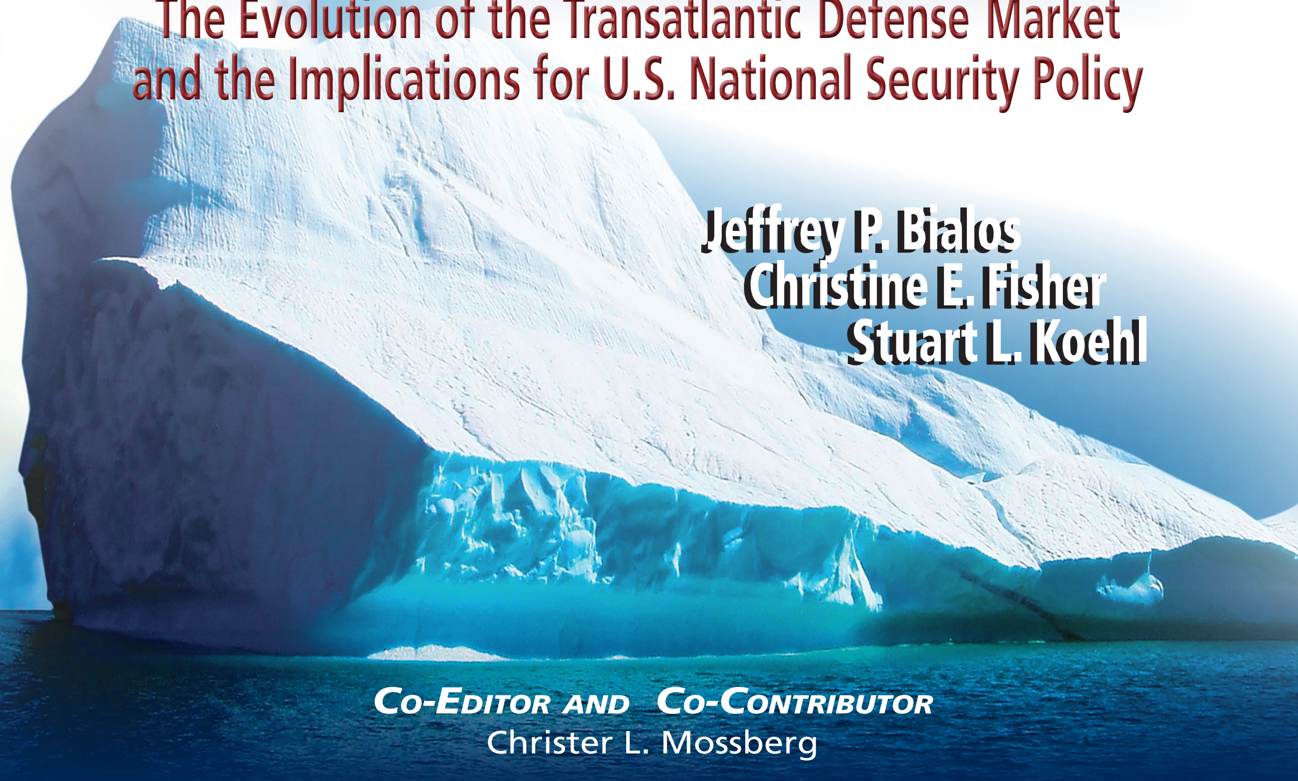
Special Foreword by Dr. Jacques Gansler

FORTRESSES & ICEBERGS

The Evolution of the Transatlantic Defense Market and the Implications for U.S. National Security Policy



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VOLUME I

Fortresses and Icebergs

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Volume I
Study Findings and Recommendations

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Executive Summary and Detailed Overview

Executive Summary

The two central dynamics of the evolving defense marketplace—the drive for innovation to meet new twenty-first century military requirements and the drive for affordability in an era of increasingly constrained budgets and rising weapons costs—converge to create powerful incentives for governments to allow more open and competitive markets. In the consolidating defense markets that exist today, cross-border market access—the subject of this study—can be a useful tool for governments to facilitate competition, and the affordability and innovation that competition can bring.

Historically, defense markets have been among the most protected of any industrial sectors in light of their close relationship to sovereignty and national security as well as domestic employment and technology leadership considerations. Today, however, Transatlantic defense markets, driven by economic realities, are in transition from historically closed "national" markets to more open and competitive markets and somewhat "better value" buying habits. There have been material and gradual changes for the better in terms of market openness in the United States and most of the European countries studied.

The Evolution of European Defense Markets: Gradually More Open and Competitive Markets, But More Challenging for U.S. Suppliers

In Europe, the available data shows that protected national defense procurement markets in the classic defense product sectors we examined are gradually being replaced with markets where awards are increasingly made either on a more open and competitive basis or through European cooperative programs. Growing cooperative programs reflect the economic reality that national programs are becoming unaffordable for most European nations. There also is evidence of more emphasis on "best value for money" in European procurements and more buying for security need rather than to achieve social goals. The heavy reliance on sole source national buying is declining and there is evidence of increased inter-European buying (both directly and through European cooperative programs).

These trends vary by country and by market segment. Sweden is the most accessible market in Europe for U.S. firms and Italy and Romania are the least. France, historically a closed country, shows signs of opening—especially to other European suppliers—as it shifts from a traditional Gaullist strategy of independence to a neo-Gaullist Eurocentric approach. Across all nations ground and naval markets tend to be more closed and national while military aircraft and C4ISR (command, control, computers, communications, intelligence, surveillance and reconnaissance) markets tend to be more open and competitive. These European national trends also are evolutionary in nature; change in defense markets is inherently slow because defense programs, by their nature, tend to last many years. Not surprisingly, the lion's share of contracts awarded on legacy programs continues to be awarded to national contractors on a sole source basis.

The high levels of U.S. spending for the war in Iraq—effectively a "bull market" in defense—created an upwards trend from 2004 to 2007 in both U.S. sales to European nations and European sales to the United States. However, it is unlikely the U.S. sales to Europe will continue at these elevated levels as the war winds down (U.S. sales to Europe had already begun to decline in 2008) and it is uncertain that European participation in the U.S. market can be sustained at current levels.

Trends at the European level are likely to reinforce and accelerate the better national buying habits emerging in Europe. Europe is coalescing a defense identity and the European Union (EU) is developing a real role in defense markets—as a regulator, coordinator and, gradually, as a buyer. In particular, the pending enactment of European Commission (EC) Directives on Defense Procurement and Transfers are constructive steps forward. These new rules will help to eliminate fragmentation and redundant spending in European defense markets, and will introduce competition and the innovation and affordability that competition can bring. The new EC Directives also will likely reinforce and accelerate the better national buying habits emerging in Europe that we identified during this study.

The shift toward a "European" market and industry has other implications at the national level. Numerous of the European countries studied have emerging national policies of encouraging the development of a European, as distinct from national, defense industry; these governments face trade-offs between this goal and the desire to maintain a national defense industrial capability, with technological, employment and other benefits. These governments are also keenly aware of these trade-offs and are taking various approaches to reconciling them.

Paradoxically, despite constructive developments in European defense markets, the net effect of all of the European dynamics—at the national and EU level—is to create a tougher market environment for U.S. defense firms seeking to do business in Europe—especially U.S. subsystem suppliers.

- The increased competition in Europe means a decreased use of sole source awards, where American firms have derived significant sales. Moreover, in competitive procurements, U.S. firms must face increasingly robust solutions offered by other European and third-country (especially Israeli) suppliers and industry teams.
- There is evidence of an emerging European (as distinct from national) policy preference and Eurocentric buying pattern in the growing number of non-U.S. awards in European competitive procurements. Indeed, the U.S. win rate on competitive programs is low and the U.S. presence on large European programs is limited.
- The new EC Defense Procurement Directive, while ostensibly neutral on non-EU participation in European defense markets, affords national authorities the opportunity to use various formalized EU acquisition procedures (e.g., the "security of supply" and "security of information" provisions) to effectively exclude U.S. and other non-EU firms.
- The growth of European cooperative procurements unfortunately means fewer opportunities for U.S. firms in light of longstanding *juste retour* policies, under which participating governments negotiate work share agreements that allocate work to their own national firms on the basis of the investment of each country.
- There is clear evidence, beyond rhetoric, of a behavioral shift in Europe toward "designing around" or designing out components or subsystems regulated by the U.S. International Traffic in Arms Regulations (ITAR), which has a particularly adverse impact on U.S. subsystem and component suppliers.

- On the supply side of European markets, the fact of a very few, increasingly large, European defense firms creates powerful incentives for European governments to favor these firms in their procurement decision-making—reinforcing the European preference noted above—in order to maintain a robust European supplier base.

In sum, absent strategic action by the United States, the market position of U.S. firms in Europe is likely to erode over time—with occasional European buying of U.S. system solutions (for urgent requirements or where no other comparable or affordable European options exist) and fewer opportunities for U.S. subsystem suppliers.

The Evolution of U.S. Defense Buying: Somewhat More Open With Continued Challenges for Foreign Suppliers

In contrast to the challenges increasingly faced by U.S. firms in Europe, the future prospects in the United States for European firms appear somewhat more appealing.

The United States has a long history of competitive procurement but not of fully "open" procurement. Historically, foreign suppliers have often been excluded from competition through formal and informal means for a variety of reasons. However, the traditional attitudes are changing, and there is increased evidence of "openness" to foreign sources of supply at the prime level. European suppliers won some 28 percent of new competitive awards on major U.S. programs across the market areas we studied (typically as one of the lead suppliers on a team with other U.S. suppliers). This data reflects recent awards on the Army Light Utility Helicopter (LUH), the Marine One presidential helicopter, and other programs; the recent award of the tanker program (not included in the data) also is indicative. European firms also have "bought" into the U.S. market through acquisitions (large ones in the case of United Kingdom (UK) firms and smaller purchases of mostly dual-use firms by continental European firms) as well as greenfield start-up operations.

Moreover, the emerging elements of the Obama Administration defense acquisition policy tend to create incentives for U.S. Department of Defense (DoD) to allow additional market access for foreign suppliers in the future. In this regard, the new "demand" side emphasis is on affordability, more rapid fielding, more competition and "70 percent solutions"—putting the practical ahead of the perfect—in the context of shifting investment toward irregular warfare challenges. In the context of these new policy thrusts, enhanced market access can not only result in more competition, and the innovation and affordability it can bring, but also can facilitate our war fighters' access to existing 70 percent solutions from abroad. Further, future "war" may be waged not via defense hardware power but by potentially devastating cyber or other global levers of power. In this context, there is even more of a premium on collaboration with our European Allies that may help to override market access impediments.

To be sure, significant challenges exist in the United States for European suppliers. These include institutional and cultural constraints, the sheer complexity of the U.S. market, the costs of entry, and security-driven measures. The risks of additional Buy American legislation and similar actions during the ongoing economic downturn and the failure to reform defense trade controls also are key factors that can undermine our ability to collaborate with our allies. Further, as defense budgets tighten due to our growing fiscal imbalances and competing economic needs (e.g., the recent stimulus package), it remains to be seen whether programs that feature large European value-added elements will have the domestic support to be sustained.

However, in the long term, a number of factors point to the gradual evolution of a more appealing environment for European firms, including: the size of U.S. spending and range of opportunities, signs of increasing customer willingness to consider foreign sources; and the increasing willingness of the United States to allow foreign firms to buy into the market through mergers, acquisitions and other forms of industrial collaboration.

It also should be recognized that the risks of "fortress-like" conduct on both sides of the Atlantic are interactive. U.S. policies and attitudes can have a bearing on European actions with respect to its defense market, and vice versa. A series of U.S. laws, policies and practices—the challenges posed by the ITAR, restrictive policies on foreign investment in U.S. defense firms, restrictive immigration policies and constant congressional Buy American proposals—can create an impression of U.S. protectionism that helps shape European actions regarding its defense market and enhances the risks that Europe will move in a reciprocal and more protectionist fashion.

While Long-Term Dynamics Tend to Favor an Open and Competitive Transatlantic Defense, Short-Term Impediments—Largely Government Rules, Policies and Practices—Curtail Its Development

In the long term, powerful societal trends and forces at work—the globalization of the broader economy, the economics of defense markets (especially rising costs), and increased reliance on commercial technology in defense systems—may encourage a more open and accessible Transatlantic defense market and "better value" buying by customers. However, this is one possible long-term trajectory and the future is yet to be written.

The reality today and for the foreseeable future is that a series of complex and interrelated market access barriers—embedded in government laws, rules, policies and practices—serve as a drag on Transatlantic defense market development. As we show below, the key market access impediments, which vary in degree by country, include:

- Domestic content rules;
- Informal domestic work share requirements;
- Offsets and *juste retour*;
- ITAR, the U.S. defense trade rules, which have resulted in a significant "design around" movement in Europe and thereby limited market opportunities for U.S. firms;
- Foreign investment rules and policies; and
- Continuing government ownership and control of defense firms in some countries.

In an era where firms can "buy" into foreign commercial markets globally through mergers, acquisitions and joint ventures, restrictions on foreign investment in defense assets have been a limiting factor on both sides of the Atlantic.

While these market access impediments all vary in form, at their core is the fundamental reality that governments have powerful incentives to spend their defense dollars at home to the extent possible for several interrelated reasons: 1) the close relationship of defense industries to national sovereignty and economic health; 2) a desire for operational sovereignty of their own systems; 3) anxieties over security of supply (national reliance or dependence on other nations for sensitive systems); and 4) a desire to promote autonomous national industrial capabilities, employment—in a word, jobs—and technology leadership.

Significantly, the tendencies toward fortress-like conduct are likely to be exacerbated in the context of the current global financial crisis and serious recession. On both sides of the Atlantic, the understandable focus on sustaining and protecting domestic jobs is creating protectionist pressures that may constrain the ability of governments to maintain momentum toward more open defense procurement.

In sum, governments can drive the pace and scope of the development of the Transatlantic defense market through their actions. On our current trajectory, the development of better buying habits in the markets studied will be very gradual and evolutionary in nature—slow and lumpy—without strategic action by governments to address these impediments.

The Strategic Rationale for Action and Recommendations for Change

Developing a more open and competitive Transatlantic marketplace can have a number of potential benefits for U.S. national security: 1) encouraging competition, and the innovation and affordability it can bring, in consolidated defense markets marked by escalating weapons system costs; 2) facilitating greater force interoperability and capability acquisition by allies in an era where coalition warfare is the norm; 3) enhancing cooperation among allies in a world where collective action is more likely the norm than the exception; and 4) strengthening the U.S. defense industry, which through improved market access can lower per unit costs of our own systems. While greater Transatlantic defense industrial cooperation necessarily implies greater technology sharing, enhanced standards and appropriate security safeguards can appropriately mitigate associated risks.

The following are six core sets of actions, described in detail below, which we recommend the DoD consider undertaking in order to facilitate change in this area:

1. Assign a Senior Pentagon Executive to Manage the Interrelated Coalition War Fighting, Transatlantic Market Development and Globalization Agenda
2. Step Up Armaments Cooperation in Support of Coalition Warfare and Transatlantic Market Development
3. Reform Internal U.S. Government Rules, Policies and Processes to Facilitate Development of a Transatlantic Defense Market: Export Controls, Industrial Security, National Disclosure Policy, Procurement, Investment, and Buy National Tendencies
4. Put in Place the International "Hardwiring" for an Open and Competitive Transatlantic Defense Market: Engage on Sustained Basis With the EU and LOI 6 and Revitalize the Bilateral Declaration of Principle Process
5. Shape Demand-Side Measures With Arms-Buying Nations to Curb Illicit Foreign Payments in the Defense Sector
6. Create a Transatlantic Defense Industrial Dialogue to Catalyze Change

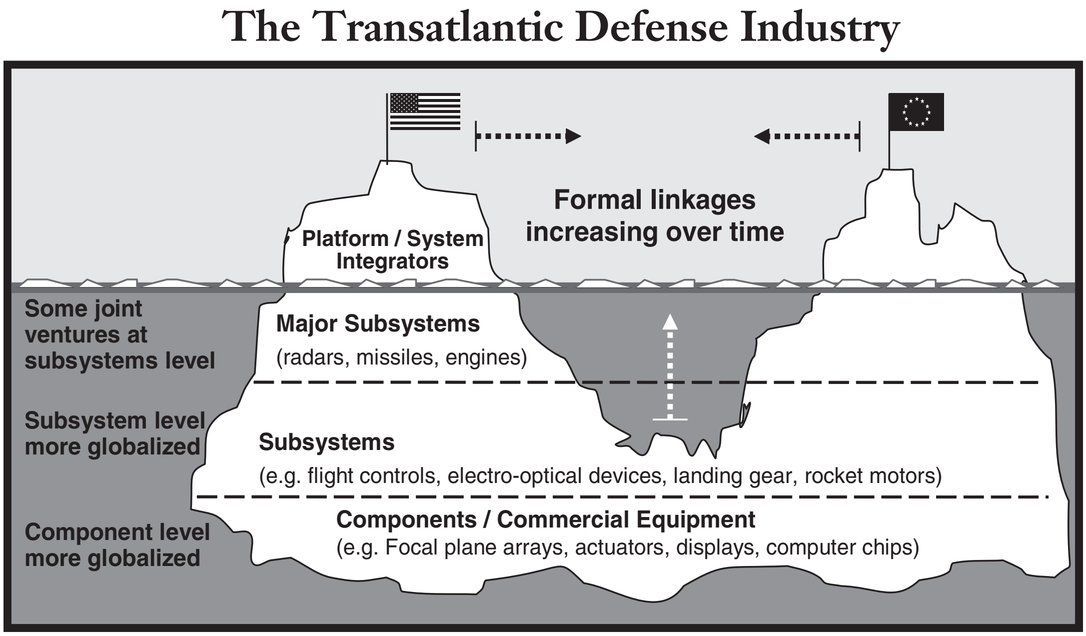
One of the core policy thrusts that permeate these recommendations is the need for the United States to accept the reality that for matters of security and defense and the related markets, Europe is evolving a set of central bodies with their own authorities and roles. Put another way, North Atlantic Treaty Organization (NATO) is no longer the only appropriate multilateral forum for U.S.-European engagement on security and defense—especially defense market—matters.

Accordingly, the United States should not rigidly cling exclusively to a bilateral process and engagement only with NATO. Rather, we should embrace, engage with, and work to shape the EU's emerging role in defense generally, and defense markets in particular, in a manner consistent with U.S. interests rather than continue to question or resist this development.

Thus, a lynchpin of a new U.S. strategy should be to engage on a bilateral and multilateral basis with the six major defense supplier nations in Europe (France, Germany, Italy, Spain, Sweden and the UK, hereafter referred to as the LOI 6), the EU and NATO—to create effective "hardwiring" and improved standards for an open and competitive Transatlantic defense market.

Finally, the emerging U.S. demand side shift currently underway—toward greater investment in low intensity conflict and coalition operations in support of such missions—should help shape our defense market policies. Thus, we should organize our armaments cooperation with European partners on the development of low intensity capabilities—where we can gain benefits from existing European security solutions in the war against terrorism—and enhanced interoperability—with an emphasis on facilitating secure communications, friendly fire avoidance and improved situational awareness needed to work effectively in coalitions. These efforts, less platform-oriented and in some aspects lower-tech in nature, are more realistic, less apt to engender protectionist tendencies on both sides of the Atlantic, and more likely to produce meaningful results—to benefit our war fighters and peace keepers.

Figure 1 Fortresses and Icebergs



Source: U.S. Department of Defense, Office of Deputy Under Secretary of Defense for Industrial Policy.

A Detailed Overview: The Study Focus, Plan and Findings

At the request of the DoD, this two volume study examines the Transatlantic defense market and its implications for U.S. policy.

- *First*, it analyzes the fabled two-way street in the Transatlantic defense market—evaluating the degree of market access of U.S. defense firms in European nations and of European defense firms in the United States.
- *Second*, it reviews the degree to which evolving European institutions, laws, rules, policies, practices and arrangements with respect to the defense industry also may have implications for the United States and the access of our firms in Europe (i.e., whether these rules and policies are creating a preference for buying European and, ultimately, a protected European procurement market).

At the center of the study is an analysis of what we somewhat euphemistically refer to as "fortresses" and "icebergs"—concepts prevalent in the defense world and, hence, the title of the study. "Fortress" refers to the demand side of the market—the insular tendencies toward closed national defense markets protected from foreign competition through government laws, policies and practices based on considerations of sovereignty, jobs, and security of supply, among others. Historically, the term "Fortress America" has been periodically used to suggest that the United States has largely been protectionist—a defense autarky—spending its defense dollars at home and keeping its large defense market largely closed. Abroad, individual European nations have also historically been viewed as engaging in fortress-like conduct with respect to defense procurement. At issue today, as European national behaviors change, is whether a "Fortress Europe" will develop, replacing national fortresses, as Europe itself forges its own defense identify.

"Icebergs" refers to the supply side of the market—the idea that the prime level defense firms on each side of the Atlantic are still largely isolated from each other—with little cross-ownership or integration—while globalization has led to considerably more integration at the sub-tier levels (especially the lower component levels where commercial technology and industries are involved). A chart prepared by the staff in the Office of the Deputy Under Secretary of Defense for Industrial Affairs in the late 1990s (see Figure 1) illustrates the "iceberg" construct—showing little Transatlantic prime level integration but greater connectivity of the "icebergs" below the surface, where both sets of primes draw on a commercial supplier base with stronger linkages.

While the "Fortresses and Icebergs" colloquialisms are in fact caricatures of a more complex and nuanced reality, they nevertheless are useful as images in considering the economic, political, and other dimensions of the Transatlantic arms market.

Looking Through the Kaleidoscope: Demystifying Fortresses and Icebergs

Examining the Transatlantic defense marketplace is like looking through a kaleidoscope. It is a multidimensional, complex, and ever-changing subject that can be viewed differently from different angles at any given moment, depending on the broader context of Transatlantic relations, the specific governments and companies involved, the defense markets involved, and other specific facts of the situation. Not surprisingly, given the complex and subjective nature of the subject, it is also difficult to find an objective and consistent analysis of the marketplace; most analyses consider only one element of the story or lack analytical rigor.

A central effort of this study is to identify metrics that help to understand and demystify the realities of "Fortresses and Icebergs"—to try to lend objectivity and rigor to this complex subject to the extent possible. What are the propensities toward fortress-like conduct in the United States and in Europe, and is a true Transatlantic market—with open cross-border competition in defense markets—developing?

Examining Both Demand and Supply. While the study is primarily focused on the demand side of the market, it cannot be viewed in a vacuum; the demand and supply side of the defense marketplace are closely related. For example, supplier consolidation (mergers, acquisitions, joint ventures and other collaborative arrangements) may be the best way to achieve market access. Conversely, the more open and competitive the nature of the Transatlantic armaments market, the better prospects exist for Transatlantic supplier collaboration and consolidation. Hence, we have given attention to the supply elements of the equation as well in this analysis.

The Multiple Roles of Governments in Defense Markets. The multiple roles of governments add to the complexity and uniqueness of defense markets. Governments function as regulators, customers and financiers of their defense industries and engage in bilateral and multilateral relations and armaments cooperation with other governments and multilateral institutions like NATO and the European Defence Agency (EDA). In taking this broad spectrum of actions, governments are often motivated by a mixture of goals (geopolitical, security, economic) that extend beyond simply providing the most innovative and affordable solutions to the war fighter.

Differentiating National and Intergovernmental Actions. Historically, defense industrial matters have been the province of national governments—of relevance here, the

U.S. government and national governments in Europe. Increasingly, however, the EU and other intergovernmental groups and arrangements have emerging roles in defense markets. Hence, this study focuses on, and differentiates, actions by the United States, national governments in Europe and, as discussed fully in Chapter 5, the EU and other evolving institutional arrangements in Europe.

The Regulatory Hardwiring for Market Access. Defense industries and markets have historically been among the most protected from competition by host governments because they are so closely linked to national sovereignty, jobs and the expenditure of state resources. Thus, this study seeks to "peel" through the multiple layers of the Transatlantic market "onion," focusing on legal, regulatory and other impediments—the regulatory "hardwiring" critical to market access.

Policy Implications and Recommendations. Finally, the study ends by drawing these strands of analysis together. We set forth both an overall perspective on the broader policy implications of the evolution of the Transatlantic defense market and some recommendations for the future. Thus, the study inevitably focuses, in the end, on the core question of whether it is in the strategic interests of the United States and its European Allies to take concrete actions to catalyze the development of an open and competitive Transatlantic defense market.

The Study's Two Volumes

Volume I sets forth the main body of the study. It covers:

- The overall defense market and policy context (geopolitical, economic, and security) in which the study is undertaken (Chapter 1)
- The study's methodology (Chapter 2 and Appendix I)
- The study's core findings on the accessibility of national defense markets in Europe and the United States (Chapters 3 and 4)
- The emerging role of the European Union and other "European" arrangements in defense markets (Chapter 5)
- The implications of the evolution of defense markets for U.S. national security policy and recommendations for the future (Chapter 6)

Volume II provides in-depth examinations of the defense markets of the eight countries: France, Germany, Italy, Poland, Romania, Sweden, United Kingdom and the United States. For each country reviewed, Volume II covers:

- Market Background and Evolution: Changes in Defense Strategy, Budgets, Force Structure and Equipage
- Armaments Cooperation With the United States
- Dynamics of Demand (the Acquisition System) and Supply (Defense Industrial Policies and Capabilities)
- Market Access Impediments and Issues

The Study Context: The Unique Realities of Defense Markets

As discussed in Chapter 1, the defense marketplace is governed by a number of relatively unique realities that shape the contours of this study. It is important to understand some of the key demand and supply dynamics that operate in defense markets in order to assess the accessibility of such markets. Specifically:

- **National Security Demand and the Drive for Innovation.** An immutable reality is that defense markets are different from other markets in large part because the "demand" is a function of national security threats and requirements—a classic "public good." Thus, national security decision-making by governments critically affects the marketplace and the ability of firms to participate in it. In this twenty-first century era of multiple asymmetric security threats, a driving force of defense policy is a thrust for innovation needed to meet the wide ranging challenges of agile enemies.

- **The Economics of Defense: The Drive for Affordability.** The economics of defense is a powerful driver of change. The combination of constrained national defense budgets and rising weapon systems costs is a major dynamic in defense markets on both sides of the Atlantic. In this constrained environment, national buyers in Europe are moving toward increasingly cooperative buying to share costs and increasingly "better value" buying to reduce costs. As U.S. budgets flatten and recede from the height of the Bush Administration buildup, the United States inevitably is moving toward a greater focus on affordability. The combination of a flat or declining overall defense budget, plus pressure from growth in so-called "fixed" defense accounts (personnel and health care) and operations and maintenance (O&M) expenses, undoubtedly will constrain the key investment accounts (Research, Development, Testing and Engineering (RDT&E) and Procurement) from which defense firms derive much of their income. Additionally, the current global financial crisis and resulting recession is putting yet more strain on defense budgets and will likely force yet harder choices and a greater emphasis on affordability on both sides of the Atlantic.

- **The Role of Competition in Defense Markets: A Driver of Innovation and Affordability.** Both modern economic theory and empirical evidence have shown that full and open competition—where all sources of supply can compete—can produce both greater innovation and affordability. Defense markets are inherently "imperfect" in an economic sense and far from the Adam Smith model of many buyers and sellers who lack the ability to set prices. Defense markets are typically characterized by: a few (typically, government) customers, a "bid" model of competition, with relatively few new programs that can last for years, significant barriers to entry, and a limited number of suppliers in a consolidating supplier base. As history has taught, achieving best value results—rapidly fielded, innovative and affordable high-performance weaponry—is not just a matter of having a competitive bid market for early phases of programs. Rather, it also requires addressing the inherent difficulties in managing large, long-term programs with established incumbent contractors that are largely insulated from many of the market incentives that exist in the commercial world. Despite these market imperfections, competition has been a longstanding feature of U.S. defense markets—with at least several suppliers in most major markets and in the subsystems arena. Evidence shows that even a small number of competitors can produce benefits when compared to reliance on sole source suppliers. Moreover, there is no compelling evidence that models other than competition—national teams, managed monopolies, or the like—produce better results; most evidence is to the contrary. The challenge going forward is multiple: 1) how to sustain sufficient competition for initial awards in an era of fewer, long-term programs and a consolidating supplier base; and 2) how to manage large programs to mitigate key risks and achieve better results (e.g., through a stronger cadre of experienced acquisition executives, steps to inject competition into long-term programs—especially at the subsystem level, and the like.)

- **Market Access as a Strategic Option to Maintain Competition in a Consolidating Market.** One significant strategic option for governments to maintain competition is to open their markets to foreign suppliers subject to appropriate security safeguards. Hence, "market access," the central element of this study, is one of a number of useful tools for government procurement authorities in the context of a consolidating market. Where demand from a national customer can sustain only one or two national firms, the participation of foreign competitors can help sustain a competitive framework and the innovation and affordability it can bring—provided, of course, that appropriate security measures can be put in place.

The Methodology: The Use of Disciplined Diagnostics

Examining the complex Transatlantic arms market is not easy. Numerous past studies have tended to be relatively subjective and based more on value judgments than on empirical evidence. Hence, as set forth in Chapter 2, we have developed a detailed methodology designed to bring a greater degree of objectivity to the task. In the end, of course, there were judgments made—but they were fact-based—drawn from observations from hard data, interviews and dozens of previous studies in this field.

Study Scope: Systems in More "Classic" Defense Product Areas. From a policy perspective, this study has assessed and characterized the national and relevant intergovernmental policies and practices that affect access to defense markets broadly defined. However, from the standpoint of data, the study covers only the market for defense articles (systems, subsystems and products) in five traditional defense market areas: air vehicles, ships/submarines, ground vehicles, missiles/munitions and C4ISR.[3] In undertaking this analysis, we have relied on, and analyzed, data provided by Documental Solutions (DOCSOL), which maintains extensive databases on defense contract awards in the United States and Europe.

Hence, this study does *not* include the burgeoning market for defense services, information technology and homeland security, and it generally does not include areas of clear dual-use or commercial technology. Also, the study does not examine space systems, subsystems or capabilities. This means a sizable portion of national security spending by the United States and European nations studied is not within this study data scope.

These limitations are important because the more commercial and dual-use technology-driven markets and the markets for services tend to be more globalized, more widely competitive, more open to new entrants and often less nationally sensitive. While our findings are valid in defense markets generally, a study that focused on data in those additional markets might offer somewhat different findings.

[3] These were areas of interest defined by our sponsor, the Office of the Deputy Under Secretary of Defense for Industrial Policy.

National Defense Markets: A Disciplined Diagnostic of Market Access Barriers. This study employs a "quantified judgment" methodology for assessing market access in the eight national defense markets under study which combines: 1) quantitative measures where data is available; and 2) qualified judgments based on our analysis of underlying country policies and behaviors, taking into account available academic literature, relevant government documents and the several hundred interviews we conducted with government, industry, military and academic representatives during the course of this study.

Specifically, for seven selected European nations and the United States, we have identified and evaluated a series of market access metrics that measure the tariff and non-tariff barriers to foreign firms participating in these markets. The "non-tariff" metrics really focus on the classic market access impediments that the United States has addressed with our trading partners in the context of commercial markets; we have tailored these criteria to the unique characteristics of defense markets.

The relevant criteria include: 1) the degree of open and competitive procurement in national defense markets and the transparency of the procurement system; 2) the degree to which nations establish domestic content requirements; 3) the use of offset and *juste retour* practices, unique defense practices described below; 4) the degree of openness to foreign investment in domestic defense firms; and 5) the role of export controls in the defense market.

In evaluating the degree of competition, we have relied on DOCSOL's data, which shows actual awards made on major programs in these countries in the last three years (2006-2008). While we would have preferred a longer time series, this is the best data that was available to use.

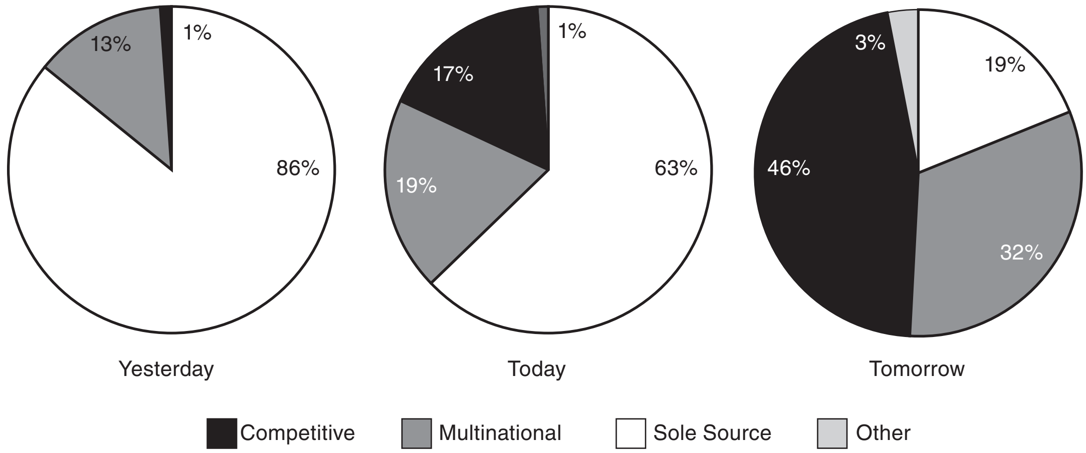
National Defense Markets: An Analysis of Outcomes (Measuring Traffic on the Two-Way Street). To validate this analysis, the study then reviews market access "outcomes" for each of these markets—focusing on defense trade and investment flows, the degree of Transatlantic defense cooperation, and the cross-border "footprints of major defense firms and their strategies to cope with market access impediments. In effect, we have examined both cause (the market access barriers discussed above) and effect (i.e., the actual market outcomes—how much of a two-way street exists).

The Emerging European Role in Defense Markets. In evaluating the degree to which emerging European (as distinct from national) laws, rules, policies, practices and arrangements will create fortress-like tendencies, we also utilized a set of qualitative metrics, described below, that focus on: the prospect of European as distinct from "national" European demand emerging; the likelihood of further European defense industrial consolidation; and the implications for the United States—i.e., most notably, whether the shift from national to European buying will result in the creation of a distinct European preference in buying (or "Fortress Europe" tendency).

Market Access Realities: Continued Impediments But Gradually Better and More Open Buying Habits

As set forth in detail in Chapter 3, there have been material and gradual changes for the better in the United States and most of the European countries studied.

Figure 2 European Markets: Yesterday, Today and Tomorrow



Source: Analysis based on Documental Solutions data.

The Evolution of European Defense Markets: More Open and Competitive Markets But More Challenging for U.S. Suppliers

Specifically, Figure 2 highlights the evolution that is underway in European defense markets:

- **Yesterday.** In the past, European nations predominantly purchased weapons systems on a sole source national basis—with little competitive procurement (mostly in the UK), some cooperative procurement among European governments and considerable sole source purchases of U.S. equipment. Ironically, in the old world, European nations bought more from the United States on a sole source basis than from each other, in circumstances where the United States had a leading capability.
- **Today.** The present European market shows a decline in sole source procurement from national champions as well as from U.S. firms, increased European cooperative buying, and increased competitive buying by European governments.
- **Tomorrow.** The future, as reflected in the pattern of buying in recent European awards on major programs, points to a world of even less sole source buying, increased competition to obtain better value solutions, and continued European cooperative buying driven by the economic reality that national programs are becoming unaffordable.[4]

[4] The charts in Figure 2 are illustrative only and are designed to provide a rough estimate of three snapshots in time. All three charts are derived from our analysis of Documental Solutions data showing major program awards between 2006 and 2008. The "Yesterday" chart is based on analysis of awards in legacy programs (which we believe is consistent with historic norms when these programs were first awarded). The "Today" chart is based on an analysis of all awards (legacy and new) during the period, and data for the "Tomorrow" chart is based on an analysis of awards on new programs only during the period. Other available information also confirms the historic realities (i.e., the Yesterday chart). For example, European national authorities have typically exempted approximately 90 percent of defense procurements from the existing EU procurement directives, which generally require publication of opportunities and competitive bidding. See European Commission, *Communication from the Commission to the Council and the European Parliament on the results of the consultation launched by the Green Paper on Defence Procurement and on the future Commission initiatives*, p. 3 (Brussels, June 12, 2005) (626 final). Available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52005DC0626:EN:NOT.

These European trends are evolutionary in nature; change in defense markets is inherently slow because defense programs, by their nature, tend to last many years. Some 60 percent of spending on major defense programs in the European countries examined between 2006 and 2008 was for "legacy" programs (i.e., programs where the initial award for development and/or procurement were made at some point in the past). The heavy emphasis on legacy systems is not surprising and reflects the long development and production cycles of major defense programs. Poland and Romania were the only exceptions to this trend. Having scrapped most of their old, Soviet-designed equipment in favor of modern, NATO-compatible systems, only about a fourth of their defense spending is dedicated to the upgrading and maintenance of legacy systems.

Not surprisingly, the lion's share of contracts awarded on legacy programs—approximately 85 percent—was awarded to national contractors on a sole source basis. The magnitude of sole source buying reflects the realities of large defense programs. Since the original program award was made years ago (either on a sole source basis, typical in continental Europe, or on a competitive basis, more typical in the UK and the United States), practical economic considerations mean that follow-on production, sustainment and modification work will in all likelihood be awarded to the original incumbent contractor. Indeed, it would be uneconomical to change contractors midstream on large programs unless the incumbent is not performing (although subsystems and certain upgrades can and should be competed).

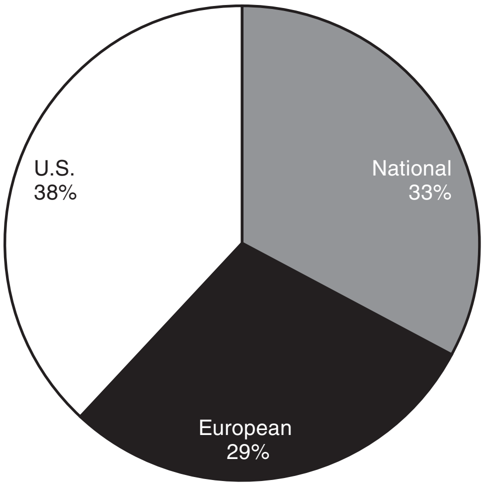
Thus, even today the incumbent "national champions" on legacy programs in the European countries reviewed continue to receive a very sizable percentage of *all* major program awards (whether awarded on a sole source, competitive or cooperative basis). Specifically, during the period reviewed, Airbus/EADS received approximately 60 percent in France, BAE Systems received 46 percent in the UK, Finmeccanica received 70 percent in Italy, Saab received 24 percent in Sweden, and EADS/Thyssen received 44 percent in Germany.

However, analysis of *new* major European major defense procurements (i.e., of non-legacy systems) in recent years in the countries studied clearly shows a changing reality away from this historic norm of protected national markets toward more open and competitive buying. Specifically, approximately 50 percent of awards made on *new* major defense programs (by value) in the European countries examined between 2006 and 2008 were sourced competitively, with non-national suppliers winning the competitively sourced awards approximately 73 percent of the time. This new pattern is in stark contrast to the historic, primarily sole source, norm.

European "Demand" Dynamics, While Constructive in Nature, Are Likely to Favor European Solutions and Disadvantage U.S. Firms. Overall, these developing trends, if sustained, can produce efficiencies and better value buying in Europe. Paradoxically, however, the evolving "demand" dynamics in Europe are potentially detrimental to U.S. firms in multiple ways:

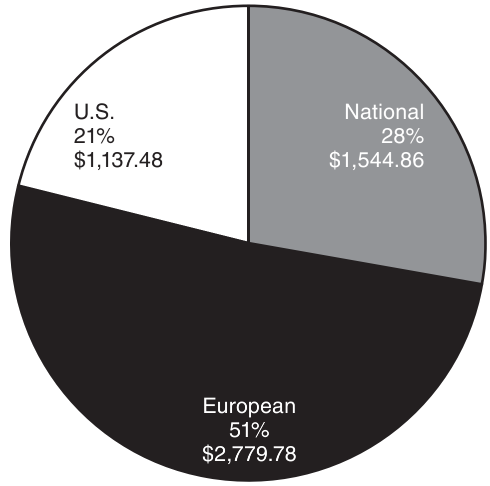
- **Fewer Sole Source Awards.** The increased competition in Europe—generally a good thing—means a decreased use of sole source awards, where American firms have derived significant sales (roughly $2.1 billion during the 2006-2008 period). And, in competitive procurements, U.S. firms must face increasingly robust solutions offered by other European and third-country (especially Israeli) suppliers.

Figure 3 Total European Competitive Procurement Awards, 2006-2008



Source: Analysis based on Documental Solutions data.

Figure 4 Total Competitive Procurement Awards in Continental Europe, 2006-2008



Source: Analysis based on Documental Solutions data.

- **A European Preference in Competitive Buying.** In the growing number of competitive procurements held in European countries studied, there is evidence of an emerging European policy preference and Eurocentric buying pattern. This is reflected in national procurement policies that suggest that some of the "competitive" procurement will be open only to European firms and closed to the United States. This is also reflected in recent award data on new major programs competed in 2006-2008 (Figure 3), which shows that approximately 62 percent of all new European competitive awards (by value) went to European firms and 38 percent went to U.S. firms. The 62 percent in total to European firms, when disaggregated, includes approximately 29 percent inter-European buying (awards to non-national European firms) and 33 percent sales to national firms. The trend is even more pronounced when looking at continental Western European countries (see Figure 4), which shows that most competitive awards (79 percent by value) went to European suppliers in total, with only 21 percent to U.S. suppliers. *Thus, the data clearly shows an emerging track record of openness to inter-European buying—a new and important development. At the same time, however, it suggests that programs ostensibly open and competitive are not really always open to American solutions.*
- **Increased Cooperative Programs with Limited U.S. Opportunities.** The documented growth of European cooperative procurements over the years, driven by the increasing inability of national governments to go it alone in major procurements, can result in less fragmented markets and more efficient allocation of resources. Unfortunately, however, the continued application of longstanding *juste retour*[5] policies to these programs means that participating governments negotiate

[5] As discussed in detail in Chapter 3 below, *juste retour* (just return) is the prevalent European policy whereby national investment in a cooperative program is proportional to the national procurement work share of the system under development.

work share agreements among themselves that allocate work to national firms on the basis of investment of each country. With no competition on these programs and work share assigned by agreement, there are few opportunities for U.S. firms.

- **The Impact of U.S. Defense Trade Controls.** Finally, as discussed below, the behavioral shift in Europe toward "designing around" or designing out components or subsystems regulated by the ITAR has a particularly adverse impact on U.S. subsystem and component suppliers.

A key mitigating factor is the degree to which European nations will really apply a European "preference" in practice when faced with capable, already developed U.S. offerings that are more affordable—especially during wartime. This is an area where European geopolitical and economic aspirations for an autonomous defense industry may run into economic realities and immediate operational requirements. In this respect, there will likely always be some room in Europe for U.S. offerings when economics drives buyers to the "best value" mousetrap, or when short-term operational needs dictate the purchase of an off-the-shelf capability.

European Supply Dynamics May Disadvantage U.S. Firms. On the supply side of European markets, the dynamics also appear to be increasingly unfavorable to U.S. participation. These include informal European restrictions on foreign investment in defense firms in some countries that have led to a relatively Eurocentric consolidation in Europe and the creation of large, largely European defense conglomerates that compete with U.S. firms. The existence of these large, primarily European defense firms creates powerful incentives for European governments to favor these firms in their procurement decision-making (reinforcing the European preference noted above) in order to maintain a robust European supplier base.

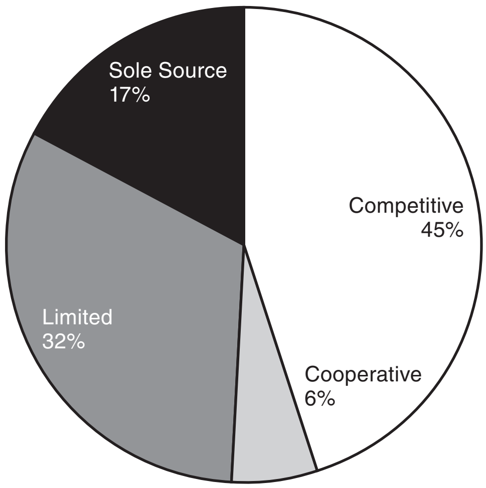
The combined effect of these European market dynamics is particularly of concern for U.S. subsystem suppliers. U.S. subsystem suppliers cannot for the most part participate in cooperative programs and are being disfavored in competitive procurements to the extent they utilize ITAR-controlled components and technologies. While it is difficult to quantify these effects, it is clear that U.S. subsystem firms will likely be at a considerable disadvantage.[6]

The Evolution of U.S. Defense Buying: Somewhat More Open With Continued Challenges for Foreign Suppliers. In contrast to the challenges increasingly faced by U.S. firms in Europe, the future prospects in the United States for European firms appear somewhat more appealing.

The United States has a long history of competitive procurement (it is the default position under U.S. law and policy) but not necessarily of "open" procurement. Historically, foreign suppliers have often been *excluded* from competition through formal and informal means for a variety of reasons, including:

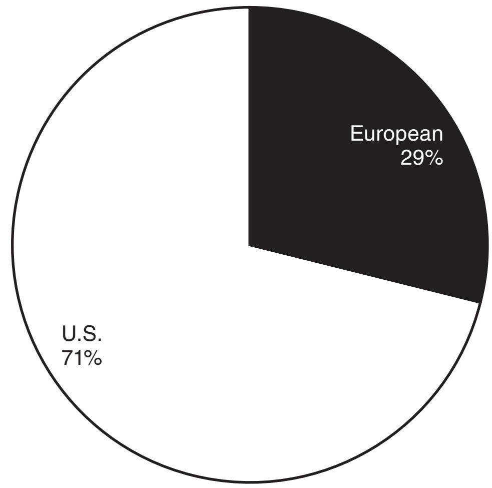
[6] A recent study of the impact of ITAR on the U.S. space industrial base shows precisely this type of effect. Based on survey data collected from U.S. subsystem suppliers, the report confirms that U.S. subsystem suppliers are facing difficulties in European and other foreign space markets due to U.S. export control policies and the resulting efforts by European and other governments to design around ITAR-controlled subsystems and components. See *Briefing of the Working Group on the Health of the U.S. Space Industrial Base and the Impact of Export Controls*, Center for Strategic and International Affairs (February 2008), p. 10 ("Export controls are adversely affecting U.S. companies' ability to compete for foreign space business, especially the second and third tier. And it is the second/third tier of the industry that is the source of much innovation, and is normally the most engaged in the global marketplace in the aerospace/defense sector.") Available at: http://www.csis.org/media/csis/pubs/021908_csis_spaceindustryitar_final.pdf.

Figure 5 Total U.S. Defense Procurement Awards by Type, 2006-2008



Source: Analysis based on Documental Solutions data.

Figure 6 New U.S. Defense Procurement Awards by Nationality



Source: Analysis based on Documental Solutions data.

- national security (especially the risk of accessing sensitive information and control of vital security assets by a foreign-owned entity);
- security of supply (i.e., the risk inherent in relying on a foreign supplier whose host government could choose to restrict supply in a time of exigency); industrial base considerations; and
- a simple aversion to foreign solutions (the "not invented here" syndrome).

Thus, in numerous situations, major platform awards have been made through "limited competition," with only invited suppliers allowed to compete and foreign firms excluded one way or another.

However, the traditional attitudes are changing, and there is increased evidence of "openness" to foreign sources of supply at the prime level. As shown on Figure 5, a review of recent *new* U.S. procurements on major programs in 2006-2008 shows that 45 percent of awards were made through full and open competition, with 32 percent made through limited competition (excluding foreign sources). The remainder was sole source (17 percent) and cooperative procurement (6 percent).

This changing reality of U.S. procurement is also reflected in other tangible evidence. As shown on Figure 6, some 29 percent of new awards on major U.S. programs that were competed actually went to European suppliers (typically, as one of the lead suppliers on a team with other U.S. suppliers).[7] This data reflects recent awards on the LUH, the Marine One presidential helicopter, and other programs; the recent award of the tanker program (not included in the data) also is indicative. Additionally, a number of leading foreign suppliers

[7] As discussed in Chapter 14, this data does not include products produced by U.S. subsidiaries of foreign firms in the United States (e.g., offerings of a firm like BAE Systems North America).

we interviewed indicated that U.S. procurements are increasingly open to their participation—with fewer blanket exclusions than in the past. Moreover, the major foreign defense firms, with an increasing U.S. onshore presence and classified facilities, are also better positioned to enter the market in the future than they were in the past.

To be sure, significant challenges exist in the United States for European suppliers. As discussed below, these include institutional and cultural constraints, the sheer complexity of the U.S. market, the costs of entry and security-driven measures. The risks of additional Buy American legislation and similar actions during the ongoing economic downturn and the failure to reform defense trade controls also are key factors that can undermine our ability to collaborate with our allies.

Further, as defense budgets tighten due to our growing fiscal imbalances and competing economic needs (e.g., the recent stimulus package), some DoD programs are likely to be cut. It remains to be seen whether programs that have large European value-added elements will have the domestic support to be sustained. For example, both the Marine One presidential helicopter program (Lockheed/Finmeccanica) and the tanker program (Northrop Grumman/EADS) involve Transatlantic teams with European platforms at their core that were sufficiently meritorious to prevail over domestic competition.[8] It is uncertain whether such programs with significant foreign content can be maintained in today's economic context in lieu of programs more national in character.

Globalization Can Drive Change But Government Policies Matter

In the long term, broad societal trends and fundamental economics tend to encourage the current trend toward "better value" buying (i.e., more procurement competition, buying for security needs rather than social goals, and seeking "best value for money"). These factors, working together, may drive the Transatlantic defense market's evolution toward open, competitive, and cooperative buying on the demand side and Transatlantic supplier globalization on the supply side—all of which should foster greater innovation and affordability.

The key drivers of this change include:

- Globalization of the broader economy—while protected sectors like defense change last, they will and are coming (witness the gradual evolution in textiles and steel, two other protected sectors in which markets have gradually opened over time);
- Defense market economics—as noted above, the combination of significant budgetary constraints (expected to worsen in the current global financial crisis) and the rising costs of weapons systems;
- Increased reliance on commercial technology and products in defense systems and the global supplier base that supports such commercial technology;
- Constantly changing military requirements in an era of asymmetric and low intensity warfare and the innovation required to meet those changing and significant demands;
- In Europe, defense firms face powerful incentives to broaden their markets and participate in the large U.S. market in light of the existence of small national markets with limited demand that can no longer sustain "national" champions; and

[8] The Marine One Presidential helicopter was a program designated by Secretary of Defense Gates for cancellation on April 6, 2009, due to cost overruns and other programmatic problems.

- The need for force interoperability (including meeting NATO standards) to facilitate coalition warfare.

Market Access Impediments: Assessing Their Significance

However, the reality today, and in the short-to-medium term, is that a series of complex and interrelated market access barriers—embedded in government laws, rules, policies and practices—serve as a drag on the development of an open and competitive Transatlantic defense market.

Which market access impediments are most significant? Traditional tariff barriers are of minimal significance in the defense arena. Also, as discussed above, most of the nations studied are gradually opening their markets to allow at least some increased foreign competition in procurement programs. Thus, more subtle non-tariff barriers are becoming increasingly important and are likely to grow in importance in the future. Specifically, based on the disciplined diagnostic analysis we have conducted, the key market access impediments to an open and competitive Transatlantic defense market include the following:

1. **Domestic Content Rules, Informal Domestic Work Share Requirements, Offsets and *Juste Retour*: The Drive to Spend at Home.** This genre of market impediments reflects a truism worldwide: governments, at their heart, still face powerful incentives to spend their defense research, development and procurement dollars at home to the extent possible. Government conduct in this arena is driven by a desire for domestic employment, access to technology and the economic strength it can create, the maintenance of industrial capabilities, and a desire for operational sovereignty over key systems. Thus, they adopt varying practices to achieve these goals.

   - European governments, for their part, do not maintain formal domestic content or "buy national" rules. However, they achieve the same goals through some combination of formal offsets, informal and implicit work share requirements (where in some cases market participants offer work share knowing its importance without even receiving a government request), and the longstanding practice of *juste retour* on European cooperative programs.

     - Formal offsets remain high and prevalent in Europe, and are particularly high in small nations like Sweden or in Central European nations like Poland and Romania. More informal work share requirements are increasingly prevalent in larger defense markets such as France, Germany, Italy and the UK, including requiring high-level "noble work" to be done at home, teaming with a domestic partner, or production of key systems at home.

     - Finally, as noted above, the continued use of *juste retour* principles—even if on a more global rather than program-specific basis—on European cooperative programs effectively forecloses participation by U.S. firms in this growing segment of European defense spending.

   - In contrast, the United States does have Buy American and related domestic content rules. While the most onerous of these rules are waived for nations with reciprocal procurement memorandums of understanding (MOUs) (i.e., all countries studied except Poland and Bulgaria), they still are a factor in defense markets. While the United States does not impose offset requirements of any type, informal domestic work share requirements of one type or another have traditionally been prevalent (and/or foreign firms presume such requirements exist).

2. **Export Controls: ITAR as a Market Access Barrier and the "Design Around" Trend.** Over more than a decade, one study after another has highlighted the problems inherent in U.S. export controls—notably the ITAR. While the specifics of these ITAR issues are beyond the scope of this study, the impact of ITAR on the Transatlantic defense market relationship is not. Market participants, U.S. and foreign, consistently report that ITAR slows the speed of obtaining licenses needed for sales and collaboration, limits the release of U.S. technology, creates business uncertainty, and generally makes the process of Transatlantic defense industrial cooperation difficult. Fairly or not, most European governments are concerned about relying on ITAR systems and subsystems because they potentially limit their operational autonomy over major systems (especially in real-time crises), introduce program delays and risks, and curtail their export flexibility for systems with U.S. components.

   Years of European talk of "designing around" or "designing out" ITAR have now begun to translate into action, according to market participants—with increased evidence that U.S. ITAR policies and practices, for better or worse, are limiting opportunities for U.S. firms competing in Europe (especially at the subsystem level). This is increasingly true even among our staunchest allies.

   The ITAR also inhibits U.S. firms from working with foreign firms on domestic U.S. programs and creates challenges for foreign firms seeking to enter the U.S. market. By declining to release certain information on technologies, the acquisition community can effectively preclude foreign participation.

   While strong and well-enforced export controls are an important tool of U.S. national security, it is clear that the U.S. failure to address these concerns will curtail the extent of Transatlantic defense technology sharing, defense cooperation and the development of an open and competitive Transatlantic defense market.

3. **Foreign Investment and Government Ownership of Defense Firms.** In an era where firms can "buy" into foreign commercial markets globally through mergers, acquisitions and joint ventures, restrictions on foreign investment in defense assets have been a limiting factor on both sides of the Atlantic.

   - **The United States, with very little government ownership of defense assets, has a mixed record on foreign acquisitions of U.S. defense firms but has nevertheless allowed foreign firms to "buy" into the U.S. market in a variety of ways.** Despite relatively restrictive U.S. investment policies (for most countries other than the UK), European firms have nevertheless bought into the market and have significant foreign ownership of U.S. defense assets (although the total under foreign control is still relatively small in percentage terms). UK firms have achieved substantial presence primarily through larger acquisitions, and firms from other European nations studied have largely achieved presence through a combination of smaller acquisitions, collaborative activities with domestic firms (joint ventures, licensing arrangements and so forth) and the establishment of greenfield manufacturing operations (which are exempt from U.S. government review under applicable laws).

- **In Europe, Poland, Sweden, Romania and the UK are relatively open for U.S. investment while Germany, France and Italy are considerably less open.** Of course, in Poland, Romania and Sweden, the opportunities are fewer in light of the smaller size of the markets. In Poland and Romania, investors also face the unavailability of attractive properties—most of which are state-owned—and difficulties in reaching agreements. In Germany, France and Italy—three of the larger markets—there have been virtually no meaningful U.S. acquisition of defense firms and no meaningful U.S. ownership of significant defense assets. These realities may reflect to some extent the lack of U.S. interest in acquiring defense firms in these markets in light of the limited market size and other commercial considerations. Yet, the lack of U.S. industrial presence also reflects the continued role of governments in ownership of defense firms in Italy and France and relatively inhospitable policies toward U.S. investment in defense firms in all three countries. These policies are consistent with longstanding continental European fears of dominance by large U.S. defense firms. Hence, European leaders have periodically spoken of seeking Transatlantic mergers of large defense firms only on equal terms—i.e., only when inter-European consolidation is largely complete and "balance" can be achieved in Transatlantic arrangements.

4. **Domestic Corruption and Foreign Payments.** In the United States and in Western European countries studied generally, there is a strong internal commitment to the rule of law; internal bribery and corruption are relatively rare. Not surprisingly, Romania, and to a lesser extent Poland, scored lower because the commitment to the rule of law is less developed and the potential for corruption is therefore increased, although there is no specific evidence that it is directly undermining their defense markets. In third-country markets, however, corruption has long been and remains a considerable factor; there continue to be instances of Western suppliers making illicit payments to government customers. This practice creates market distortions in global defense markets, with customers choosing solutions on the basis of factors other than best value and firms rewarded based on illicit practices rather than innovative solutions. Illicit payments also undermine democratic institutions and the rule of law. While the United States has a relatively strong track record and regularly prosecutes firms for illicit payments, in Europe there continues to be a mixed track record with respect to government tolerance for, and business firms' propensity to make, illegal payments in third-country defense markets. The recent Siemens settlement of bribery charges in Germany and the United States has brought more attention to the issue, and European defense firms are taking enhanced steps to ensure compliance with national anti-bribery laws.

U.S. Market Access: Unique Challenges. With respect to the large U.S. defense market, one major factor constraining foreign participation is the depth and breadth of American technological capability relative to foreign competitors. With smaller budgets at home and less funds for research and development (R&D), foreign firms lack competitive offerings in some areas. Of course, this is not true across the board and European and other foreign firms do have appealing capabilities and niche products of interest to the United States. In areas where European firms do have competitive offerings, there are several special market access impediments that appear most significant and were consistently reported by defense firms from virtually all of the European countries examined. These factors, some of which do not fit neatly into the market access metrics we have utilized, include the following:

- **The Need for a Better Widget.** European firms universally report that, based on their experience, they must have a better product than is currently available in the United States for successful market penetration. Having "distinctive" capabilities or "daylight in capability" between their offering and those of American firms was, in their view, a threshold prerequisite for competing in the U.S. market. Typically European firms have succeeded where they already have a developed niche subsystem capability that was not available in the United States at the same quality or capability level.
- **The Complexity of the U.S. Defense Procurement System and Sizable Investment Needed to Penetrate.** The U.S. defense market, with its many components, poses a significant knowledge and cost barrier to non-U.S. companies. A firm seeking sales must often have contact with and prove a product's capabilities to multiple defense communities, including, among others, the user community, the requirements community, the acquisition community, and the prime contractor in the case of subsystems. Numerous foreign companies (especially small and medium ones) believe it is not worth the effort to access the U.S. market unless the company has the size and scale to make it worthwhile and can afford the potentially sizable expense associated with penetrating the market.
- **The "Not Invented Here" Syndrome and Institutional Resistance to Change.** On both sides of the Atlantic, there is an inherent customer bias for domestic sources. This is largely not a matter of law, rules or policies but a matter of customer behaviors (e.g., in the United States, the exclusion of foreign firms from competition). This factor is especially pronounced in the United States given its large, broad and very capable defense industry—government customers tend to think there is little reason to look overseas. Foreign firms stated that biases against the use of foreign products still shape the mindset of numerous U.S. acquisition officials. Foreign firms have also found that U.S. competitors try to play on these existing biases, and in some situations U.S. requirements and acquisition authorities may be seeking to favor known domestic vendors in how they shape requirements and programs. They do note, however, that there appears to be less of this tendency than there was 5 to 10 years ago.
- **Other Barriers Exist or are Likely to Emerge.** To date, issues such as intellectual property (IP) and technical standards have not played significant roles in curbing access to defense markets. However, as traditional market barriers fall, issues such as technical standards are more likely to come to the fore—especially as the EU and individual countries seek to develop their own standards that go beyond those established by NATO.

Evaluating Market Access Impediments: Country-Specific Findings Vary

When the dynamics of each country's defense market is separately evaluated, key differences do emerge. Based on the market access metrics we developed, we were able to rank order the key markets as follows in terms of their accessibility (to U.S. firms in the case of European countries and to European firms in the case of the United States). Country-specific rankings are set forth on Table 1 and a full assessment of market access in each of the markets studied is set forth in Volume II of this study.

Table 1 Market Access: Normalized Country Rankings

	Weight	France Weighted	Germany Weighted	Italy Weighted	Poland Weighted	Romania Weighted	Sweden Weighted	UK Weighted	U.S. Weighted
Tariff Barriers	0.2	0.15	0.15	0.15	0.10	0.10	0.15	0.15	0.15
Competition in Procurement	1.0	0.45	0.31	0.43	0.66	0.52	0.68	0.62	0.42
Fair and Transparent Procurement Process	1.0	0.80	0.70	0.50	0.60	0.50	0.95	0.95	0.80
Domestic Content Requirments	0.8	0.72	0.60	0.60	0.76	0.76	0.76	0.64	0.52
Offsets and *Juste Retour*	0.8	0.22	0.16	0.16	0.02	0.21	0.14	0.23	0.80
Government Ownership and Control	0.7	0.46	0.67	0.42	0.35	0.32	0.67	0.56	0.67
Limits on Foreign Direct Investment	0.7	0.42	0.28	0.28	0.49	0.42	0.7	0.49	0.42
Ethics and Corruption	1.0	0.68	0.68	0.60	0.53	0.38	0.90	0.75	0.73
Export Controls	0.7	0.42	0.42	0.42	0.70	0.70	0.63	0.56	0.35
Intellectual Property Rights	0.3	0.27	0.27	0.24	0.15	0.15	0.27	0.27	0.21
Technical Standards	0.3	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Raw Score	7.5	**4.82**	**4.47**	**4.04**	**4.59**	**4.29**	**6.08**	**5.46**	**5.30**
Normalized Score (0-1)		**0.64**	**0.60**	**0.54**	**0.61**	**0.57**	**0.81**	**0.73**	**0.71**
Normalized National Score		0.79	0.73	0.66	0.76	0.71	1.00	0.90	0.87
Rank Order		**4**	**6**	**8**	**5**	**7**	**1**	**2**	**3**

1. **Sweden has the most accessible defense market of the countries examined—by a considerable margin—on either an absolute or a comparative basis.** This reflects not only its longstanding policies affording market access to American firms but Sweden's effective implementation of these policies. Sweden has a largely open and competitive procurement system, does not have "buy national" rules or policies, does not have any state-owned defense firms, and has allowed considerable foreign ownership of defense firms. Of all the metrics, Sweden scores poorly only on offsets, which are relatively high on Swedish programs.

   - **Italy and Romania—with very different legacies—have the most inaccessible markets for U.S. firms—by a fair margin on either an absolute or a comparative basis.** One might view as surprising the fact that Italy scores on roughly the same level as Romania in light of their very different internal circumstances—with Romania still transitioning from its Soviet bloc past and having considerably different defense market conditions. But the similarity in overall grading reflects several factors. First, Romania has made considerable strides in recent years and is essentially playing on a clean defense procurement slate—adopting new Western rules and buying mostly new capabilities on a competitive basis. Second, both countries have a number of market imperfections in common: offsets and continued government ownership of defense firms (albeit to different degrees). Third, the reasons for the lower grades are based on different circumstances in each country, as described below. Thus, on balance, the grading provides a reasonably good sense of where these and the other countries studied stand—keeping in mind that this is not a highly precise, scientific analysis but is designed to give an overall sense of each country's market conditions and tendencies.

a. **Italy: A Market Access Paradox.** Italy's low score—the lowest among Western European countries examined—is somewhat counterintuitive in light of a strong bilateral security relationship, the broad scope bilateral cooperation between the United States and Italy, and significant Italian purchases of U.S. weaponry and ongoing cooperation on the F-35 Joint Strike Fighter and other programs. However, American defense sales to Italy have been largely made on a sole source basis when Italy has had a specific need and chose to buy a developed American capability. In contrast, when a U.S. firm seeks to enter the Italian market as a bidder to compete, the barriers are significant. Teaming with Italian firms (especially Finmeccanica on major programs) is essentially an implied condition for entry to the market. The relative inaccessibility of Italy's defense market is a reflection of a range of factors: 1) the least transparent procurement system of all the Western European countries examined (with decisions sometimes based in significant part on the impact on jobs rather than on requirements and best value); 2) the lack of a clear policy on whether and when to use competition in making awards (which tends to be decided on a case-by-case basis) and the informal nature of that competition; 3) the continued reliance on considerable sole source buying and relatively less overall competition in major program procurements (although more competition in recent awards); 4) continued significant government ownership of major defense firms (although less than in the past); and 5) sizable offsets.

b. **Romania: Evolving New Policies and Implementation Challenges.** Romania has put in place new Western style laws and programs, largely scrapped Soviet-era legacy programs, and made changes quickly. And, as noted above, most of its recent procurement awards are competitive, both in absolute terms and relative to other countries. Nevertheless, Romania has a challenged business environment marked by corruption, excessive bureaucracy, and a judiciary that has a mixed record on enforcement of investor rights. It is only in the last four years, with changes in government, that Romania has made progress on these issues and it has a considerable way to go. Romania's defense funding, acquisition and management processes also are works in progress. Romania is not yet ably executing its new acquisition processes due to a lack of defense acquisition expertise and has established a number of unrealistic programs. Hence, the climate for defense trade is still challenging for Western suppliers.

2. **The five other countries examined, which fall between the "outliers"—Sweden on the one hand, and Italy and Romania on the other—all have significant, but somewhat different, impediments to market access and their scores fall within a fairly narrow range.**

   a. **The UK and the United States fall at the top of the range.**

      i. The **UK** has a long history of open and competitive procurement. However, its new defense industrial policy and actual practice walk back subtly from that posture in several respects. First, the UK now balances competition with more focus on partnerships for long-term sustainment programs for major platforms. Second, the UK has put increased focus on operational sovereignty, which signals its increasing concern over reliance on ITAR-controlled capabilities. Third, the UK now encourages foreign firms to undertake more onshore activities in order to be considered part of the "UK" defense industry, including IP creation and noble work, onshore manufacturing capability and local jobs. In effect, this new "onshore" industrial policy is an offset requirement with a velvet glove. U.S. firms and other foreign firms seeking to compete in the UK market—especially at the prime level—need to develop a domestic presence and/or substantially partner in the UK to compete.

      ii. In contrast, while the **United States** has a competitive and transparent procurement system, it is less open to foreign participation than the UK, as discussed above. Nevertheless, in the context of the wartime "bull market" in defense acquisition, foreign companies *have* seen significant growth in U.S. sales and market penetration since 2003. The United States has allowed European participation in some key programs recently and has allowed foreign firms to "buy" into the U.S. market through acquisitions, collaborative arrangements and the establishment of greenfield manufacturing operations.

   b. **France, Poland and Germany (listed in order of their scores) are clustered together but each has a relatively unique set of circumstances and is moving in a somewhat different direction. France and Poland are trending toward a more open environment and better buying practices, but Germany appears to be wedded to the traditional approach.**

      i. **France,** historically considered a relatively closed market, has adopted new pro-competitive policies within the last five years and has taken steps to open its system to competition and adopt more modern acquisition strategies; there also is anecdotal evidence of increased competitive sourcing. However, available data on recent major program awards does not yet reflect this change (i.e., there is a lag between policy and performance). The data on awards instead shows a high percentage of sole source awards, as in the past, and a new focus on buying "European" through cooperative programs. This is consistent with France's emerging Eurocentric policy, which in effect replaces a traditional Gaullist strategy with a neo-Gaullist pro-European approach. France also continues to have significant ownership stakes in large segments of its defense industry, has offset requirements in practice, and has not been receptive to U.S. ownership of any sizable French defense firms.

ii. **Poland** scored surprisingly high given that it has been in the throes of transition and continues to own a sizable percentage of their defense firms and has a business environment with challenges that are a product of its Soviet-era legacy. Nevertheless, the scoring reflects how far Poland has come since the fall of the Berlin Wall in 1989. In a macro sense, Poland made many changes in its economic and security policies years ago—with radical reforms—and has effectively implemented many of these changes. Poland is now a full-fledged member of the EU and NATO and has a fairly good overall environment for trade and investment. In a defense-specific sense, Poland's moderate scores also reflect that it has put in place new laws and programs on defense acquisitions (drawing from European models), largely scrapped Soviet-era legacy programs, and made changes quickly. Thus, since Poland has less desire to continue purchases of legacy equipment, most of its recent procurement awards are competitive both in absolute terms and relative to other countries (which continue to rely to a greater degree on legacy programs). However, Poland's defense market has considerable remaining impediments, including high and rigid offsets and a sense that buying decisions are in part a product of the size of the offset package rather than the best value.

iii. **Germany** scores similarly to France but there is little evidence of a forward-looking trend toward openness. There continues to be a significant amount of sole source national buying even on new programs. On those major defense programs that are competitively awarded, most awards went to German or other European suppliers, with little openness to U.S. offerings. U.S. firms also note that they must partner with German firms to have any real chance of participating in German procurements. Germany also has adopted one of the most restrictive policies in Europe with respect to U.S. acquisitions of German defense firms. On the other hand, Germany's tradition of private ownership of defense firms has materially affected its score in a salutary manner. Germany's defense industrial policy is marked by tensions; while in favor of creating a more European industry Germany continues to seek to protect domestic suppliers in a "low demand" environment.

Defense Market Outcomes—Measuring Traffic on the Two-Way Street

Chapter 4 evaluates market "outcomes"—trade and investment flows, the degree of Transatlantic armaments cooperation, and the developing footprints of U.S. defense firms in Europe and of European defense firms in the United States. By and large, this data tends to confirm and complement the market access findings summarized above and set forth in detail in Chapter 3.

An Analysis of Trade Flows

The defense trade flow between the United States and Europe remains very unbalanced—one side of the street has a good deal of traffic while the other has very little, in absolute or percentage terms. Not only do U.S. exports to Europe dwarf European exports to the United States (the ratio is roughly 5:1 or 6:1), but the U.S. market share in Europe is much greater than the European share of the U.S. market. However, U.S. companies by and large do not depend as heavily on exports as do European companies and have retained a dominant position in the global defense market, with 51 percent market share in 2007. In short, while Europe accounts for a large portion of U.S. defense exports, Europe is not critical to the health of the U.S. defense industry.

The data also shows a bulge in U.S. defense trade to Europe in the 2004-2007 period that appears to relate to European buying for immediate operational needs (spares, upgrades, additional equipment). This surge in U.S. sales to Europe during wartime, which is probably not sustainable, confirms that European governments, whatever their political preferences, will buy American equipment (often on a sole source basis) when urgent needs dictate. This suggests that the future U.S. participation in the European market may be more in the context of special buying for short-term operational needs rather than in the context of ongoing, long-term European programs.

On the other hand, for European defense industries, which depend on exports for more than half of their total revenues, the United States is emerging as a critical market because: 1) their own domestic markets continue to decline; 2) other European markets remain stagnant or in decline; and 3) the European market share in the global defense market continues to decline. Because the United States remains the single largest defense market in the world, European companies need to penetrate the U.S. market to survive. Thus, in this context, their willingness to deal with various impediments to U.S. market access is wholly understandable.

Finally, the data on U.S. defense trade with Europe also shows that U.S. defense firms have historically had the most success on the geographic periphery of Europe—the UK, Greece, Italy, Turkey and increasingly in Central Europe. This reflects a combination of geopolitical considerations, the availability of very competitive U.S. offsets and financing packages for sales, and the relative superiority of U.S. offerings. The analysis here indicates that this reality is unlikely to change. As Western European nations in the heart of Europe open their markets and introduce better buying habits, the opening is unlikely, as discussed above, to benefit U.S. suppliers as these governments increasingly adopt a more Eurocentric approach. Moreover, as American firms face more competitive offerings in the periphery of Europe, it is likely that our position in these markets will be under stress as well (although we have not explicitly studied some key periphery countries such as Greece and Turkey).

An Analysis of Transatlantic Content on Major Programs and Cooperative Engagement

Our assessment of U.S. participation in major European programs confirms the paradox discussed above: European defense procurements, while becoming more competitive, are becoming less open to U.S. participation:

- First, due largely to budgetary constraints, the number of major European programs initiated each year has fallen from an average of 5 or 6 per year in 1995-96 to only one or two per year today. Europe's sustained procurement holiday reduces the opportunity for U.S. companies to compete in the European market. Moreover, the dearth of new starts has created incentives for European customers to keep any new programs as "European" as possible.
- Second, of those competitively awarded European programs ostensibly open to U.S. participation, the win rate for U.S. competitors is low; only a few have been won by U.S. prime contractors.
- Third, a review of major cooperative European programs, which have grown as a percentage of European defense spending, shows a limited U.S. presence on those platforms. U.S. companies at best participate in supplying limited subsystems and components.

An "outcomes" analysis of European participation in U.S. programs also confirms the obvious: European firms have a small share of U.S. prime level procurement awards and an even more minor role in U.S. RDT&E programs. At the subcontractor level, we believe European participation in the U.S. defense market is deeper and more varied. However, meaningful data on subcontractor sales in the United States is unavailable.

Moreover, there is very limited Transatlantic armaments cooperation underway (with F-35 Joint Strike Fighter accounting for most of the effort). The small list of joint programs offers no overriding strategic purpose or plan such as the general promotion of force interoperability. Rather, it is a hodgepodge of programs that, for various reasons at various times, were undertaken cooperatively.

The limited number of Transatlantic cooperative programs reflects several other underlying factors on both sides of the Atlantic. First, in the United States, the absence of DoD leadership support for cooperative programs means that DoD components will seek this alternative only if they really need to (e.g., in order to lower costs per unit or obtain needed funding from foreign partners, as in the case of the F-35 Joint Strike Fighter). Given the large budgets in the United States in recent years, there has been less motivation for services and program offices to seek foreign participation in a cooperative program. In Europe, small defense budgets are in fact driving armaments cooperation—but primarily European cooperation in light of geopolitical considerations. Finally, the relative lack of enthusiasm on both sides of the Atlantic reflects not only underlying geopolitical and budgetary realities, but the sustained practical problems we have encountered in these programs (with issues of budgets, technology transfer, cost and the like).

An Analysis of Foreign Direct Investment

A review of foreign direct investment in defense firms in the markets studied also tracks with the market access analysis above. The pattern of European acquisitions over time reflects changing U.S. policies. There were more significant acquisitions in the Clinton years when U.S. policy favored these Transatlantic supplier linkages, and fewer in most of the Bush years when a series of things, including September 11, the U.S.-European rift over Iraq, and the controversial Dubai Ports acquisition, created a less hospitable environment for foreign investment. Thereafter, there was an increase in foreign investment activity in the late Bush years when U.S.-European relations improved and U.S. attitudes toward foreign investment somewhat relaxed.

- Most of the European acquisitions were subsystem firms and suppliers with only a scant few acquisitions of prime level firms (all by UK buyers).
- Consistent with the "special" relationship between the United States and the UK and the deep bilateral defense industrial cooperation, British firms made the lion's share of all acquisitions (nearly 50 percent). Finmeccanica of Italy's 2008 acquisition of DRS Technologies, a leading electronics subsystem firm, was the only significant non-UK acquisition of a U.S. defense firm.

The data on U.S. acquisitions of European defense firms also is consistent with our findings of foreign investment policies in European countries—i.e., that France, Germany and Italy are largely not hospitable to U.S. acquisitions of defense firms, while the UK was reasonably hospitable. Significantly, the data shows that only 19 percent of U.S. acquisitions of defense firms in Europe were in the three largest continental European countries studied despite the fact that France, Germany and Italy hold the bulk of Europe's defense industrial capacity outside the UK. In contrast, consistent with its more open policies toward U.S. investment in the defense sector, the UK was the home of 70 percent of the U.S. acquisitions in recent years.

An Analysis of Transatlantic Defense Industrial Footprints—Examining the "Icebergs"

Finally, the footprints of U.S. firms in Europe and of European firms in the United States also track well with our market access analysis. Among European firms, the UK defense firms have the largest U.S. presence—consistent with the special U.S.-UK relationship, longstanding defense industrial collaboration, and a greater degree of U.S. openness to UK ownership of U.S. defense assets. Continental European firms, faced with a less favorable climate for acquisitions in recent years (especially larger ones), have expanded their U.S. presence through smaller, less sensitive acquisitions and other approaches. In contrast, U.S. firms have a modest, but growing, presence in the UK and a very limited presence in continental European firms—reflecting both different market opportunities and different foreign investment policies in the relevant countries.

Are the defense industrial "icebergs" described above melting? Significantly, there is little doubt that European firms are becoming more integrated into the U.S. defense industrial base in ways not previously seen. In contrast, the European prime level firms (i.e., the "icebergs") largely remain European—more integrated across national lines but with little integration with large U.S. firms. There are, however, a series of linkages between U.S. and European primes, formed largely through teaming arrangements and a limited number of joint ventures.

An Analysis of the Coping Mechanisms of Defense Firms. Not surprisingly, defense firms have adopted different coping mechanisms to deal with this complex market environment. European firms, with small home markets, have long recognized the imperative to participate in global markets and have increasing percentages of revenues from non-home markets in recent years. Nearly all of the major European firms seek enhanced participation in the U.S. market, the largest market in the world. Recognizing the difficulty in selling directly to the DoD, they seek to participate through acquisitions of U.S. defense firms, joint ventures, partnerships and other collaborative mechanisms that typically involve considerable U.S. domestic production. Large European firms have increasingly become multidomestic (with sufficient local capability to be considered a domestic player in relevant markets) and seek to include the United States as another home market.

In contrast, in an era of large U.S. defense budgets, large U.S. firms have not viewed international markets as anywhere near as important to their business as their European counterparts do (with revenue from foreign sales running at 20-30 percent of total sales at the large U.S. firms). They perceive fewer opportunities abroad, risks of loss through fixed-price contracts (more prevalent in Europe), long program gestation periods, potential national and European preferences, and more complexity. Hence, they tend to operate abroad through local representatives and agents and compete opportunistically except in the UK, where the availability of opportunities and openness have caused several large U.S. firms to make sizable investments. As U.S. budgets remain flat or decline, U.S. firms may again look to deepen their engagement in Europe and elsewhere.

The Role of the EU and Other "European" Arrangements in Defense Markets—Realities, Prospects and Implications

As discussed in Chapter 5, there is no doubt that the role of "Europe" as a whole—as distinct from individual national governments—is growing in defense and homeland security markets through the EU and other collaborative European arrangements.

The Role of the LOI 6

On the supply side of the market, post-Cold War budget drawdowns drove European nations to actively encourage the consolidation of defense industries within Europe. In this context, six European nations constituting a large share of European defense spending (the LOI 6) have signed a Letter of Intent (LOI) and put together a series of arrangements that are designed to ease anxieties over cross-border mergers, acquisitions and collaborative efforts. These arrangements served their purpose and ushered in an era of largely European industrial consolidations—especially in the aerospace sector. The various LOI agreements also established a number of standards now gaining traction in the larger EU, and the LOI 6, as a forum, itself has been useful for the development of the European market.

The Emerging Role of the EU in Defense and Security

More broadly, Europe is coming together in defense—in fits and starts—through the EU and is developing an overall defense identity separate from the individual national defense identities. Over the next 10 to 15 years, as the EU increasingly becomes the center of gravity for European defense in all its elements (from strategy to capabilities to missions), we project the EU will play a growing role in the establishment of European defense requirements and capability development. Gradually, an increasing amount of European research and technology and procurement will be spent through the EU and smaller groups of European nations often under an EU umbrella.

The Growing Role of EU Institutions in Defense Markets

A series of EU institutions are becoming active in defense markets—on both the demand and supply sides of the equation:

- The EDA will increasingly be a shaper of requirements for, and potentially a buyer of, both defense and homeland security products and services where common needs exist.
- The EC is becoming the leading regulator to ensure an open and competitive European defense market, as reflected in its new package of defense-related directives—the EC Procurement and Transfers (export licensing) Directives. The Directives, recently passed by the European Parliament, are expected to be finally adopted in 2009.
- The European Court of Justice also has made a series of rulings related to defense markets that effectively restrict the ability of national governments to invoke Article 296 of the Treaty establishing the EC (Article 296 EC Treaty) and exempt defense procurements from competition on the grounds of "essential security."

The New EC Procurement and Transfers Directives: A Constructive Development for Europe, A Mixed Blessing for the United States

The enactment of the new EC Defense Directives is a major milestone for the Commission, which has long sought to create a single European defense market rather than a series of fragmented national markets. The EC Defense Procurement Directive applies the basic market principles of the EC's existing Public Procurement Directive, including transparency and competitive bidding requirements, to defense markets. But the Directive recognizes the unique and sensitive nature of defense markets and, hence, affords more flexibility to contracting authorities and also provides safeguards designed to ensure the security of information and supply.

The EC Transfers Directive is expressly designed to create an improved and simplified regulatory environment for intra-European defense transfers that both strengthens the European defense industry's competitiveness and improves security of supply of European defense products. The Directive seeks to accomplish these goals by creating broader and less burdensome *internal* export license mechanisms while maintaining clear, strong controls at EU external frontiers.

Significantly, virtually all parties interviewed for this study agreed that the most important aspect of the new Directives is that they have the force and effect of law and can be judicially challenged. All believed that the prospect of judicial challenge, if not its actuality, will gradually force more discipline on the part of Member States and, over time, result in a more open and competitive European defense market. Thus, if some governments fail to fully apply the Directives and continue to seek to protect their markets, they would be subject to judicial action.

While the enactment of these Directives and the development of a truly European defense market is a constructive step forward, they do hold some material risks for the United States. Specifically:

1. **The increasing use of competition in national defense procurement, which the new EC Defense Procurement Directive is likely to accelerate, will likely make it harder for U.S. firms to obtain sole source contracts in Europe.** As noted above, U.S. firms historically won a sizable number of awards on a sole source basis. Now, through Brussels, European firms can pressure national governments to open these awards to competition. Perversely, U.S. defense firms will likely be major beneficiaries of individual national governments' continued willingness to invoke Article 296 EC Treaty to buy on a non-competitive basis from the United States (e.g., to fill urgent needs).
2. **More broadly, as Europe comes together in defense, there is a very real risk that a European preference to "buy European" will develop and gradually substitute for existing "buy national" tendencies prevalent in Europe today.** This potential "Fortress Europe" risk may manifest itself in European countries limiting some national competitions to European bidders. This risk is driven by a mix of nationalist and protectionist impulses present in some quarters in Europe, including a desire for autonomous European security policies and defense industrial capabilities as a counterbalance to perceived U.S. hegemony and a desire to create more "balance" in Transatlantic defense trade. While not all in Europe share these more protectionist motivations, some nations and constituencies are strongly advocating these approaches.

The new EC Defense Procurement and Transfer Directives do not contain an express European preference and, indeed, make clear that it is up to national authorities whether to allow non-EU firms to compete in their defense markets. EC officials stressed to the study team that the Directives are designed to facilitate the development of a more integrated European market but are neutral on U.S. participation in that more integrated market. However, the Defense Procurement Directive in particular has a number of features that in effect create potential implicit European preferences. These include, among other things, security of supply provisions allowing European nations to disfavor bidders that rely on ITAR-licensed products as compared to other bidders with a wholly European supply chain. The ability of national procurement authorities to use "security of supply" as a discriminator in contracting could well be, or evolve into, a disguised market access barrier in practice. How the security-of-supply rules are implemented by national governments remains to be seen.

Similarly, a core question for the future is the relationship between the Defense Procurement Directive and the existing bilateral defense MOUs between the United States and various EU Member States, which contain varying types of national treatment requirements. Specifically, will EU Member States afford the benefits of the EC Defense Procurement Directive to the United States, and will the United States continue to maintain the MOUs in place in the absence of true "national treatment" being afforded to U.S. suppliers?

Implications for U.S. Policy and Recommendations

The reality today is that neither the United States nor Europe (collectively or as individual nations) have put in place a coherent set of strategies to encourage the development of a more open and Transatlantic defense market.

- For legitimate reasons, European nations are primarily focused inward on creating a more open and competitive *European* market—an imperative given constraints on

European defense spending and well-known market fragmentation and duplication. European governments also are driven to cooperative programs due in large part to economic circumstances—the lack of ability to go it alone. However, a range of factors are driving European nations to *European* armaments cooperation rather than *Transatlantic* cooperation.

- In the United States, the Clinton Administration, especially in its last years in office, actively pursued the development of an open Transatlantic arms market—primarily through a focused "supply side" policy of encouraging Transatlantic supplier globalization to promote force interoperability and competition in defense markets, and to remove incentives for arms proliferation (through U.S. and European competition) in third-country markets. Specifically, the United States took a number of steps to put in place the "hardwiring" for supplier globalization.
- In contrast, the Bush Administration, with a different focus in the post-September 11 era, was largely agnostic, or in certain circumstances hostile, to this agenda. While the Bush Administration continued some Clinton Administration initiatives, in essence, for its eight years in office, it had no clearly articulated defense industrial policy or policy on supplier globalization or armaments cooperation. In the early years, its approach ranged from non-activist to quasi-protectionist. Nevertheless, after a number of years of a "circle the wagons" approach in the immediate post-September 11 era, a series of Bush actions in more recent years has been promising. These include the negotiation of export control treaties with the UK and Australia (following from the ITAR waivers negotiated during the Clinton Administration), the award of several major contracts to Transatlantic teams and the approval of a large non-UK defense firm's acquisition of a U.S. defense firm (Finmeccanica's purchase of DRS Technologies). The Bush Administration also deserves credit for working actively to fight off the prospect of more protectionist Buy American legislation.

In short, the historic record shows that Administration policies matter and do affect the scope and pace of the Transatlantic defense marketplace. Thus, the threshold question for the Obama Administration and our European Allies—faced with many other challenges before them—is whether to take strategic, meaningful action in this arena. Specifically, should we take the steps needed to sustain the positive dynamics underway, eliminate or reduce impediments to change, and foster or facilitate a more rapid development of a Transatlantic market—or leave the matter to gradual, evolutionary change?

Back to First Principles: The Linkage Between Transatlantic Market Development and Strategic Policy Goals

Simply put, the central policy question is whether enhanced mutual market access facilitates arming the United States and its coalition partners with affordable, innovative and interoperable military capabilities designed to address the range of twenty-first century threats?

Under the prevailing "defense paradigm" developed during the Cold War, American security has been based primarily on U.S. military superiority—derived from our technological and industrial edge developed in the cocoon of defense industrial autarky. This paradigm is under serious stress in the post-September 11 security environment we face today. For one thing, the powerful trends at work—the globalization of the economy and the information revolution—have led to a more interconnected world, where national "beggar thy neighbor" policies do not work to our mutual benefit. Moreover, the broad range of challenges and threats we face—increasingly transnational in character—cannot be solved by the United States alone and increasingly require collective action across all the tools of statecraft, from intelligence to economic assistance to high- and low intensity military power. Going it alone is not an effective option for addressing challenges from economic trauma and cyber power to global terrorism and global warming to weapons of mass destruction.

- In an era markedly different from the Cold War, with agile non-state actors operating across national boundaries, the need to work more closely with allies is not an option but an imperative. Among our allies, our European partners are among our closest partners by virtue of our shared heritages and values, and our congruence of interests.
- In an era when we face a range of potential conflicts abroad and high tempo of operations (especially low intensity conflicts such as counterinsurgency, stabilization and reconstruction and anti-terrorism), it is more important than ever that we share the burden with our allies through coalition warfare. Burden sharing with our European Allies is particularly likely in low intensity operations; by virtue of their history, culture and political evolution, most European countries have little appetite for out-of-area, high intensity operations today. Thus, a more open and competitive Transatlantic market—with both cooperative demand and supply-side supplier integration—is potentially one part of a holistic approach to enhancing coalition capabilities and force interoperability in support of such low intensity missions.
- In an era when weapons costs continue to escalate and defense budgets are increasingly constrained, enhanced Transatlantic competition can help drive affordability and innovation in consolidating U.S. and European defense markets.
- In an era when a good deal of future innovation is likely to come from abroad (e.g. from India or China), we need to take steps to ensure that the United States can continue to access the best and brightest foreign people, ideas and investments in order to provide the best solutions for our war fighters and maintain our competitiveness.
- In an era when Europe is developing its own defense identity, an integrated Transatlantic defense market can be part of the broader spectrum of ties that continue to bind us together.

Finally, and not insignificantly, enhanced market access can strengthen and expand our own defense industrial base. Foreign sales—running 20-30 percent at large defense firms—are not unimportant to their bottom line. They can enhance economies of scale and lower the per-unit costs of systems and products for the DoD. Moreover, coming at the end of production runs, they often have good margins and benefit the bottom lines of defense firms. Such sales also are probably more important to U.S. subsystem suppliers, but little data is available to confirm this inference.

In light of these considerations, there remains a strong case for developing an open and competitive Transatlantic defense market—with closer defense and homeland security industrial cooperation among a circle of close allies subject to appropriate security safeguards.

Some Lessons Learned

If the Obama Administration and our European Allies pursue this agenda, there are several important "lessons learned" that should be taken into consideration.

1. **Developing an open and competitive Transatlantic defense market is not an easy task, requires senior leadership attention, and will inevitably be evolutionary in nature.** Since, as discussed above, governments have powerful incentives to spend their resources at home, it requires substantial leadership attention to change the existing culture. Moreover, the nature of the resistance to change is such that it will take time to change deep-seated cultural and institutional attitudes—a matter of years not months. One lesson from the Clinton years—when major reforms were initiated during the last two years of the President's second term—is that this type of paradigm shift needs to be started earlier in the Administration in order for it to really produce results.
2. **Developing an open and competitive Transatlantic defense market requires concerted efforts on *both* the supply and the demand side of the market; supplier globalization alone is not a panacea.** Experiences over the last two Administrations indicate that progress can be most effectively made through a series of interrelated actions. Put another way, supplier globalization—the development of enhanced defense industrial linkages among allies—cannot alone be an effective tool in the absence of a more open market on the demand side that will entertain offerings from such globalized firms. There is little point in urging Transatlantically linked firms to come forward with bottom-up solutions that promote interoperability and coalition war fighting capability acquisition unless the buyers are willing to entertain such solutions. Moreover, achieving the goals of interoperability and capability acquisition cannot be done through bottom-up supplier offerings alone. More attention is needed to create a demand pull in support of these goals to complement the supplier push.
3. **Finally, the United States needs to fully accept and embrace the reality of an EU with a significant role in defense generally and in defense markets in particular—with an emerging role as regulator and buyer.** Thus, any new strategy should have as a core element deepened and broadened engagement with the EU, as well as the LOI 6 and European national governments, in order to better shape the evolving development of European defense markets in ways salutary for U.S. interests.

Recommendations for Change

Specifically, as set forth in the body of the report in detail (Chapter 6), there are six core recommendations for actions that can help facilitate the development of an open and competitive Transatlantic defense market.

1. **Assign a Senior Pentagon Executive to Manage the Interrelated Coalition War Fighting, Transatlantic Market Development and Globalization Agenda.** The current Pentagon organizational structure related to this agenda is balkanized in a variety of ways, which undermines our ability to effectuate our strategic policy goals. DoD export control functions are dispersed among different DoD

components and are not well connected to our armaments cooperation functions or our efforts to improve coalition capabilities. Moreover, there is not a clear focal point at the DoD for incentivizing our allies' capability acquisition and promoting force interoperability—the critical enablers of coalition warfare. Because of these relatively stove-piped functions and policies, the DoD has struggled to assimilate to a globalizing world. Accordingly, the disconnects between coalition warfare planning, international armaments cooperation and technology transfer policy can potentially be addressed by creating an organizational structure that brings these capabilities together under one senior DoD executive who can facilitate making balanced, holistic decisions.

2. **Step Up Armaments Cooperation in Support of Coalition Warfare and Transatlantic Market Development.** The DoD should develop a more coherent, across the board approach to armaments cooperation to replace the current ad hoc approach and organize a concrete set of programs that advance our interests in coalition warfare. Specifically, the United States should develop interoperability roadmaps for NATO coalition forces and should use these as a basis for cooperative engagement. In particular, a cluster of efforts could be focused on cooperation with respect to low intensity warfare, which typically requires the development of capabilities that are lower tech in nature in some cases and also does not involve large platforms (where protectionist tendencies are greatest). These efforts also could draw more attention to better harnessing technology for low intensity conflict.

   - Thus, the United States should consider, among other things, joint programs or foreign participation in key U.S. enabling programs on network-centric warfare (including technology demonstrators) in order to facilitate force interoperability with our key allies—a serious need that has been largely left unattended. Such programs could 1) focus on fostering the development of common network-centric architectures into which nations can "plug and play," 2) incorporate their own sensor outputs, and thereby 3) achieve secure communications, similar levels of situational awareness and other potentially higher-order forms of interoperability as needed.
   - The United States also should consider cooperative efforts—joint investments—with the EU in defense and homeland security (e.g., in the area of civil/military interoperability). With this approach in mind, the Obama Administration should seek to work cooperatively with Congress to amend the Arms Export Control Act in order to afford the DoD the authority to enter into cooperative R&D agreements with the EU; today, such agreements can be signed only with individual governments or NATO.

3. **Reform Internal U.S. Government Rules, Policies and Processes to Facilitate Development of a Transatlantic Defense Market: Export Controls, Industrial Security, National Disclosure Policy, Procurement, Investment, and Buy National Tendencies.** As discussed above, an emerging confluence of U.S. policies and practices—some intentional and others unintended, some old and some new—together threaten to impair our access to foreign innovations, as well as defense markets, and impede our collaboration with foreign partners. These policies and practices, over time, can put at risk American industrial leadership in critical industries and our national security. The danger is real and should be addressed

now before the damage is severe and we are doomed to be "second best" and see our defense posture and competitiveness erode. Accordingly, the Obama Administration should consider giving guidance to the federal government departments and agencies to administer the various regulatory regimes—investment, trade, export controls, Buy American, immigration—in a more balanced manner that regulates these matters only to the degree needed to protect national security and bring more focus to competitiveness considerations.

- **Conduct ITAR Review and Adopt Needed Defense Export Control Reforms (Release Policies And Processes); Consider Merging Export Control and National Disclosure Regimes.** Virtually every interview we conducted highlighted U.S. defense trade controls as a "barrier" significantly impeding Transatlantic cooperation and the evolution of a Transatlantic defense market. Numerous studies, including some by the Defense Science Board (which is tasked to advise the DoD), have pointed out the problems inherent in our export control system. Accordingly, the time for study is past.
  - The United States should reform our ITAR rules, policies and practices with a view toward a balanced approach that safeguards those technologies, products and systems that warrant protection but allows release to our close allies in order to develop a more open and competitive Transatlantic defense market and promotes interoperability among coalition forces. Changes are warranted in both our procedures, which are too complex and arcane, and our release policies. *Allowing greater release of technologies and technical information for low intensity warfare should be a priority and should pose fewer challenges than sensitive information relevant to high intensity fighting.* Undoubtedly, however, not all of the complaints of foreign governments and firms are accurate or can be remedied. And, at the end of the day, significant U.S. technologies do warrant protection. However, there is no denying the legitimacy of some of these concerns.
  - The United States should move to ratify the U.S.-UK and Australia export control treaties signed in 2008—these agreements contain a new model for technology sharing among a community of trusted friends.
  - The United States also should reform related national disclosure policies that pertain to the release of classified information. These policies today inhibit our ability to engage in coalition warfare and also undermine defense industrial collaboration. One option to consider is the merger of national disclosure and export control regimes—they are really two sides of the same coin.
- **Modernize U.S. Foreign Ownership, Control and Influence (FOCI) Mitigation Arrangements to Allow More Business Synergies and Lower the Costs of Doing Business While Maintaining Security.** The basic mitigation agreements being used by the DoD where foreign firms acquire FOCI of U.S. defense firms with classified contracts were developed decades ago and have not been modified to adapt to twenty-first century business models now in place. While foreign firms with U.S. classified operations have learned to live with the inflexible arrangements that exist under today's U.S. industrial security rules, they nevertheless impose significant administrative costs and burdens beyond

what is necessary to protect security in some situations and limit the ability for business synergies and the innovations that may result. Accordingly, the DoD should conduct a review with a view toward adopting a more flexible approach that nevertheless maintains security and revising the National Industrial Security Program Operating Manual accordingly.

4. **Put in Place the International "Hardwiring" for an Open and Competitive Transatlantic Defense Market: Engage on a Sustained Basis With the EU and LOI 6 and Revitalize the Bilateral Declaration of Principle (DoP) Process.** The United States should more comprehensively engage with Europe (all counterparts) with a view toward addressing market access impediments, easing insecurities, and "leveling up" standards and harmonizing practices in areas such as: market access, industrial security, export controls, procurement, R&D, the development of the defense industrial base, offsets, security of supply and technical standards. A U.S. willingness to share more technology with our allies inevitably is tied to their willingness to enhance their own security standards *vis-à-vis* third parties.

   - **The EU: An Early Focus On Avoiding the Development of a European Procurement Preference in the Implementation of the New EC Defense Procurement Directive.** The DoD should engage with the EU and national governments to ensure that the new EC Defense Procurement Directive and any other new rules or policies on European acquisition are effectuated in a manner consistent with existing international trade law principles on government procurement and U.S. interests, and are not interpreted so as to create a "European preference." In particular, the dialogue should focus on the "security of supply" measures in the Directive, which suggest that ITAR-based products in a supply chain of a bidder might be viewed as "insecure" and, therefore, put that bidder at a competitive disadvantage *vis-à-vis* other bidders with no ITAR-based products in its offering. The United States should signal that the adoption of European preferences, explicitly or implicitly, would be viewed as contrary to our existing reciprocal procurement MOUs and could result in the possible termination of such MOUs.

   - **The LOI 6: Offsets, Domestic Work Share Requirements (Formal and Informal), Industrial Security and Intellectual Property.** On offsets, a key market access impediment, the United States should build on efforts to date and develop a sustained dialogue with the LOI 6 and other like-minded countries (Australia and Japan) with a view toward developing disciplines and limitations on the use of offsets and informal domestic work share requirements that have emerged—perhaps phasing them out over time. While prior periodic multilateral consultations (including those with the LOI 6) have not produced tangible results on offsets, a reinvigorated effort may lead to disciplines that become stronger over time in the context of discussions with more like-minded countries rather than in a broader group that includes countries that are predominantly buyers (especially those in transitional countries in Central Europe). In the areas of industrial security and IP, in order to level the playing field and facilitate cooperation, the United States should explore mutual recognition agreements and ways to harmonize practices with the LOI 6 nations as a group. The LOI agreements in place on these issues can serve as a point of reference.

- **National Governments: The United States should reinvigorate and revitalize the bilateral DoP process begun in the late 1990s by the DoD, and seek specific agreements in key subject areas with DoP partners on a country-specific basis in order to broaden mutual market access.** The focus should be on priority countries where U.S. strategic interests are greatest. With this close circle of friends, we should consider the possibility of negotiating broadened market access agreements that address priority issues that pose the greatest impediments: foreign investment, offsets and performance requirements. The approach would be to make more tangible the benefits of DoP membership and incentivize countries to change their policies and practices so as to get the benefits of these expanded market access benefits.
- **Addressing Security of Supply Anxieties Through Interdependence.** In undertaking this range of discussions, the United States should directly discuss with its European counterparts "security of supply" anxieties—a central issue hindering the creation of an open and competitive market. European concerns over this matter are very real—as manifest in inter-European LOI agreements designed to address these issues. While agreements on some aspects of "security of supply" (e.g., a priority allocation process for times of exigency and peacetime) can perhaps create some degree of comfort, this is an area where conduct and practice are probably more important. The reality is that sovereign governments of course retain the right to deny supply to other governments. Indeed, the U.S. government could not commit legally to cede these rights, which exist as a matter of law, and also would be unwilling to limit its flexibility in this manner. European governments thus should recognize that dependence does not necessarily imply vulnerability in today's age of increased security cooperation. In fact, the best salve is growing *interdependence* and cooperation—with step-by-step confidence-building measures—which can in practice, over time, create more comfort on these issues. Thus, as a Transatlantic market develops, with more cooperation and competition, this type of concern should gradually ease as trust and confidence grow.

5. **Shape Demand-Side Measures With Arms-Buying Nations to Curb Illicit Foreign Payments in the Defense Sector.** Western suppliers will continue to face pressures to make illicit payments from government buyers in transitional and developing countries. The reported prevalence of bribery and corruption in the military sectors of developing countries in Asia and South America and in transitional countries of Central and Eastern Europe reflects deeply rooted and systemic problems. While the United States and other Western governments have taken action to address the "supply" side of this problem through the adoption of the Organisation for Economic Co-operation and Development (OECD) Convention on Combating Bribery of Foreign Public Officials in International Business Transactions and national criminal laws prohibiting foreign bribery, there have been limited steps overall on the "demand" side of the equation. There also has been little specific focus on these issues by DoD or by Defense Ministries in Europe. The achievement of meaningful results in stopping the practice will require more systematic efforts to curtail the demand for corrupt payments by addressing the underlying institutional problems noted above and the perverse incentives they cre-

ate. The United States therefore should work with its allies to develop a more robust demand-side agenda to address payments in the defense sector.

6. **Create a Transatlantic Defense Industrial Dialogue to Catalyze Change.** Governments alone by no means hold all of the answers, and private sector engagement and action is an important part of creating a more open and competitive Transatlantic defense industry. To this end, one approach to consider is the creation of a Transatlantic Defense Industry Dialogue (the Dialogue) among senior executives of the U.S. and European industry and senior government leaders, including representatives of NATO, the EU, and the national governments involved in the "Five Power" armaments group (France, Germany, Italy, the UK and the United States). The Dialogue could potentially be a vital force in helping to catalyze the types of policy changes set forth in the recommendations above and in promoting private sector solutions and collaboration in the context of a secure environment.

The Bottom Line

In sum, the development of a more open and competitive Transatlantic defense market can be a potentially useful policy tool for solidifying the Transatlantic relationship, facilitating coalition war-fighting capabilities, and improving affordability and innovation in defense acquisition. However, as the list of recommended actions above reflect, deepened Transatlantic defense industrial cooperation will not be easy to achieve—it goes against the basic grain of national governments not to protect their strategic industries and to spend their R&D and procurement dollars at home. It also requires changing laws and rules and breaking down longstanding institutional and cultural impediments.

Further, for progress to be made, it is critical that both the United States and our European Allies engage constructively with respect to this agenda. If Europe (both the EU and its members) decides as a strategic matter to focus largely inward on fostering its own European market development—a fair prospect—it will not be possible to make material progress on this agenda.

Finally, it should be recognized that Transatlantic market development is no panacea standing alone. It will not automatically result in greater force interoperability or improved coalition war fighting or greater weapons affordability. This is only one piece of a larger mosaic, with other steps beyond the scope of this report, that together can help to achieve these strategic goals. And, this strategy will be effective only when both sides of the Atlantic really care about the underlying security and economic goals discussed herein. Both sides must be willing to apply scarce leadership resources to address the difficult underlying impediments and shift the paradigm from national defense industrial policy toward a Transatlantic defense industrial policy among a community of trusted friends.