

EXHIBIT 19

(Part 8 of 8)

TRW INC.

CAPITAL STRUCTURE
LONG TERM DEBT

Issue	Rating	Amount Outstanding
1. Thomp. Ramo Woold. deb. 5 $\frac{1}{8}$ %, 1986	A1	\$7,303,000
2. TRW deb. 5 $\frac{1}{8}$ %, 1992	A1	18,808,000
3. TRW deb. 8 $\frac{1}{8}$ %, 2004	A1	75,000,000
4. TRW deb. 9 $\frac{1}{8}$ %, 2000	A1	50,000,000
5. TRW 9% notes, 1985	A1	50,000,000
6. Guar. conv. deb. 5s, 1988		12,157,000
7. Guar. bearer bds. 7 $\frac{1}{8}$ %, 1984		110,109,000
8. Guar. deb. 7 $\frac{1}{8}$ %, 1983		13,605,000
9. Guar. deb. 8 $\frac{1}{8}$ %, 1986		18,760,000
10. Other debt		91,627,000
11. Long-term lease obligations		54,882,000

CAPITAL STOCK

Issue	Par Value	Amount Outstanding	Earned per sh.	Divs. per sh.	Call Price	Price Range
			1981	1980		1981
1. \$4.40 cum. conv. pref. II Ser. 1	No par	360,364 shs.	\$125.43	\$87.46	\$104	143 - 108
2. \$4.50 cum. conv. pref. II Ser. 3	No par	1,464,002 shs.			102	121 $\frac{1}{2}$ - 92
3. Common	\$1.25	733,371,000 shs.	\$76.60	\$76.15	2.35	65 $\frac{1}{2}$ - 49

[1] Sold outside U.S.A. by TRW International Finance Corp. [2] Subject to change and/or callable for sinking fund; see text. [3] Subject to change, see text. [4] Sold outside U.S.A. by TRW Overseas Finance N.V. [5] Based on average shs.; fully diluted; 1981, \$6.13; 1980, \$5.49. [6] Sold outside U.S.A. by TRW Overseas Capital N.V.

HISTORY

Incorporated in Ohio, June 17, 1916 as The Steel Products Co. On June 27, 1916, acquired the net assets of The Steel Products Co., successor to The Electric Welding Products Co., which had been organized in 1901 as Cleveland Cap Screw Co. Also on June 27, 1916, acquired the net assets of The Michigan Electric Welding Co. and The Metals Welding Co. Name changed to Thompson Products, Incorporated in May, 1926; to Thompson Products, Inc., Mar. 28, 1944; to Thompson Ramo Wooldridge Inc. Oct. 31, 1958; present name adopted Apr. 30, 1965.

In February, 1929, purchased the assets and business of The Cleveland Piston Mfg. Co., a maker of pistons, and The Cox Tool Co., a maker of piston pins.

On Nov. 1, 1929, organized as a wholly owned subsidiary, Thompson Products, Ltd., to manufacture and sell in Canadian and foreign markets.

In August, 1932, acquired from General Motors Corp. the valve manufacturing equipment of the latter's Muncie Products Division.

During 1935, organized as a wholly owned subsidiary, The Toledo Steel Products Co., which on Dec. 5th purchased the assets of The Toledo Steel Products Co. of Toledo, Ohio.

In April, 1937, acquired the net assets of Jordon Motor Products Co., Bell, Calif. Business absorbed by parent in June, 1940.

On Dec. 27, 1945 acquired all the stock of Vane Wheel Co., Mich., manufacturer of impellers and inducers for use in connection with superchargers. Assets of this company transferred to parent in Mar., 1947.

During 1946, Thompson Aircraft Products Co., a wholly-owned subsidiary, was discontinued as a separate corporation and operations combined with parent company.

In May, 1947, acquired machinery, equipment and inventories of International Piston Ring Co.

In July, 1950, organized as a wholly-owned subsidiary, Ramsey Corp. (Ohio), which acquired all assets of Ramsey Corp. (Del.) for \$895,708 and assumption of liabilities amounting to \$1,875,249.

On Sept. 30, 1951, acquired entire outstanding stock of Antenna Research Laboratory, Inc., Columbus, O., which was engaged in the design and development of electronic products. This subsidiary was liquidated on March 31, 1952, and its assets taken over by parent company.

On Dec. 31, 1951, Thompson-Toledo Vitameter Corp., wholly-owned subsidiary, discontinued its activities, and its assets were taken up by parent company.

On Dec. 31, 1951, Toledo Steel Products Co., Ohio, a wholly-owned subsidiary, was dissolved and its operations continued as a division of parent company.

On Sept. 30, 1953, acquired Bell Sound Systems, Inc., Columbus, O. (subsequently dissolved and business transferred to Dage-Bell Corp. in 1964).

In Mar., 1954, company completed negotiations for purchase of Dage Electronics Corp., of Beach Grove, Ind. (transferred to Dage-Bell Corp. in 1963).

In Nov., 1954, acquired Kolcast Industries, Inc., Cleveland, for 27,851 common shares (now a division).

In June, 1955, purchased Karl-Douglas Associates, Inc., Hawthorne, Cal., now assimilated into other divisions of the parent company.

On Oct. 31, 1958 merged Ramo-Wooldridge Corp. (57 $\frac{1}{2}$ % owned) by issuance of 13,857 common shares for each class B share.

On Sept. 11, 1959 purchased 70% of stock of Magnetic Recording Industries, Ltd.; remainder in 1960 and 1961; (subsequently dissolved and business transferred to Dage-Bell Corp. in 1964).

On Sept. 24, 1959 purchased Bel Canto Magnetic Recording Tape (and its subsidiary, American Magnetic Tape Duplicators). Dissolved in 1961, and transferred to Dage-Bell Corp. in 1964.

On Dec. 15, 1959, acquired Radio Industries Inc. (with 51% interest in subsidiary, Radio Kemetel Industries, Inc., remaining shares ac-

quired in 1960); Radio Industries, Inc. merged into parent Sept. 28, 1962. Radio Kemetel Industries Inc., merged parent on Oct. 1, 1962.

In Apr., 1961, acquired 83.6% interest in Good-Air Electric Mfg. Co., Ogallala, Neb., and subsidiary, Milam Electric Mfg. Co., Providence (remaining shares acquired in Aug., 1960 both are now divisions).

In Mar., 1961, acquired 50% interest in Teves & Co., G.m.b.H., now Teves-Thompson, G.m.b.H. Balance acquired in July 1966.

In Apr. and May, 1961, acquired entire stock of Radio Condenser Co. on basis of .2374 of one company common share for each Radio Condenser share; functions absorbed by parent.

In 1963 merged Space Technology Laboratories, Inc., subsidiary.

In Dec. 1963 acquired 25% interest in Fuji Valve Co. Ltd., Japan.

In June 1964 acquired Marlin-Rockwell Corp., Jamestown, N.Y. manufacturer of ball and roller bearings, by exchange 0.25 class A preference share and 0.25 common share for each Marlin-Rockwell share.

Also in June 1964 acquired Ross Gear & Tool Co. Inc., Lafayette, Ind. manufacturer of steering gears, by exchange of 0.18 class A preference share and 0.254 common share for each Ross share.

In May, 1965, acquired substantially all remaining shares of Cam Gears, Ltd. Hitchin, Eng. (Company previously owned 35% of Cam Gears).

In 1966, acquired United Transformer Corp. manufacturer of transformers and electric wave filters; Scientific Electronic Products, specializing in production of quartz crystals for electronic applications, Clifford Motor Components Ltd., a British valve, steering wheel and auto parts manufacturer; and remaining shares of Societe d'Exploitation des Brevets Gemmer, Surenes (Seine), France; and Teves-Thompson G.m.b.H. Germany.

In 1967 Noblesville Casting Co., Inc. was acquired through an exchange of common shares and Globe Industries, Inc., a Dayton-headquartered manufacturer of miniature precision AC and DC electric motors, was acquired by issuance of a new series B preference stock.

Also acquired were Mission Manufacturing Co. of Houston, Texas, and its subsidiaries, including International Controls Corp., manufacturers of products and supply services for oil and gas exploration and production. Also acquired Hazleton Laboratories, Inc. (sold Hazleton Laboratories Jan. 1972 to Environmental Sciences Corp.), a supplier of research and other services and products in fields related principally to environmental health.

In February 1968 acquired United-Carr, Inc., a Boston-based company manufacturing a variety of products for the electronics industry and fasteners and other parts for the automotive, appliance, clothing, and other industries and markets, and IRC, Inc., a manufacturer of a broad line of resistors and other television and general electronic products.

Also early in 1968, TRW, through its German subsidiary, acquired Munich-based Bayerisches Leichtmetallwerk KG (BLW), a manufacturer of component parts for the automotive industry.

In May 1968 acquired Duly & Hansford, Ltd., Sidney, Australia, for \$6,000,000.

In Sept. 1968 acquired by merger, United-Greenfield Corp., headquartered in Northbrook, Ill., manufacturer of carbide and high-speed steel cutting and threading tools, tungsten and titanium carbide wear parts, hand tools, and other industrial items. Merger was effected through exchange of 0.20 Co. com. sh. and 0.41 sh. of \$4.50 cum. conv. serial pref. stk. II, series 3, for each United-Greenfield share.

Also in 1968 Company made an investment in Credit Data Corp. and has agreed to provide financial support to assist Credit Data with a nationwide computerized system for credit information and charge authorization services.

In Jan. 1969 completed acquisition by merger of Reda Pump Co. of Bartlesville, Okla., a designer and manufacturer of submergible

electric motors and pumps for the petroleum industry and other high-performance fluid handling applications. Its wholly-owned subsidiary, Crecent Insulated Wire & Cable produces electric wire and cable for oil field and general industrial use. Merger was effected through exchange of 0.125 Co. com. sh. and 0.222 \$4.50 cum. conv. pfd. sh. for each Reda Pump common share.

Also in Jan. 1969 acquired Gregory Industries, Inc. of Lorain, Ohio, manufacturers of welded studs and stud welding equipment for the metalworking, construction, shipbuilding, railroad and automotive industries. Merger was effected through exchange of 0.48 Co. com. sh. and 0.12 sh. of Co. cum. conv. pfd. stock for each Gregory share.

In Sept. 1969 acquired minority interest in International Decision Techniques Inc., computer programming subsidiary of J.P. Morgan & Co.

In June 1971, formed Community Technology Corp. in Los Angeles to enter the residential construction field. New Co. will supply structural materials to homebuilders and will engage in research and development of materials and manufacturing processes. In April, 1972, Co. agreed to sell a 40% interest in Community Technology to Horizon Corp. Horizon's initial cash investment will be \$700,000. Co. will invest additional cash of \$700,000 and will make available debt financing of up to \$3,500,000, 40% of which will be guaranteed by Horizon.

In July 1972 acquired DeLew, Cather & Co., Chicago (sold in July 1977).

In May, 1974 Co. acquired Financial Data Sciences Inc., Orlando, Fla., for up to 952,479 Co. com. shs.

In July 1974 acquired Aertech Industries, Inc. Sunnyvale, Cal. for 177,000 Co. com. shs.

In May 1975 acquired Vidar Corp. for approximately 653,715 shs. of common stock.

In Aug. 1976 acquired 40% interest in Ventek Ltd. for \$1,450,000. Ventek markets TRW's datapoint series of data/processing systems.

In Oct. 1976 acquired the maintenance and customer service operations of the Singet Business Machines Division, North American Operations.

In Apr. 1977 Co. sold its IRC Potentiometer division to Veritron Corp.

In Jan. 1977, sold Supermet Products Division to Stanadyne Inc. for cash.

In June 1978, acquired ESL Inc. for approximately \$41 million in cash.

In July 1978 completed acquisition of certain assets and obligations of Teller-Matic operation of Mosler Safe Co., a subsidiary of American Standard Inc.

In Dec. 1978, acquired Control Concepts, Inc. for approximately 119,985 shares of common stock.

In Jan. 1979 acquired Optron, Inc. for \$16.8 million in cash.

In Mar. 1979 acquired C.E. Niehoff for \$29.0 million in cash.

In May 1979 completed the sale of its Vaidata operations for an undisclosed amount of cash. Buyer was Tymshare Inc. of Cupertino, Calif.

In Feb. 1980 acquired Stanley Spring Works, Inc. for \$16.7 million cash.

In July, 1981 acquired Hartzell Propeller, Inc. for about \$30 million cash.

In Aug. 1981 sold a network of nine distributors, part of Datacom operations, for approx. \$74 million to Datapoint Corp.

SUBSIDIARIES

Company owned, as of Dec. 31, 1981, 100% (except as noted) voting control of the following:

Carr Fastener Company Ltd. (U.K.)

Clifford Motor Components Ltd. (U.K.)

TRW Clifford Ltd. (U.K.)

TRW Valves Ltd. (U.K.)

Cam Gears Ltd. (U.K.)

ESL Inc. (Cal.)

Ramsey Corp. (Ohio) which together with TRW Inc. owns Gemmer, France S.A.

Ramsey Corp. and TRW International Finance Corp. (Del.) which together own TRW GmbH für industrielle Beteiligungen (W. Germany) which in turn owns
 A. Ehrenreich GmbH & Co. KG (W. Ger.)
 Buecher Verwaltungs GmbH (W. Ger.)
 Hagen & Goebel Maschinenfabrik G.m.b.H. (W. Ger.)
 Nelson Bolzenschweis-Technik GmbH (W. Ger.)
 Pleuger Unterwasserpumpen GmbH (W. Ger.)
 Repa Feinstanzwerk GmbH (W. Ger.) (90%)
 Werner Messmer GmbH & Co. KG (W. Ger.)
 Teves-Thompson GmbH (W. Ger.)
 Reda Pump Company (Singapore) Private Ltd. (Singapore)
 TRW do Brasil (Brazil) (98.73%)
 SMP, Inc.
 Tokai TRW & Co. Ltd. (Japan) (80.78%)
 TRW Australia Ltd. (Australia)
 TRW Canada Ltd. (Canada)
 TRW Colorado Electronics, Inc.
 TRW Electronic Components Co. (Taiwan)
 TRW Finance Ltd. (U.K.)
 TRW International S.A. (Switzerland)
 TRW International Sales Corp. (Del.)
 TRW Overseas Capital N.V. (Netherlands Antilles)
 TRW Overseas Finance N.V. (Netherlands)
 For description, see an appended statement.
 For description, see alphabetical index.

Joint Ventures: In 1966, Co. and Mitsumi Electric Co. formed Mitsumi-Cinch Ltd., Japan, to make electronic components. New Co. is equally owned by Co. and Mitsumi.
 Co. and Tokai Cold Forming Co., Nagoya, Japan, in 1970 established Tokai TRW & Co. Ltd., Co.'s initial investment was about \$5,400,000 and has had a 49% interest in the business which will make suspension ball joints and tie-rod ends. In Mar. 1979 purchased an additional 25% of Tokai TRW & Co. Ltd. for \$11.4 million.
 In 1980, Co. formed a joint venture with Fujitsu Ltd./Japan, called TRW-Fujitsu Co. TRW has 49% ownership. TRW-Fujitsu will market information processing systems throughout the U.S.

In Oct. 1980, Units of Co. and Lucas Industries Ltd., Birmingham, England, agreed to develop a microprocessor-controlled, diesel-engine fuel injection system designed by Lucas. Under the agreement, Co. will develop and produce the system's electronic control unit based on joint design work by Co.'s automotive unit and by Lucas CAV, a Lucas subsidiary. The agreement allows both companies to manufacture the electronic control unit. Lucas CAV will make the mechanical hardware and special sensors and actuators for the system. The system should be ready for production by mid-1983 and will be sold to engine manufacturers by Lucas CAV. Co. would not estimate how much it will invest in the project or its expected sales of the electronic control unit.

BUSINESS & PRODUCTS

TRW is a diversified, technically oriented company. Principal businesses of Co. and its subsidiaries are the design, manufacture and sale of products for industry and government and the performance of advanced systems engineering, research and technical services in the following industry segments:

CAR AND TRUCK

A broad range of steering, engine, hydraulic, chassis, electrical, electronic, and other components for passenger car, truck, and off-highway vehicle applications, sold worldwide to original equipment manufacturers and through a variety of replacement parts distribution channels, including manual and power rack and pinion steering gears, engine valves, hydraulic motors, hydraulically actuated truck and off-highway steering systems, suspension systems, electronic monitoring and control systems, passenger safety systems, and a service line of car and truck accessories, tools, and care products.

ELECTRONIC AND SPACE SYSTEMS

Electronic components, including large scale integrated circuits, capacitors, connectors, motors, printed circuit boards, resistors, semiconductor, inductors, and optoelectronic products sold for government and commercial use in the telecommunications, computer, automotive and home entertainment industries.

Computer-based & analytical services, including software systems and analytical services for space and defense, and consumer and business credit information.

Electronic systems, equipment & services, including communications equipment for defense and space applications and related research and analysis; transmission equipment for the telephone industry, and maintenance and support services.

Spacecraft, including design and manufacture of spacecraft and their subsystems for defense, scientific research and communications.

INDUSTRIAL AND ENERGY

Fasteners, tools and bearings, including metal and plastic fasteners, ball and roller

bearings, expendable cutting and hand tools sold to a variety of industrial and energy-related users.

Pumps, valves and energy services, including submersible electric pumping systems, power cables, valves, pumps, pump parts and drilling tools sold for use in oil and gas exploration, production and pipeline transmission and other industrial purposes, components for nuclear reactors and gas and steam turbines, planning and management support services, and research and development provided to both government and commercial users.

Aircraft components, including turbine and compressor airfoils, fuel and booster pumps and propellers for commercial and military aircraft.

Source of Net Sales

Source of net sales is as follows (in thousands of dollars):

	Comm. & Ind.	Government	Total
1970.....	1,072,675	512,513	1,585,188
1971.....	1,158,700	388,300	1,547,000
1972.....	1,320,000	368,000	1,688,000
1973.....	1,702,000	463,000	2,165,000
1974.....	2,008,000	478,000	2,486,000
1975.....	2,010,500	575,200	2,585,700
1976.....	2,513,014	616,000	2,929,014
1977.....	2,601,843	662,100	3,263,943
1978.....	3,047,308	739,940	3,787,248
1979.....	3,588,803	871,500	4,460,303
1980.....	3,794,340	1,189,600	4,983,970
1981.....	3,981,497	1,403,636	5,385,133

Results by Industry Segment (in \$ million):

	1981	1980	1979
Net Sales:	1981	1980	1979
Car & truck.....	1,690	1,752	1,799
Electronics & space syst.....	2,032	1,799	1,501
Indust. & energy ..	1,563	1,433	1,260
Total net sales	5,285	4,984	4,560
Oper. Profits:			
Car & truck.....	146.0	149.4	192.7
Electronics & space syst.....	123.3	133.3	88.9
Indust. & energy ..	219.9	193.9	156.8
Oper. profit ...	489.2	476.6	438.4
Co. staff exps.	(35.9)	(48.0)	(40.2)
Interest exps.	(65.9)	(66.5)	(52.3)
Equity in affil. inc.	(1.4)	1.3	9.0
Earn. bef. inc. taxes.....	386.0	363.4	354.9

PRINCIPAL PLANTS & PROPERTIES

At Dec. 31, 1981, TRW operated more than 100 manufacturing facilities in the U.S. and more than 90 manufacturing facilities in Europe and the rest of the world.

Domestic manufacturing plants, research facilities, warehouses and offices owned by Company contain about 11.6 million square feet of floor space and are located on sites consisting of approximately 2,100 acres of land owned in fee. Company also leases similar domestic properties containing approximately 11.1 million square feet of floor space located on sites aggregating approximately 3,600 acres of land.

Of the manufacturing plants in foreign countries, those owned in fee by TRW contain approximately 8 million square feet located on sites aggregating about 900 acres; and leased plants contain about 1.3 million square feet located on sites totaling about 25 acres.

1980 Capital Expenditures were \$262,959,000 of which \$35,000 was used for expenditures of international subsidiaries.

MANAGEMENT

Chief Executive Officers

R.F. Mettler, Chmn. of Board & Chief Exec. Off.

S.C. Pace, Pres. & Chief Oper. Off.

Company Staff Executives

C.R. Allen, Executive Vice Pres. & Chief Financial Officer

A.J. Kelley, Vice Pres. & Assistant Chief Financial Officer

F.H. Kettle, Vice Pres. & Controller

R.B. Perkovic, Vice Pres. & Treasurer

E.N. Button, Vice Pres., Investments

M.A. Coyle, Vice Pres., General Counsel & Secretary

C.T. Harvie, Vice Pres. & Assistant General Counsel

K.G. Preston, Vice Pres. & Assistant General Counsel

J.E. Terrell, Vice Pres. & Assistant General Counsel

T.J. Fay, Vice Pres., Communications

R.D. Lundy, Vice Pres., Public Relations & Advertising

Michael Monroney, Vice Pres., Government Relations

J.S. Foster, Jr., Vice Pres., Science & Technology

A.L. Bement, Jr., Vice Pres., Technical Resources

H.P. Conn, Vice Pres., Productivity

J.M. Grocock, Vice Pres., Quality

G.A. Harris, Vice Pres., Materiel

G.E. Schrader, Vice Pres., Manufacturing

J.B. Gearhart, Vice Pres., New Headquarters Project

L.N. Hand, Senior Vice Pres., Public Policy, & Assistant to the Chairman

G.A. Harter, Vice-Pres., Planning & Investment

E.M. Foley, Vice-Pres., Planning & Development

W.V. Bussmann, Chief Economist

Pearson Graham, Dir. Operating Investment

C.G. Petrow, Vice-Pres., TRW Europe

H.V. Knicely, Vice Pres., Human Relations

B.B. Hauserman, Vice Pres., Personnel Programs

R.G. McCarty, Vice Pres., Employee Relations

R.N. Olsen, Vice-Pres., Compensation and Benefit Systems

D.G. Revelle, Vice President, Human Resources

Operating Executives

R.A. Campbell, Executive Vice Pres., Deputy Gen. Mgr. TRW Electronics and Defense

R.C. Anderson, Vice-Pres. & Asst. Gen. Mgr., TRW Energy Development Group

R.L. Ashley, Vice Pres. and General Manager, TRW Communications Group

E.J. Brennan, Vice Pres. and General Manager, TRW Information Services

K.E. Heller, Vice Pres. and General Manager, TRW Electronic Components Group

F.J. Rechin, Vice Pres. and Asst. General Manager, TRW Aircraft Components Group

G.E. Solomon, Exec. Vice Pres. and General Manager, Electronics and Defense Acting Gen. Mgr., TRW Energy Development Group

J.T. Gorman, Executive Vice Pres. and Gen. Mgr., TRW Industrial & Energy

R.E. McGinnis, Vice Pres. and General Manager, TRW United-Carr Divisions

E.F. Myerholtz, Vice Pres. and General Manager, TRW Industrial Products Group

S.C. Phillips, Vice Pres. and General Manager, TRW Energy Products Group

A.W. Reynolds, Executive Vice Pres. and Gen. Mgr., TRW Automotive Worldwide

S.V. Intihar, Vice-Pres. and Gen. Mgr., TRW Engine Components Group

T.O. Jones, Vice Pres. and Gen. Mgr., TRW Transportation Electrical and Electronics Operations

R.M. Lehman, Vice Pres., Engineering-Automotive Worldwide

R.M. Lynas, Vice Pres. and General Manager, TRW Chassis Components Group

C.L. Miller, Vice Pres. and General Manager, TRW General Components Group

G.A. Poe, Vice Pres. and General Manager, TRW Aftermarket Group

J.A. Poremba, Vice President and General Manager, TRW General Components Group

Directors

(Showing Principal Corporate Affiliations)

John A. Alexander, Partner of Krieg DeVault Alexander & Capehart, Attorneys

Charles R. Allen, Exec. Vice-Pres. & Chief Financial Officer

E. Bradley Jones, Chmn. & Chief Exec. Officer, Republic Steel Corp.

Sir Alister Down, Chmn. of the Board, Burmah Oil Co. Ltd.

Martin Feldstein, Professor of Economics, Harvard University

W.M. Krome George, Chmn. of the Board & Chief Exec. Off., Aluminum Company of America

Ruben F. Mettler, Chmn. of the Board & Chief Exec. Officer

Stanley C. Pace, Pres. & Chief Oper. Officer

Jack S. Parker, Retired Vice Chmn. of the Board, General Electric Co.

Simon Ramo, Consultant

A. William Reynolds, Exec. Vice-Pres.

Horace A. Shepard, Consultant

Charles E. Spahr, Business Consultant

H. Guyford Stever, Scientist and Consultant

Gerald B. Zornow, Director & Retired Chmn. of the Board, Eastman Kodak Co.

Auditors: Ernst & Whinney.

Investor Relations: T.A. Myers, Director Investor Relations, Tel: (216)383-3458.

Director Meetings: In 1982, Feb., Apr., July, Oct. and Dec.

Annual Meeting: Last Wednesday in April.

No. of Stockholders: Dec. 31, 1981: \$4.40 pref. II ser. 1, 4,077; \$4.50 pref. II ser. 3, 4,245; common, 39,941.

No. of Employees: Dec. 31, 1981, worldwide, 91,941.

General Offices: 23555 Euclid Ave., Cleveland, OH 44117. Tel: (216)383-2121.

INCOME ACCOUNTS

COMPARATIVE CONSOLIDATED INCOME ACCOUNT, YEARS ENDED DEC. 31
(Taken from reports to Securities and Exchange Commission)
(in thousands of dollars)

	1981	1980	1979
Net sales	5,285,133	4,983,970	4,560,303
Cost of sales	3,974,258	3,743,760	3,433,658
Selling, general & admin. exp.	877,025	825,594	732,603
Balance	433,850	414,616	394,042
Other income	52,907	42,368	45,318
Total	486,757	456,984	439,360
Interest	65,956	66,551	52,280
Other deductions	34,812	26,983	32,192
Inc. bef. income taxes	385,989	363,448	354,888
Income taxes	157,159	158,917	166,437
Net income	228,830	204,531	188,451
Retained earnings, begin. of year	1,080,134	956,409	842,457
4% cum. preferred dividends			8
Series A Preference dividends			14
Series B Preference dividends			3
Ser. pref. stk. II—Ser. I divs.	1,661	3,070	6,564
Ser. pref. stk. II—Ser. J divs.	6,869	8,514	9,279
Common dividends—cash	79,434	69,222	58,631
Retained earnings, end of year	1,221,000	1,080,134	956,409
SUPPLEMENTARY P. & L. DATA			
Maintenance & repairs	109,380	101,212	97,408
Depreciation and amortization	141,208	128,470	111,033
Payroll taxes	153,235	146,401	136,819
Other taxes other than income	37,677	30,043	31,420
Rents	100,827	83,244	67,116
Royalties	4,593	3,400	3,416
Advertising costs	13,121	11,538	10,593
Research & development costs	91,243	66,867	58,914
Deprec. and amort. of prop., plt., and equip.	145,228	134,030	128,470
Def. inc. taxes—lg.-tm.	110,943	69,062	50,357
Other items—net	3,419	1,536	20,703
Incra. in lg.-tm. debt	33,787	14,889	
Prop. retirements	18,770	8,838	13,678
Other	26,755	24,810	18,109
Total	567,732	457,696	453,770
Applications of Working Capital			
Dividends declared	87,964	80,806	113,962
Add. to prop., plt. and equip.	262,959	259,060	259,060
Payments and matur. of lg.-tm. debt			50,357
Purch. of bus. and Eff. of trans. adj. and hedging transacs. on work. cap.			13,678
Other			18,109
Total			453,770
Incra. (decr.) in work. cap.			113,962
			(1,782)
Sources of Working Capital:			
1981	1980		
Net earnings	228,830	204,531	

BALANCE SHEETS

COMPARATIVE CONSOLIDATED BALANCE SHEET, AS OF DEC. 31
(Taken from reports to Securities and Exchange Commission)
(in thousands of dollars)

	1981	1980	1979
ASSETS			
Cash	8,458	22,040	63,500
Short term securities (cost)	167,458	18,612	10,429
Notes & accounts receivable	782,095	761,020	689,192
Inventories	700,966	734,623	743,093
Prepaid expenses	31,182	27,874	25,413
Def. income taxes	68,402	47,469	79,278
Total current assets	1,778,561	1,611,638	1,610,905
Invest. assoc. foreign cos.	71,806	73,576	50,843
Miscellaneous other assets	74,367	77,263	79,857
Prop., plant & equip.	2,099,914	1,964,348	1,746,752
Less: Depreciation & amort. reserve	1,097,606	1,036,177	941,352
Net property account	1,002,308	928,171	805,400
Cost of acq. cos. over net assets	186,408	179,653	182,933
Equipment for lease	13,153	15,542	19,164
Total	3,126,603	2,885,845	2,749,122
LIABILITIES			
Notes payable	72,316	105,956	59,063
Curr. install. on long term debt	23,222	28,098	20,910
Accts., payable & accruals	724,448	670,252	704,845
Provision for income taxes	68,677	31,396	48,369
Total current liabilities	888,663	835,702	833,187
Debenture 5/8s, due 1986	7,303	7,333	7,567
Debenture 5/8s, due 1992	18,808	18,895	18,895
Debenture 5/8s, due 2004	75,000	75,000	75,000
5% guar. deb. due 1988	2,157	5,362	5,512
7 1/4% guar. deb. due 1983	2,750	4,750	5,180
Trust deed notes payable		1,750	2,100
Other long term oblig.	244,011	273,270	315,689
Total long term obligations	350,029	386,360	429,943
Deferred income taxes	460,374	349,431	280,369
Minority interest	9,891	11,160	11,434
4.40 cum. preference stk. II, ser. I	991	1,322	3,762
4.50 com. preference stock II, ser. 3	4,026	4,909	5,663
Common stock (par \$1.25)	41,571	40,012	37,015
Other capital	151,102	141,550	138,483
Translation adjustment	(1,044)	35,065	52,857
Retained earnings	1,221,000	1,080,134	956,409
Total stockholder's equity	1,417,646	1,303,192	1,194,189
Total	3,126,603	2,885,845	2,749,122
Net current assets	889,898	775,936	777,718
PROPERTY ACCT.—ANALYSIS			
Additions at cost	262,959	259,060	200,091
Retirements or sales	58,728	44,479	39,741
Adj. to current rate	77,870	47,181	137,455
Other additions	9,205	12,214	53,066

**BALANCE SHEETS (Cont'd):
DEPREC. RESERVE—ANALYSIS**

Additions chgd. to income	141,206	128,470	111,033
Retire. renewals chgd. to res.	39,974	35,733	30,996
Adj. to current rate	40,364	30,711	86,592
Other additions	561		12,602
Other reductions		5,183	

At lower of cost (generally first-in, first-out) or market, see general note (c) comprising in 1981: Finished products & work in process, \$521,045,000; raw materials and supplies, \$179,921,000; total, \$700,966,000.

1981 (\$000):	Book Values	Related Reserves
Property, etc.	50,594	45
Land	579,222	274,504
Buildings	1,470,098	850,057
Mchy. & equip.		

Total 2,099,914 1,097,606
Restated to conform with Financial Accounting Standards Board No. 43 and 52.

Represented by no par shares: 1981, 360,364; 1980, 553,503; 1979, 1,368,089.

Represented by no par shares: 1981, 1,464,002; 1980, 1,784,985; 1979, 2,039,105.

Principal changes follow:
1981-79: After crediting: 1981, \$3,252,000; 1980, \$262,000; 1979, \$2,244,000, excess of stated value or principal amount of senior securities converted over par value of common stock issued in conversion; 1981, \$6,300,000; 1980, \$2,805,000; 1979, \$1,454,000, excess of proceeds from sale over stated value of stocks sold under option plans.

After deducting shares in treasury: 1981, 679,928; 1980, 684,070; 1979, 692,792.

General Notes

(a) Consolidated financial statements include the accounts of the company and all significant subsidiaries. Investments in unconsolidated subsidiaries, which include a subsidiary engaged in insuring certain risks of the company, and associated companies are accounted for by the equity method.

(b) The percentage of completion method of accounting is used to estimate the sales value of performance under fixed-price and fixed-price incentive contracts. Sales under cost-reimbursement contracts are recorded as costs are incurred and include estimated costs. Fees based on cost or other incentives under certain contracts are included in sales at the time such amounts can be determined reasonably. Accounts receivable at December 31, 1981 and 1980 included \$267 million and \$227 million, respectively, related to long-term contracts and programs, of which \$117 million and \$126 million, respectively, were unbilled. Unbilled costs, fees, and claims represent revenue earned but not billable under terms of the related contracts. Substantially all of such amounts will be billed during the following year as units are delivered and accepted by the customers. Unbilled receivables subject to negotiation were approximately \$8 million and \$16 million at December 31, 1981 and 1980, respectively.

(c) Inventories are valued at the lower of cost or market. Cost is determined by the first-in, first-out (FIFO) method except for certain inventories in the United States for which the last-in, first-out (LIFO) method is used. At December 31, 1981 and 1980, approximately 38 percent and 34 percent, respectively, of total inventories were valued using the LIFO method. Had the cost of all inventories been determined by the FIFO method, reported inventories at December 31, 1981 and 1980, would have been greater by approximately \$230 million and \$196 million, respectively. Inventories include amounts applicable to long-term contracts and programs aggregating \$36 million in both years after deduction of progress payments of \$42 million and \$25 million at December 31, 1981 and 1980, respectively.

(d) Depreciation is computed for financial reporting purposes by the straight-line method for the majority of depreciable assets.

(e) Intangibles arising from acquisitions consummated prior to 1971 (approximately \$104 million) are not being amortized because, in the opinion of management, there is no present indication of diminished value. Intangibles arising from acquisitions in 1971 and thereafter are being amortized, as required by generally accepted accounting principles, by the straight-line method over a period not to exceed 40 years.

(f) The company maintains pension plans covering substantially all of its employees, including the majority of employees in foreign countries. Pension expense, which is accrued and funded, includes current costs and amortization of prior service liabilities over periods from 10 to 25 years.

(g) Deferred income taxes arise from timing differences between tax and financial reporting and principally relate to the income recognition on long-term contracts and depreciation methods. Deferred income taxes have not been provided on that portion of the undistributed earnings of certain subsidiaries, including the earnings prior to 1977 of a Domestic International Sales Corporation (DISC), considered to be reinvested indefinitely. Such undistributed earnings at December 31, 1981 and 1980, amounted to \$89 million and \$99 million, respectively, after reduction for the effects of foreign tax credits and other deductions.

Investment tax credit is treated as a reduction of income tax expense in the year realized for tax purposes (flow-through method).

(h) In compliance with recent pronouncements of the Financial Accounting Standards Board, the company in 1981 changed its method of accounting for vacation pay benefits and for the translation of foreign currency financial statements and accounting for hedging transactions. Financial statements for 1980 and 1979 have been restated to reflect these changes. The new method of accounting for vacation pay benefits requires a liability to be accrued for vacation pay benefits when earned rather than when paid. The new method of translating foreign currency financial statements requires all accounts denominated in foreign currencies to be translated at current exchange rates. Exchange gains and losses resulting from translation of foreign financial statements (except for hyper-inflationary countries such as Brazil and Argentina) and transactions of a hedging or investment nature are required to be deferred and reported as a separate component of shareholders' investment, rather than included in net earnings.

For 1981 the effect of these changes was to increase net earnings and fully diluted earnings per share by \$9.2 million and \$2.25, respectively. Net earnings and fully diluted earnings per share for 1980 and 1979 have been reduced by \$7.4 million and \$3.20, and \$6.2 million and \$1.17, respectively.

FINANCIAL & OPERATING DATA

Statistical Record

Earned per share—preferred	1981	1980	1979
—preference	\$125.43	\$87.46	\$54.99
—common (actual)	\$6.62	\$6.03	\$5.83
On average shares	\$6.60	\$6.15	\$5.86
Fully diluted shares	\$6.13	\$5.49	\$5.11
Dividends per share—4% preferred			\$2.00
—\$5 preference B			\$2.30
—\$4.25 preference A			\$2.30
—\$4.40 pref. II, series 1			\$4.40
—\$4.50 pref. II, series 3			\$4.50
—common	\$2.35	\$2.15	\$1.95
Price range—\$4.40 pref. II, series 1	143-108	134-78 1/2	90-73 1/2
—\$4.50 pref. II, series 3	121 1/2-92	113-65	79-63 1/2
—common	65 1/2-49	61 1/2-34 1/2	41 1/2-33 1/2
Times charges earned:			
Before income taxes	6.85	6.46	7.79
After income taxes	4.47	4.07	4.60
Times charges & pfd. pref. div. earned	3.96	3.47	3.53
Preference divs. times earned	2.88	3.56	4.01
Price range—			
—debenture 5 1/2%, 1986	65 3/4-64 3/4		82 1/2-76 1/2
—debenture 5 1/2%, 1992	61 1/2-49	60 1/2-52	71-67 1/2
—deb. 9 1/2%, 2000	65-55 1/4	77 1/2-62	89-84
9% notes, 1985	69 1/4-63 1/4		
Net tangible assets per sh.—preferred	88-80	96-78 1/2	99-88 1/2
—preference	\$777.06	\$357.28	\$348.45
—common	\$39.65	\$36.54	\$32.37
Net tang. assets \$1,000 long term debt	\$5,050	\$4,373	\$3,776
Net curr. assets \$1,000 long term debt	\$2,542	\$2,008	\$1,808
No. of shares—preferred			
—preference ser. A			
—preference ser. B			
—preference II ser. 1	360,364	553,505	1,368,089
—preference II ser. 3	1,464,002	1,784,988	2,059,105
—common (year end)	33,256,815	32,009,736	29,611,812
—common (aver.)	33,371,000	31,351,000	29,466,000
—common (fully diluted)	37,331,000	37,275,000	36,907,000
Financial & Operating Ratios			
Curr. assets ÷ curr. liabilities	2.00	1.93	1.93
% cash and securities to curr. assets	9.89	2.53	4.59
% inventory to curr. assets	39.41	45.58	46.13
% net curr. assets to net worth	62.78	59.54	65.13
% property depreciated	52.27	52.75	53.89
% ann. depr. & amor. to gross prop.	6.91	6.89	6.77
Capitalization:			
% Long term debt	22.28	22.87	26.47
% Preferred stock & pref.	0.32	0.38	0.58
% Common stock and surplus	89.92	76.75	72.95
Sales ÷ inventory	7.54	6.78	6.16
% sales to net property	6.76	6.55	6.62
% sales to total assets	527.30	536.97	566.22
% net income to total assets	169.04	172.70	163.88
% net income to net worth	7.32	7.09	6.85
Analysis of Operations			
%	16.14	15.69	15.78
Net sales	100.00	100.00	100.00
Cost of sales	75.20	75.12	75.29
Selling, general & admin. exp.	16.59	16.56	16.06

FINANCIAL & OPERATING DATA (Cont'd):

Balance	8.21	1980	1979
Other income	1.00	0.85	0.99
Total income	9.21	9.17	9.64
Interest and other deductions	1.91	1.58	1.85
Net income before income taxes	7.30	7.29	7.79
Income taxes	2.97	3.19	3.65
Net income	4.33	4.10	4.14

①Based on annual requirements of stock at end of year. ②On average shares as reported by Co.

LONG TERM DEBT

1. Thompson Ramo Wooldridge Inc. debenture 5 7/8s, due 1986:

Rating—A 1
 AUTHORIZED—\$25,000,000; outstanding, Dec. 31, 1981, \$7,303,000.
 DATED—July 1, 1961.
 MATURITY—July 1, 1986.
 INTEREST—7 1/2% at office of trustee.
 TRUSTEE—Citibank, N.A., NYC.
 DENOMINATION—Coupon, \$1,000; registrable as to principal; fully registered, \$1,000 and multiples thereof. C&R in the several denominations, interchangeable.
 CALLABLE—As a whole or in part at any time on at least 30 days' notice, to each June 30, incl., as follows:
 1980101.00 1981100.80 1982100.60
 1983100.40 1984100.20 1986100.00

Callable at 100 for sinking fund (which see).
 SINKING FUND—Cash (or debentures) to redeem at par following amounts of debentures each July 1: \$500,000, 1965-70; \$1,000,000, 1971-81; \$1,500,000, 1982-85; plus similar optional payments which may be credited against subsequent mandatory payments, with total credits not to exceed 20% of total authorized debentures. Payments estimated to retire 80% of issue by maturity.
 SECURITY—Not secured. Company or a consolidated subsidiary may not mortgage assets unless debentures are equally and ratably secured therewith, except for purchase money liens, liens arising out of judgments; title retention agreements; liens arising out of government contracts, etc.

ADDITIONAL FUNDED DEBT—May not be created (other than debt issued to and held by company or another consolidated subsidiary; certain types of obligations, including renewals and certain purchase money debt) unless tangible assets of company and consolidated subsidiaries, after deducting liabilities other than funded debt, would thereafter equal at least 200% of consolidated funded debt plus all preferred stock (at involuntary liquidation value) of consolidated subsidiaries not owned.

LEASE-BACK PROVISION—Indenture prohibits lease-back arrangements of principal manufacturing plants now owned by company or any consolidated subsidiary (with anyone other than company or a consolidated subsidiary) unless proceeds of sale are used to reduce debt.

DIVIDEND RESTRICTION—Company may not pay cash dividends or acquire stock in excess of consolidated net income after Dec. 31, 1960 plus \$12,500,000 and net proceeds of stock sold and debt converted into stock since that date.

RIGHTS ON DEFAULT—Trustee or majority of debentures may declare principal and interest due and payable (60 days' grace for payment of interest or sinking fund).

INDENTURE MODIFICATION—Indenture may be modified, except as provided, with consent of 66 2/3% of debentures.
 LISTED—On New York Stock Exchange.

2. TRW Inc. debenture 5 1/4s, due 1982:

Rating—A 1
 AUTH.—\$30,000,000; outstanding, Dec. 31, 1981, \$18,808,000.
 DATED—Apr. 1, 1967. DUE—Apr. 1, 1992.
 INTEREST—A&O1 by mail holders registered 15th day prior to interest date.
 TRUSTEE—Bank of America N.T.&S.A., Los Angeles.
 DENOMINATION—Fully registered, \$1,000 and authorized multiples thereof. Debs. are interchangeable.
 CALLABLE—As a whole or in part on at least 30 days' notice to each Mar. 31, incl., as follows:
 1983101.37 1984101.10 1985100.82
 1986100.55 1987100.27 1992100.00

Also callable for sinking fund (which see) at par.
 SINKING FUND—Annually, to retire debs. at par each Apr. 1, 1972-91, cash (or debs.) equal to \$2,000,000 debs. outstg. plus similar optional payments. Payments estimated to retire 80% of issue prior to maturity.
 SECURITY—Not secured. Co. or a consolidated subsidiary may not mortgage assets unless debs. are equally secured except for purchase money mortgages or liens, title retention agreements, liens arising out of government contracts, assumption of liens existing on property of acquired corp., refundings, renewals or extensions of the foregoing, etc.

ADDITIONAL FUNDED DEBT—See deb. 5 7/8s, due 1986.
 DIVIDEND RESTRICTION—Co. may not pay cash divs. on or acquire capital stock in excess of consolidated net income after Dec. 31, 1966 plus proceeds from sale of stock or debt converted to stock after such date and \$25,000,000.

RIGHTS ON DEFAULT—In event of default (60 days' grace period for payment of interest), trustee or majority of outstanding debentures may declare debentures due.

INDENTURE MODIFICATION—Indenture may be modified, except as provided, with consent of 66 2/3% of outstanding debentures.

PURPOSE—Proceeds to reduce domestic bank debt.

LISTED—On New York Stock Exchange.
 OFFERED—(\$50,000,000) at 100 (proceeds to Co., 99 1/2%) on Apr. 4, 1967 thru Smith, Barney & Co., Inc., NYC, and associates.

3. TRW Inc. debenture 8 1/8s, due 2004:

Rating—A 1
 AUTH.—\$75,000,000; outstg. Dec. 31, 1981, \$75,000,000.
 DATED—Jan. 15, 1974. DUE—Jan. 15, 2004.
 INTEREST—7 1/2% 15, in NYC or at Co.'s option by mail to holders registered J 30 & D 31.
 TRUSTEE—REGISTRAR—Cleveland Trust Co., O.
 DENOMINATION—Fully registered, \$1,000 and integral multiples thereof.
 CALLABLE—As a whole or in part at any time on at least 30 days' notice to each Jan. 14, as follows:
 1981106.175 1982105.850 1983105.525
 1984105.200 1985104.875 1986104.550
 1987104.225 1988103.900 1989103.575
 1990103.250 1991102.925 1992102.600
 1993102.275 1994101.950 1995101.625
 1996101.300 1997100.975 1998100.650
 1999100.325

and thereafter at 100. Not callable, however, prior to Jan. 15, 1984 thru refunding at interest cost less than 8 1/8% per annum. Also callable for sinking fund (which see) at 100.

SINKING FUND—Annually, each Jan. 15, 1983-2003, cash (or debs.) to redeem \$3,750,000 principal amount of debs., plus similar optional payments. Sinking fund designed to retire 95% of issue prior to maturity.
 SECURITY—OTHER PROVISIONS—Same as deb. 5 1/4s, due 1986.
 DIVIDEND RESTRICTIONS—Co. nor any consolidated subsidiary may pay cash divs. on or acquire stock since Dec. 31, 1973 in excess of \$90,000,000 plus consolidated net incomes since that date, plus net consideration from sale of stock of debt converted into stock since that date.

LISTED—On New York Stock Exchange.
 PURPOSE—Proceeds to be added to general funds.
 OFFERED—(\$75,000,000) at 100 (proceeds to Co., 99.125) on Jan. 10, 1974 thru Smith, Barney & Co., Inc. and Prescott, Ball & Turben and associates.

4. TRW Inc. debenture 9 7/8s, due 2000:

Rating—A 1
 AUTH.—\$50,000,000; outstg., Dec. 31, 1981, \$50,000,000.
 DATED—Apr. 15, 1975. DUE—Apr. 15, 2000.
 INTEREST—A&O 15, in NYC or at Co.'s option, by mail, to holders registered M31 & S30.
 TRUSTEE—Chase Manhattan Bank, N.A., NYC.
 DENOMINATION—Fully registered, \$1,000 and integral multiples thereof. Transferable and exchangeable without service charge.
 CALLABLE—As a whole or in part at any time on at least 30 days' notice (subject to the right of the registered holder on the record date for an interest payment to receive such interest), to each Apr. 14, as follows:
 1982105.60 1983105.20 1984104.80
 1985104.40 1986104.00 1987103.60
 1988103.20 1989102.80 1990102.40
 1991102.00 1992101.60 1993101.20
 1994100.80 1995100.40

thereafter at 100.
 Not callable, however, prior to Apr. 15, 1985 from proceeds of money borrowed or of any sale and leaseback transaction, at an interest cost or interest factor less than 10.12% per annum. Also callable for sinking fund (which see) at 100.

SINKING FUND—Annually, on Apr. 15, 1986-99, cash (or debs.) to retire \$3,000,000 principle amount of debs.; plus similar optional payments. Sinking fund designed to retire 84% of issue prior to maturity.
 SECURITY—Not secured. Co. nor any domestic subsidiary may incur any mortgage, security interest, pledge or lien upon any principal or upon any sha. of capital stock or indebtedness of any domestic subsidiary without providing that the debs. shall be secured equally and ratably by such mortgage, except for (i) mortgages on any principal property existing at the time of the acquisition thereof or securing the purchase price thereof or securing the cost of construction or improvement of a principal property provided that the mortgage shall not include any property theretofore owned by Co. except substantially unimproved real property; (ii) mortgages on

property of a corporation existing at the time such corporation becomes a domestic subsidiary or is merged or consolidated with Co. or a domestic subsidiary or at the time of a sale, lease or other disposition of the properties of such corporation (or a division thereof) as an entirety or substantially as an entirety to Co. or a domestic subsidiary; (iii) mortgages securing indebtedness of Co. or a domestic subsidiary to Co. or a wholly owned domestic subsidiary; (iv) mortgages in favor of the United States or any State or Territory or Possession thereof, or any department, agency, instrumentality or political subdivision of any such jurisdiction, to secure partial, progress, advance or other payments pursuant to any contract or statute for the purpose of financing all or part of the purchase price or the cost of constructing the property subject to such mortgages; (v) mortgages representing the extension, renewal or replacement (or successive extensions, renewals or replacements) of mortgages existing on the date of the indenture or mortgages referred to in the foregoing clauses (i) to (iv); and (vi) mortgages imposed by law, created by legal proceedings, arising from governmental charges not yet due or delinquent and similar mortgages.

SALE & LEASEBACKS—Sale and leaseback transactions by Co. or any domestic subsidiary (except for transactions involving temporary leases for a term of 3 yrs. or less and except for transactions among themselves) of any principal property will be prohibited unless the sale is for an amount at least equal to its fair value and either (a) Co. or such domestic subsidiary would be entitled, pursuant to clauses (i) through (vi) of the foregoing Security covenant, to create or assume any mortgage on the principal property to be leased without equally and ratably securing the debs. or (b) Co. applies an amount equal to the net proceeds of the sale to the redemption of the debs. or other consolidated funded debt of Co. ranking prior to or on a parity with the debs. (or, in lieu of such redemption, delivers debs. to the trustee for cancellation).

CREATION OF ADDITIONAL DEBT—The indenture will prohibit Co. or any consolidated subsidiary from creating, guaranteeing or assuming any additional funded debt, other than funded debt issued to and held by Co. or another wholly-owned consolidated subsidiary, unless consolidated net tangible assets would thereafter be at least 200% of the sum of (a) outstg. consolidated funded debt, and (b) all paid stock (at the amount payable on involuntary liquidation) of consolidated subsidiaries not owned by Co. or a consolidated subsidiary. This restriction provides an exception for extensions, renewals and refundings of funded debt.

Notwithstanding the limitations on mortgages, sale and leaseback transactions and issuance of stock, Co. or any domestic subsidiary will be permitted to create or assume mortgages or to enter into sale and leaseback transactions and domestic subsidiaries will be permitted to issue or sell pfd. stock and will be permitted to issue, assume or guarantee funded debt provided that at the time of such event, and after giving effect thereto, the sum of outstg. indebtedness incurred after the date of the indenture and secured by such mortgages plus the attributable debt in respect of such sale and leaseback transactions plus the involuntary liquidation value of such pfd. stock and the principal amount of such outstg. funded debt of domestic subsidiaries issued or incurred after the date of the indenture will not exceed 5% of the consolidated shareholders' investment.

DIVIDEND RESTRICTIONS—Co. may not pay any div. or make any distribution on its stock of any class (other than in stock of Co.) or make, or permit any consolidated subsidiary to make, any payment (other than in stock of Co.) for the purchase, redemption or retirement of stock of Co. if, after giving effect thereto, the total of all such divs. and payments since Dec. 31, 1974 would exceed \$100,000,000 plus consolidated net income since that date, plus the net consideration received by Co. from the issue or sale of stock of Co. (whether for cash or property) and the aggregate principal amount of debt converted into stock since that date. The foregoing restriction will not apply to (a) divs. or sinking fund payments in respect of pfd. or pref. stock; (b) redemption or retirements of shares by exchange for, or out of the proceeds of the substantially concurrent sale of, other sha.; (c) the purchase of sha. with moneys accumulated for such purpose pursuant to certain employee benefit plans; or (d) the conversion of sha. of any class into sha. of any other class. Any payment under clause (a) shall be included in the foregoing calculations and any purchase, retirement, redemption, or conversion under

clauses (b) through (d) shall be excluded from the foregoing calculations.

INDENTURE MODIFICATION—Indenture may be modified, except as provided, with consent of 66 2/3% of debts, outstg.

LISTED—On New York Stock Exchange.

PURPOSE—Proceeds to repay borrowings from domestic banks under revolving credit agreements incurred for general corporate purposes including capital and to repay Co.'s additional working capital and to repay Co.'s \$50,000,000 of 8 1/2% notes, due 1975.

OFFERED—(\$50,000,000) at 97.750 (proceeds to Co., 98.875) on Apr. 9, 1975 thru Smith, Barney & Co., Inc. and associates.

5. TRW Inc. 9% notes due 1985:

Rating—A 1
AUTH.—\$50,000,000; outstg., Dec. 31, 1981, \$50,000,000.

DATED—Apr. 15, 1975. **DUE**—Apr. 15, 1985.

INTEREST—A&O 15, in NYC or at Co.'s option, by mail, to holders registered M31 & S30.

TRUSTEE—Chase Manhattan Bank, N.A., NYC.

DENOMINATION—Fully registered, \$1,000 and integral multiples thereof. Transferable and exchangeable without service charge.

CALLABLE—As a whole or in part at any time on or after Apr. 15, 1982 on at least 30 days' notice (subject to the right of the registered holder on the record date for an interest payment to receive such interest), at 100, plus accrued interest.

SINKING FUND—None.

SECURITY—OTHER. **PROVISIONS**—Same as deb. 97 1/8, due 2000.

LISTED—On New York Stock Exchange.

PURPOSE—Proceeds to repay borrowings from domestic banks under revolving credit agreements incurred for general corporate purposes including capital expenditures and additional working capital and to repay Co.'s \$50,000,000 of 8 1/2% notes, due 1975.

OFFERED—(\$50,000,000) at 99.375 (proceeds to Co., 98.675) on Apr. 9, 1975 thru Smith, Barney & Co., Inc. and associates.

6. TRW International Finance Corp. guaranteed convertible debenture 5s, due 1988:

OUTSTANDING—Dec. 31, 1981, \$2,157,000.

Unconditionally guaranteed by TRW Inc. Sold outside U.S.A. For description, see appended statement.

7. TRW International Finance Corp. guaranteed bearer bonds 7 1/8, due 1984:

OUTSTANDING—Dec. 31, 1981, \$10,109,000.

Unconditionally guaranteed by TRW Inc. Sold outside U.S.A.

8. TRW Overseas Capital N.V. guaranteed debenture 7 1/8, due 1982:

OUTSTANDING—Dec. 31, 1981, \$4,605,000.

Unconditionally guaranteed by company. Sold outside U.S.A. For description, see alphabetical index.

9. TRW Overseas Finance N.V. guaranteed debenture 8 1/8, due 1986:

OUTSTANDING—Dec. 31, 1981, \$8,760,000.

Unconditionally guaranteed by TRW Inc. Sold outside U.S.A. For description, see TRW Overseas Finance N.V. (alphabetical index).

10. Other Long-Term Debt: Outstanding Dec. 31, 1981, \$21,627,000 comprised:

(1) \$53,525,000 notes payable to banks are primarily from international sources most of which bear interest at 8.5% to 20.4% and mature at various dates through 1988.

(2) \$38,042,000 other long-term debt.

Company has established short-term credit lines with a number of United States and overseas banks aggregating approximately \$233 million. At Dec. 31, 1981, current notes payable include \$72 million borrowed under these credit facilities.

11. Long-Term Lease Obligations: Outstanding, Dec. 31, 1981, \$54,882,000 capital lease obligations under noncancelable leases.

Dividend Restrictions: The indentures and other long-term loan agreements impose limitations on the payment of dividends. Under the most restrictive interpretation of these

limiting covenants, retained earnings of approximately \$540,000,000 were unrestricted at Dec. 31, 1981.

CAPITAL STOCK

1. TRW Inc. \$4.40 cumulative convertible serial preference II, Series I; no par:

AUTH.—All series, 5,998,968 shs., outstg., Dec. 31, 1981, 360,364 shs.; no par (stated value \$100).

PREFERENCES—Has equal preference with other serial pref. as to assets and divs.

DIVIDEND RIGHTS—Entitled to cum. cash divs. of \$4.40 annually, payable quarterly, Mar. 15, etc.

DIVIDEND RECORD—Initial dividend of 30 cents paid Mar. 15, 1968; regular quarterly dividends paid thereafter.

LIQUIDATION RIGHTS—In liquidation, entitled to \$104 a sh. plus divs., if involuntary; if voluntary, \$112 a sh. prior to Mar. 15, 1974; thereafter, redemption price.

VOTING RIGHTS—Has one vote per sh. with cumulative voting for directors, except if divs. are in arrears for 6 quarterly payments then pref. voting separately as a class may elect 3 directors.

Consent of 66 2/3% of pref. needed to (1) change terms adversely, (2) issue prior stock, or (3) purchase or redeem less than all serial pref. II, except for a stock purchase offer made to all holders of serial pref. II, when any divs. or sinking fund requirements are in arrears.

Consent of majority of pref. need to (1) sell, lease or convey all or substantially all property or business, or to consolidate or merge, and (2) issue parity stock or increase authorized amount of pref.

CALLABLE—As a whole or in part at any time at \$104.

CONVERTIBLE—Into com. at any time (if called, on or before redemption date) at rate of 2.2 \$1.25 par com. shs. for each pref. sh. No adjustment for divs. Cash paid in lieu of fractional shs. Conversion privilege protected against dilution.

TRANSFER AGENTS—None.

TRANSFER AGENTS—Morgan Guaranty Trust Co., NYC and Company office.

REGISTRARS—Madison City Bank, Cleveland; Chase Manhattan Bk. (N.A.), NYC; and Bradford Trust Co., NYC.

PURPOSE—Issued in Feb. 1968 on basis of 1/2 pref. II share for each United-Carr Inc. common share and 1/4 pref. II share (and 1/4 common share) for each IRC, Inc. common share in connection with mergers.

LISTED—On NYSE (Symbol: TRW PrB).

2. TRW Inc. \$4.50 cumulative convertible serial preference II, Ser. 3; no par:

AUTH.—All series, 5,000,000 shs., outstg., Dec. 31, 1981, 1,464,002 shs., no par.

PREFERENCES—Has equal preference with \$4.40 cum. conv. serial pref., ser. 1, as to assets and divs.

DIVIDEND RIGHTS—Entitled to cum. cash divs. of \$4.50 annually, payable quarterly, Mar. 15, etc.

DIVIDEND RECORD—Initial dividend of \$1.07556 per share paid Dec. 15, 1968; regular quarterly dividends paid thereafter.

LIQUIDATION RIGHTS—In liquidation, entitled to \$40 a sh. if involuntary; if voluntary, redemption price; plus divs.

VOTING RIGHTS—Same as \$4.40 cum. conv. serial pref., ser. 1.

CALLABLE—As a whole or in part on or after Jan. 1, 1976 on at least 30 days' notice to each Dec. 31, incl., as follows (per sh., plus divs.): 1976, \$105.00; 1977, 104.50; 1978, 104.00; 1979, 103.50; 1980, 103.00; 1981, 102.50; 1982, 102.00; 1983, 101.50; 1984, 101.00; 1985, 100.50; thereafter \$100.00.

CONVERTIBLE—Into com. at any time (if called, on or before redemption date) at rate of 1.862 cum. shs. for each pref. sh. Cash paid in lieu of fractional shs. No adjustment for divs. Conversion privilege protected against dilution.

PREEMPTIVE RIGHTS—None.

TRANSFER AGENTS—Morgan Guaranty Trust Co., NYC and Company office.

REGISTRARS—National City Bank, Cleveland; Chase Manhattan Bk., (N.A.), NYC and Bradford Trust Co., NYC.

PURPOSE—Issued in connection with merger of Co. and United-Greenfield Corp.

LISTED—On NYSE (Symbol: TRW PrD).

3. TRW Inc. common stock, par \$1.25:

AUTHORIZED—50,000,000 shares; outstanding, Dec. 31, 1981, 33,256,815 shares; in treasury, 679,928 shares; reserved for options and conversion of preference shares and 5% guaranteed debentures, approx. 5,900,000 shares; par \$1.25.

Par changed from no par to \$5 May 1, 1950, by 6-for-5 split; \$5 par shares split 2-for-1 Nov. 1, 1950 and Oct. 21, 1954; change from \$5 to \$2.50 Dec. 17, 1964 by 2-for-1 split; to \$1.25 by 2-for-1 split May 1, 1968.

Dividend Record (in \$)
 (Old \$100 par shares)

1917 6.00 1918 10.00 1919-20 12.00
 1921-25 Nil [1]1926 12.00 [1]1927 6.00
 (Class A and class B shares after issuance of 8 class A shares and 2 class B shares for each)

(\$100 par share)
 1927 0.40 1928 1.60 1929 2.00
 (No par shares)

1930 2.40 1931 1.50 1932 0.30
 1933-35 Nil 1936 1.50 1937 1.70
 1938 0.25 1939 1.00 1940 1.75
 1941 2.50 1942-43 1.50 1944-47 2.00
 1948 3.75 1949 3.00 1950 0.50

(\$5 par shares)
 1950 1.50
 (\$5 par shares after 2-for-1 split in 1950)

1950 0.50 [1]1951-53 2.00 1954 1.50
 (\$5 par shares after 2-for-1 split in 1954)

1954 0.35 1955-62 1.40 [1]1963 1.45
 1964 1.80
 (\$2.50 par shares)

1965 1.20 1966 1.40 1967 1.60
 1968 0.80
 (\$1.25 par shares)

1968 0.50 1969 1.00 1970 1.05
 1971 1.00 1972 1.01 1973 1.06
 1974 1.12 1975 1.20 1976 1.35
 1977 1.55 1978 1.75 1979 1.95
 1980 2.15 1981 2.35 [1]1982 1.25

[1]Plus 25% in stock.
 [2]Paid prior to capital change.
 [3]Also 10% in stock in 1953 and 1963.
 [4]To June 15.

Dividends payable quarterly, Mar. 15, etc., to stock of record about Feb. 12, etc.

DIVIDEND REINVESTMENT PLAN—TRW offers holders of its common and preference stock the opportunity to buy additional shares of common stock through its Automatic Dividend Reinvestment Service. Under the service, the full dividend plus any optional monthly cash payments (which must be limited to amounts from \$10 to \$1,000 per month) will be applied to the purchase of TRW common stock in the open market at the prevailing market price. The service is administered by Citibank, N.A., N.Y. Cost of the service consists of the brokerage commissions. TRW pays the Bank service charge.

DIVIDEND RESTRICTIONS—See preference and long term debt above.

VOTING RIGHTS—One vote per share, with cumulative voting for directors permitted. Also, see both preferences.

PREEMPTIVE RIGHTS—Has preemptive rights.

TRANSFER AGENTS—Morgan Guaranty Trust Co., New York and Company office.

REGISTRARS—Chase Manhattan Bank, Bradford Trust Co., New York, New York, and National City Bank, Cleveland.

DIVIDEND DISBURSING AGENT—TRW Inc.

LISTED—On NYSE (Symbol: TRW); also listed on Midwest, Philadelphia, Pacific Stock Exchanges, stock exchange of Great Britain and Ireland and Frankfurt Stock Exchange; unlisted trading on Boston Stock Exchange.

TRW INTERNATIONAL FINANCE CORP.

(Controlled by TRW Inc.)

Executive Office: Wilmington, Del.

Long Term Debt: 1. TRW International Finance Corp.; 5% guaranteed convertible debentures, due 1988:

AUTH.—\$10,000,000; outstg., Dec. 31, 1981, \$2,157,000.

DATED—Feb. 1, 1968. **DUE**—Feb. 1, 1988.

INTEREST—Annually, each Feb. 1. Principal and interest payable in U.S. dollars (a) at corporate trust office of Morgan Guaranty Trust Co. in NYC, or (b) subject to applicable laws in the country of the following offices, at offices of Morgan Guaranty Trust Co. in Brussels, Frankfurt, London and Paris; Banca Vonwiller S.p.A. in Milan; office of Mees and Hope in Amsterdam; and Kredietbank S.A. Luxembourg in Luxembourg. Payments referred to in (b) above will be made by check drawn on a U.S. dollar account, or by transfer to a U.S. dollar account maintained by payee, with a bank in NYC.

TRUSTEE—Morgan Guaranty Trust Co., NYC.

DENOMINATION—Bearer coupon, \$1,000.

CALLABLE—As a whole or in part on or after Feb. 1, 1971 on at least 30 days' notice to each Jan. 31, incl., as follows:

1981 101 1/4 1982 101 1/4 1983 101 1/4
 1984 101 1985 100 3/4 1986 100 3/4
 1987 100 1/4 1988 100

If, at any time on or after Feb. 1, 1971, Co. or Guarantor shall become obligated to pay additional interest as described under heading, "Taxes on Principal, Premium or Interest" as a result of any change in, or amendment to, the laws of the U.S. or any subdivision or taxing authority thereof affecting taxation, or change in, or amendment to, the laws of the U.S. or any subdivision or taxing authority thereof affecting taxation, or change in, execution of, or amendment to any treaty or treaties to which the U.S. is a party, which change, execution or amendment becomes effective af-

History: Incorporated in Delaware on Jan. 17, 1968 as a wholly-owned subsidiary of TRW Inc.

Business: Co. was formed for the principal purpose of assisting in the financing of parent Co.'s international operations.

Control: TRW Inc. (see preceding statement) owns all outstg. com. stock.

Officers

C.R. Allen, President
 A.J. Kelley, Vice-President
 R.B. Perkovic, Vice-Pres. & Treas.
 C.T. Harvie, Secretary
 D.M. Steuert, Asst. Sec. & Asst. Treas.
 J.M. Schmidt, Asst. Sec.

Directors

C.R. Allen
 A.J. Kelley
 C.T. Harvie
 M.A. Coyle
 R.B. Perkovic

Auditors: Ernst & Whinney.