INTERNATIONALIZATION STRATEGY
AND
GLOBALIZATION OF EUROPEAN CARMAKERS*

MITSUHIRO HIRATA

I. A Problem Proposed

In this paper we briefly outline the internationalization strategy of European carmakers and discuss whether the strategy thus employed has been a factor in their globalization efforts which are receiving much attention in professional circles.

Since there are numerous European carmakers, we have excluded US-capitalized carmakers such as Ford and GM (Ford UK, Ford-Werke, Ford Espana, Adam Opel, Vauxhall, and GM Espana), and in this paper will turn our attention only to European carmakers. The author provides a detailed investigation of the business activities of Volkswagen, Daimler-Benz, BMW, Renault, Peugeot S.A., Fiat, Rover Group, Volvo, and SEAT.

Under these circumstances, the term globalization should be defined as follows: From a global viewpoint, business is conducted without distinguishing between domestic and overseas business activities. Briefly, these endeavors can be considered to be internationalization of the work-specification within an enterprise.

When globalization of the automobile industry is considered, we can identify two types. One is a form of localized production, i.e. parts and components, as well as end products, are manufactured in a local site. In this case, a project for manufacturing semi-finished products and sub-components should naturally be included in this localization program.

Another case is a form of advocacy for the advancement of international cooperation or international work-specification, where international planning is widely carried out for production ranging from parts and components to complete cars. These projects include capital cooperation, sales-route alignments, production tie-ups, and sharing of technology. It should be pointed out however that a characteristic of the recent cooperative efforts does not take the form of complete cooperation, but rather involves partial cooperation, where individual enterprises extend assistance to other companies with which they share profits and losses, whenever these firms encounter problems. That is to say, it is cooperation complying with individual phases.

With regard to globalized efforts, terms such as internationalization, attainment of multi-nationality, and worldwide diversification are in common use. The author is of the opinion that these trends form just one possible direction for the automobile industry.

* This research was supported by a Grant-in-Aid for research from the Ministry of Education, No. 63530057. The author thanks Mr. Ronald M. Siani for editing the English version of an early draft of this paper.
and is not an inevitable direction by any means. This problem has been proposed as a first step.

What then has promoted these internationalization or worldwide diversification efforts? The author believes that there are three factors. The first is a technological factor. Technological innovation in the forms of standardization into FMS, the high-technology-oriented revolution, and the potential for developing new products are believed to be the driving forces for globalization and internationalization in the automobile industry. The second is marketing activities. Markets have become increasingly uniform year by year. In the case of mass-produced motorcars especially, this phenomenon is particularly noticed. In addition, it should be pointed out that demand for automobiles has gradually diminished. This situation is especially true regarding markets in the U.S., Europe, and Japan. Thirdly, political and economic problems must be considered as one of the factors. Particularly in the case of Japan, this is emphatically so. In Japan, the appreciation of the yen, export restrictions and trade friction are very important factors, which have had a direct impact on the automobile industry.

These three factors have given impetus to the trend toward internationalization and worldwide diversification of the automobile industry. The author feels that this trend is not an inevitable one, but is simply one possible direction the industry may follow.

In this paper the author wishes to present an additional problem for discussion. What is the future of the automobile industry? The author is rather pessimistic and is of the view that the future of the industry is not bright. However, this does not necessarily suggest that there are no reasons for optimism. Since market needs increase and FMS progresses in parallel with this increase, methods for making more personalized cars are developing. With more consumers seeking specialized, high performance vehicles, both small and medium-sized manufacturers, as well as the larger ones, are receptive to policies that allow for coexistence and mutual prosperity. In spite of this, the future of the automobile industry is, judged in toto, not bright by any means. With this pessimistic prognostication as a guide, the problem of internationalization will be considered in this paper.

There are two kinds of markets, the passenger car market and the commercial vehicle market. The former is further divided into the volume car market and the middle/high-class car market. Thus, based on these market structures the problems of internationalization strategy and worldwide diversification will be discussed. However, it is very difficult to discuss these matters in a summarized form as an actual problem. In this paper, the author categorizes the carmakers as an individual unit of the production line without strictly distinguishing the markets mentioned above, and would also like to identify the nine national carmakers previously stated with regard to how the individual makers have deployed their internationalization strategy and whether their strategy truly complies with their worldwide diversification efforts.

II. The Internationalization Strategy of European Carmakers

1) Volkswagen

Volkswagen (West Germany) was established to produce low-priced automobiles under
the Nazi administration in 1937. The company's name when the enterprise was established was the Society for the Development of the German Volkswagen. In 1960, it was incorporated as a semi-state-run firm with 20% of the stock held by the Federal Republic of Germany and the State of Niedersachsen. In spite of the government's holdings neither authorities interfered with the operation of the company, but did dispatch officials to Volkswagen. Volkswagen, therefore, is not different from any other private enterprise.

In 1939, Volkswagen started production of a car named the "Strength-through-Joy Car" (later known as the "Beetle"). In 1941, it started production of a revised version of the car, which eventually evolved into the well known Volkswagen "Beetle." During World War II, the firm produced military vehicles, and when the war ended, it returned to the production of passenger cars. Nordhoff, the Director General of Volkswagen, advocated a mono-typic vehicle manufacturing policy in which only the Beetle was mass-produced, and he extended his managerial efforts to overseas projects. Under Nordhoff's managerial leadership, Volkswagen developed a market for Volkswagen in Canada in 1952, in the U.S. in 1955, and in France in 1960, respectively. It also established production bases in Brazil in 1953, in South Africa in 1956, in Australia in 1957, and in Mexico in 1964.

In 1965, Volkswagen acquired Auto Union from Daimler-Benz. This acquisition provided the firm with a very important opportunity to depart from the conventional Beetle-monotypic-production policy and allowed Volkswagen to develop into a full-line car manufacturer. By this acquisition, a new line of passenger cars were added, as well as new technologies (water-cooled engines and front-wheel drive cars) which the conventional Beetle lacked.

The cumulative production total of the Beetle since June 1945 reached 5 million in 1962, 10 million in 1965, 15 million in 1968, and 20 million in 1981, respectively. In trying to meet diversified customer needs which were gradually increasing, Volkswagen found it difficult to comply with these needs with only the Beetle to offer. In the 1970s, Leiding, now the President, presented a post-Beetle strategy. Under Leiding's leadership Volkswagen exploited new markets for such new models as the Passat (1973), Scirocco and Golf (1974), and Polo (1975). By offering a range of new models, as well as the more expensive Audi, a full-line production policy was promoted. Volkswagen also added Indonesia (1972) and Yugoslavia (1974) as new production bases. However, Volkswagen went into the red in 1973 and in 1974, due to increased developmental costs, a slowdown in exports to the U.S. caused by the sudden rise of the Mark and increased labor costs, augmented trade protectionism in the U.S., and the 1st oil crisis.

President Schmucker resolved the long-pending problem regarding the establishment of a factory in the U.S. and increased productivity and radically reduced personnel. Furthermore, he was successful in re-establishing Volkswagen's business by promoting a post-Beetle strategy which had been the company's primary goal since the presidency of Leiding. At the same time Volkswagen, under the leadership of Schmucker, extended its efforts to

---

1 The long-delayed offering of the West German government's remaining 16% stake in Volkswagen took place on March 24, 1988. The government offered 4.8 million shares at 238 marks each, and raised a total of 1.14 billion marks. The issue closed oversubscribed on March 28. The offering was delayed twice last year, first by a scandal involving a multimillion-dollar case of foreign-exchange fraud unearthed in March 1987 and then by the October 19, 1987 stock-market crash.
develop overseas projects and expanded its business in North and South America by pro-
claiming the U.S. (1978) and Argentina (1980) as new production bases. However, in 1979, it withdrew from Australia. Volkswagen also established agreements for joint production and research with other enterprises. In 1977, it reached agreement with the MAN Corp. for the joint development and production of heavy-duty trucks. In 1980, it signed a contract with Renault for the joint designing and manufacturing of fuel-efficient automatic transmissions. Also in 1980, it concluded an agreement with Japan's Nissan Motor Co. to develop new markets for their vehicles, including Volkswagen's cars. In the same year it concluded long-range agreements for fundamental joint studies in the field of automobiles and their relevant equipment with Fiat, Renault, Rover Group, Peugeot S.A., and Volvo.

In a further display of aggressive marketing Volkswagen acquired Triumph-Adler Inc., a business machine maker, in 1979 and purchased the Pertec Corp., an electronic component manufacturer, in 1980. However, these acquisitions were not profitable, due to the 2nd oil crisis, the increase in corporate debts in the Central and South American projects, the failure of the distribution and marketing policy in the U.S., Triumph-Adler’s sluggish production and sales campaign (the company was sold to Olivetti in 1986), a lowering of the competitiveness of the Golf, Passat, Scirocco lines, etc. which formed the basis of the post-Beetle strategy, as well as other causes. Volkswagen, therefore, suffered deficits successively in 1982 and 1983.

Immediately after assuming the position of president, Hahn began to address the problem of high labor costs by introducing robot technologies and FEBES, a new parts procurement and distribution system. He also established a policy to regain Volkswagen’s former position in Europe and revamped the management of overseas subsidiaries by producing higher-quality Audi passenger cars. Under Hahn’s leadership, Volkswagen reached an agreement in 1983 with the Shanghai Tractor & Automobile Corp. for the joint manufacturing of passenger cars and engines. At this time the assembly and production of the Santana line began. In the same year, 1983, Volkswagen sought cooperation with SEAT to provide access to that firm’s technical leadership and licenses, and later acquired the company (75.0 % share) in 1986. Volkswagen maintains that it can take the lead over its European competition by developing specific niches in the market place, i.e. SEAT cars for lower-end users, Volkswagen cars for middle-class users, and Audi cars for higher-end customers. In 1984, Volkswagen reached agreement with the East German government for the production of engines. Starting from 1988, Volkswagen intends to provide licenses for the production of engines in accordance with a 5-year plan, and plans to purchase 100,000 cars a year from East German. Volkswagen sold the second factory of its subsidiary company in the U.S., which suffered serious deficits since 1980, to Chrysler Corp. In 1985 it closed its Stamping facility, and instituted a cost reduction policy by expanding parts procurement from Mexico and Brazil.

---

2 In June 1987, Volkswagen reached agreement with Toyota for coproduction of pickup trucks. In addition, Toyota decided in May 1988 to offer two additional types of pickup trucks to Volkswagen (OEM). Their agreement will be extended in the future.

3 On July 14, 1988, Volkswagen of America Inc. rolled the last car off its assembly line in New Stanton, Pennsylvania, closing its sole U.S. assembly plant, which opened 10 years ago, because of weak U.S. sales.
in July 1987 a new joint venture with Ford, (Autolatina), which will supervise the Brazil/Argentina subsidiaries of both carmakers. The establishment of this new company is expected to lead to the opening of the Central and South American markets. Unable to overcome the public's desire for higher-class automobiles, the production of the Beetle was discontinued in West Germany in 1977 and in Brazil in 1986. It is now being produced only in Mexico.

Volkswagen is also carrying out the knockdown assembly work for passenger cars and commercial vehicles in Belgium, Peru, Uruguay, Turkey, Nigeria, Tunisia, Malaysia, India, and other countries.

Volkswagen has been aggressively deploying an internationalization strategy since the 1950s, and is still promoting that strategy in Europe, the U.S., Central and South America, Africa, and Asia. The ratio of sales outside of Germany has already reached approximately 70%. Among overseas subsidiaries, the procurement of low-priced cars and parts is also being vigorously conducted. It can be expected that Volkswagen will continue to strengthen its internationalization strategies.

2) Daimler-Benz

Daimler-Benz (West Germany) was established by the merger of Daimler and Benz in 1926. From the start of the merger, the company has adhered to its policy of offering only high-quality automobiles to the public. It developed the Mercedes SSK, a high-performance car, in 1928 and the 260D, the first diesel passenger car in the world, in 1935. During World War II, it supplied military machinery and materials, field equipment, and multi-use engines as did BMW and Volkswagen. Daimler-Benz resumed the production of civilian cars in 1947 and expanded by acquiring Auto Union in 1958 and Porsche-Diesel Motorenbau in 1963.

In the middle of the 1960s, President Zahn promoted the company’s policy of producing high-quality passenger cars and set production levels lower than customer demand. This strategy maintained the demand for rarity and high price of Benz cars. Under Zahn's leadership Daimler-Benz sold Auto Union to Volkswagen in 1965 and withdrew from the volume car market. Concurrently, it acquired Rheinstahl-Hanomag and became the largest maker in the field of large-sized commercial vehicles in Europe.

Daimler-Benz, the oldest carmaker in the world, is now known as a preeminent high-profit enterprise which promotes its specialization policy of high-grade passenger cars and middle and large-sized commercial vehicles, not only in Europe, but also throughout the world. The foundation of its present-day prosperity was Zahn's policy of placing the same emphasis on foreign markets as it did on the domestic market. Rather than resting on its laurels, Daimler-Benz has actively pursued the development of products and business projects outside the country.

At present, Daimler-Benz’s passenger car line is comprised of 4 models, the W201 small-size series, the W124/123 middle-size series, and the W126 and W107 high-grade series. Daimler-Benz’s commercial vehicle line is comprised of many types, ranging from 2.6-ton mini-vans to 40-ton trailers. In parallel with these efforts, the company’s production system has also been strengthened. Within West Germany especially, a reorganization of the production system was begun with the investment of 6,000 million Marks from 1979 to 1984. This huge investment was required to increase the production level of new types of passenger
cars and to reduce the cost of producing commercial vehicles. The reorganization involved the production of specific passenger cars and commercial vehicles in separate assembly plants in order to increase productivity. Factory automation was also promoted by placing stress on flexibility and quality control.

Prior to the reorganization of its eleven domestic factories, product development was also stressed. An extensive fuel-efficiency-improvement program for the passenger car division was enacted at the time of the first oil crisis. Improvements to the products were carried out by reducing the weight of the cars, by developing fuel-efficient engines and by improving production processes. In 1979, a model change was made for large-sized cars. In 1982, compact cars of the 190 series were entered the competitive marketplace. Model changes were also made in the mid-sized car line in 1985. Furthermore, Daimler-Benz plans model changes for the S class cars, its highest-class line, and seeks to increase its competitive power in the high-end passenger car market by renovating the line at an estimated cost of more than 2,500 million Marks per year by 1990. The 190 series, in particular, a quasi-massproduced, compact, high-quality model, featuring a fresh, dynamic image, which conventional Benz cars do not possess, has proved very popular with new customers. In the commercial vehicle sector, where Daimler-Benz's mid and large-sized trucks of six tons or more enjoy an excellent international reputation, the firm introduced the Wörth series small truck line in 1984, in order to improve its relatively weak position in the low end of the market. In 1987 Daimler-Benz entered into a joint venture for the production of small vans at a subsidiary in Spain with Mitsubishi Motors.4

In contrast to its decision regarding the out-of-country manufacturing of trucks, Daimler-Benz continues to abide by the policy of manufacturing all passenger cars in Germany, in order to maintain its image as a producer of high quality German automobiles. Since the same standards for quality finishing and appointments are not required in commercial vehicles, the firm feels that they can be produced outside of Germany. Concurrent with the decision to manufacture commercial vehicles in foreign countries is the need to develop sales routes in order to sell on the world market.

Based on passenger car and commercial vehicle production, Daimler-Benz has attained a steady growth. With international markets expanding, it had 43 manufacturing/assembly facilities outside the country as of 1987, while sales networks totaled 25.

Overseas sales of commercial vehicles were first attempted in Argentina (1951), and then in Brazil (1953), Australia (1958), South Africa (1962), Spain and Indonesia (1972), the U.S. (1980), Switzerland (1982), Turkey (1983), and Yugoslavia (1984). Daimler-Benz regards the U.S. and South East Asia as crucial areas for maintaining and strengthening its status in world markets, and is seeking to enter into agreements with Freightliner Corp. of the U.S. and P.T. German Motor Mfg. of Indonesia.

In order to maintain absolute control over all facets of production and quality, Daimler-Benz has declined every proposal for the joint-production of passenger cars. It has, however, softened its stand somewhat in recent years and is now seeking limited agreements with other manufacturers. Licensed production of Honda automobiles in a South African

---

4 In June 1988, Daimler-Benz and Mitsubishi Motors formed a joint venture to cooperate in the sales and servicing of Mercedes-Benz cars in Japan. However, Daimler and Mitsubishi have not yet worked out their agreement for the joint production of mini-vans.
subsidiary and the joint development of Mitsubishi mini-vans by an affiliated company in Spain are two examples of this change in corporate policy.

Under the direction of Breitschwerdt, Daimler-Benz absorbed MTU, a joint venture with MAN for the production of engines, as a 100-percent invested subsidiary in February 1985. In next acquired Dornier, an aeronautic and aerospace manufacturer (65.6%) in May of the same year. The acquisition of these two companies indicates the significance that Daimler-Benz attaches to the development of a technological capability. In October of the same year the company acquired AEG, an electric equipment and electronic instruments maker (56%). With the AEG acquisition, Daimler-Benz unveiled a new corporate strategy. With the German automobile market stagnant, the company sees the need to develop into high-technology areas with quality management and economies of scale in order to maintain its dominant position.

Daimler-Benz has aggressively deployed its internationalization strategy to advance its specialized policy for high quality passenger cars and mid and large-sized commercial vehicles in order to maintain and strengthen its position in world markets. As a leading West German industrial firm, Daimler-Benz also seeks to enter into the high-technology field in order to compete in this industry, and vigorously promote its internationalization strategy by employing the high-technology products it develops to improve the quality of its automobiles.

5 In August 1988, Daimler-Benz reduced its holdings in Dornier from 65.5% to 54% by selling back shares to Mr. Silvius Dornier of the Dornier family.

Daimler's reduced stake, however, is not likely to affect its control over Dornier. Under the compromise agreement with the Dornier family, Daimler was granted total control over Dornier in return for adding 300 million DM to the subsidiary's reserves. The Dornier family in return relinquished the right to veto decisions on company policy.

Daimler's agreement with the Dornier family is in line with the goal of Mr. Reuter to promote a restructuring in the German aerospace industry as part of an overall reorganization in Europe.

6 Mr. Reuter, who had been responsible for the takeovers of AEG, Dornier and MTU in his previous position as finance director, assumed the position of chairman of Daimler-Benz on September 1, 1987. He is well aware of the risks any company runs when it diversifies. However, he hopes the enlarged Daimler group will require only 3 to 5 years to develop the common corporate culture which will lead to synergistic growth.

Daimler's transformation into a broadly-based technology company (Reuter rejects the label of conglomerate) has raised many eyebrows because the company has always epitomized West Germany's industrial tradition of strength-through-specialization. Its diversification efforts have unleashed a spate of emulators across the German industrial landscape.

Reuter had two primary reasons for pushing diversification. Firstly, he emphasized the need to broaden Daimler's range of business in order to offset the actual collapse of growth in the commercial vehicle market, and the possibility of similar problems occurring eventually in the passenger car market. Secondly, he argued that integrated electronic systems would soon become an important part of any car that Daimler could no longer afford to rely solely on collaboration with suppliers for its electronic components.

How does Daimler plan to avoid repeating the mistakes of other diversified companies? Reuter states that Daimler must avoid becoming an ITT-like conglomerate operating in a huge number of fields with no synergistic ties between sections of the company. It must furthermore build a common corporate ethic shared by all sections of the company.

Daimler's is expected to take a 30% stake in Messerschmitt-Boelckow-Blohm (MBB) as long as the West German government agrees to cover certain risks and a law suit by the minority Dornier family shareholders fails. However, there are still hurdles in the path of a final accord. These centre on the insistence of Mr. Reuter that the government maintains prime responsibility for risks stemming from the heavily subsidized European Airbus project, in which MBB has a 37.9% stake.
3) Bayerische Motoren Werke

Bayerische Motoren Werke (BMW, West Germany) was founded as a manufacturer of airplane engines. In 1952 the company began the production of low-priced passenger cars but the venture failed. Faced with insolvency, it was forced to revamp. It turned instead to the production of high-quality small and mid-sized automobiles and introduced the Model 1500 in 1962. The Model 1500 was a high-performance, practical automobile whose commercial success has governed the direction of the company ever since. The fundamental policy of the company continues to be the production of stylish, high-quality automobiles which provide excellent performance and road-handling capabilities. BMW has successfully developed a market niche which has not been exploited by either Volkswagen or Daimler-Benz. As the status of its automobiles improved, the company secured its reputation and market in Europe.

The secret of BMW's strength lies in the fact that the company has severely restricted its market share both within and outside of Germany to approximately 6%, and in so doing, increased the scarcity factor and subsequently the demand factor for its automobiles. It has also been pointed out that concurrent with its marketing policy BMW has penetrated foreign markets through the establishment of solely-owned dealer networks in 14 countries. BMW has employed the policy of exporting finished cars to all its markets except for South Africa, where the company operates a small-scale knockdown facility. As in the case of Daimler-Benz, BMW has rejected every offer for joint production in order to secure its reputation for uniqueness. The only exception to this policy is a joint development project with the German firm of Robert-Bosch. Given the nature of its corporate policy, it may be safe to assume that BMW is not contemplating the adoption of an internationalization strategy in the near future.

4) Renault

Renault of France was derived from the automobile firm of Renault Bros. & Co. The original firm, later known as Louis Renault Co., greatly expanded its business activities with the production of tanks, aircraft engines and military vehicles during World War I. It further added affiliated steel, nonferrous metals, machine tool, parts and components companies, and grew over time into an extremely large organization. Accused of collaborating with the Nazis during the Second World War, the firm was forced to divest itself of its stock and was nationalized in 1945. From 1950 to 1970 Renault renovated its factories and built new ones throughout the country. It also absorbed a number of parts manufacturers as subsidiaries, and developed into an enterprise for the production of industrial machinery, engines, specialized vehicles, in addition to its primary role as the producer of automobiles.

During this expansionary period Renault promoted exports and extended its overseas production capabilities. In regard to overseas activities, special stress should be placed upon the internationalization strategy the firm developed in the second half of the 1970's. In order to convert from being a French firm with international markets to a truly international entity, the firm targeted North America and the Iberian Peninsula as strategic targets. Renault participated in the management of American Motors Corp. (AMC) by acquiring a 46.4% vested interest in the firm, and established AMC as an important base for its North American operations. Following the acquisition, AMC began the licensed prod-
duction and marketing of the R-9 and R-11 passenger cars. However, with the fall in energy prices demand has shifted to larger-sized cars, and sales have not been as high as expected. Since 1980 AMC has suffered losses, with the exception of 1984. Renault's North American marketing strategy has not been profitable and is generally considered to have been a failure. In March 1987 Renault agreed to sell its share of AMC to Chrysler and the sale was announced in May of that year.8

In 1979, the same year that its passenger car strategy was inaugurated, Renault acquired a 10% share of Mack Trucks Inc., a manufacturer of large trucks. It later increased its share to 45% and in so doing it has strengthened its sales activities and the level of technological cooperation with Mack Trucks Inc., which now markets Renault's mid-sized trucks through its sales network. In addition, the cooperative efforts have led to interchangeable designs and parts, as well as joint-efforts in the development of new products. However, given the sluggish demand for mid and large-sized trucks in the North American market Renault has been forced to fight an up-hill battle.

As part of its Iberian strategy, Renault began local production in Spain and Portugal. In 1978 it completed the reorganization of its Spanish facilities and in 1983 it completed the expansion of its Portuguese facilities. Fasa Renault (Renault holds 71.7% of the shares) produces 240,000 passenger cars and commercial vehicles in Spain each year, while Renault Portugal (65% share) assembles 30,000 to 40,000 automobiles in Portugal annually.

In addition, Renault has knockdown facilities in Belgium for the production of passenger cars and commercial vehicles, carries out the production of commercial vehicles in Britain, and operates knockdown facilities for passenger cars in Yugoslavia. It also produces passenger cars in Argentina, Mexico and Chile and has knockdown production facilities in Columbia, Venezuela, Turkey, South Africa, Morocco and Tunisia, the Philippines, Taiwan and Australia. Efforts toward the joint production of jeeps in China have also been advanced. In addition, technical assistance for the production of commercial vehicles has been furnished to the Soviet Union and Czechoslovakia.

Renault's business activities are comprised of five production and service categories; passenger cars, commercial vehicles, automatic machinery/tools and production systems, industrial machines and finance/service. From the 1980's Renault has suffered serious losses due to frequent labor disputes, sluggish sales in its RVI commercial vehicle division, depressed domestic markets, and a lowering of its export competitiveness due to inflation, slowness in making model changes and insufficiency in making proper product discrimination.9 Another obstacle faced by Renault is the imposition of various burdens placed on the company by the French government. Principle among these burdens, which lowered profitability, was the forced establishment of RVI in 1978 at the direction of the government. The government also refused to allow the company to split off its deficit-ridden agricultural/industrial machinery division and limited the amount of capital that Renault

---

8 In August 1987, Chrysler assumed the remaining 53.9% stake in AMC and made it a 100% invested subsidiary.

9 Renault achieved record profits in 1987, ending six years of disastrous losses. The company posted consolidated profits of 3.69 billion francs in 1987, in contrast to a deficit of 5.54 billion francs in 1986. This spectacular recovery stems from a 3-year restructuring effort in which the company eliminated jobs, boosted quality control and divested itself of subsidiaries and affiliates such as AMC.
could invest in AMC. The company was also prevented from cutting back on personnel, and the dissatisfaction with the company’s management has led to frequent labor disputes.

In January 1985 Besse was named president and inaugurated a radical rebuilding program. This program includes the laying off of 27,000 employees and the assigning of 77,000 workers in the passenger car division and 22,000 workers in the commercial vehicle division. It also involves a 20% reduction in production capability and a redistribution of production of 1,600,000 units per year. A withdrawal from production in South Africa and Mexico and modernization of its factories in Spain are also planned, as is technical tie-ups with foreign makers and a revitalizing of the firm’s non-automotive divisions.

Regardless of the success or failure of these drastic remedies, it appears that the road ahead will be rough and rocky for Renault.10

5) Peugeot S.A.

Peugeot S.A. (PSA, France) is a holding company, with Peugeot as the parent body, which was formed by the absorption of Citroën and Talbot into the Peugeot Motor Company. The takeovers occurred during a four-year period starting in 1974, during the two oil crises and at a time of intensifying European competition. PSA thus found itself with the capability of producing more than 2,000,000 vehicles a year in Europe. Despite this capability, the three constituent companies were individually deploying separate strategies. A number of problems soon surfaced. For one, the company was slow in unifying the three organizations. The models produced by the three also overlapped, resulting in unnecessary competition for buyers. In addition, production facilities were outdated and overstaffed and relations between management and the unions were poor, resulting in a loss of competitiveness in terms of cost and quality. In addition to these negative factors, PSA suffered deficits since 1980, although the company did manage to operate profitably in 1985.

Calvet, who assumed the presidency of Peugeot in 1982 and of PSA in 1984, pressed policies to increase productivity and the quality of the firm’s products and to improve management efficiency, rather than simply seeking to expand production, which was the policy expounded by his predecessor Parayre.

PSA pared the work force by releasing 18,000 workers, closed two domestic factories, introduced automation into the factories, and adopted CAD/CAM and other computer systems. It has also closed assembly plants in Belgium and Britain and has withdrawn capital from its Chilean, Argentinian, British and South African operations. Along with these changes the company seeks to increase its share of the passenger car market by introducing new models such as the Peugeot 205 and 309 and the Citroën AX and BX.

Two subsidiaries in Britain have been reorganized and two important foreign production facilities in Spain, which PSA feels will be pivotal to its European production plans, are

---

10 Renault was due to receive a debt write-off of 12 billion francs from the French government as part of the changing of its legal status from a Regie, or state agency, to a regular, state-owned commercial company. The conservative government of ex-Prime Minister Chirac formulated a bill on the status change in December 1987 and hoped to introduce it in parliament in January 1988. President Mitterrand, however, refused to place the bill on the agenda, forcing its postponement until after the presidential elections.

On July 19, 1988 Mr. Fauroux, the new French Industry Minister, said the French government intended to recapitalize Renault. However, he again said he didn’t consider changing Renault’s special legal status as an urgent issue.
being modernized with an investment of 22.5 billion Pesetas.

PSA has also provided technical assistance to Yugoslavia, Rumania and East Germany. It has also undertaken knockdown production in Nigeria, Morocco, Madagascar and Kenya. Production of mini-vans and wagons are projected for production in India and China respectively. These plans, however, are all small in scope, and it appears that PSA is reverting back to the type of single car maker company it was in the past when it was known as Peugeot. It might be expected, then, that PSA will not undertake internationalization strategies in the future.

6) Fiat

Fiat was formed with the incorporation of the Torino Motorcar Mfg. Co. in 1906. With passenger cars and commercial vehicles as the basis of its business, the company began to produce iron and steel, light metals and parts and components, growing into a giant enterprise in Europe after World War I. In the second half of the 1960's, Fiat successively acquired OM, a commercial vehicle manufacturer; Autobianchi, a passenger car maker; Lancia, a high-quality automobile producer; Ferrari, the famous sports car and racing car manufacturer and other small car makers. As befitting the company's 'golden age,' management likes to boast that "all roads lead to Torino."

Since 1907 Fiat has promoted its overseas projects by providing licensing and technical assistance, rather than capital to local enterprises. Licenses were awarded in the U.S. in 1909, Poland and France in 1934, Yugoslavia in 1954, Thailand in 1962, Malaysia in 1967 and Indonesia in 1971. Licenses were also granted in Costa Rica, Bulgaria, Rumania and Korea. In 1949 and 1971, however, licenses and capital were provided to Spain and Turkey, respectively.

After the Second World War Fiat also made capital investments in Ireland in 1952, Argentina in 1954 and 1960, Venezuela and Chile in 1962 and Brazil in 1973. Most of this investment was for knockdown production. Fiat is also carrying out the knockdown production of passenger cars and/or commercial vehicles in New Zealand, Morocco, Egypt, Tunisia, Zambia, Nigeria, Pakistan and other countries, and in 1966 it entered into an agreement with the Soviet Union.

As can be seen from the above, Fiat has advanced into many markets which have only just begun to take the first step toward motorization. It has adopted this policy in order to export its products, but also to develop cooperative production facilities overseas.

Toward the end of the 1960's, the Italian economy fell into recession. Management/labor relations also declined, resulting in frequent labor disputes and a decrease in productivity and quality. At around the same time the first oil crisis occurred, which led to the feeling that growth of the passenger car market could not be expected due to the rapid rise in crude oil prices. Fiat thus determined that public mass transportation would be the principal means of transportation in the future and pressed forward with a plan to lower its dependency on the production of automobiles. As a result, passenger car development investment was reduced and the development of fuel-efficient automobiles delayed, and the entire company suffered as the result of this management-inspired crisis.

To deal with this crisis, Fiat began to reorganize. In 1975 the commercial vehicle division was separated from the parent firm and reorganized as IVECO in partnership with KHD of West Germany. In 1979 the passenger car division was also split off to form a
separate company, Fiat Auto, with Mr. Ghidella nominated as president. Concurrent with these efforts, the parent company Fiat, headed by Mr. Romitti, was reorganized to exercise management control over the subsidiary companies. IHF was designated to control subsidiary companies outside of Italy. With these changes, a management system of 16 separate sectors was established under the corporate umbrella of Fiat.

Under the Romitti/Ghidella leadership, the policy enacted immediately following the first oil crisis came under review and a new 5-year plan, which called for the re-establishment of the passenger car division in the European region as a dominant factor was enacted in 1980. To support this plan newly designed cars were introduced, unprofitable sectors were eliminated, cooperative efforts with other enterprises were encouraged and automation of the production facilities was stressed.

Included among the new models was the Uno, which represented Fiat’s efforts to provide a more competitive automobile. In addition, Fiat offered advanced options such as 4-wheel drive and turbo and diesel engines. As part of the restructuring efforts capital was withdrawn from the loss-incurring SEAT in Spain and from the U.S. where competition from Japanese automakers was intense. The company also scaled down its operations in Central and South America, with the exception of Brazil.

Fiat also entered into cooperative efforts with Peugeot and Renault in the area of engine development, with Volkswagen and Volvo for the development of transmissions, and with Saab-Scania for the development of new types of cars. In addition, cooperative efforts began with Robogate for the manufacturing of automobile bodies and with LAM system for engine production technology. These efforts resulted in the introduction of new automated technology and higher production efficiency.

The reorganization was successfully completed in three years, which Fiat considers, rightly so, to be something of a miracle. It should be added that the improvement and stabilization of management/labor relations also played an important role.

With regard to the commercial vehicle division, IVECO has incurred losses since its establishment in 1975. In 1983 IVECO was reorganized as a 100% invested subsidiary company under Fiat. In 1983-84, IVECO factories in France and West Germany were partially closed and the work force was reduced. In 1986 IVECO entered into an agreement with Ford U.K. for the joint-production of large trucks. In 1987 IVECO further developed its relationship with Nanking Automobile Manufacturing Corp. for the transfer of technology for light trucks.

Equally important was Fiat’s acquisition of Alfa Romeo. In 1986, Fiat defeated efforts by Ford U.K. to take over Alfa Romeo by enlisting the support of the unions and by stressing the need to keep Alfa Romeo an 'Italian' firm. In November 1986 Fiat was notified by IRI and Finmeccanica, the major stockholders of Alfa Romeo, that Fiat’s offer was acceptable. In January 1987, Fiat combined Alfa Romeo and Lancia into a single operating division, with the goal of producing luxury automobiles which can compete with Daimler-Benz, BMW and Audi cars.

Fiat’s diversification strategy was switched from one that called for a reduction in the size and importance of the automobile division to one which stressed its importance. These redirected efforts suggest that the near-term future of the division, in terms of corporate support, appear promising.

As part of Fiat’s restructuring campaign, internationally known enterprises such as
Comau (production systems), Telettra (telecommunications) and Sorin Biomedica (biotechnology) were purchased.

In 1987-89 Fiat plans to invest 10,000 billion Lira, half of which will be spent on the development of the passenger car division and on improvements to Fiat facilities. It will

---

The possible takeover of Rover Group by British Aerospace (BAe) astonished parliamentarians, the automotive and aerospace industries and others.

On March 1, 1988 BAe said it might purchase the U.K. government's 99.8% stake in Rover Group. Mr. Day, Rover's chairman, welcomed the bid from BAe.

Rover Group had an accumulated deficit of some 2.6 billion pounds, plus more than 800 million pounds in bank loans. Rover maintains ties with BAe for engineering, technology, marketing, purchasing and the pursuit of quality standards.

The U.K. government agreed to sell the Rover Group to BAe for 150 million pounds, under terms far more generous than expected.

The accord triggered a political outcry that the carmaker was being sold too cheaply. The proposed sale grew out of the conservative government's privatization campaign and its desire to shed the long-troubled auto company.

In Parliament, the conservative government's announcement brought strong criticism from the opposition Labor Party. Mr. Gould, the Labor Party's main trade spokesman, called the planned Rover sale an act of political irresponsibility and industrial sabotage.

The government has poured about 2.9 billion pounds into Rover Group since 1976, the year after it nationalized the company. In 1986, the conservative government unleashed a xenophobic furor when it proposed breaking up Rover Group and selling sections of the company to Ford Motor Co. and General Motors Corp. of the U.S.

The EC began to investigate whether the proposed sale would hinder competition in Europe.

BAe's takeover terms, originally agreed upon with the U.K. government, were as follows:
1. A 800 million pound Government cash payment to allow the Rover Group to liquidate "past indebtedness."
2. BAe to pay 150 million pounds or 2.7 pounds per share for the Government's 99.8% stake.
3. Rover Group's carry-forward trading tax losses of 1.6 billion pounds to be reduced to 500 million pounds, and only to be used against future Rover profits. Other currently-available Rover tax relief to be applied only within the Rover Group.
4. BAe will not "relinquish control" of Austin Rover or Land Rover for at least five years.
5. A new U.K. state guarantee of 1.6 billion pounds to cover the Rover Group's bank debt to be eliminated.

The EC urged BAe to modify the above terms and set down new conditions. The newly proposed terms were as follows:
1. Rover should be granted a cash loan of 469 million pounds.
2. 78 million pounds in regional aid for future investment at three Rover production sites. (Rover's corporate plans call for 1.5 billion pounds.)
3. Establishment of a commission to monitor corporate plans.
4. No further Government aid to Rover.
5. Elimination of the Government guarantee for the Rover Group bank debt; no new assurances permitted.
6. Rover's carry-forward trading tax losses to be limited to 500 million pounds; only applicable against Rover profits.
7. 300 million pounds of Rover's unused capital allowances and 200 million pounds capital write-offs worth an estimated 17 million-25 million pounds to be applied to BAe profits.

BAe was not willing to accept the new terms set down by the EC. The future of the deal was therefore dramatically thrown into confusion by BAe's refusal. However, on July 14, 1988 BAe agreed to proceed with its purchase of the Rover Group, following 24 hours of hectic negotiations during which the group's last-minute reservations about the proposed takeover were resolved.

The extent of the rationalization involved in the Rover corporate plan is not being made public, but the central objective is to transform Rover from a volume carmaker into a specialist producer offering a limited range of upper-market models containing higher added value and profit margins.

On August 11, 1988 an extraordinary meeting of BAe shareholders approved the company's acquisition of the U.K. government's 99.8% stake in the Rover Group.
also place added stress on the development of the luxury car market. With these efforts the giant Italian automaker may strengthen its international efforts and return to the North American market.

7) The Rover Group

The Rover Group was established by the joining together of separate small and mid-sized automobile companies in order to meet the challenge imposed by the Big Three U.S. auto manufacturers. Divisions operating in the Rover Group include such well-known companies as British Motor Co. and Leyland Motors. Rover, however, has suffered from managerial problems which similarly affected the companies now under its control. In addition to these problems, Rover has suffered from a general lack of effective management and inefficient production systems for a number of years. To compound the problem, the combining of two separate production groups, the passenger car divisions and the commercial vehicle divisions led to an overlapping of production processes. During this trying period the company was also confronted with the first oil crisis and experienced great difficulty in raising necessary capital. Faced with the prospect of bankruptcy, the Rover Group was nationalized by the British government in 1975. Under the protection of the government, the company closed its overseas production facilities, except for small-scale commercial vehicle knockdown facilities in South Africa, India, Australia and other areas. The company also reduced and reorganized its domestic production facilities.

The Rover Group originally considered the European market as a primary market for its passenger cars, with the Jaguar designated for overseas markets. The company was resolved to withdraw from the European market should profits not be forthcoming. At this time, Prime Minister Thatcher’s government separated the Jaguar division and privatized it, in keeping with its efforts to advance the privatization of nationalized industries.

The Rover Group is now faced with mounting deficits and major problems lie ahead as the company attempts to reorganize. In addition, even though the company has contractual agreements with other major firms such as Honda Motors, Volkswagen and DAF, it has dropped out of the European market and may be obliged to accept its status as a local maker. There is also the likely possibility that the remaining divisions of the company may also be privatized. Given these factors, there is very little chance that the company will pursue an international strategy now, or in the future.

8) Volvo

The Swedish company Volvo was established as an automobile manufacturing subsidiary of SKF, a bearing maker, in 1926. In 1935 Volvo separated from SKF and became an independent company. It acquired KMV, a transmission manufacturer, in 1941 and Bolinder Munktell, a construction machinery maker, in 1950. In 1961 Volvo Flyingmotor, a subsidiary, was established for the production of airplane engines. These efforts reflect Volvo’s commitment to broaden the base of its operations.

In the 1970’s Volvo competed aggressively in foreign markets. It participated in the management of DAF, a Dutch passenger car manufacturer, by acquiring a 33% share in the company. In 1975 it acquired the remaining shares of DAF. It also built production facilities in Australia in 1972, in Peru in 1973, in Indonesia in 1974, in Brazil in 1977, and built a plant in Belgium in 1975.
In 1979 the passenger car division was separated and became Volvo Car Corp., an independent company. In 1981 Volvo acquired White Motor Co. securing a production/sales system in the U.S. In concert with Peugeot and Renault, Volvo established PRV in 1971 and has conducted the joint development of engines since that time. In 1985 it also terminated its relationship with Renault which had held 15% (later 9.4%) of Volvo’s stock.

Troubled by its total reliance on the production of automobiles, the company has consistently sought to diversify. In keeping with this policy Volvo acquired Beijerinvest, a securities company, in 1981. It also acquired engineering, food processing, brokerage companies and energy technology firms, as well as Hamilton Oil Corp., Pharmacia Co., Provendor Co. and Caldo (food manufacturers). Volvo’s acquisition efforts continue, and now include firms in the automation and computer-related fields.

Volvo is now a holding company, directing the efforts of a number of subsidiaries. As such it is the largest diversified and multinational enterprise in Northern Europe. While its transportation and conveyance equipment divisions have been cut back, the company still places great emphasis on the expansion of its automobile, engine and construction machinery divisions.

In terms of automobiles, the centerpiece of its corporate strategy, Volvo continues to stress the safety of its cars, and seeks to introduce the corporate goal of making all its products the safest in the world to all its operating subsidiaries. In order to advance its policies for the production of quality passenger cars and mid and large-sized commercial vehicles, Volvo has deployed an internationalization strategy that places great emphasis on the European, and especially the North American market.

In 1986 Volvo acquired complete interest in Volvo Japan, buying out the shares held by Teijin Ltd., in order to increase its presence in the Japanese market. In May 1987 the company launched a joint venture for new types of busses with Fuji Heavy Industries Ltd. Volvo is expected to strengthen its international marketing efforts with greater stress placed on the North American and Japanese markets.

9) SEAT

The Spanish firm of SEAT was established through the capital investment of INI, the Spanish Industrial Public Corporation, in 1950. The company began production of Fiat cars under a licensing and investment agreement with Fiat. Production reached 350 thousand cars in 1977. As competing firms entered the Spanish market, and as its production facilities and car models became outdated, SEAT lost competitive power and declined. The Spanish government requested that the firm be purchased by Fiat, but the latter refused.

Under the new system, a vehicle undergoing assembly will remain static at a work station for up to two hours. The concept is to be used in a plant being built at Uddevalla, near Volvo’s main car plant at Gothenburg. The Uddevalla plant is seen as setting the pattern for its other car plants in Sweden.

More than 30 fixed assembly sites are planned within Uddevalla, each of which will process four cars a day during full production. Each site will have its own team of workers, who will have more complex tasks to perform than is the case with conventional assembly lines.

This, Volvo believes, will create greater job satisfaction, with benefits for the company in terms of improved quality. The plant should thus display in near-ultimate form the term concept of assembling cars which Volvo pioneered at its Kalmar plant.
and finally severed its relationship with SEAT in 1981. In 1982 SEAT concluded a new agreement with Volkswagen, transferring 51% of its stock to the West German automaker in 1986. However, the company continues to experience management problems and its accumulated debts since 1978 now total 160.6 billion Pesetas. Volkswagen has agreed to cover the deficits in exchange for a loan of 185 billion Pesetas from the Spanish government.

Under Volkswagen, SEAT has begun to modernize and rationalize its production facilities and has drastically reduced its work force. The company is now producing Volkswagen's Passat and Polo models under license, and has also introduced the Ibiza and Malaga Models, developed by the company, to the Spanish market. By producing cars of their own design the firm hopes to capture a 1.5% share of the European market for small and mid-sized automobiles. It will also seek to export these cars to North America, Asia and Africa. Given its position under Volkswagen, which seeks to limit SEAT to the production of low-priced automobiles, it remains to be seen how much freedom SEAT will have to pursue an internationally-oriented marketing strategy.

III. An Investigation of the International Strategy of European Carmakers

In the previous sections of this paper the international strategies of the nine principal European carmakers have been discussed. From the material presented we can state that BMW, Rover and SEAT do not, and in the near future will not, pursue an international marketing strategy. The question that now must be addressed is to what extent do the international marketing strategies of the remaining six auto makers conform to the criteria for the implementation of a successful globalized marketing efforts set forth in this paper.

Looking first at Volkswagen, we note that the firm operates production bases for passenger cars and commercial vehicles in Brazil, South Africa, Mexico, the U.S. (as of the Spring of 1988), Argentina, Spain and other countries. It also maintains assembly plants in Belgium, Peru, Uruguay, Turkey, Nigeria, Malaysia, China and India. In addition, procurement of completed cars and parts is made from a number of overseas subsidiary companies. Volkswagen is also cooperating with MAN for the joint development/production of trucks, with Renault for the joint design/ manufacture of automatic transmissions and with Nissan Motors. A contract for the production of engines has also been concluded with East Germany. In terms of a global-wide marketing effort it can be stated that Volkswagen has pursued this goal, and will continue its global-wide efforts in the future.

Turning next to Daimler-Benz, we have described the production of commercial vehicles in Argentina, Brazil, South Africa, Spain, the U.S., Switzerland, Turkey and Yugoslavia. The firm also operates assembly plants for commercial vehicles in the U.S., Saudi Arabia, Turkey, India, Malaysia, the Philippines, Australia, New Zealand, Ghana, Kenya and Tanzania. In terms of the production of passenger cars, however, the firm continues to refuse every proposal for overseas production. It appears that Daimler-Benz relies on overseas facilities only as a means of supporting its domestic production efforts.

Renault operates production facilities in Spain, the U.K., Argentina, Chile and the U.S. Assembly facilities for passenger cars and commercial vehicles are also operated in Belgium, Turkey, Yugoslavia, Portugal, Columbia, Venezuela, Morocco, Tunisia, the
Philippines, Taiwan, Australia and Indonesia. In conjunction with AMC, Renault invested capital and concluded production contracts, but has agreed to sell the American firm to Chrysler Corp. Renault's remaining cooperative venture is with Mack Trucks. Renault also provides technical assistance to the Soviet Union and Czechoslovakia. Renault's global efforts, therefore, have been limited basically to local production activities.

Peugeot S.A. operates production and assembly facilities for passenger cars and commercial vehicles in the U.K., Spain and Yugoslavia. It also provides technical assistance to Yugoslavia, Rumania and East Germany. As is the case with Renault, Peugeot's overseas efforts have been limited to local production.

Fiat operates production bases for passenger cars and commercial vehicles in West Germany, France, the U.K. and Yugoslavia, and assembly plants in Brazil, South Africa, Morocco, Egypt, Tunisia, Pakistan and New Zealand. The firm has also concluded licensing agreements with Yugoslavia, Costa Rica, Indonesia, Thailand, Malaysia, Korea, Poland and Rumania. It cooperates with Peugeot S.A. and Renault for the development of engines, with Volkswagen and Volvo for the development of transmissions and with Saab-Scania for new car designs. It also provides assistance to the Soviet Union. IVECO, the Fiat subsidiary in West Germany, is presently concluding a joint-venture agreement with Ford U.K. for the production of trucks and with Nanking Automobile Corp. for the transfer of technology. It can be seen that Fiat is actively pursuing an international strategy with global implications.

Volvo produces passenger cars in Canada, the U.S. and the Netherlands. It operates assembly plants for passenger cars and commercial vehicles in Belgium, Brazil, Peru, Malaysia, Indonesia and Australia. It is also involved in negotiations with Peugeot S.A. and Renault for the joint-development of engines and with Fuji Heavy Industries for the production of busses. It can also be claimed that Volvo is pursuing a global marketing effort, in part to support its domestic production of automobiles.

**IV. Conclusions**

In closing, the author would like to briefly discuss the capabilities required to compete in the global automobile market.

In addition to competitive products, advanced technology and managerial competence, the firm must also be able to adapt to the demands and requirements of consumers in foreign markets. Perhaps equally important, the management of the firm must be willing to totally commit itself, while at the same time preserving and/or developing a unique, characteristically individualistic product.

In terms of the nine carmakers described in this paper, all of them offer competitive products that feature advanced technology. To the author, however, only Daimler-Benz, BMW and Volvo presently fulfill all the requirements for the implementation of a successful global marketing strategy.

Benz continues to be successful in producing automobiles which represent the highest standards of German quality and which are valued both in Germany and in overseas markets.

BMW has developed a reputation as the producer of high-quality, high-performance luxury automobiles.
Volvo has directed its efforts to producing the world's safest automobiles.

In terms of developing a corporate philosophy which is reflected in the cars they produce, the remaining six auto makers have not been successful. For example, Volkswagen, which insists on producing the Golf model, appears to the author to still be under the influence of the "Beetle." It is also plagued by low profits and its management base appears too weak to ensure the success of a long-term strategy.

Renault, Peugeot S.A., the Rover Group and SEAT are simply local European manufacturers of automobiles, which collectively suffer from deficits and ineffective management.

Fiat has attempted to solidify its position as an European carmaker before pursuing global marketing efforts, which sets the firm apart from the others.

Daimler-Benz, BMW and Volvo have reached their present position through steady efforts and have managed to grow into giant organizations without committing any serious blunders. In contrast, Fiat has succeeded and failed in a number of ventures causing the company to expand and contract in size repeatedly, but this fact also indicates the basic resilience of the firm.

Given the less-than-bright future for the automobile industry as a whole, what strategies can other carmakers adopt to ensure success? While the question is difficult to answer, they could do worse than emulate the example provided by Daimler-Benz, BMW and Volvo.
REFERENCES


Japan External Trade Organization (1984), Saisei o Kakeru Ohshu Sangyo (European Industries Are Risking Their Revival), Tokyo: Jetro.


Japan Machinery Exporters' Association (1984), Ohshu Jidosha Maker no 1980 Nendai Senryaku (Corporate Strategies of European Carmakers in the 1980s), Tokyo: JMEA.


Economist (1988), March 5.


Financial Times (1988), March 2, 3, 4, 12/13, 22, 24, 29, 30; April 16/17, 18, 22, 25; May 12; July 2, 6, 7, 11, 13, 14, 15, 16, 18, 19, 20; August 4, 8, 12.
