

# THE IRANIAN NUCLEAR DEAL: BENEFITS AND RISKS

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**14 May 2015**

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## The stakes are high – and broad

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### □ Outcome would affect:

- Probability of an Iranian bomb (and attendant risks)
- Proliferation risks in the Middle East
- The global effort to stop nuclear proliferation – and the credibility of the International Atomic Energy Agency
- Iranian politics
- U.S. politics
- Middle East security and politics
- The credibility of the United Nations Security Council
- U.S. relations with Iran on other issues
- U.S. relations with other parties in the Middle East – Israel, Saudi Arabia, other Arab states, Turkey...
- Oil markets
- More...

## The agreement taking shape

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- ❑ **Enrichment:**
  - Cap of 6,100 IR-1s (5,060 enriching)
  - Cap of 300 hundred kg LEU (avoids 2/3 head start)
  - R&D on advanced centrifuges permitted, but constrained
  - Fordow converted to R&D, no new sites
- ❑ **Plutonium:**
  - Modify Arak reactor so it produces much less Pu
  - No reprocessing facility; ship spent fuel out of country
- ❑ **Covert sites:**
  - All extra centrifuges, key components declared, monitored – procurement only in declared, monitored channel
  - Cap of 300 kg LEU (avoids 2/3 head start)
  - Broader inspections
  - Good intelligence still key – inspections complement

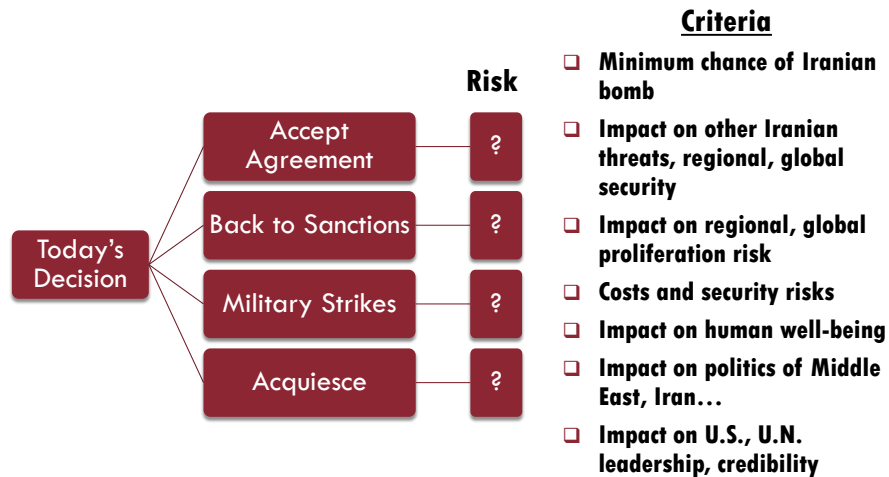
## The agreement taking shape (II)

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- ❑ **Inspections and transparency:**
  - Additional Protocol
  - Likely access to agreed set of sites, documents...
  - Some sanctions may not be removed until IAEA is able to complete its investigation
- ❑ **Duration:**
  - Different provisions last different amounts of time
  - AP indefinite; enrichment constraints 10-15 years
  - After agreement, Iran to be treated like other NPT states
- ❑ **Sanctions:**
  - Some to be lifted or waived early
  - Others to be lifted or waived in response to particular Iranian steps

## Comparing the alternatives

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## Benefits of the agreement

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- ☐ **Greatly reduces Iran's potential to "race to the bomb" at declared facilities – "breakout"**
  - Installed centrifuges to be cut > 2/3
  - LEU stock to be cut >95%
  - Obama administration argues would extend breakout time to one year – some debate
  - Would take this off the table as a practical option for Iran – facilities would not be able to finish making bomb material before they were stopped
  - Re-modifying Arak to produce Pu would be time-consuming and observable
- ☐ **Reduces risk of covert sites – "sneakout"**
  - Expanded inspector access (AP and other)
  - Monitoring of extra centrifuge parts, manufacture
  - Little LEU to start from requires bigger facility or longer time

## Benefits of the agreement (II)

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- ❑ **Political impact may be even more important – reduces the chance Iran will decide to build the bomb**
  - Undermines the arguments of Iranian bomb advocates:
    - Technical constraints make it harder to make the case Iran could get to the bomb without being found and stopped
    - Deal with all of the P5+1 greatly reduces sense of threat – U.S. and Israeli strikes implausible
    - Creates flow of benefits – including to powerful figures in regime – that they will not want cut off
    - Makes clear compromise with the West that benefits Iran is possible – strengthens compromise advocates
- ❑ **Overall, lower probability world will face an Iranian bomb in next 10-20 years**
  - Benefits global, regional nonproliferation
  - Strengthens role of IAEA

## Benefits of the agreement (III)

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- ❑ **May open doors for other cooperation – though U.S.-Iranian hostility likely to continue**
  - Common interests in:
    - Combatting Islamic State and al Qaeda
    - Stable governments in Iraq and Afghanistan
    - Stopping drug trade
    - Trade, science, environment, cultural exchange
  - Many conflicting interests – especially Israel, terrorism, Syria, democracy, human rights – will continue
- ❑ **Benefits for long-term oil and gas supply**
  - Increased Iranian production if sanctions lifted
  - Could further hold down prices in near term, help assure supply in longer term

## Risks of the agreement

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- ❑ **Iran left with substantial nuclear infrastructure**
  - Could still choose to produce a bomb in the future
  - Still effectively a “threshold” state
- ❑ **Limited duration means Iran could build up its capabilities after the enrichment constraints end**
  - Perhaps the biggest compromise
  - Agreement buys time – unless that time is used well, Iran may again be in a position to “race to the bomb” at declared sites in the future
  - Racing at declared sites was never the biggest risk, however
- ❑ **Ongoing enrichment in Iran would make controlling the spread of enrichment elsewhere more difficult**
  - Though few countries interested in entering an oversupplied market – at least in the near term

## Risks of the agreement (II)

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- ❑ **Lifting sanctions would strengthen Iran, and might be difficult to reverse**
  - Iran would have expanded trade, revenue, likely increased economic growth
  - More money could lead to more hostile actions in region – though reduced hostility on nuclear issue could lead to less
  - Reduced pressure for more fundamental change – though increased interaction with the world might foster change
  - Could be difficult to rebuild sanctions regime – though clear Iranian violation of a deal with all of the P5+1 would likely lead to broad support for tough sanctions

## Risks and benefits of the “return to sanctions” alternative

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### □ Benefits:

- Continued broad pressure on Iran – increasingly severe with oil prices likely to stay low
- Some chance Iran would ultimately agree to still tighter constraints

### □ Risks:

- Iran would return to installing more centrifuges; building up stocks of LEU; possibly building up stocks of 20% material; testing advanced centrifuges; building Arak as originally designed... closer and closer to nuclear threshold
- Might be left only 2 options: acquiesce to an Iran within weeks of breakout or launch military strikes
- If the world perceived it was the United States that walked away from a reasonable deal, would be very difficult to maintain and strengthen sanctions on Iran (easier if Iranian intransigence was seen as the reason for no deal)

## Risks and benefits of the “return to sanctions” alternative (II)

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### □ Risks (continued):

- Would undermine Iranian advocates of compromise – possibly lead to another Ahmadinejad-type government
- Would reinforce hard-liners’ narrative that the United States is not really seeking nuclear compromise but the overthrow of the Islamic Republic
- Would continue suffering of the Iranian people from sanctions

### □ In the net, risks seem clearly higher than those of accepting the agreement

- The deal is better than the U.S. BATNA (Best Alternative to a Negotiated Agreement)
- The deal is also likely better for Iran than the Iranian BATNA

## Risks and benefits of the “military strikes” alternative

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### ❑ Benefits:

- Could destroy Iran’s existing nuclear facilities – Natanz, Fordow (harder), Isfahan, Arak, others
- Would set Iran’s program back by years (2? 5?)
- Would send a message to others who might be tempted to follow a similar path

### ❑ Risks:

- Iran would be likely to respond in some way – terrorism, missile strikes, attacks in the Strait of Hormuz...
- Potential new war in the Middle East
- Could provoke Iran to believe it needs nuclear weapons, pull out of the NPT, kick out inspectors, rebuild at secret facilities
- Would likely provoke a “rally round the flag” effect in Iran in the face of foreign attack
- Unless in response to clear Iranian movement toward the bomb, would likely face global condemnation

## Risks and benefits of the “acquiesce” alternative

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### ❑ Benefits:

- Allows refocus on other issues
- Reduces suffering of Iranian people

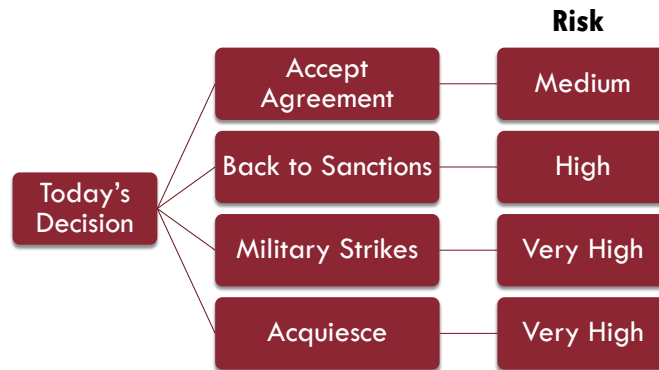
### ❑ Risks:

- Would permit Iran to come as close to the bomb as it chose
- Would provoke widespread fear, potential counterbalancing, in the region
- Israel might choose unilateral military action
- Would undermine credibility of the United States, the United Nations, the international nonproliferation regime...

### ❑ Not a credible alternative

## Comparing the alternatives -- again

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## Congress should not play the spoiler

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- ❑ **Recently passed legislation gives Congress an up-or-down-vote**
  - Both houses will vote to reject the deal – Obama will veto
  - House Democrats' letter suggests veto will be sustained
  - Will Congress seek to take other action to block the deal?
- ❑ **High risks if the world sees the United States (including Congress) as being at fault for no deal:**
  - Increased chance sanctions would unravel
  - Would reduce chance for better deal in the future, if sanctions pressure weakens
- ❑ **Congress does have an important role**
  - “Snapback” legislation if Iran reneges could be helpful
  - Ongoing oversight of implementation needed



## Deep obstacles to a deal

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- ❑ **Genuinely conflicting interests**
  - Iran wants as much of a bomb option as possible – if not a bomb itself
  - The United States wants Iran to have as little of a bomb option as possible
- ❑ **Deep mistrust**
  - Both sides mistrust everything the other side does –interpret each action or statement in most negative light
  - Credibility of U.S. military threat in some doubt; credibility of U.S. promises in even more doubt
  - Credibility of Iranian promises in doubt
- ❑ **Spoilers may be able to block**
  - Both Obama and Rouhani face deal skeptics with substantial influence over the outcome

## The Supreme Leader's doubts

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“Now they claim that if the Iranian nation ignores its nuclear energy, the sanctions will be lifted. They are telling a lie. They make decisions against the Iranian nation due to their long-cherished hostility.”

-- Ayatollah Khamenei, quoted in the *New York Times*, 10/11/12

“Any move which is made by the Americans and their allies and cohorts is for the sake of bringing the people of Iran to their knees and humiliating them... Our negotiating team... is trying to take the option of sanctions from this deceptive and treacherous enemy... which achieves its goals by breaking its promises and haggling...”

-- Ayatollah Khamenei, speech, 1/8/2015

## Prognosis uncertain

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- ❑ **All options – deal, extension, collapse – plausible**
- ❑ **My bet on probabilities by June 30:**
  - **Comprehensive deal: 70%**
  - **Extension: 15%**
  - **Collapse: 15%**
    - **If collapse, “blame game” will be important – if seen as caused by U.S. intransigence, will be difficult to maintain and expand international sanctions**
- ❑ **Even if a deal, the issue won’t be over**
  - **Deal will be of fixed duration – and will likely permit Iran unlimited enrichment eventually**
  - **Disputes over compliance (on both sides) are inevitable**
  - **Will be a major focus of U.S. policy for years to come**

## Summary: The proposed deal is the best chance to stop an Iranian bomb

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- ❑ **Deal would impose technical barriers that would take overt breakout off the table as a plausible option, and make sneakout more difficult**
- ❑ **Political effects of the deal would undermine Iranian bomb advocates, reduce the chance of an Iranian decision to build the bomb**
- ❑ **The credible alternatives – a return to sanctions or military strikes – pose significantly higher risks to U.S. and world security**
- ❑ **The deal is highly imperfect – but better than the other options realistically available**

## For further reading...

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- ❑ Belfer Center's "Iran Matters" website  
— <http://iranmatters.belfercenter.org/>
- ❑ Belfer Center's "Decoding the Iran Nuclear Deal"  
— <http://belfercenter.ksg.harvard.edu/publication/25234/>
- ❑ U.S. Institute of Peace "Iran Primer"  
— <http://iranprimer.usip.org/>
- ❑ The Iran Project  
— <http://iranprojectcsny.org/>

## Backup slides...

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## Iran and the United States: Much more than just nuclear issues

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- ❑ **The Iranian view**
  - United States is relentlessly hostile, will never accept the Islamic Republic
  - Constant sanctions, threats – helped Iraq in Iran-Iraq war
  - Iran is a peaceful country, with only a peaceful nuclear program
- ❑ **The U.S. view**
  - Iran is a dangerous actor – sponsors terrorism (kills U.S. troops), threatens Israel, disrupts the region, violates agreements
  - Iran's nuclear program offers a weapons option – could threaten the region and beyond



Source: Wikipedia

## Congress should not play the spoiler (II)

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- ❑ **Contrary to current sense in Congress, the situation is not urgent**
  - JPOA froze centrifuge installation
  - JPOA “effectively eliminated” (DNI) Iran's 20% stock
  - JPOA froze major construction on Arak
  - JPOA includes expanded inspections
  - JPOA has maintained sanctions regime (contrary to early claims), metered out funds for Iranian compliance
- ❑ **Hence Congress can (and should) wait to review a final agreement in June**
  - Gives opportunity to review full specifics
  - Congress already has all the authority it needs to review a deal and block its implementation if it disapproves – Corker-Menendez would not really create any new authority

## A multi-level game

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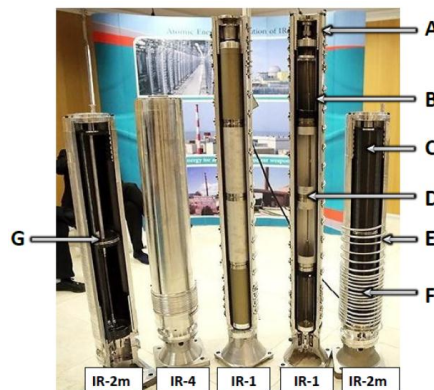
- ❑ For Obama:
  - Need a deal that Iran will accept
  - Need a deal that is sustainable in U.S. domestic politics
  - Need Israel and the Gulf states not to be too outraged (need them on other issues and they influence the domestic scene)
  - Need P5+1 to stay on board with negotiating strategy
  - Need all oil importers to stay on board with sanctions
- ❑ For Rouhani:
  - Need a deal that U.S. and rest of P5+1 will accept
  - Need a deal that Supreme Leader will approve, can survive against hard-line critics
  - Need a deal that strengthens, or at least does not undermine too much, his faction's position in domestic politics

*Satisfying domestic parties and allies pushes sides to more hard-line positions, makes negotiation difficult*

## Iran's nuclear program in a nutshell

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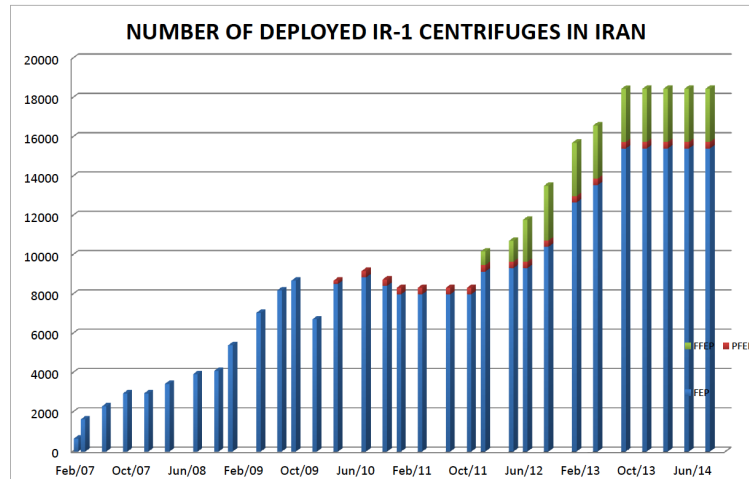
- ❑ **Power reactor at Bushehr**
- ❑ **~19,000 centrifuges, 2 sites**
  - Enough to produce material for a nuclear bomb in months (esp. w/LEU)
- ❑ **Arak reactor under construction**
  - Well suited for plutonium production
- ❑ **Repeated violations of safeguards agreement**
- ❑ **Evidence of past weapons design work**



Source: UN Panel of Experts on Iran Sanctions

## Building, slowdown, acceleration, then capping at a high level...

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Source: Institute for Science and International Security

## Iranian Nuclear Facilities

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## Elements of Iran's nuclear program

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| Program element                     | Status    | Safeguards |
|-------------------------------------|-----------|------------|
| Uranium mining                      | operating | N          |
| Uranium conversion                  | operating | Y          |
| Uranium enrichment                  | operating | Y          |
| Suitable plutonium reactor          | constr.   | Y          |
| Reprocessing                        | no        | n.a.       |
| <i>Weaponization</i>                |           |            |
| Conversion to metal                 | tested    | Y          |
| Casting to weapons shapes           | docs.     | N          |
| Precisely timed detonators          | exper.    | N          |
| Explosives arranged to crush sphere | exper.    | N          |
| Neutron initiator                   | materials | N          |
| Missile reentry vehicle for warhead | docs.     | N          |

## Natanz Enrichment Facility

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Source: Hamed Saber, archive photo



Source: www.President.ir



Source: Institute for Science and International Security

## Fordow Enrichment Facility

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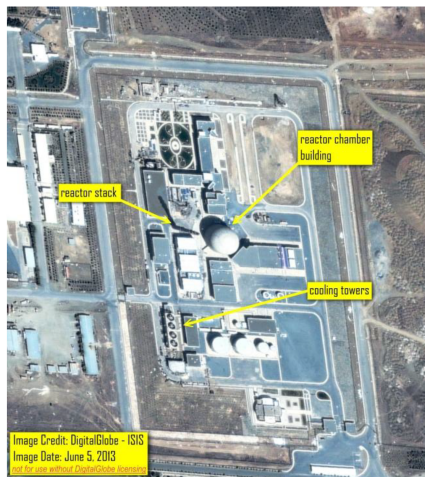


Source: Institute for Science and International Security

## Arak reactor

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- ❑ Construction paused by JPOA
- ❑ Capable of producing plutonium for ~2 bombs per year
- ❑ No evidence of reprocessing plant yet
- ❑ Israel has history of striking such reactors before they become operational
- ❑ If deal, likely modified to reduce Pu production to <1kg/yr



Source: Institute for Science and International Security



## The U.S. narrative

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- ❑ Iran's "civil" nuclear programs is a fig leaf for a weapons program – otherwise no need for enrichment
- ❑ Iran threatens U.S. and world security – supports terrorism, threatens Israel, sponsors militias that have killed U.S. soldiers, seeks to dominate the Gulf
- ❑ Iran has repeatedly violated its safeguards obligations, continues to conceal its nuclear weapons work
- ❑ Iran needs to rebuild international confidence in the peaceful nature of its program by: dismantling most of its centrifuges (so it no longer has enough to rapidly break out); modifying the Arak reactor so that it cannot produce much weapons plutonium; revealing its past weaponization activities; and accepting wide-ranging inspections
- ❑ Iran is defying the entire international community

## The Iranian narrative

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- ❑ Iran's nuclear program is entirely peaceful, within NPT
- ❑ Iran has the same rights as all other NPT members
- ❑ Iran was forced into concealment by Western efforts to stymie nuclear supply
- ❑ Iran needs nuclear power to avoid using up its valuable oil and gas, needs enrichment to fuel reactor if there's a cutoff of supply
- ❑ Iran has given the IAEA transparency far beyond what it is obligated to provide, corrected all past issues – only remaining disagreements are over Western fabrications, in areas far beyond the IAEA's mandate
- ❑ Sanctions are an unjust assault on Iran's sovereignty and must be removed; problem will be solved if U.S. and Israel drop their hostility and unjust demands

## The Iranian narrative (II)

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- ❑ Iran does not support terrorism; it supports legitimate social movements (Hezbollah, Hamas...)
- ❑ Iran has not threatened or waged aggressive war against any other state for centuries
- ❑ Much of the world supports Iran's legitimate rights
- ❑ The United States and Israel have waged an unrelenting campaign of threats, sabotage, murder, and intimidation, and have manipulated the IAEA and the Security Council
- ❑ Some Iranians:
  - The United States will never accept the very existence of the Islamic Republic – so no value to Iran of nuclear deal
  - The EU3 and the P5+1 have never negotiated with Iran in good faith – demanded far-reaching Iranian action for small, easily reversible Western action

## The European narrative

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- ❑ With 2003-2006 suspension, Europe had a major success in showing it can pull together as a team, play a leading international role
- ❑ While hoping for more active U.S. participation, EU-3 secured U.S. backing for proposals
- ❑ Iran negotiated in bad faith, simply strung out the talks to get maximum benefit while giving nothing up
- ❑ Tough sanctions have been essential to getting talks to the current stage
- ❑ Issues related to Iran's other foreign policy behavior are more complex than the United States makes them out to be
- ❑ Military strikes should be considered, but only as a last-ditch option

## The Russian narrative

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- ❑ Iran, while sometimes annoying, is a legitimate player in the international system, with its own rights and interests that have to be addressed – and a legitimate recipient of arms sales and civil nuclear sales
- ❑ Nuclear cooperation with Iran increases Russia's ability to influence Iran not to pursue nuclear weapons
- ❑ Iran should not enrich, but buy a share in the International Enrichment Center at Angarsk, but if Tehran insists on enriching, it is acceptable
- ❑ Sanctions will not stop the nuclear program – the only real solution is a deal that addresses Iran's interests, as well as those of the United States and others
- ❑ Unilateral U.S. military action is unacceptable

## An unspoken Russian view

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- ❑ An Iran under U.S.-driven sanctions:
  - Exports less oil and gas, increasing prices
  - Resents the United States and needs to rely more on Russia
  - Hence, some advantages in status quo, no agreement (but no breakdown of talks that might threaten regional instability)
- ❑ Russia doesn't always have to follow the U.S. lead
  - If there are options to tweak the United States without undermining Russia's interests, probably worth pursuing
  - Example: proposed oil for food swap, undermining sanctions
  - Dynamic stronger with Ukraine crisis – though Russia has maintained P5+1 unity so far
- ❑ Russia doesn't want an Iranian bomb
  - But may be willing to tolerate a closer approach to an Iranian bomb than the United States, Israel, the Gulf States, or Europe

## The Chinese narrative

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- ❑ All issues between Iran and the West should be resolved through dialogue
- ❑ The key issue is compliance with the NPT. While China would prefer much less enrichment in Iran, good enough for Iran to comply with NPT
- ❑ Sanctions are not likely to be effective
- ❑ Unilateral U.S. military action (like Iraq) is unacceptable
- ❑ The real solution is for the United States and Europe to offer Iran strong security guarantees and economic incentives, so Iran won't feel it needs nuclear weapons
- ❑ China, as a major player in the international system, supports nonproliferation, has supported the UN resolutions, and has participated in the P5+1 effort

## Facts any policy must cope with

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- ❑ Iran has ~19,000 centrifuges installed at Natanz and Fordow – more advanced centrifuges in testing
- ❑ Iran has substantial enrichment knowledge – can't be destroyed or negotiated away
- ❑ Major portion of Arak reactor built
- ❑ Intense U.S.-Iranian hostility, distrust
- ❑ U.S. has many issues with Iran – Iraq, Afghanistan, Syria, terrorism, Israel, etc. – going well beyond nuclear issue. And Iran has many issues with the United States
  - Limits what can be offered for nuclear deal (e.g., diplomatic recognition, security assurances)

## Facts any policy must cope with (II)

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- ❑ Many other states – Europe, Russia, China, Israel, Gulf states, etc. – also have major interests at stake
  - Iran has huge reserves of oil and gas – impossible to completely isolate, exclude from world economy
  - Israel, Gulf states have major concerns over growing Iranian power, will push hard for their preferred outcomes
- ❑ All outcomes will have an impact on nonproliferation regime, credibility of Security Council, regional politics, and more
- ❑ Iranian government has been sclerotic, factionalized, legitimacy-challenged—difficulty making hard choices
  - Deal would require giving Iranian advocates of compromise enough to convince Ayatollah Khamenei to say “yes”
  - No faction can afford to be seen as buckling to foreign pressure; some do not believe compromise would bring any benefit

## Balancing objectives

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- ❑ U.S. objectives:
  - No Iranian nuclear weapons
  - To the extent still practicable, broad and verifiable gap between permitted nuclear activities and a nuclear weapons capability
  - Preserving the NPT regime
  - Addressing – or at least not making worse in a nuclear deal – Iranian behavior on Iraq, terrorism, Israel, etc.
- ❑ Iranian objectives:
  - Preserving regime, avoiding attack
  - Repeal of sanctions
  - Status and prestige as leader of developing, Islamic worlds
  - Recognition of its regional power and role
  - Economic development
  - Civilian nuclear energy
  - Nuclear weapons option (or more?)

## Plutonium, declared site

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- ❑ **Arak as designed: 40 MWt HWR**
  - ~8 kg Pu/yr at high capacity factor
- ❑ **Options for change:**
  - Reduce power (~ linear, 10 MWt → 2 kg Pu/yr)
  - Modify core
    - Enriched fuel
    - More compact core
    - Can achieve same or higher neutron flux for science, isotope production with far smaller Pu production
  - 10 MWt, 5% enriched compact core, ~1/3 kg Pu/yr
  - How difficult to reverse?
- ❑ **Key additional elements:**
  - No reprocessing plant
  - Export of spent fuel

## HEU, declared sites

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- ❑ **Current:**
  - ~ 19,000 centrifuges installed
    - ~1,000 IR-2m
  - ~9,000 centrifuges enriching (no IR-2m)
  - Large stocks of <5% enriched LEU
  - Stocks of <20% enriched LEU being converted to oxide or blended below 5%
- ❑ **For discussion:**
  - Total # of deployed centrifuges
  - Total capability of deployed centrifuges
  - Locations of centrifuges (Natanz, Fordow, other)
  - Quantity of <20% material (UF<sub>6</sub>, oxide)
  - Quantity of <5% material (UF<sub>6</sub>, oxide)
  - Centrifuge R&D

## Covert sites

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- ❑ **Intelligence will continue to do the main work of making covert sites more difficult and risky for Iran**
- ❑ **But an agreement can help:**
  - **Require data, monitoring of all production and all stocks of centrifuges and key components and materials**
  - **Ban any undeclared import of centrifuges, key components, and materials**
  - **Strengthen understanding of mining, stocks of mined material**
  - **Get CTBO isotope collection sites established (would help detect isotopes from covert reprocessing)**
  - **Collaborative R&D? Multilateral staff for ongoing enrichment?**
- ❑ **Improved confidence on covert sites is likely more important than rollback at declared sites**