
Pakistani-Indian Non-Nuclear Military Instabilities

*Presentation to
NPEC-Lowy Institute Event*

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February 2010**

Preview

- **Bottom Line-Up Front: Indian conventional dominance is inevitable, but we should be careful about how we get there.**

Sections

- **The Nuclear Balance**
- **The Conventional Balance**
- **“Cold Start”**
- **Specific Areas of Concern**
 - Precision-strike
 - Short-range ballistic missiles
 - Missile defense
- **Policy Recommendations**



GEN J. J. Singh at Ambala

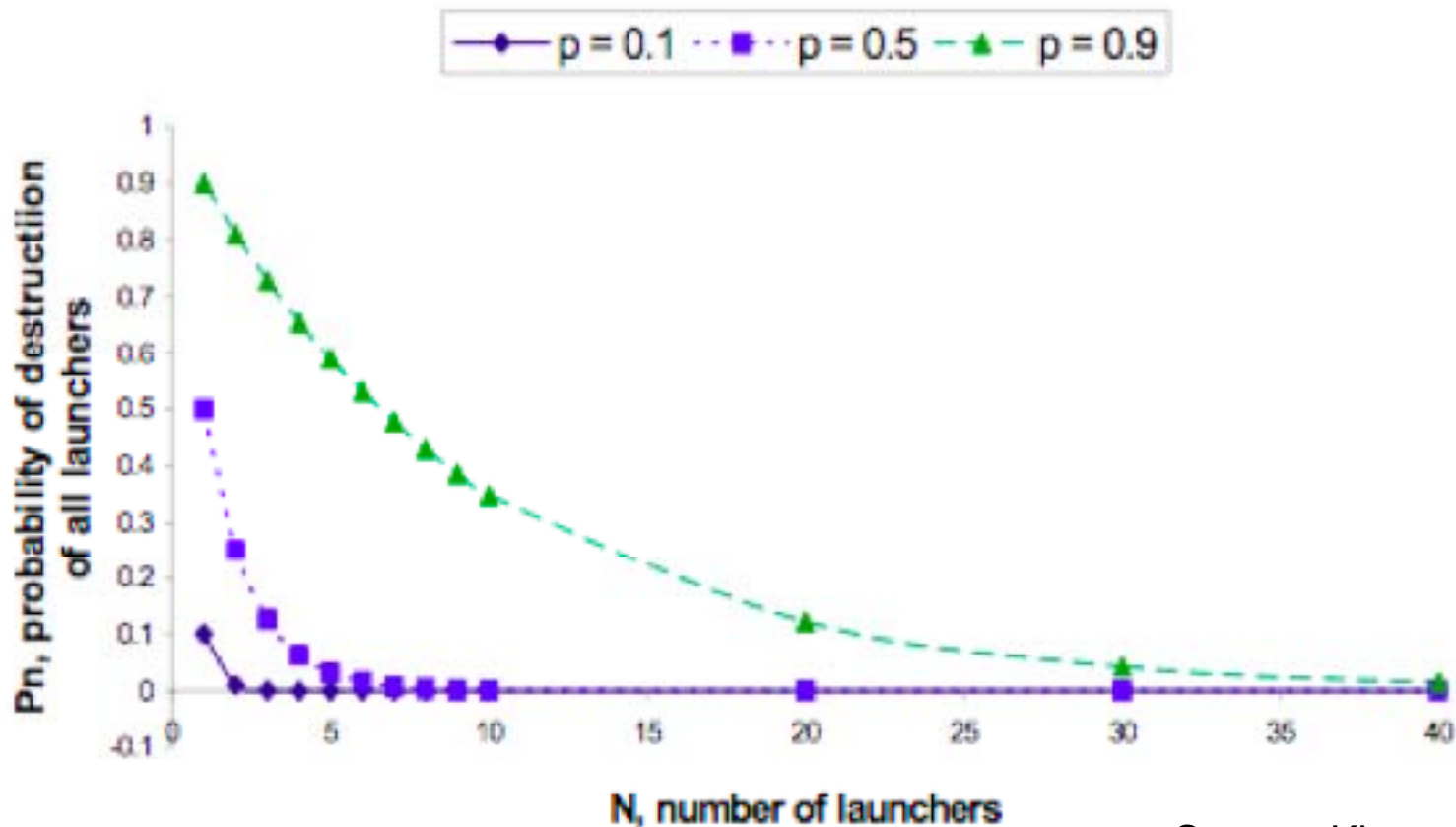
The Nuclear Balance

- **Best estimates:**
 - Pakistan: 80-130 warheads equiv. (NRDC/FAS 2009); 60-85 warheads equiv. (IPFM 2008)
 - India: 50-80 (NRDC/FAS 2008-2009) with potential for many more
- **While both countries claim more, unlikely they have confidence in greater than 15-20kt yield**
- **Therefore, less likely for counterforce/tactical roles**
 - Some attraction for “tripwire” or “demonstrative” use strategies in Pakistan, but still minority viewpoint.



Advantages of Mobile Launchers

Probability of destruction of all launchers versus number of launchers and probability "p" of finding and destroying any one launcher - $p = 0.1, 0.5, 0.9$

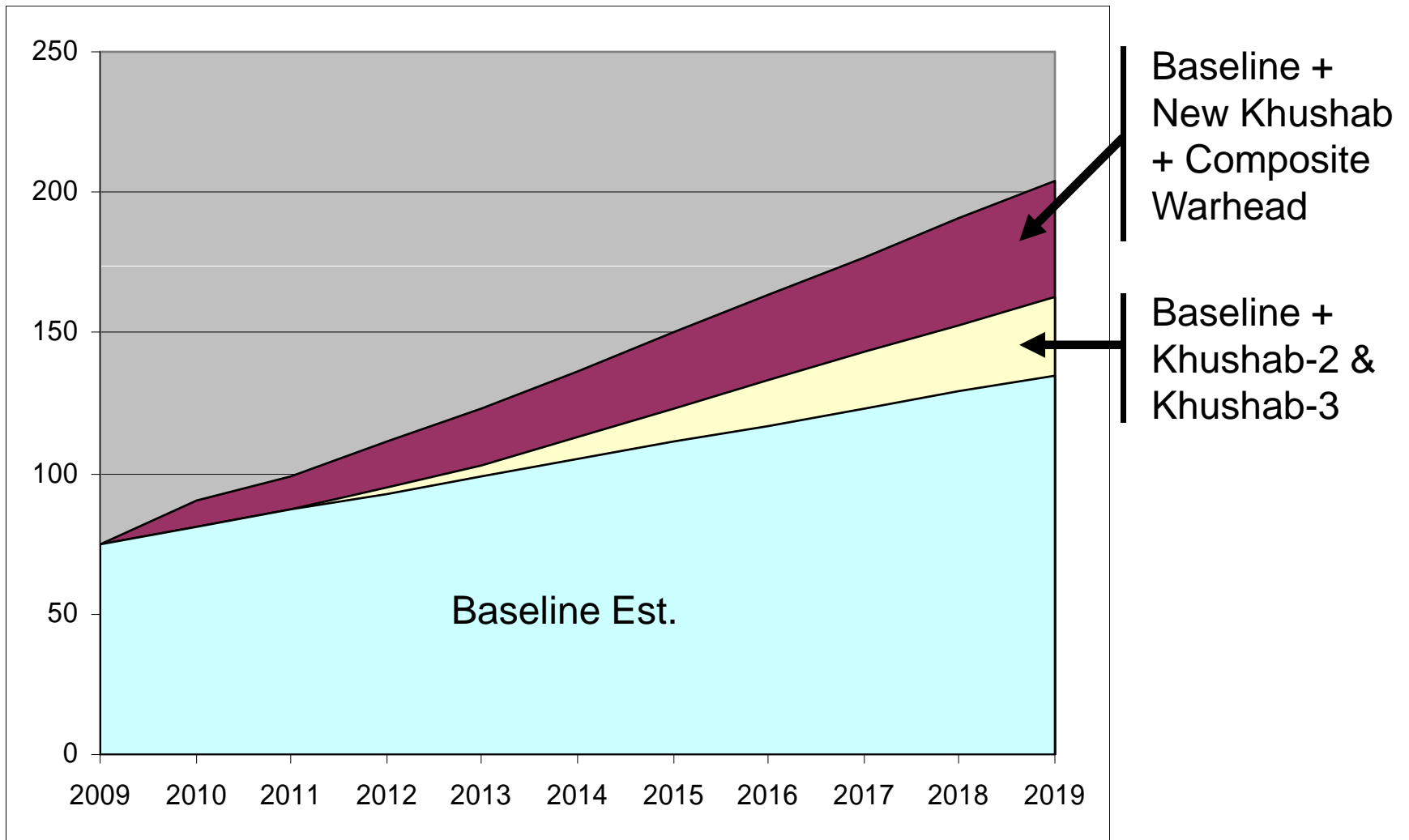


Source: Khan, et al 2004

Ignorance is Bliss?

- **In light of mobile missile forces and poor real-time ISR capabilities, neither side can have confidence in a disarming first strike.**
 - Interest in improving Indian airborne ISR
 - However, India's no-first-use posture, while not credible to Pakistan, does diminish the instability caused by growing Indian capabilities.
- **Poor, though improving early warning capabilities also diminish concerns about launch-on-warning.**
 - A side effect of missile defense would be real-time early warning and responsive Indian command & control system.

Notional Pakistan Fissile Material Est.



Conventional Balance (Snapshots)

Army	
MBT	1.6:1
AIFV/ APC	1.5:1
ARTY	2.6:1



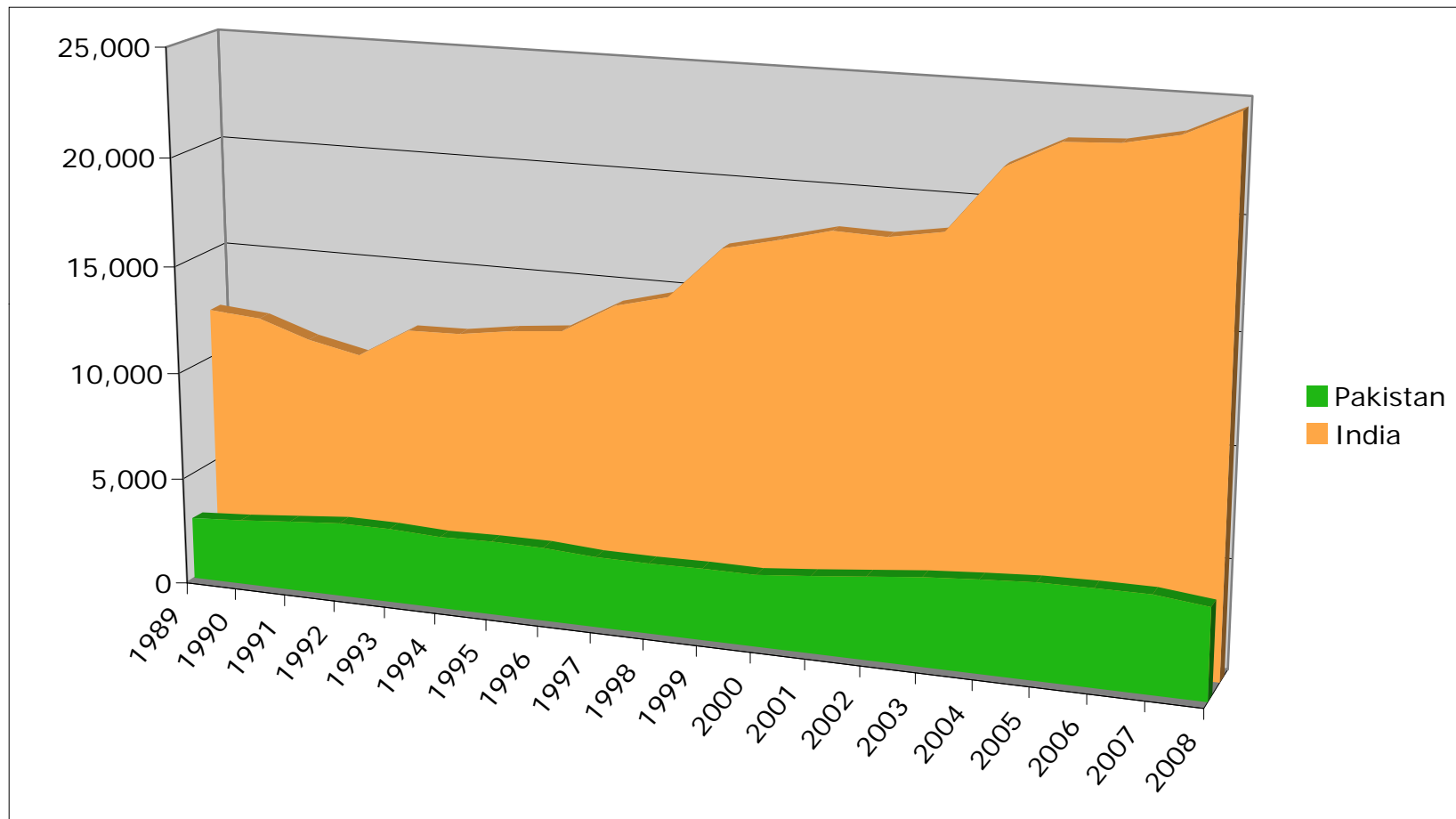
Navy	
Surface	45:7
Subs	16:5
Aircraft carriers	1:N/A



Air Force	
Fighters	1.7:1
Tankers	6:N/A
AWACS	(3):(5)

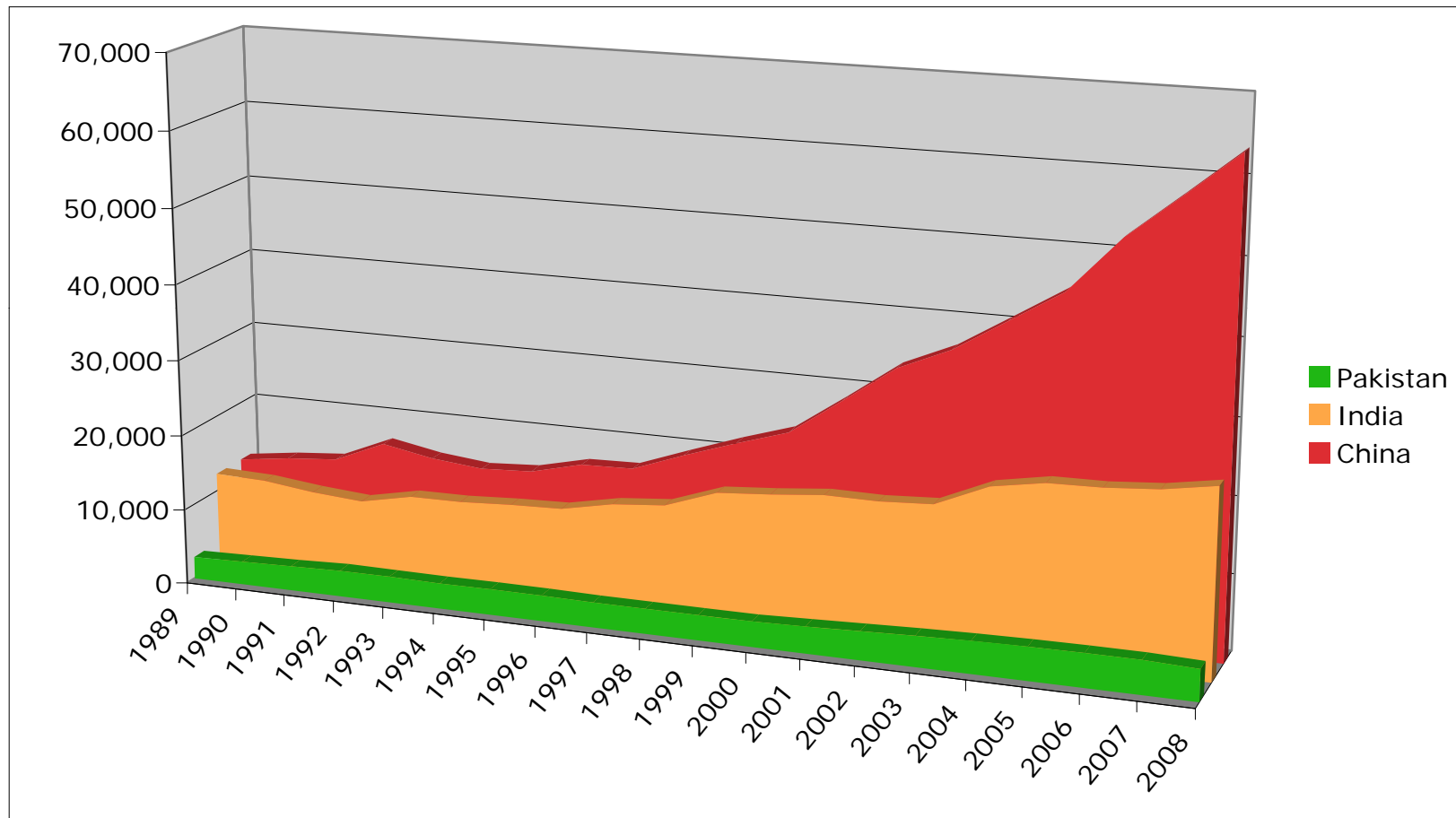
Source: IISS 2010

Military Spending (Indo-Pak)



Source: SIPRI 2010

Military Spending (Context)



Source: SIPRI 2010

“Cold Start”

- **Kargil led to Indian conception of “limited war” and 2001-2002 military standoff led to Army’s “Cold Start.”**
- **Coordination with other Services unclear and civilians likely minimal.**
 - Indian civilians historically have not reviewed war plans.
- **Requires India to do more with less.**
 - Pakistan as the smaller power with shorter lines of communication benefits from limited war strategies.
- **Pakistan military planners most concerned because troubles on western frontier complicate redeployment.**



Shatrughna 2007



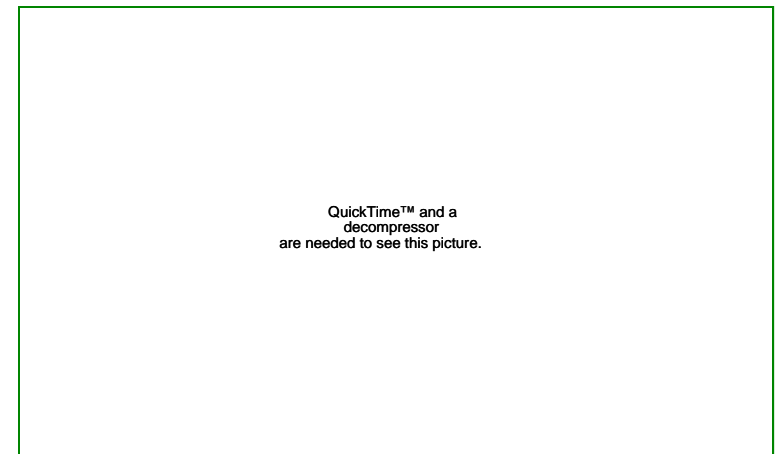
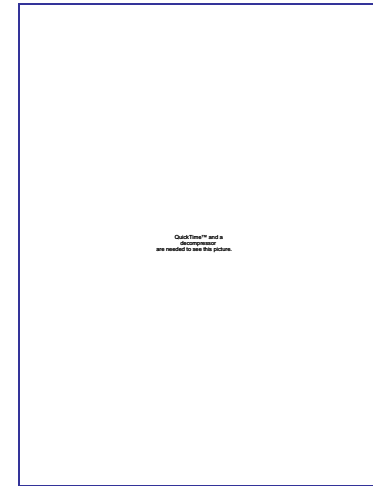
Brazen Chariots 2008

Precision Strike

- **Both parties advancing in cruise missile developments**
 - RA'AD and BABUR
 - BRAHMOS
- **Targeting philosophy of IAF is unclear and without informed civilian oversight**
 - Are Pakistani command and control nodes acceptable targets?
 - Are Pakistani leadership targets acceptable?
 - Are Pakistani dual-use conventional targets acceptable?
 - Are Pakistani suspected nuclear targets acceptable?
- **Biggest concern is that advances on air/joint campaigns surprise Pakistanis with sudden collapse in ground fight.**
 - Sensor-fuzed weapons and tank “plinking”
 - SMERCH MLRS and Pakistani reinforcements

Short-Range Ballistic Missiles

- **Lack of early warning is likely a plus in South Asian case**
 - As we transition to a more sensor-saturated environment, problems will arise.
- **SRBM use in conflict**
 - India may delegate use decisions to theater/local commanders.
 - Pakistan will likely be tempted to use SRBMs for conventional missions and for signaling.



Missile Defenses

- **Requires C2 and ISR upgrades.**
- **U.S. sales pitch during Bush years may have built indigenous constituency within India.**
- **DRDO has made outlandish claims about success of R&D program.**
- **Chinese developments likely reinforce Indian desire.**
- **India likely receives external assistance from Russia, France, and/or Israel**
 - Could purchase platforms (air defense backdoor)



Missile Defenses, Part II

- **Missile defenses in South Asia likely have the following effect(s):**
 - Increase Pakistan fissile material production;
 - Increase Pakistan delivery vehicle production and countermeasure development (signal-to-noise);
 - Be foolish to expect this work would not spillover to other missile-developing states (North Korea, Iran)
 - Channelize Pakistan toward cruise missiles; and
 - Increase incentives for earlier and larger Pakistani nuclear use than otherwise, *ceteris paribus*.
- **Missile defenses might be stabilizing in limited missions (point defense, protection against limited strikes)**

Policy recommendations

- **Much greater seriousness in thinking about how arms sales affect conventional stability**
 - SFW, M777 artillery, etc.
 - With understanding that India will have options (Russia, France, EADS)
- **Encourage India-Pakistan strategic stability talks with missile defenses as a topic.**
- **Halt missile defense cooperation with India until impact on strategic stability is more fully understood.**
 - Scrutinize Israeli cooperation with Indian entities
- **Identify what concessions Pakistan wants to resume FMCT process.**

Policy recommendations, part II

- **Through track-I and track-II channels attempt to reinvigorate CBM process**
 - Avoid Kashmir
 - See if progress can be made on water issues and maritime boundary, perhaps via World Bank and other fora.
 - Maritime CBMs (INCSEA-like) are low-hanging fruit.
- **Encourage much more explicit track-I and track-II discussions on Afghanistan.**
 - Both countries believe U.S. withdrawal is near-term and are planning accordingly. Proxy war is possible.
- **Encourage dedicated communications lines to each other and DC.**
 - “Mukherjee”-Zardari incident in 2008.

Policy recommendations, part III

- **Elimination of SRBMs**

- Khan proposes Hatf-1 and Prithvi-1 in Phase 1; Hatf-2 and Prithvi-2 in Phase 2.
- Very few missions that SRBMs are required for.
- Most such missions could be carried out by longer-range devices.
- Creates forward momentum and diminishes loose-or-use scenarios.
- Also diminishes concerns about “missile moves” in theater.
- Longer-range delivery vehicles, while they still might be used in conventional missions, are much more likely to be employed only when national command authority desires.
- Political agreement without verification may be sufficient.



Back-up Slides

Delivery Vehicles

	Range	Numbers (if available)
Pakistani Aircraft		
F-16 A/B	925 km	46 planes in inventory
F-16 C/D	1,370 km	18 scheduled for delivery (2010-2011)
Mirage 5 PA	1,300 km	50 planes in inventory
Pakistani Ballistic Missiles		
Hatf 1	80 km	Unknown
Hatf 2 (Abdali)	180 km	Unknown
Hatf 3 (Ghaznavi)	400 km	Fewer than 50 Hatf-3 & Hatf-4 launchers
Hatf 4 (Shaheen 1)	450+ km	Fewer than 50 Hatf-3 & Hatf-4 launchers
Hatf 5 (Ghauri 1 and 2)	1275 km	Fewer than 50 Ghauri launchers
Hatf 6 (Shaheen 2)	2000+ km	Unknown
Pakistani Cruise Missiles		
Babur (Ground-launched)	320 km	Unknown
Ra'ad (Air-launched)	320 km	Unknown