



## WHITE PAPER

### **Aggressive and Predictable: Iran's Recent Behavior Follows Internal Signaling**

***Date:***

1 September 2019

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VARYSS is an Open Source Solution that aggregates news and social media, and fuses social science with Machine Learning to identify, predict, and influence strategic change in real time. Our comprehensive database of global news and our quantitative measures of political behavior power our highly performant and theoretically justified predictive models for political risk. VARYSS is the only large-scale media analysis platform that provides high-frequency macro analysis of the modern information environment. VARYSS continuously collects and analyzes global media to monitor and predict developments, worldwide. VARYSS is uniquely adept at facilitating a predictive understanding a strategic competitor's moves in an area of competition below armed conflict, sometimes referred to as the "Gray Zone."

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VARYSS predicts increased Iranian aggression 6-9 months prior to actual events.

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Consistent with concerns suggested in the 2018 National Defense Strategy, VARYSS has continued to follow the activities of actors such as China, Russia, North Korea, and Iran as they persist in activity to fracture U.S. alliances and engage in activity to "win without fighting." For the past 12 years, VARYSS tracked and monitored political, economic, and military activities in Iran, as well as the entire Middle East, with a focus on internal Iranian and regional political interactions. Using a blended measure of cohesion, belligerence, and framing, VARYSS detected an increase in Iranian behavior signifying a desire to engage in riskier geopolitical activity, beginning as early as the 2<sup>nd</sup> quarter of 2018 and continuing into the Fall of 2019.

As this rise has followed a continual trend, our Risk Auction model indicated Iran would increasingly engage in dangerous activities in the realm of inter-state strategic competition, characterized by varying levels of military activity against non-military targets. This manifested itself on the International stage with the seizure of a British oil tanker, attacks on two other oil tankers, and shooting down of a U.S. drone over the summer of 2019. We expect this to continue at least through the Fall of 2019 and into the early Winter of 2020 until internal Iranian factions change their alignments.

The volume of global, unstructured social and news text creates the opportunity to quantify the factors that drive geopolitical risks. Continuous assessment of risk factors combined with a comprehensive database of threat activity enables the creation and validation of predictive models of political risk. Kingfisher's VARYSS platform automates this process at scale. As part of our global monitoring, VARYSS continually collects and analyzes global English- and Persian-language media to monitor and predict

developments in the Persian Gulf. VARYSS provides predictive insights about Iranian threat activity, which creates risks for both United States (U.S.) interests in the region and for global energy and financial markets.

The framework for establishing competitive (Gray Zone) behavior is known as a Risk Auction, a game in which each side, here, the Iranians and the U.S. and its regional allies, displays a willingness to incur risks to gain advantage. Like most games, recurring internal and external alignments lead the two sides to pursue similar strategies as those tried before, creating recurring patterns of conflict and cooperation, and allowing VARYSS Artificial Intelligence layers to learn predictive models that relate observed political measures and the near-term level of threat activity.

In the Fall of 2018, VARYSS models detected increasing activity by Iran and Iranian proxies in the region, continuing through the Summer of 2019 to levels 200% above peacetime norms. The increase was not directly in response to the U.S. withdrawal from the Joint Comprehensive Plan Of Action (JCPOA), commonly referred to as the Iranian Nuclear Deal, coming five months after the U.S. withdrawal. Rather, the increased likelihood of threat activity reflected the evolution of complex regional and internal Iranian politics, in which U.S. policy toward Iran and its regional rivals is one influence among many.

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Iranian signaling of aggressiveness exceeds 200% of peacetime norms in Summer 2019.

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VARYSS' prediction of increased risk anticipated the sustained increase in activity observed that began in the Spring of 2019 and continued through the Summer of 2019. VARYSS can model the risk of Iranian threat activity because risky behavior is not random, but rather a rational and purposeful response to internal and external political alignments, which are tracked by VARYSS quantitative measures.

VARYSS risk models were borne out by the three Iranian oil tanker seizure through early August 2019 and the continued drone activity against U.S. Naval forces in the region. VARYSS continues to monitor developments in the region, providing a continuous assessment of the Iranian threat and enabling more informed and faster decisions.

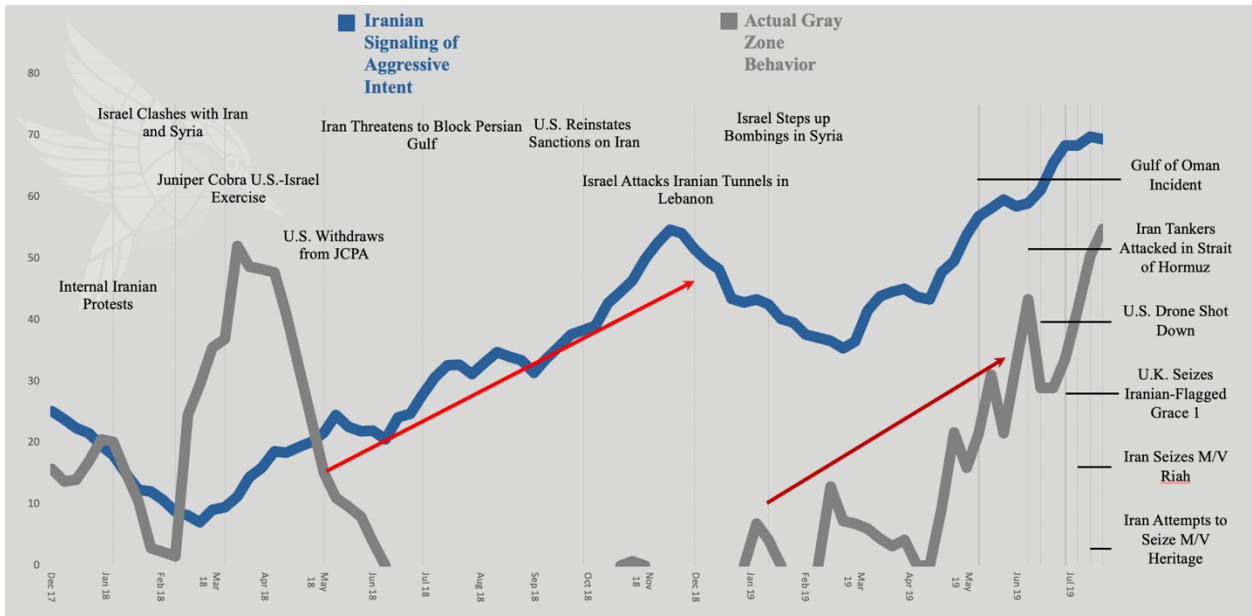


Figure 1: Observed Gray Zone signaling – Iran changes internal alignments and external policies in the Fall of 2018, signaling a willingness to engage in increasingly risky behavior.

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Iran responds to a combination of regional actors and internal events, of which the U.S. is only one part.

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Iran frequently chooses to use the Strait of Hormuz as a mechanism for influencing Geopolitical activity. The Strait of Hormuz is a strategically important narrow strip of water that links the Persian Gulf with the Arabian Sea, the Gulf of Oman, and to the Indian Ocean. The strait is only 21 to 60 miles (33 to 95 km) wide throughout its length. The Strait of Hormuz is important because it is a geographic chokepoint on the main artery for the transport of oil from the Middle East. Iran and Oman share territorial rights over the waters of the Strait of Hormuz and shipping is restricted to a narrow path following the center of the strait. More than 6 billion barrels of oil transit through the Strait of Hormuz annually, comprising approximately 20% of the world's traded oil. On average, 15 crude oil tankers navigate through the strait every day.

However, risk should not be limited to a single axis of possible responses. Iran is a dynamic country, constantly vying for increased influence in regional politics: they are simultaneously stymied by the massive military presence of the U.S. and politicizing the U.S. presence for their own internal and regional gain. As such, Iran will look for asymmetric ways to influence the region and will consider non-traditional responses as well.

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Iran will continue aggressive behavior until internal political alignments change.

Iran will continue to engage in risky inter-state competitive activity, most likely through proxies, risking regional conflict, as long as their internal alignment between the hard-liner factions and the Rouhani administration is cohesive and their international position is weak. Until Iran is offered a path to a stronger economic situation or their internal political alignments fracture, this behavior will likely continue. We do not anticipate the U.S. leading an effort to provide a more stable economic path for Iran in 2019 but cannot discount a European effort to do so. As long as the U.S. is seen as the reason for their economic troubles, we expect Iran to remain politically cohesive and united against International efforts.

Geopolitical risk is a global concern that affects economics and finance, as well as national security and international relations. Rising risk is driven by many factors, among them political shifts in developed countries, demographic changes, weak economic growth, increased relevance of countries with weak institutions, and the need for additional economic and political resources. Monitoring the breadth of geopolitical risks demands data-driven, high-frequency methods, but current models for political risk are highly flawed.

***ABOUT KINGFISHER SYSTEMS, INC.:*** With a focus on big data, Machine Learning, and Artificial Intelligence, Kingfisher specializes in providing National Security support to the U.S. Government. Kingfisher is a Capability Maturity Model Integration (CMMI) CMMI-DEV Level 3 appraised and International Organization for Standardization (ISO) 9001:2015 certified company.