

THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF FINANCE

SHORTING ISIL: THE ROLE OF FINANCE IN UNDERSTANDING AND DEFEATING
ISLAMIC STATE

IAN RICHARD BUTTON
FALL 2015

A thesis
submitted in partial fulfillment
of the requirements
for baccalaureate degrees
in Finance and German
with honors in Finance

Reviewed and approved* by the following:

Brian Davis
Clinical Associate Professor of Finance
Thesis Supervisor and Honors Advisor

James Miles
Professor of Finance, Joseph F. Bradley Fellow of Finance
Faculty Reader

* Signatures are on file in the Schreyer Honors College.

ABSTRACT

This paper argues that the Islamic State in Iraq and the Levant (ISIL) is not analogous to conventional terrorist networks such as al-Qaeda. Rather, the United States and its allies must acknowledge ISIL's uniqueness and assess the means required to defeat a corporatized, modularized enemy. Such an assessment will make apparent the need to view the Islamic State through a business lens and adopt a 'finances-first' approach that deploys U.S. ground forces to the region in order to deprive the group of its financial lifeblood: the territory under its control.

This study utilizes a cost-benefit approach pioneered by the Rand Corporation to assess difficult and politically challenging public policy options in an objective manner. The goal of this approach is to use the principles of finance and economics in creative ways to make quantitatively optimal decisions that help inform otherwise subjective policy debates.

TABLE OF CONTENTS

LIST OF FIGURES	iii
LIST OF TABLES	iv
ACKNOWLEDGEMENTS	v
Chapter 1 Dynamics and Depth of the ISIL Problem	1
What are Islamic State’s Origins?	3
The Role of Religion	6
The Finance Connection	10
Oil Revenue	15
War Profiteering	19
Taxation	22
Human Trafficking and Manipulation of Charities	23
Hawala Value Transfer System	26
<i>Treasury Department Hawala Case Study</i>	27
Competition with al-Qaeda	29
Chapter 2 Implications and Potential Impact	36
Why the Islamic State Problem Must be Addressed	36
Interview with Dr. Steven Bucci, Retired U.S. Army Special Forces Colonel in July 2015	39
<i>Expert Commentary Concerning Chapter 1 – “Dynamics and Depth of the ISIL Problem” and Chapter 2 – “Implications and Potential Impact”</i>	40
Chapter 3 Future Policy Dilemma	45
Political-Military Case for American “Boots on the Ground”: Analyzing Strategy Beyond the Horrors of the Headlines	45
Financial Analysis	51
<i>Introduction, Purpose, and Methodology</i>	51
<i>Decision Model Specifications and Operationalizing Variables: Calculating Potential Costs and Results of a Ground Campaign vs. Airstrikes</i>	54
<i>Estimating Variance within the Decision Calculations</i>	58
<i>Adjusting the Cost-Benefit Analysis Given the Variance</i>	60
<i>Putting the Pieces Together: Decision Matrix Analysis and Research Findings</i>	63
<i>Analyzing the Options: Arriving at the Bottom Line</i>	65
<i>Summary of Matrix Methodology</i>	68
<i>Conclusion</i>	71
Appendix A Abbreviations	72

Appendix B Case Selection, Analytic Approach, and Key Findings	73
BIBLIOGRAPHY	77

LIST OF FIGURES

Figure 1: The State of the War Against ISIS	1
Figure 2: Possible ISIL Daily Oil Revenue	16
Figure 3: Selected Historical Sites Under Threat from ISIL.....	20
Figure 4: Where ISIS Has Gained Territory in Libya.....	20
Figure 5: Distance Adoptions-Related Donations Performed by a FTF	24
Figure 6: Diversion of Funds by Actors to NPOs	24
Figure 7: ISIS Price List for Sex Slaves	25
Figure 8: Attacks in Baghdad	50
Figure 9: Trends in Combat Over Time.....	50
Figure 10: The Iraq Surge, Before and After	51
Figure 11: Iraq War Troop Levels and FY War Spending.....	53
Figure 12: Afghanistan War Troop Levels and FY War Spending	54
Figure 13: Cost Per Kill Figures for Proposed Ground Offensives and Air Campaign	61
Figure 14: U.S. Ground Offensive Decision Matrix 1	63
Figure 15: U.S. Ground Offensive Decision Matrix 2	64
Figure 16: Iraq War Projected Spending Compared to Historical Spending	70
Figure 17: Afghanistan War Projected Spending Compared to Historical Spending	70

LIST OF TABLES

Table 1: Projected Annual Cost Per Soldier	55
Table 2: Cost-Benefit Analysis of U.S. Boots on the Ground	66

ACKNOWLEDGEMENTS

I would like to express my deep gratitude to Dr. Brian Davis, my thesis supervisor and honors advisor, for his encouragement and constructive suggestions throughout the planning and development of this research piece. His willingness to give his time so generously has been much appreciated.

I would also like to thank Dr. James Miles for his thoughtful critiques of this document , Major Ryan Kort for his help in finding unique and relevant sources, and Dr. Steven Bucci for his unselfish contributions of time and insight, both of which shaped the trajectory of my greatest scholastic achievement to date.

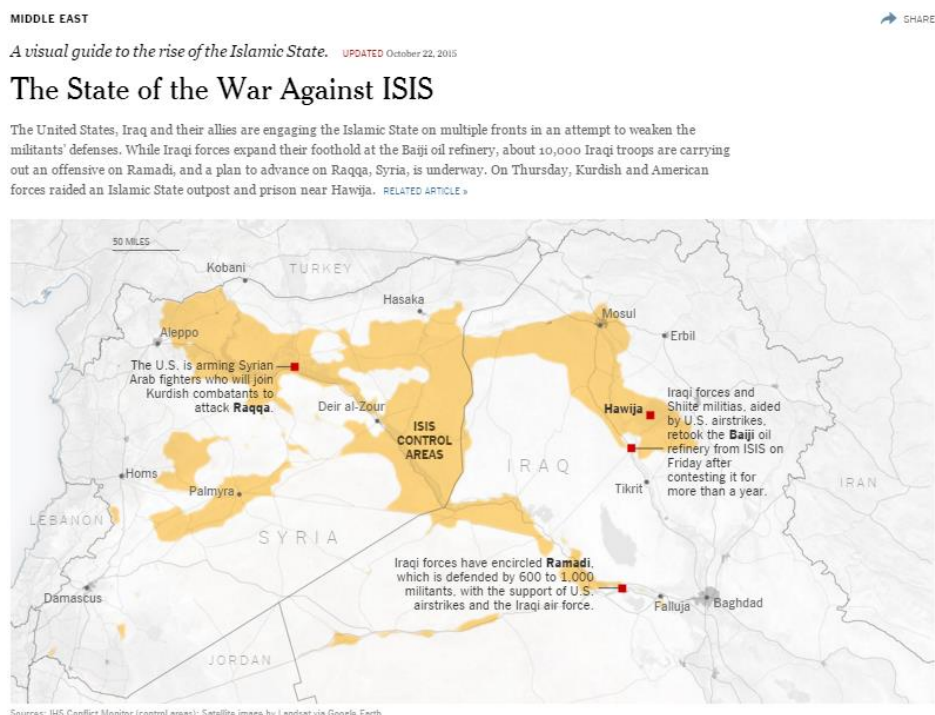
Finally, I wish to thank my family for their support and encouragement throughout my time at Penn State. Without them, this honors thesis would not have been possible.

Chapter 1

Dynamics and Depth of the ISIL Problem

The self-declared Islamic State (IS) is a Salafist jihadist insurgency bidding for control of territory in western Iraq and eastern Syria. IS is known by several other names, including the Islamic State of Iraq and the Levant (ISIL), the Islamic State of Iraq and Syria (ISIS), and Daesh. The proto-state controls territory equivalent in size to Great Britain¹ and holds dominion over roughly 10 million inhabitants.² A former al-Qaeda affiliate, IS increasingly resembles an organized, corporatized militia.

Figure 1: The State of the War Against ISIS



¹ Johnston, "The Rise of Isis."

² Nebehay, "Islamic State-Controlled Parts of Syria, Iraq Largely out of Reach."

³ Gordon and Schmitt, "U.S. and Iraqi Forces Take Offensive Against ISIS on Several Fronts."

In June 2014, Islamic State burst onto the scene following its successful capture of Mosul and Tikrit. The group then declared itself a caliphate and demanded exclusive political and theological authority over the world's *ummah*, or Muslims. In practice, the so-called state has been characterized more by its violence and extremist ideology than by its civil society or good governance.

The United States and other Western nations reacted to beheadings of captives and other incendiary acts with shock and horror. Calls for armed intervention grew louder in the wake of the deaths of Americans James Foley, Steven Sotloff, Peter Kassig, and Kayla Mueller. Seeking to consolidate its territorial control, IS has engaged in widespread violence under the guise of its Salafist interpretation of the Quran. The rapidity with which the group seized territory in Iraq and Syria became the focal point of its slick social media campaign. Since then, tens of thousands of foreign fighters have joined IS.

The United States has led Operation Inherent Resolve (OIR), a multinational campaign of airstrikes, to “degrade and ultimately destroy” Islamic State. While U.S. and allied military action has slowed the group, it has remained stubbornly resilient in the face of increasing external pressure. As a result of the United States’ desire to keep its ground troops out of the fight, Iraqi national security forces seeking ground support have allied with Shia militias, some of which are backed by Iran.⁴ Iran, the region’s greatest Shia power, may well deepen the country’s already alarming Sunni-Shia rift insofar as Sunni tribesmen fear sectarian attacks. Furthermore, Islamist groups across Africa and South Asia have strengthened IS’s ideological grip by swearing *baya*, or allegiance, to it.

⁴ Fantz, Wedeman, and Botelho, “Iran, Shia Militias Are Mixed Blessing to U.S., Iraq.”

What are Islamic State's Origins?

To the uninitiated, it seems as though the group appeared out of thin air. As recently as January 2014, President Barack Obama used the following comparison to describe ISIL: “The analogy we use around here sometimes, and I think is accurate, is if a jayvee team puts on Lakers uniforms that doesn’t make them Kobe Bryant.”⁵ Predictably, this sentence was mined for its political value as the group’s militants made lightning advances in Syria and Iraq. The aim of this paper is not to engage in politicking but rather to explore the reasons behind the White House’s grave underestimation of the threat posed by ISIL militants.

Until the summer of 2014, few outside of the U.S. Department of Defense or U.S. Intelligence Community had heard of the Islamic State. Even fewer had knowledge of the group’s origins. In addressing this shortfall, two articles prove particularly useful. The first is a piece titled “A short political history of the terrorists who call themselves the ‘Islamic State,’” written by Bobby Ghosh of Quartz.⁶

This August 2014 exposé states that the now infamous group “has existed under various names and in various shapes since the 1990s.”⁷ The story begins with the arrival of a Jordanian named Abu Musab al-Zarqawi in Afghanistan in 1989. At the time, Afghanistan had just expelled the Red Army of the Soviet Union. Zarqawi came with the intention of becoming a mujahidin warrior but was “a year too late to fight the Soviet Union.”⁸

Disappointed, he returned to his native Jordan and “remained a fringe figure in the international violent ‘jihad’ for much of the following decade.”⁹ He would later meet Osama

⁵ Geraghty, “Remember When Obama Called ISIS ‘Jayvee’?”

⁶ Ghosh, “A Short Political History of the Terrorists Who Call Themselves the ‘Islamic State.’”

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.

bin Laden but decided against joining al-Qaeda. Understanding this decision is vital to understanding the origins of ISIL; Zarqawi, in the words of Ghosh, was “a free agent” looking for an opportunity to start his own terrorist franchise.¹⁰ With the founding of Jama’at al-Tawhid w’al-Jihad (the Party of Monotheism and Jihad) in 2003, he got his start. Though Zarqawi’s brainchild would later merge with bin Laden’s al-Qaeda and rename itself al-Qaeda in Iraq (AQI), significant tensions remained.

Zarqawi, unlike bin Laden and Ayman al-Zawahiri, the current leader of al-Qaeda and bin Laden’s “right-hand man,” believed in the necessity of targeting the “near enemy” as much (if not more) than targeting the “far enemy.” This meant attacking the Imam Ali shrine in Najaf, the “holiest place of Shia worship in Iraq.”¹¹ In his eyes, Shia Islam is an alteration of original Islam and to alter original Islam is to deny its inherent perfection. Such thinking amounts to heresy. Therefore, he targeted both American soldiers and fellow Muslims, the latter with a visceral hatred.¹² By attacking Shia Muslims, Zarqawi wanted to provoke a violent response against his fellow Sunni Muslims, thus forcing them to turn to him and AQI for protection.

His wanton slaughter of Shia Muslims and unwillingness to be reined in by bin Laden or Zawahiri earned him al-Qaeda’s official rebuke.¹³ AQI began to disintegrate shortly thereafter due to Zarqawi’s death in June 2006. The U.S. Air Force dropped two 500-pound bombs on the building he was hiding in just north of Baghdad. Fomented by General David Petraeus, an “insurgency-within-an-insurgency” called the “Awakening” catalyzed the breakdown of AQI. Demoralized by the death of Zarqawi and facing a massive surge in U.S. troops, many broke

¹⁰ Ibid.

¹¹ Ibid.

¹² McChrystal, “My Share of the Task.”

¹³ Hunt, “Zarqawi’s ‘Total War’ on Iraqi Shiites Exposes a Divide among Sunni Jihadists.”

ranks. But as the U.S. armed forces withdrew their final men and women in 2011, a power vacuum was left behind.

In May 2010, Abu Bakr al-Baghdadi assumed control of what was left of AQI and “supercharged” it. He “rebranded” the group the Islamic State of Iraq (ISI) and expanded attacks to include police officers, military installations, and additional civilian targets. Baghdadi then turned his attention to Syria, where an ongoing revolt against Bashar al-Assad had already disemboweled the country’s already vulnerable stability. Battle-hardened, ISI’s soldiers were “a much more potent fighting force than most of the secular groups.”

Relations between ISI and al-Qaeda eventually reached the boiling point in April 2013. It was then that “Abu Bakr al-Baghdadi, the leader of ISIS, expanded his group into Syria and attempted to subordinate the local al Qaeda branch, Jabhat al-Nusra (JN), to his own authority.”¹⁴ When JN rejected Baghdadi’s takeover and ISI refused to accept Ayman al-Zawahiri’s mediation, the “overreach provoked a backlash.” To reflect “his greater ambitions,” Baghdadi then renamed his group one last time: the Islamic State in Iraq and the Levant (ISIL).

This final rebranding is discussed in greater detail by Robert Rabil of the National Interest in his article “The ISIS Chronicles: A History.”¹⁵ In this second article of interest, Rabil makes clear the time frame during which AQI cut ties with al-Qaeda at large as well as its reasons for doing so. He claims “the Islamic State has already replaced Al Qaeda as the paradigm organization of Salafi-Jihadists and stands...to change...the scope and breadth of Salafi-jihadi threat to the West and Middle East.”

The term Salafism comes from the Arabic al-salaf al-salih, or pious ancestors. This circle of people comprised the Prophet Muhammad and his closest followers. In essence, Salafism

¹⁴ Mendelsohn, “Collateral Damage in Iraq.”

¹⁵ Rabil, “The ISIS Chronicles.”

advocates a “return to the authentic beliefs and practices” of those select few. This means “ridding Islam of all bida” (reprehensible/illegitimate innovations) in belief and practice. To Salafists, the practice of Shia Islam constitutes just such an innovation, which justifies attacks against the sect.

Of great importance are ISIL’s disagreements with other Salafist organizations, particularly al-Qaeda. Though they agree on certain fundamental principles, they advocate different means to achieve those ends. “At the heart of the dispute” between ISIL and al-Qaeda, writes Rabil, “was al-Zarqawi’s plan to first and foremost wage a jihad against the Shi’a, for, according to him, they held the key to radical change in Iraq.”

Al-Baghdadi, the current leader of ISIL, studied al-Zarqawi and agrees with his positions relative to the persecution of Shia and the use of violence to spread the Salafist ideology. It is for this reason that al-Qaeda formally cut all ties with ISIL on February 2, 2014. In a public statement, al-Qaeda announced, “ISIS is not a branch of the Qaidat al-Jihad [al-Qaida’s official name] group, we have no organizational relationship with it, and the group is not responsible for its actions.”¹⁶

The Role of Religion

Much disagreement on the subject of ISIL’s religiosity persists. One camp makes the case that Islam directly informs the group on everything from war to statecraft to daily life. The other suggests that ISIL bastardizes Islam and does not actually practice the religion’s tenets.

¹⁶ Weiss and Hassan, “ISIS: Inside the Army of Terror.”

New York Times bestselling author Robert Spencer makes light of this debate in his book “The Complete Infidel’s Guide to ISIS” by equating all questioning of the group’s Islamic ties to questioning whether the Pope is in fact Catholic.¹⁷ Tactful or not, Spencer makes an important point. Whether or not ISIL practices Islam correctly is secondary to whether it believes it is practicing Islam.

As such, it is clear that ISIL’s religiosity informs its organizational aims. In his article for the Atlantic titled “What ISIS Really Wants,” Graeme Wood makes the argument that the group “is no mere collection of psychopaths” but rather “a religious group with carefully considered beliefs, among them that it is a key agent of the coming apocalypse.” Wood first demonstrates just how vital the role of faith is to ISIL’s politico-military campaign and then examines what that means in terms of its ongoing strategy as well as how ISIL’s weaknesses can be exploited.

There are those who would argue that the Islamic State is in fact un-Islamic. The author describes this tendency as “a well-intentioned but dishonest campaign to deny the Islamic State’s medieval religious nature.” Instead, one cannot understand what ISIL seeks without simultaneously understanding how its faith shapes its actions. Numerous facts support this assessment, ranging from the derision with which Islamic State spokesmen describe “moderns” to speeches made by the group’s chief spokesman Sheikh Abu Muhammad al-Adnani calling on Muslims in Western countries to attack their infidel counterparts in a variety of peculiarly antiquated ways, including smashing their heads “with a rock” and destroying their crops. The latter “directly echoed orders from Muhammad,” as do many of ISIL’s other actions. ISIL is a

¹⁷ Spencer, “The Complete Infidel’s Guide to ISIS.”

practitioner of what is called “the Prophetic methodology,” which means “following the prophecy and example of Muhammad, in punctilious detail.”

In addition, the author describes the extremities to which ISIL goes to punish those who do not conform to its ultra-strict interpretations of the Koran. Foremost among these is the practice of takfir, or excommunication from Islam. Zarqawi, who constitutes the forefather of ISIL, “heedlessly expanded” the use of excommunication in the eyes of his al-Qaeda counterparts, further engendering the rift between the two. According to the holy texts, takfir is not to be taken lightly. The punishment for apostasy, regardless of whether one is a false accuser of infidelity or a true infidel, is death. Zarqawi expanded the use of this tactic by including crimes that previously would not have justified excommunication, including the use of alcohol and the wearing of Western clothing.

Wood’s depiction of ISIL is one of a tightly run, highly efficient band of marauders motivated by Salafism and bloodthirstiness. ISIL consists not of crazed, semi-deranged deadbeats who kill without rhyme or reason but rather surprisingly well-educated theologians and former military officers. Moreover, religion stands at the center of ISIL’s conquest. In an interview with Graeme Wood, Princeton scholar and “leading expert on [ISIL’s] theology” Bernard Haykel described Muslims who deny ISIL’s Islamic nature as “embarrassed and politically correct, with a cotton-candy view of their own religion.” He also believes that this perspective disregards “what their religion has historically and legally required.”

Per Haykel, “the fighters of the Islamic State are authentic throwbacks to early Islam and are faithfully reproducing its norms of war. Prior to the ascendancy of ISIL, “no group in the past few centuries had attempted more-radical fidelity to the Prophetic model than the Wahhabis of 18th-century Arabia.” That being said, an important discrepancy between the two bears

mentioning; the Arabian Wahhabis “were not wanton in their violence” while ISIL “is reliving the early period” during which Muslims were surrounded by non-Muslims, as evidenced by its “takfiri tendencies.”

ISIL’s extreme ideology also fuels its tactics and propaganda. Al-Baghdadi, for example, has effectively revived the institution of the caliphate – which “had not functioned except in name for about 1,000 years” – thereby invoking a “communal obligation” for all Muslims to pledge their allegiance to the caliph and to move to the caliphate if at all possible. The obligatory nature of allegiance hinges on al-Baghdadi’s legitimacy, which is predicated on his lineage and his authority, or *‘amr* in Arabic. Sunni law stipulates that caliphs must be “a Muslim adult man of Quraysh descent.” This designation is reserved for those who are descended from the Prophet Muhammad. Because al-Baghdadi meets these strict criteria, he exerts considerable authority throughout the Middle East and beyond.

Before ISIL’s caliphate came into existence, says Anjem Choudary, a Londoner who aspired to join ISIL but who was unable due to the confiscation of his passport, “maybe 85 percent of the Sharia was absent...” because “these laws are in abeyance until [Muslims] have a khilafa,” or caliphate. Now, however, “this law, along with a huge body of other jurisprudence, suddenly awakens.” Under the tenets of this body of law, those who knowingly continue to support secular states in the Middle East even after being warned of their transgressions are labeled apostates and are viable targets for ISIL attacks. Interestingly, the list of apostates includes Saudi Arabia, home to Mecca and several other of Islam’s holiest sites. Due to the country’s theocratic nature, even the building of churches and synagogues is forbidden. Yet Saudi Arabia still falls within ISIL’s crosshairs. The reason is its implementation of just the Sharia penal code rather than the entire Sharia legal system.

Much as ISIL views Saudi Arabia as a watered down, half-hearted purveyor of Sharia law, so too does it view al-Qaeda as an organization comparatively uninterested in the Day of Judgment. Al-Qaeda's current and former leaders, Osama bin Laden and Ayman al-Zawahiri, both deride talk of the coming apocalypse due to its popularity among the masses. By comparison, the Islamic State hypes its coming war with Rome. It expects the two forces will clash in northern Syria. Before Jesus, the second most important prophet in Islam, arrives to strike down the anti-Messiah, all but 5,000 ISIL followers will die in battle. It is for this very reason that the group does not fear – or even eagerly awaits – a showdown with the United States and her allies.

Until such time, ISIL will proceed according to the law of “offensive jihad,” which requires “forcible expansion into countries that are ruled by non-Muslims.” The expansion of the caliphate is one of the caliph's chief duties; in fact, any caliph who refuses to obey the law or who tarries by agreeing to long-term peace or permanent borders is “in a state of sin.” This is cause for his removal. This is also a potential downfall, as the Islamic State has no friends in international circles. It threatens the security and wellbeing not only of the Middle East but also the world at large. “It's hard,” in the words of Graeme Wood, “to overstate how hamstrung the Islamic State will be by its radicalism.”

The Finance Connection

How, does a largely friendless terrorist organization finance itself in a hyper connected, globalized world? How can a group that appears to belong to the middle ages not only exist, but flourish in a world driven by innovations in technology and finance? The following paragraphs

will endeavor to answer these questions and others by examining a variety of books, research publications, and articles on the subject.

The Financial Action Task Force (FATF), an independent inter-governmental body that develops and promotes policies to protect the global financial system against money laundering, terrorist financing, and the financing of proliferation of weapons of mass destruction, sought to answer these questions in its report titled “Financing of the Terrorist Organization Islamic State in Iraq and the Levant (ISIL).”¹⁸ The FATF concludes that

ISIL earns revenue primarily from five sources, listed in order of magnitude: (1) illicit proceeds from occupation of territory, such as bank looting, extortion, control of oil fields and refineries, and robbery of economic assets and illicit taxation of goods and cash that transit territory where ISIL operates; (2) kidnapping for ransom; (3) donations including by or through non-profit organisations; (4) material support such as support associated with FTFs and (5) fundraising through modern communication networks. These revenue streams are inconsistent and shift based on the availability of economic resources and the progress of coalition military efforts against ISIL.

For all its acts of barbarism, its belief in a coming clash with the armies of Rome, and its desire to reestablish a long dormant caliphate, the Islamic State is far less medieval than it would appear. The breadth and sophistication of the revenue streams identified above support this conclusion. Cam Simpson of Bloomberg Business wrote of a similarly “professional and efficient” operation, a “mergers and acquisitions strategy,” a “very rational managerial approach,” and a “corporatized” organization when describing ISIL in his article “The Banality of Islamic State: How ISIS Corporatized Terror.”¹⁹ Normally, these adjectives would not appear in an article written about terrorists. But ISIL defies what is considered normal. Indeed, it in many ways bears a stronger resemblance to a tightly run company than to al-Qaeda, the terror group with which many erroneously equate the Islamic State.

¹⁸ Financial Action Task Force, “Financing of the Terrorist Organisation Islamic State in Iraq and the Levant.”

¹⁹ Simpson, “The Banality of Islamic State.”

This misnomer is fundamentally misleading. Al-Qaeda is a terrorist organization from top to bottom. ISIL, on the other hand, blurs the line between profits and spoils, marketing strategies and propaganda. U.S. intelligence officials echoed this when they called the Islamic State “the most sophisticated terrorist propaganda machine they’ve ever seen.” Cam Simpson agreed when he wrote that “the foundation of its management model, as identified by experts, is more akin to that of General Motors than it is to a religious dynasty from the Dark Ages.” The result: “the ultimate professionalization of terror.”

ISIL employs a management form known colloquially as the M-form, short for multidivisional-hierarchy form. This style of management was pioneered in the 1920s by Alfred Sloan of General Motors. At the time, the unitary form of management was dominant. Unitarianism, however, was rigid and inflexible due to the centralization of control. Sloan wanted to grow his company and expand overseas. To achieve these goals, he “began transforming the company by creating semiautonomous divisions ordered largely around geography, freeing him and other top leaders from daily decision-making so they could focus on strategy and overall performance.” Moreover, each division was “largely self-financed.” In separate studies by Alfred Chandler Jr., a Harvard business professor and Pulitzer Prize-winning historian, and Oliver Williamson, the winner of the 2009 Nobel Prize for economics, Sloan’s success was hailed “as a triumph of the M-form structure of corporate management.”²⁰

ISIL, which adopted this management structure, “was set up along the lines of the best multinationals studied by Chandler and Williamson.”²¹ The group’s central offices offer “influence, oversight, and some financing to smaller, semiautonomous cells..., closely monitoring their books and their results” while simultaneously leaving “day-to-day decisions to

²⁰ Ibid.

²¹ Ibid.

the local commanders.” Surpluses are “sent back to the group’s ‘national treasury.’”²² Notably, cash couriers carry “no more than two weeks’ worth of operating cash at a time, making it harder for U.S. forces to disrupt the overall structure with individual raids”²³ such as the airstrike in May 2015 that killed ISIL’s “chief financial officer.”²⁴

ISIL’s business savvy extends to more than just management. As with any company, the Islamic State must finance itself. But how? Corporations such as General Motors provide customers with a physical, need-fulfilling product via globalized supply chains and access to the international financial system. They borrow money when and where needed while operating under the auspices of a friendly host government. ISIL, on the other hand, has few friends in international circles, has virtually no access to international finance due to sanctions and anti-money laundering statutes, and has only limited means with which to bring its goods to market.

The answer to the Islamic State’s financial success lies in its strategy of diversification. Unlike its peers al-Qaeda and Hezbollah, it does not rely on money from the outside to finance its operations. The *Frankfurter Allgemeine Zeitung* of Germany reported in August 2014 that while al-Qaeda was built upon Osama bin Laden’s connections to a “network of foreign supporters” whose “sources of income could be thinned out by intelligence officials,” ISIL “gets its money primarily, if not entirely, from local sources.”²⁵ As a result, the organization “is not very integrated into the international financial system,” making it “unassailable.” Islamic State documents “warn against [the largess of foreign patrons], because many terrorist groups that ceded influence to foreign benefactors were devastated when patrons stopped sending money.”²⁶

²² Ibid.

²³ Ibid.

²⁴ Toosi and Ewing, “U.S. Says It Killed Islamic State’s ‘Chief Financial Officer.’”

²⁵ “Islamischer Staat: Die Ölgeschäfte der IS-Terroristen.”

²⁶ Johnston and Bahney, “Hitting ISIS Where It Hurts.”

Unlike those terrorist organizations that rely on conventional banks and electronic money transfer systems, the Islamic State depends on sources of income largely beyond the jurisdiction of the United States and her allies.

As such, the Islamic State “can finance itself and its caliphate-state” without the help of nation-states like Qatar, which Gerd Müller, Germany’s development minister, falsely accused of helping to finance ISIL.²⁷ Instead, ISIL “raises most of its money from the territories it feeds off of, making the problem of beating back the group exceedingly difficult.”²⁸ Particularly troubling is the group’s “most important revenue source right now:”²⁹ its lucrative oil business, which earns an estimated \$1 million to \$3 million each day.³⁰ As of the end of August 2014, some seven Iraqi oil fields and two refineries as well as six of 10 eastern Syrian oil fields were under the group’s control.³¹ While it remains impossible to determine exactly how much each barrel of oil fetches on the black market and how much oil revenue flows in each day, several estimates are available.³² The *Frankfurter Allgemeine Zeitung* (FAZ) reports production of 800,000 barrels a day, with roughly half of them reaching market. Crude oil is sold at prices between \$25 and \$60 per barrel, representing a steep discount when compared to the fair market value. Nevertheless, FAZ reports income of roughly \$2 million per day from oil sales alone.

²⁷ Avenarius, “So finanziert der Islamische Staat sein Kalifat.”

²⁸ Shatz, “How ISIS Funds Its Reign of Terror | RAND.”

²⁹ Ibid.

³⁰ Leigh and Deeply, “ISIS Makes Up To \$3 Million a Day Selling Oil, Say Analysts.”

³¹ “Islamischer Staat: Die Ölgeschäfte der IS-Terroristen.”

³² Avenarius, “So finanziert der Islamische Staat sein Kalifat.”

Oil Revenue

When oil is discovered, both governments and companies celebrate their good fortune. Oil, often referred to as “black gold,” is seen as a first-class ticket out of dire economic straits. After all, nation-states like Norway and Saudi Arabia have amassed impressive “rainy day” and sovereign wealth funds (SWFs) thanks largely to oil.

It is therefore unsurprising that media outlets would identify oil as the magic bullet that could take ISIL down. According to this line of thinking, oil is so valuable a commodity that it must play an outsize role in ISIL’s financial success.

Supporting this assessment are several prominent politicians. Republican presidential aspirant Donald Trump made clear that his campaign against Islamic State, should he win the 2016 election, “would knock out the primary source of their wealth...which is oil.”³³ Writing for the Albuquerque Journal, U.S. Representative Steve Pearce (R-NM) also identified oil as “step one” in stopping ISIL’s ability to finance itself.³⁴

But while oil may be an important step, it is not necessarily *the* step as either politician would suggest. According to the Combating Terrorism Center (CTC) at West Point, ISIL has a much lower production capacity than FAZ would suggest. Syrian facilities “produce a maximum of 200,000 barrels of crude oil each day, while maximum production capacity in oil fields controlled by the IS in Iraq is about 80,000 barrels each day.”³⁵ Moreover, estimates suggest U.S. gas prices will reach 11-year lows this Labor Day.³⁶

³³ Ehrenfeld, “To Stop ISIS, Stop Its Ability to Sell Oil.”

³⁴ Pearce, “It’s Simple: Stop the Oil, Stop ISIS.”

³⁵ Price et al., “The Group That Calls Itself a State: Understanding the Evolution and Challenges of the Islamic State.”

³⁶ Davidson, “Gas Prices to Be Lowest for Labor Day in 11 Years.”

The CTC also estimates that “the price the IS can receive ranges from \$18 to \$60 per barrel.” Assuming the Islamic State reaches only “the low end in terms of the estimates presented” in the CTC-produced spreadsheet below, “it will still bring in approximately \$263 million a year in oil revenues alone.”³⁷ The CTC considers the totals found in the chart below unrealistic because it is highly unlikely the Islamic State actually maximizes its production.

Figure 2: Possible ISIL Daily Oil Revenue

Table 2: Possibly Daily Revenue to the IS Contingent on Production and Price

		Black Market Oil Price (Per Barrel)		
Barrels/Day		\$18	\$30	\$60
Iraq	20,000	\$360,000	\$600,000	\$1,200,000
	40,000	\$720,000	\$1,200,000	\$2,400,000
	80,000	\$1,440,000	\$2,400,000	\$4,800,000
Syria	20,000	\$360,000	\$600,000	\$1,200,000
	50,000	\$900,000	\$1,500,000	\$3,000,000
	200,000	\$3,600,000	\$6,000,000	\$12,000,000

38

Other estimates have ISIL’s total production capacity at more than 150,000 barrels per day, with actual production likely much lower.³⁹ Yet the same source reports that the oil finds customers in more countries than just Turkey. Instead, ISIL’s oil reaches buyers in Syria, the Kurdistan region of Iraq, “and possibly in Iran and even Bashar Assad’s regime in Syria, among other countries.”⁴⁰ Despite these lower production capacity estimates, the Rand Corporation still suggests that revenues may be as high as \$3 million per day.⁴¹ If production is truly 150,000 barrels per day and daily oil revenue registers \$3 million per day, then the price per barrel of oil

³⁷ Price et al., “The Group That Calls Itself a State: Understanding the Evolution and Challenges of the Islamic State.”

³⁸ Ibid., p. 58.

³⁹ Shatz, “To Defeat the Islamic State, Follow the Money.”

⁴⁰ Ibid.

⁴¹ Ibid.

is \$20.00 per barrel, significantly lower than both the aforementioned FAZ estimate and the \$30.00 price quoted by ABC News.⁴² In a separate Rand analysis, the group considers “a range of \$1 million to more than \$2 million a day” to be “reasonable.”⁴³

At that rate of \$1 million to \$2 million per day, simple arithmetic implies oil revenue of between \$365 million and \$730 million per year from oil alone. This figure roughly matches Colorado’s legal marijuana revenue in 2014, which came in at about \$700 million.⁴⁴ With annual revenue figures so high, claims that ISIL is the world’s single wealthiest terrorist group appear valid.⁴⁵ Yet it would seem premature to presume the Islamic State will remain solvent indefinitely. Geoff Porter of the United States Military Academy at West Point’s Combating Terrorism Center writes that because “the price of crude (Brent) has fallen by 50% [since June 2014],” it is likely that “2015 IS oil revenue [will be] 50% of what it was.”⁴⁶ This constitutes a severe test of the group’s financial mettle, as declining oil revenue will force it “to find ways to simultaneously cut costs elsewhere and raise new revenue – and both methods are likely to jeopardize popular support for the group.”⁴⁷ If forced to trim spending on social programs and on infrastructure, ISIL’s image as an Islamic paradise will erode.

Moreover, the inflexibility of Sharia law, to which the Islamic State is bound, forbids the changing of tax rates; ISIL “does not have recourse to tax hikes to offset falling oil sales.”⁴⁸ Raising tariffs on incoming goods and increasing the use of extortion would both undermine what little popularity the group has left. Perhaps more important is the impact of falling oil revenue on ISIL’s military strategy. “Prior to having access to oil receipts the IS behave more

⁴² Leigh and Deeply, “ISIS Makes Up To \$3 Million a Day Selling Oil, Say Analysts.”

⁴³ Shatz, “To Defeat the Islamic State, Follow the Money.”

⁴⁴ Ingraham, “Colorado’s Legal Weed Market.”

⁴⁵ Bender et al., “Here’s How The World’s Richest Terrorist Group Makes Millions Every Day.”

⁴⁶ Porter, “CTC Perspectives: The Impact of Crude’s Collapse on the Islamic State.”

⁴⁷ Ibid.

⁴⁸ Ibid.

like an insurgency, relying heavily on terrorist tactics, than conventional military strategy.”⁴⁹

Any continuation in the collapse of oil prices could force a return to terrorist tactics as well as the concession of oil-less territory in order to take new oil-bearing lands.

Given the inaccessibility of transparent global markets, ISIL relies on black markets to transform its black gold into hard currency. According to *Der Spiegel*, the group’s oil business “runs primarily through Turkey.”⁵⁰ Initially, ISIL “also sold oil in the autonomous region of Kurdistan” but the business dried up when the Kurdish regional government clamped down on the trade. Turkey claims it is unable to completely control its border with Syria, but according to *Der Spiegel*, that “is not plausible: the entire border is secured with...barbed wire, mine fields, and watch towers.” The border between the two countries is “no smuggler’s paradise.” If Turkey were to come under the threat of sanctions or were otherwise persuaded to shut down ISIL’s distribution channels, the group’s financial shortages could become more acute. That being said, “the IS was a capable and lethal organization well before it seized oil fields,” meaning the deprivation “of oil revenue is likely to weaken the group” but unlikely to defeat it singlehandedly.⁵¹

The Islamic State’s income does not depend on oil alone. As was mentioned earlier, the group has taken it upon itself to diversify its revenue streams. With the United States spending \$9 million per day⁵² to finance its air campaign against the Islamic State, oil production facilities and refineries have come increasingly under attack. The air campaign has forced changes in the group’s modus operandi, creating an incentive to decrease the petro-state’s dependence on oil.

⁴⁹ Ibid.

⁵⁰ Joerin, “Finanzen der Dschihadisten: ‘Der ‘Islamische Staat’ ist die größte Mafia.’”

⁵¹ Price et al., “The Group That Calls Itself a State: Understanding the Evolution and Challenges of the Islamic State.”

⁵² Westcott, “The U.S. Has Spent \$9 Million a Day to Fight ISIS.”

As military maneuvers against ISIL targets have limited the amount of oil that can be brought to market⁵³, preexisting revenue-generating activities have been ramped up and new activities have been brought online.

War Profiteering

Of these preexisting activities, plunder ranks among the most important. In addition to seizing more than \$425 million⁵⁴ after conquering Mosul, Iraq, the Islamic State has benefitted from captured antiquities and U.S. military equipment. According to the Economist, “antiquities trafficking is now a prime source of IS revenue” and “the need for antiquities-dollars will only rise” due to airstrikes on oil facilities. The practice has come to be called “subsistence looting” as a result. While exact figures remain unavailable, the financial gains to be had from selling priceless artifacts must not be understated. For example, “a collection of 7,700 ancient gold coins, jewellery and statuettes disappeared from Libya’s main commercial bank in Benghazi.” Although Libya is not contiguous to ISIL’s current caliphate, it is active there and has already received a pledge of allegiance from one of the country’s preexisting terror groups.⁵⁵ This is concerning given the symmetry between the locations of the country’s historical sites and the locations where ISIL has gained territory.

⁵³ Philips, “Islamic State Loses Its Oil Business.”

⁵⁴ McCoy, “ISIS Just Stole \$425 Million, Iraqi Governor Says, and Became the ‘world’s Richest Terrorist Group’.”

⁵⁵ Tomlinson, “ISIS Opens New Front in North Africa.”

Figure 3: Selected Historical Sites Under Threat from ISIL



56

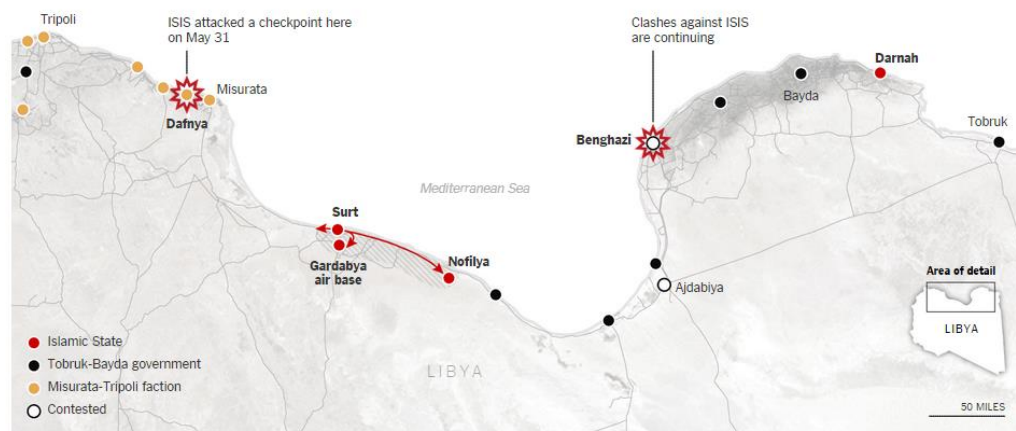
Figure 4: Where ISIS Has Gained Territory in Libya

A visual guide to the crisis in Iraq and Syria. UPDATED June 9, 2015

Where ISIS Has Gained Territory in Libya

In November 2014, the Islamic State established a base in Libya after accepting pledges of allegiance from militants in Darnah. The group occupied Surt in January. Now, the Islamic State is gaining territory beyond Surt, reaching Nofliya.

RELATED ARTICLE »



Surt

The Islamic State captured Gardabya air base last week and seized a power plant Tuesday. Forces loyal to the Misurata-Tripoli faction retreated from areas east and west of Surt.

Misurata

A suicide bombing claimed by the Islamic State killed at least four Misurata brigade fighters at the Dafnya checkpoint, a key entrance to the city on the road from Tripoli.

Benghazi

Government forces reported ammunition shortages as they continued fighting the Islamic State here. More than 50 government fighters were killed last month.

Source: IISS Armed Conflict Database (control)

57

⁵⁶ "Save Our Stones."

⁵⁷ "The State of the War Against ISIS."

The CTC reports that a branch of the Islamic State spent approximately 40 percent of its budget on materiel, including “weapons and related equipment.”⁵⁸ Assuming this ratio holds for the group as a whole, then the capture of “millions of dollars in American hardware...a month after [the] Iraqi army fled Ramadi” constitutes a significant savings.⁵⁹ Estimates by military officials suggest as many as 2,000 Humvees have been captured by ISIL. Other vehicles captured include cargo trucks and MRAPs (Mine-Resistant, Ambush-Protected). In an interview with Fox News, U.S. Army Lieutenant Colonel (LTC) Ralph Peters said the United States has been “the number one source of sophisticated military gear for Islamic State. The Iraqis were only middlemen.”⁶⁰ In May 2015, the *Wall Street Journal* reported that “the group...churned out dozens of formidable new weapons by converting captured U.S. military armored vehicles designed to be impervious to small-arms fire into megabombs with payloads equal to the force of the Oklahoma City bombing.”⁶¹

“Considerable money,” according to the Rand Corporation, has been made “through war itself,” as the group confiscated “millions of dollars from local Christians and Shiites, whom ISIS views as apostates.”⁶² Conquest has yielded new opportunities to enact protective tariffs⁶³, kidnap foreigners⁶⁴, institute taxes⁶⁵, and smuggle priceless antiques⁶⁶. Kidnapping has proven especially lucrative, with ISIL earning “approximately \$20 million in ransom payments” in 2014,

⁵⁸ Price et al., “The Group That Calls Itself a State: Understanding the Evolution and Challenges of the Islamic State.”

⁵⁹ Robinson, “ISIS Shows off Seized US Military Equipment in Latest Video.”

⁶⁰ “ISIS Shows off US Gear Seized from Iraqis in Fighting near Fallujah.”

⁶¹ Coker, “How Islamic State’s Win in Ramadi Reveals New Weapons, Tactical Sophistication and Prowess.”

⁶² Johnston and Bahney, “Hitting ISIS Where It Hurts.”

⁶³ Joerin, “Finanzen der Dschihadisten: ‘Der ‘Islamische Staat’ ist die größte Mafia.”

⁶⁴ Avenarius, “So finanziert der Islamische Staat sein Kalifat.”

⁶⁵ Ibid.

⁶⁶ Ibid.

according to David Cohen, the Treasury Department's undersecretary for terrorism and financial intelligence⁶⁷. This estimate has been confirmed by the Economist.⁶⁸

Taxation

Another lucrative preexisting source of revenue is taxation in various forms. The Islamic State compels those under its hegemony to make “donations” by invoking *zakat*, one of the five pillars of Islam. In reality, contributions made in this manner more closely resemble taxes than voluntary giving. Regardless, *zakat* is highly profitable; “Even before the city of Mosul fell...reports were that the IS received \$1 million a month from this city alone.”⁶⁹ Some Iraqi government estimates placed the total as high as \$8 million.⁷⁰ Taxes have also been levied on a variety of economic activities, including the shipping of goods, exit taxes as vehicles move into territory not under ISIL control, and the withdrawal of funds from banks.⁷¹ Contributions from foreign benefactors, while important, may make up as little as “5 percent of the group’s overall revenue.”⁷² Similarly, donations from foreign fighters joining ISIL are “certainly not enough...to play a pivotal role now that the IS has diversified sources of revenue.”⁷³

⁶⁷ LoGiurato, “ISIS Is Making An Absurd Amount Of Money On Ransom Payments And Black-Market Oil Sales.”

⁶⁸ “Where Islamic State Gets Its Money.”

⁶⁹ Price et al., “The Group That Calls Itself a State: Understanding the Evolution and Challenges of the Islamic State.”

⁷⁰ Ibid.

⁷¹ Ibid.

⁷² Ibid.

⁷³ Ibid.

Human Trafficking and Manipulation of Charities

Though a longstanding source of funds for terrorist organizations, human trafficking has only a marginal impact on ISIL's bottom line. In *Al Dabiq*, the official magazine published by the Islamic State, the group "boasted...of its involvement in human trafficking, specifically targeting women and children."⁷⁴ Yet the Financial Action Task Force (FATF) reports that "it is difficult to envisage human trafficking as a lucrative source of revenue for ISIL" because "the prices ISIL fighters are paying for their slaves appear to be relatively low (approximately 13 USD)."⁷⁵

The opposite may be true for one of the group's most recent additions to its financial portfolio: dealing in organs harvested from victims. The Iraqi ambassador to the United Nations claimed in February 2015 that "bodies have turned up in mass graves bearing surgical incisions and missing organs such as kidneys."⁷⁶ Nikolay Mladenov, the erstwhile United Nations envoy to Iraq, confirmed the "increasing number of reports and allegations that the Islamic State group is using organ harvesting as a financing method."⁷⁷ In Europe, the likely market for these illegally harvested organs⁷⁸, those receiving kidneys, livers, hearts, or other organs "can pay anywhere between \$50,000 and \$100,000."⁷⁹

The FATF cites "donations...by or through non-profit organisations (NPOs)" as another means of financing ISIL's conquest of the Middle East.⁸⁰ Though "minimal relative to its other revenue sources," "foreign donor support could increase in importance for ISIL as other sources

⁷⁴ Financial Action Task Force, "Financing of the Terrorist Organisation Islamic State in Iraq and the Levant."

⁷⁵ Ibid.

⁷⁶ "ISIS Harvests Organs to Fund Terror."

⁷⁷ Ibid.

⁷⁸ Sanchez, "United Nations Investigates Claim of ISIS Organ Theft - CNN.com."

⁷⁹ Nguyen, "Black Market Trade in Organs Targeted in Anti-Trafficking Treaty."

⁸⁰ Financial Action Task Force, "Financing of the Terrorist Organisation Islamic State in Iraq and the Levant."

of revenue diminish.”⁸¹ The following two case studies, taken from the FATF briefing on ISIL financing, highlight the savvy with which the group already manipulates charities to pad its bottom line.

Figure 5: Distance Adoptions-Related Donations Performed by a FTF

Case Study 1: Distance adoptions-related donations performed by a FTF

The account at an Italian bank of an organisation based in Northern Italy promoting charitable activities (*e.g.*, distance adoptions) in Syria received cash deposits and wire transfers (mostly involving small amounts) sent by numerous individuals and entities located in Italy and Europe. Once credited, funds were sent to Turkey, where they would be withdrawn for their final legitimate use (most descriptions associated with the transactions referred mainly to “adoptions”).

At a later stage, with reference to a limited number of transfers, investigations revealed that one of the donors was a member of an extremist group located in the North of Italy aimed at recruiting people to engage in violent extremism. Financial analysis eventually showed that this individual, who subsequently died fighting in Syria, used the organisation as unwitting conduit for fund transfers possibly connected to his terrorist activity.

Source: Italy

82

Figure 6: Diversion of Funds by Actors to NPOs

Case Study 2: Diversion of Funds by Actors to NPOs

An individual (Mr. A) established a charitable foundation under the pretext of collecting donations for Syrian refugees, people in need of medical and financial aid, and construction of mosques, schools and kindergartens. However, Mr. A was the leader of an organized scheme in which donations were sent to a group of individuals related to Mr. A (Group A) instead of the foundation's account. In most cases, the first stage involved money being sent through money remitters and then transported in cash. The money was then transferred either to credit cards accounts or to e-wallets. The members of Group A placed the relevant information (that funds are being collected for the declared purposes) on the Internet, but, in fact, the funds were sent as an aid for terrorists and their families and meant to be used as a financial support for terrorist activities.

This information was discovered through investigations conducted by the FIU based on regular monitoring of entities on their domestic list of designated terrorist entities and related persons or on information provided by law enforcement. Analysis of the collected information allowed the FIU to identify the relation between different cases: common payers and recipients and similar *modus operandi* in collection and distribution of funds. Further cooperation with law enforcement authorities allowed the FIU to establish the direct link between Mr. A and ISIL's activity. This resulted in several criminal investigations related to Mr. A. In addition, Mr. A was listed on the domestic list of designated terrorist entities, with the relevant freezing procedures performed. Under the court decisions, assets of the Group A members were frozen.

Source: Russian Federation

83

⁸¹ Ibid.

⁸² Ibid.

Similarly disturbing is IS's entrance into the slave trade. When the group takes over a new town or city, it moves quickly to capitalize on the misfortune of captured Christians, Yazidis, and other minorities. While men who refuse to convert to Islam are executed, women and children are turned into sources of revenue.

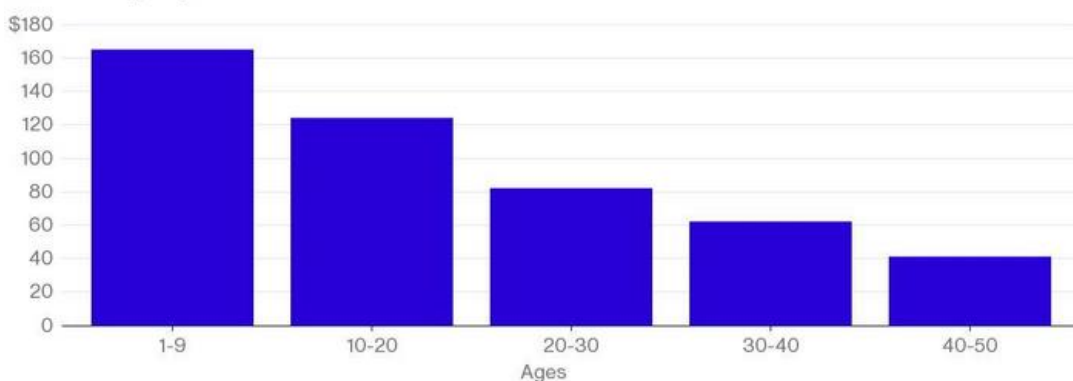
Customers "include the group's own fighters and wealthy Middle Easterners." IS commanders have first pick, after which affluent outsiders buy those they wish. Bidding occasionally reaches "thousands of dollars." Only then is the market opened to rank-and-file IS fighters at the listed prices found below.

Figure 7: ISIS Price List for Sex Slaves

ISIS Has a Price List for Sex Slaves

The youngest cost \$165. Women over 40, \$41

■ Price charged by Islamic State for Children and Women



Source: United Nations Office of the Special Representative of the Secretary-General on Sexual Violence in Conflict

* Children between ages 1 and 9 includes boys

Bloomberg 84

IS captives are sold into bondage, with "the girls...peddled like barrels of petrol." In fact, one girl can be bought and sold by as many as six different men. "Captured children," writes Bloomberg, "fetch the highest price." Prices are also adjusted upward if a captured female "has blue eyes."

⁸³ Ibid.

⁸⁴ Yoon, "Islamic State Circulates Sex Slave Price List."

Hawala Value Transfer System

“Another vehicle for the potential transfer or movement of funds” is the popular, ordinarily harmless “IVTS [informal value transfer system] or *hawala* system that plays an important role in transfers of funds for guest workers across the globe.”⁸⁵ For much of the developing world, “this is the only effective and cost-effective way to transfer funds.”⁸⁶ The *hawala* value transfer system is “an ancient and sophisticated...banking practice,”⁸⁷ meaning it is embedded in many cultures throughout the Middle East. According to Spanish intelligence officials, this is becoming a serious problem because it “is facilitating the payment of jihadists’ salaries in Iraq and Syria via a European network to avoid detection by authorities.”⁸⁸ Monthly sums as high as \$800 for unmarried jihadists and \$1,200 for married jihadists are transferred in this manner.

Hawala “translates as ‘transfer’ in Arabic”⁸⁹ and as “trust”⁹⁰ in Hindi; these translations reflect the system’s paperless, opaque nature. Newsweek explains in greater detail below⁹¹:

It consists of a trust-based network of *hawaladars*, essentially brokers, whose survival depends on their reputation. The charging of interest, known as *Riba*, is prohibited in Islam and any profit garnered through theft or taxation would lead to the greater price of losing the respect of the network and customers, says Loretta Napoleoni, a world-leading expert on the financing of terror and author of the book *Islamist Phoenix*, which charts the rise of the Islamic State.

Though “no evidence has surfaced that money transferred through the hawala system has contributed to an attack by ISIS or the Nusra Front,”⁹² the practice has been utilized by other

⁸⁵ Biersteker and Eckert.

⁸⁶ Ibid.

⁸⁷ Moore, “Hawala.”

⁸⁸ Ibid.

⁸⁹ Ibid.

⁹⁰ Biersteker and Eckert.

⁹¹ Moore, “Hawala.”

⁹² Ibid.

terror groups seeking to exploit the system's near imperceptibility for their own nefarious ends, including Islamic State's parent organization: al-Qaeda.⁹³ While ISIL and al-Qaeda disagree on many important points and recently declared war on one another, it is not unreasonable to believe that ISIL, under increasing pressure from the U.S. military, would consider adopting the practice itself.⁹⁴ Perhaps most attractive to a terrorist group is the distinct lack of government oversight regarding *hawala*. The system remains largely unregulated despite its frequent use by al-Qaeda.

Treasury Department Hawala Case Study

The U.S. Department of the Treasury provides the following example transaction conducted via a *hawaladar*, which will be summarized briefly below before the Treasury's official analysis is introduced.⁹⁵

Abdul, a Pakistani taxi driver working in New York City, wishes to send his brother, Mohammad, the \$5,000 he has managed to save while working. A bank would typically require that Abdul open an account before processing his transfer and would charge extra for the physical delivery of his money.

Hawala therefore presents an attractive alternative, which is why Abdul approaches Yasmeen, a local *hawaladar*. She offers Abdul a better rate than the official rate quoted by the bank and includes delivery in her price. She agrees to complete the transaction by working with Ghulam, a *hawaladar* in Pakistan.

⁹³ Roth, Greenburg, and Wille, "Monograph on Terrorist Financing."

⁹⁴ Mills, "Al-Qaeda Now at War with ISIS."

⁹⁵ Jost and Singh Sandu, "The Hawala Alternative Remittance System and Its Role in Money Laundering."

The hawala transaction proceeds as follows: Abdul gives the \$5,000 to Yasmeen; Yasmeen contacts Ghulam in Karachi, and gives him the details; Ghulam arranges to have Rs 180,000 delivered to Mohammad.

The Treasury offers three possible explanations as to how Yasmeen and Ghulam would square up after Abdul's money was delivered to Mohammad.

The first possibility is that Yasmeen and Ghulam are business partners (or that they just do business together on a regular basis). For them, transferring money is not only another business in which they are engaged but a part of their normal business dealings with one another. Another possibility is that, for whatever reason, Ghulam owes Yasmeen money. Since many countries make it difficult to move money out of the country, Ghulam is repaying his debt to Yasmeen by paying her hawala customers; even though this is a very informal relationship, it is quite typical for hawala. A third (and by no means the final) possibility is that Yasmeen has a rupee surplus and Ghulam is assisting her in disposing of it.

In the last two cases, Ghulam does not need to recover any money; he is either repaying an existing debt to Yasmeen, or he is handling money that Yasmeen has entrusted to him, but is unable to move out of the country. In the first case, where Yasmeen and Ghulam are partners, a more formal means of balancing accounts is needed.

One very likely business partner scenario is an import/export business. Yasmeen might import CDs and cassettes of Indian and Pakistani music and 22 carat gold jewelry from Ghulam, and export telecommunications devices to Ghulam. In the context of such a business, invoices can be manipulated to conceal the movement of money.

If Yasmeen needs to pay Ghulam the Rs 180,000 that he has given to Mohammad, she can do it by under invoicing a shipment to him. She could, for example, send him \$20,000 worth of telecommunications devices, but only invoice him for \$15,000. Ghulam pays Yasmeen \$15,000 against this invoice. The extra value of goods, in this case \$5,000 (the equivalent of Rs 180,000) is the money that she owes him.

In order to move money the other way (in this case, from Pakistan to New York), over invoicing can be used. For this example, it is assumed that Ghulam owes Yasmeen \$5,000. She could buy \$10,000 of telecommunications devices, and send it to Ghulam with an invoice for \$15,000. Ghulam would pay her \$15,000; this covers the \$10,000 for the telecommunications devices as well as the other \$5,000.

Competition with al-Qaeda

Since ISIL and al-Qaeda separated in February 2014, competition between the two for leadership of the global jihadist movement has been intense. ISIL “has become a bitter rival of Al Qaeda, its parent organization. Its leaders represent a new generation of Islamist militants who have broken with Al Qaeda in a power struggle over Syria and the future of the global Islamist revolution.”⁹⁶

Not unlike two corporate rivals dueling for larger slices of a particular market, they are employing all means necessary to develop better products, refine their marketing campaigns, and improve their profit margins. At stake is each group’s brand of jihad and hard-won reputation for success.

In the media, this rivalry has been dubbed “Jihadism’s Global Civil War”⁹⁷ and “The Battle for the Soul of Jihad.”⁹⁸ When it comes to who is winning this battle, the answer depends on whom one asks. U.S. national security professionals disagree as to who is winning. For those whose focus is the homeland, al-Qaeda’s history of successful attacks could easily make it appear the more threatening of the two. And for those whose focus lies abroad, ISIL’s expansion in the Middle East and its ability to inspire attacks around the world make it especially troubling. To better understand the nature of the ISIL threat, it is worth examining each organization in greater detail.

“Although the ultimate goal of Al-Qaeda is to overthrow the corrupt ‘apostate’ regimes in the Middle East and replace them with ‘true’ Islamic governments,” writes *Newsweek*, “Al-Qaeda’s primary enemy is the United States, which it sees as the root of the Middle East’s

⁹⁶ Phillips, “ISIS vs. Al Qaeda.”

⁹⁷ Byman and Williams, “ISIS vs. Al Qaeda.”

⁹⁸ Byman and Williams, “Al-Qaeda vs. ISIS.”

problems.”⁹⁹ Behind this strategy lays the belief that U.S. financial and military support for “apostate” governments prevents al-Qaeda and its affiliates from deposing them and replacing them with “true” Islamic regimes. Therefore, the United States is the chief obstacle to al-Qaeda’s ultimate goal.

IS has a decidedly different outlook on the matter. The group concerns itself far more with the “near enemy” than the “far enemy,” which contrasts al-Qaeda directly. “Al-Qaeda believes in playing nice with other jihadists in general; the Islamic State does not.”¹⁰⁰ IS “favors purifying the Islamic community” by cleansing it of religious minorities and competing Islamist groups. In particular, IS goes out of its way to target Shia Muslims. Al-Qaeda also sees Shia Muslims as apostates but considers slaughtering them to be self-defeating; this makes intuitive sense, as al-Qaeda requires community support in order to shelter itself from U.S. military and intelligence assets and in order to fund itself. IS depends on neither of these and is therefore far more willing to kill both Shia Muslims and fellow Sunnis, both of which are to be found on the group’s “long list of enemies.”

In addition, “Both groups share the same ultimate goal: the establishment of a global caliphate, to be ruled under a harsh brand of sharia (Islamic law).”¹⁰¹ Ayman al-Zawahiri and Abu Bakr al-Baghdadi generally agree on the ends of jihad, but they tend to disagree on the ways in which holy war is waged. It is this rift that colors relations between the two and which divides the Sunni jihadist movement. In his piece for Foreign Affairs, Foreign Policy Research Institute

⁹⁹ Ibid.

¹⁰⁰ Ibid.

¹⁰¹ Ibid.

Senior Fellow Barak Mendelsohn eloquently describes the differences between the two groups.¹⁰²

The differences between ISIS, on the one side, and al Qaeda and JN, on the other, are not merely about power and control of the jihadi movement. As important as these aspects are, the groups have serious differences when it comes to strategy, tactics, and Islamic authority. They differ on issues such as the implementation of harsh Islamist laws, the killing of Shia civilians, and the right of one group to impose its authority over all others. The groups don't disagree about the legitimacy of all these things, but al Qaeda is more patient and ISIS is generally more radical and uncompromising. For that reason, its trairpse through Iraq represents a serious organizational, strategic, and ideological blow to al Qaeda.

But for all the disagreement as to which group poses the greatest threat to the Untied States, few would dispute Islamic State's momentum. According to Mendelsohn, "Al Qaeda's greatest achievement was the 9/11 attacks, but that was 13 years ago. Many of today's jihadis were young children at the time." While "al Qaeda may have started the march toward the reestablishment of the Caliphate, it is ISIS that seems to be realizing it." ISIL's recent successes have bred more success, helping fuel its slick social media campaign and recruitment efforts. When jihadists ask themselves the ever-prescient question "what have you done for me lately?" ISIL simply has more to offer than its chief competitor.

Increasingly, young jihadis regard al-Qaeda, often equated with terrorism's old guard, as "disconnected from reality."¹⁰³ They admire war heroes more than religious scholars, which makes it difficult for the comparatively squinty-eyed, grandfatherly Zawahiri to command the same respect enjoyed by his counterpart in Syria. Zawahiri's version of jihad is also more difficult to sell when it appears that its chief competitor has done more (sooner) with less. After going their separate ways, Baghdadi quickly led IS to resounding victories on his way to

¹⁰² Mendelsohn, "Collateral Damage in Iraq."

¹⁰³ Ibid.

accumulating more territory than Great Britain. Al-Qaeda's land holdings have never approached such magnitude. This would appear to substantiate IS's brand of jihad.

IS's brand equity has caused the Federal Bureau of Investigation to reevaluate its stance on the group. "Only a year ago, the FBI largely dismissed the threat from IS" but because "IS...has grown increasingly effective at recruiting impressionable, 'troubled souls' through social media" and at "urging Muslims who can't travel to the Middle East to 'kill where you are,'" it now considers IS a bigger threat than al-Qaeda.¹⁰⁴

Heritage Foundation senior research fellow Lisa Curtis has also suggested IS may poach al-Qaeda's chief ally in Afghanistan: the Taliban. "For now," she writes, "the Islamic State is a direct competitor for recruits, financing and ideological influence of the Afghan Taliban and al-Qaeda, but U.S. policymakers must be alert to the potential for ISIS to merge with the Taliban in the future and thus play a greater role in both Afghanistan and Pakistan." While acknowledging that "for now, the Afghan Taliban remains closely allied with al-Qaeda," Curtis believes "ISIS may try to gain influence in the region by making common cause with the Taliban and seeking to lure it from its alliance with al-Qaeda."¹⁰⁵

IS has already proven adept at expanding its franchisee model, expanding its operations into North and West Africa. The continent's two most feared terror groups, Boko Haram of Nigeria¹⁰⁶ and Al Shabaab of Somalia¹⁰⁷, have already taken this step. Aref Ali Nayed, Libya's ambassador to the United Arab Emirates, confirmed the group's business savvy when he said that "the Islamists have been very clever at rebranding. They have learned the franchising model

¹⁰⁴ "FBI Says Islamic State Bigger Threat Than Al-Qaeda Now."

¹⁰⁵ Curtis, "Are ISIS and the Taliban Flirting With Allying?"

¹⁰⁶ Elbagir, Cruickshank, and Tawfeeq, "Boko Haram Purportedly Pledges Allegiance to ISIS - CNN.com."

¹⁰⁷ Odowa, "Somalia Terror Group Al Shabaab 'to Pledge Allegiance to ISIS.'"

from McDonald's. They give you the methodology, standards and propaganda material.”¹⁰⁸

Indeed, Islamic State is “an entire brand family, the equivalents of the Apple logo’s glow...terrorism’s Coca-Cola.”¹⁰⁹ The comparison is telling. In this case, IS is Coca-Cola, the industry leader, rather than Pepsi, the less iconic though still important competitor. Speaking at the Heritage Foundation’s July 2015 event “A View from the Frontlines of Islamist Insurgency: Perspectives on Terrorism in the Middle East and South Asia,” Dr. Sebastian Gorka similarly labeled IS the jihadist industry’s new Coca-Cola.¹¹⁰

Much as al-Qaeda’s stock skyrocketed once the U.S. military began engaging it on the battlefield, IS now enjoys legitimacy as a result of attacks from high-profile opponents including the U.S. Air Force and prominent Islamist theologian Abu Muhammad al-Maqdisi. Maqdisi “counts the leader of al-Qaida, Ayman al-Zawahiri, as a personal friend.”¹¹¹ Moreover, “His numerous books and pamphlets are required reading for Islamic militants around the world, who eagerly follow the latest proclamations on Maqdisi’s website, the Pulpit of Monotheism and Jihad.” Since IS came to prominence in 2014, he has “emerged...as one of the group’s most powerful critics,” labeling it as “ignorant and misguided.”

Maqdisi’s upbraiding of IS is evidence “that al-Qaida, once the world’s most feared terrorist network, knows it has been surpassed.”¹¹² The *Guardian* assesses that

Isis has not simply eclipsed al-Qaida on the battlefields of Syria and Iraq, and in the competition for funding and new recruits. According to a series of exclusive interviews with senior jihadi ideologues, Isis has successfully launched ‘a coup’ against al-Qaida to destroy it from within. As a consequence, they now admit, al-Qaida – as an idea and an organization – is now on the verge of collapse.

¹⁰⁸ Bereznak, “Terror Inc.”

¹⁰⁹ Ibid.

¹¹⁰ Curtis, “A View from the Frontlines of Islamist Insurgency.”

¹¹¹ Malik et al., “How Isis Crippled Al-Qaida.”

¹¹² Ibid.

While al-Qaeda has certainly lost much of its capacity to launch attacks in the West, it is not completely toothless. “Analysts,” writes the Council on Foreign Relations, “rate [al-Qaeda in the Arabian Peninsula] as the most lethal Qaeda franchise, carrying out a domestic insurgency while maintaining its sights on Western targets.”¹¹³ This particular al-Qaeda franchise bases its operations out of Yemen, “long a fractured and fragile country” now “on the brink of collapse.” The ongoing civil war in that country “could help AQAP exploit the instability and expand its domestic insurgency among Sunni communities.”

While it would be premature to completely write off al-Qaeda so long as AQAP remains motivated to strike the West and safely ensconced in a failed state, IS enjoys a number of advantages over its erstwhile ally that set it up well to take over the mantle of global jihad. At virtually every turn, IS has proven itself to be the more extreme, more violent of the two organizations. By virtue of its slick social media campaigns, it has turned its wanton violence into a successful recruiting feature, attracting future jihadists from all over the world and inspiring leading terror organizations to pledge loyalty. IS’s brand equity is on the rise thanks to the legitimacy that comes with confronting the U.S. military and Abu Muhammad al-Maqdisi.

The good news: the intense competition between two rival factions of the jihadist movement could starve them of much of the manpower, funding, and arms required to threaten the United States. Moreover, infighting between the two can be exploited by the U.S. Intelligence Community, further disrupting terror attacks.

The bad news: as is often the case in Corporate America, competition could yield better products at lower prices. In such a buyer’s market, potential jihadists would have the luxury of

¹¹³ “Al-Qaeda in the Arabian Peninsula (AQAP).”

choosing between two top tier terror organizations. And should either falter in its quest for dominance, desperate attacks on Western targets could result.

Chapter 2

Implications and Potential Impact

Why the Islamic State Problem Must be Addressed

In a September 2014 speech at the White House, President Barack Obama announced his strategic objective in the fight against IS: “We will degrade and ultimately destroy ISIL.”¹¹⁴ The president went on to justify U.S. military involvement in Iraq and Syria by explaining how ISIL threatens not only the homeland, but also American allies and interests the world over.¹¹⁵

...ISIL poses a threat to the people of Iraq and Syria, and the broader Middle East -- including American citizens, personnel and facilities. If left unchecked, these terrorists could pose a growing threat beyond that region, including to the United States. While we have not yet detected specific plotting against our homeland, ISIL leaders have threatened America and our allies. Our Intelligence Community believes that thousands of foreigners -- including Europeans and some Americans -- have joined them in Syria and Iraq. Trained and battle-hardened, these fighters could try to return to their home countries and carry out deadly attacks.

U.S. Army General Martin Dempsey, Chairman of the Joints Chiefs of Staff from 2011 to 2015, provided similarly unvarnished commentary: “ISIL is a threat to the United States.”¹¹⁶ At the July 2015 Aspen Security Forum, FBI director James B. Comey shared the General Dempsey’s concern when he identified the Islamic State as “the threat that we’re worrying about in the homeland most of all.”¹¹⁷ He went on to say that “They’re just pushy. They’re like a devil on somebody’s shoulders saying, ‘Kill, kill, kill,’ all day long.”

It is this capacity for violence that so troubles Director Comey and the rest of the national security establishment. “Jihad,” writes Sarah Canna of NSI in her summary of “ISIS: Inside the

¹¹⁴ Hudson, “President Obama.”

¹¹⁵ Ibid.

¹¹⁶ “The Rise of ISIS.”

¹¹⁷ Schmitt, “ISIS or Al Qaeda?”

Army of Terror,” “has to be about violence and has to be extreme, shocking violence. And the violence has to escalate and be more shocking each time in order to have a deterrent effect.”¹¹⁸ Indeed, “For ISIL, the idea of overwhelming violence is their overarching principle that guides everything else.”

What is more, this violence is not intended to be a deterrent to U.S. involvement in the Middle East. Instead, it is a means to an end. “ISIL,” writes Canna, “believes the end of days is imminent and is actively preparing the ground for the final battle between Islam and the West. ISIL believes that in order to achieve its goals, it has to fight everyone who does not share their ideology.”¹¹⁹ Representative Adam B. Schiff (D-CA), the top Democrat on the House Intelligence Committee, echoed this sentiment when he said “ISIS is all about the quantity of attacks.”¹²⁰ While “Al Qaeda, on the other hand, is focused on the quality of the attack,” one must concede that quantity has a quality all its own in a situation such as this.

Quantity is also the cornerstone of ISIL’s slick social media campaign. The sheer volume of Islamic State activity on social media is such that “U.S. investigators are becoming overwhelmed trying to keep up with the social media barrage...”¹²¹ In the year since it “burst onto the stage,” IS “has evolved into a highly sophisticated multimedia organization, boasting slick social media strategies that could give major corporate marketing teams a run for their money.”¹²² Its marketing department “knows how to package its extremist ideology in the form of well-produced videos, attractive graphics, polished magazines and strategic online posts.”

¹¹⁸ SARAH CANNA

¹¹⁹ Ibid.

¹²⁰ Schmitt, “ISIS or Al Qaeda?”

¹²¹ Herridge, “Bulletin Warns US Analysts Overwhelmed by pro-ISIS Social Media, Military Posts Threatened.”

¹²² Berezna, “Terror Inc.”

Messages on social media platforms “are hypercustomized in language, tone and content to reach as many people as possible and ultimately go viral.”

More troubling still is the U.S. Intelligence Community’s assessment of the war on ISIL to date. “Intelligence analysts,” according to an Associated Press report, “see the overall situation as a strategic stalemate: The Islamic State remains a well-funded extremist army able to replenish its ranks with foreign jihadis as quickly as the U.S. can eliminate them.”¹²³ Case in point: “After billions of dollars spent and more than 10,000 extremist fighters killed, the Islamic State group is fundamentally no weaker than it was when the U.S.-led bombing campaign began a year ago, American intelligence agencies have concluded.”

Clearly, Islamic State is a threat to the United States and to American allies and interests around the world. It believes not only that an apocalypse is coming, but also that said apocalypse is desirable and that it can play a pivotal role in realizing the end of days. Its strategy employs wanton violence against all whom it deems apostates and unbelievers. These targets include religious and ethnic minorities such as Christians, Jews, and Yezidis as well as secular Arabs, the United States, U.S. allies, and Shia Muslims. Moreover, this extremist Islamist ideology is promoted around the world in the form of professional grade videos, tweets, blog posts, and magazines. This enemy is resourceful, skilled, and resilient in the face of airstrikes. The ISIL problem must be addressed.

¹²³ Dilanian, Karam, and Mroue, “Despite Bombing, Islamic State Is No Weaker than a Year Ago.”

Interview with Dr. Steven Bucci, Retired U.S. Army Special Forces Colonel in July 2015³⁹¹²⁴

Dr. Steven Bucci is the current Director of the Heritage Foundation's Douglas and Sarah Allison Center for Foreign and National Security Policy. According to his Heritage biography, he "served America for three decades as an Army Special Forces officer and top Pentagon official," including a period "as commander of 3rd Battalion, 5th Special Forces."¹²⁵ While leading this battalion, "Bucci led deployments to eastern Africa, South Asia and the Persian Gulf -- including Operation Desert Thunder in 1998 in response to Saddam Hussein's threats to violate the no-fly zone over Iraq."¹²⁶ Moreover, "Bucci was a seasoned leader in the 82nd Airborne as well as 5th & 7th Special Forces when, in July 2001, he assumed the duties of military assistant to Defense Secretary Donald H. Rumsfeld."¹²⁷

Dr. Bucci has earned degrees from the U.S. Military Academy at West Point, the University of South Carolina, the U.S. Army War College, and the Hellenic Army War College in Greece. He led a team of 25 military experts in Baghdad, Iraq following the onset of the War on Terror¹²⁸, making him the ideal subject matter expert to comment on the nature and severity of the ISIL threat. Dr. Bucci's rare combination of firsthand experience in the Middle East, scholastic achievements in the field of national security, and distinguished record of service to the nation set him apart from many other experts. The insights found in this interview will form the basis of the analysis to follow in chapter 3.

¹²⁴ Bucci, Interview with Dr. Steven Bucci.

¹²⁵ "Steven Bucci."

¹²⁶ Ibid.

¹²⁷ Ibid.

¹²⁸ Ibid.

Expert Commentary Concerning Chapter 1 – “Dynamics and Depth of the ISIL Problem” and Chapter 2 – “Implications and Potential Impact”

- **Button:** The *National Interest* wrote that “While some in Congress and elsewhere still believe ISIS is a localized problem of little concern to the United States, the inconvenient truth is that ISIS actually represents a dangerous new chapter in the global war being waged by Al Qaeda and its affiliated and inspired groups, and a clear and present threat to the U.S. homeland.”¹²⁹ *What is unique about the threat ISIL poses to the United States and her allies? Why is it so dangerous?*
- **Bucci:** “They are truly a threat to U.S. national interests. This is not just about Iraq. They are a threat to the region. Because they are so disposed to go after these regimes, they are trying to bring those regimes down. That is a threat to us and to our vital national interests [that] al-Qaeda never was. ISIL’s reasons for existence and methodology have made them way more dangerous than anybody else.”
- **Button:** CNN national security analyst Peter Bergen claims that the Islamic State’s magazine, *Dabiq*, provides a “key window into understanding” Islamic State’s ideology.¹³⁰ Explaining the end-times theology that appears to be present in the aforementioned article, Bergen said that the terror group has an ideology of an “apocalyptic cult that believes that we are living in the end times and that ISIS’ actions are hastening the moment when this will happen.”¹³¹ *What are some steps that can be taken to defeat an enemy that blatantly disregards danger due to its belief in the coming apocalypse?*
- **Bucci:** “When any group claims the authority of God...show them God isn’t with them. If it doesn’t work, that puts a pin in their balloon. This justifies action to crush them. You have to convince these other people that they aren’t the be-all and end-all. These guys think they have input – active input. There really is no way to talk them out of it.

¹²⁹ Gottlieb, “Four Reasons ISIS Is a Threat to the American Homeland.”

¹³⁰ Bergen, “Why Does ISIS Keep Making Enemies?”

¹³¹ Ibid.

They don't want to negotiate. It's not an option. They're not crazy. They believe in their faith to the nth degree. We just need to accept that that's how we're going to play it."

- **Button:** ISIL is paying foreign fighters \$1,000 a month, according to King Abdullah II of Jordan.¹³² This is equivalent to middle-class or upper-middle-class income in his country, underscoring the challenge of fighting the militant organization and its allure for would-be jihadists. Consider, for example, the following countries' GDP figures, each of which is less than the \$12,000 a year an ISIL fighter could earn per King Abdullah's estimation: \$5,100 in Syria (2011)¹³³, \$3,900 in Yemen (2014)¹³⁴, and \$11,400 in Tunisia (2014)¹³⁵. *How much of a draw is this for would-be extremists?*
- **Bucci:** "It's a self-funding machine. The fact that they can pay people \$1,000 a month – that's just extraordinary. That's a pretty big motivator to come do it. There is that big chunk in the middle – it makes their recruitment that much easier. When he can earn more money fighting jihad than at home at his coffee shop, he'll go. Clearly this is an enabler, though it isn't decisive. The listening to God part is more significant."
- **Button:** Terrorism, in the words of the American Foreign Policy Council, consists of two things: ideology and money.¹³⁶ *What role does money play in fueling the phenomenon that is terrorism? How can the U.S. erode ISIL's ability to finance its jihad?*
- **Bucci:** "It's expensive to fight modern wars. It's costly. There has always had to be a sponsor – until now. Several insurgency movements in Latin America used to kidnap. Jihad is the same sort of thing. You can live sacrificially but you still need guns and bullets. Financing remains one of the more vulnerable parts of it. It has the blessing of not being as messy as having boots on the ground. That self-funding aspect of ISIS has really been hard for us to get our arms around. These guys have made the same sort of deal as Saul: they're no longer smashing their false idols, but selling them instead. They have to continue to try to expand."

¹³² "ISIS Pays Foreign Fighters \$1,000 a Month."

¹³³ "CIA World Factbook."

¹³⁴ "CIA World Factbook."

¹³⁵ "CIA World Factbook."

¹³⁶ American Foreign Policy Council, "Confronting Terrorism Financing."

- **Button:** Hezbollah receives an estimated \$100 million to \$200 million each year from Iran.¹³⁷ Numerous other terror groups also receive monetary aid from nation-states. *At what point might ISIL – notorious for its reluctance to depend on foreigners for its financial wellbeing – also turn to foreign donors for cash? What kind of support could ISIL expect?*
- **Bucci:** “I think they’ll cross the threshold when it suits them. I don’t know of too many nation-states that would be interested in financing them. Right now they can afford to be choosy. If things start getting tighter, I think they’ll be flexible rather than get destroyed.”
- **Button:** Jens Stoltenberg, the head of NATO, said air strikes alone will not be enough to defeat Islamic State militants and that greater Western help in building up Iraqi security forces could also play a role.¹³⁸ *What are the limitations of such airstrikes and what role might landpower play in “degrading and ultimately destroying” ISIL?*
- **Bucci:** “Airpower alone has never won a war. It’s a great enabler. It’s a great asset. That’s a wonderful thing. But you can’t do it with airpower alone. That is not sufficient. It wasn’t in Afghanistan and it isn’t here. Precision-guided munitions (PGMs) are not all that precise. If you want to degrade and ultimately destroy ISIS, you’re going to need ground troops. You need them to recapture the land and liberate the population.”
- **Button:** Peter Bergen of CNN wrote that “To be sure, any counterterrorism campaign that eliminates many leaders of a group can have a real impact – al Qaeda’s core group in Pakistan is a shadow of what it once was, in part, because of a deadly campaign of CIA drone strikes that eliminated many of its leaders and middle managers. Yet, if we zoom in on the bigger picture...the resulting chaotic conditions and weakened states have proven a boon to ISIS and to al Qaeda and its affiliates.”¹³⁹ *How effective is the whack-a-*

¹³⁷ Levitt, “Hezbollah Finances.”

¹³⁸ Croft, “Air Strikes Alone Not Enough to Defeat Islamic State.”

¹³⁹ Bergen, “Whack-a-Mole Is Not a Strategy.”

mole targeting of terrorist groups' top leadership such as the Special Forces attack that killed Abu Sayyaf, ISIL's CFO?

- **Bucci:** “The use of special operations or drones is not in and of itself a bad thing. I just think there’s way too much dependence on these narrow processes. That doesn’t win the war. It’s going to take a combination of things. My concern is if you say this stuff isn’t sufficient. That doesn’t mean don’t do it. A lot of this stuff is pretty expensive. The decision gets easier the higher a guy is up the food chain. We need to keep doing those things. We need to keep doing drone strikes. My big concern is them depending on that as a sole option. They will not win a war by themselves. Generally speaking, you’re going to need some conventional guys along with them.”
- **Button:** In a statement published by the New York Times, U.S. Army Colonel Peter Schwemmer said he was stunned by the state in which he found Iraqi soldiers when he arrived in Iraq. “It’s pretty incredible. I was kind of surprised. What training did they have after we left?”¹⁴⁰ *Why is it so difficult to establish a credible Iraqi security force? How effective might the 4,500 trainers be in reversing the deterioration of the ISF’s capabilities?*
- **Bucci:** “Because they are only there for training, it’s not working. It’s not sufficient. Military readiness is inherently perishable. Maliki replaced soldiers with cronies. They weren’t going to waste money on training when they could pocket it. Our system of training the trainer is very foreign in many other countries. To make train the trainer work, you’ve got to have good leaders. Many of them were replaced. Some of it’s cultural. This strategy is just not working. We’ve got to do more. At least try the Afghanistan 2001-2002 strategy. Embed our Special Forces with the locals. The Iraqis haven’t had that sort of experience yet. I think we should try that at least. Maybe we should try the Sadr City thing too. That’s not a bad model. Let the professionals do it rather than the volunteer fire department. It’s not just their fight. This isn’t an internal coup against Baghdad. We need to step in and probably help.”
- **Button:** The U.S. Intelligence Community has upped its estimate of the number of foreign fighters from all over the world, not just the West. General James Clapper, the Director of National Intelligence (DNI), said that ISIL “now has 20,000 foreign fighters –

¹⁴⁰ Nordland, “U.S. Soldiers, Back in Iraq, Find Security Forces in Disrepair.”

up from 16,000 last fall – out of a total fighting force of as many as 31,000.”¹⁴¹ With the establishment of a caliphate, long-dormant sections of Islamic jurisprudence awaken and compel faithful Muslims to immigrate to the caliphate if at all possible.¹⁴² *How can landpower be applied in such a way to stem the flow of foreign fighters?*

- **Bucci:** “It can help. The most porous border is with Turkey. But it has an enormous army. Jordan could help more. Turkey could stem the tide somewhat. In some places, there is a border crossing with nothing around it but desert. Landpower is the only way to do it. You’re going to need a large amount of landpower to isolate ISIS. You’re probably going to need to put some forces in Syria so they don’t fade westward. That may require sealing off the western border. That would probably be us. I don’t think you’re going to get the ISF to the point where they’re good enough to do that. Crushing ISIS is worth it. That needs to happen. This is not a debatable thing. We can’t just stand back and let that happen. The longer we wait to deal with it, it’s like an infection. You take antibiotics but not enough to kill it and it comes back as a super infection. By not losing to the United States, they’re winning.”

This interview forms the basis of the policy decision analysis to follow. When scrutinizing the more subjective components of this study, it is important to remember the seriousness of the threat to the United States and to U.S. interests described by Dr. Bucci. Put simply, it may be impossible to assess certain subjective factors with complete objectivity, but this limitation does not justify their omission. Indeed, it is precisely because they are both controversial and important that they must be included. The analysis to follow seeks a starting point for this critical debate.

¹⁴¹ Windrem, “ISIS By the Numbers.”

¹⁴² Wood, “What ISIS Really Wants.”

Chapter 3

Future Policy Dilemma

Political-Military Case for American “Boots on the Ground”: Analyzing Strategy Beyond the Horrors of the Headlines

To date, the media’s response to ISIL has been dominated by emotional and haphazard discourse. However cold and detached this analysis may be in comparison, it represents a cut at objective decision-making. The previous chapters provide historical context for the evolution of Islamic State as a significant and unique terrorist threat to the United States.

Assuming the case is now clear concerning ISIL as an imminent threat to U.S. interests and security, Washington has three possible courses of action at its disposal concerning the United States’ military presence in Iraq and Syria: 1) increase U.S. involvement, 2) maintain current levels of U.S. involvement, or 3) decrease U.S. involvement. Which, then, is the optimal course of action for removing the ISIL threat?

From a purely political-military perspective, a growing body of evidence appears to support an increased U.S. military presence in Iraq and Syria. To understand why, this paper will first address the two remaining alternatives.

Operation Inherent Resolve, the ongoing U.S.-led military campaign against ISIL, has failed to achieve President Obama’s stated goal of “degrading and ultimately destroying” the enemy. According to Associated Press reports based on discussions with members of the U.S. Intelligence Community, “the Islamic State group is fundamentally no weaker than it was when the U.S.-led bombing campaign began a year ago.”¹⁴³

¹⁴³ Dilanian, Karam, and Mroue, “Despite Bombing, Islamic State Is No Weaker than a Year Ago.”

Despite “billions of dollars spent and more than 10,000 extremists killed,” defense officials have seen “no meaningful degradation in their numbers.”¹⁴⁴ This assessment has been corroborated by a 2015 Central Intelligence Agency estimate, which at 20,000-31,500 remained unchanged from 2014 despite strikes on ISIL positions.¹⁴⁵

By not defeating ISIL, the United States “made them stronger,” according to CNN contributor Kimberly Dozier.¹⁴⁶ Put simply, “The terror army took on the world’s superpower – and is still standing. No wonder they’re drawing fresh recruits from around the globe.”¹⁴⁷ U.S. airstrikes legitimize ISIL by signaling to the world that Washington considers the group a threat to its interests. At the same time, however, airstrikes do not do enough to cripple its financial or military operations.

This unpleasant reality may have caused senior officials to whitewash the reports of roughly 50 intelligence analysts working at the U.S. Central Command (CENTCOM). According to the analysts’ claims, the amended reports “portrayed the terror groups as weaker than the analysts believe they are. The reports were changed by CENTCOM higher-ups to adhere to the administration’s public line that the U.S. is winning the battle against ISIS and al Nusra, al Qaeda’s branch in Syria, the analysts claim.”¹⁴⁸

Complicating matters is the United States’ inability to find, vet, train, and arm sufficient quantities of moderate rebels willing to act as proxies in Iraq and Syria. Dozier writes that “The program to train rebels is far behind, with fewer than 100 trained instead of the 5,000 the Americans hoped for. Worse, the rebels most willing to fight are pulling out of the program

¹⁴⁴ Ibid.

¹⁴⁵ Michaels, “Islamic State Recruiting Offsets 15,000 Killed by Airstrikes in Past Year.”

¹⁴⁶ Dozier, “We Didn’t Kill ISIS. We Made Them Stronger.”

¹⁴⁷ Ibid.

¹⁴⁸ Harris and Youssef, “Exclusive.”

because the U.S. doesn't want them attacking their main enemy: Syrian dictator Bashar al Assad."¹⁴⁹ This comes despite the Pentagon paying Syrians a salary of up to \$400 per month to fight ISIL.¹⁵⁰

The few graduates of U.S. training programs have come under fire from Russian warplanes, muddying the waters still further. "U.S. officials," writes the *Wall Street Journal*, "say they now believe the Russians have been directly targeting CIA-backed rebel groups that pose the most direct threat to Mr. Assad since the campaign began...both to firm up regime positions and to send a message to Mr. Obama's administration."¹⁵¹ The viability of a U.S.-led air campaign now faces new questions amid allegations of Russian violations of NATO airspace¹⁵² and monitoring of U.S. military drones.¹⁵³ As airborne operations become increasingly complex and dangerous, it is likely that the effectiveness of an airstrikes-only campaign will decrease.

Should this be the case, ISIL will benefit from the easing of U.S. military pressure and will likely take the opportunity to dig in further in preparation for ground conflict. The current power vacuum on the ground has been filled by various militias, often pitting Shia Muslims and Sunni Muslims against one another. Iran, a longstanding foil for American foreign policy in the region and an inflamer of sectarian violence, has seized the opportunity to increase its sway in Baghdad and beyond. This includes supporting Shia militias in their fight against ISIL¹⁵⁴, a group whose recruiting efforts are bolstered by Sunni Muslims' fear of Shia persecution.

¹⁴⁹ Dozier, "We Didn't Kill ISIS. We Made Them Stronger."

¹⁵⁰ Vanden Brook, "Pentagon Pays Syrians \$400 per Month to Fight ISIL."

¹⁵¹ Entous, "U.S. Sees Russian Drive Against CIA-Backed Rebels in Syria."

¹⁵² Yackley and Pamuk, "NATO Denounces Russian Incursion into Turkish Airspace."

¹⁵³ Tomlinson and Griffin, "EXCLUSIVE."

¹⁵⁴ "ISIS and Iran-Backed Shia Militias Are on a Collision Course outside of Ramadi."

That is not to say that the current campaign of airstrikes has achieved nothing. On the contrary, Operation Inherent Resolve has slowed ISIL's growth and has forced the group to act less brazenly in its conquest of the Middle East. Yet it is clear that the resources the U.S. has dedicated to the degradation and destruction of ISIL are insufficient to achieve that end. Washington must either recognize that the current campaign is enough to "degrade and contain" the enemy and accept that as its new strategic goal or it must commit more resources to the fight.

Because ISIL is a very real threat to the United States and its interests in the Middle East, neither an air campaign provided with insufficient resources to achieve its ends nor a scaled back campaign are viable options. The former secures only ISIL's containment while the latter all but guarantees ISIL's continued expansion. Neither is an acceptable outcome for U.S. national security.

Writing for *Defence-In-Depth*, Dr. Chris Tuck of King's College London quotes Philip Hammond, the current British Defense Secretary, as saying "Nobody has pretended the battle against Isil can be won from the air alone."¹⁵⁵ This is "partly because airpower is impermanent: air platforms cannot remain over their targets indefinitely."¹⁵⁶ Hammond goes on to quote General Norman Schwarzkopf as saying that "There is not a military commander in the entire world who would claim he had taken an objective by flying over it."¹⁵⁷ This is especially true for an enemy who derives his success from the control of territory. Put simply,

"Land power is central to Islamic State's success; in consequence, if we wish to defeat them comprehensively, we will require overmatching land forces."¹⁵⁸ There is little doubt American soldiers would be up to the task; in an August 2014 statement,

¹⁵⁵ Tuck, "Land Power and the Islamic State Crisis."

¹⁵⁶ Ibid.

¹⁵⁷ Ibid.

¹⁵⁸ Ibid.

President Obama said “...our military is the best in the world. We can route ISIS on the ground....”¹⁵⁹

Estimates for the number of American troops required to defeat ISIL in a ground offensive vary but most often tally 20,000-25,000. Republican presidential aspirant and current South Carolina senator Lindsey Graham detailed his plan in the summer of 2015, calling for 20,000 U.S. troops in Iraq and Syria.¹⁶⁰ In its monogram “A Strategy to Defeat the Islamic State,” the Institute for the Study of War calls for “as many as 25,000 ground troops in Iraq and Syria” with “Special Forces...numbering in the low thousands, in a dispersed footprint.”¹⁶¹ Two architects of President Bush’s 2007 Iraq “surge” also suggested as many as 20,000 troops would be necessary to defeat ISIL.¹⁶² Despite the “high risk of failure and the near-certainty of U.S. troop casualties,” the possibility of ISIL retaining control of its territory “outweigh[s] those risks.”¹⁶³

Large-scale U.S. ground operations in Iraq, though politically controversial, have a history of yielding results, as indicated by the three diagrams below. The first, taken from a RAND Corporation piece on the 2008 Battle of Sadr City, details the significant dropoff in insurgent attacks in Baghdad following President Bush’s 2007 surge. The second and third diagrams, taken from the Combating Terrorism Center at the United States Military Academy and the *Washington Post*, respectively demonstrate a similar Iraq-wide decrease in enemy attacks following the introduction of overwhelming U.S. ground forces to the region.

¹⁵⁹ Obama, “Statement by the President.”

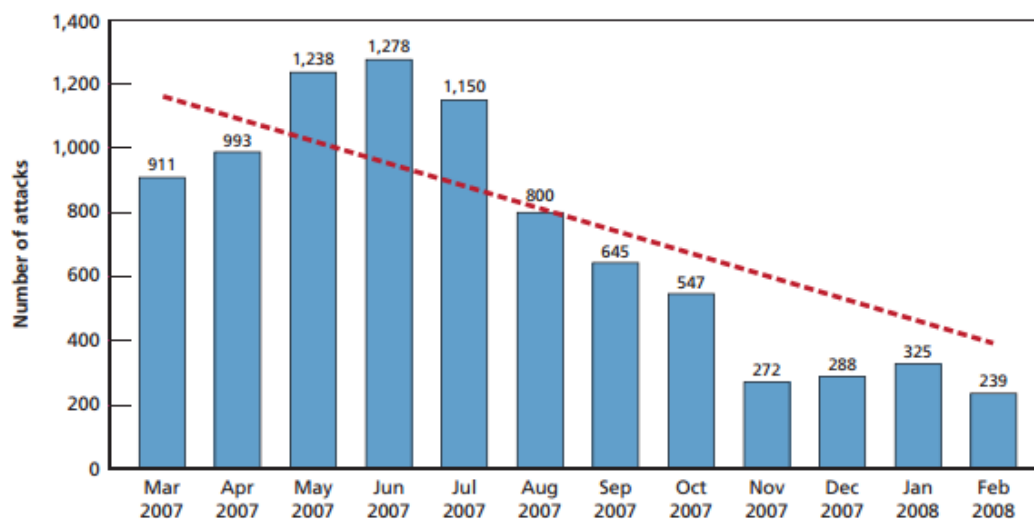
¹⁶⁰ O’Toole, “Lindsey Graham Gets Specific.”

¹⁶¹ Kagan, Kagan, and Lewis, “Middle East Security Report 23: A Strategy to Defeat the Islamic State.”

¹⁶² Crowley, “What a New Iraq ‘Surge’ Could Look like.”

¹⁶³ Kagan, Kagan, and Lewis, “Middle East Security Report 23: A Strategy to Defeat the Islamic State.”

Figure 8: Attacks in Baghdad

Figure 1
Attacks in Baghdad

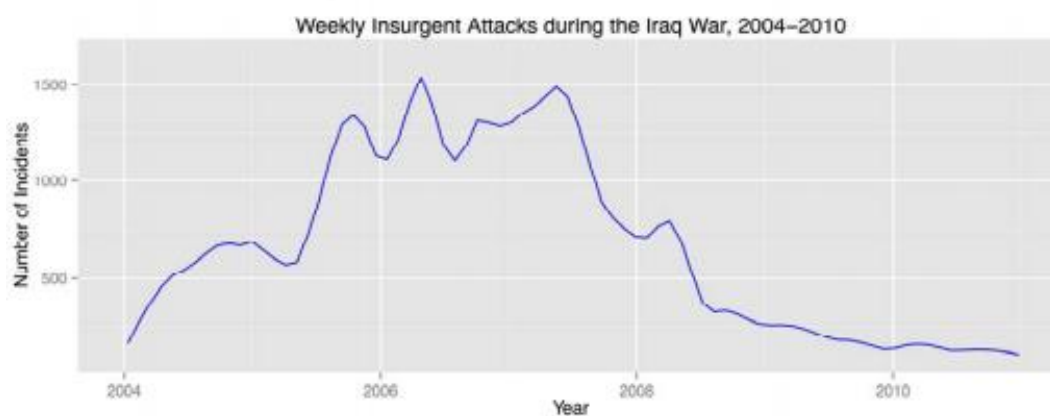
SOURCE: Multi-National Division-Baghdad, "Fort Hood Community Leaders VTC, 25 April 2008," briefing, April 25, 2008.

RAND OP325-1

164

Figure 9: Trends in Combat Over Time

Figure 1. Trends in Combat Over Time



165

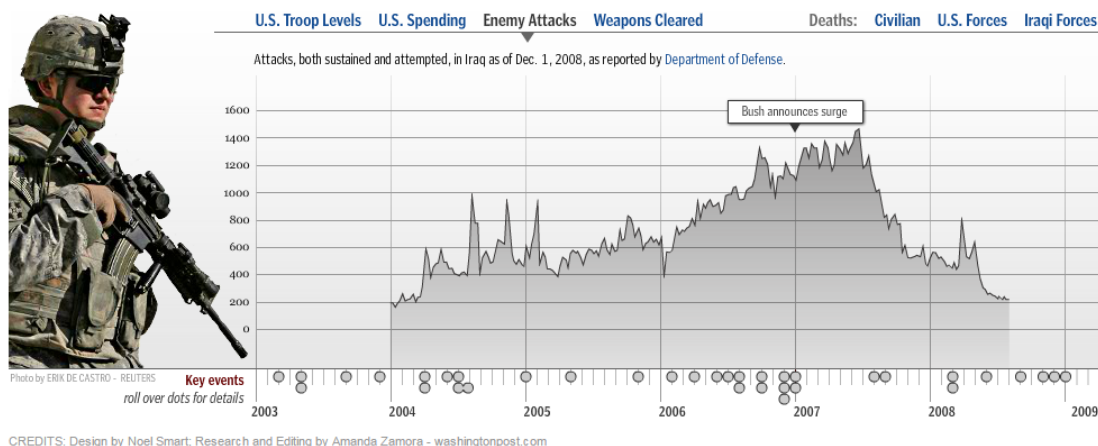
¹⁶⁴ Johnson, Markel, and Shannon, "The 2008 Battle of Sadr City."

¹⁶⁵ Jung et al., "Managing a Transnational Insurgency: The Islamic State of Iraq's 'Paper Trail,' 2005-2010."

Figure 10: The Iraq Surge, Before and After

Timeline: The Iraq Surge, Before and After

On Jan. 10, 2007, President George W. Bush announced a [dramatic shift in U.S. strategy](#) with the deployment of 30,000 additional troops to Iraq. By early August, field commanders began reporting better cooperation from Iraqi citizens, and U.S. combat deaths were declining. Below, a guide to key events and trends in the Iraq war, before and after implementation of the surge.



166

Financial Analysis

Introduction, Purpose, and Methodology

Regarding the ISIL threat, media reports consistently horrify audiences worldwide. Pundits bandy numbers about without providing context. Politicians make speeches. Consequently, the ongoing ISIL debate has resembled a mostly qualitative, subjective argument over the extent to which chocolate ice cream is superior to vanilla ice cream. When framed in this light, no one can make an objective decision.

As the above graphics and text demonstrate, the political-military grounds for a U.S. offensive against ISIL warrant thorough consideration. Before committing American “blood and treasure,” however, the U.S. national security establishment should build a more complete, well-rounded case for a decision that comes at such a high human cost.

¹⁶⁶ Smart and Zamora, “Timeline: The Iraq Surge, Before and After.”

As a result, governments seek a variety of tools to help them arrive at the best possible conclusion in situations such as this. Finance is one such tool that aids in evaluating the wisdom of a particular course of action. Consequently, the remainder of this paper will seek a financially informed decision regarding the viability of a U.S. ground campaign against ISIL targets. **Stage One** of this analysis consists of calculations determining the cost of such a ground campaign. **Stage Two** uses decision matrices to determine the best course of action in Iraq and Syria.

Both matrices utilize marginal analysis to weigh the merits of each option. Marginal analysis is defined as “an examination of the additional benefits of an activity compared to the additional costs of that activity.”¹⁶⁷ Moreover, “Companies use marginal analysis as a decision-making tool to help them maximize their profits. Individuals unconsciously use marginal analysis to make a host of everyday decisions.”¹⁶⁸ Because marginal analysis guarantees the scrutiny of both the incremental cost and incremental benefit of each additional unit, it inhibits the harmful effects of personal biases. No option, however attractive or popular, goes without receiving thorough examination.

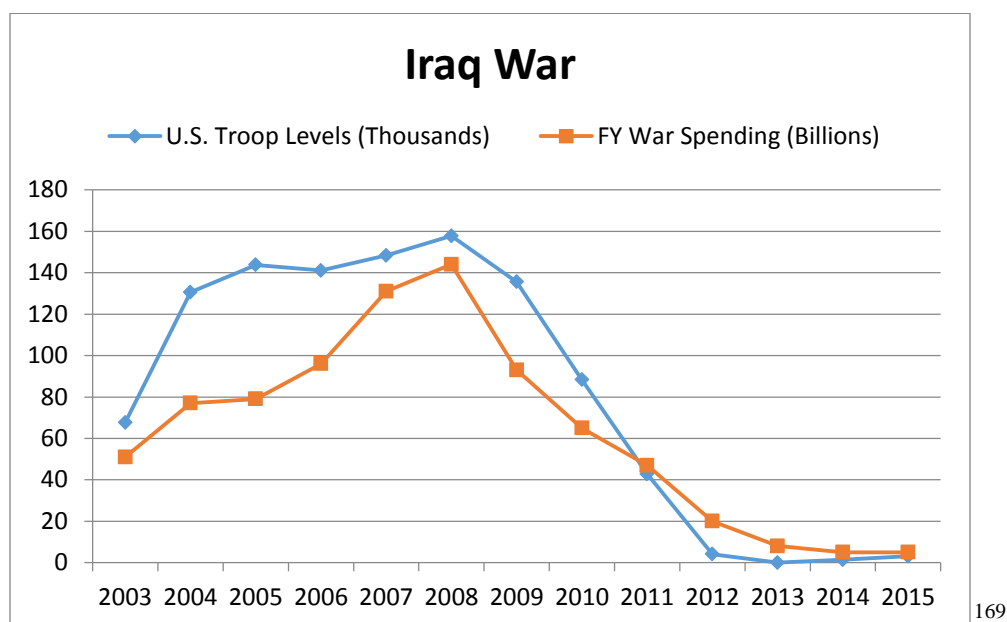
In determining the cost of a U.S. ground campaign against ISIL, history plays an important role. Calculating the cost and benefits of a potential future war is an inexact science limited by the availability of information and the inability to predict the intensity and longevity of fighting with precision. However, leaders must still make decisions even if information is imperfect or incomplete. Decision analysis therefore utilizes multiple sources of information to abstract and to estimate the intricate variables that form the ultimate decision to fight or not to fight.

¹⁶⁷ “Marginal Analysis Definition.”

¹⁶⁸ Ibid.

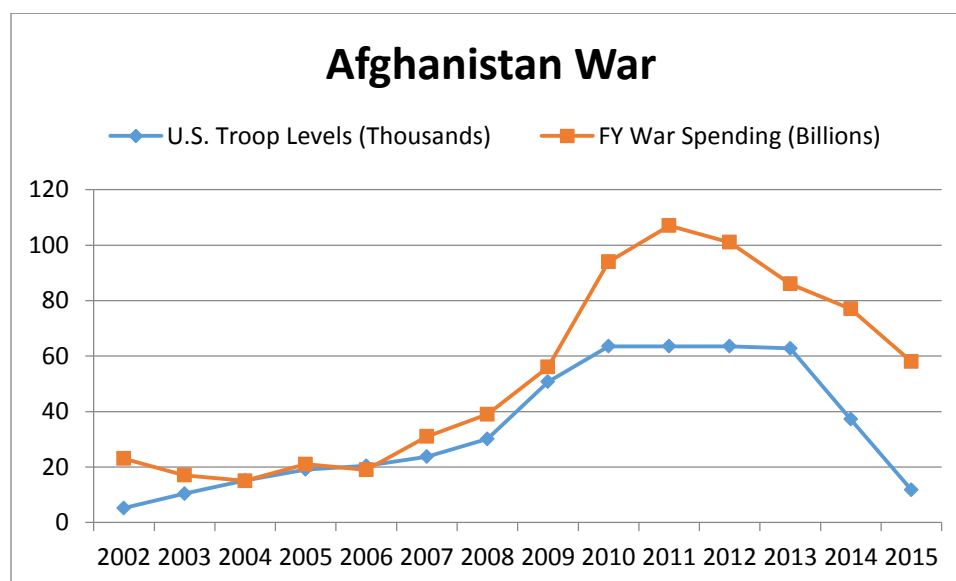
While ISIL differs from al-Qaeda and the Taliban, Washington's two most notable historical opponents in Iraq and Afghanistan, respectively, one can draw useful parallels between the two conflicts to inform potential U.S. strategy against Islamic State. Below are two graphs depicting U.S. fiscal year (FY) war spending on the wars in Iraq and Afghanistan as well as attendant troop levels. The Iraq War graph represents spending during both Operation Iraqi Freedom (OIF) and Operation Inherent Resolve (OIR). The Afghanistan War graph represents spending during Operation Enduring Freedom (OEF).

Figure 11: Iraq War Troop Levels and FY War Spending



¹⁶⁹ See bibliography for sources used in figures 11 and 12

Figure 12: Afghanistan War Troop Levels and FY War Spending



Decision Model Specifications and Operationalizing Variables: Calculating Potential Costs and Results of a Ground Campaign vs. Airstrikes

In a series of separate calculations, each conflict's **Annual War Spending** figures were divided by the appropriate troop levels, resulting in a best estimation of U.S. spending per soldier per year. These annual figures were then averaged to arrive at the overall per-soldier cost across both wars: \$1,649,505.05. To calculate the expected annual cost of a ground campaign against ISIL, one could then multiply \$1,649,505.05 by the number of troops deployed to Iraq and Syria.

According to expert estimations, ground efforts to defeat Islamic State would require 20,000-25,000 U.S. troops. The *Washington Free Beacon* published an article stating that Frederick Kagan, director of the Critical Threats Project at the American Enterprise Institute, advocates deploying 20,000 troops.¹⁷⁰ Presidential candidate Lindsey Graham (R.-SC), who has “been to the Middle East at least 35 times,” also recommends that 20,000 U.S. troops be

¹⁷⁰ Wisner, “How Lindsey Graham Would Defeat the Islamic State.”

deployed to defeat ISIL.¹⁷¹ In its report “A Strategy to Defeat the Islamic State,” the Institute for the Study of War, a Washington-based think tank, suggests that a campaign “will require as many as 25,000 ground troops in Iraq and Syria.”

Should the U.S. military use surge-style strategies reminiscent of President George Bush’s 2007-2008 surge in Iraq or President Barack Obama’s 2010-2012 surge in Afghanistan, it would appear to benefit from economies of scale. The table below projecting annual U.S. war expenses reflects this reality. Rather than spend roughly \$1.6 million per soldier per year, Washington could spend as little as \$1.3 million per soldier per year if economies of scale are realized.

Given the range of 20,000-25,000 troops and an annual cost per soldier range of \$1.3-\$1.6 million, it appears that a U.S. ground campaign against the Islamic State would likely cost between \$26.2 billion and \$41.2 billion per year. The reader can turn to page 69 to see how these annual spending figures compare to U.S. spending to date on both wars in Iraq and Afghanistan. The green lower boundary marker represents the lowest projected annual cost for 20,000 troops while the red upper boundary marker represents the highest projected annual cost for 25,000 troops. Barring unforeseen externalities, annual spending should fall between these two boundaries.

Table 1: Projected Annual Cost Per Soldier

	Pure Average	Surge Average
Annual Cost Per Soldier	\$1,649,505.05	\$1,310,359.52
Annual Cost for 20,000 Troops	\$32,990,100,974.09	\$26,207,190,448.57
Annual Cost for 25,000 Troops	\$41,237,626,217.61	\$32,758,988,060.71

¹⁷¹ Wisner, “Lindsey Graham Calls for 20,000 Ground Troops in Iraq, Syria to Defeat Islamic State.”

After comparing these figures with the above graphs depicting U.S. FY war spending, it becomes apparent that an annual cost of \$26.2 billion compares favorably to both the Iraq War and the Afghanistan War. The Iraq War alone cost roughly \$140 billion in 2008 alone; that would be enough to fund roughly 5.34 years' worth of ground operations against ISIL assuming a constant annual cost of \$26.2 billion. Even if the anti-ISIL ground campaign cost \$41.2 billion per year, \$140 billion would still fund roughly 3.4 years' worth of fighting. Barring any unforeseen externalities requiring significant increases in troop levels and attendant war spending, a ground campaign on the order of magnitude advocated by the likes of Senator Lindsey Graham¹⁷² would come at a moderate price compared to what has been spent in recent memory.

Another useful metric in assessing the cost of the proposed anti-ISIL ground campaign is the **Cost to Kill** each ISIL soldier. In his article for *DailyFinance*, Bruce Watson writes that “it ultimately cost the country \$168,000 to kill each Vietnamese soldier” during the Vietnam War.¹⁷³ According to the Bureau of Labor Statistics' Consumer Price Index (CPI) calculator, this figure equates to a present-day per capita cost of \$1,148,700 after being adjusted for inflation since 1968.¹⁷⁴ A 2010 Information Clearing House article written about the Afghanistan War suggests that it cost U.S. taxpayers some \$50 million to kill individual Taliban soldiers at that point in the conflict.¹⁷⁵

So how much would it cost to kill individual ISIL soldiers? A *USA Today* article citing an anonymous Pentagon official reports that “the U.S.-led air campaign against ISIS had killed

¹⁷² Wisner, “Lindsey Graham Calls for 20,000 Ground Troops in Iraq, Syria to Defeat Islamic State.”

¹⁷³ Watson, “Robert McNamara: The high cost of cold-blooded analysis.”

¹⁷⁴ Bureau of Labor Statistics, “CPI Inflation Calculator.”

¹⁷⁵ Nasuti, “Killing Each Taliban Soldier Costs \$50 Million.”

20,000 of the group's fighters in just over a year.”¹⁷⁶ This is up from the 15,000 estimated in July by U.S. military and intelligence organizations.¹⁷⁷ Because these figures reflect coalition-wide progress, they do not accurately represent the kills for which the U.S. is responsible. Al Jazeera estimates suggest “Nearly 4 out of 5 airstrikes on ISIL territories have been conducted by the U.S.”¹⁷⁸ Assuming that because the U.S. conducts approximately 80 percent of airstrikes it can also take credit for 80 percent of ISIL fatalities and that the number of ISIL fatalities in the past year ranges from 15,000 to 20,000, then simple multiplication attributes the following two annual kill figures to U.S. airstrikes: 12,000 (80% of 15,000) or 16,000 (80% of 20,000).

As of June 11, 2015, the U.S. has spent more than \$2.74 billion on the ongoing airstrikes campaign against ISIL.¹⁷⁹ That equates to roughly \$9.1 million per day or \$3.32 billion per year.¹⁸⁰ Dividing \$3.32 billion by the higher of the two fatality estimates yields a cost per kill of \$207,593.75 while dividing by the lower of the two estimates yields a cost per kill of \$276,791.67 (see below for the exact calculation of this figure). Compared to spending during Vietnam (\$1.15 million per kill) and during Afghanistan (\$50 million per kill), it is easy to appreciate the “bang per buck” of Operation Inherent Resolve. Moreover, only one American soldier has died in combat operations in Iraq since 2011.¹⁸¹

$$\$9,100,000 \text{ per day} * 365 \text{ days} = \$3,321,500,000 \text{ per year}$$

$$\frac{\$3,321,500,000 \text{ per year}}{12,000 \text{ kills per year}} = \$276,791.67 \text{ per kill}$$

¹⁷⁶ Gilsinan, “Counting the ISIS Dead.”

¹⁷⁷ Ibid.

¹⁷⁸ Aregawi, “Operation Inherent Resolve.”

¹⁷⁹ Shabad, “US Spending \$9M a Day in ISIS Fight.”

¹⁸⁰ Ibid.

¹⁸¹ Ryan, Gibbons-Neff, and Salim, “First American Soldier Is Killed in Combat in Iraq since 2011 Troop Exit.”

Estimating Variance within the Decision Calculations

For reasons detailed earlier, however, an air campaign is insufficient to achieve the President's stated objective of "degrading and ultimately destroying" ISIL. Due to a variety of factors, including the inherent limits of airpower and the efficacy of ISIL recruiting tactics, simply expanding the air campaign will not succeed in eliminating the threat posed by Islamic State. By comparison, a ground campaign would be considerably more expensive. That being said, it would also have the potential to achieve what an air campaign alone cannot: victory.

Determining the cost per kill of a hypothetical ground campaign poses several unique challenges. First and foremost, it is impossible to know exactly how many enemy fighters would be killed by U.S. servicemen and -women. Therefore, a proxy is needed. As suggested by the author of this paper and acknowledged as a possible option by former Army Special Forces officer Dr. Steven Bucci, the 2008 Battle of Sadr City, Iraq, may prove a useful starting point for further financial analysis.

According to an analysis conducted by the Rand Corporation,

The 2008 Battle of Sadr City took place nearly 15 months after the beginning of the U.S. 'surge' in Iraq. President George W. Bush stated the mission of U.S. forces when he announced the surge in a January 10, 2007, speech: 'to help Iraqis clear and secure neighborhoods, to help them protect the local population, and to help ensure that the Iraqi forces left behind are capable of providing the security that Baghdad needs.' The 'Baghdad Security Plan' was a key element of the surge. Its purpose was announced by Major General Joseph Fil, Jr., commander of the Multi-National Division-Baghdad (MND-B) on February 16, 2007.¹⁸²

General Fil's plan involved three components: "clear, control, and retain." After clearing an area of extremists, joint operations with Iraqi elements controlled the territory gained in the assault and protected the population from attacks. When ready, Iraqi security forces would then

¹⁸² Johnson, Markel, and Shannon, "The 2008 Battle of Sadr City."

assume full control during the retain phase and American forces would move closer to the front where they could respond quickly to threats.

The Sadr City battle plan provided a stark contrast to the previously accepted strategy practiced by “the Russian Federation in the Chechen city of Grozny in December 1999-February 2000 and U.S. forces in the Iraqi city of Fallujah in November 2004.” In Grozny and Fallujah, blue forces underwent a “block-by-block clearing operation supported by massive amounts of firepower.” Noncombatants were told to leave the city, lest they be considered an enemy soldier. The result was heavy casualties, with Russia losing “at least 600” and the U.S. suffering “70 dead and more than 600 wounded.”

By comparison, the Sadr City battle plan took a very different approach:

The 2008 Battle of Sadr City offers a second model for wresting control of a city from insurgents: treating an urban area as a wide-area security mission. In Sadr City, unlike in Grozny and Fallujah, telling the civilians to leave what was about to become a high- intensity battlefield simply was not feasible. Sadr City had 2.4 million residents, and there was nowhere for them to go: Sadr City is part of the larger city of Baghdad and, unlike Grozny and Fallujah, is not geographically isolated. These conditions in Sadr City may be representative of the future challenges of urban operations, and they will likely worsen as urban areas around the globe become more densely populated. The objective was not to take and clear Sadr City but to create conditions that would make it both impossible for the insurgents to operate effectively and possible to restore security to the broader population.¹⁸³

A similar strategy could prove effective against ISIL in urban areas such as Mosul, Iraq, and Raqqa, Syria. As with Jaish al-Mahdi (JAM), the extremist element that had embedded itself in Sadr City, the U.S. military has intelligence on where to find ISIL fighters. ISIL is by definition a territory-bound enemy. The land under its control serves as its financial and military lifeblood, delivering vital extortion and oil revenues to the group’s war chest. On one hand, that makes Islamic State more difficult to defeat because it does not depend on foreign donors for its

¹⁸³ Ibid.

financial viability. On the other hand, its dependence on territorial control makes it vulnerable to ground offensives modeled after the 2008 Battle of Sadr City.

At the time the battle took place, Sadr City spanned 35 km² and reported a population of roughly 2.4 million residents.¹⁸⁴ The Rand Corporation reports that “municipal officials in Baghdad estimate that the fighting in the Battle of Sadr City killed 925 people and wounded 2,605, an estimate that does not distinguish combatants from noncombatants.”¹⁸⁵ Their “interviews with U.S. participants in the battle suggest that the number of JAM fighters killed in the battle exceeds 700.”¹⁸⁶

This strategy was effective in addressing Iraqi extremism, helping usher in an extended period of declines in violence (see graphics at the end of the Political-Military Case for American “Boots on the Ground”). Indeed, “It created a situation that was intolerable to JAM, and JAM had to come out and fight. In so doing, the enemy attacked U.S. forces that now had the initiative and were in a position of enormous advantage. JAM lost, and the coalition victory in the Battle of Sadr City offers important lessons for the prosecution of future urban operations.”

Adjusting the Cost-Benefit Analysis Given the Variance

What would it cost to operate this battle plan on a much larger scale? How much would it cost to kill individual ISIL fighters? The below graphic depicts what a ground offensive might look like. The x-axis represents the number of ISIL fighters killed by the United States over the course of a year while the y-axis represents the cost per kill. It is important to note that the gray

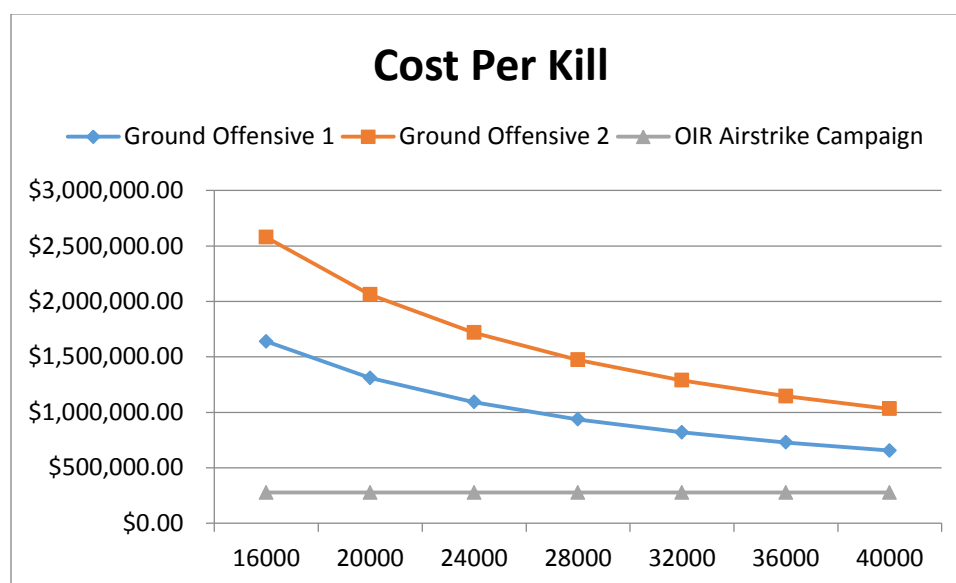
¹⁸⁴ Ibid.

¹⁸⁵ Ibid.

¹⁸⁶ Ibid.

Operation Inherent Resolve line is set to be constant at \$276,791.67, which is the higher of the two airstrike costs per kill calculated earlier in this analysis. This figure is held constant for two reasons: to reflect the fact that simply intensifying the current bombing campaign is unlikely to dramatically increase the number of enemy killed and to provide a fixed baseline against which the proposed ground campaign can be measured. “Ground Offensive 1” represents the best-case scenario in which it is assumed a year of ground operations against ISIL will cost \$26,207,190,448.57. “Ground Offensive 2” represents the worst case scenario, which comes at an annual cost of \$41,237,626,217.61. For the calculations behind the ground offensive figures, the reader should refer to page 55. Similarly, the reader should refer to page 57 for the OIR cost per kill calculations.

Figure 13: Cost Per Kill Figures for Proposed Ground Offensives and Air Campaign



The x-axis begins at 16,000, the presumptive number of ISIL fighters killed by the U.S. alone over the past year of airstrikes, because it is assumed that a ground offensive will kill at least as many enemy fighters as do airstrikes alone. At this rate, the cost per kill would be

roughly 9.3 times as high for “Ground Offensive 2” as for Operation Inherent Resolve. This gap narrows, however, the more ISIL fighters are killed as a result of the ground operation. If 40,000 ISIL fighters were killed in a year, the cost per kill for “Ground Offensive 2” would drop to about 3.7 times that of Operation Inherent Resolve. That constitutes an improvement of about 60 percent. The gap is even narrower (about 2.4 times the OIR cost per kill at 40,000 kills) when considering “Ground Offensive 1,” the best-case scenario.

Given that Islamic State’s recruitment has replaced its members as quickly as they have been killed by the U.S.-led coalition, it will be necessary to exceed 20,000 kills per year in order to achieve a net decrease in ISIL fighting strength. A ground offensive that eliminates more ISIL fighters than airstrikes alone has the added benefit of draining the group’s coffers.

According to Howard Shatz of Politico,

ISIL historically has paid its members (yes, it maintains payroll sheets) based on a flat monthly rate per person and then additional fixed amounts for each wife, child and dependent unmarried adult woman in the household. In Anbar, Iraq, the rate was \$491 per year in 2005 and 2006, and then about \$245 per year per dependent; the rate was similar in Mosul in 2007 and 2008. These payments to family are meant to continue if the ISIL member is captured or killed—a primitive form of life insurance. If enough members are captured and killed, however, these costs start to mount.¹⁸⁷

Assuming the average ISIL soldier has one dependent and the payment of benefits continues into perpetuity, a single KIA would have cost the group \$736 in 2005. After adjusting for inflation, this number rises to \$896.71.¹⁸⁸ Assuming an annual interest rate of six percent, the net present value (NPV) of the “primitive” life insurance paid by ISIL in perpetuity to the families of the deceased would cost \$14,945.17.¹⁸⁹ Were Islamic State to lose 24,000 soldiers in combat over the course of the year, the aggregate NPV of these perpetuity payments would reach

¹⁸⁷ Shatz, “To Defeat the Islamic State, Follow the Money.”

¹⁸⁸ Bureau of Labor Statistics, “CPI Inflation Calculator.”

¹⁸⁹ “Iraq Interest Rate | 2004-2015 |.”

Using these various cost-benefit estimates and the context provided above, the reader is now ready to compare the three possible states of the world: increasing U.S. involvement (i.e., deploying U.S. boots on the ground), maintaining current levels of U.S. involvement (i.e., continuing the current airstrikes campaign), and decreasing U.S. involvement (i.e., withdrawing U.S. personnel from the region). With this model in place, it is possible to pull the information presented to date into a quantitative decision regarding the best available strategy.

U.S. Ground Offensive Decision Matrix 1							
Weight	2	3	4	3	1	2	15
	13%	20%	27%	20%	7%	13%	100%
Option	U.S. War Spending	U.S. Military Casualties	U.S. National Security	Potential for Victory	Cost Per ISIL Kill	Damage to ISIL Finances	Score
Increase Involvement	11	10	75	75	20	80	50.47 <div><div></div></div>
Maintain Involvement	89	90	25	25	80	20	49.53 <div><div></div></div>
Decrease Involvement							0
Weight of 1	Add 1 Point = Add 0.06 to Score						
Weight of 2	Add 1 Point = Add 0.13 to Score						
Weight of 3	Add 1 Point = Add 0.20 to Score						
Weight of 4	Add 1 Point = Add 0.27 to Score						

Figure 15: U.S. Ground Offensive Decision Matrix 2

U.S. Ground Offensive Decision Matrix 2							
Weight	1	1	1	1	1	1	6
	17%	17%	17%	17%	17%	17%	100%
Option	U.S. War Spending	U.S. Military Casualties	U.S. National Security	Potential for Victory	Cost Per ISIL Kill	Damage to ISIL Finances	Score
Increase Involvement	11	10	75	75	20	80	45.17
Maintain Involvement	89	90	25	25	80	20	54.83
Decrease Involvement							0
Weight of 1	Add 1 Point = Add 0.17 to Score						

Matrix 1 represents an effort to objectively weigh factors relevant when considering whether to escalate American military intervention in Iraq and Syria. While this particular matrix recommends increasing U.S. involvement, it must be noted that there are virtually an infinite number of permutations, many of which could discourage further military involvement in the conflict. As such, it will be important to understand the rationale behind the categories, weights, and scores assigned.

Located at the bottom of both matrices are tables that describe the effect of score changes in each category given different weights. In Matrix 1, for example, a one point increase in the “U.S. national security” score for “increase involvement” would improve that option’s score by roughly 0.27, resulting in a new score of 50.74. Similarly, a one point decrease in the “damage to ISIL finances” score for “maintain involvement” would decrease that option’s score by roughly 0.13, resulting in a new score of 49.4. In essence, these tables show the tradeoffs or sensitivities associated with gains or losses in each category considered by this analysis.

Matrix 2 isolates the effect of weights on this analysis in that the score for each category remains the same as in Matrix 1 but the weights assigned to each category have been changed to one. When all weights are the same, each category is considered of equal importance to the remaining five. Assuming this is the case, maintaining the current level of U.S. involvement

appears to be the best available option to U.S. policymakers. As it is highly unlikely, however, that each category is of equal importance, an attempt was made in Matrix 1 to weight each category from what I believe to be the current ranking of U.S. interests.

Analyzing the Options: Arriving at the Bottom Line

The elegance of this analytical model is that other researchers can make an argument to weigh the categories differently. In this way, it is modifiable to reflect differences in opinion as well as new information. The value of this approach is therefore found not only in the resulting policy prescription but also in its use as a tool for evaluating complex decisions. As a result, the model now allows us to debate the decision objectively rather than by simple opinion or taste (i.e., whether chocolate ice cream is better than vanilla ice cream).

Washington's three options, as described earlier in this paper, are as follows: increase, maintain, or decrease military involvement in Iraq and Syria. Because decreasing the U.S. presence is antithetical to the country's national security goals and interests, it is not considered a legitimate option for the purposes of this paper and is therefore not scored. That leaves maintaining the status quo and increasing the U.S. presence as the only plausible options. The costs and benefits associated with each option are assessed in detail in the following table.

Table 2: Cost-Benefit Analysis of U.S. Boots on the Ground

	Increase U.S. Presence	Maintain U.S. Presence	Decrease U.S. Presence
Cost	<ul style="list-style-type: none"> -Guaranteed U.S. casualties -Higher financial cost to be passed on to taxpayers -Risk of being drawn into long-term conflict 	<ul style="list-style-type: none"> -Inherent inability of airpower to “degrade and ultimately destroy ISIL” -Perceived American strategic ineffectuality 	<ul style="list-style-type: none"> -Clear and pressing danger to U.S. national security -Inability to achieve strategic objectives
Benefit	<ul style="list-style-type: none"> -Benefit to national security -Improves odds of U.S. achieving President Obama’s strategic objectives -Seize territory from IS -Costs significantly less per year than most of Iraq War and Afghanistan War -Outperforms Vietnam and Afghanistan Wars on cost per kill basis 	<ul style="list-style-type: none"> -Limited exposure to U.S. casualties -Substantial cost savings compared to BOG -Efficiency and affordable cost per kill ratio 	<ul style="list-style-type: none"> -No U.S. casualties -Cost savings

The Bottom Line: President Obama’s stated objective of “degrading and ultimately destroying” ISIL is both legitimate and necessary. ISIL threatens the United States, its allies, and its interests. Proof of the group’s contempt for Western values and its tactical reach is plentiful: recent attacks killed hundreds of innocent people in Paris¹⁹⁰, Beirut¹⁹¹, and onboard a Russian passenger plane over the Sinai Peninsula.¹⁹² Airstrikes, though politically expedient and cost effective, cannot accomplish President Obama’s goals. A ground force of 20,000-25,000 U.S. troops would help achieve what airstrikes alone cannot and would do so at a cost substantially less than most spending to date in Iraq and Afghanistan.

For reasons apparent to the reader, the proper policy prescription involves increasing U.S. involvement in Iraq and Syria. Though the drawbacks associated with this action are both real

¹⁹⁰ Callimachi, “ISIS Claims Responsibility, Calling Paris Attacks ‘First of the Storm.’”

¹⁹¹ Barnard, “Beirut, Also the Site of Deadly Attacks, Feels Forgotten.”

¹⁹² Starr and Shoichet, “Russian Plane Crash.”

and concerning, the threat posed to the U.S. and its interests necessitates a level of military engagement commensurate with President Obama's strategic objectives.

Without question, maintaining the status quo offers numerous benefits. The first and arguably most consequential is the cost savings. The current airstrikes campaign costs about \$3.32 billion per year compared to the proposed ground campaign, which could cost as much as \$41.24 billion per year. Second is the potential for U.S. military casualties. An airstrikes-only campaign minimizes the risk to American servicemen and –women while ground combat guarantees American casualties. And on a cost per kill basis, the airstrikes campaign has a lot to offer. At virtually any body count, its cost advantage relative to ground combat cannot be ignored.

But while airstrikes are largely affordable, safe, and efficient, they are unable to achieve Washington's strategic goals in the ongoing conflict against Islamic State. It is for this reason that the proposed ground campaign scores much better in matters of U.S. national security, potential for victory, and damage to ISIL's finances. During his interview for this paper, Dr. Steven Bucci emphasized that "Crushing ISIS is worth it. That needs to happen. This is not a debatable thing. We can't just stand back and let that happen. The longer we wait to deal with it, it's like an infection. You take antibiotics but not enough to kill it and it comes back as a super infection. By not losing to the United States, they're winning."

In an interview with *USA Today*, retired admiral and former commander of U.S. Special Forces Command (SOCOM) William McRaven echoed this sentiment when he said, "We've known for a very long time that airstrikes alone can't solve the problem. You have to put boots on the ground."¹⁹³ Admiral McRaven's remarks came one day before DefenseOne reported that

¹⁹³ Michaels, "U.S. Looking at Expanding Role on Ground in Iraq, Syria."

the Pentagon would be sending “a few dozen special operations troops” into Syria, effectively signaling an end to the U.S. policy of “no boots on the ground.”¹⁹⁴

Summary of Matrix Methodology

Though imperfect and open to debate, the methodology behind the ground campaign’s winning score in Matrix 1 is as follows:

- First and foremost, it is important to note that there are several highly subjective components in this decision matrix (U.S. national security, potential for victory, and damage to ISIL finances). That being said, they must be included in order to paint a more complete picture of the situation on the ground than could be achieved through raw data-driven components alone. Because they are scalable and can be adjusted to include additional categories or to reflect more accurate weights, these matrices serve as a starting point around which an informed discussion regarding the role of U.S. ground forces in Iraq and Syria can take place.

- The matrices assume three possible states of the world: 1) increase U.S. involvement, 2) maintain the current level of U.S. involvement, and 3) decrease U.S. involvement. For reasons discussed earlier in this paper, decreasing U.S. involvement is not considered a viable alternative to maintaining the status quo and is therefore not scored. It is included in the matrices, however, because it is a hypothetical possibility.

- The matrices score both viable options according to six different categories. Higher scores are better than lower scores, with a maximum of 100 points allocated between the two states of the world for each category. Points are awarded proportionally. For example, if

¹⁹⁴ O’Toole, “Bye-Bye ‘No Boots on the Ground.’”

U.S. war spending were twice as high for a ground offensive as for an airstrikes campaign, the ground offensive would receive 50 percent of the points (33) allocated to the airstrikes campaign (66).

- U.S. national security is the most difficult category to objectively defend and assess because it is so difficult to determine what will make the nation safer and by how much. It is for this reason that multiple matrices appear in this analysis, each featuring a different weights and scores than the last one.
 - While some dispute the seriousness of the threat posed to the U.S. homeland by Islamic State, the group does pose a very real threat to U.S. citizens working abroad, embassy personnel, allies, and interests.
 - Moreover, Federal Bureau of Investigation Director James Comey had the following to say regarding the danger of ISIL: “Asked if the threat from the Islamic State group had eclipsed that of Al Qaeda, the rival organization that attacked the U.S. on September 11, 2001, Comey said, ‘Yes.’”¹⁹⁵
 - Although Director Comey believes Islamic State is more dangerous than al-Qaeda, the U.S. government has thus far spent far less money trying to defeat it than it did during anti-al-Qaeda operations in Iraq and Afghanistan. The proposed ground offensive, though more expensive than the current airstrikes campaign, would cost significantly less expensive than most of OIF and OEF (as seen below) at between \$26.2 and \$41.2 billion per year. The green lines mark the lower end of the per annum cost estimate for a ground campaign while the red lines mark the upper end of the per annum cost estimate.

¹⁹⁵ “Islamic State Bigger Threat than Al Qaeda, FBI Chief Says.”

Figure 16: Iraq War Projected Spending Compared to Historical Spending

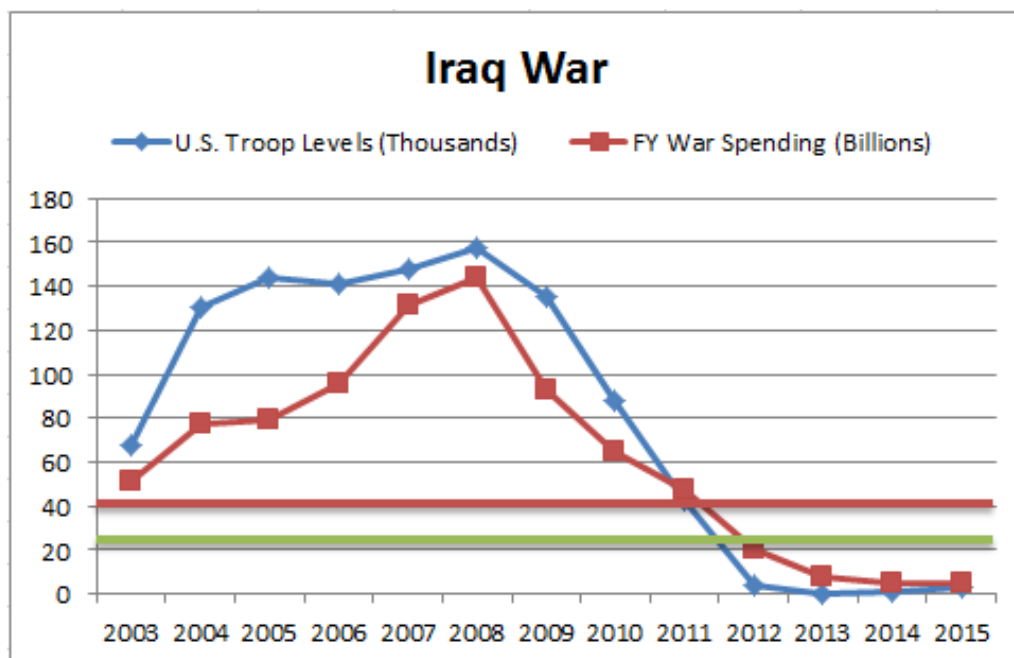
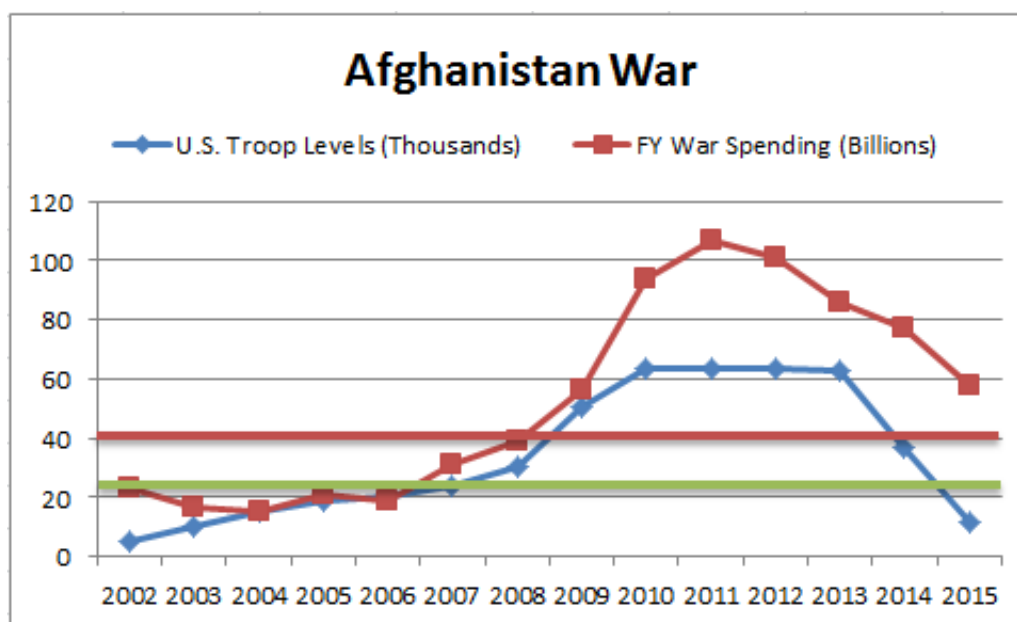


Figure 17: Afghanistan War Projected Spending Compared to Historical Spending



Conclusion

This thesis began with a morass of information, which was distilled into individual issues and atomistic components. Once distilled, these pieces could then be put together in an analytical way to make a decision not just on subjective data but also on objective data. The purpose of this exercise was to produce actionable information. Though the reader may not agree with the results of this study or the methodology, it is critical that a framework within which this debate can take place now exists. By using a structured, analytical approach to the deployment of U.S. Soldiers, Sailors, Airmen, and Marines, it will be possible to achieve better outcomes. Anytime American warfighters are sent into harm's way, it is vital that the American public weigh the costs and benefits of spending the nation's hard-won blood and treasure.

In this case, the benefits of a U.S.-led ground campaign to “degrade and ultimately destroy ISIL” outweigh the costs. The group threatens the United States. Therefore, the United States must take action. Airstrikes, though cost effective and politically tenable, “will do little to diminish the power of Islamic State.”¹⁹⁶ Indeed, “As the Air Force chief of staff observed last year: ‘You don’t dictate end states from the air. You can’t control territory. You can’t influence people. You can’t maintain lines of control after you’ve established them. That will take a ground force.’”¹⁹⁷

Future researchers should update this analysis with new information reflective of political and military developments in Iraq and Syria. When possible, they should also strive to incorporate declassified and other government reports to achieve the most accurate assessment of the progress made against ISIL.

¹⁹⁶ Barnes, “Paris Attacks Prompt Debate on Further Military Intervention on Syria.”

¹⁹⁷ Schladow, “Six Seductive Stories That Undercut the Army.”

Appendix A

Abbreviations

AQI – Al-Qaeda in Iraq

BOG – Boots on the Ground

CENTCOM – U.S. Central Command

FAZ – Frankfurter Allgemeine Zeitung

GDP – Gross Domestic Product

IS – The Islamic State

ISI – The Islamic State in Iraq

ISIL – The Islamic State in Iraq and the Levant

ISIS – The Islamic State in Iraq and Syria

JAM - Jaish al-Mahdi

JN - Jabhat al-Nusra

KIA – Killed in Action

OEF – Operation Enduring Freedom

OIF – Operation Iraqi Freedom

OIR – Operation Inherent Resolve

SOCOM – Special Operations Command

Appendix B

Case Selection, Analytic Approach, and Key Findings

This analysis of ISIL began with a broad interest in U.S. national security affairs and a desire to provide insight into an ongoing issue of strategic relevance. Of paramount importance was the ability to contribute tangibly to U.S. Government efforts to protect the Nation from terrorist threats both foreign and domestic.

With this goal in mind, the author interviewed Dr. Steven Bucci of the Heritage Foundation in the summer of 2015. A retired Army Special Forces officer with experience in the Middle East and the current director of the Douglas and Sarah Allison Center for Foreign and National Security Policy, he confirmed the seriousness of the threat posed to the United States and its allies by the Islamic State. Moreover, he identified the central role of landpower in deciding the conflict in Iraq and Syria.

After conducting further research, it then became clear that landpower would do more than aid the U.S. in defeating ISIL militarily. Indeed, seizing territory with American “boots on the ground” would cripple the Islamic State both financially and religiously for reasons described in greater detail below.

This paper adopts the U.S. Intelligence Community’s writing style in that it addresses three main questions: what?, so what?, and what next? The ensuing paragraphs will explain the origins of ISIL, why the reader should care about the ISIL threat, and what may happen going forward.

The analytic approach taken is as follows:

1. The Islamic State is an enduring threat to the U.S. homeland and to U.S. national security interests around the world.
2. The U.S. should “degrade and ultimately destroy” ISIL, yet the current U.S.-led airstrike campaign against ISIL targets cannot defeat the enemy.
3. As has been the case in all previous wars, airpower cannot secure victory on its own. While airpower provides strategic and tactical advantages, it cannot be used to take or hold territory.
4. Holding territory requires landpower. To date, U.S.-trained rebel militias in Iraq and Syria have been invariably over budget and undermanned. The Kurdish pesh merga will not fight beyond the boundaries of the group’s ancestral territory. As a result, it will not fight all the way to Raqqa, ISIL’s self-proclaimed capital. Regional nation-states have proven similarly unwilling to launch ground campaigns.
5. Absent a suitable regional force to fight the Islamic State on the ground, it is incumbent upon the U.S. military establishment to take and seize ISIL territory.
6. Seizing ISIL territory is essential because the group requires land for religious legitimacy and financial solvency. Depriving the group of land discredits Abu Bakr al-Baghdadi’s claim to have established a caliphate and restricts its ability to traffic in oil, persons, and antiquities.
7. If the U.S. succeeds in depriving ISIL of its legitimacy and finances, the group may be forced to rely more heavily on foreign donors and disperse geographically. In this sense, ISIL’s future could more closely resemble that of al-Qaeda, an organization which has largely been contained by the U.S. Intelligence Community and Military. By forcing ISIL to operate in opposition to its strengths and organizational competencies, the global

coalition will be better able to achieve President Obama's stated objective of degrading and ultimately destroying the Islamic State.

8. The financial-military strategy outlined above is the author's recommended course of action going forward.

Key Findings

1. ISIL is equal parts formidable and resourceful. Its wildly successful recruiting tactics have helped the group to replace its foot soldiers at the same rate coalition airstrikes have killed them. Additional strikes designed to cripple ISIL's oil business have failed to do so. Instead, the group has diversified its revenue streams to include trafficking in human organs. After one year of military strikes against ISIL targets, the enemy is no weaker than before.
2. Religion plays a vital, enduring role in informing ISIL leadership's military and governing tactics.
3. The U.S. Government is not the proper vehicle for the delivery of a counter-ISIL ideological campaign. It should instead concern itself with the disruption of ISIL finances.
4. ISIL oil revenue, while certainly part of the problem, is not the silver bullet that can take down the entire organization. As military pressure on ISIL oil assets has amplified, so too have the scale and ingenuity of ISIL's financial diversification efforts.
5. Decreasing U.S. involvement in the ongoing conflict against Islamic State is not a viable option from a national security perspective. Maintaining the current airstrike campaign, while cost-effective and safe relative to a ground offensive, cannot achieve the strategic objectives established by the president. Therefore, increasing U.S. involvement to a

ground offensive consisting of 20,000-25,000 U.S. troops at a cost of \$26.2-\$41.2 billion per year is advisable.

BIBLIOGRAPHY

1. "Al-Qaeda in the Arabian Peninsula (AQAP)." *Council on Foreign Relations*, June 19, 2015. <http://www.cfr.org/yemen/al-qaeda-arabian-peninsula-aqap/p9369>.
2. American Foreign Policy Council. "Confronting Terrorism Financing," 13. Lanham, MD: University Press of America, Inc., 2005.
3. Aregawi, Hermela. "Operation Inherent Resolve: A Year of Fighting ISIL," August 14, 2015. <http://america.aljazeera.com/watch/shows/third-rail/articles/2015/8/14/operation-inherent-resolve-a-year-of-fighting-isis.html>.
4. Avenarius, Tomas. "So finanziert der Islamische Staat sein Kalifat." *sueddeutsche.de*. August 27, 2014, sec. politik. <http://www.sueddeutsche.de/politik/terrormiliz-im-nahen-osten-so-finanziert-der-islamische-staat-sein-kalifat-1.2104658>.
5. Barnard, Anne. "Beirut, Also the Site of Deadly Attacks, Feels Forgotten." *The New York Times*, November 15, 2015. <http://www.nytimes.com/2015/11/16/world/middleeast/beirut-lebanon-attacks-paris.html>.
6. Barnes, Julian. "Paris Attacks Prompt Debate on Further Military Intervention on Syria." *WSJ*, November 14, 2015. <http://www.wsj.com/articles/paris-attacks-prompt-debate-on-further-military-intervention-on-syria-1447499860>.
7. Belasco, Amy. "CRS: The Cost of Iraq, Afghanistan, and Other Global War on Terror Operations Since 9/11." *Council on Foreign Relations*, March 29, 2011. <http://www.cfr.org/defense-budget/crs-cost-iraq-afghanistan-other-global-war-terror-operations-since-911/p28295>.
8. Belasco, Amy. "Troop Levels in the Afghan and Iraq Wars, FY2001-FY2012: Cost and Other Potential Issues," July 2, 2009. <https://www.fas.org/sgp/crs/natsec/R40682.pdf>.
9. Bender, Amanda Macias and Jeremy, 2014 Aug. 27, 297 39, and 12. "Here's How The World's Richest Terrorist Group Makes Millions Every Day." *Business Insider*, August 27, 2014. <http://www.businessinsider.com/isis-worlds-richest-terrorist-group-2014-8>.
10. Berezna, Alyssa. "Terror Inc.: How the Islamic State Became a Branding Behemoth." *Yahoo News*, February 18, 2015. <http://news.yahoo.com/terror-inc---how-the-islamic-state-became-a-branding-behemoth-034732792.html>.
11. Bergen, Peter. "Whack-a-Mole Is Not a Strategy - CNN.com." *CNN*, July 17, 2015. <http://www.cnn.com/2015/06/16/opinions/bergen-whack-a-mole-strategy/index.html>.
12. Bergen, Peter. "Why Does ISIS Keep Making Enemies? - CNN.com." *CNN*, February 18, 2015. <http://www.cnn.com/2015/02/16/opinion/bergen-isis-enemies/index.html>.

13. Biersteker, Thomas, and Sue Eckert. In *Countering the Financing of Terrorism*, 10. New York: Routledge, 2008.
14. Bradner, Eric, Barbara Starr, and Jim Acosta. "White House OKs up to 450 Additional Troops in Iraq - CNNPolitics.com." *CNN*, June 10, 2015. <http://www.cnn.com/2015/06/09/politics/u-s-considering-1000-additional-troops-in-iraq/index.html>.
15. Bucci, Steven. Interview with Dr. Steven Bucci, July 2015.
16. Bureau of Labor Statistics. "CPI Inflation Calculator," n.d. <http://data.bls.gov/cgi-bin/cpicalc.pl?cost1=736&year1=2005&year2=2015>.
17. ———. "CPI Inflation Calculator," n.d. <http://data.bls.gov/cgi-bin/cpicalc.pl?cost1=168000&year1=1968&year2=2015>.
18. Byman, Daniel, and Jennifer Williams. "Al-Qaeda vs. ISIS: The Battle for the Soul of Jihad." *Newsweek*, March 27, 2015. <http://www.newsweek.com/al-qaeda-vs-isis-battle-soul-jihad-317414>.
19. ———. "ISIS vs. Al Qaeda: Jihadism's Global Civil War." Text. *The National Interest*, February 24, 2015. <http://nationalinterest.org/feature/isis-vs-al-qaeda-jihadism%E2%80%99s-global-civil-war-12304>.
20. Callimachi, Rukmini. "ISIS Claims Responsibility, Calling Paris Attacks 'First of the Storm.'" *The New York Times*, November 14, 2015. <http://www.nytimes.com/2015/11/15/world/europe/isis-claims-responsibility-for-paris-attacks-calling-them-miracles.html>.
21. "CIA World Factbook." *Syria Country Profile*. Accessed November 9, 2015. <https://www.cia.gov/library/publications/the-world-factbook/geos/sy.html>.
22. "CIA World Factbook." *Tunisia Country Profile*. Accessed November 9, 2015. <https://www.cia.gov/library/publications/the-world-factbook/geos/ts.html>.
23. "CIA World Factbook." *Yemen Country Profile*. Accessed November 9, 2015. <https://www.cia.gov/library/publications/the-world-factbook/geos/ym.html>.
24. Coker, Margaret. "How Islamic State's Win in Ramadi Reveals New Weapons, Tactical Sophistication and Prowess." *Wall Street Journal*, May 25, 2015, sec. World. <http://www.wsj.com/articles/islamic-states-gains-reveal-new-prowess-on-battlefield-1432592298>.
25. Crowley, Michael. "What a New Iraq 'Surge' Could Look like." *POLITICO*, May 29, 2015. <http://www.politico.com/story/2015/05/what-a-new-iraq-surge-could-look-like-118395.html>.
26. Croft, Adrian. "Air Strikes Alone Not Enough to Defeat Islamic State: NATO Chief." *Reuters*, January 30, 2015. <http://www.reuters.com/article/2015/01/30/us-mideast-crisis-nato-idUSKBN0L321820150130>.
27. Curtis, Lisa. "Are ISIS and the Taliban Flirting With Allying?" *The Daily Signal*, June 18, 2015. <http://dailysignal.com/2015/06/18/are-isis-and-the-taliban-flirting-with-merging-in-afghanistan/>.
28. ———. "A View from the Frontlines of Islamist Insurgency: Perspectives on Terrorism in the Middle East and South Asia." *The Heritage Foundation*, July 10, 2015. <http://www.heritage.org/events/2015/07/islamist-insurgency>.
29. Davidson, Paul. "Gas Prices to Be Lowest for Labor Day in 11 Years." *USA TODAY*, September 4, 2015. <http://www.usatoday.com/story/money/2015/09/03/labor-day-gas/71654422/>.

30. DeBruyne, Nese, and Anne Leland. "American War and Military Operations Casualties: Lists and Statistics," January 2, 2015. <https://www.fas.org/sgp/crs/natsec/RL32492.pdf>.
31. Dilanian, Ken, Zeina Karam, and Bassem Mroue. "Despite Bombing, Islamic State Is No Weaker than a Year Ago." *The Big Story*, July 31, 2015. <http://bigstory.ap.org/article/990c86ba77604586a8a9e1bf5396cec1/despite-bombing-islamic-state-no-weaker-year-ago>.
32. Dozier, Kimberly. "We Didn't Kill ISIS. We Made Them Stronger." *The Daily Beast*, August 1, 2015. <http://www.thedailybeast.com/articles/2015/08/01/there-s-a-competition-for-global-jihad-between-these-two-groups-and-isis-is-pulling-ahead.html>.
33. Ehrenfeld, Rachel. "To Stop ISIS, Stop Its Ability to Sell Oil." *Algemeiner.com*, August 20, 2015. <http://www.algemeiner.com/2015/08/20/to-stop-isis-stop-its-ability-to-sell-oil/>.
34. Elbagir, Nima, Paul Cruickshank, and Mohammed Tawfeeq. "Boko Haram Purportedly Pledges Allegiance to ISIS - CNN.com." *CNN*, March 9, 2015. <http://www.cnn.com/2015/03/07/africa/nigeria-boko-haram-isis/index.html>.
35. Entous, Adam. "U.S. Sees Russian Drive Against CIA-Backed Rebels in Syria." *Wall Street Journal*, October 5, 2015, sec. World. <http://www.wsj.com/articles/u-s-concludes-russia-targeting-cia-backed-rebels-in-syria-1444088319>.
36. Fantz, Ashley, Ben Wedeman, and Greg Botelho. "Iran, Shia Militias Are Mixed Blessing to U.S., Iraq - CNN.com." *CNN*. Accessed November 2, 2015. <http://www.cnn.com/2015/03/13/middleeast/iraq-iran-shia-militias/index.html>.
37. "FBI Says Islamic State Bigger Threat Than Al-Qaeda Now." *RadioFreeEurope/RadioLiberty*, July 23, 2015, sec. News. <http://www.rferl.org/content/fbi-islamic-state-bigger-threat-than-al-qaeda/27148067.html>.
38. Financial Action Task Force. "Financing of the Terrorist Organisation Islamic State in Iraq and the Levant," February 2015. <http://www.fatf-gafi.org/documents/documents/financing-of-terrorist-organisation-isil.html>.
39. Geraghty, Jim. "Remember When Obama Called ISIS 'Jayvee'?" *National Review Online*, August 6, 2014. <http://www.nationalreview.com/campaign-spot/384723/remember-when-obama-called-isis-jayvee-jim-geraghty>.
40. Ghosh, Bobby. "A Short Political History of the Terrorists Who Call Themselves the 'Islamic State.'" *Quartz*. Accessed November 2, 2015. <http://qz.com/248787/a-short-political-history-of-the-barbaric-terrorists-who-call-themselves-the-islamic-state/>.
41. Gilsinan, Kathy. "Counting the ISIS Dead." *The Atlantic*, October 15, 2015. <http://www.theatlantic.com/international/archive/2015/10/us-isis-fighters-killed/410599/>.
42. Gordon, Michael R., and Eric Schmitt. "U.S. and Iraqi Forces Take Offensive Against ISIS on Several Fronts." *The New York Times*, October 19, 2015. <http://www.nytimes.com/2015/10/20/world/middleeast/us-and-iraq-pursuing-isis-on-several-fronts.html>.
43. Gottlieb, Stuart. "Four Reasons ISIS Is a Threat to the American Homeland." Text. *The National Interest*, September 20, 2014.

- <http://nationalinterest.org/feature/four-reasons-isis-threat-the-american-homeland-11317>.
44. Harper, Jon. "Obama Doubling US Troop Levels in Iraq." *Stars and Stripes*, November 7, 2014. <http://www.stripes.com/news/us/obama-doubling-us-troop-levels-in-iraq-1.312905>.
 45. Harris, Shane, and Nancy Youssef. "Exclusive: 50 Spies Say ISIS Intelligence Was Cooked." *The Daily Beast*, September 9, 2015. <http://www.thedailybeast.com/articles/2015/09/09/exclusive-50-spies-say-isis-intelligence-was-cooked.html>.
 46. Herridge, Catherine. "Bulletin Warns US Analysts Overwhelmed by pro-ISIS Social Media, Military Posts Threatened." Text.Article. *FoxNews.com*, May 26, 2015. <http://www.foxnews.com/politics/2015/05/26/bulletin-warns-us-analysts-overwhelmed-by-pro-isis-social-media-military-posts/>.
 47. Hudson, David. "President Obama: 'We Will Degrade and Ultimately Destroy ISIL.'" *Whitehouse.gov*, September 10, 2014. <https://www.whitehouse.gov/blog/2014/09/10/president-obama-we-will-degrade-and-ultimately-destroy-isil>.
 48. Hunt, Emily. "Zarqawi's 'Total War' on Iraqi Shiites Exposes a Divide among Sunni Jihadists," November 15, 2005. <http://www.washingtoninstitute.org/policy-analysis/view/zarqawis-total-war-on-iraqi-shiites-exposes-a-divide-among-sunni-jihadists>.
 49. Ingraham, Christopher. "Colorado's Legal Weed Market: \$700 Million in Sales Last Year, \$1 Billion by 2016." *The Washington Post*, February 12, 2015. <https://www.washingtonpost.com/news/wonk/wp/2015/02/12/colorados-legal-weed-market-700-million-in-sales-last-year-1-billion-by-2016/>.
 50. "Iraq Coalition Casualty Count." Accessed November 15, 2015. <http://icasualties.org/>.
 51. "Iraq Interest Rate | 2004-2015 | Data | Chart | Calendar | Forecast | News." Accessed November 8, 2015. <http://www.tradingeconomics.com/iraq/interest-rate>.
 52. "ISIS and Iran-Backed Shia Militias Are on a Collision Course outside of Ramadi." *Business Insider*, May 18, 2015. <http://www.businessinsider.com/iran-to-iraq-were-ready-to-help-you-more-against-isis-2015-5>.
 53. "ISIS Harvests Organs to Fund Terror: Iraqi Ambassador." *New York Post*, February 18, 2015. <http://nypost.com/2015/02/18/isis-accused-of-harvesting-organs-to-fund-terror/>.
 54. "ISIS Pays Foreign Fighters \$1,000 a Month: Jordan King." *NBC News*, September 22, 2014. <http://www.nbcnews.com/storyline/isis-terror/isis-pays-foreign-fighters-1-000-month-jordan-king-n209026>.
 55. "ISIS Shows off US Gear Seized from Iraqis in Fighting near Fallujah." Text.Article. *FoxNews.com*, June 4, 2015. <http://www.foxnews.com/world/2015/06/04/isis-shows-off-us-gear-seized-from-iraqis-in-fighting-near-fallujah/>.
 56. "Islamic State Bigger Threat than Al Qaeda, FBI Chief Says." Text.Article. *FoxNews.com*, July 23, 2015.

- <http://www.foxnews.com/politics/2015/07/23/islamic-state-bigger-threat-than-al-qaeda-fbi-chief-says/>.
57. "Islamischer Staat Die Ölgeschäfte der IS-Terroristen." *Frankfurter Allgemeine Zeitung*, August 29, 2014. <http://www.faz.net/aktuell/finanzen/devisen-rohstoffe/islamischer-staat-die-oelgeschaefte-der-is-terroristen-13122673.html>.
 58. Joerin, Julia. "Finanzen der Dschihadisten: 'Der "Islamische Staat" ist die größte Mafia.'" *Spiegel ONLINE*, November 20, 2014. <http://www.spiegel.de/politik/ausland/is-islamischer-staat-finanziert-sich-wie-die-mafia-a-1002676-druck.html>.
 59. Johnson, David, M. Wade Markel, and Brian Shannon. "The 2008 Battle of Sadr City," 2011. http://www.rand.org/content/dam/rand/pubs/occasional_papers/2011/RAND_OP335.pdf.
 60. Johnston, Ian. "The Rise of Isis: Group Now Control an Area the Size of Britain." *The Independent*, September 4, 2014. <http://www.independent.co.uk/news/world/middle-east/the-rise-of-isis-terror-group-now-controls-an-area-the-size-of-britain-expert-claims-9710198.html>.
 61. Johnston, Patrick B., and Benjamin Bahney. "Hitting ISIS Where It Hurts: Disrupt ISIS's Cash Flow in Iraq | RAND," August 13, 2014. <http://www.rand.org/blog/2014/08/hitting-isis-where-it-hurts-disrupt-isis-cash-flow.html>.
 62. Jost, Patrick, and Harjit Singh Sandu. "The Hawala Alternative Remittance System and Its Role in Money Laundering," n.d. <http://www.treasury.gov/resource-center/terrorist-illicit-finance/Documents/FinCEN-Hawala-rpt.pdf>.
 63. Jung, Danielle, Pat Ryan, Jacob Shapiro, and Jon Wallace. "Managing a Transnational Insurgency: The Islamic State of Iraq's 'Paper Trail,' 2005-2010," December 15, 2014. <https://www.ctc.usma.edu/v2/wp-content/uploads/2014/12/Managing-a-Transnational-Insurgency-ISI-FINAL1.pdf>.
 64. Kagan, Kimberly, Frederick Kagan, and Jessica Lewis. "Middle East Security Report 23: A Strategy to Defeat the Islamic State," September 2014. http://www.understandingwar.org/sites/default/files/Defeating%20ISIS_0.pdf.
 65. Leigh, Karen, and Syria Deeply. "ISIS Makes Up To \$3 Million a Day Selling Oil, Say Analysts." *ABC News*, August 2, 2014. <http://abcnews.go.com/International/isis-makes-million-day-selling-oil-analysts/story?id=24814359>.
 66. Levitt, Matthew. "Hezbollah Finances:," February 2005. <http://www.washingtoninstitute.org/policy-analysis/view/hezbollah-finances-funding-the-party-of-god>.
 67. LoGiurato, Brett. "ISIS Is Making An Absurd Amount Of Money On Ransom Payments And Black-Market Oil Sales." *Business Insider*, October 23, 2014. <http://www.businessinsider.com/isis-ransoms-20-million-treasury-says-2014-10>.
 68. Malik, Shiv, Ali Younes, Spencer Ackerman, and Mustafa Khalili. "How Isis Crippled Al-Qaida." *The Guardian*, June 10, 2015, sec. World news. <http://www.theguardian.com/world/2015/jun/10/how-isis-crippled-al-qaida>.

69. "Marginal Analysis Definition." *Investopedia*. Accessed November 9, 2015.
<http://www.investopedia.com/terms/m/marginal-analysis.asp>.
70. McChrystal, Stanley. "My Share of the Task." In *My Share of the Task*, 120. New York: Penguin Group, Inc., 2013.
71. McCoy, Terrence. "ISIS Just Stole \$425 Million, Iraqi Governor Says, and Became the 'world's Richest Terrorist Group'." *The Washington Post*, June 12, 2014. <https://www.washingtonpost.com/news/morning-mix/wp/2014/06/12/isis-just-stole-425-million-and-became-the-worlds-richest-terrorist-group/>.
72. Mendelsohn, Barak. "Collateral Damage in Iraq." *Foreign Affairs*, June 15, 2014. <https://www.foreignaffairs.com/articles/iraq/2014-06-15/collateral-damage-iraq>.
73. ———. "Collateral Damage in Iraq." *Foreign Affairs*, June 15, 2014. <https://www.foreignaffairs.com/articles/iraq/2014-06-15/collateral-damage-iraq>.
74. Michaels. "Islamic State Recruiting Offsets 15,000 Killed by Airstrikes in Past Year." *USA TODAY*, July 29, 2015. <http://www.usatoday.com/story/news/world/2015/07/29/air-campaign-kills-15000-isis-militants-pentagon-iraq-syria/30750327/>.
75. Michaels, Jim. "U.S. Looking at Expanding Role on Ground in Iraq, Syria." *USA TODAY*, October 28, 2015. <http://www.usatoday.com/story/news/world/2015/10/28/us-looking-expanding-role-ground-iraq-syria/74758206/>.
76. Mills, Curt. "Al-Qaeda Now at War with ISIS." *Washington Examiner*, September 11, 2015. <http://www.washingtonexaminer.com/al-qaeda-now-at-war-with-isis/article/2571883>.
77. Moore, Jack. "Hawala: The Ancient Banking Practice Used to Finance Terror Groups." *Newsweek*, February 24, 2015. <http://europe.newsweek.com/underground-european-hawala-network-financing-middle-eastern-terror-groups-307984>.
78. Nasuti, Matthew. "Killing Each Taliban Soldier Costs \$50 Million," October 5, 2010. <http://www.informationclearinghouse.info/article26521.htm>.
79. Nebehay, Stephanie. "Islamic State-Controlled Parts of Syria, Iraq Largely out of Reach: Red Cross." *Reuters*, March 13, 2015. <http://www.reuters.com/article/2015/03/13/us-mideast-crisis-syria-icrc-idUSKBN0M921N20150313>.
80. Nguyen, Katie. "Black Market Trade in Organs Targeted in Anti-Trafficking Treaty." *Reuters*, March 26, 2015. <http://www.reuters.com/article/2015/03/26/us-europe-trafficking-organs-idUSKBN0MM2FR20150326>.
81. Nordland, Rod. "U.S. Soldiers, Back in Iraq, Find Security Forces in Disrepair." *The New York Times*, April 14, 2015. <http://www.nytimes.com/2015/04/15/world/middleeast/iraq-military-united-states-forces-camp-taji.html>.
82. Obama, Barack. "Statement by the President." *Whitehouse.gov*, August 28, 2014. <https://www.whitehouse.gov/the-press-office/2014/08/28/statement-president>.
83. Odowa, Mohamed. "Somalia Terror Group Al Shabaab 'to Pledge Allegiance to ISIS.'" *Mail Online*, July 10, 2015. <http://www.dailymail.co.uk/news/article-3156072/Somalia-terror-group-Al-Shabaab-pledge-allegiance-ISIS-terrifying-expansion-Caliphate.html>.

84. O'Toole, Molly. "Bye-Bye 'No Boots on the Ground': US to Send Special Ops Troops to Syria." *Defense One*, October 30, 2015.
<http://www.defenseone.com/threats/2015/10/bye-bye-no-boots-ground-us-send-special-ops-troops-syria/123285/>.
85. ———. "Lindsey Graham Gets Specific: We Need 20,000 U.S. Troops in Iraq and Syria." *Defense One*, July 8, 2015.
<http://www.defenseone.com/politics/2015/07/lindsey-graham-gets-specific-we-need-20000-us-troops-iraq-and-syria/117274/>.
86. Pearce, Steve. "It's Simple: Stop the Oil, Stop ISIS," July 5, 2015.
<http://www.abqjournal.com/607886/opinion/its-simple-stop-the-oil-stop-isis.html>.
87. Philips, Matthew. "Islamic State Loses Its Oil Business." *BloombergView*, August 14, 2014. <http://www.bloomberg.com/bw/articles/2014-10-14/u-dot-s-dot-air-strikes-cut-isis-oil-production-by-70-percent>.
88. Phillips, James. "ISIS vs. Al Qaeda: The Good News and the Bad News." *The Heritage Foundation*, January 21, 2015.
<http://www.heritage.org/research/commentary/2015/1/isis-vs-al-qaeda-the-good-news-and-the-bad-news>.
89. Porter, Geoff. "CTC Perspectives: The Impact of Crude's Collapse on the Islamic State," January 13, 2015. <https://www.ctc.usma.edu/posts/ctc-perspectives-the-impact-of-crudes-collapse-on-the-islamic-state>.
90. Price, Bryan, Dan Milton, Muhammad al-'Ubaydi, and Nelly Lahoud. "The Group That Calls Itself a State: Understanding the Evolution and Challenges of the Islamic State," December 16, 2014. <https://www.ctc.usma.edu/posts/the-group-that-calls-itself-a-state-understanding-the-evolution-and-challenges-of-the-islamic-state>.
91. Rabil, Robert G. "The ISIS Chronicles: A History." Text. *The National Interest*, July 17, 2014. <http://nationalinterest.org/feature/the-isis-chronicles-history-10895>.
92. Robinson, Wills. "ISIS Shows off Seized US Military Equipment in Latest Video." *Mail Online*, June 5, 2015. <http://www.dailymail.co.uk/news/article-3111931/Concern-Pentagon-ISIS-shows-military-equipment-seized-Iraqi-troops-latest-video.html>.
93. Roth, John, Douglas Greenburg, and Serena Wille. "Monograph on Terrorist Financing," n.d. http://www.9-11commission.gov/staff_statements/911_TerrFin_Monograph.pdf.
94. Ryan, Missy, Thomas Gibbons-Neff, and Mustafa Salim. "First American Soldier Is Killed in Combat in Iraq since 2011 Troop Exit." *The Washington Post*, October 22, 2015. https://www.washingtonpost.com/world/reports-us-iraqi-commandos-raid-islamic-state-outpost-hostages-freed/2015/10/22/f0586b60-78bd-11e5-bc80-9091021aeb69_story.html.
95. Sanchez, Ray. "United Nations Investigates Claim of ISIS Organ Theft - CNN.com." *CNN*, February 19, 2015.
<http://www.cnn.com/2015/02/18/middleeast/isis-organ-harvesting-claim/index.html>.
96. Schladow, Nadia. "Six Seductive Stories That Undercut the Army." *War on the Rocks*, October 9, 2015. <http://warontherocks.com/2015/10/six-seductive-stories-that-undercut-the-army/>.

97. Schmitt, Eric. "ISIS or Al Qaeda? American Officials Split Over Top Terror Threat." *The New York Times*, August 4, 2015.
<http://www.nytimes.com/2015/08/05/world/middleeast/isis-or-al-qaeda-american-officials-split-over-biggest-threat.html>.
98. Shabad, Rebecca. "US Spending \$9M a Day in ISIS Fight," June 11, 2015.
<http://thehill.com/policy/finance/244725-pentagon-releases-first-cost-breakdown-for-isis-fight>.
99. Shatz, Howard J. "How ISIS Funds Its Reign of Terror | RAND," September 8, 2014. <http://www.rand.org/blog/2014/09/how-isis-funds-its-reign-of-terror.html>.
100. ———. "To Defeat the Islamic State, Follow the Money." *POLITICO Magazine*, September 10, 2014.
<http://www.politico.com/magazine/story/2014/09/to-defeat-isis-follow-the-money-110825.html>.
101. ———. "To Defeat the Islamic State, Follow the Money | RAND," September 10, 2014. <http://www.rand.org/blog/2014/09/to-defeat-the-islamic-state-follow-the-money.html>.
102. Simpson, Cam. "The Banality of Islamic State: How ISIS Corporatized Terror." *Bloomberg Business*, November 20, 2014.
<http://www.bloomberg.com/graphics/2014-the-business-of-isis-spreadsheets-annual-reports-and-terror/#/>.
103. Smart, Noel, and Amanda Zamora. "Timeline: The Iraq Surge, Before and After," n.d. <http://www.washingtonpost.com/wp-srv/nation/thegamble/timeline/>.
104. "Snapshot." Accessed November 8, 2015.
<http://www.rand.org/blog/2014/09/to-defeat-the-islamic-state-follow-the-money.html>.
105. Spencer, Robert. "The Complete Infidel's Guide to ISIS." In *The Complete Infidel's Guide to ISIS*. Regnery Publishing, 2015.
106. Starr, Barbara, and Catherine Shoichet. "Russian Plane Crash: U.S. Intel Suggests ISIS Involved - CNN.com." *CNN*, November 4, 2015.
<http://www.cnn.com/2015/11/04/africa/russian-plane-crash-egypt-sinai/index.html>.
107. "Steven Bucci." *The Heritage Foundation*. Accessed November 14, 2015.
<http://www.heritage.org/about/staff/b/steven-bucci>.
108. The Economist. "Save Our Stones," June 13, 2015.
<http://www.economist.com/news/middle-east-and-africa/21654065-well-killing-people-islamic-state-smashing-up-ancient-works-art-only>.
109. "The Rise of ISIS." *FRONTLINE*, October 28, 2014.
<http://www.pbs.org/wgbh/pages/frontline/rise-of-isis/>.
110. "The State of the War Against ISIS." *The New York Times*, June 12, 2014.
<http://www.nytimes.com/interactive/2014/06/12/world/middleeast/the-iraq-isis-conflict-in-maps-photos-and-video.html>.
111. Tomlinson, Lucas, and Jennifer Griffin. "EXCLUSIVE: Russian Jets 'Intercept' US Predator Drones over Syria, Officials Say." *FoxNews.com*, October 7, 2015.
<http://www.foxnews.com/world/2015/10/07/exclusive-russian-jets-intercept-us-predator-drones-over-syria-officials-say/>.

112. Tomlinson, Simon. "ISIS Opens New Front in North Africa." *Mail Online*, November 28, 2014. <http://www.dailymail.co.uk/news/article-2853255/ISIS-opens-new-North-Africa-two-extremist-groups-Libya-Egypt-pledge-allegiance-terror-leader.html>.
113. Toosi, Nahal, and Philip Ewing. "U.S. Says It Killed Islamic State's 'Chief Financial Officer.'" *POLITICO*, May 16, 2015. <http://www.politico.com/story/2015/05/white-house-us-special-forces-kill-key-islamic-state-leader-118017.html>.
114. Tuck, Chris. "Land Power and the Islamic State Crisis." *Defence-In-Depth*, 2014. <http://defenceindepth.co/2014/10/13/land-power-and-the-islamic->
- 115.
116. "United States Department of Defense Fiscal Year 2015 Budget Amendment," July 2014. http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2015/amendment/FY2015_Budget_Request_Overview_Book_Amended.pdf.
117. Vanden Brook, Tom. "Pentagon Pays Syrians \$400 per Month to Fight ISIL." *USA TODAY*, July 22, 2015. <http://www.usatoday.com/story/news/world/2015/06/22/pentagon-syria-isis/29113251/>.
118. Walker, Dinah. "Trends in U.S. Military Spending." *Council on Foreign Relations*, July 15, 2014. <http://www.cfr.org/defense-budget/trends-us-military-spending/p28855>.
119. Watson, Bruce. "Robert McNamara: The High Cost of Cold-Blooded Analysis - DailyFinance." *DailyFinance.com*, December 4, 2009. <http://www.dailyfinance.com/2009/07/06/robert-mcnamara-the-high-cost-of-cold-blooded-analysis/>.
120. Weiss, Michael, and Hassan Hassan. "ISIS: Inside the Army of Terror." In *ISIS: Inside the Army of Terror*. New York: Reagan Arts, 2015.
121. Westcott, Lucy. "The U.S. Has Spent \$9 Million a Day to Fight ISIS." *Newsweek*, June 12, 2015. <http://www.newsweek.com/isis-islamic-state-us-fighting-isis-isil-obama-pentagon-air-force-airstrikes-342595>.
122. "Where Islamic State Gets Its Money." *The Economist*, January 4, 2015. <http://www.economist.com/blogs/economist-explains/2015/01/economist-explains>.
123. Windrem, Robert. "ISIS By the Numbers: Foreign Fighter Total Keeps Growing." *NBC News*, February 28, 2015. <http://www.nbcnews.com/storyline/isis-terror/isis-numbers-foreign-fighter-total-keeps-growing-n314731>.
124. Wiser, Daniel. "How Lindsey Graham Would Defeat the Islamic State." *Washington Free Beacon*, June 25, 2015. <http://freebeacon.com/national-security/how-lindsey-graham-would-defeat-the-islamic-state/>.
125. Wood, Graeme. "What ISIS Really Wants." *The Atlantic*, March 2015. <http://www.theatlantic.com/magazine/archive/2015/03/what-isis-really-wants/384980/>.
126. ———. "Lindsey Graham Calls for 20,000 Ground Troops in Iraq, Syria to Defeat Islamic State." *Washington Free Beacon*, July 9, 2015.

<http://freebeacon.com/politics/lindsey-graham-challenges-presidential-rivals-on-foreign-policy/>.

127. Yackley, Ayla Jean, and Humeyra Pamuk. "NATO Denounces Russian Incursion into Turkish Airspace." *Reuters*, October 6, 2015. <http://www.reuters.com/article/2015/10/06/us-mideast-crisis-syria-turkey-russia-idUSKCN0RZ0FT20151006>.
128. Yoon, Sangwon. "Islamic State Circulates Sex Slave Price List." *Bloomberg.com*, August 4, 2015. <http://www.bloomberg.com/news/articles/2015-08-03/sex-slaves-sold-by-islamic-state-the-younger-the-better>.

Academic Vita

Ian R. Button

EDUCATION

The Pennsylvania State University's Schreyer Honors College – University Park, PA
Bachelor of Science in Finance, (December 2015), Minor in International Business
Bachelor of Science in German, (December 2015), Minor in International Studies

Humboldt Universität zu Berlin – Berlin, Germany
Immersive German Language Program, August 2013 – July 2014
Sponsored by Penn State's Strategic and Global Security Program (SGS)

FOREIGN LANGUAGES

German – effective operational proficiency (attained C1.1 level)
Russian – elementary proficiency

PROFESSIONAL EXPERIENCE

Defense Studies Intern, The Heritage Foundation, Washington, DC (June – August 2015)

- Published four op-eds on Daily Signal, including two on Russian maritime maneuvering in the Arctic and Atlantic
- Researched U.S. military Major Defense Acquisition Programs (MDAPs) for 2016 Index of U.S. Military Strength
- Edited U.S. Army and U.S. Marine Corps sections of 2016 Index of U.S. Military Strength

Analyst, Strategic Studies Group, Applied Research Laboratory, Penn State University (January – May 2015)

- Assessed probable future scenarios of al-Qaeda through lens of organizational lifecycle theory
- Briefed and provided written assessments to the Defense Combatting Terrorism Center, Defense Intelligence Agency

Editor, Atlantic Community (foreign policy think-tank), Berlin, Germany (January – March 2014)

- Wrote analysis of Transatlantic Trade and Investment Partnership (TTIP) from German and American perspectives
- Edited op-ed submissions for accuracy of content, grammatical correctness, and style
- Attended symposia on US national security, TTIP, EU immigration policy, and Spanish-German relations

Research Assistant, U.S. Army War College – Strategic Studies Institute, Carlisle, Pennsylvania (May – August 2013)

- Researched impact of financial austerity on NATO interoperability for Dr. John R. Deni [Research Professor of Joint, Interagency, Intergovernmental, and Multinational (JIIM) Security Studies], published by Chatham House
- Published op-ed “Washington’s Debt, Beijing’s Bubble, and the Conversation No One is Having” examining sources of Chinese financial instability and their detrimental impact on US through exposure to foreign debt obligations
- Approved for National Agency Check with Inquiries (NACI) clearance, resulting in expanded research privileges

RESEARCH PROJECT EXPERIENCE

- Wrote and researched Schreyer Honors Thesis on role of finance in understanding and defeating the Islamic State
- Authored four analyses of proposed Transatlantic Trade and Investment Partnership (TTIP) identifying reasons why Americans and Germans both support and oppose US-EU free trade, published March 2014 by Atlantic Community
- Authored “Washington’s Debt, Beijing’s Bubble, and the Discussion No One is Having”, published November 2013 by US Army War College Strategic Studies Institute

PROFESSIONAL CONFERENCES

- Represented Penn State at the 2015 U.S. Naval Academy Leadership Conference addressing ways leaders can use technology as a catalyst for innovation and transformation rather than as a mere tool, January 2015
- Represented US military interests in PACRIM exercise focusing on South China Sea and Muslim Autonomous Regions of the Philippines, National Security Analysis Summer Seminar (NSAISS), August 2014
- Debated role of business community in responding to domestic terror attack, US Army War College, April 2013

AFFILIATIONS

- Penn State's Strategic and Global Security Scholars Program (Member, April 2013 – Present)
- Knowlton's Rangers Strategic Honors Society (Deputy Director, May 2015 – Present)
- Penn State Journal of International Affairs (Editor, May 2015 – Present)
- US Embassy Berlin's "Meet US" Program (Student Representative, April 2014 – July 2014)
- Schreyer Student Council (Member, 2011-2013 and Delegate to Penn State Student Government, 2012 – 2013)

AWARDS/HONORS

- Scholar, Penn State Schreyer Honors College (2011-Present)
- Fellow, Paterno Fellows Program for excellence in liberal arts (2013-Present)
- Smeal College of Business Student Marshal for Fall 2015 Graduation
- Evan Pugh Scholar Award: awarded to students in top 0.5% of graduating class
- German Academic Exchange Service (DAAD) Undergraduate Scholarship (2013-2014)
- Lucretia Van Tuyl Simmons Award: awarded annually to outstanding Penn State senior majoring in German
- Faculty Senate Scholarship: awarded to top 1% of Penn State students, for outstanding academic achievement
- Member, Delta Phi Alpha national German honors society for excellence in study of German
- Member, Beta Gamma Sigma international business honors society for top 10% of graduating class

VOLUNTEER EXPERIENCE

- Appalachia Service Project (March 2015): one-week community service program in rural West Virginia repairing homes, building decks, and hanging drywall

TRAVEL EXPERIENCE

- Berlin, Germany (August 2013 – July 2014): 11-month German language immersion program
- Vietnam and Cambodia (May 2013): 10-day honors study tour organized by Schreyer Honors College