

The leading military aviation construction companies: Irkutsk Aircraft (Irkut), Kazan Helicopters (KHP), Ufa Motors (UMPO)

March 2003

	Recommendation	Share price \$	Number of common shares	Capitalization \$ m	Revenue 01, \$ m	Revenue 02, \$ m (F)	EBIT' 01, \$ m	EBIT' 02, \$ m (F)	P/S'01	P/S'02 (E)	P/EBIT'01	P/EBIT'02(E)	EV/EBIT'01	EV/EBIT'02(E)
Irkut (IAPO)	Buy	0.17	791,051,875	134.48	230.9	551.6*	57.8	132.2	0.41	0.24	1.64	1.02	3.79	1.66
KHP	-	0.30	154,683,690	46.41	246.4	381.3	59.4	106.7	0.13	0.12	0.55	0.43	0.78	0.43
UMPO	-	0.15	266,106,022	39.92	234.0	287.8	82.5	106.2	0.15	0.14	0.42	0.38	0.48	0.38

HIGHLIGHTS

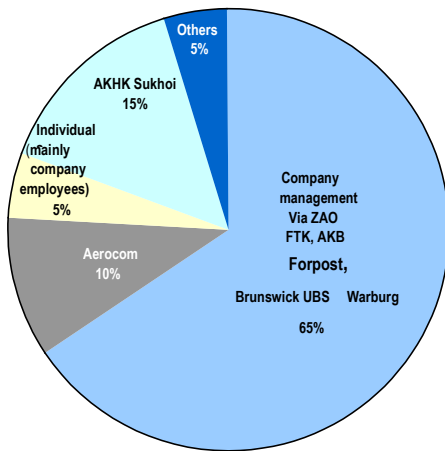
- ★ All three companies are leaders in terms of sales in the military-aviation production industry
- ★ All three companies are undervalued for P/EBIT
- ★ Irkut and UMPO both have long-term contracts, ensuring sales for the next seven years
- ★ Irkut shareholders are actively buying up profile assets, on which to set up a holding
- ★ Irkut's long-term accounts payable decreased by three times over the past year, its indicators of profitability being relatively high
- ★ Irkut's placement of a large bond issue and great likelihood of IPO in the near future significantly reduces risk of unfriendly attitude towards minority shareholders
- ★ The main Irkut's shares investment risk is associated with the government's policy aimed at enlarging its stake in Irkut, the only large company in the military and industrial sector, in which the government does not have a blocking stake
- ★ Comparing Irkut with other companies in the industry for P/E and EV/EBIT we recommend to «Buy» Irkut shares with a target price of \$0.59

* - According to the company's information

IRKUT (IAPO): COMPANY OVERVIEW

IRKUT (till 2003 Irkutsk Industrial Aviation Association - IAPO) is one of the largest manufacturers of military aircraft in Russia. The plant was built in 1934 and immediately began producing fighter planes and ANT-2 fighter-bombers; later on producing the Tu-2. In the 1970s the company's main product was the MiG-27 fighter. Since 1986 IRKUT's main product has been the two-seater Su-27UB. Today, IRKUT mainly produces two modified fighters – the Su-27UBK and the Su-30 MKI.

IRKUT Shareholders



Sales of these aircraft along with repairs to previously-sold models accounts for 95% of the company's revenues. In terms of sales IRKUT is the industry leader in Russia (see table below). In the last five years 90% of revenues have come from just two export contracts. These were for 28 Su-27UBK fighters to China and 40 Su-30MKI fighters to India. These contracts came from state defense company "Rosvooruzheniye".

FINANCIAL POSITION AND DEVELOPMENT PROSPECTS

IRKUT is in a stable financial position. This has a lot to do with the fact that the main bulk of its export contracts have not yet been finished. The contract with India was signed in 1998 and should take 11 years. IRKUT's orders total \$4 billion, according to General Director Alexei Fedorov, which at current production rates will keep revenues at the present level for the next seven years.

Irkut's financial indicators over the past year can be called successful. According to the company's preliminary reports, its sales increased more than twice from \$230.9 million to \$551.6 million. At the same time, its net profit dropped more than five times. However, this fact can be attributed to abnormally large net profit posted for the previous year. It accounted for a third of sales then. We think this happened because Irkut's profit was not directly linked to its actual output. Instead, it depends by far on the moments when the

company's customers transfer their money. Nevertheless, we believe that Irkut's net profit was quite high in the past year (see the financial details over 2000 to 2002 in Appendix).

Besides the company's accounts payable decreased from \$240 million to \$84.5 million in 2002, which was reflected in such an important indicator as EV/EBIT. Thus, to sum up, we may say that Irkut's financial results surpassed our expectations, being on average by 15% to 20% higher than the forecasts.

At the end of the past year, the company was reorganized. The procedure was painless for its minority shareholders. A number of new organizations joined the company, including Taganrog Beriyeve Technical and Scientific Plant (the designer of amphibious planes), the Russian Avionics design bureau, and the AviaStep construction bureau). In this connection, the company was renamed to Irkut, its former name being IAPO. Prospect Investment's assessment of the reorganization is positive. However we would like to warn the investors that inclusion of design bureaus in the company evidences that the main shareholders are interested in production of new types of airplanes, which will need extra financing.

Irkut's majority shareholders are looking for affordable production capacities to realize their plans. IRKUT has frequently said it plans to start producing passenger and cargo planes. The company has said it already has orders from India for this type of plane. The company could also start production at Indian corporation HAL's plants. This would be a multi-purpose MTA aircraft with capacity to carry 15-20 tons or 100 passengers. IRKUT has said it intends to buy a plant to produce passenger aircraft in Russia or the CIS. This could be the Saratov aviation plant, Aviakor, or Aviant's Kiev or Lukhovets aviation plants. The investors should be prepared for dilution of stakes, in case those plants are acquired by the holding company.

At the same time, we consider risk of unfriendly attitude towards minority shareholders to be relatively low. After the company has placed a large issue of bonds, it is not interested in a bad reputation among investors. In addition, IRKUT has said it plans an IPO in the near future.

The main investment risk is associated with probable partial nationalization of Irkut. At present, Irkut is one of the few companies in the military and industrial sector that are not controlled by the government. At the same time, authorities intend to establish a state holding company that will absorb plants and organizations that develop and produce war-planes. That holding company will take hold of the government's 14.7% stake in Irkut. There is danger that the government will want to have larger influence on Irkut. In this connection, new legislative measures may be initiated to increase the government's stakes in defense-associated companies to the blocking level. The probability of this scenario is below 25% now. At the same time, we would like to note that even in that case Irkut's stocks will remain quite attractive. A considerable number of shares will remain in private possession. Moreover, a merger of the companies that produce war-planes (Sukhoi and MIG) will result in synergy and considerable improvement of Irkut's positions on the world markets.

The leading military aviation construction companies' 2001 sales

Position in '01	Position in '00	Change (%)	Company	Sales, \$ m	Profits, \$m	Export share, %	Production share (%)
1	-	-	OAO AKHK SUKHOI	1522.0	-	>90	>90
2	-	-	GUP Uralvagonzavod	273.4	29.5	49.5	-
3	9	+154.5	FPG Defense Systems	259.2	8.9	-	-
4	5	+47.2	OAO IRKUT	230.7	56.5	93	99.0
5	13	+166.9	OAO KHP	219.2	27.4	92.82	-
6	6	+28.8	OAO Izhmash	199.5	-11.6	12.4	-
7	2	-284.7	OAO PK Antei	184.3	-	97.2	90.7
8	4	-54.7	OAO Baltiyskiy Zavod	179.6	1.7	91.9	93.1
9	-	-	FGUP PO Sevmas	155.4	3.3	6.7	79.3
10	14	+78.0	OAO Rostvertol	~130.0	19.2	87	96.0
11	10	-0.7	FGUP GNPTS Zvezda-Strela	102.0	21.8	92.84	98.9
12	-	-	OAO U-UAZ	88.5	30.5	77.13	-
13	12	+24.6	OAO V.A Deftyarev Plant (ZID)	84.3	15.7	-	-
14	-	-	FGUP UOMZ	82.2	25.0	70.7	-
15	18	+40.9	OAO ALMAZ Ship-building company	72.7	11.8	80.0	-
16	16	+11.1	OAO Izhevsk Mechanical Plant	57.7	6.5	35.5	-
17	15	+2.0	OAO NGAZ Sokol	51.0	-	97.0	-
18	-	-	OAO Kovrov mechanical Plant	22.2	3.8	50.0	80.0
19	-	-	OAO Vyatsk-Polyansk Machine Engineering Plant Molot	21.2	1.54	12.0	-
20	-	-	OAO MVZ Mil	17.1	-	15.0	50.0

Source: Center for Strategic and Technological Analysis

COMPETITION

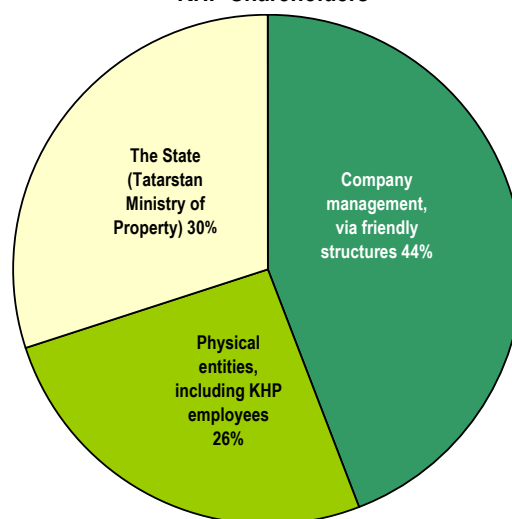
IRKUT's main competitor today is GUP Komsolok-na-Amur Aviation (KnAAPO), which specializes in production of the Su-30MKK fighter. KnAAPO, like IRKUT, exports to China, although its total orders (over \$1 billion) are not as impressive. Probably, as a result of this, KnAAPO has a more developed non-profile production sector, producing boats and parts for gas turbines, etc. The third largest producer of Su fighters is the Novosibirsk Aviation Company, which specializes in Su-24 attack fighters. The company now mainly carries out technical repairs and isn't a serious competitor.

Another competitor is the Moscow Aviation-Construction Company, which is part of the MiG corporation (producer of MiG-29 fighter and its modifications). However, the corporation hasn't signed any large contracts in recent years and has been specializing in doing repairs to MiG parts.

A definite competitor is ANHK Sukhoi, which owns OKB Sukhoi – developer of new modified Su. ANHK wants to buy KnAAPO and include IRKUT into the holding. No progress has yet been made with IRKUT shareholders on this idea.

– «the flying hospital», «fire helicopter» etc. The company's main revenues currently come not from the sale of new helicopters, but from repairs and servicing. In its entire history, KHP has produced 1765 helicopters for countries in Asia, 854 to Europe, 635 to Africa and 259 to South America. According to various statistics, exports account for 60% to 90% of KHP revenues.

KHP Shareholders



KHP's main competitors are to other producers of the Mi helicopter – Rosvertol (Rostov-na-Donu) and Ulan-Ude Aviation Plant (UUAZ). Rosvertol competes with KHP in the production of military helicopters (heavy cargo Mi-26 and military Mi-35, Mi-24 and modifications). UUAZ and KHP also both produce cargo helicopters, particularly, the Mi-171, a modified version of the Mi-8. As with KHP, competitors' main revenue source is from foreign contracts. UUAZ has fulfilled contracts in Malaysia and Pakistan recently. In terms of profits from sales, KHP is the leader amongst its competitors.

KAZAN HELICOPTER PLANT (KHP): COMPANY OVERVIEW

KHP has specialized in the production of Mi-8 and Mi-17 helicopters since the 1950s. The Mi-8 (and Mi-17, as a more modern version of the Mi-8) is one of the most widely used helicopters produced in the in the USSR and Russian Federation. This type of helicopter was used mainly for transport by the Soviet army (the passenger model can hold up to 26 people, and the cargo helicopter can hold 13 tons). KHP has produced more than modifications of this helicopter

FINANCIAL POSITION AND DEVELOPMENT PROSPECTS

KHP's financial position is stable. In recent years the company has shown good pre-tax profits and sales are growing (the current order portfolio has not been named). Year 2001' 13% yield was paid on common shares (for details see appendix). The company is largely controlled by top-management: of the eleven-strong board, four represent the Tatarstan government, seven KHP.

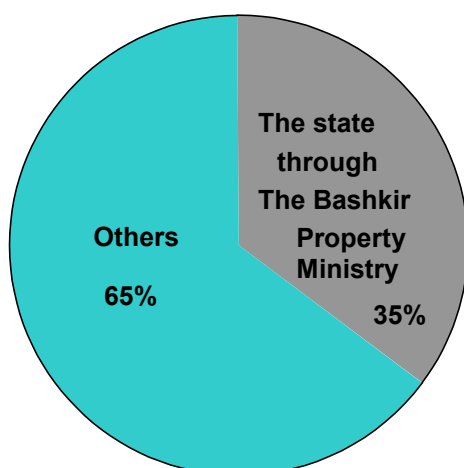
The Russian Ministry of Industry has made several attempts to create a single concern, including the Moscow Milya Plant, but without success. A chance still remains that this could happen, as the state has a blocking stake in KHP, UUAZ, Rosvertol and MVZ. Meanwhile, majority shareholders are unlikely to support unification, as they get a stable income from sales. The companies are more likely to draw closer together when the state sells its stakes, but this does not appear to be on the horizon.

KHP relies on its own resources. The plant's most promising model is the nine-seater "Ansat" and the Mi-8MTV cargo helicopter. Gazprom has expressed interest in the Ansat for use in Russia. KHP says the company already has contracts to produce 12 Ansat helicopters, as soon as it gets the certificate.

UFA MOTORS (UMPO): COMPANY OVERVIEW

UMPO mainly produces engines for Su planes and Ka helicopters. AL-31F, AL-31ST and other engines are produced at the Moscow Arkhip Lyulka construction bureau (formerly AO Lyulka-Saturn, which has merged with AO Rybinsk Motors into AO NPO Saturn). Some of these engines were modified for use in gas turbines, which Gazprom now buys. UMPO was, until recently, involved in producing engines for the Moskvich car, although production has virtually ground to a halt along with Moskvich. In addition, UMPO also produces the Ryc snow-mobile, demand for which is stable.

UMPO Shareholders



UMPO's main competitor is Salyut. During the Soviet era there was a definite division of labor between the companies, where part of the engines were produced at the Moscow plant and part in Ufa. In the mid-90s both companies began producing the final product, creating competition between the two. According to Salyut General Director Yuri Yeliseev, the two sides have reached a gentlemen's agreement, whereby both sides will produce the same number of engines. This is what has happened over the past few years, with both sides producing 300 aviation engines for military aircraft. There is a definite split between orders with Salyut supplying to IRKUT for the Indian contracts and UMPO working on the IRKUT and KnAAPO contracts. Unlike UMPO Salyut has virtually no non-profile production – 80% of revenues coming from the AL-31F engine.

FINANCIAL POSITION AND DEVELOPMENT PROSPECTS

UMPO's main financial results have grown over the past couple of years, as sales and profits rise (see appendix). Despite the fact that, unlike many companies in the industry, UMPO is not state-owned, it still has many of the characteristics of a state-run company. In particular, information about shareholders is not circulated. It is most likely that UMPO management has a large stake, although judging by the make-up of the board, the main decisions are made by the Bashkir government. There are also reports that the Moscow government has accumulated a stake. Moscow already has a blocking stake in AO Moskvich, so could be interested in further cooperation with UMPO.

There is a strong likelihood that UMPO will merge with NPO Saturn. Talks have apparently been held, and Saturn General Director Yuri Lastochkin was recently elected to the board. Meanwhile, UMPO says that there are no talks of merger yet, just an alliance. Nevertheless, merger would make sense. Unlike Salyut UMPO does not have its own construction base and is interested in the rights to produce the Saturn AL-41 engine.

RUSSIAN MILITARY-AVIATION CONSTRUCTION COMPANIES FINANCIAL RESULTS

	Ticker	Number of shares	Number of issued but not authorized shares	Share price, \$	Mcap, \$m	Revenues \$m			P/S			EBIT, \$m			P/EBIT			Debts, \$m		EV/EBIT	
						2000	2001	2002,F	2000	2001	2002,F	2000	2001	2002,F	2000	2001	2002,E	2001	2002	2001	2002,E
IRKUT	IAPO	791,051,875	-	0.17	134.48	183.5	230.9	551.6	0.73	0.58	0.24	39.5	57.8	132.2	3.40	2.33	1.02	242.00	84.50	3.79	1.66
Kazan Helicopters*	KHEL	154,683,690	-	0.30	46.41	116.3	246.4	381.3	0.40	0.19	0.12	42.1	59.4	106.7	1.10	0.78	0.43	0.00	0.00	0.78	0.43
Rostvertol	RTVL	412,094,000	-	0.03	12.36	51.9	177.1	194.7	0.24	0.07	0.06	4.6	24.1	26.5	2.69	0.51	0.47	0.04	0.04	0.51	0.47
Ulan-Ude Aviation Plant	UUAZ	267,265,350	33,328,573	0.05	13.36	42.0	93.8	103.2	0.32	0.14	0.13	12.1	30.8	33.9	1.10	0.43	0.39	0.13	0.13	0.44	0.40
Beriev TANTK	TAKB	236,810	340,800	120	28.42	13.4	7.0	-	2.12	4.06	-	2.3	0.6	-	12.36	47.36	-	1.20	1.20	-	-

	Ticker	Number of shares	Number of issued but not authorized shares	Share price, \$	Mcap, \$m	Revenues \$m			P/S			EBIT			P/EBIT			Debts, \$m		EV/EBIT	
						2000	2001	2002,F	2000	2001	2002,F	2000	2001	2002,F	2000	2001	2002,E	2001	2002	2001	2002,E
UMPO	UFMO	266,106,022	1,596,636,132	0.15	39.92	160.4	234.0	287.8	0.25	0.17	0.14	62.1	82.5	106.2	0.64	0.48	0.38	0.00	0.00	0.48	0.38
Rybinsk Motors**	RRMM	796,233	-	35.00	27.87	112.0	41.1	-	0.25	0.68	-	18.6	12.3	-	1.50	2.27	-	0.00	0.00	2.27	-
Perm Motor Plant	PMOZ	7,500,000	2,500,000	2.00	15.00	43.6	58.7	63.8	0.34	0.26	0.24	4.7	6.2	6.8	3.19	2.42	2.21	0.30	-	4.28	2.25

* total number of shares includes 594 300 preferred shares

** Revenue and profit figures for 2001 are for Jan-Oct, as in November last year Rybinsk Motors merged with AO «OKB «Lyulka-Saturn» in AO «NPO Saturn»

IRKUT 2000-2002 FINANCIAL RESULTS (\$M)

	2002 (F)	2001	2000
Revenue	551.6	230.9	183.5
Costs	341.6	171.3	142.5
Gross profits	-	59.6	41.0
EBIT	132.2	57.8	39.5
Net profit (loss)	16.6	110.9	-9.5
ASSETS		01.01.2002	01.01.2001
Fixed assets	-	29.8	27.6
Uncompleted construction	-	7.5	4.0
Reserves	-	183.3	80.5
Short-term receivables	-	0.128	0.068
LIABILITIES			
Long-term debts	-	242.0	80.1
Short-term debts	-	397.1	411.5
Loans	-	265.1	275.0
Advances	-	163.5	178.7

KAZAN HELICOPTER PLANT 2000-2002 FINANCIAL RESULTS (\$M)

	2002 (F)	2001	2000
Revenue	381.3	246.4	116.3
Costs	190.6	141.4	66.2
Gross profits	-	105.0	50.1
EBIT	106.7	59.4	42.1
Net profit (loss)	-	5.6	28.2
ASSETS		01.01.2002	01.01.2001
Fixed assets	-	13.5	11.4
Uncompleted construction	-	2.9	1.4
Reserves	-	48.3	37.1
Short-term receivables	-	41.4	87.9
LIABILITIES			
Long-term debts	-	-	-
Short-term debts	-	66.6	87.1
Loans	-	14.5	6.2
Advances	-	6.6	2.3

UFA MOTORS 2000-2002 FINANCIAL RESULTS (\$M)

	2002 (F)	2001	2000
Revenue	287.8	234.0	160.4
Costs	169.3	138.1	92.2
Gross profits	-	95.9	68.2
EBIT	106.2	82.5	62.1
Net profit (loss)	-	55.2	51.1
ASSETS		01.01.2002	01.01.2001
Fixed assets	-	47.9	45.8
Uncompleted construction	-	9.9	6.5
Reserves	-	112.3	67.0
Short-term receivables	-	114.3	88.9
LIABILITIES			
Long-term debts	-	0.003	0.003
Short-term debts	-	197.5	136.2
Loans	-	197.1	134.1
Advances	-	76.6	12.5

Source: financial statements 01.01.2002, calculated at average exchange rate (29.18 rubles/\$ in 2001 and 28.13 rubles/\$ in 2000)

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