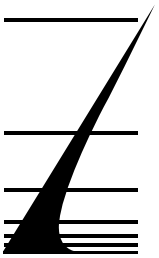
The Market for Light Tracked Vehicles

Product Code #F651

A Special Focused Market Segment Analysis by:



FORECAST INTERNATIONAL

Analysis 2
The Market for Light Tracked Vehicles
2010 - 2019

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Introduction

Since its debut during the Second World War, the armored light tracked vehicle has increasingly become the basis for mechanized infantry warfare on the modern battlefield. Throughout its history, the light tracked vehicle has developed in response to evolving – and often divergent – threat scenarios and tactical doctrines. Each generation of light tracked vehicles, therefore, reflects its particular tactical environment.

Historical Perspective. In 1934, the British Army introduced the Bren Gun Carrier, a fully tracked light utility vehicle and machine gun platform. While this lightly armored, open-top vehicle saw extensive service during World War II, it was hardly an armored fighting vehicle in the modern sense. Nevertheless, the Bren Gun Carrier paved the way for later, more capable designs.

WWII: War of Movement

During the mid-to-late 1930s, the reconstituted German Wehrmacht became the first army to exploit the offensive potential of mechanized warfare. As the German panzer became the centerpiece of the first true combined arms offensive doctrine – the blitzkrieg – the Wehrmacht saw the need for an armored infantry carrier capable of keeping up with the panzers in the field. In 1939, Germany introduced the Sonder Kraftfahrzeug (Sd Kfz) 250-series armored half-track. Although the Sd Kfz 250 series was essentially a development of a conventional truck chassis, this highly successful design became a virtual icon of Wehrmacht mechanized infantry operations.

In response, the Allies had to develop new vehicles and tactical doctrines to deal with the German threat. In 1942, the United States introduced the White M2 and M3 half-tracks. Like the German Sd Kfz 250 series, the White half-track was a development of a conventional truck chassis. Nevertheless, the White half-track clearly became the most successful armored personnel carrier of the war. In fact, the success of the White half-track effectively discouraged any serious development and fielding of infantry fighting vehicles by the Allied armies, most of whom used the American vehicle.

Russians as Late Bloomers

In sharp contrast to the popularity of the German Sd Kfz 250 series and the White half-tracks in Western Europe, the Soviet Union showed little interest in the development or fielding of light tracked vehicles during World War II. However, with the emergence of the Cold War, the Red Army gained an appreciation for the usefulness of a light tracked vehicle. In 1957, the BTR-50P became the Red Army's first fully tracked infantry fighting vehicle.

BMP: A Watershed Event

In 1967, the Soviet Union redefined the light tracked vehicle as a true mechanized infantry combat vehicle with the introduction of the BMP-1. A radical departure from the conventional armored personnel carrier concept of a "battlefield taxi," the MICV provides the infantry squad the means to fight from within the protection of the vehicle; the vehicle also provides mobile fire support for the dismounted infantry squad. The BMP-1 quickly became the signature vehicle of Red Army high-speed mechanized infantry operational doctrine.

Since the introduction of the BMP-1, the Russians have introduced two follow-on BMP designs; they have also developed two versions of the BMD mechanized infantry combat vehicle, optimized for airborne operations. As with other Russian vehicles, the BMP design concept is also evident in the designs of other nations, notably the People's Republic of China.

NATO Plays Catch Up

During the Cold War, the United States, the United Kingdom, and their allies also integrated light tracked vehicles into their force structures. However, this integration exhibited two distinct progressions. The U.S. and the U.K. initially developed simple, rugged armored personnel carrier designs – characterized by the 1955 introduction of the M113 in the U.S. and the 1962 fielding of the FV432 with the British Army.

Like the White M2/M3 series half-track of World War II, the M113 became virtually the international standard for tracked armored personnel carriers. This market dominance led other players to develop mechanized infantry combat vehicles as alternatives to the ubiquitous M113. In 1956, France introduced the AMX-VCI, the French Army's first tracked infantry fighting vehicle. Germany introduced its Marder into Bundeswehr service in 1971.

During the 1980s, the U.S. and the U.K. finally adopted MICV designs with the 1982 introduction of the M2/M3 Bradley Fighting Vehicle in the U.S. and the 1985 fielding of the FV510 Warrior with the British Army. Since then, MICV designs have gained worldwide acceptance as first-line infantry fighting vehicles.

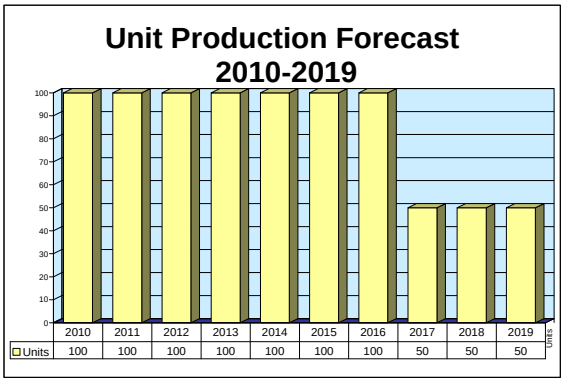
Today's Market. The fielding of the BMP series in the Soviet Union and the M2/M3 Bradley Fighting

Continued…

Korean Infantry Fighting Vehicle

Outlook

- Serial production of K200A1 KIFV for ROK Army completed in 2006
- ROK Army reportedly began fielding next-generation K300 KNIFV in 2008, toward an estimated procurement objective of 900 K300 KNIFVs
- Forecast reflects serial production of K300 KNIFV for ROK Army procurement only



Orientation

Description. A tracked infantry combat vehicle.

Sponsor. The Republic of Korea Ministry of National Defense sponsors the development and ROK Army procurement of the Korean Infantry Fighting Vehicle.

Licensees. None

Status. Development through serial production.

Total Produced. Through 2009, we estimate that the prime contractor produced 2,383 KIFVs, in various configurations. We estimate that the prime contractor has also produced 100 K300 KNIFVs.

Application. A mechanized infantry combat vehicle, optimized for transporting infantry during offensive and defensive operations.

Price Range. In 2006 U.S. dollars, the basic ROK Army K200A1 KIFV carried a unit price of $1.406 million.

Malaysia paid $1.319 million per unit for its K200 vehicles.

In 2010 U.S. dollars, the K300 KNIFV reportedly carries a unit price of between $2.8 million and $3.2 million for ROK Army procurement.

Contractors

Prime

Doosan DST	http://www.doosandst.com, 24, Seongju-dong, Changwon, Kyongsangnam-do, Korea, South, Tel: + 82 055 280 6114, Fax: + 82 055 280 6118, Email: doosandst@doosan.com, Prime

Subcontractor

Alcan Inc	http://www.riotintoalcan.com, 1188 Sherbrooke St W, Montreal, H3A 3G2 Quebec, Canada, Tel: + 1 (514) 848-8000, Fax: + 1 (514) 848-8162, Email: media.relations@alcan.com (Aluminum Armor)
AP Precision Hydraulics Ltd, (APPH Ltd)	http://www.apph.co.uk, 8 Pembroke Ct, Manor Park, Runcorn, WA7 1TG Cheshire, United Kingdom, Tel: + 44 1928 579366, Fax: + 44 1928 579454, Email: sales@apphltd.co.uk (KIFV Powered Braking and Steering)

Korean Infantry Fighting Vehicle

Allison Transmission Division, General Motors Corp	http://www.allisontransmission.com, PO Box 894, Indianapolis, IN 46206 United States, Tel: + 1 (317) 242-5000 (X200-5K Automatic Gearbox)

Comprehensive information on Contractors can be found in Forecast International's "International Contractors" series. For a detailed description, go to www.forecastinternational.com (see Products & Samples/Governments & Industries) or call + 1 (203) 426-0800.

Contractors are invited to submit updated information to Editor, International Contractors, Forecast International, 22 Commerce Road, Newtown, CT 06470, USA; rich.pettibone@forecast1.com

Technical Data

K200 & K200A1 KIFV

Crew. Three: commander, gunner, and driver. The vehicle carries nine fully equipped infantrymen.

Armor. Conventional aluminum armor, with an additional layer of bolt-on spaced laminate steel/composite armor.

Dimensions. The following data reflect the production-standard K200 vehicle. Data for the K200A1 are in parentheses where different. The height figure is to the top of the 12.7x99mm (.50 caliber) machine gun.

	SI Units	U.S. Units
Length	5.49 m	18.01 ft
Width	2.85 m	9.35 ft
Height	2.52 m	8.27 ft
Combat weight	12.9 (13.2) tonnes	14.21 (14.55) tons
Fuel capacity	400 liters	106.38 gal

Performance. The maximum speed and range data reflect use on a paved road. Data for the K200A1 are in parentheses where different.

	SI Units	U.S. Units
Maximum speed	74 (70) kmph	45.95 (43.47) mph
Maximum range	480 km	298.25 stat mi
Maximum amphibious speed	6 kmph	3.73 mph
Step	63 cm	2.07 ft
Trench	1.7 m	5.78 ft
Slope	30%	30%
Gradient	60%	60%
Fording	Amphibious	Amphibious

Engine

K200. Maschinenfabrik-Augsburg-Nurnberg (MAN) D 2848M diesel V-8 engine. This powerplant generates 208.88 kilowatts (280 hp), with a power-to-weight ratio of 16.19 kilowatts per tonne (19.7 hp/ton).

K200A1. MAN D 2848T, a supercharged version of the D 2848M. This powerplant generates 261 kilowatts (350 hp), with a power-to-weight ratio of 19.77 kilowatts per tonne (24.05 hp/ton).

Doosan DST builds both MAN engines under license. The 28-volt electrical system features two model 6TN 100-ampere-hour batteries.

Gearbox

K200. Self-Changing Gears T-300 automatic gearbox, with seven forward and seven reverse gear ratios.

K200A1. Allison X200-5K automatic gearbox, with one reverse and four forward gears.

The KIFV features the AP Precision Hydraulics powered braking system and a power-assisted steering system.

Suspension and Running Gear. Torsion bar suspension, with five dual-tired roadwheels (no track return rollers) on each side. The drive sprocket mounts to the front. The first, second, and last roadwheel stations feature hydraulic shock dampers.

Armament

Main Armament. One pintle-mounted 12.7x99mm (.50 caliber) M2HB heavy machine gun.

Secondary Armament. One pintle-mounted 7.62x51mm NATO (.308 Winchester) M60 machine gun. Six electrically operated smoke grenade launchers mount across the front of the hull. If the KIFV variant features a turret, the smoke grenade launchers mount on the turret (three on each side).

K300 KNIFV

Note: The ROK Army has thus far released little technical data regarding the K300 KNIFV program. (The K300 KNIFV is also referred to as the K21 by the prime contractor.) The Forecast International Weapons Group will continue to fill in the information gaps as data become available in open-source reporting.

Crew. Three: commander, gunner, and driver. The vehicle carries nine fully equipped infantrymen.

Armor. Conventional welded steel armor, with an additional layer of bolt-on spaced laminate steel/composite armor.

Dimensions. The following data reflect the serial-production-standard K300 vehicle. The height figure is to the top of the commander's periscopic sight.

	SI Units	U.S. Units
Length	6.85 m	22.47 ft
Width	3.5 m	11.48 ft
Height	3.0 m	9.84 ft
Combat weight	25.0 tonnes	27.56 tons
Fuel capacity	Unknown	Unknown

Performance. The maximum speed and range data reflect use on a paved road. The K300 KNIFV is amphibious with the aid of external floatation bladders.

	SI Units	U.S. Units
Maximum speed	70 kmph	43.47 mph
Maximum range	450 km	279.63 stat mi
Maximum amphibious speed	6 kmph	3.73 mph
Fording	Amphibious	Amphibious

Engine. Data not available. Open-source reporting suggests the K300 KNIFV may mount the Maschinenfabrik-Augsburg-Nurnberg D 2840 L supercharged V-10 diesel engine. This powerplant generates 387.92 kilowatts (520 hp), which would yield a power-to-weight ratio of 15.52 kilowatts per tonne (18.87 hp/ton) in the K300 KNIFV application. Doosan DST (formerly Daewoo Heavy Industries & Machinery Co) produces this powerplant under license.

The K300 KNIFV reportedly features a 28-volt electrical system, supported by a 400-amp DC generator and four 6TN 12V 100AH batteries.

Gearbox. Data not available. Open-source reporting suggests the K300 KNIFV may mount the General Dynamics HMPT-500-3 automatic gearbox, with one reverse and three forward gears.

Suspension and Running Gear. In-arm hydro-pneumatic suspension, with six dual-tired roadwheels and track return rollers on each side. As skirts cover the upper part of the suspension, we cannot determine from available photographic evidence how many return rollers the K300 KNIFV employs.

The K300 KNIFV also features a new double-pin track.

Armament

Main Armament. One BAE Systems Bofors 40mm L/70 cannon. This fully stabilized ordnance features a maximum rate of fire of 120 rounds per minute. Available 40mm ammunition types include Armor-Piercing-Tracer (AP-T), Armor-Piercing Fin-Stabilized Discarding Sabot-Tracer (APFSDS-T) and High Explosive-Tracer (HE-T). The 40mm rounds for this ordnance feed from a magazine below the turret basket. The ordnance ejects spent rounds forward out of the turret roof.

For a detailed discussion of the 40mm L/70, see the "L/60 and L/70 40mm Anti-Aircraft Artillery Systems" report in Tab C of the *Ordnance & Munitions Forecast.*

The K300 KNIFV also mounts a single BGM-71 TOW anti-tank guided missile launcher on either side of the turret.

Secondary Armament. One coaxial 7.62x51mm NATO (.308 Winchester) M60 machine gun. Three electrically operated smoke grenade launchers mount on either side of the turret.

Fire Control. The gunner employs a roof-mounted day/night sight and a computerized fire control suite to engage multiple targets while the K300 KNIFV is either stationary or on the move. The vehicle commander employs a roof-mounted stabilized panoramic sight to acquire and track targets.

Korean Infantry Fighting Vehicle

K300 KNIFV

Source: Doosan DST

Variants/Upgrades

Variants. Doosan DST (formerly Daewoo Heavy Industries & Machinery Company Ltd) developed a number of variants to the basic Korean Infantry Fighting Vehicle design. The following table presents a brief summary of the KIFV variants.

Designation	Description
K200A1	Armored ambulance. Developed for Malaysian peacekeeping operations in Bosnia-Herzegovina. Carries four litter patients.
K216A1	Nuclear, biological, and chemical (NBC) reconnaissance vehicle. In ROK Army service.
K242A1	107mm (4.2 in) mortar carrier. Features roof hatch and turntable mount for the mortar. In ROK Army service.
K255	Field artillery ammunition support vehicle; also known as Military Logistic Support Vehicle. Enlarged version of basic KIFV chassis. Proposed design; no orders to date.
K263A1	20mm Vulcan self-propelled anti-aircraft gun. Basic KIFV, mounting 20mm Vulcan anti-aircraft artillery system in a one-man turret. In ROK Army service.
K277A1	Armored command post. In ROK Army service.
K281A1	81mm mortar carrier. Features roof hatch and turntable mount for the mortar. In ROK Army service.
K288A1	Armored recovery vehicle. Mounts hydraulically operated 3.5-tonne (3.86-ton) crane on left side of hull; a hydraulically operated 20-tonne (22.05-ton) winch mounts at the rear of the vehicle. In ROK Army service.
(unknown)	Tank destroyer, mounting BGM-71 TOW anti-tank guided missile launcher in a turret. Proposed design. No orders to date.
KAFV 25	25mm gun carrier. Basic KIFV, mounting an unspecified 25mm cannon. No orders to date.

Designation	Description
K200A1/AV30 (KAFV 30A)	Features 30mm Alliant Techsystems (ATK) M230 cannon in a one-man turret. Developed for export market. No orders to date.
K200A1/MT30 (KAFV 30M)	Features Mauserwerke MT30K turret with the 30mm Mauser Mk 30 cannon in an external mount. Developed for export market. No orders to date.
KAFV 40	Basic KIFV, mounting new-design one-man turret with a 40mm K4 grenade launcher and a coaxially mounted 12.7x99mm (.50 cal) M2HB machine gun. No orders to date.
KAFV 90	Export version of basic KIFV, mounting Cockerill 90mm cannon in a Textron Marine & Land Systems (Cadillac Gage) two-man powered turret. No orders to date.
K300 KNIFV	Korean Next Infantry Fighting Vehicle. The ROK Army's next-generation IFV.
Bi Ho	Twin 30mm SPAAG. Enlarged version of basic KIFV chassis, mounting twin-30mm anti-aircraft artillery system turret. In ROK Army service. (See the report "Bi Ho Twin 30mm Self-Propelled Anti-Aircraft Artillery System" in Tab C of the *Ordnance & Munitions Forecast.*)
Chun Ma	Pegasus surface-to-air missile platform. Enlarged version of basic KIFV chassis. In ROK Army service.

Modernization and Retrofit Overview. Other than the powerpack and drivetrain enhancements of the K200A1 model (see **Technical Data**, above), the Korean Infantry Fighting Vehicle program has not developed any significant modernization and retrofit packages.

The KIFV design has been in service for two decades, a condition that would normally make it ripe for extensive modernization and retrofit work. Indeed, the Forecast International Weapons Group had expected the K200-series KIFV would generate a lucrative market for such work.

To Be Eclipsed by KNIFV?

However, the ROK Army reportedly began fielding the K300 Korea Next Infantry Fighting Vehicle (KNIFV) in 2008 as a replacement for the K200-series KIFV. Should the ROK be able to execute the K300 production plan on schedule, the K200-series KIFV may find itself relegated to second-line status in the ROK Army in a relatively short period of time. We expect such a shift in status will severely impact at least the sense of urgency for any K200-series KIFV modernization and retrofit work by the ROK Army.

The prime contractor, Doosan DST, reportedly has high hopes for the export potential of the K300 KNIFV. If the ROK Ministry of National Defense does not find buyers for soon-to-be-surplus K200-series KIFV vehicles, the prime contractor will likely not pursue any significant level of modernization and retrofit of those vehicles beyond what will be necessary to maintain those remaining in ROK Army service.

Program Review

Background. As an early element of the Republic of Korea's effort to greatly reduce its dependence on outside (particularly U.S.) sources for military hardware, the ROK Ministry of National Defense issued a Request for Proposals for a new mechanized infantry combat vehicle in 1981.

Experience with M113 Design

As several Korean firms had been involved in maintaining or upgrading various U.S. Army vehicles, the RFP broke new ground only in that it specified indigenous production.

In 1981, the ROK Ministry of National Defense selected Daewoo Heavy Industries as the prime contractor for the development and production of the new vehicle. At the time, Daewoo was modernizing FMC Corporation M113A1 armored personnel carriers to the M113A2 configuration. Serial production of the Korean Infantry Fighting Vehicle (KIFV) for the ROK Army began in 1985; the prime contractor reportedly completed this production run in 2008.

Corporate Evolution

In April 2005, the Doosan Corporation acquired Daewoo Heavy Industries & Machinery Company Ltd. The prime contractor now operates as Doosan DST.

Description. Reflecting Daewoo's close working relationship with FMC Corporation, the Korean Infantry Fighting Vehicle bears a remarkably close resemblance to the FMC Armored Infantry Fighting Vehicle.

Korean Infantry Fighting Vehicle

However, the Korean prime contractor insists that FMC Corporation (later United Defense Limited Partnership, now operating as BAE Systems Land & Armaments) had no direct involvement in the KIFV program. (For a detailed discussion of the AIFV, see the "Armored Infantry Fighting Vehicle" report in this tab).

The ROK AIFV

In essence, the Korean Infantry Fighting Vehicle is an indigenous improvement of the basic Armored Infantry Fighting Vehicle design, which is itself an improvement of the M113 design. The Korean prime contractor integrated several all-new components with the basic design – especially in the powerpack and drivetrain. Like the AIFV, the KIFV features welded aluminum hull armor, with additional steel/composite spaced laminate armor bolted on.

The driver sits in the left-forward hull; the commander's station is located immediately to the rear of the driver. The powerpack occupies the right-forward portion of the hull. The driver's station features a single-piece hatch cover and four M27 day periscopes; the center periscope is interchangeable with a passive night-driving unit. The commander's station features a cupola with a single-piece hatch cover and a pintle-mounted 7.62x51mm NATO (.308 Winchester) M60 machine gun. The commander has four M17 day periscopes and an M20A1 magnifying periscope for observation.

Keeping It Simple

To the right of the commander, the gunner's station features a rotating cupola with a pintle-mounted 12.7x99mm (.50 cal) M2HB machine gun. A forward shield, as well as lateral and rear plates, protects the gunner from hostile small arms fire. The gunner's station also features five M17 day periscopes for 360-degree observation.

The rear troop compartment provides seating for nine fully equipped infantrymen. A power-operated ramp at the rear of the vehicle provides primary troop access/ egress. An integral door in the ramp and a troop compartment roof hatch provide secondary access/egress. The troop compartment features six firing ports (two on each side and two in the rear ramp) with vision blocks.

The KIFV employs its standard tracks for water propulsion. Standard features include a trim vane, two bilge pumps, and a nuclear, biological, and chemical (NBC) protective suite. The KIFV features an automatic fire detection/suppression system for the engine compartment; the crew must employ portable fire extinguishers within the crew/troop compartments.

Enter the K300 KNIFV

The K300 Korean Next Infantry Fighting Vehicle represents the next generation of the KIFV concept. While retaining the same basic layout as the K200-series KIFV, the K300 KNIFV has a longer and wider hull and a two-man powered turret.

As in the K200-series KIFV, the K300 KNIFV driver sits in the left-forward hull. The powerpack occupies the right-forward portion of the hull. The driver's station features a single-piece hatch cover and three day periscopes; the center periscope is interchangeable with a passive night-driving unit.

The power-operated turret occupies the center of the vehicle. The commander sits to the right of the main armament; the gunner sits to the left. Both turret crew stations feature single-piece hatch covers. The gunner's station features a roof-mounted day/night sight and the customary periscopes for forward and side observation. The commander's station features a roof-mounted stabilized panoramic sight to acquire and track targets.

The 40mm L/70 main armament is fully stabilized. The weapons stabilization system allows a fire-on-the-move capability.

The rear troop compartment provides seating for nine fully equipped infantrymen. A power-operated ramp at the rear of the vehicle provides primary troop access/ egress. An integral door in the ramp and a troop compartment roof hatch provide secondary access/egress. The troop compartment features two periscopes on each side of the roof.

The K300 KNIFV employs its standard tracks for water propulsion. Standard features include a trim vane, two inflatable floatation bladders, two bilge pumps, and a nuclear, biological, and chemical (NBC) protective suite. The K300 features an automatic fire detection/ suppression system.

Related News

South Korea Building Smaller but Stronger Military – South Korea may be shrinking the size of its military, but the force it deploys will be much stronger. South Korea will equip its military with high-tech weaponry, including new tanks and guided missile systems, to compensate for a reduction in overall strength.

The improvement in the combat capability of the South Korean military began in 2005 and will take place over a 15-year period. (*The Korea Times,* 3/10)

South Korea May Lease MRAP for Use in Afghanistan – South Korean troops deploying to Afghanistan may use Mine Resistant Ambush Protected vehicles leased from the United States. Seoul is interested in leasing or buying 10 MRAP vehicles. South Korea plans to deploy 320 troops to Afghanistan. A final decision could come in January 2010. If the MRAPs are unavailable, South Korea will instead use Barracuda four-wheel-drive armored vehicles or K21 armored infantry fighting vehicles. South Korean troops will operate in Parawan province, a mountainous area north of Kabul. (*DefenseNews,* 12/09)

RoK Offers Malaysia Armored Vehicles – Malaysia could become a customer for South Korean-built armaments. Seoul is offering Malaysia its K21 Next Infantry Fight Vehicle and Black Fox armored vehicle. These vehicles are built by Doosan DST. The K21 can be armed with anti-tank missiles. South Korea sold 111 Korean Infantry Fighting Vehicles to Malaysia between 1993 and 1995. (Bernama, 11/09)

South Korean Troops Headed to Afghanistan – South Korea is deploying troops to Afghanistan; these troops will be using equipment from the Zaytun Division, which served in Iraq. The Zaytun Division returned to South Korea in December 2008.

The Afghan contingent will use at least 10 armored personnel carriers. Other equipment will include Barracuda 4x4 armored wheeled vehicles, K200 amphibious armored personnel carriers, and K1A/K2 assault rifles. The Barracuda is built by Doosan DST. (*The Korea Times,* 11/09)

South Korean Defense Ministry Requests Budget Hike – South Korea's Defense Ministry has requested a 7.9 percent budget increase for 2010 as a result of the increased threats from the Democratic People's Republic of Korea (DPRK). The proposed increase will lift the South Korean defense budget to KRW30.8 trillion ($24.1 billion), representing 2.8 percent of South Korea's GDP, up from the current 2 percent level. (Xinhuanet, 7/09)

South Korean Military's Artillery, MRL Numbers to Rise – South Korea plans to triple the number of advanced artillery pieces and multiple rocket launchers in service by 2020. These systems will help counter North Korea's large inventory of long-range artillery. South Korea also plans to cut the number of Army divisions from 47 to 28. These remaining units will be modernized, receiving new tanks, armored vehicles, and other advanced tactical vehicles. In times of war, South Korea will be able to field 38 divisions.

South Korea plans to develop an indigenous 230mm multiple launch rocket system (MLRS) by 2013. The South Korean Army will see its tank strength double, with a greater number of K2 Black Panther tanks entering service. The K2 will be produced beginning in 2011. (*The Korea Times,* 6/09)

Funding

The Republic of Korea Ministry of National Defense, through the ROK Army, funds the development and ROK Army procurement of the Korean Infantry Fighting Vehicle.

Contracts/Orders & Options

Not available, as neither the Republic of Korea Ministry of National Defense nor the prime contractor have released contractual information regarding this program.

Timetable

Month	Year	Major Development
Late	1970s	KIFV concept development
	1981	ROK awards production contract to Daewoo
	1985	KIFV achieves Initial Operational Capability with ROK Army
Oct	1993	First export sale to Malaysia

Korean Infantry Fighting Vehicle

Month	Year	Major Development
Apr	2005	Doosan Corporation acquires Daewoo Heavy Industries & Machinery Company; contractor now operates as Doosan Infracore
	2006	Serial production for ROK Army procurement completed
	2008	ROK Army begins fielding K300 KNIFV
	2010	K300 KNIFV ramping up to serial production for ROK Army

Worldwide Distribution/Inventories

Export Potential. Malaysia has thus far been the only export customer for the Korean Infantry Fighting Vehicle. Between 1993 and 1995, Malaysia purchased 111 vehicles in three increments. In fact, Malaysian U.N. commitments in Bosnia-Herzegovina prompted the K200A1 upgrade. Malaysian employment in the Balkans provides much-needed international exposure and an operational record for the KIFV.

The Malaysian experience with the KIFV has been a double-edged sword, however. In 2000, Malaysia ordered 211 Turkish ACV-300 IFVs from FNSS Savunma Sistemleri AS. As the Turkish IFV carries a marginally higher unit price than the KIFV, potential customers are left to speculate if this Malaysian procurement indicates a deficiency in the KIFV. Nevertheless, in October 2003, Chile reportedly expressed serious interest in purchasing the KIFV, in a deal potentially worth $100 million. However, Chile has yet to commit to a KIFV procurement contract.

The ROK Ministry of National Defense and Doosan DST expect the next-generation K300 KNIFV to be a hit on the international market. However, given the lack of export sales success for the K200A1 KIFV, the export potential of the K300 KNIFV remains to be seen.

Countries. **Malaysia** (111 K200-series KIFV); **Republic of Korea** (2,272 K200-series KIFV; 100 K300 KNIFV).

Forecast Rationale

The serial production run of the K200-series Korean Infantry Fighting Vehicle for the ROK Army was reportedly completed in 2006. While the exact ROK Army procurement objective for the K200-series KIFV remains classified, our research suggests it to be slightly less than 2,300 vehicles.

Given the Malaysian procurement of the Turkish ACV 300 IFV, we do not expect that Malaysia will purchase any additional K200 vehicles. Open-source reporting suggests the Korean prime contractor has made no progress in securing confirmed export orders for the K200-series KIFV since Chile first expressed serious interest in 2003.

From K200A1 to K300

The ROK Army reportedly began fielding the K300 Korea Next Infantry Fighting Vehicle (KNIFV) in 2008, as a replacement for the K200-series KIFV. Should the ROK be able to execute the K300 production plan on schedule, the K200-series KIFV may find itself relegated to second-line status in the ROK Army in a relatively short period of time.

While the K200-series KIFV (which has been in ROK Army service for two decades) would normally be ripe for extensive modernization and retrofit work, we believe the introduction of the KNIFV will severely impact any sense of urgency for such work by the ROK Army.

The prime contractor, Doosan DST, reportedly has high hopes for the export potential of the K300 KNIFV. If the ROK Ministry of National Defense does not find buyers for soon-to-be-surplus K200-series KIFV vehicles, it is unlikely the prime contractor will pursue any significant level of modernization and retrofit work beyond what will be necessary to maintain those vehicles remaining in ROK Army service.

Enter the K300 KNIFV

Our **Ten-Year Outlook** reflects the expected serial production run of the K300 KNIFV, as the successor to the K200A1 KIFV in ROK Army service. The ROK Army reportedly began fielding the next-generation K300 KNIFV in 2008, toward a procurement objective of 900 K300 vehicles.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR UNIT PRODUCTION												
Designation or Program		**High Confidence**				**Good Confidence**			**Speculative**			
	Thru 2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**
Doosan DST												
K300												
	100	100	100	100	100	100	100	100	50	50	50	850
Total	100	100	100	100	100	100	100	100	50	50	50	850

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