



Universal Circuits, Inc.

Pierre Bourquin, manager of international finance of Universal Circuits, was troubled by problems confronting the Irish subsidiary. The strong U.S. dollar had contributed to excellent profitability for the plant located near Limerick, but today's good news could be tomorrow's problem. The controller of the Irish plant estimated that the profit margin was highly vulnerable to any weakening of the dollar against the Irish punt. A telex had been received from the controller pointing out the severity of the risk and urging that he be allowed to buy the punt forward to protect his 1985 budgeted profit. He felt certain that the huge American trade deficits, running at an annual rate in excess of \$100 billion, would crater the dollar.

Bourquin felt caught in the middle. There was no question that the Irish operation was exposed, but the pessimism about the dollar was far from shared. Universal Circuits's chief financial officer, Joe Merrill, had recently pointed out that the dollar was in the middle of its twenty-year range (see **Exhibit 1**). "Anyone who can forecast which way it is going to move shouldn't bother being in the manufacturing business; he could make a fortune speculating on currencies." Speculation was of no interest to senior management.

Company Background

Universal Circuits, Inc., is a leading supplier of components for the measurement and control industry. The function of a computerized measurement and control system is to acquire physical information from the real world, to measure this information, and then to control the physical process. The physical information to be measured can be temperature, pressure, light, weight, velocity, thickness, density, etc. Applications include medical instruments, such as blood analyzers and CAT scanners, industrial automation systems, process controls, environmental controls, instruments for energy conservation, pollution control, cancer research, oil exploration, radar systems for missile detection, aircraft navigation systems, and fire control systems.

Universal Circuits's products are sold through an extensive field sales force. The company's U.S. sales organization consists of approximately 170 sales engineers and sales managers, and 37 manufacturers' representatives. Outside the United States, Universal Circuits maintains wholly owned sales subsidiaries in eleven countries, with approximately 120 sales engineers and sales managers. In addition, the company is represented by independent sales representatives in seventeen other countries. Foreign sales account for 40% of total sales.

This case was prepared as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

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Universal Circuits has many competitors within each of its industry segments. Some offer a broad range of other electronic products, and some have substantially larger financial resources. The principal competitors are U.S.-based companies that supply their worldwide operations almost entirely from U.S. plants. Several Japanese manufacturers including Fujitsu, Hitachi, Toshiba, Matsushita, and NEC have introduced products that compete at least marginally with Universal Circuits. However, competition from Japanese products is not significant.

Relative competitive strength is dependent upon technical innovation, quality, and reliability; product availability; technical service and support, and range of products. While price is the most important competitive factor when all other considerations are equal, and price reductions frequently accompany improvements in manufacturing technique, users are willing to pay a higher price for superior performance and reliability.

In general, Universal Circuits uses standard supplies and materials in the manufacture of its products. Most of the raw materials and components are generally available from a number of suppliers in the United States and Europe. Approximately 25% of Universal Circuits's manufacturing is conducted in Ireland, the United Kingdom, the Philippines, and Japan. Ireland is by far the largest of the offshore facilities.

Management's goals include annual sales growth of 25 to 35%, nearly twice the growth rate of the broad markets served. The growth is largely self-financed, based on a target return on capital of 19%, a willingness to use debt, and a policy of paying no cash dividend.

Universal Circuits's record since 1978 had been outstanding. Sales had more than tripled to \$214 million in fiscal 1983 as the company pursued its goal of increased market share. Net income quadrupled to \$18.4 million, and the share price increased tenfold (see **Exhibit 2, 3, and 4** for financial information). This strong performance made equity sales possible at attractive prices. A \$37 million issue in 1983 was placed at a price of \$35¹/₂ per share.

The Irish Operation

Several factors prompted Universal Circuits to establish operations in Ireland in 1976. First, the Irish Development Authority provided a capital grant and very attractive tax inducements and authorized full repatriation of profits. Manufacturing profits would be taxed at an effective rate of 0% until 1990 and at a 10% rate thereafter. The low rate resulted from the special treatment of profits on goods that provided Ireland with export earnings. Second, location within the EEC would save the 17% duty on all sales within the EEC. This would be only partially offset by a 4.2% tariff on goods shipped from the plant to the United States. Third, a well-educated, young population would provide a technically skilled work force.

To facilitate intercompany funds transfers, the Irish operation was established as a branch of a Dutch holding company, UCNV Netherlands. Had it been established as a separate legal entity, all remittances to the Dutch holding company would have been subjected to Irish withholding taxes. The manufacturing profits of the Irish branch would not be taxed in the Netherlands as they had already been subjected to taxation in Ireland. All dividends paid to the U.S. parent would be taxed at the full U.S. tax rate. Alternatively, funds could be invested by the Dutch holding company in other operations outside of the United States, although this could result in a currency exposure.

The Irish branch was a fully integrated research and manufacturing operation, responsible for the design, development, and manufacturing of all computer measurement and control system products for sale by Universal Circuits throughout the world. Labor and locally sourced supplies accounted for 30% of direct cost of sales; raw materials and supplies, most of which were sourced

from the United States and Europe, accounted for the balance (see **Exhibit 5**). Operating and other expenses were incurred virtually entirely in Irish punt.

The plant's output was exported to Universal Circuits's foreign sales affiliates, the U.S. sales force, and the independent manufacturers' representatives. Transfer prices were based on the U.S. dollar price list, with some modification to meet competitive pressures. All sales were invoiced in U.S. dollars, with payment made in zero to ninety days. On average, the affiliates paid the Irish branch in fifty-five days.

Operations in Ireland were profitable. In fiscal year 1984, both the pretax return on assets and the pretax contribution margin were above the targets set for all Universal Circuits's divisions (see **Exhibit 5**). These performance evaluations measures, along with all budgets, were made in U.S. dollars, the functional currency of the branch.

The Sales Affiliates

In addition to its U.S. sales force, Universal Circuits had wholly owned sales affiliates, established as separate legal entities, in Great Britain, France, West Germany, Belgium, Denmark, the Netherlands, Sweden, Italy, Japan, Israel, and Switzerland. The company was also represented by independent sales representatives in seventeen other countries. The sales affiliates reported to the vice president of sales and were evaluated on the basis of (1) sales growth, measured in U.S. dollars, and in the local currency; (2) return on assets; (3) change in market share; (4) direct contribution margin; and (5) growth of operating profits. The measures were calculated before interest and before currency gains and losses.

Customers often asked for quotes several weeks prior to committing to purchase. Quotes were made in the local currency, based on the standard U.S. transfer price plus shipping costs from the United States plus the duty on goods imported from the United States plus the target sales mark-up to cover local cost of doing business in the various countries. The local currency quote was based on the spot rate with the provision that the final price would be based on the spot rate at the time of shipment to the customer. Thus, Universal Circuits was theoretically insulated from any change in the local currency/U.S. dollar exchange rate between the quotation date and the date of shipment. (See **Exhibit 6** for a portrayal of the flow of goods from manufacturing to the customer.)

In fact, Universal Circuits's recent experience indicated that local currency prices could be increased on 60 to 90% of foreign sales, to offset a weakening of the local currency after the initial quotation. Approximately 10 to 20% of foreign sales were made on long-term contracts at fixed local currency prices. Another 10 to 20% were priced in U.S. dollars.

Customers were invoiced in the local currency, with credit terms based on local regulations and competitive patterns. Collection periods in the various countries ranged from 28 days to 100 days. (See **Exhibit 7** for the financial statements of a typical sales affiliate).

The International Finance Function

The organization of the international finance function reflected Universal Circuits's strong commitment to decentralization. The markets served by each of the divisions were characterized by rapid technological advances. The company's growth was driven by a continuing flow of new products. It seemed essential to maintain a strong entrepreneurial mentality at the divisions by granting them full managerial responsibility.

However, some members of senior management felt that responsibility for exchange rate exposure should be centralized. "We want manufacturing to focus on operations and sales to work on pricing and sales margins, rather than mess around with currencies," stated the chief financial officer. "It's treasury's responsibility to manage the financial structure and the net consolidated currency exposure."

Pierre Bourquin was confident that no one at Universal Circuits focused on the balance sheet account for currency gains and losses. "Our focus is on economic exposure. . . . We're not going to worry about what we think are accounting fictions. . . . In terms of profit and loss exposure, we take a one-month time horizon, estimate the exposure, and then decide whether to hedge based on trends in the market for the currency and current market inputs. . . . Management of exposure is clearly our responsibility but it requires the active participation and cooperation of the controllers at the sales affiliates who report to their local managers and on a dotted line to the controller of corporate sales." (See **Exhibit 8**.)

The treasurer of Universal Circuits, Jon Kriesler, supported the policy of selective hedging. "We review regularly our exposure position, hedging exposure and market conditions with the belief that we can do a little better in terms of long-run economic value by actively managing the exchange rate exposure."

But what should be done about the telex from the controller of the Irish operation?

Exhibit 1 Information on Selected Countries

	1977	1978	1979	1980	1981	1982	1983	1984.II
France								
Consumer prices	73	79	88	100	113	127	139	149
Industrial prices	78	81	92	100	111	123	137	155
Money supply	75	84	94	100	116	129	145	
Gross domestic product ^a	92	96	99	100	100	102	103	
Trade balance ^b	(3.3)	.1	(3.2)	(13.4)	(10.0)	(15.8)	(8.1)	
Government (deficit) ^c	(14)	(17)	(3)	0	(33)	(84)	(159)	
Government bond yields	9.6	9.0	9.5	13.0	15.7	15.6	13.6	13.0
FF/\$ (end of period)	4.7	4.2	4.0	4.5	5.7	6.7	8.3	8.5
Japan								
Consumer prices	86	89	93	100	105	108	110	112
Wholesale prices	81	79	85	100	101	103	101	100
Money supply	87	99	102	100	110	116	116	118
Gross domestic product ^a	86	91	95	100	104	107	111	
Trade balance ^b	17	26	2	2	20	18	31	
Government bond yields	7.3	6.1	7.7	9.2	8.7	8.1	7.4	6.6
¥/\$ (end of period)	240	195	240	203	220	235	232	238
United Kingdom								
Consumer prices	69	75	85	100	112	122	127	133
Manufacturing prices	72	79	88	100	110	118	125	132
Money supply	76	89	97	100	117	131	147	153
Gross domestic product ^a	96	100	102	100	99	101	104	
Trade balance ^b	(4)	(3)	(7)	4	8	4	(1)	
Government (deficit) ^c	(4)	(8)	(10)	(11)	(10)	(8)	(14)	
Government bond yields	12.7	12.5	13.0	13.8	14.7	12.9	10.8	11.2
£/\$ (end of period)	.52	.49	.45	.42	.52	.62	.69	.74
United States								
Consumer prices	74	79	88	100	110	117	121	126
Industrial prices	71	76	86	100	111	114	115	118
Money supply	81	88	94	100	107	115	127	132
Gross domestic product ^a	93	98	100	100	102	100	104	
Trade balance ^b	(31)	(34)	(28)	(26)	(28)	(36)	(61)	
Government (deficit) ^c	(51)	(44)	(28)	(69)	(73)	(131)	(190)	
Government bond yields	7.7	8.5	9.3	11.4	13.7	12.9	11.3	13.5
West Germany								
Consumer prices	89	91	95	100	106	112	116	119
Industrial prices	88	89	93	100	108	114	116	119
Money supply	82	93	96	100	99	106	114	114
Gross domestic product ^a	91	94	98	100	100	99	100	
Trade balance ^b	20	25	17	9	17	25	22	
Government (deficit) ^c	(22)	(26)	(26)	(29)	(40)	(36)	(31)	
Government bond yields	6.2	5.8	7.4	8.5	10.4	9.0	7.9	8.1
DM/\$ (end of period)	2.1	1.8	1.7	2.0	2.3	2.4	2.7	2.8

^aGross domestic product in 1980 prices^bTrade balance in billions of U.S. dollars^cGovernment surplus (deficit) in billions of local currency

Exhibit 1 Information on Selected Countries (Continued)

Relative Industrial Prices	1960	1970	1980	1984	
U.S.A. ÷ France	100	88	98	73	
U.S.A. ÷ Ireland	100	80	53	41	
U.S.A. ÷ Japan	100	102	121	139	
U.S.A. ÷ United Kingdom	100	86	59	51	
U.S.A. ÷ West Germany	100	102	151	147	

Exchange Rates	1960	1970	1980	1984	Range 1960–1980
French franc/dollar	4.90	5.52	4.52	8.50	4.02–5.56
Irish punt/dollar	.36	.42	.53	1.01	.36–.53
Japanese yen/dollar	360	358	203	238	195–362
British pound/dollar	.36	.42	.30	.74	.36–.59
Deutsche mark/dollar	4.17	3.65	1.96	2.85	1.73–4.17

Exhibit 2 Selected Financial Information

	1978	1979	1980	1981	1982	1983
Sales (millions)	\$66	\$100	\$136	\$156	\$174	\$214
Net income (millions)	4.5	7.0	9.3	4.6	9.9	18.4
% of sales	6.8%	7.1%	7.0%	2.9%	5.7%	8.6%
Earnings per share	.32	.47	.59	.27	.55	.97
Dividends per share	0	0	0	0	0	0
Book value per share	1.72	2.23	3.05	4.02	4.69	7.79
Share price—high	4 ¹ / ₂	8 ¹ / ₂	16 ¹ / ₂	15 ³ / ₈	19 ³ / ₄	41 ³ / ₄
—low	2 ¹ / ₄	3 ¹ / ₄	6 ¹ / ₂	8 ³ / ₈	8 ³ / ₄	17 ¹ / ₂
Price/earnings ratio	7–14	7–18	11–28	31–57	16–36	18–43
Return on assets	9%	10%	9%	3%	6%	9%
Return on capital	14	15	15	8	10	13
Return on equity	21	25	23	8	13	16
Long-term debt % capital	38%	45%	51%	42%	37%	15%
EBIT ÷ interest	5X	5X	3X	3X	3X	6X
Shares outstanding (millions)	13.2	15.0	15.8	17.2	18.0	19.0

Note: The data in the case have been disguised.

Exhibit 3 Consolidated Statement of Income [Year Ended October 30 (\$ in millions)]

	1981	1982	1983
Sales	\$156	\$174	\$214
Cost of sales	<u>81</u>	<u>84</u>	<u>99</u>
Gross margin	75	90	115
Research, development, and engineering	12	15	20
Marketing	9	10	11
Selling	23	26	32
General and administrative	14	16	20
Interest expense	10	8	5
Other	<u>1</u>	<u>1</u>	<u>0</u>
Income before taxes	6.7	14.5	27.1
Provision income taxes ^a	2.2	4.6	8.7
Net income	\$4.6	\$9.9	\$18.4

^aThe company's practice is to reinvest the earnings of its international subsidiaries in those operations, and repatriation of such earnings occurs only when it is advantageous to do so. Applicable taxes are provided only on amounts planned to be remitted. Accordingly, no income taxes have been provided for approximately \$20 million of unremitted earnings of international subsidiaries, principally the company's Irish operation.

For tax purposes, the company has available approximately \$2.4 million of foreign tax credit carry-forwards expiring in 1984 and 1988.

Note: The data in the case have been disguised.

Exhibit 4 Consolidated Balance Sheet

	1982	1983
ASSETS		
Cash	\$ 1	\$ 24
Accounts receivable	34	42
Inventories	47	56
Other	<u>5</u>	<u>6</u>
Total current	87	128
Net property, plant, and equipment	61	70
Investments	8	15
Other	<u>7</u>	<u>10</u>
Total assets	<u>\$163</u>	<u>\$223</u>
LIABILITIES AND EQUITY		
Short-term borrowings	\$ 1	\$ 2
Obligations under capital leases	1	2
Accounts payable	11	15
Income taxes payable	1	8
Accrued liabilities	<u>9</u>	<u>11</u>
Total current	23	38
Long-term debt	48	23
Obligations under capital leases	4	5
Deferred income taxes	4	5
Common equity	86	154
Cumulative translation adjustment	<u>(2)</u>	<u>(2)</u>
Total	<u>\$163</u>	<u>\$223</u>

Notes:

1. The consolidated financial statements included the accounts of the company and all its subsidiaries.
2. In the first quarter of 1982, the company adopted Statement of Financial Accounting Standards No. 52, "Foreign Currency Translation."
3. At year end 1983, foreign currency debt totaled \$13.7 million and was comprised almost entirely of yen, French franc and deutsche mark borrowings.

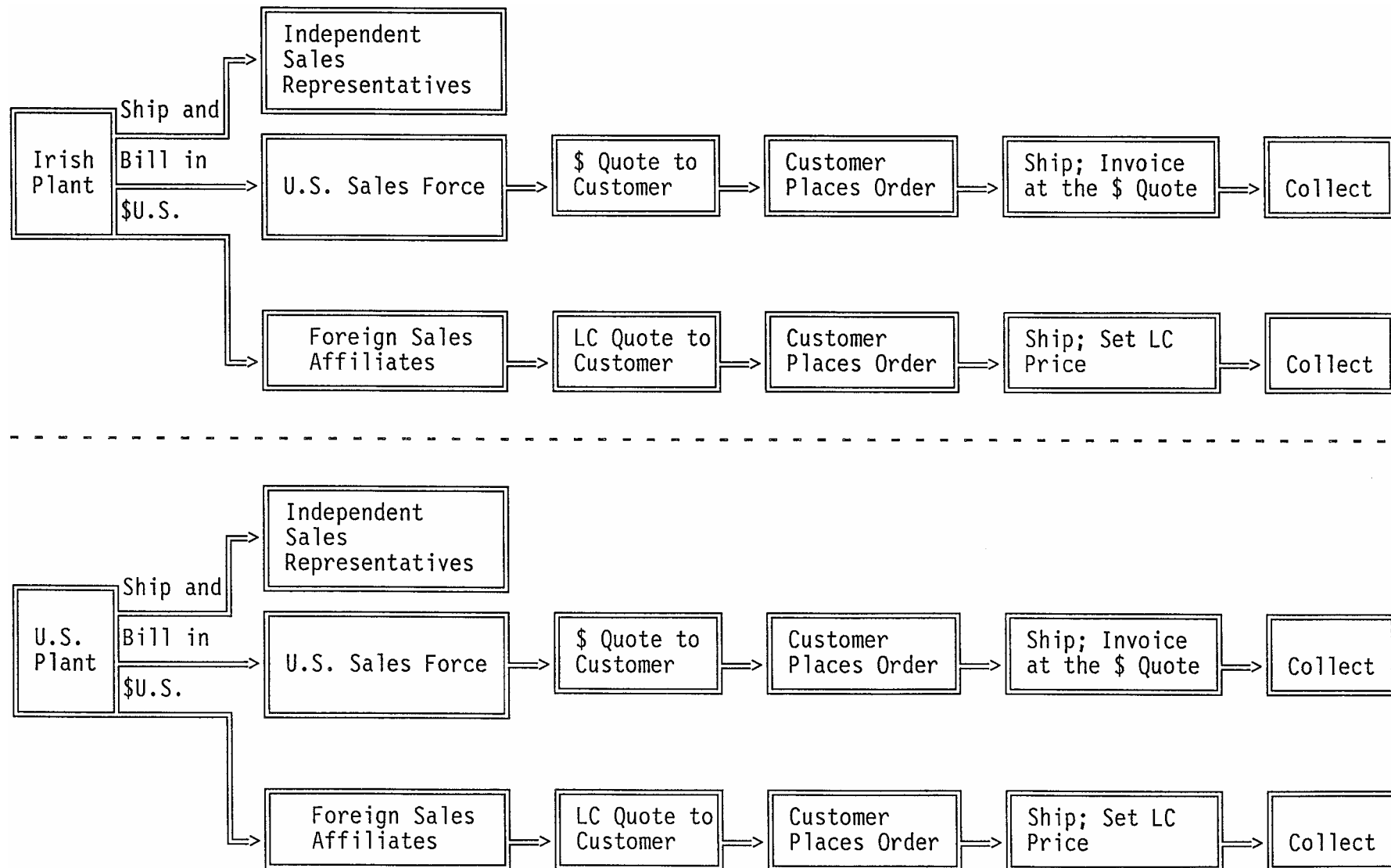
Note: The data in the case have been disguised.

Exhibit 5 Profit and Loss Statement of the Irish Operations (% of sales)

Sales	100%
Direct cost of sales	<u>48</u>
Direct margin	52
Operating expenses	<u>34</u>
Contribution margin	18
Other income/expense	<u>3</u>
Profit before tax	<u>15%</u>

Note: The data in the case have been disguised.

Exhibit 6 Flow of Goods Through System



Note: LC = Local currency

Exhibit 7 Summary Financials for a Typical Sales Affiliate

Balance Sheet—% of Total			
Cash	0%	Bank debt	59%
Receivables	75	Accounts payable	19
Inventory	15	Intercompany payables	<u>7</u>
Other	<u>6</u>	Total current	85
Total current	96		
Fixed assets	<u>4</u>	Equity	<u>15</u>
Total	100%	Total	100%

Profit and Loss—% of Sales	
Trade sales	100%
Cost of sales	<u>75</u>
Gross margin	25
Operating expenses	15
Other expense	<u>5</u>
Net income	<u><u>5%</u></u>

Note: The data in the case have been disguised.

Exhibit 8 Abbreviated Operational Organization Chart

