

**Behavioral Finance Beyond the Markets:
A Real-Time Case Study of Russia's Military Resurgence**

Matt Lampert

Socionomics Institute

Alyssa Hayden

Socionomics Institute

Alan Hall

Socionomics Institute

Abstract

Socionomic theory proposes that social mood manifests across the spectrum of social behavior, from the movements of stock market indexes to the leaders we elect to the songs we choose to hear and even to changes in the social propensity toward peace or war. This case study tracks a real-time socionomic analysis of the Russian Trading System Index and Russia's military resurgence from 2007 to 2016. It illustrates the utility of the theory for anticipating the character of social actions that express swings in social mood.

Introduction

Socionomic theory proposes that social mood manifests across the spectrum of social behavior, from the movements of stock market indexes to the leaders we elect to the songs we choose to hear and even to changes in the social propensity toward peace or war. This case study tracks a real-time analysis of the Russian Trading System Index (RTSI) conducted from 2007 to 2016. It illustrates the utility of socionomic theory for anticipating the character of social actions that express swings in social mood.

Hardly a day passes without another reminder in the media that relations between the U.S. and Russia are at their most tense since the Cold War. Such was not the case just ten short years ago when Russia was a darling among Western investors. Its benchmark stock index, the RTSI, was up more than 5000% from its 1998 low. A pop song called "A Man Like Putin" rocketed up the Russian pop charts (PBS 2012). Moscow had more billionaires than any city in the world even though just 15 years prior it didn't even have one millionaire (Wingfield-Hayes 2007). Fortune magazine wrote, "These days more and more CEOs are livin' la vida BRIC [Brazil, Russia, India and China]" (Kirkland 2007). In the midst of ebullient optimism toward Russia, Hall (2007a, 2007b) reached a counterintuitive conclusion about the country's future. He used the Elliott wave model (Elliott 1938) to diagnose a high probability for a major top in the RTSI and employed Prechter's (1999, 2003) socionomic theory to surmise that the change in social mood that would impel a change in the RTSI's direction would also impel a change in the tenor and character of social actions in Russia. Despite relatively rosy relations among Russia, its neighbors and the West, Hall (2007b: 2) forecast that an upcoming change toward negative social mood would have "serious geostrategic implications." Specifically, he forecast that Russia would seek to reclaim its former USSR borders and identified Georgia, Ukraine and Syria among the likely locales for conflict. After the report was published, the RTSI plunged in just a few months to the bottom of Hall's target zone. About one-third of the way through the steep drop, Russia invaded Georgia.

The RTSI has continued its net downward trend from its 2008 high. In this paper, we detail the social and geopolitical developments that have transpired during the Russian stock market's decline and explicate how socionomists were able to contextualize and forecast many of them using the tools of socionomic theory. In the process, we introduce readers to socionomic research methods and suggest that the insights of socionomics—and behavioral finance more generally—contain a utility value far beyond crucially important insights into financial markets and decision-making.

Mood and Emotion in Behavioral Finance

Though neoclassical theorists have traditionally ignored the roles of mood and emotion in financial decision-making, behavioral finance scholars have begun to fill this gap. Kuhnen & Knutson (2011), for example, reported that positive emotions such as excitement compelled participants in their laboratory study to be more inclined to invest in stocks instead of assets with a guaranteed rate of return and to be more confident in their abilities to assess investment options, while negative emotions such as anxiety were associated with the opposite behaviors.

Similarly, Hall (2010) found that participants in a study that were shown happy facial expressions were more likely to invest in stocks, whereas participants that were shown fearful and angry facial expressions were more likely to make safer, more conservative investment decisions. Au et al. (2003) found that participants in an experiment who were induced to experience positive emotional states were more confident and made less profitable trading decisions than participants induced to experience neutral or negative emotional states. Some authors, such as Bassi et al. (2013), linked changes in the weather to subsequent changes in mood or emotion which prompted changes in individuals' financial decisions.

Although many studies in behavioral finance examine how mood and emotion impact financial decision-making on the *individual* level, a small but growing number of scholars have expanded their unit of analysis to consider how mood and emotion in the aggregate influence stock market pricing. The roles of mood and emotion in the origins of financial bubbles and crashes has received particular attention. Smith et al. (1988) found that participants in a trading game consistently generated bubbles and crashes despite having knowledge of the fundamental value of the financial asset. Prechter (1999: 153) discussed a herding dynamic that may be the source of speculative bubbles in stock markets: "'Wall Street' certainly shares aspects of a crowd, and there is abundant evidence that herding behavior exists among stock market participants." Shiller (2000: 148) reached a similar conclusion: "if less-than-mechanistic or irrational thinking is in fact similar over large numbers of people, then such thinking can indeed be the source of stock market booms and busts." He proposed that the high valuations in the stock market at the turn of the century were the "combined effect of indifferent thinking by millions of people. ... who are motivated substantially by their own emotions" (203). Roszczynska-Kurasinska et al. (2012: 5) found a similar phenomenon at work in their study on the formation of bubbles and anti-bubbles. They concluded that spontaneous collective "moods" or "biases" governed participants' decisions in a trading game and led to the generation of speculative bubbles. In sum, this literature demonstrates that mood and emotion strongly influence the behaviors of financial market participants at the individual and aggregate levels.

One potential area for confusion in this line of research is that some authors use terms such as *affect*, *emotion* and *mood* interchangeably, whereas others assign a distinct meaning to each term. For our purposes, we adopt the following definitions: "Affect" is an umbrella term, encompassing both emotion and mood, meaning "the specific quality of goodness or badness (1) experienced as a feeling state (with or without consciousness) and (2) demarcating a positive or negative quality...." (Slovic et al. 2004: 312). Emotions are "feelings about a particular circumstance or event (someone or something) that arise from cognitive appraisals for circumstances" (Grable & Roszkowski 2008: 906). Moods are "more generalized non-specific states that are not directed at any particular target" (Grable & Roszkowski 2008: 906) and last longer than emotions (Grable & Roszkowski 2008: 907). In other words, emotions are intense, short-term, consciously experienced feelings that have a known stimulus or referent. Mood is a more diffuse, longer-term, unconsciously generated feeling that lacks a known stimulus or referent.

Socionomic Theory

Prechter's (1999, 2003, 2016) socionomic theory contributes to the literature by extending the behavioral analysis of collective psychology beyond financial markets into other areas of decision-making. Socionomists have argued that *social mood* is the most important affective motivator of social trends in financial and non-financial domains. According to the theory, social mood arises unconsciously as a result of social interaction. Trends in social mood motivate trends in feelings, perceptions and behaviors. This theory replaces the intuitive postulation that social actions (e.g., events) regulate the net aggregate tenor and character of social mood with the claim that social mood regulates the net aggregate tenor and character of social actions. In the socionomic formulation, social mood influences actors' behaviors, but actors' behaviors do not influence social mood.

Prechter (1999: 228-229, 2014: 3) presented a typology of traits that are more frequent and intense during positive social mood trends vs. traits that are more frequent and intense during negative social mood trends (Table I).

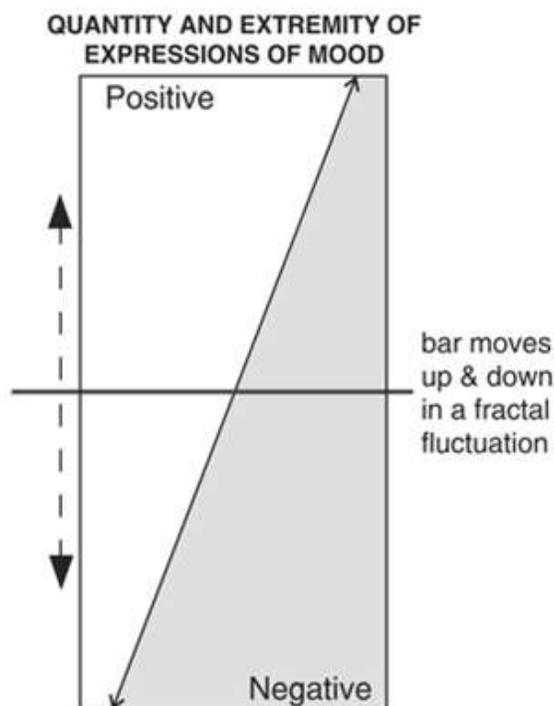
Table I. Aspects of Social Polarity. A typology of traits that are more frequent and intense during positive social mood trends vs. traits that are more frequent and intense during negative social mood trends.

POSITIVE MOOD	NEGATIVE MOOD
Acceptance	Rejection
Accommodation	Obstruction
Adventurousness	Protectionism
Agreeableness	Antagonism
Alignment	Opposition
Allowance	Restriction
Benevolence	Malevolence
Centrism	Radicalism
Certainty	Uncertainty
Clarity	Fuzziness
Concord	Discord
Confidence	Fear
Constructiveness	Destructiveness
Convergence	Polarization
Daring	Defensiveness
Desiring Power Over Nature	Desiring Power Over People
Ebullience	Depression
Embrace of Effort	Avoidance of Effort
Feelings of Safety	Feelings of Vulnerability
Forbearance	Anger
Friskiness	Somberness
Frivolity	Seriousness
Happiness	Unhappiness
Homogeneity	Heterogeneity
Hopefulness	Despair
Inclusion	Exclusion
Interest in Love	Interest in Sex
Optimism	Pessimism
Practical Thinking	Magical Thinking
Romanticism	Cynicism
Search for Joy	Search for Pleasure
Self-Assurance	Anxiety
Self-Providence	Self-Deprivation
Sharpness of Focus	Dullness of Focus
Supportiveness	Opposition
Sympathy	Meanness
Tendency to Excuse	Tendency to Accuse
Tendency to Praise	Tendency to Criticize
Togetherness	Separatism
Trust	Suspicion

These traits manifest in various social actions, such as stock-market valuation (Prechter 1999, 2016), macroeconomic trends (Prechter 2016), propensities toward mass violence (Galasiewski 2011), political tendencies (Hall 2012; Prechter et al. 2012) and cultural trends (Prechter 1985, 1999, 2003; Kendall & Prechter 2009). For example, during positive social mood periods,

speculation in the stock market, retention of incumbent leaders and frisky fashions tend to be more common, and during negative social mood periods, more conservative investing behavior, rejection of incumbent leaders and somber fashions tend to be more common (Prechter 1999: 230-231). There is always a mix of positive and negative social expressions, but the quantity and intensity of each wax and wane in concert with the direction and extremity of the social mood trend, as illustrated in Figure I (Prechter 2011, 2016).

Figure I. Quantity and Intensity of Expressions of Mood, from Prechter (2016). The quantity and intensity of positive and negative social expressions wax and wane in concert with the direction and extremity of the social mood trend.



Socionomists use stock indexes as indicators of social mood. Positive social mood trends motivate advances in the stock market, and negative social mood trends motivate declines in the stock market (Prechter 1985, 1999). Gilbert & Karahalios (2010) and Bollen et al. (2011) validated this methodology by independently showing that changes in social mood, as registered in changes in the aggregate sentiment expressed on online social media platforms, are positively associated with subsequent changes in national stock market indexes. Among other potential metrics of social mood, the stock market is especially valuable because investors can reprice stocks almost immediately in response to changes in social mood (Prechter 1999). Other mood-motivated actions, such as those that lead to fluctuations in business activity, election outcomes, climates of peace or war, and the tone of popular entertainment, take longer to execute than stock trades and therefore tend to lag the overall trends of stock market indexes (Prechter 1999). Finally, data on major stock markets are typically accurate, detailed, cheap to obtain and combine long data histories with instant, real-time updates. In summary, because stock market indexes quickly respond to changes in social mood and provide inexpensive data suitable for

historical, real-time and future-oriented analyses, socioeconomic studies have employed them as primary meters of social mood, or sociometers.

The task of historical socioeconomic studies is to identify qualitative and quantitative associations between a sociometer's trends and other social behaviors motivated by trends in social mood. Once identified, these historical associations can be used to forecast social behavior during subsequent positive and negative mood trends, as reflected by subsequent advances and declines in the stock market or other sociometers.

Readers interested in additional thorough treatments of socioeconomic theory, its methods, causal propositions and applications are invited to access Prechter (1999, 2003, 2016) and Prechter et al. (2012). For further illustrations of the theory's applicability to military conflict in other countries, see Prechter (1982: 1, 1999: 266-271), Wilson (2010), Lampert & Galasiewski (2012: 9-10), Hall (2014a, 2015b) and Thompson (2015), several of which are collected in Prechter (2017).

Hall's Forecast

Socioeconomic causality offers a useful basis for predicting the tenor and character of social actions. It is especially forward-looking when employed in conjunction with an accurate stock market forecast. Although myriad market forecasting approaches exist, in his study of Russia, Hall (2007b) used a fractal form of technical analysis called the Elliott wave model (Elliott 1938; Frost & Prechter 1978) to forecast the RTSI. The Market Technicians Association, an organization of approximately 4,500 investment professionals in 85 countries, defines technical analysis as:

[T]he study of data generated by the action of markets and by the behavior and psychology of market participants and observers. Such study is usually applied to estimating the probabilities for the future course of prices for a market, investment or speculation by interpreting the data in the context of precedent. (Market Technicians Association, Inc. 2003: 1)

The RTSI is "based on prices of the 50 most liquid Russian stocks of the largest and dynamically developing issuers presented on the Moscow Exchange" (Bloomberg Business 2015). Hall's analysis indicated that an upward wave in the RTSI of nine years' duration appeared to be near the point of termination. He forecast a 62-75% decline in the RTSI, which would carry the index into the area of the preceding fourth wave, a normal retracement level according to the Elliott wave model. Figure II below, from Hall's 2007 study, published in November 2007, depicts that forecast.

Figure II. Hall's Forecast for the Russian Trading System Index, from Hall (2007b).



Hall then used socionomic theory to predict that the same large-degree negative social mood trend that would soon impel the RTSI into a steep decline would also shift Russia's social system toward increased discord, destructiveness, exclusion, restriction, opposition and other traits listed in the right column of Table I. In applying these generalities to Russia, Hall (2007a) increased the specificity of his forecast by observing the historical behavior of Russia and the Soviet Union during past global bear markets and identifying patterns in their actions. He found that during negative social mood periods over the previous 150 years, Russia had tended to consolidate political power under an increasingly authoritarian executive, who attempted to expand the country's territory, bolster its military and play the role of outsider on the international stage while exhibiting feelings of opposition to its neighbors and the West that were drawn from an increased sense that the country was encircled and besieged. Based on these historical tendencies, Hall (2007b) predicted an acceleration in the country's military aggression toward its neighbors and named Kosovo, Azerbaijan, Lithuania, Poland, Syria, Georgia and Ukraine as potential sites of conflict. Hall (2007b: 10) also surmised "Russia's opposition to the U.K. and the U.S. would likely increase...." He additionally forecast increased centralization of power under Vladimir Putin and greater state control of the media, politics, economy and society.

Results

Initial RTSI Decline and the Georgia Conflict

In November 2007, just before the RTSI began a final advance to its all-time high, Russia completed its withdrawal of troops that had been stationed in Georgia since 1991 (Associated Press 2007). This action reflected an elevated social mood.

In May 2008, six months after Hall (2007a, 2007b) published his report, the RTSI peaked and then plummeted 79.9% into January 2009 (see Figure III). During the initial stages of this decline, tensions reignited between Russia and Georgia. In late May 2008, Russia sent several hundred troops to Abkhazia (an internationally recognized though disputed territory of Georgia) reportedly to conduct railway repairs. Georgia suspected Russia was planning a military attack (The New York Times 2008). Just two months later, as the RTSI fell sharply, South Ossetian separatists began attacking Georgian peacekeepers. Georgian President Mikhail Saakashvili directed troops into South Ossetia (another disputed territory of Georgia), and Russia began air strikes there (CNN 2015). In mid-August, Georgian and Russian leaders signed a ceasefire agreement, yet Russia did not withdraw the bulk of its forces until later in the year (Blomfield 2008), near the conclusion of the initial decline in the RTSI.

Figure III. May 2008 Peak and Subsequent Decline in the Russian Trading System Index, adapted from Hall (2014b).



The Ukraine Conflict

The RTSI made a low in late January 2009 and rallied into 2011 (see Figure IV). Consistent with socionomic theory, Russia did not engage in any armed conflicts with any external nations or territories during this period.

The downtrend in the RTSI resumed in April 2011, and the index plunged 45% through February 2014. The renewed decline signaled a continuation of the trend toward negative mood, which increased the probability for subsequent conflict. But where would Russia direct its aggression next?

Socionomists addressed this question in real time. Hall's colleague, Robert Folsom, noted that tension was increasing between Russia and Ukraine at a time when stock indexes in both countries were undergoing sizeable declines. On December 9, 2013, Folsom issued the following commentary on the potential for Russia-Ukraine conflict:

Negative mood is now driving Ukraine's politics, foreign relations and financial system (its stock market is down some 75 percent). The country is wedged economically and geographically between West and East, and its neighbor to the east is particularly unlikely to tolerate much more instability before intervening. (Folsom 2013)

Russia did intervene in Ukraine. It began its occupation of the Crimean Peninsula less than three months after Folsom's forecast (see Figure IV) and then annexed Crimea three weeks later (see Figure V).

Figure IV. Russia's Negative Mood Trend from 2008 to 2015, from Hall (2015a).



In Senate Armed Services Committee testimony in July 2015, U.S. Joint Chiefs of Staff Chairman Joseph Dunford stated that official U.S. military intelligence and defense strategy "did not fully anticipate growing Russian aggression" even as late as early 2014 (Garver 2015). Folsom not only anticipated growing Russian aggression but also recognized a serious implication of the conflict in Ukraine. His article titled "Ukraine: The Geographic Center of a New Cold War?" showed that he understood that any emerging conflict could serve as the focal point for a wider renewal of hostility and tension between Russia and the West, a condition that has indeed developed since.

Folsom's analysis is particularly illustrative of the utility of the socio-economic perspective, as opposed to traditional forecasting methods. Consider that the degree of Russia's aggression evaded Pentagon planners with access to untold volumes of intelligence, yet Folsom was able to diagnose the elevated probability of Russian intervention in Ukraine with only three tools: socio-economic theory, a couple of stock index charts and an awareness of the political landscape.

Prechter (1999: 234) explained that "the social mood is always in flux at *all degrees of trend...*" The events of the Ukraine crisis illustrate how social mood can impel changes in the tenor and character of events not only at large degrees but at smaller degrees of scale as well. Figure V, from Hall (2016), shows the timing of the chief developments in the conflict relative to changes in the RTSI. Positive social mood trends, reflected by advances in the index, tend to be

The Russian Navy recently announced plans to return to the Mediterranean Sea and began dredging and building docks in Syrian ports. Israel expressed alarm that Russian ships in Syrian bases will allow electronic surveillance of the entire Middle East and an air defense umbrella over much of Syria. Russia downplays the deployment as only a symbolic presence.

On September 30, 2015, Russia launched air strikes in Syria against anti-Assad rebels trained by the CIA, "putting Moscow and Washington on opposing sides in a Middle East conflict for the first time since the Cold War" (Bassam & Osborn 2015). Moscow claimed to have targeted Islamic State camps, but the areas it struck largely appear to be held by U.S.-backed insurgents (Cooper et al. 2015). Secretary of State John Kerry stated that the U.S. had "grave concerns" about the Russian strikes in Syria (Schwartz 2015). Hall (2016) observed that a U.S.-and-Russia-backed ceasefire in the Syria conflict in September 2016 was short-lived and that the brief partnership between the countries, consummated at a rally peak in the RTSI, broke down as social mood resumed its negative trend in Russia, as indicated by the resumption of the negative trend in the RTSI.

The West has begun to adopt a more adversarial posture toward Russia through military, political and economic means. Following the annexation of Crimea in March 2014, the U.S. and the EU have implemented multiple sanctions on Russia's state finances, energy and arms sectors (BBC News 2014). Since 2014, Russia has been excluded from the former-"G8" (now "G7") annual summit of major world economies (BBC News 2015a). In June 2015, the U.S. announced its plans to send 250 tanks, along with other weapons and artillery, to nations along the Russian border (Dearden 2015), prompting a Russian defense official to declare that as the plan unfolds, "[Russia's] hands are completely free to organize retaliatory steps to strengthen [its] Western frontiers" (Baczynska & Szary 2015). So far, the potential for these actions to boil over into a hotter conflict between the two nations, as Hall (2015a: 8) observed, "may be muted only by the persistence of positive mood in the U.S."

Many Eastern European countries, whose stock markets have also trended downward in recent years, have taken steps to prepare for conflict with Russia. In October 2014, Poland's defense minister announced it would move thousands of troops toward its eastern border because "the geopolitical situation has changed. We have the biggest crisis of security since the Cold War" (Scislowska 2014). Estonia doubled the number of soldiers in its voluntary Defense League, fast-tracked military procurement and requested that NATO permanently base troops and equipment there. Lithuania "launched a high-readiness combat response force comprising some 1,600 troops," and Latvia requested that NATO troops be "on permanent rotation" in the state (Braw 2014). In short, a negative social mood trend throughout Eastern Europe is prompting numerous governments to prepare for conflict, isolating Russia further.

A June 2, 2015, Foreign Policy article reported conditions that fulfilled Hall's (2007b) prediction of Russia's outsider status:

As Russia becomes increasingly isolated from Europe and the West over everything from the annexation of Crimea to the jailing of Pussy Riot and the treatment of gays and lesbians, their society will increasingly reject the 'norms' of the West and become more 'the other' – a place they have been before. (Stavridis 2015)

Internal Authoritarian Measures

Hall (2007b: 4) also forecast that Russia would slide toward "greater state control of the economy, media, politics and society." Since then, Russia has implemented multiple economic sanctions and authoritarian social and political restraints. In August 2014, Russia banned imports of fruit, vegetables, meat, fish and dairy products from the 28 countries of the European Union, the U.S., Canada, Norway and Australia for one year (Birnbaum 2014). In August 2015, Russia added more foods (Kottasova 2015) and more countries (BBC News 2015b) to the ban and made a show of burning banned foods. Putin has increased surveillance measures within Russia. The World Policy Institute reported in 2007 that seven Russian investigative and security agencies had been given the right to intercept phone calls and emails within the nation (Soldatov & Borogan 2013). According to Russia's Supreme Court, the number of state-intercepted telephone conversations and email messages doubled from 2007 to 2012 (Soldatov & Borogan 2013).

Putin's attempts to consolidate power have intensified since Hall's (2007b) report. In 2008, term limits forced Putin to step down from the presidency, yet his hand-picked successor, Dmitry Medvedev, appointed him prime minister. Putin regained the presidency in 2012 and appointed seven members of his former cabinet to Kremlin posts (Gutterman 2012). Many of them are ex-KGB veterans and members of the "siloviki" faction in the Russian elite who promote a large state role in economic and political affairs (Gutterman 2012). On September 29, 2014, The New York Times reported that Putin shifted state money into a private bank in a move that made his loyalists into billionaires (Myers et al. 2014). A newly-amended constitution now enables Putin to serve a six-year term, and if he is re-elected in 2018, he could remain in power until 2024. Doing so would give him the longest tenure of any Russian leader since Stalin (Black 2012).

It may be tempting for psychologists to speculate about causality with reference to Putin's idiosyncratic mix of charm and ruthlessness in pursuit of his aims. While he may possess such personality traits, they carry little predictive value. In contrast, his actions have fit the behavioral patterns of Russian leaders during periods of negative social mood, just as Hall (2007b) anticipated.

Looking Ahead

At a private meeting at the Vatican on June 10, 2015, Pope Francis implored Putin to make a "sincere and great effort" to allow peace in Ukraine (Center for Strategic & International Studies 2015). Yet here at the end of 2016, the RTSI remains approximately 54% below its 2008 all-time high, indicating the continuation -- so far -- of a negative social mood trend and therefore low prospects for a peaceful resolution to conflicts involving Russia. According to socionomic theory, the likelihood of a peaceful resolution will increase when Russia experiences a substantial trend toward positive social mood. That is when the corresponding traits of concord, constructiveness and togetherness are more apt to manifest in social interaction.

As long as the RTSI remains entrenched in a bear market, the potential for conflict between Russia and its neighbors will remain high. The additional probable locales for conflict that Hall (2007b) identified -- Kosovo, Azerbaijan, Lithuania and Poland -- may still experience

clashes with Russia. It is worth noting that conflict did, in fact, threaten to erupt between Russia and Kosovo just three months after Hall published his report, when Kosovo declared independence from Serbia, one of Russia's allies. The United States and many European Union nations recognized Kosovo's independence, despite significant Russian opposition, and Putin threatened to retaliate (Sweeney & Lowe 2008). At the time, the RTSI was at an all-time high and was just months away from reaching the peak of a bull market. We conjecture that the extremely positive social mood in Russia ultimately disinclined the country to act militarily, despite substantial geopolitical motivation to do so. The Russia-Kosovo case illustrates that geopolitical factors alone do not propel countries' military actions; social mood ultimately regulates a society's propensity to go to war or to seek peace.

We further surmise that the persistence of positive social mood in the United States and many Western European countries since 2009 has helped prevent verbal threats and military shows of force between Russia and the West from escalating a cold war into a hot war. The return of a major negative social mood trend in Western countries would signal an elevated risk of hotter conflict, whereas a major positive mood trend in *both* Russia and the West would signal a return to an environment of less conflict, more accord and less potential danger (Hall 2015a).

Conclusion

One of the preeminent contributions of the field of behavioral finance is the realization and substantiation that mood and emotion influence the behavior of decision makers in financial markets. Hall's prescient study of Russia's social mood and its implications demonstrates the utility of socionomic theory for anticipating the degree to which social mood manifests not only in financial market indexes but also across the full spectrum of human social behavior. The results suggest that employing the insights of behavioral finance in general, and socionomic theory in particular, to examine the relationship between social mood and social events is a fruitful area of both research and application.

REFERENCES

- Anishchuk, A., 2014, "Putin Accuses United States of Damaging World Order" *Reuters*.
- Associated Press, 2007, "Russia Withdraws All Troops from Georgia" *NBC News*.
- Au, K., Chan, F., Wang, D., and I. Vertinsky, 2003, "Mood in Foreign Exchange Trading: Cognitive Processes and Performance" *Organizational Behavior and Human Decision Processes* 91:2, 322-338.
- Baczynska, G., and W. Szary, 2015, "Russia Will Retaliate if U.S. Weapons Stationed on its Borders" *Reuters*.
- Bassam, L., and A. Osborn, 2015, "Iran Troops to Join Syria War, Russia Bombs Group Trained by CIA" *Reuters*.
- Bassi, A., Colacito, R., and P. Fulghieri, 2013, "O Sole Mio: An Experimental Analysis of Weather and Risk Attitudes in Financial Decisions" *Review of Financial Studies* 26:7, 1824-1852.
- BBC News, 2014, "How Far Do EU-US Sanctions on Russia Go?"
- 2015a, "G7 Summit: Obama and Merkel Firm on Russia Sanctions."
- 2015b, "Russia Adds Countries to Food Import Ban Over Sanctions."
- Birnbaum, M., 2014, "Russia Bans Food Imports from U.S., E.U." *The Washington Post*.
- Black, P., 2012, "Putin Returns as Russia's President Amid Protests" *CNN*.
- Bloomberg Business, 2015, "Russian Trading System Cash Index."
- Blomfield, A., 2008, "Russia Completes Troops Withdrawal from Georgia Buffer Zones" *The Telegraph*.
- Bollen, J., Mao, H., and X. Zeng, 2011, "Twitter Mood Predicts the Stock Market" *Journal of Computational Science* 2:1, 1-8.
- Braw, E., 2014, "Tiny Baltic States Prepare to Hit Back at Mighty Russia" *Newsweek*.
- Cenciotti, D., 2013, "Russia Simulated a Large-Scale Aerial Night Attack on Sweden" *Business Insider*.
- Center for Strategic & International Studies, 2015, "The Ukraine Crisis Timeline."
- CNN, 2015, "2008 Georgia Russia Conflict Fast Facts."

- Matt Lampert, Alyssa Hayden, and Alan Hall/*The Journal of Behavioral Finance & Economics* 1&2 (2015-2016)
- Cooper, H., Gordon, M. R., and N. MacFarquhar, 2015, "Russians Strike Targets in Syria, but Not ISIS Areas" *The New York Times*.
- Dearden, L., 2015, "US to Send 250 Tanks to Countries along Russian Border to 'Respond to Russian Aggression'" *The Independent*.
- Elliott, R. N., 1938, *The Wave Principle*. In R. R. Prechter, Jr., Ed., *R.N. Elliott's Masterworks -- The Definitive Collection*, 1994, Gainesville, New Classics Library.
- Entous, A., and E. Nakashima, "FBI in Agreement with CIA that Russia Aimed to Help Trump Win White House" *The Washington Post*.
- Folsom, R., 2013, "Ukraine: The Geographic Center of a New Cold War?" *The Socionomics Institute*.
- Frost, A. J., and R. R. Prechter, Jr., 1978, *Elliott Wave Principle: Key to Market Behavior*, Gainesville, New Classics Library.
- Galasiewski, M., 2011, "Arabia's 'Days of Rage' Reflect Its Stock Markets" *The Socionomist*, 8-9.
- Garver, R., 2015, "A New Warning About Putin's Russia from a Top U.S. General" *The Fiscal Times*.
- Gilbert, E., and K. Karahalios, 2010, "Widespread Worry and the Stock Market", Fourth International AAAI Conference on Weblogs and Social Media.
- Gladkova, Y., 2015, "More and More Russians See America as a Threat, Poll Reveals" *The Moscow Times*.
- Grable, J., and M. J. Roszkowski, 2008, "The Influence of Mood on the Willingness to Take Financial Risks" *Journal of Risk Research* 11:7, 905-923.
- Gutterman, S., 2012, "Putin Shifts Former Ministers to Kremlin" *Reuters*.
- Hall, A., 2007a, "Sizing Up a Superpower: A Socionomic Study of Russia: Part I: Russian History and Global Social Mood" *Global Market Perspective*, 1-11.
- 2007b, "Sizing Up a Superpower: A Socionomic Study of Russia: Part II: Social Portents of Extreme Behavior in the Resurging Russian Bear" *Global Market Perspective*, 1-11.
- 2012, "Coming Up: A Historic Peak in the Amount of U.S. Government Entitlements" *The Socionomist*, 1-5.

Matt Lampert, Alyssa Hayden, and Alan Hall/*The Journal of Behavioral Finance & Economics* 1&2 (2015-2016)

-----2014a, "A Quarter Century of Waxing Authoritarianism: From the Third Reich to the Holocaust" *The Socionomist*, 1-3.

-----2014b, "The World May See an Even Darker Side of Putin" *The Socionomist*, 1-9.

-----2015a, "Social Mood in Russia Continues a Dangerous Trend" *The Socionomist*, 4-8.

-----2015b, "Syria: Epicenter of a Negative Mood Vortex" *The Socionomist*, 1-2.

-----2016, "Is Russia About to Attack...Everyone?" *The Socionomist*, 4-6.

Hall, J. L., 2010, "Affect, Risk-Taking, and Financial Decisions: Investigating the Psychological and Neural Mechanisms by which Conscious and Unconscious Affective Processes Influence Decisions", The University of Michigan, Doctoral Dissertation.

Kendall, P., and R. R. Prechter, Jr., 2009, *The Mania Chronicles: A Real-Time Account of the Great Financial Bubble (1995-2008)*, Gainesville, New Classics Library.

Kirkland, R., 2007, "The Greatest Economic Boom Ever" *Fortune*.

Kottasova, I., 2015, "Russia Bans More Foreign Foods" *CNNMoney*.

Kuhnen, C. M., and B. Knutson, 2011, "The Influence of Affect on Beliefs, Preferences, and Financial Decisions" *Journal of Financial and Quantitative Analysis* 46:3, 605-626.

Lampert, M., and M. Galasiewski, 2012, "The Global Financial Crisis and Outbreaks of Violence in Asia and the Middle East" *Market Technician* 72, 9-11.

Market Technicians Association, Inc., 2003, "Constitution of the Market Technicians Association (Revised 2003)."

Myers, S., Becker, J., and J. Yardley, 2014, "Private Bank Fuels Fortunes of Putin's Inner Circle" *The New York Times*.

The New York Times, 2008, "Russia Sends 300 Troops to Abkhazia."

PBS, 2012, "A Man Like Putin."

Prechter, R. R., Jr., 1982, "Wave V Confirmed – Super Bull Market Underway" *The Elliott Wave Theorist*, October Interim Report, 1-2.

-----1985, "Popular Culture and the Stock Market" *The Elliott Wave Theorist*, 1-20.

-----1999, *The Wave Principle of Human Social Behavior and the New Science of Socionomics*, Gainesville, New Classics Library.

Matt Lampert, Alyssa Hayden, and Alan Hall/*The Journal of Behavioral Finance & Economics* 1&2 (2015-2016)

-----2003, *Pioneering Studies in Socionomics*, Gainesville, New Classics Library.

-----2011, "Predicting Social Change", Presentation at the 2011 Socionomics Summit.

-----2014, "Turning Point Toward a Different World" *The Elliott Wave Theorist*, 1-8.

-----2016, *The Socionomic Theory of Finance*, Gainesville, Socionomics Institute Press.

----- (Ed.), 2017, *Socionomic Causality in Politics*, Gainesville, Socionomics Institute Press. Forthcoming.

Prechter, R. R., Jr., Goel, D., Parker, W. D., and M. Lampert, 2012, "Social Mood, Stock Market Performance and U.S. Presidential Elections: A Socionomic Perspective on Voting Results" *SAGE Open*, doi: 10.1177/2158244012459194.

Roszczyńska-Kurasinska, M., Nowak, A., Kamieniarz, D., Solomon, S., and J. V. Andersen, 2012, "Short and Long Term Investor Synchronization Caused by Decoupling" *PLoS ONE* 7:12, doi: 10.1371/journal.pone.0050700.

Schwartz, F., 2015, "John Kerry Says U.S. Has 'Grave Concerns' About Russian Airstrikes in Syria" *The Wall Street Journal*.

Scislowska, M., 2014, "Poland to Move Thousands of Troops East, Defense Minister Says" *The Washington Times*.

Shiller, R. J., 2000, *Irrational Exuberance*, Princeton, Princeton University Press.

Slovic, P., Finucane, M. L., Peters, E., and D. G. MacGregor, 2004, "Risk as Analysis and Risk as Feelings: Some Thoughts about Affect, Reason, Risk, and Rationality" *Risk Analysis* 24:2, 311-322.

Smith, V. L., Suchanek, G. L., and A. W. Williams, 1988, "Bubbles, Crashes, and Endogenous Expectations in Experimental Spot Asset Markets" *Econometrica* 56:5, 1119-1151.

Soldatov, A., and I. Borogan, 2013, "Russia's Surveillance State" *World Policy Institute*.

Stavridis, J., 2015, "What Russian Literature Tells Us about Vladimir Putin's World" *Foreign Policy*.

Sweeney, C., and C. Lowe, 2008, "Russia's Options Limited for Kosovo Retaliation" *Reuters*.

Taylor, J., 2014, "Would Russia's President Really Be Willing to Start World War III?" *Foreign Policy*.

Matt Lampert, Alyssa Hayden, and Alan Hall/*The Journal of Behavioral Finance & Economics* 1&2 (2015-2016)

Thompson, C., 2015, "Conflict or Cooperation: In North Korea, It's a Matter of Social Mood" *The Socionomist*, 1-7.

Wilson, E., 2010, "Parting of Peaceful Ways: A Socionomic Review of Civil War" *The Socionomist*, 1-7.

Wingfield-Hayes, R., 2007, "Moscow's Suburb for Billionaires" *BBC News*.