of modern finance, science is ever present as part of the socio-technical

arrangements and gets involved in what Caliskan and Callon (2010) describe as ‘types of framing [the market]’ such as ‘market design and maintenance’, and ‘price-setting’. However, this involvement happens in varying degrees of scientific legitimacy and rigour. For example, passive index funds are transforming the asset management industry by performing the Nobel prize winning efficient market theory (Braun, 2016) that condemns active fund management (Fama, 1995). Professional investors perform a less pure version of award-winning scientific financial arbitrage theory to correct price discrepancies in similar assets (Beunza et al., 2006). Last but not least, retail and professional investors use technical analysis (Roscoe, 2015, Thompson, 2013), which modern finance theory condemns as ‘astrology’ in efficient markets (Fama, 1995) but sociological research (Preda, 2004) demonstrates to be similar to scientific methods in its ‘techniques of theorisation’ (Callon, 2007). There are also practitioner models, blending scientific and practitioner theories and helping market actors value and forecast individual assets, for example, discounted cash flow (DCF) in the so-called ‘fundamental analysis’ (Fama, 1995), and calculate probabilities of market events and discern how others do it as a ‘coordinating device’, for example, ‘spreadplot and implied volatility’ (Beunza and Stark, 2012).

Moreover, market actors are shown to engage in what Zaloom (2003: 266) calls ‘market chatter’ – namely, ‘develop[ing] a narrative around the patterns of the market’ too. These conversations that happen among professional and lay market actors can be representative and generative of what Preda (2004: 354) describes as ‘vernacular knowledge’ – that is, ‘tacit, commonly shared assumptions and knowledge’ derived from market experiences and observations and ‘oriented towards solving everyday problems’. The existence of vernacular knowledge may also be seen as the result of actors’ awareness of the limits of the applicability of scientific theories and models in ‘the real world’ (Coleman, 2014), and actors’ eagerness to bring sociality back into the abstractions that scientific theories, associated framing devices and market screens generate in post-social anonymous markets (Beunza and Stark, 2012, Zaloom, 2003). As Caliskan and Callon (2010) note, ‘lay knowledge’ is as relevant as scientific knowledge to ‘many operations [necessary for] market maintenance’ such as marketing, brokerage, and investment, though their review of the literature does not say much about it and its performativity. Concomitantly, a question arises on the nature of finance practitioners’ knowledge, and whether those that do not come from science can be performative.

One concept that can help to answer these questions is ‘folk economics’ (Swedberg, 2018). Similar to the study of other types of ‘folk science’ (Rip, 2006), folk economics concerns the study of how people other than scientists theorize about an economic phenomenon in question by way of conceptualisation, categorization and establishing causality (Swedberg, 2018). Because these theorisations ‘colour’ people’s interpretation of experiences and generalisations thereof (Rip, 2006), folk economics is interested in how these theorisations affect the ways people behave in households and workplaces, and in the economy (Swedberg, 2018). As such, it provides a scope to study lay theories and their performance.

As explained by Rip (2006), folk theories’ ‘robustness’ depends on their degree of acceptance in a given group or broader culture as well as whether they are subjected to systematic validity checks. Swedberg (2018) proposes the concepts of ‘communities of discourse’ and ‘primary and secondary [...]doxic [knowledge] communities’ to conjecture such dynamics. Communities of discourse is similar to ‘epistemic cultures’ but without privileging specific sites and specific groups of people (e.g., scientists in labs) for the study of knowledge generation (Cetina, 2007). Everyday experiences in household and work places are generative of primary doxic communities. Consequently, they share common ways of thinking, representations, and acting (Swedberg, 2018: 10). Secondary doxic communities refer to people and their theorisation on phenomena with which they do not have direct experience. Consequently, secondary communities and their theories are more ‘fragile and fragmented’, and thus more open to ‘challenge [and] manipulation’, unlike primary doxic communities (Swedberg, 2018).

Swedberg (2018) argues that economics has reduced the study of folk economics to exploration of people's ignorance of the scientific economic theories and findings. Yet, he acknowledges 'narrative economics' (Shiller, 2017) as a new strand of economics research on folk economics. Narrative economics explores the role in and impact on the economy of the narrative mode of thinking, which is the dominant mode among humans as opposed to the logico-scientific mode (Bruner, 1986). While narrative economics focuses on viral phenomena, Rebonato (2013) points to finance professionals' modelling of market events or 'macro level stories' in spatio-temporal or narrative terms (e.g., "Oil price at \$ 200"), and how these narrative models may colour professionals' judgements and decisions (e.g., they may ignore information 'inconvenient' to the model). These studies provide theoretical insights into how individuals in households and professionals at work think and act in different domains of the economy.

Although Swedberg (2018) may be right in arguing that sociology has hardly studied folk economics as a concept (cf. Preda, 2004 on vernacular knowledge), the sociological literature on financial markets reviewed so far has shown the material and mediated nature of people's thinking and acting in financial markets. This nonetheless mainly concerns the performance of scientific theories. This may be because of a perceived disconnect between 'unrealistic' theories of economics and 'real life', and hence performative outcomes of economics performed in real markets being seen as more 'interesting' (MacKenzie, 2006) than everyday knowledge and its performance. In the following section, we discuss how folk economics can also be studied from the perspectives of performance (Callon, 2010) and performativity (MacKenzie, 2006).

### *Folk economics: A camera or an engine?*

Because folk theorisations build on people's experiences of the economy (Swedberg, 2018), one argument against applying the performativity framework to study folk economics can be that any folk theory on the economy is a mere expression without any performative effects of an economic reality, which happen to be theorised and/or observed by scientific economics and econometrics too. This is similar to what MacKenzie (2004) postulates about situations where there is a great deal of verisimilitude between a scientific theory and the reality it depicts without any performativity of the former. MacKenzie's example on astrophysicists having no effect on nuclear reactions within stars to explain this postulate is quite telling for its implausibility for any folk theory that is widely performed in markets. This also underlines the importance of the distinction between performance and performativity, and the necessity to explore and confirm the former to be able to test the latter.

Even if we assumed that both folk and scientific theories were cameras rather than engines on various aspects of the economy mysteriously caused by actants without any contribution from the folk who theorize and act on those aspects, the camera toolkit used by people (e.g., lay investors, professional investors) who also act on the economy, and the one used by academics to observe the economy from a distance without any involvement may have different performative (illocutionary) consequences for the economy. This is irrespective of any similarities and differences in the way these different toolkits take pictures of the economy.

For example, in the case of folk theories on the interconnectedness of financial markets in a global economy, the folk theorisation of people may be performed in their market work oriented towards solving everyday problems in a market like Borsa Istanbul, which may have specific 'institutional and geographical entanglements' (Muellerleile, 2013) such as the lay investor dominance in share trading. These performances with the right felicitous conditions can therefore have performative effects in Borsa Istanbul. Exploring the performance and performativities of such a folk theory in that specific market does not rule out the effects of other factors (e.g., the Turkish economy's global entanglements such as trade in goods, services and capital) that scientific



economics may incorporate in explaining the same phenomenon from a distance nor the possibility of people incorporating these very factors in their folk theorisation. What it does is to show that folk economics and theories, when performed, can simultaneously act as cameras and engines of market reality if the right felicitous conditions are present. In subsequent sections, we further discuss the scientific theories on the global market connectivity alongside our findings on the performance and performativity of the American Spirit.

## Methodology

The data in this study comes from the lead author's *in-situ* observations in Borsa Istanbul. The original research, which aimed to explore cognition and decision-making in financial markets took place between January and September 2008 and between May and June 2009 in the following sites representing the aforementioned formal investor categories and corresponding modes of market behaviour (see Table 1).

The observations took place during market hours (9:00–17:00) and lasted 74.5 days. As it is common practice in field research (Spradley, 1979), we recorded the site events in notebooks and via voice recorder, whenever the latter was permitted, without any preconceived notions of relevance. The resulting observation data, the collection of which ended when we observed 'data saturation' (Denzin, 2006) had rich descriptions of market events, including our interlocutors' market chatter. The observation data was 'triangulated' (Denzin, 2006) with interviews (32 in the observation sites, and 58 elsewhere – see Appendix) and the analysis of periodic documents used in brokerage and investment work (e.g., daily bulletins, analyst valuations). The data and its analysis allowed us to build an interlocutor-verified picture of how market actors think and act in their brokerage and investment work, including their vernacular models of the market.<sup>1</sup>

More specifically, we analysed the market chatter data to explore how our interlocutors interpreted and anticipated markets. Firstly, and because market chatter was dominated by causal statements in spatio-temporal terms, we drew on organisational storytelling literature (Boje, 2001, Czarniawska, 2004) to develop an operationalised definition to identify individual utterances as discourses by which the narrator connects two or more clauses together for retrospective and/or prospective explanation on the states of markets. We identified 1285 utterances. We then subjected them to 'narrative element' (Czarniawska, 2004) and 'causality' analysis (Boje, 2001) to identify how different narrative elements or actants (e.g., 'Amerikan piyasasi [US stock market]', Borsa Istanbul) related to each other in interlocutors' emplotments. This was accompanied by codification of each utterance according to various features (see Table 2 for a sample). These initial coding categories emerged during the time of original observations and were discussed and validated with interlocutors.

The results of this analysis showed that a considerable percentage (40%) of the utterances explained and/or predicted Borsa Istanbul events by looking afar to 'Amerikan' and other developed markets, as represented on market screens. As MacKenzie (2006: 19) explains, if a model of the economy remains 'incorporated in the heads of economic actors' as a belief only, then its performance and performativity may be 'precarious'. Our triangulated data analysis demonstrated that this was not the case. Daily bulletins that we regularly collected from the observation sites and beyond materially manifested this shared way of plotting in their headline commentaries and in the way bulletins were laid out (i.e., a calendar on the left that listed anticipated market events in US and other developed markets before those in Borsa Istanbul). Our observations on interlocutors' market screens also highlighted how data streams from developed markets were invariably ubiquitous alongside local ones. We also discussed with our interlocutors in and beyond the observation sites the invisible aspects of this shared way of modelling Borsa Istanbul in investment and brokerage work. All these helped us to confirm the performance of the American Spirit in brokerage and investment work (Callon, 2010) or its generic performativity (MacKenzie, 2006).

**Table 1.** Coordinates of field sites.

Site	Organisational coordinates	Observation type
A, A1	Brokerage firm, serving Turkish retail investors, 1.1% market share in annual trading volume (in the top 40 out of 89 firms)	Non-participant in headquarters (A) and a branch (A1), observing three financial analysts and five brokers in A, three investors and two brokers in A1
B	Brokerage firm, serving Turkish retail investors and foreign and Turkish professional investors, 1.5% share in trading (top 25)	Non-participant in headquarters, observing seven brokers and one analyst serving retail investors
C	Brokerage firm, serving Turkish retail investors and foreign and Turkish professional investors, 1.6% market share in trading (top 25)	Participant-observer in headquarters, observing two brokers and assisting two analysts serving foreign professional investors
D, D1	Brokerage firm, serving Turkish retail investors and foreign and Turkish professional investors, 3.6% share in trading (top 10)	Nonparticipant in headquarters, observing five brokers and one analyst serving retail investors in D, and five brokers and eight analysts serving foreign professional investors in D1
E	Turkish professional investors, managing funds for local and foreign companies, high-net-worth individuals, 1.8% share in the asset management industry	Nonparticipant, observing five fund managers



### Measuring the performativity of the American Spirit

For the more ‘interesting’ effective performativity, MacKenzie (2006b) stresses that the practical use of any aspect of economics ‘must make a difference’. Without that particular aspect, the economic process would look different to one that has the aspect incorporated. We follow this and argue that if the performance of the American Spirit makes our interlocutors more accurate in their market predictions, this can be seen as evidence for the effective performativity of the American Spirit. In measuring this, we do not argue that individual market utterances’ predictive accuracy comes from an Austinian sense of performativity, whereby Borsa Istanbul moves as the utterer declares (Austin, 1962). This would be impossible for domains like financial markets where ‘a centralised authority’ is missing (MacKenzie, 2004). Our argument rests on the generic performativity of the American Spirit in Borsa Istanbul and posits that this model might have had other performative effects.

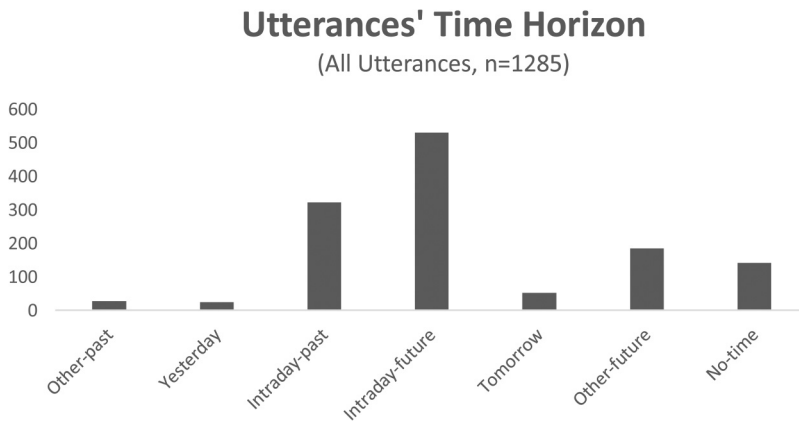
To test the predictive accuracy of each utterance, we recoded the original market chatter dataset with new categories on utterance-time and utterance-horizon (see Table 2). We observed the following time horizons in the dataset (see Figure 4).

Given the short-term focus of our interlocutors in their interpretations and explanations, we limited our predictive accuracy tests to *Intraday-future* and *Tomorrow*. In these, we focused on two Borsa Istanbul assets where the American Spirit was invoked most frequently (67%). These are the BIST-100 index and the BIST-30 futures contract. With this sub-dataset, which was composed of 228 predictions, our predictive accuracy tests consisted of whether the prediction was

**Table 2.** Summary coding table.

Code	Explanation
Time	Time horizon (e.g., day, tomorrow, yesterday)
Change*	Predicted directional change in Turkish asset (1 = increase, 0 = decrease)
Time code*	Time of utterance
Event *	Predicted event time, day
Western (W) market	1- US, 2-Germany, 3-UK...
Turkish (TR) market/asset	0 = BIST-100 [index that contains the top-100 company-shares representing 90% of the market value in Borsa Istanbul], 1 = BIST-30 futures [forward-looking financial contract on the top-30 company-shares in Borsa Istanbul], Share code
Content of utterance*	1 = Borsa Istanbul forecast based on developed markets/economies E.g., ‘Buy the BIST-30 contract now and you can sell it up [at a higher price] later [in the day] as the American futures [on the US stock index] are recovering [going up from a lower point]’ (A retail broker advising their client on 25 February 2008 14:45 pm) 0 = Borsa Istanbul forecast, No mention of developed markets E.g., ‘There will be a correction [fall] in BIST-100 today after the rally [the price increase in the index yesterday]’ (An analyst serving retail investors making a forecast, 4 May 2009, 10:00 am)
Teller*	Codes for each 53 interlocutors in market chatter
Observation site*	1 = A, 2 = A1, 3 = B, 4 = C, 5 = D, 6 = E
Client	0 = Retail, 1 = Professional
Correct Forecast*	=1 if the direction of prediction and that of actual movement are the same, =0 if different

\*Either revised or created anew during the recoding process.



**Figure 4.** Utterances' time horizon.

accurate at the specified time horizon. For this test, we collected minute by minute data from Borsa Istanbul for each asset. To ascertain the accuracy of each prediction, we assigned the corresponding asset value to the time of utterance (e.g., at 10:45, when the broker predicts BIST-100 to go up at the close of market trading, BIST-100 is 45,000 points). We then checked whether the asset value at the prediction horizon (i.e., at 17:00, BIST-100 is 46,000 points) was in line with the directional prediction made (i.e., correct prediction). Once we established the prediction accuracies of utterances, we created a dummy variable (correct forecast = 1, else = 0) for predictions and another dummy variable for the American Spirit use. Our aim was to find out whether our interlocutors' predictive accuracy in general and when they invoked the American Spirit in particular, was statistically significant or whether any predictive accuracy was down to chance, akin to flipping a coin, as expected in modern financial markets (Fama, 1995), with the American Spirit having no effective performativity, despite increasing the predictive accuracy.

## Findings

### *The performance and performativity of American spirit*

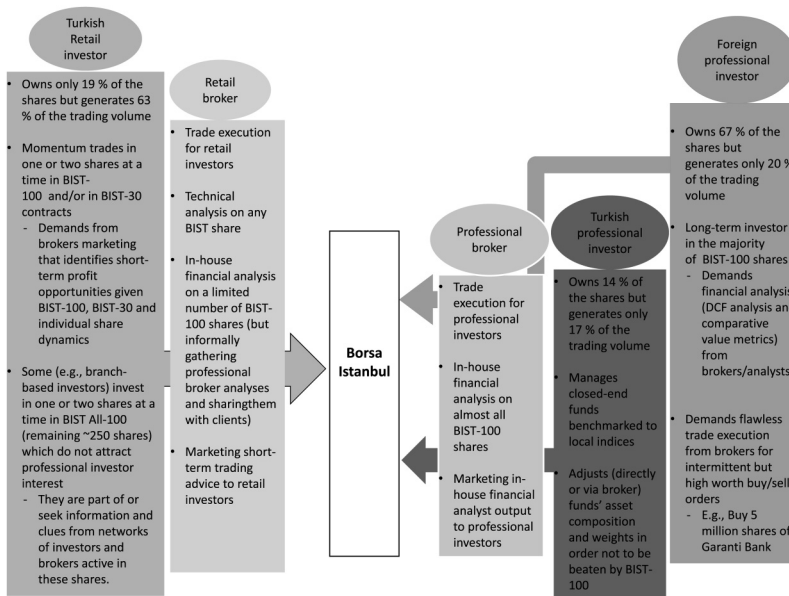
As presented in Table 3's first row, column 2, the American Spirit was used in more than every other prediction on Borsa Istanbul. This underlines its generic performativity. Moreover, columns 3 and 4 in row 1 show that the use of the American Spirit was effective performative in the sense that it made our interlocutors as a group slightly more accurate in their predictions of Borsa Istanbul movements. The increase in predictive accuracy with the American Spirit was not down to chance. Yet, looking at the subsequent rows that represent our interlocutors according to market identities, these hint at some differences in the performance and performativity of the American Spirit. For example, retail brokers performed the American Spirit much more frequently than their professional counterparts despite the theory having no effective performativity for either group. Before we zoom into these findings and their perlocutionary aspects, we give, in Figure 5, an overview of the complex relationships between and the motivations of these market actors, and the markets and assets in which each of these groups did brokerage and investment work. Categories and descriptions in Figure 5 represent each actor in their most typical form during our research.

Foreign and Turkish professional investors and their brokers can be characterized by relatively long-term investment horizons (i.e., several months to several years) and associated devices of valuation, marketing, and investment. This contrasts with the pressure on retail brokers to market trading

**Table 3.** The performance of the American Spirit in predictions over BIST-100 and BIST-30.

	Prediction #	American Spirit in predictions	Accuracy with American Spirit	Accuracy in all prediction
Total	228	62%	60%**	59%**
Retail brokers serving Turkish retail investors	132	72%	57%	55%
Professional brokers serving foreign and Turkish professional investors	56	39%	64%	68%**
Turkish professional investors	40	61%	67%*	63%**

\*\*,\*Indicate significance at 1%, 5%, respectively. The prediction accuracy is tested under the assumption that the percentage of correct predictions (p) follows a binominal distribution (under the null hypothesis  $p = 0.5$ , alternative  $p > 0.5$ ).



**Figure 5.** The investment and brokerage field in Borsa Istanbul in 2008/9.

ideas with very short-term investment horizons (i.e., daily to several days/weeks) in a sector dominated by discount brokerage. This business strategy, and retail investors' chase of such "apparent" momentums and opportunities in shares has been generative of spectacular and world-leading share turnover ratios in Borsa Istanbul (see Figure 3).<sup>2</sup> Below, we explain how these perlocutionary differences shape the ways in which the American Spirit was performed in brokerage and investment work, including its performative effects over predictions on Borsa Istanbul.

### The performance of the American Spirit in retail brokerage

The performance of the American Spirit in retail brokerage happened in two types of work—namely, the execution of trade (i.e., buy/sell) orders of retail clients, and marketing retail investors trading advice in a select few Borsa Istanbul shares and futures contracts on any given day. The daily bulletin prepared by analysts and the event calendar therein and the constant presence of global and

local data streams on market screens structured retail brokers' frequent performance of the American Spirit in these tasks.

Despite its very frequent performance in retail brokerage and investment work, the American Spirit did not help our retail broker and investor interlocutors to become better forecasters any more than flipping a coin (see Table 3, row 2, and Appendix 2 for site-based breakdowns). Why did the American Spirit, despite having no effective performativity in predictions, remain an "over-marketed" theory in retail brokerage and investment work? As put by an interviewee in charge of retail sales in a large brokerage firm, the performance of the American Spirit helped retail brokers tell the type of stories that Turkish retail investors had demanded in the 2000s (Interview, 1 September 2008):

Ten years ago [in the 1990s], the market would rally with İlhami [the name of one of the many renowned so-called domestic speculators who exerted considerable influence on market price of shares in Borsa Istanbul], now the shopkeeper in Afyon [a small Anatolian city] asks about the future of 'Tom [Dow] Jones [30- a major stock market index in the US]', then you hear in a village in Kars [an Eastern province bordering Iran and Armenia] 'what will the FED [US central bank] do?' So, this data expansion phenomenon, this is one of the reasons why the effect of [domestic] speculators has declined. Now people [average retail investor] look for a story, a justification before they trade.

What our interviewee referred to as 'data expansion' concerns how the American Spirit was performed by retail brokers and investors in brokerage and investment work. Irrespective of this new popular demand from clients, which we also observed during our fieldwork, our interlocutors actually believed in and justified this folk theory for various reasons, ranging from the dominant presence of foreign professional investors in Borsa Istanbul in recent years:

Why we look at what happens abroad, American data, etc., because after the 2001 financial crisis in Turkey<sup>3</sup>, [Borsa Istanbul] and the Turkish economy have rebounded well, and foreigners have bought up [in Borsa Istanbul]. This has also coincided with the liquidity surge from America [USA] following the dot.com crash and 9/11. All these have changed our perceptions here about [Borsa Istanbul] (Informal discussion with retail broker, Firm B, 8 April 2008)

...to the Turkish economy's links to developed economies:

Nothing like this was followed before, but globalisation has made markets connected, and that is why we follow what happens abroad. I think there should be [a] one-on-one relationship between our market and the markets with which we have trade relationships... the DAX [the main stock index in Germany], yes, we follow closely, because Germany is our biggest trade partner, and their real economy is at the centre of financial markets and Europe. (Interview, Head of Branches, Firm A, 14 March 2008).

Irrespective of these different interpretations, the American Spirit's performance helped our interlocutors in retail brokerage sites do their brokerage and investment work.

### *The performance of the American spirit in professional brokerage and investment*

Our professional-broker interlocutors invoked the American Spirit as a coordinating device against daily movements in Borsa Istanbul in providing what they described as 'best-trade execution' service for foreign professional investors' large buy/sell orders. As put by one of the brokers in C when we asked as to why he followed the markets abroad (6 August 2008):

Day-wise, you check the DAX, the Dow [Jones 30], etc. and adjust your [client order execution] strategy accordingly... [When selling for your client in Borsa Istanbul] if the market [abroad] falls quickly

you sell [in Borsa Istanbul] quickly, [when buying] if [the market abroad] goes up quickly you buy [in Borsa Istanbul] quickly. What I do here is I calculate the quantity with a calculator and use my discretion according to the momentum in the markets.

The performance of the American Spirit in this manner was therefore related to sociality in markets. Our professional-broker interlocutors wanted to account for how the retail investor figure as the major source of trading activity in Borsa Istanbul would think and act on any given day. Otherwise, they did not seem to see any role for the American Spirit in marketing work, hence its much less prolific performance (see Table 3 row 3). As put by the head of research in Firm C (14 July 2008), performing the American Spirit in marketing work would be detrimental:

If you focus too much on what happens abroad, your clients who [come from] those markets might take it as a sign of you not knowing what you are actually talking about! Your client wants to know about Turkey.

Similar to professional brokers, our Turkish professional investor interlocutors performed the American Spirit as a coordinating device, more specifically in their investment work of carefully adjusting the exposure of the funds that they managed to industry performance benchmarks (e.g., monthly/yearly BIST-100 return). As such, the American Spirit helped them predict these benchmarks' short-term movements in a given month. Otherwise, our professional investor interlocutors seemed dismissive of the American Spirit in terms of its actual relevance to Turkish shares' fundamental/comparative values, which, like their foreign counterparts, informed their investment work with the assistance of professional brokers. When we asked what he thought of this folk theory, one of the managers remarked that (18 April 2008):

When they fart in America [USA], we soil ourselves here [in Borsa Istanbul]!

Despite the much less prolific performance of the American Spirit restricted to a specific brokerage work, which was unlike its overuse in marketing in retail brokerage, the performance of the American Spirit did not have any effective performativity over our professional-broker interlocutors' predictions. Nonetheless, both professional brokers and investors had better general forecast ability on Borsa Istanbul than flipping a coin and for that matter their retail broker counterparts. Moreover, the performance of the American Spirit was effective as it actually made the majority of our professional broker and investor interlocutors even better forecasters of Borsa Istanbul movements (see Table 3 bottom row, and Appendix 2 for site-based breakdowns).

### *The American spirit and Borsa Istanbul: A camera or an engine?*

Financial economics has long been unearthing increasing global connectivity among stock markets, which undermines the international diversification strategy sanctioned by modern portfolio theory, and exploring the reasons behind it (e.g., economic shocks in one country, see Bekaert et al., 2005; economic globalisation, see Forbes and Rigobon, 2002). It is interesting to observe that the debate in financial economics about the so-called transmission mechanisms across markets overlook some essential measures of economic globalisation (Bordo, 2002), for example, the ratio of foreign assets to GDP, to prevent mistaking correlations for economic globalisation (see Pukthuanthong and Roll, 2009 for such a critique). Another overlooked aspect then is the actual thinking and acting of market actors in a specific locale about the connectivity of markets and how these might be contributing to econometric patterns of connectivity across markets. All in all, given the brief review above, financial economics can be described, to use MacKenzie's (2006) term, more as 'a camera', than 'an engine' of global market connectivity.

The Turkish market has received its fair share of scientific pictures about its connectivity, which show short-term uni-directional connections from developed markets to Borsa Istanbul in the 2000s (e.g., Berument et al., 2011) in contrast to the 1990s (e.g., Bekaert et al., 2005). Different to the aforementioned factors espoused by financial economics, the American Spirit as a folk economics theory originating from Turkish market actors' thinking about and acting in Borsa Istanbul in the 2000s, including their theories on the globalisation the Turkish economy, plausibly contributed to this connectivity considerably. Yet, it may not be possible to econometrically test and demonstrate the strong performativity of the American Spirit for a number of reasons, starting from the comparison issue that MacKenzie (2006) highlights: ascertaining such effects across two historical periods (i.e., before and after a model) is not straightforward and involves 'element[s] of conjecture and judgement' owing to a plethora of differences in those periods.

Nonetheless, this econometric evidence raises questions as to whether the American Spirit, as a folk theory, is a mere expression, without any performative effects, of a global market reality, which happens to be scientifically theorised and/or observed by economics and econometricians too, similar to how astrophysicists have no effect on the nuclear reactions in the stars that they study (MacKenzie, 2004). This question can also apply to our findings on the effective performativity of the American Spirit in market predictions.

As we discussed in the literature review, and showed in this paper, when performed in the right felicitous conditions, the folk theories of market actors can be performative in a generic, effective and even strong sense. To put it differently, Borsa Istanbul is not a star wherein nuclear reactions happen, and our interlocutors representing important socio-technical arrangements in this market are not astrophysicists studying Borsa Istanbul from a distance. Our interlocutors took pictures of this market with scientific and folk toolkits, including the American Spirit, and acted on them to perform brokerage and investment work, which contributed to making Borsa Istanbul what it was in terms of share turnover, ownership, connectivity, and so on. Without these toolkits, which acted as both cameras and engines of market reality, Borsa Istanbul would have looked very different to how we found it during our research, including the effective performativity of the American Spirit in market predictions.

What then makes the American Spirit a folk theory and thus part of the folk economics toolkit of our interlocutors? We argue that it is the narrative reasoning, instead of a logico-scientific one, on the lived experiences on and off market screens. For example, concerning the global connectivity of markets, our market professional interlocutors irrespective of their market identities and their invariable exposure to economics in higher education did not care for what scientifically peer-reviewed market connectivity literature had to say about the phenomenon and how they said it in relation to scientific methodology. Their belief in a globalised Borsa Istanbul for various perceived reasons, including sociality, stemmed from our interlocutors' narrative theorisations on everyday experiences.

Whether this folk theorisation and its performance in brokerage and investment work in Borsa Istanbul were "economically rational" things to do given whatever scientific theoretical and empirical economic entanglements the Turkish economy had with the rest of the global economy is a matter for further research with rigorous scientific methods. A scientific answer to this question could, for example, ascertain the *required* degree of co-movement for Borsa Istanbul with developed markets given the Turkish economy's entanglements. To the best of our knowledge, such an answer is not given yet as financial economics seems to remain a camera of global connectivity. Such an answer might reveal that what our interlocutors in retail brokerage sites did, actually amounted to "irrationality" when over-marketing the American Spirit. However, this narrow question on economic rationality overlooks the importance of how 'lay knowledge' is generated, performed and becomes performative in the economy and markets, something Caliskan and Callon (2010) implore us to explore further. This is because both folk economics and scientific economics,

without any interaction between them, can and do take similar pictures of an economic phenomenon albeit with different toolkits, resolutions and details. Market actors in Istanbul took and acted on their own folk pictures of Borsa Istanbul with the performance processes and illocutionary effects that we have found in our research. Without these, any scientific picture taken by financial economics on Borsa Istanbul would look very different too.

Our findings show the importance of socio-technical arrangements and their discourses, whether scientific or folk, in the emergence and re-enactment of economic phenomena such as the global connectivity of financial markets. As such, they need to be incorporated into the study of such phenomena. Borsa Istanbul at the time of our research was not just a world of the American Spirit just as developed markets have never been a world of Black-Scholes only (MacKenzie, 2006). Yet, we observed the American Spirit being performed in multiple sites in 2008 and 2009, and our interlocutors invariably told us that Borsa Istanbul had become a globalised market in the early 2000s. What we call the American Spirit is not then a mere artefact of the 2008 Global Financial Crisis when the world focussed on the US and other developed economies. This historical evolution means that if the circumstances that underpinned our interlocutors' belief in this theory change considerably in Borsa Istanbul (e.g., foreign ownership of shares, retail investor dominance in share turnover), the American Spirit might be modified or abandoned altogether with plausible effects on brokerage and investment work and on Borsa Istanbul's global connectivity. This is not unlike how a scientific model such as Black-Scholes may lose its performative 'powers' in the face of changing market circumstances (MacKenzie, 2006).<sup>4</sup>

## Discussion and conclusion

Our findings have implications for the study of 'statements' in their broadest sense and their performativity in the economy (Callon, 2007). This includes those that come from people's everyday thinking and acting in the economy (Swedberg, 2018), something the social science literature has overlooked from a performativity perspective. Our findings show that such statements do not seem to be 'incorporated in the heads of economic actors' as mere 'precarious' beliefs (MacKenzie, 2006). As we have shown, folk theories can shape how economic work is done through organisational routines and material arrangements with performative effects.

As MacKenzie (2004) reminds us, unlike the 'simple performatives' of Austin in reference to speech acts, the model-like statements on financial markets are not uttered by a 'centralised authority' thus their performativity would hardly be like that of Austin's performatives. Instead, it is the widespread performance of a model that endows it with performative effects. This applies to folk theories like the American Spirit too. Our findings therefore open up the way to explore the performance and performativity of belief-like statements that originate from the types of everyday thinking and acting that Swedberg (2018) explains as generative of folk economics. These statements may take the shape of 'macro level' stories (Rebonato, 2013) or even a viral narrative phenomenon (Shiller, 2017).

Drawing on social psychology, Swedberg (2018) argues that people's thinking about the economy has an 'independent quality and existence [not reducible to] material interests, social structure, [or] ignorance'. While we agree with this, especially given the salience of the narrative mode of thinking, we also observe that the similarities in thinking and acting in primary doxic communities may partly be down to actors' awareness of other communities with which they share a domain of action. Just like in the performance of scientific theories (Beunza and Stark, 2012), sociality matters in the way folk economics and its theories are performed. For our interlocutors in professional investment and brokerage, the performance of the American Spirit was mainly to account for thinking and acting of an anonymous yet a well-known collective to them, i.e., the average Turkish retail investor. This finding also underlines the importance of an overlooked aspect in



the performativity research, that is, ‘power relations’ and how they ‘enable and constrain [...] performative practices’ (Lansing, 2012) in specific ‘institutional and geographical entanglements’ (Muellerleile, 2013). In the case of financial markets, market liquidity and who provides it is an integral aspect of these relations and entanglements.

Nonetheless, as we have shown in this paper, folk economics is more than this type of reflexive modelling or socially ‘habilitated’ calculation and exchange (Callon, 2008 cited in Beunza and Stark, 2012). As such, folk economics is generative of statements that can explain and thus perform any economic phenomenon. People’s tendency to think in narrative mode (Bruner, 1986) and the substantive organisational and institutional efforts required to create the right perlocutionary effects for the performativity of ‘confined [theoretical]’ or ‘wild [applied]’ economics - not to mention the overflows on them (Callon, 2007) constitute the social-psychological and organisational underpinnings for folk economics’ potential permeance and performativity in parts or the whole of the economy.

Our argument also addresses the question of whether the study of folk economics should be confined to lay people only and exclude market professionals and experts. This is not unlike the question of whether performativity research should be limited to expert economists who are involved ‘in the analysis, transformation [and] configuration of the markets’ (Callon, 2007). Interestingly, Swedberg (2018), despite identifying work ‘as the centre of primary doxa’ also seems to imply that folk economics is about lay people’s thinking about and acting in the economy as his discussion of experts is limited to academics. In our exploration of brokerage and investment work, we have shown how market professionals with expert knowledge still formulate and perform folk theories. This is not unlike how Swedberg (2018) and others (e.g., Mirowski, 2015, Rip, 2006) show how even experts, including scientists and academic economists themselves engage in theorisations that can be considered folk-like, sometimes with contestable standards of scientific rigour.

As we argued before, the desire for such conceptual fencing in favour of studying only experts and scientific theories configuring markets may arise because of a perceived disconnect between economics and real life (MacKenzie, 2006). A related case against studying folk economics with performativity could be made as folk theories such as the American Spirit are inferred from people’s actions, including discursive ones like market chatter. As such, these theories do not exist outside market practices. This implies that folk theories are essentially performative in generic and even other senses although this argument seems to be confusing performance with illocutionary effects.

Butler’s (2010) take on performativity in which discourses are not privileged or excluded on the basis of their origins (e.g., economists) and function (e.g., transformation/configuration) (see also Lansing, 2012) but taken to be involved ‘in the processes that performatively bring about the market’ provides further conceptual purchase for the use of performativity to study folk economics. This is similar to what we observe in Caliskan and Callon’s (2010) advocacy to include ‘lay knowledge’ in the exploration of performativity in ‘market design and maintenance’, which can be extended to other types of market framing that they identify such as ‘price-setting’. Performativity studies on technical analysis (e.g., Roscoe, 2015) and investment valuation tools (e.g., Kish and Fairbairn, 2018) show how performance of marketing and investment discourses perhaps matter more in mobilising investors than the maths and science that underpin these tools. These findings and our paper resonate with Caliskan and Callon’s (2010: 22) argument that texts, discourses and narratives matter as much as scientific knowledge and associated devices in markets. Of course, such a broad take on performativity and folk economics, just as we have taken in this paper, still has to show how folk statements are performed and whether they have illocutionary effects in parts or the whole of the economy.

To wit, if the performativity thesis is taken too narrowly to include only scientific theories that analyse, transform and configure markets, then a great number of phenomena are left out in our understanding of how economics and markets are performed. Of course, performativity is not

the only conceptual framework to study folk economics. Nonetheless, its focus on performance makes it better suited to explore folk economics' material and organisational incorporation into people's everyday practices in households, workplaces, markets and economies in developed and developing countries alike.

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### Notes

1. To explore continuities and changes, follow-up studies were conducted through 73 interviews and 4-day observations in June-July 2014 and 3-days in May-September 2018. We comment on our findings and more recent developments in endnotes 3 and 4.
2. Trading commissions constituted around 70% of the revenues of the Turkish brokerage sector in the 2000s. The discount brokerage strategy became widespread, especially after commissions were deregulated in the early 2000s. Professional brokers, owing to services provided to professional investors and the latter's low share turnover, could charge three to ten times higher trading commissions (e.g., 0.003% to 0.001% of order amount) than their retail counterparts.
3. The 2001 crisis originated from an IMF-sanctioned programme mismanaged by a three-party coalition government. Foreigners were in Borsa Istanbul as early as 1990 yet with a negligible ownership compared to the 2000s when Turkey had bolstered its emerging market status with a number of market-friendly reforms under Recep Tayyip Erdogan's leadership. In the late 2010s, Erdogan was to gradually reverse those reforms. In 2020, one global news agency started to cover this under a special rolling-report titled *Turkey's war against the markets* (available at <https://www.bloomberg.com/news/storythreads/2020-06-25/turkey-s-war-against-the-markets>, last-accessed 13-October-2022).
4. While our brief observations did not generate sufficient data to test the American Spirit's effective performativity, our follow-ups in 2014 and 2018 showed its continued widespread performance underpinned by the steady felicitous conditions of market identities and behaviours (see Figures 1-2-3). Unsurprisingly, recent connectivity studies point to continued connections between developed markets and Borsa Istanbul in the 2010s (e.g., Tastan and Imamoglu 2022). Nonetheless, in 2018, our interlocutors repeatedly underlined the possible adverse consequences of Erdogan's

unconventional economic policies in coming years under his newly inaugurated system of executive presidency such as foreigners fleeing Borsa Istanbul. These insights were prescient because, as of October 2022, foreigners' share in stock ownership is 30 %, down from 63 % in 2018. Turkish retail investors continue their dominant presence in trading volume (62 %) despite increasing their stock ownership to 37 %, which will potentially slow down Borsa Istanbul's world-leading share turnover rate. With these considerable changes in the American Spirit's felicitous conditions, we had a cursory look at daily bulletins from various months in 2022 from a small sample of brokerage firms. Our investigation gave us the impression that while developed economies still dominated a large chunk of these bulletins, the interpretations and predictions on Borsa Istanbul indices seemed to be devoid of these actants as if Borsa Istanbul had lost its American Spirit. This disjointed co-existence in bulletins might also be because of Turkish brokerage firms' increasing foray into brokering for Turkish retail investors in developed markets via online trading platforms. Further field research alongside new econometric studies covering the 2020s are necessary to explore whether and how the American Spirit is performed in this new period.

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**Appendix I.** List of Interviews<sup>1</sup>


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1. Retail-Investor, 19/07/2007
  2. Retail-Broker, One-Stop-Shop Brokerage Firm (OSS)<sup>2</sup>, 19/07/2007
  3. Former Retail-Broker, 25/06/2007
  4. Deputy General Manager (DGM), Market Surveillance Department, Borsa Istanbul, 27/06/2007
  5. General Manager (GM), OSS, 26/02/2008.
  6. Retail-Investor; formerly Retail-Broker, 5/03/2008\*
  7. Head of Branches, Retail-Brokerage Firm, 14/03/2008\*\*<sup>3</sup>
  8. GM, DGM, Turkish Asset Management Company (AMC) 17/04/2008\*\*<sup>4</sup>
  9. Head of Professional-Brokerage, OSS 17/04/2008\*
  10. Economist, OSS 7/05/2008\*
  11. Retail-Broker, OSS 8 /05/2008
  12. Head of a branch, Brokerage-Firm, 8/05/2008
  13. Technical-Analyst, OSS 12/05/2008 \*
  14. Financial-Analyst, OSS, 13/05/2008\*
  15. Sales & Marketing Specialist, AMC, 14/05/2008\*
  16. Head of Marketing, AMC, 14/05/2008\*
  17. GM, AMC, 14/05/2008\*
  18. Head of Marketing, Retail-Brokerage, OSS, 15/05/2008\*
  19. Head of IT, OSS, 16/05/2008\*
  20. DGM, AMC 28/05/2008
  21. Technical-Analyst, OSS, 29/05/2008
  22. Professional-Broker, OSS, 2/06/2008
  23. Head of Research, Global-Broker<sup>9</sup>, 2/06/2008
  24. Head of Retail-Brokerage, Brokerage Firm, 15 August 2008
  25. Fund Manager, AMC, 4/06/2008
  26. Chief Economist, Global-Broker, 5/06/2008
  27. Professional-Broker, OSS, 17/05/2008; 6/06/2008\*
  28. Chief Economist, OSS, 12/06/2008
  29. Head of Professional-Brokerage, OSS, 13 /06/ 2008, 3 /08/ 2008
  30. Fund Manager, Global AMC, Istanbul, 23/06/2008
  31. Professional-Broker, Global-Broker, 14/07/2008
  32. Financial-Analyst, OSS, 14/07/2008
  33. Financial-Analyst, OSS, 22/07/2008\*\*
  34. Financial-Analyst, OSS, 23/07/2008
  35. Financial-Analyst, OSS, 14/07/2008
  36. Professional-Broker, Global-Broker, 29/07/2008
  37. Professional-Broker, OSS, 29/07/2008\*
  38. Head of Retail-Brokerage, OSS, 4/08/2008\*
  39. Professional-Broker, OSS, 29/07/2008
  40. Head of Research, OSS, 8/08/2008\*
  41. Head of Research, OSS, 11/08/2008\*
  42. Professional-Broker, OSS, 10/08/2008\*
  43. Retail-Investor (former broker of a domestic speculator), 11/08/2008\*
  44. GM, OSS 15/08/2008\*
  45. Head of Compliance, Global-Broker, 15/08/2008
  46. Retail-brokerage Manager, Retail-Brokerage, 18/08/2008
  47. Head of Professional-Brokerage, OSS, 18/08/2008
  48. Professional-Broker, OSS, 20/08/2008\*
  49. Head of Research, Global-Broker, 21/08/2008
  50. Professional-Broker, OSS, 22/08/2008
  51. Professional-Broker, OSS, 27/08/2008
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52. Head of Corporate Finance, OSS, 27/08/2008
  53. Assistant Head of Branches, OSS, 27/08/2008
  54. Professional-Broker, OSS, 28/08/2008, 15 /06/ 2009
  55. Head of Research, Head of Professional-Brokerage, OSS, 27/08/2008\*\*
  56. Statistics/Valuation Expert, Borsa Istanbul, 29/08/2008
  57. GM, Market Surveillance Department, Borsa Istanbul, 29/08/2008
  58. Head of Branches, OSS, 1/08/2008\*
  59. Head of Branches, OSS, 1/08/2008
  60. Head of Professional-Brokerage, OSS, 2/08/2008
  61. Head of Retail-Brokerage, OSS, 4/08/2008\*
  62. DGM, Retail-Brokerage, 5/08/2008\*
  63. Head of Professional-Brokerage, OSS 8/08/2008\*
  64. Professional-Broker, OSS, 8/08/2008
  65. Retail-Investors, 10/08/2008
  66. Retail-Broker, OSS, 9/08/2008
  67. GM, Retail-Brokerage firm, 10/08/2008
  68. DGM, Markets Department, Borsa Istanbul, 11/08/2008
  69. Retail-Broker, OSS, 12/08/2008
  70. Professional-Broker, Global-Broker, London, 28/10/2008
  71. Head of Professional-Brokerage, Global-Broker, London, 2/11/2008
  72. Financial-Analyst, Global-Broker, 20/11/2008
  73. Professional-Broker, Global-Broker, London, 21/02/2009
  74. Financial-Analyst, OSS, 27/05/2009\*
  75. Financial-Analyst, OSS, 27/05/2009\*
  76. Financial-Analyst, OSS, 2/06/2009\*
  77. Financial-Analyst, OSS, 2/06/2009\*
  78. Financial-Analyst, OSS, 2/06/2009\*
  79. Chief Economist, OSS, 3/06/2009\*
  80. Head of Research, OSS, 4/06/2009\*
  81. Financial-Analyst, OSS, 5/06/2009\*
  82. GM, Head of Research, Turkish Capital Market Institutions, 15/07/2009\*\*
  83. Head of a branch, Retail-Brokerage, 17/06/2009
  84. Fund Manager, Global AMC, Istanbul, 19/06/2009
  85. Professional-Broker, Global-Broker, 18/06/2009
  86. Retail-Investor, (former retail-brokerage owner), 18/06/2009
  87. Former Retail-Broker serving domestic speculators 18/06/2009
  88. Retail-Broker, Retail-Brokerage, 22/06/2009
  89. Retail-Investor, 22/06/2009
  90. Head of Professional-Brokerage, Global-Broker, London 5/11/2009
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<sup>1</sup>Interviews lasted 30 to 180 minutes.

<sup>2</sup>OSS in market vernacular refers to brokerage firm serving all investor types.

<sup>3\*</sup> Interviews in the observation sites. Informal discussions therein were too numerous to list.

<sup>4\*\*</sup> Two interviewees.

<sup>5</sup>Global-Broker in the vernacular refers to Istanbul-based subsidiaries of global banks serving professional investors.

**Appendix 2.** The performance of the American Spirit in BIST-100 and BIST-30 predictions in each site.

Site	Time	Prediction #	American Spirit in predictions	Accuracy with American Spirit	Accuracy in all prediction
Retail brokerage and investment sites					
A	February 2008	69	73%	56%	55%
AI	March 2008	14	93%	69%	71%*
B	April 2008	31	59%	44%	39%
D	May 2009	18	72%	69%	66%
Professional brokerage and investment sites					
C	July-August 2008	28	32%	50%	57%
DI	May-June 2009	28	46%	85%**	79%**
E	April-May 2008	40	61%	67%**	63%**

\*\*,\* indicate significance at 1%, 5%, respectively.