Arming Israel to Defeat Iranian Aggression:
Frontloading Weapons Delivery

JINSA's Gemunder Center U.S.-Israel Security Policy Project

Chairman: ADM James Stavridis, USN (ret.)

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Executive Summary

The Middle East "remains a dangerous neighborhood." Those were President Obama's words in 2016 when he announced a new agreement to provide Israel $33 billion in U.S. defense assistance, known as foreign military financing (FMF), plus $5 billion in missile defense cooperation over the following decade – the vast majority of which will be spent in the United States. This 10-year memorandum of understanding (MoU) forms the centerpiece of America's commitment under U.S. law to uphold Israel's "qualitative military edge" (QME), which ensures Israel can counter military threats at acceptable cost to itself. It also represents a significant commitment to an ally, benefits the U.S. economy and American workers, and underscores Israel's importance as an anchor for securing U.S. interests.

Israel now faces more urgent and intensive security threats than when this agreement was negotiated and signed – first and foremost Iran's regional and nuclear expansion, which is on track to trigger a major Israel-Iran war that could impact the whole region. Yet the MoU locks in Israel's procurement of U.S. defense articles at a constant annual level through 2027, by dividing up the $38 billion total evenly across ten fiscal years.

The U.S. government needs to shift forward, or "frontload," these outlays in the MoU to help Israel continue to defend itself against these urgent threats and prepare for looming major conflict with Iran and Hezbollah. We provide options below for doing so but are agnostic about which might be best. Concomitantly, the United States should replenish prepositioned weapons stockpiles in Israel and/or loan Israel much-needed weapons.

Bolstering Israel's military capabilities in these ways is both vital and urgent for U.S. national security. A strong and vibrant Israel is inherently in America's interest, but with its own regional presence and future commitments uncertain, the United States increasingly depends on Israel to uphold Middle East stability and roll back rising aggression from shared adversaries like Iran.

Our paper aims to encourage serious thinking in both countries about how to accomplish this, by laying out financing options about how to accelerate Israel's weapons procurement, without raising the annual cost of the MoU to the United States.

A. Strategic Need

The United States increasingly depends on Israel to uphold regional stability since the MoU was agreed in 2016, due to rising threats from Iran and others, while America seeks to reduce its footprint in the region.

Iran is the primary strategic challenge for both Israel and the United States in the Middle East. Its regional presence and nuclear and missile programs have expanded significantly since the MoU was finalized, including advances in ballistic and cruise missiles. Tehran's military footprint also has grown significantly since 2016, when Hezbollah's massive arsenals in Lebanon already posed the primary threat to Israel. Iran is building proxy forces in Syria, Iraq and Yemen, and is proliferating increasingly capable and precise missiles and other advanced weapons to them and Hezbollah. Indeed, the latter now possesses more firepower than 95 percent of the world's conventional militaries, and more rockets and missiles than all European NATO members combined – at least 130,000. Iranian cyber and terrorist attacks also remain real threats to Israel and the United States.

These developments raise the very real prospect of a major war between Israel and Iran which could extend across much of the Middle East. In such a conflict, the entire Israeli homeland would become the front lines for the first time since its War of Independence (1948-49). It also would impose unprecedented operational demands on Israel, including heavy fighting on multiple fronts simultaneously. Already this looming prospect has spurred the Israel Defense Forces (IDF) to expend significant precision munition stocks in an interdiction campaign against Iran's regional entrenchment.

Tehran's hegemonic ambitions in the Middle East are also feeding a broader arms race among Iran, Arab states and an increasingly aggressive Turkey that jeopardizes Israel's QME. Iran's conventional arsenals will make a qualitative leap forward with the expiration of a U.N. arms embargo less than a year from now. Tehran's nuclear capabilities are once again advancing, raising the prospect of a massively destabilizing regionwide proliferation cascade or preventive U.S. or Israeli military action against its nuclear program. At the same time, U.S. presence and credibility in the region have diminished as a result of long-term fiscal uncertainty, as well as more recent reticence to push back on the ground against Iran's escalating aggression.

Consequently, as Israel stands more and more alone in confronting Iran and other growing shared threats, the United States is becoming increasingly dependent on Israel's longstanding ethos of self-defense to help protect U.S. interests as well.

B. Frontloading Options

We recommend frontloading to proactively provide Israel what it needs to secure a strategic advantage over these growing challenges and defend broader U.S. regional interests. Priorities for the IDF include, but are not limited to:

- Combat aircraft, including an additional Lockheed Martin F-35 squadron, and potentially new Boeing F-15I Advanced fighters in the interim while the F-35 squadron is onboarded;

- Airborne refueling tankers, including the latest-generation Boeing KC-46;

- Longer-range transport helicopters like the Lockheed Martin CH-53K, and Bell Boeing V-22 tiltrotor aircraft;

- Precision guided munitions (PGM) such as Boeing JDAM kits for unguided munitions, Boeing GBU-39 and Raytheon GBU-53/B small diameter bombs, and Lockheed Martin AGM-114 Hellfire missiles;

- Missile defense systems such as Rafael-Raytheon Iron Dome, Rafael-Raytheon David's Sling and IAI-Boeing Arrow 2 and Arrow 3, as well as interceptors for these systems.

Frontloading would send a clear strategic signal to the region, and more globally, that American policymakers appreciate the rising risks from Iran and other adversaries to both the

United States and Israel. This would also convey concrete determination by both countries to meet the operational challenges of addressing these shared threats.

Further, frontloading has mutual economic benefits. In general, the American worker and economy already are key beneficiaries, since Israel must spend the lion's share (and eventually all) of these funds in a given year on U.S.-made equipment. By creating more advanced contracts and assuring greater demand upfront, accelerated Israeli procurement could offer more stability for U.S. defense contractors and provide cost efficiencies that accompany bulk purchases. It also would offer savings for Israel, by enabling it to replace existing platforms at the end of their lifecycles more quickly and avoid the diminishing returns of maintaining and training on outdated platforms. Moreover, Israel's overhead, manpower and related costs would decrease as it absorbs newer, more combat effective platforms.

Finally, frontloading will not increase Israel's defense needs in the latter years of the MoU. Instead it will reduce the need for emergency resupplies to Israel. It will also smooth out delivery of long lead-time weapons, ensuring weapons procured under the MoU are not delivered only after the agreement expires in 2027. This would mitigate concerns that the United States might be expected to "backload" the MoU in the latter half of the agreement.

There are several ways to frontload the MoU without altering its terms or raising the annual cost to the United States. These public and private financing options vary in terms of the costs borne by Israel, how Israel pays those costs and whether new outlays would be needed from the U.S. government.

Specific options, listed in ascending order of action required by the United States, are:

1. **Commercial loan**

   Most straightforwardly, the Israeli government could borrow commercially against MoU funds. It would have to decide to pay the interest in shekels or out of funds set forth in the MoU. The U.S. government would not be party to such a loan and would incur no expenses or risk associated with it.

   a) If Israel pays interest to a bank in shekels, Congress would not have to take any action beyond what it would have to do anyway, which is to authorize funds set forth in the MoU.

   b) If Israel pays interest to a bank out of funds set forth in the MoU, it would incur no further cost. However, this would reduce the amount of the MoU that could be devoted to procurement, and would require Congress to authorize such a repurposing of funds set forth in the MoU, either by passing a standalone authorization bill or adding such a provision to an existing bill.

2. **Commercial loan guaranteed by U.S. government**

   The U.S. government could enable Israel to borrow at a lower rate by guaranteeing a commercial loan, as it has done in past decades to help Israel secure billions of dollars' worth of economic recovery loans. Congress would need to authorize setting aside funds to cover the highly unlikely contingency of an Israeli default, but unless Israel defaulted this financing option would not entail any actual U.S. expenditures.

3. **U.S. government loan**

   The U.S. Government could issue its own loan directly to Israel at a lower interest rate than Israel might find on the open market. Similar to a loan guarantee, this would entail U.S. budget outlays and require Congressional action.

4. **Re-appropriation of MoU funds**

   Congress could reauthorize and re-appropriate funds set forth in the MoU. Compared to a U.S. loan guarantee, this would entail significantly more budget "scoring" of the entire grant amount added to pay interest, as the frontloaded funds would need to be matched by corresponding reductions in other current outlays or borrowing by the U.S. government. Clearly, this would be the most challenging option for the United States.

C. Addressing Critical Weapons Shortages

Financing options are generally more straightforward and simpler than the uncertainty of U.S. weapons production capacity. Israel is already in the process of acquiring additional F-35 aircraft, but delayed deliveries of KC-46 tankers – the U.S. Air Force only began receiving them earlier this year – potentially could push back Israel's acquisition of these important platforms to 2022-23.

However, the biggest hurdle concerns U.S. production capacity for precision guided munitions (PGM), which Israel would want to procure in the thousands under a frontloaded MoU. In recent years PGM production capacity constraints in the United States and high usage rates by both countries threaten efforts to expedite Israeli procurement of these critical munitions. These shortfalls are projected by many experts to last years, and potentially nearly a decade – a longer time horizon than Israel can afford given its deteriorating security situation.

Amid this backdrop, however, there are several, not mutually exclusive, options that could potentially increase the rate and overall volume of PGM deliveries to Israel without jeopardizing U.S. stockpiles:

1. **Larger single-year contracts**

   Frontloading the MoU could enable Israel to begin offering bigger single-year PGM procurement contracts during the next several years, which could help give Israel higher priority among U.S. defense suppliers.

2. **Multi-year contracts**

   Multi-year contracts provide more stable and certain demand, as well as lower cost per unit, and defense contractors may give higher priority to such contracts. A frontloaded MoU could enable Israel to offer large, multi-year contracts, moving them more to the front of the line.

3. **Hybrid contracts**

   Offering a multi-year contract with limited PGM procurement commitments for each year, but with the option to buy more in any given year, would likely give Israel higher priority than with single-year contracts, but less than with guaranteed multi-year contracts. As with the preceding two options, a frontloaded MoU could better enable Israel to offer such contracts.

4. **Direct commercial sales**

   Israel could also use direct commercial sales (DCS) to purchase equipment from U.S. suppliers. While this could give Israel priority among defense companies for fast-tracking new deliveries, it likely would entail the difficult process of obtaining a DCS license from the U.S. government. The Israeli Ministry of Defense could make it a top priority to undertake and complete the DCS licensing process for Israeli PGM purchases from Boeing, Raytheon and Lockheed Martin.

5. **Preposition U.S. PGMs in Israel**

   Instead of, or in tandem with, frontloading, the U.S. military could also update and replenish its own existing PGM stockpiles in Israel, the vast majority of which currently are outdated. As in previous conflicts, Israel could then draw or purchase from these stocks in emergencies or joint contingencies with U.S. permission. This would not initially involve U.S. procurement outlays, while enhancing readiness and deterrence for both countries in the Middle East. Indeed, Israel offers the United States a very secure and geostrategically valuable location to forward-deploy critical munitions. This would also be the fastest way to address Israel's munitions shortage, and is in line with bilateral understandings to provide necessary weapons to Israel in wartime.

6. **Loan U.S. weapons to Israel**

   The United States also could loan PGMs, KC-46 aerial refueling tankers and other weapons to Israel instead of, or in tandem with, the above options, as a stopgap measure until U.S. production capacity increases and in the interim period before the IDF's contract for such aircraft would be fulfilled.

While we believe strongly in the need for frontloading as America depends increasingly on Israel to advance U.S. interests, we are agnostic about the specific financing mechanism to accomplish this. We are similarly agnostic about contracting options to remedy Israel's PGM shortfalls, though we do strongly support prepositioning PGMs in Israel regardless.

We hope this paper provides useful groundwork for a fruitful discussion of options to bolster Israel's ability to defend itself and advance U.S. national security interests.

MoU Background

The United States is required by U.S. law to uphold Israel's "qualitative military edge" (QME) over its neighbors, by ensuring Israel can counter and defeat real or potential military threats while sustaining minimal damage and casualties. Bilateral cooperation to support Israel's QME takes many forms; the centerpiece is the current ten-year memorandum of understanding (MoU) on U.S. defense assistance to Israel. Under this MoU, the United States will disburse a total of $33 billion in defense assistance to Israel – known as foreign military financing, or FMF – plus $5 billion for joint missile defenses, with the total amount for each divided evenly over U.S. fiscal years 2019-28.

Negotiated by the Obama Administration and signed in 2016, this agreement represents an unprecedented level of U.S. commitment to an ally and underscores Israel's importance as an anchor for American interests in the Middle East. It also builds on 1998 and 2007 agreements whereby the United States provided Israel $21 billion and $30 billion overall in FMF during fiscal years 1999-2008 and 2009-18, respectively. These initial MoUs enabled Israel to procure advanced U.S. capabilities including precision munitions, warships, armored vehicles and the first delivery of F-35 aircraft to a foreign partner.[1]

These agreements benefit the United States strategically by giving Israel the tools to defend itself and, effectively, U.S. interests as well. The U.S. economy is also a key beneficiary. The 2007 MoU mandated Israel spend nearly three-quarters of the FMF each year on U.S.-made equipment; the current agreement gradually will increase this percentage and ultimately require that Israel spend the entire annual sum on U.S. goods and services. As then National Security Adviser Susan Rice stated when announcing the current agreement, "like so many aspects of the U.S.-Israel relationship, this MoU is a win-win."[2]

Strategic Context

Upon its rollout in 2016, President Obama framed the current MoU as bolstering Israel's security "in what remains a dangerous neighborhood."[3] Yet dramatic, unpredictable and often rapid changes in the few intervening years are only making the neighborhood even more dangerous, and Israel's defense needs even more urgent. Meanwhile under the MoU Israel's procurement levels will remain flat through 2027 instead of being shifted forward to help meet these threats proactively.

These negative trends are driven by three overarching, and interrelated, factors: the ongoing military entrenchment of Iran and its proxies across Iraq, Syria, Lebanon and Yemen; a regional arms race among U.S. adversaries and allies alike, with Israel caught in the middle; and decreased U.S. regional presence.

A. Iran's Ascendance

The primary threat comes from Iran, whose trajectory toward becoming the first hegemon in modern Middle East history has accelerated since the MoU was agreed. It is pursuing this goal primarily through a growing network of proxies, orchestrated centrally from Tehran by the Islamic Revolutionary Guard Corps (IRGC) against the United States, Israel and others. For decades, its primary asset has been Hezbollah in Lebanon. Thanks to Iranian largesse, since the 2006 Lebanon conflict Hezbollah's arsenal of rockets and missiles has grown by more than an order of magnitude, to at least 130,000 today. Unlike in 2006, this includes dozens or hundreds of long-range missiles capable of striking targets accurately across Israel.[4] Overall, Hezbollah now possesses more firepower than 95 percent of the world's conventional militaries, and more rockets and missiles than all European NATO members combined.

Iran's expanding influence beyond Lebanon has been stunning in its extent and rapidity since the current MoU was finalized. Its main axis of advance – and the most pressing threat to Israel – scythes across Iraq and Syria to the Golan and the Mediterranean, with another axis encircling the Arabian Peninsula as far as Yemen and the vital maritime chokepoint of Bab el Mandeb. Beginning in May 2019 it has also demonstrated a serious ability to disrupt the free flow of energy in the Persian Gulf. Since Tehran first intervened militarily in Syria in 2012, it has spent more than $16 billion on military aid to prop up Assad, Hezbollah and other proxy forces around the Middle East – roughly the same amount the United States has provided Israel over the same period.[5]

This enlarging footprint offers Iran incredible strategic depth against Israel and other U.S. allies. It also raises the very real prospect of a major direct conflict between Israel and Iran which likely would include Hezbollah and other proxies.

Indeed, the strategic threat to Israel from such a conflict has only grown since the MoU was agreed. After the fall of Aleppo to Iranian proxies in late 2016, which confirmed the Assad regime's survival, Tehran pivoted to converting Syria into another front against Israel, including entrenching tens of thousands of proxy militiamen in the country. In response Israel has escalated its "campaign between the wars" to prevent the IRGC and its tens of thousands of militiamen from establishing bases for missile, unmanned aerial vehicle (UAV) and ground attacks from Syria. Amounting to hundreds – and potentially thousands – of airstrikes since early 2017, this campaign has increased Israel's expenditure of precision munitions significantly.[6]

Despite Israel's ongoing efforts, Tehran continues building bases in Syria and cementing control over the country's security services and critical infrastructure.[7] This resembles an Iranian program in neighboring Iraq, begun last year, to equip proxies there with ballistic missiles capable of reaching Israel and U.S. installations around the region.[8]

Whether in Syria or more recently Iraq and Lebanon, Iran also has begun trying to provide its proxies with their own capacity to manufacture precision-guided missiles and/or upgrade existing stocks of unguided missiles to be much more accurate. If successful, this project would greatly increase the already significant damage Iran could credibly threaten to inflict against Israel in a major conflict, most directly via Hezbollah. It also is prompting Israel to expand its campaign between the wars not just to Lebanon, but also as far afield as Iraq.[9] Increasingly, Israel also is concerned about missile attacks from Iran's Houthi proxy in Yemen.[10] Iranian cyber and terrorist attacks remain real threats as well.

Combined, Iran's strategic gains pose unprecedented operational challenges for the Israel Defense Forces (IDF). Its air defenses, advanced as they are, will face significant difficulties against Hezbollah and possibly Iran and others, which now can fire as many rockets and missiles into Israel in one day as in the entire 2006 Lebanon War. Indeed, the entire Israeli homeland will become the front lines for the first time since its War of Independence (1948-49). The expectation of such an onslaught will compel the IDF to seek decisive victory as quickly as possible by targeting Hezbollah and Iranian launch sites with a combined-arms campaign in depth in Lebanon and potentially elsewhere. This will require Israel to conduct as many air sorties in the opening 48 hours as it did in the entire 2006 conflict, and to do so over appreciably greater distances. It will also need to conduct the vast majority of these sorties with precision munitions, given Hezbollah's extensive and illegal interspersing of launch sites amid civilian infrastructure.

B. Regionwide Arms Race

Tehran's hegemonic ambitions in the Middle East are also feeding a broader arms race among Iran, Arab states and Turkey that increasingly jeopardizes Israel's QME.

Despite the constraints imposed by economic sanctions, Iran's defense budget is roughly equivalent to Israel's. It has spent years developing a sizable domestic arms industry, including dedicated production lines for proxies like Hezbollah. While the quality of Iranian output lags behind Israel, it is the region's largest producer of ballistic missiles and is steadily improving their range, payload and accuracy – including those it tries to supply to Hezbollah and other proxies. In addition to air defenses, it also produces UAVs and cruise missiles like those used to devastating effect against Saudi oil facilities in September 2019.[11]

Notably, it has developed these capabilities despite being cut off from the global arms trade. Iran's arsenals will begin making a qualitative leap forward no more than a year from now, upon the expiration of a U.N. conventional arms embargo imposed in 2006. Tehran can then procure latest-generation weaponry from Russia, China and possibly Europe. Perhaps most importantly, this includes advanced conventional cruise and ballistic missiles with greater accuracy, payload and range than Iran's current inventories, as well as upgrades over its existing arsenals of UAVs, air defenses, antitank munitions, electronics and intelligence, surveillance and reconnaissance (ISR) systems. Iran also will gain access to advanced platforms its currently lacks altogether, including new attack aircraft, armor, artillery and warships.

Spurred in no small part by Tehran's military ambitions, the region overall is witnessing a massive weapons-buying spree. Three of Israel's Arab neighbors – Egypt, Saudi Arabia and United Arab Emirates (UAE) – are among the world's five biggest arms importers over the past five years. They are procuring and upgrading cutting-edge U.S., Russian and European systems in bulk, including amphibious assault ships, missile boats, submarines, multirole fighter aircraft, precision munitions, air and missile defenses as well as radar and cyber technologies.

Unlike the United States, which has a legally enshrined process to help ensure its arms sales to the region do not threaten Israel's QME, no other weapons suppliers to the region have any analogous safeguards. Furthermore, while Israel maintains official or sub rosa ties with many of its Arab neighbors, the prospect of further political upheaval in the Middle East sustains the very real risk these advanced capabilities might come under the control of adversarial regimes overnight.

Turkey meanwhile has already transformed under President Erdogan from a reliable partner of Israel to an increasingly disruptive anti-Western force across the Middle East. It is undertaking an ambitious naval modernization and expansion to become the predominant military power in the Eastern Mediterranean and project strategic influence into the Red Sea. By 2023, Ankara expects to launch an aircraft carrier, amphibious assault ship and nearly two dozen other warships and submarines. The country's defense industrial base is also growing significantly to facilitate this buildup.[12]

As its develops these capabilities, Turkey is drawing steadily closer to Russia, Iran and especially the Muslim Brotherhood, including Hamas in Gaza. Unprecedentedly for a NATO member, it recently acquired new Russian weaponry in the form of the mobile S-400 – potentially the world's best air defense system, and one designed to operate against latest-generation U.S.-made aircraft. With the United States consequently cancelling Turkey's participation in the F-35 aircraft program, Ankara is now in negotiations to purchase Russia's competitor to the F-35.

This unfolding regionwide conventional arms race could well expand into the nuclear realm. Even when it adhered fully to the Joint Comprehensive Plan of Action (JCPOA), Iran remained no more than a year away from nuclear weapons capability, and only until 2031 at the latest. Now the shadow of the future is shortening as Tehran progressively violates the parameters of an increasingly tenuous agreement, all the more so given last year's revelations about the extent of Iran's weaponization efforts.[13] Regardless, no later than 2023 – roughly halfway through the current MoU – Iran can begin upgrading its nuclear delivery vehicles upon the expiration of the U.N. embargo on these capabilities.

In addition to possible preventive U.S. or Israeli military action against Iran's nuclear program, this also raises the prospects of a proliferation cascade in response to Tehran approaching the nuclear threshold. While the UAE already is building nuclear energy infrastructure under U.S.

and international protections, American policymakers have expressed real concerns about Saudi Arabia's pursuit of unsafeguarded nuclear technologies. Moreover, Riyadh is widely believed to possess nuclear-capable ballistic missiles ranging the entire Middle East.[14] Egypt has an established uranium production capacity, and it announced in the last year that Russia will begin building Egypt's first nuclear power plant by 2021. By 2023, Turkey is expected to have four new Russian nuclear reactors, and just this summer Erdogan reiterated the unacceptability of his country not being allowed to develop nuclear weapons.[15]

C. Decreasing U.S. Presence

The United States unofficially has been the Middle East's security guarantor since the early Cold War, and officially since at least the Carter Doctrine in 1980 which declared the balance of power in the Persian Gulf to be an American national security interest. But more recently, even as regional security deteriorates, the United States is curtailing its presence and undermining the credibility of its guarantees to maintain stability.

For more than a decade now, a stark majority of Americans has favored shifting national attention away from problems overseas toward domestic issues, spurred by perceptions of overextension in the region's seemingly interminable conflicts as well as growing energy independence at home.[16] Furthermore, beginning in 2011, Congress cut nearly $500 billion defense spending for the succeeding ten years and began a process of sequestration that forced another almost $500 billion in reductions.[17]

Amid this backdrop, the current and prior U.S. administrations have redeployed noticeable numbers of American forces from the Middle East to Europe, Asia-Pacific and the continental United States.

Therefore, the dangers to Israel have significantly increased at the very same time that the United States needs more Israeli help to protect common interests in the region. This combination will only compound the already significant strategic threats and operational challenges confronting Israel.

Benefits of Frontloading

Frontloading the MoU will enable the IDF to acquire critical capabilities as part of an accelerated buildup to deter, and if necessary defeat, these growing shared challenges to both Israel and the United States – especially as America's own role in the region dwindles. Indeed, frontloading can give Israel what it needs now to secure a strategic advantage over these rising threats, and thereby defend broader U.S. regional interests as well. It also could provide cost efficiencies and other economic benefits to both countries.

The IDF's five-year modernization plan for 2016-20 was finalized during the previous MoU, and thus is based on lower levels of defense assistance than under the current agreement. By the same token, this modernization plan could not account for the recent rising intensity of Iran-led threats and the resource demands of the campaign between the wars to counter them. Ongoing negotiations within Israel for the next five-year plan, through 2025, reflect the need for accelerated procurement to address the heightened urgency of threats it must address.[18]

New aircraft are among the highest priorities for fast-tracking IDF modernization. U.S.-made F-15 and F-16 combat aircraft constitute the backbone of the Israeli Air Force's (IAF) long-range strike capabilities, but much of this fleet was acquired as long ago as the 1970s and is aging due to persistent high operations tempos – including during the ongoing campaign between the wars. These platforms are nearing the end of their lifespan and need immediate replacement. Similarly, many of the IAF's airborne refueling tankers and transport helicopters are approaching obsolescence, having been acquired decades ago.

Israel is already taking ownership of Lockheed Martin F-35 stealth combat aircraft, and it plans to onboard two full squadrons by 2023 to ultimately replace some of the core capabilities currently provided by its F-15 and F-16 fleet. This likely will consume much of the FMF currently set forth in the MoU through fiscal year 2024. Given that next-generation platforms like the F-35 entail longer lead times to mature properly than proven platforms, frontloading could enable Israel to acquire upgraded Boeing F-15I Advanced fighters to cover these gaps in combat aircraft while the F-35 squadron is onboarded.

At the same time, the IDF could use frontloading to begin procuring new, longer-range transport helicopters like the Lockheed Martin CH-53K. It could also start updating its outdated tanker fleet by taking delivery of the latest-generation Boeing KC-46 in the next few years, among other options. Israel also could expedite procurement of an entirely new capability, the Bell Boeing V-22 tiltrotor aircraft, to enhance airlift for special operations forces.

U.S. production pipelines for these aircraft may be sufficiently supplied to meet expedited demand from Israel. The same cannot be said for precision-guided munitions (PGM) like the Boeing GBU-39 and Raytheon GBU-53/B small diameter bombs, as well as additional Boeing JDAM kits for unguided munitions and Lockheed Martin AGM-114 Hellfire missiles – all of which IAF combat aircraft will need to deliver in significant quantities in a major conflict with Hezbollah and/or Iran. While U.S. law calls for providing such munitions to Israel, the United States, and by extension Israel, faces significant shortfalls for the foreseeable future due to serious U.S. production capacity constraints and high usage rates by both countries.

Frontloading also could enable expedited deliveries of critical defensive capabilities, chiefly air defenses to counter growing Iranian proliferation of UAVs and sophisticated surface-to-surface and anti-ship missiles. Increasingly, as Israel recognizes, this requires defenses against not only ballistic missiles – which Hezbollah and Iran possess in abundance – but also cruise missiles posing entirely different challenges, as evidenced by the major Iranian attack on Saudi oil facilities in September 2019.[19] Many Israeli air defense systems, including Rafael-Raytheon Iron Dome, Rafael-Raytheon David's Sling and IAI-Boeing Arrow, and their interceptors are co-developed or co-produced with the United States.

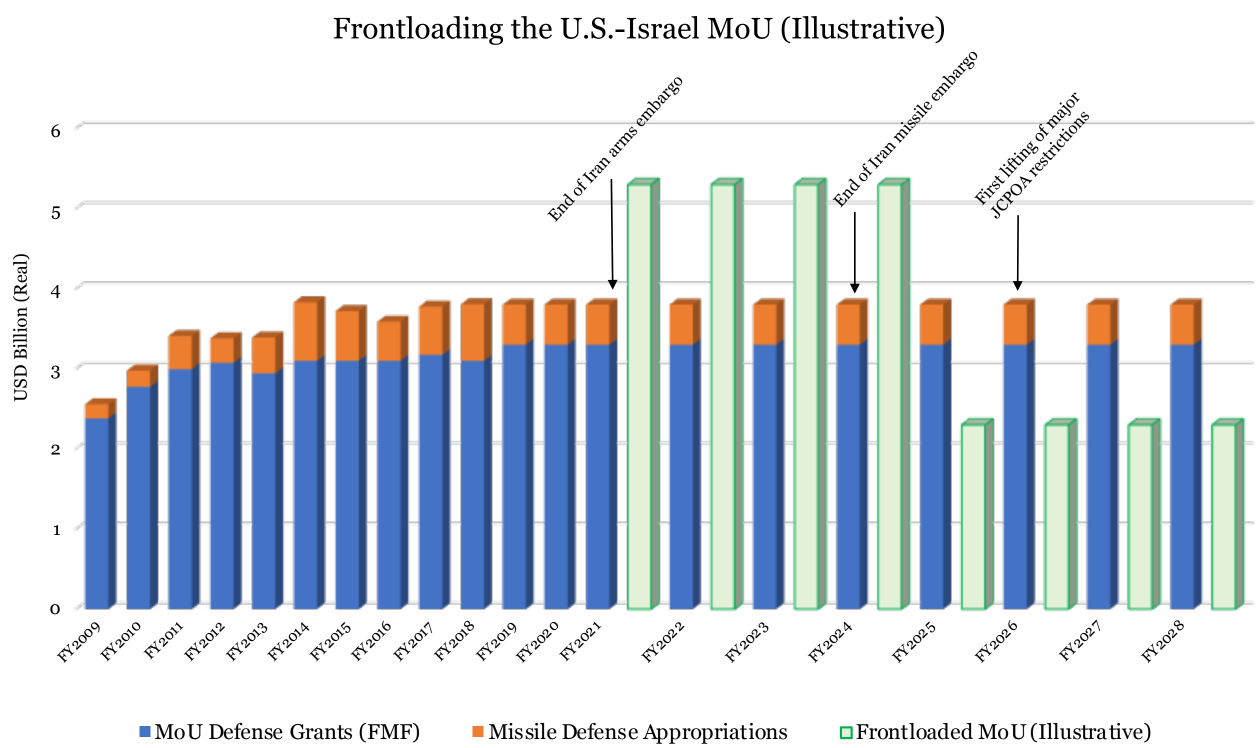
Accelerating Israeli procurement would also send a clear strategic signal to the region, and more globally, that American policymakers appreciate the rising risks from Iran and other adversaries to both the United States and Israel. This would also convey concrete determination by both countries to meet the operational challenges of addressing these shared threats, for instance providing Israel with KC-46s to support long-range operations against Iran's increasingly regionwide entrenchment.

Finally, frontloading could benefit both countries economically as well. In general, the U.S. economy is a key beneficiary of the MoU since Israel must spend the lion's share (and eventually all) of a given year's funds on U.S.-made equipment. By creating more advanced contracts and assuring greater demand upfront, frontloading would offer more stability for U.S. defense companies while also providing the cost efficiencies that accompany purchasing in bulk.

Frontloading offers inherent savings for Israel, by enabling it to replace more of its existing platforms at the end of their lifecycles more quickly, and thereby avoid the diminishing returns associated with maintaining and training on increasingly outdated platforms. Moreover, given the force-multiplying capabilities of more advanced weaponry like the F-35 compared to its current fleet, Israel's overhead, manpower and related costs would decrease as it absorbs new platforms. Among its strategic benefits, therefore, frontloading essentially offers Israel more bang for the buck.

Frontloading Methods

Frontloading would modify the remaining schedule of outlays defined in the MoU for fiscal years 2021-28, by enabling Israel to spend more than $3.8 billion annually on U.S. defense equipment in the early years of the agreement and correspondingly less in the later years. While the MoU prohibits changes in the overall FMF level for the duration, its terms do not preclude changes in the annual provision of FMF as long as the ten-year total remains the same.



There are several potential private and public financing arrangements whereby Israel could accelerate procurement without altering the terms or raising the annual cost to the United States of the MoU. These options vary in terms of the costs borne by Israel and the degree of action required by the U.S. government.

A. Commercial Loan

The Israeli government could arrange a commercial loan backed by funds allocated in the MoU, but without costing the United States an extra cent. Israel would need approval from its suppliers of U.S. defense equipment to arrange letters of credit with U.S. banks, and Israel would then pay down the principal on any loan(s) using the annual transfer of FMF as set forth in the MoU. The Department of Defense would need to assent to any such arrangement between Israel and its American suppliers, but the U.S. government would not be party to the loan and would incur no expenses or risk associated with it.

If pursuing this route, Israel would have to decide whether to pay the loan interest in shekels or from funds set forth in the MoU. The former arrangement has been used multiple times previously to expedite procurement of critical U.S. weaponry. Israel took out a commercial loan in the 1990s to hasten deliveries of F-16 combat aircraft, and separately in 2008 to advance procurement of an F-35 squadron.[20] In the case of the F-35 squadron, Israel chose to do so by borrowing against the FY09-18 MoU.

If Israel pays interest to a bank in shekels, Congress would not have to take any action beyond what it would have to do anyway, which is to authorize funds set forth in the MoU. No resolution, legislation or any other action would be required. On the Israeli side, any such arrangement would increase government borrowing and thus require the Ministry of Defense to seek approval from the Treasury and cabinet.

Paying the interest out of funds set forth in the MoU means Israel would incur no costs in frontloading, but only by reducing the amount of the MoU it could devote to procurement. Unlike paying interest in shekels, this option would not require higher approval from the Israel government. However, it could require Congress to authorize such a repurposing of funds set forth in the MoU, either by passing a standalone authorization bill or adding such a provision to an existing bill.

B. U.S. Government Guarantee for Commercial Loan

Regardless how the interest would be paid, the U.S. government could enable Israel to borrow at a lower rate by guaranteeing the commercial loan. Since the 1970s the United States has extended tens of billions of dollars' worth of such guarantees to Israel and other Middle Eastern countries, though not for Israel's loans to frontload its F-16 and F-35 procurement.

Such a guarantee would not entail actual U.S. expenditures. However, the Congressional Budget Office (CBO) would need to assign an estimated cost to the U.S. government, or "score," of an Israeli default, which in turn would require Congress to set aside the appropriate funds in a U.S. Treasury account to cover this contingency. The financial risk to the United States would be minimal, given Israel's creditworthiness and its record of never defaulting on a U.S.-backed loan.[21] By lowering Israel's interest rate, a guarantee would either reduce the overall frontloading cost to Israel or would free up FMF funds otherwise devoted to paying interest.

C. U.S. Government Loan

The U.S. government instead could issue its own loan directly to Israel. As with a commercial loan, Israel could carry the interest burden either in shekels or from funds set forth in the MoU. Similar to a loan guarantee, and given Israel's creditworthiness, the U.S. government could offer a concessionary interest rate enabling Israel to borrow at lower cost than on the open market, thus freeing up funds for Israel to devote to frontloading, either by reducing its overall interest burden or by reducing the amount of interest drawn directly from FMF funds. Also similar to a loan guarantee, this would entail U.S. budget outlays and therefore scoring by the CBO based on the estimated probability of Israeli default. It also would entail authorization and appropriation by Congress.

D. Re-appropriating MoU Funds

A final option would be for Congress to reauthorize and re-appropriate funds set forth in the MoU. Compared to a U.S. loan guarantee, this would entail significantly more budget "scoring" of the entire grant amount added to pay interest, as the frontloaded funds would need to be matched by corresponding reductions in other current outlays or borrowing by the U.S. government. Clearly, this would be the most challenging option for the United States.

VI. Weapons Production Issues

Financing options are generally more straightforward and simpler than the uncertainty of U.S. weapons production capacity. Israel is already in the process of acquiring additional F-35 aircraft, but delayed deliveries of KC-46 tankers – the U.S. Air Force only began receiving them earlier this year – potentially could push back Israel's acquisition of these platforms to 2022-23.

Most critically, the United States is grappling with limited PGM production capacity which affect its ability to meet demand from U.S. partners around the globe. At the same time, Israel faces critical shortages of these munitions and would want to procure them in abundance under a frontloaded MoU.

Israel's PGM shortfall derives from several factors. The IDF expended vast numbers of these munitions in the 2014 Gaza conflict – during which Israel needed resupply of AGM-114 Hellfires from the United States – and in the ongoing campaign between the wars. Even as these conflicts depleted IDF stocks, its projected demand is rising given the expected intensity of a looming major conflict with Hezbollah, Iran and/or others. Furthermore, Israel has very limited indigenous PGM production capacity, and relies almost exclusively on U.S. defense companies for such munitions.

Meanwhile the United States faces its own PGM production capacity problem. Similar to Israel, high operational demands – chiefly from air campaigns in Syria, Iraq and Afghanistan – have drawn down U.S. stockpiles of PGMs. Replacing these inventories is proving challenging. The aforementioned nearly $1 trillion cut in defense spending, plus periodic government shutdowns, over the past decade have severely undermined U.S. acquisition programs for PGMs, as part of a larger contraction of the defense industrial base since the "peace dividend" of major defense budget reductions beginning shortly after the end of the Cold War. The number of defense suppliers and qualified personnel shrunk in tandem, creating single points of failure and chokepoints throughout an extremely intricate supply chain. All of this is exacerbated by future U.S. budget uncertainty, including whether Congress can pass a defense authorization act.

Combined, these factors leave the U.S. manufacturing base with limited ability to expand PGM production rapidly, whether for the U.S. or Israeli military. These shortfalls are projected to last years, and potentially nearly a decade – a longer time horizon than Israel can afford given its deteriorating security situation. However, there are several, not mutually exclusive, options potentially to increase the rate and overall volume of PGM deliveries to Israel without jeopardizing U.S. stockpiles:

1. **Larger single-year contracts**

   Simply put, the bigger the customer, the easier it is to find advocates among defense suppliers for the U.S. government to prioritize deliveries to that customer. Frontloading the MoU could enable Israel to begin offering bigger single-year PGM procurement contracts during the next several years.

2. **Multi-year contracts**

Multi-year contracts are more attractive to U.S. defense suppliers than single-year contracts, simply because they provide more stable and certain demand and do not require rapid production surges or contractions. They are also better for procuring items like PGMs with long lead times for production. Indeed, in recent years U.S. defense companies have shown an ability to ramp up PGM production when presented with more secure longer-term demand, in this case from the U.S. military to meet its own shortfalls. A frontloaded MoU could enable Israel to do likewise over the next several years. Such contracts also allow for lower costs per unit.

3. **Hybrid contracts**

While multi-year contracts are more likely to help meet demand than one-year contracts, budgetary uncertainty for the Israeli government (independent of the MoU) could hinder longer-term contracting. Hybrid contracts are a possible middle ground, whereby Israel offers a multi-year contract with certain limited PGM procurement commitments for each year, but with the option to buy more in any given year. This would likely give Israel higher priority than with single-year contracts, but less than with guaranteed multi-year contracts. As with the preceding two options, a frontloaded MoU could better enable Israel to offer such contracts.

4. **Direct commercial sales**

Most Israeli procurement goes through the U.S. government, which buys defense articles from U.S. companies and sells to Israel at a markup. An alternative is direct commercial sales (DCS), whereby Israel purchases equipment directly from the U.S. supplier. While U.S. companies prefer DCS as more profitable, and thus tend to fast-track deliveries to such customers, generally it is incumbent on the foreign buyer to lead the difficult process of obtaining a DCS license from the U.S. government. The Israeli Ministry of Defense could make it a top priority to undertake and complete the DCS licensing process for Israeli PGM purchases from Boeing, Raytheon and Lockheed Martin.

5. **Preposition U.S. PGMs in Israel**

The U.S. military could also redeploy its existing PGM stockpiles instead of, or in tandem with, Israel accelerating its own procurement. Specifically, the United States could upgrade its currently outdated prepositioned stockpiles in Israel (known as War Reserve Stock Allies – Israel, or WRSA-I) with PGMs that are interoperable between both countries. As it has done in previous conflicts, Israel could then draw or purchase from these stocks in emergencies or joint contingencies with U.S. permission. Part of this replenishing could be conducted quickly by relocating existing regional stocks to Israel, which is a very secure partner country – something which has been underscored by growing U.S.-Turkish tensions as well as recent Iranian attacks on U.S. partners in the Persian Gulf.

This would not initially involve U.S. procurement outlays, though it would enhance readiness and deterrence for both countries while minimizing the likelihood the United

States would have to consider massive emergency resupply of Israeli forces in wartime like it did in 1973. It would also be the fastest way to address Israel's munitions shortage, and is in line with bilateral understandings to provide necessary weapons to Israel in wartime.

6. Loan U.S. PGMs to Israel

The United States also could loan PGMs to Israel instead of, or in tandem with, the above options, as a stopgap measure until U.S. production capacity increases. Similarly, the United States could loan KC-46 aircraft to Israel in the interim period before the IDF's contract for such aircraft would be fulfilled.

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