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Pakistan's Nuclear Command and Control: Perception Matters

By Ian Bremmer & Maria Kuusisto • Series Editor: Maria Sultan



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Pakistan's Nuclear Command and Control: Perception Matters

Ian Bremmer & Maria Kuusisto

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Ian Bremmer and Maria Kuusisto

Abstract

Pakistan needs to address three major developments—the 9/11 terrorist attacks, the 2003/2004 A. Q. Khan scandal, and the recent instability in Pakistan—triggered concerns in the international community that Pakistan's control over its nuclear weapons may be weak. This perception has wide-ranging strategic diplomatic, political, and economic implications for Pakistan. Pakistan's new Pakistan Peoples Party (PPP)-led coalition government needs to build international—governmental and non-governmental—confidence in its nuclear command and control system and the security of its nuclear weapons if it is to have any hope of securing a more stable regional environment, a more stable economic and security environment, or any hope of gaining access to civilian nuclear technology argues Ian Bremmer and Maria Kuusisto.

Pakistan's nuclear command and control—perception matters

By Ian Bremmer and Maria Kuusisto

Introduction

Pakistan has significantly improved the institutional frameworks and operational procedures for its nuclear weapons and moved from a clandestine nuclear weapons program to greater openness. However, three major developments—the 9/11 terrorist attacks, the 2003/2004 A. Q. Khan scandal, and the recent instability in Pakistan—triggered concerns in the international community that Pakistan's control over its nuclear weapons may be weak. This perception has wide-ranging strategic diplomatic, political, and economic implications for Pakistan. Pakistan's new Pakistan Peoples Party (PPP)-led coalition government needs to build international—governmental and non-governmental—confidence in its nuclear command and control system and the security of its nuclear weapons if it is to have any hope of securing a more stable regional environment, a more stable economic and security environment, or any hope of gaining access to civilian nuclear technology.

Overview of Pakistan's nuclear capability

Pakistan developed its nuclear capability in three phases. During the first phase (1954–1974) Pakistan acquired basic knowledge about nuclear energy and built its first research reactor in 1965. During this phase, development was slow because of the government's weak commitment and lack of skill, technology, and investment. India's May

1974 “peaceful nuclear test” was a major turning point. It heightened the country's sense of vulnerability and marked the beginning of the second, more robust and military focused phase (1974–98). During this phase, Pakistan learnt to enrich uranium and to manufacture components for a nuclear weapon. Although it is likely to have achieved the technological capability to carry out an explosive nuclear test by mid-1980s, it did not do so until late May 1998 (after India carried out an 18 May nuclear test). During the third phase (1998–present) Pakistan has focused on designing more sophisticated nuclear weapons and delivery systems.¹ Pakistan probably wants to develop a plutonium-based weapon, improve the range of its surface-to-surface missiles, and gain naval and cruise missile capability.

The details of Pakistan's nuclear weapons capability and doctrine remain uncertain because of Pakistan's need to maintain strategic ambiguity. But, Pakistan is estimated to have between 50 and 60 nuclear weapons and the capability to deliver them either by aircraft (modified F-16s and Mirages) or surface-to-surface missiles. Pakistan has not formally announced any nuclear doctrine. However, statements by senior Pakistani military and government officials suggest that the objective of its nuclear doctrine is to deter all forms of external aggression that could endanger Pakistan's national security or strategic forces.² It is not clear what would

¹ Naeem Ahmad Salik, “Regional Dynamics and Deterrence: South Asia (2)”, *Contemporary Security Policy*, Volume 25 (2004), 185-186.

² Mahmud Ali Durrani, “Pakistan's Strategic Thinking and the Role of Nuclear Weapons”, *Cooperative Monitoring Center Occasional Paper, SAND 2004 3375P*, (New Mexico: Sandia National Laboratories, 2004), 23

constitute a severe enough danger to Pakistan's national security to trigger the use of nuclear weapons, but a variety of events have been suggested. This threshold could be a loss of a significant part of Pakistani territory, a destruction of a large part of Pakistan's military, economic strangulation, or social destabilization.³ Pakistan believes that it can achieve deterrence against aggression through a combination of conventional and strategic forces.⁴ Pakistan has not agreed to a no-first-use but will not use nuclear weapon against non-nuclear weapon states.⁵

Evolution of Pakistan's nuclear command and control system

Little is known about Pakistan's command and control system during the first two phases (1954–1998) but it is likely to have been relatively weak.⁶ The government's focus during the first two phases of Pakistan's nuclear development was on building a weapon and little attention was therefore paid to developing a nuclear command and control system. For example A. Q. Khan's laboratory was granted a largely

free hand to pursue its research.⁷ Since 1975 Pakistan's nuclear weapons program has been controlled by the National Nuclear Command Authority (NCA) and the National Nuclear Command Committee (NNCC).⁸ There are different views on the composition of the NNCC and the balance of power between its key members. Originally, this committee is likely to have had six members including the president, the prime minister, and the chief of army staff. The balance of power between these key members is likely to have shifted in line with the wider political environment.⁹ In the 1990s, the membership of this committee is likely to have increased and the role of this committee is likely to have been formalized. In 1998, Prime Minister Nawaz Sharif ordered the military to prepare a new institutionalized command and control system.

Since 1998 Pakistan's nuclear command and control system has been transformed in four stages with the end result being a mature system. During the first stage (1998–1999) Pakistan started to consider a more institutionalized command and control system. During the second stage (2000–2001) Pakistan introduced its first reforms. On 7 February 2000, Pakistan

³ Centro Volta, "Nuclear Safety, Nuclear Stability and Nuclear Strategy in Pakistan", Pugwash, available at <http://www.pugwash.org/september11/pakistan-nuclear.htm>

⁴ Mahmud Ali Durrani, "Pakistan's Strategic Thinking and the Role of Nuclear Weapons", Cooperative Monitoring Center Occasional Paper, SAND 2004 3375P, (New Mexico: Sandia National Laboratories, 2004), 23

⁵ Mahmud Ali Durrani, "Pakistan's Strategic Thinking and the Role of Nuclear Weapons", Cooperative Monitoring Center Occasional Paper, SAND 2004 3375P, (New Mexico: Sandia National Laboratories, 2004), 23

⁶ Nuclear command and control refers to a system to manage strategic nuclear assets and infrastructure.

⁷ Douglas Frantz, "Pakistan's Role in Scientist's Nuclear Trafficking Debate: Islamabad's awareness of a Black Market led by the Father of its Atomic Bomb is still Uncertain", Los Angeles Times, 16 May 2005.

⁸ Mushahid Hussain, "Media off Target with Pakistan nuclear scare", Asia Times, 7 November 2001.

⁹ Douglas Frantz, "Pakistan's Role in Scientist's Nuclear Trafficking Debate: Islamabad's awareness of a Black Market led by the Father of its Atomic Bomb is still Uncertain", Los Angeles Times, 16 May 2005, Ahmed Rashid, Bare All and Be Damned: Ex-army Chief Reveals Nuclear Secrets, Far Eastern Economic Review, 5 May 1994.

announced a formal chain of command over nuclear weapons. This system was put into operation during 2001. During the third stage (2001–2003) Pakistan further strengthened oversight over its nuclear weapons. This was a response to the 9/11 terrorist attacks, which focused international attention on Pakistan and put pressure on Pakistan to secure its nuclear weapons.¹⁰ The final phase (2003–present) has been marked by the investigation into the A. Q. Khan nuclear network and related improvements in the command and control system, and export controls.¹¹ Finally, in December 2007 President Pervez Musharraf transformed the ordinance establishing the system into a law.¹²

The current command and control system is likely to remain unchanged under the new government. Both the PPP and Pakistan Muslim League Nawaz (PML-N) argued in their election manifestos that nuclear command and control system should be overseen by the cabinet defense committee chaired by the prime minister instead of the NCA. However, in April 2008 the PPP-led government announced that the nuclear

command and control system will remain unchanged.¹³ Prime Minister Yousaf Raza Gillani even expressed satisfaction with the current system.¹⁴ The government is likely to understand the need to consolidate and build on the existing, well-functioning system. Moreover, the government probably wants to focus on more urgently needed reforms, such as strengthening democracy, tackling the economic and power crisis, and fighting terrorism and Islamic militancy. However, the balance of power within the system is likely to shift to the prime minister in line with the wider political environment. While the military will retain operational control, the government will have more say on Pakistan’s nuclear weapons program.

Overview of Pakistan's nuclear command and control system

Pakistan’s nuclear command and control system is considered to be relatively sophisticated and balanced. It has civilian and military involvement, checks and balances between the participating institutions, and a clear division of responsibility between the institutions. The system is based on a three-tier structure: the National Command Authority (NCA), the Strategic Plans Division (SPD), and the three services’ strategic forces command. The composition and role of each of these institutions is outlined in the following sections.

National Command Authority (NCA)

The government created the NCA in 2000 as the highest decision-making

¹⁰ “Nuclear Black Markets: Pakistan, A.Q. Khan and the rise of proliferation networks”, (London: International Institute for Strategic Studies (IISS) 2007). 107-109.

¹¹ For further information see “Nuclear Black Markets: Pakistan, A.Q. Khan and the rise of proliferation networks”, (London: International Institute for Strategic Studies (IISS), 2007), Adrian Levy and Catherine Scott-Clark, “Deception: Pakistan, the United States, And the Secret Trade in Nuclear Weapons”, Walker and Company, 2007), Douglas Frantz and Catherine Collins, “The Nuclear Jihadist: The True Story of the Man Who Sold the World’s Most Dangerous Secrets...And How We Could Have Stopped Him”, (New York: Hachette Book Group, 2007).

¹² Stephen Graham, “Musharraf tightens his control over Pakistan's nuclear arsenal”, Associated Press, 15 December 2007.

¹³ Zeeshan Haider, “Pakistan’s Nuclear Command Stays Unchanged: Official”. Reuters, 8 April 2008.

¹⁴ “Pakistan's nuclear assets safe – PM”, BBC Monitoring South Asia, 18 April 2008.

body in the nuclear command and control system. It has ten members including the president (chairman), the prime minister (vice-chairman) and the chief of army staff.¹⁵ It is responsible for formulating policies, deploying the strategic forces, coordinating the activities of all strategic organizations, negotiating arms control/disarmament, overseeing implementation of export controls, and safeguarding nuclear assets and sites.¹⁶ It has two committees: the Employment Control Committee (ECC) and the Development Control Committee (DCC). The ECC is responsible for directing policy-making during peace time and deployment of strategic forces during war time, making recommendations on the evolution of nuclear doctrine, establishing the hierarchy of command and the policy for authorizing the use of nuclear weapons, and establishing the guidelines for an effective command and control system to safeguard against accidental or unauthorized use. The DCC is responsible for exercising technical, financial, and administrative control over the strategic organizations involved in the nuclear weapons program, and overseeing development of strategic weapons programs.¹⁷

Strategic Plans Division (SPD)

The SPD was created in 1998 as the permanent secretariat for the NCA. The

SPD is headed by a director general who is appointed from the army and comprises some 50–70 officers from the three services.¹⁸ It is responsible for formulating policy options (nuclear policy, strategy, and doctrine) for the NCA, implementing the NCA's decisions, drafting strategic and operational plans for the deployment of strategic forces.¹⁹ Moreover, the SPD carries out the day-to-day management of Pakistan's strategic forces, coordinates the activities of the different strategic organizations involved in the nuclear weapons program, and oversees budgetary, administrative and security matters.²⁰ The SPD has eight directorates—including the Operations and Planning Directorate, the Computerized, Control, Command, Communication, Information, Intelligence and Surveillance Directorate (CCCCIISD), Strategic Weapons Development Directorate, and the Arms Control and Disarmament Affairs Directorate—and several divisions. One of the main divisions is the security division, which has a 10,000-strong force charged with guarding and protecting Pakistan's nuclear weapons.

The Services' Strategic Forces Command

The Services Strategic Forces Command is raised from all the three services, which all have their respective strategic force commands. It is responsible for

¹⁵ "Pakistan Says Its Nuclear Assets Are Safe from Militants", Associated Press, 26 January 2008.

¹⁶ Kenneth Luongo and Naeem Salik, "Building Confidence in Pakistan's Nuclear Security", Arms Control Today, 1 December 2007.

¹⁷ Mahmud Ali Durrani, "Pakistan's Strategic Thinking and the Role of Nuclear Weapons", Cooperative Monitoring Center Occasional Paper, SAND 2004 3375P, (New Mexico: Sandia National Laboratories, 2004), 50

¹⁸ "Nuclear Black Markets: Pakistan, A.Q. Khan and the rise of proliferation networks", (London: International Institute for Strategic Studies (IISS) 2007). 112

¹⁹ Mahmud Ali Durrani, "Pakistan's Strategic Thinking and the Role of Nuclear Weapons", Cooperative Monitoring Center Occasional Paper, SAND 2004 3375P, (New Mexico: Sandia National Laboratories, 2004), 51

²⁰ Kenneth Luongo and Naeem Salik, "Building Confidence in Pakistan's Nuclear Security", Arms Control Today, 1 December 2007.

daily and tactical operational control of nuclear weapon delivery systems (the NCA is still responsible for overall strategic operational control). This operational control includes technical, training, and administrative control over missiles and aircraft that would be used to deliver nuclear weapons.²¹



The NCA has established strategic operational policy guidelines and plans for the deployment of nuclear weapons systems (these are national secrets). A decision to launch a nuclear strike is made by consensus within the NCA with the chairman casting the final vote. The NCA will communicate the decisions and delegate authority to implement the decision to the SDP and down the institutional hierarchy/structure. The details of this delegation are unclear. Nonetheless, Pakistan applies a two and/or three-man rule to the authorization of assembly and use of nuclear weapons.²² While the number of people required in different parts of the hierarchy is likely to vary because of technical reasons no single individual in any part of the institutional hierarchy is in a position to launch a nuclear strike or operate a nuclear weapon on their own. In addition, the NCA has the ability to cancel the decision to launch a nuclear strike up until the last minute before delivery systems are activated.²³ There is likely to be also contingency guidelines and plans in case of a disruption to the established guidelines.

Risks to Pakistan's nuclear command and control system

There are two major scenarios, which could subvert Pakistan's nuclear command and control system: Islamist takeover of the government or the military, and the assassination or elimination of key individuals in the command and control system. These

Decision-making procedures

²¹ Kenneth Luongo and Naeem Salik, "Building Confidence in Pakistan's Nuclear Security", Arms Control Today, 1 December 2007.

²² Mahmud Ali Durrani, "Pakistan's Strategic Thinking and the Role of Nuclear Weapons", Cooperative Monitoring Center Occasional Paper, SAND 2004 3375P, (New Mexico: Sandia National Laboratories, 2004), 24

²³ "Pakistan Says Its Nuclear Assets Are Safe from Militants", Associated Press, 26 January 2008.

scenarios could lead to either unauthorized access to nuclear materials (and proliferation of nuclear materials) or use of nuclear weapons. Both of these scenarios seem unlikely given the political realities in Pakistan and sophistication of the nuclear command and control system. These two scenarios are discussed below.

Islamist takeover of the government or the military

There are concerns that conservative Islamic political forces could hijack the government—either through elections or political manipulation—and gain influence over the nuclear command and control system. This scenario is based on the use of these forces by earlier Pakistani leaders and governments to consolidate their power, the perceived weakness of the secular political forces, and the growing social conservatism of some sections of the population. There have been two examples of previous leaders encouraging the growth of Islamic groups. In the late 1970s and early 1980s, General Zia-ul-Haq encouraged increasing Islamic influence in the Pakistani government, military, and society while President Pervez Musharraf manipulated the 2002 election result to help the religious Muttahida Majlis-e-Amal (MMA) win more seats. But despite such examples, it is unlikely that conservative Islamic groups could gain control of the government. Post-Haq governments have rolled back Islamization of the government, the majority of Pakistanis are unsympathetic to conservative Islamic groups—as demonstrated by the MMA’s weak performance in the 18 February elections—and the fact that the military maintains significant influence over the nuclear command and control system and the operational control of nuclear

weapons. The military sees nuclear weapons as a major source of its influence and status and is therefore motivated to maintain the security of the weapons and materials. This makes it unlikely that even if conservative Islamic political forces were to control the government that they would be able to gain immediate access to nuclear weapons and materials.

There are also concerns that conservative Islamic forces could increase their influence over the military and gain access to nuclear weapons and materials. This scenario is based on the fact that the Pakistani military is becoming socially, ethnically, and religiously more diverse, with an increasing number of soldiers from low-income and religiously conservative backgrounds. Additionally, some elements within the military are known to have had links to Islamic extremist militant groups (such as the Taliban). This is also an unlikely scenario because Musharraf has carried out major reshuffles in the military, removing officers believed to have sympathies for conservative Islamic forces or values, or who are suspected of having links to extremist groups. The new Chief of Army Staff Ashfaq Pervez Kiani is considered a liberal and is will probably move to prevent this scenario from emerging. Even if some extremist individuals were to assume influential positions in the military, a decision to launch of nuclear weapons requires consensus among the military and civilian members of the NCA. Moreover, these individuals would need to secure the cooperation of several senior officers in order to gain access to nuclear weapons or materials.

Assassination or elimination of key leaders

The second major scenario involves fears that extremist Islamic elements could assassinate or eliminate key individuals in the command and control system and create a dangerous vacuum in the system that might make nuclear weapons and materials vulnerable to unauthorized access or use. It is true that Islamic extremists are willing to attack government figures. Such groups have carried out three major suicide bomb attacks against President Pervez Musharraf in 2003. All three involved middle-ranking army and air force personnel with connections to Al Qaeda. A fourth security incident involving Musharraf took place in July 2007, when an airplane carrying the president came under antiaircraft fire a few minutes after take off from Rawalpindi.²⁴ Islamist extremists were also responsible for the 28 December 2007 suicide attack against PPP leader Benazir Bhutto. These elements have also targeted senior military leaders, military sites and convoys, and high-security military areas. In February 2008 Pakistani military's most senior medical officer, Lt. Gen. Mushtaq Baig, was killed in a suicide bomb attack in Rawalpindi.²⁵ But despite the litany of such attacks this remains an unlikely scenario because it would require the simultaneous assassination and or elimination of several individuals within the command and control system. In addition, it ignores the fact that Pakistan has contingency plans in place to respond to such scenario.

²⁴ Salman Masood and Garlotta Gall, "Musharraf's Plane Fired Upon as Mosque Standoff Continues", New York Times, 7 July 2007.

²⁵ "Pakistan army's top medic killed", BBC World Service, 25 February 2008, see http://news.bbc.co.uk/1/hi/world/south_asia/7262622.stm

Strategic implication of concerns about Pakistan's nuclear command and control system

Since 1998 Pakistan's nuclear command and control system has been significantly improved. In the process, the risk of a failure in the system that would allow unauthorized access to nuclear materials or use of nuclear weapons has been considerably reduced. The main improvements include the establishment of the NCA and SPD, the integration of the command and control system, and the use of a two/or three-man rule and indigenous Permissive Action Links (PALs) on nuclear weapons. This belief is shared by senior members of the US military including Admiral Michael Mullen, the chairman of the US Joint Chiefs of Staff, who in 2007 said that he did not "see any indication right now that [the] security of those weapons is in jeopardy."²⁶ Nonetheless, the 9/11 terrorist attacks, the 2003/2004 A. Q. Khan scandal, and recent instability in Pakistan have created the perception of weakness in the nation's command and control system. This has caused concern among the international community. In January 2008, the head of the International Atomic Energy Agency (IAEA) Mohammad ElBaradei expressed concerns that Pakistan's nuclear weapons could fall into the hands of extremist groups in either Pakistan or Afghanistan.²⁷ These concerns highlight the fact that institutional and technical improvements need to be accompanied by efforts to

²⁶ Peter Wonacott, "Inside Pakistan's Drive To Guard Its A-Bombs", Wall Street Journal, 29 November 2007.

²⁷ Pervez Hoodbhoy, "A State of Denial Pakistan's Nuclear Threat", International Herald Tribune, 17 January 2008.

combat negative perceptions in order to build international confidence.

In order to do this, Pakistan needs to demonstrate openness (without sacrificing national security) and provide details about its command and control system. Pakistani officials have started this process with steps to brief the government and parliament about the nuclear command and control and security measures. On 16 April 2008, the head of the SPD, Khalid Kidwai, briefed the new PPP-led government on the command and control system, and security measures.²⁸ Kidwai has also started to engage diplomats, academics, and journalists. In January 2005, he visited the US and spoke in academic think tanks about Pakistan's nuclear command and control system.²⁹ In January 2008, Kidwai also organized two unprecedented briefings for Islamabad-based diplomats and journalists to further explain the system.³⁰ Kidwai said that Pakistan has "instituted command and control structures and security measures in a manner so as to make these foolproof." These briefings have increased international community's understanding on the level of sophistication related to the command and control system. The PPP-led government and military—under Kiani's leadership—should continue this approach. Failure to do this will have wide-ranging diplomatic, political, and economic consequences for Pakistan.

²⁸ "New Govt Committed to Pak's Nuke Prog: Gillani", The Press Trust of India, 17 April 2008.

²⁹ "A Q Khan "a Sordid Chapter" Pakistan wants to leave behind", Indo-Asian News Service, 25 October 2006.

³⁰ "Pakistan says its nuclear assets are safe from militants", Associated Press, 26 January 2008.

Failure to combat negative perceptions and build international confidence will undermine the dialogue between India and Pakistan. While the US and Western countries have expressed mounting concern over the security of Islamabad's nuclear weapons, India has been extremely restrained in its public comments. However, on 18 February 2008, India's special envoy to Prime Minister Manmohan Singh, Shyam Saran, said that there is "mounting concern over the likelihood that in a situation of chaos, Pakistan's nuclear assets may fall into the hands of jihadi elements" and that "India has to be deeply concerned about the danger it faces" from this new and growing threat."³¹ Saran's comments are likely to reflect a widely held sentiment within the Indian government. Pakistan's new government has expressed its commitment to dialogue with India. This process also needs to include confidence-building measures in the nuclear front. Pakistan needs regional stability, and stability along its eastern border, in order to tackle its pressing political, economic, and security challenges.

The failure to combat negative perceptions and build international confidence will heighten international concerns and pressure regarding the security situation in Pakistan. These will undermine the government's efforts to pursue a more independent and Pakistan-focused approach to the battle against Islamic extremists. Needed to improve the security situation. The new PPP-led government argues that Pakistan must pursue its own interests rather than those of the international community. The

³¹ "Indian official warns over Pakistan nukes: report", Agence France Presse, 18 February 2008.

government is also transferring policy-making to the parliament and shifting its focus away from military operations, which had resulted in the spillover of militancy and terrorism (especially suicide bombings) from the troubled tribal areas. As part of its policy shift, the government has proposed a dialogue with selected militant elements. It also wants to extend and strengthen government control of the tribal areas, and to boost social and economic development in the area. The US government, however, fears that this new approach will play into the hands of the militants and strengthen their operational capability. The US will pressure the Pakistani government to continue Musharraf's approach and allow targeted US strikes in tribal areas.

The fallout from a failure to build international confidence will also include slower foreign investment in Pakistan, something that could hurt the economy. Pakistan is facing a looming economic crisis: it has large fiscal (9.5%) and current account (9.2%) deficits, and an inflation rate of 10%. Moreover, it was reported in April 2008 that there has been a 46% year-on-year drop in foreign investment during the first nine months of the 2007–2008 fiscal year from \$5.55 billion to \$2.98 billion compared to the same period a year earlier.³² After the 18 February election, the country received about \$300 million in foreign investment, which is much lower figure than expected. This suggests that the drop in foreign investment was not just related to the February elections and related political instability but because of much wider concerns related to the political,

³² Rizwan Bhatti, "Foreign investment down by 46%, Business Recorder", 22 April 2008.

economic and security environment in the country, including perceived growing Islamic extremism and presence of nuclear weapons. Therefore, there is a risk that the current trend in foreign investment will continue, slowing Pakistan's economic growth. The PPP-led coalition government has already been forced to scale back its GDP growth target to around 6% from an earlier 7%.

Pakistan's failure to tackle this issue could also hinder development of civilian nuclear capability and efforts to tackle the country's power crisis. Pakistan is currently facing a power shortage of about 3,000 MW, which is expected to increase to over 7,000 MW by 2010 with the growth of the population, and domestic and industrial power consumption. Pakistan currently generates about 400 MW of its power from nuclear plants and hopes to gradually increase this to 8,800 MW by 2030. Pakistan is not able to produce nuclear power using its own technology and needs access to foreign civilian nuclear technology and uranium. Pakistan wants access to Western technology. Press reports indicate that high-level military officials want to move that way. Press reports from 25 October 2006, cited a senior Pakistani military official as saying that Pakistan wanted to leave behind the A. Q. Khan scandal, improve its image in the US/West and get access to nuclear technology for civilian use.³³ Musharraf's government expressed its interest in a civilian nuclear agreement similar to the 2006 US/India deal and the new government is likely to have similar interests. There has been no US or

³³ "A Q Khan "a Sordid Chapter" Pakistan wants to leave behind", Indo-Asian News Service, 25 October 2006.

Western involvement in Pakistan's civilian nuclear industry since late 1970s—due to international nuclear proliferation concerns—and this has forced Pakistan to rely on China for nuclear cooperation. Although China has offered to build six more nuclear plants, Pakistan is interested in larger and more effective Western-designed plants.

Conclusion

Since 1998, Pakistan has taken a more mature approach to the command and control of its nuclear weapons and started to promote openness. The command and control system has been significantly improved, considerably reducing the risk of unauthorized access to nuclear materials or unauthorized use of nuclear weapons. While Pakistan feels that it has already met international standards, it needs to continue to strengthen the NCA's and SPD's control over nuclear weapons, to improve operational procedures and promote openness. Failure to do this could cause problems for the new government. The PPP-led government has announced that it wants to continue the dialogue with India, to develop a more independent strategy to tackle terrorism and Islamic militancy, and to tackle its power shortages, and its economic problems. In order for the government to achieve these key political and economic goals, it needs to improve international confidence in its nuclear command and control systems and the safety of its nuclear sites and assets. In short, international perceptions about Pakistan nuclear command and control system do matter.

Authors

Ian Bremmer, President, Eurasia Group

Ian Bremmer's career spans academic, investment, and policymaking communities. His focus has been global emerging markets—for Bremmer, those countries where political will matters at least as much to the market as economic fundamentals. Bremmer's work to define the business of politics has accordingly focused on making political science relevant to the global marketplace.

Ian Bremmer received his PhD in political science from Stanford University in 1994. Bremmer went on to the faculty of the Hoover Institution where, at 25, he became the Institution's youngest ever National Fellow. He has held research and faculty positions at Columbia University (where he presently teaches), the EastWest Institute, Lawrence Livermore National Laboratory, and the World Policy Institute, where he has served as Senior Fellow since 1997.

Bremmer's research focuses on states in transition, global political risk, and US foreign policy. His five books include *The J Curve: A New Way to Understand Why Nations Rise and Fall* (Simon & Schuster, 2006), selected by *The Economist* as one of the best books of 2006. Bremmer has also published over 200 articles and essays in *The Harvard Business Review*, *The New Republic*, *Survival*, *Fortune*, *The Los Angeles Times*, *The Washington Post*, *The Financial Times*, *The Wall Street Journal*, and *The New York Times*. He is a columnist for *The International Herald Tribune* and the webzine *Slate*, contributing editor at *The National Interest*, and a political commentator on CNN, FoxNews, and CNBC.

In 1998, with \$25,000 in hand, Bremmer founded the research and consulting firm Eurasia Group. Today, Eurasia Group is the preeminent global political risk consultancy, with 80 full-time employees in New York, London, and Washington; as well as 480 experts in 65 countries worldwide. Widely respected for its objectivity, Eurasia Group has worked with government leaders (as well as opposition leaders) throughout the world. AIG, Bear Stearns, Boeing, Coca Cola, ExxonMobil, Fidelity, Goldman Sachs, Google, Lehman Brothers, Merrill Lynch, Motorola, News Corporation, PricewaterhouseCoopers, and Shell are among Eurasia Group's more than 200 multinational clients.

In 2001, Bremmer authored Wall Street's first global political risk index, now the GPRI (Global Political Risk Index)—a joint venture with investment bank Citigroup. The GPRI brings together Eurasia Group political scientists with Citigroup economists and strategists, and represents the first time political science methodology has ever been used on Wall Street to assess risk.

Throughout his career, Bremmer has spent much of his time advising world leaders on US foreign policy, including US presidential candidates from both Democratic and Republican parties, the former Russian prime minister, Sergei Kiriyenko, and the former Japanese prime minister, Shinzo Abe.

Maria Kuusisto is a research analyst in Eurasia Group's Asia practice. She specializes in the politics of South Asia with special focus on Pakistan.

Prior to joining Eurasia Group, Kuusisto was based in London and worked as a research analyst for Control Risks Group. She has provided political analysis and investment advice to a broad range of investors in South Asia, with a particular focus on the energy and mining sectors. Before joining Control Risks she worked for the leading international think tank on strategic affairs, the International Institute for Strategic Studies (IISS), as a researcher for South Asia, and the Finnish Ministry of Foreign Affairs as a desk officer in the arms control department. Kuusisto has travelled widely in South Asia and Middle East, including extended research trips to Pakistan and Afghanistan. Kuusisto is a political commentator for Al-Jazeera and CNN.

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