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THE “FINANCIALIZED” STRUCTURE OF AUTOMOBILE CORPORATIONS IN THE 2000s

*Roberto Alexandre Zanchetta Borghi, Fernando Sarti,
and Marcos Antonio Macedo Cintra*



Roberto Alexandre Zanchetta Borghi (*left*), PhD Candidate in development studies at the University of Cambridge, United Kingdom, and MA in Economics at the State University of Campinas (Unicamp), Brazil. Email: razb2@cam.ac.uk

Fernando Sarti (*centre*), Professor and Director, Institute of Economics, State University of Campinas (Unicamp), Brazil. Email: fersarti@eco.unicamp.br

Marcos Antonio Macedo Cintra (*right*), Secretariat for Strategic Affairs, Institute for Applied Economic Research (IPEA), Brazil. Email: marcos.cintra@ipea.gov.br

Abstract: Important changes in the economic system, both in productive and financial dimensions, have been observed since the 1970s, pointing to a growing capital mobility and a stronger presence of finance within the logic of non-financial corporations. This article aims to analyze this increasing role of finance in the dynamics of automobile companies. Data from annual financial statements of selected carmakers (Daimler, Fiat, Ford, General Motors, Honda, Hyundai, Toyota and Volkswagen) between 2000 and 2009 are considered, in order to verify the occurrence of a “financialization” movement in this industry. From the analysis, a clear movement towards a more “financialized” pattern of the carmakers’ structure could be observed, although there were notable differences among groups according to corporate dependence upon activities from the financial segment and the degree of exposure of their financial structures.

Key words: automobile corporations; financial structure; “financialization”

Introduction

Significant changes in the economic system, both in productive and financial dimensions, have been occurring since the 1970s and the 1980s. Productive modifications involve a combination of different processes, such as the intensification of production internationalization and trade, a more intense competition at global level, and an increasing integration of productive structures of national economies. Financial changes are related to the interaction of three phenomena, which are the expressive expansion of international financial flows, a fiercer competition in the capital markets and a higher integration of international financial systems.¹ These movements are reflected in the adoption of a wide variety of financial management strategies by non-financial corporations through the constant monitoring of net cash flows, merger and acquisition operations (M&A) and the use of mechanisms, such as derivatives, to hedge against or profit from interest and exchange rate fluctuations (Chesnais 1994, 1996; Gonçalves et al. 1999).

According to Belluzzo (2005: 228, authors' translation), the global economy after the end of the Bretton Woods regime in the 1970s was characterized by three movements: "the financial and foreign exchange liberalization; the changes in the competition pattern; the modification in the institutional rules governing trade and investment." The first movement represented an expansion of liberalization and deregulation processes of financial and foreign exchange markets both at national and international levels. This resulted in an intensification of the "financialization" process of the economy² through a higher degree of financial asset flows and stocks in the composition of private income and wealth.

As Coutinho and Belluzzo (1998: 138, authors' translation) state, economic agents "began to subordinate their spending, investment and saving decisions to their expectations of the pace of their financial enrichment." This process was reinforced by the development of even more complex financial innovations, such as securitization and derivatives operations, and by the surge of new agents, such as institutional investors (e.g. mutual funds, insurance companies and pension funds).³ If, on the one hand, all these phenomena made high speculative and patrimonial gains possible, on the other hand, they made the system much more unstable and subject to systemic risks, given the high leverage degree and asset price volatility⁴ (Tavares and Belluzzo 2002: 153).

The second movement, related to the changes in the global competition strategy of large corporations, was characterized by a relocation of productive facilities and a capital concentration and centralization, both reflected in growing foreign direct investment flows (FDI), especially of M&A operations. The strategy for creating global productive networks contributed to changes in investment and trade

flows. Simultaneously, corporations adopted strategies to promote technological modernization, including the establishment of joint ventures, and also asset "financialization," aiming for a combination of profitability and liquidity in their portfolios.

The third movement was caused by the pressure of the economic agents in this new competitive environment on the institutional rules governing trade and investment, so that national states could make trade and investment inflows and outflows more flexible, thus moving them towards a global scale. In the context of globalization, it meant the promotion of trade and financial openness which resulted in a higher or lower external vulnerability for the countries, depending on the degree that the openness was conceived (Tavares and Belluzzo 2002).

For the large corporation, all these movements represented a technological change, a productive restructuring and an increasing presence of the quest for financial valorization into its dynamics.⁵ The corporation's logic of growth and survival became dependent not only upon its productive activities, including technological progress and investments, production and sales elsewhere, but also upon the financial possibilities of resource application and funding. The widespread movement of the financial globalization process suppressed the existing barriers to capital mobility. As a result of a competitive dynamics⁶ companies entered much more intensively into financial markets, either for raising funds or investing resources in profitable and liquid assets. Therefore, finance became a strategic and decisive element within the corporation's logic.⁷

This tendency towards a higher importance of finance within the corporation was also a consequence of the logic of maximizing shareholder value,⁸ i.e. managing the company by aiming to increase its stock value and to distribute dividends to the owners of the company's shares, which were in most cases big institutional investors with diversified and global portfolios. Short-term results became a major goal for corporations, very often contrary to their long-term activities and gains.⁹ As Guttman (2008: 12–14, authors' translation) points out, "large increases of financial assets in the portfolios of non-financial corporations...with financial income (interests, dividends, capital gains) becoming in the same extent more important" were observed.

According to Lazonick and O'Sullivan (2000), there was a change in the corporation's strategic orientation from "retain and reinvest" to "downsize and distribute." The central strategy for retaining profits and reinvesting in the company's growth,¹⁰ which predominated in the "Golden Age" of capitalism, when finance mainly played the role of supporting investment plans, has been modified from the 1980s onwards. Since then, corporations have aimed to downsize their workforce, in order to rationalize production and reduce costs, and to distribute dividends to shareholders, besides using income to increase dividends

or repurchasing shares to raise their prices. In such strategies, a greater interpenetration between the functioning of financial markets and the performance of big corporations was promoted.

With this background, this article aims to analyze the increasing role of finance in the dynamics of automobile corporations. Data from the financial statements of selected carmakers (Daimler, Fiat, Ford, General Motors, Honda, Hyundai, Toyota and Volkswagen) between 2000 and 2009¹¹ are taken, in order to verify the occurrence of a “financialization” movement in this industry, understood as a central role played by finance within the corporation’s logic. This financial dynamic is characterized under three perspectives, each one being discussed in a specific section. In the first section, companies’ asset and capital structure is discussed. In the second section, the participation of the financial segment in the corporate activities due to the possibility of significant non-operating gains from these operations is assessed. In the third section, the groups’ degree of financial exposure is examined as it may represent a higher financial fragility as part of companies’ cash flows is committed to interest and dividend payments or buyback operations. Some concluding remarks follow.

Asset and Capital Structure of Automobile Corporations

Analysis of the corporations’ assets and liabilities structures allows the identification of their main resource applications and funding. It also provides features to understand companies’ degree of capital immobilization and financial exposure as it makes possible a comparison between short- and long-term positions and the dependence upon external resources to the enterprise.

Figure 1 shows the evolution of companies’ sizes measured by the amount of their assets during the 2000s. In the first half of the decade, a predominance of the so-called Big Three, the three giant American companies of the sector (General Motors, Ford and DaimlerChrysler),¹² was observed. For instance, GM accumulated assets of almost US\$480 billion in 2004. Ford’s wealth surpassed US\$300 billion in 2003.

However, productive and financial conditions that may have given rise to these structures have progressively deteriorated as a result of competitiveness loss and increasing financial fragility of American groups. The emergence of new competitors, especially Japanese companies, has challenged the hegemonic position of American carmakers. Driven by a new productive pattern—the Toyotism¹³—and the continuous concern about the development of greener technologies, such as alternative means of propulsion and lower degree of pollution emission, and more efficient vehicles with lower fuel consumption, Japanese carmakers could expand into other markets, including the United States.

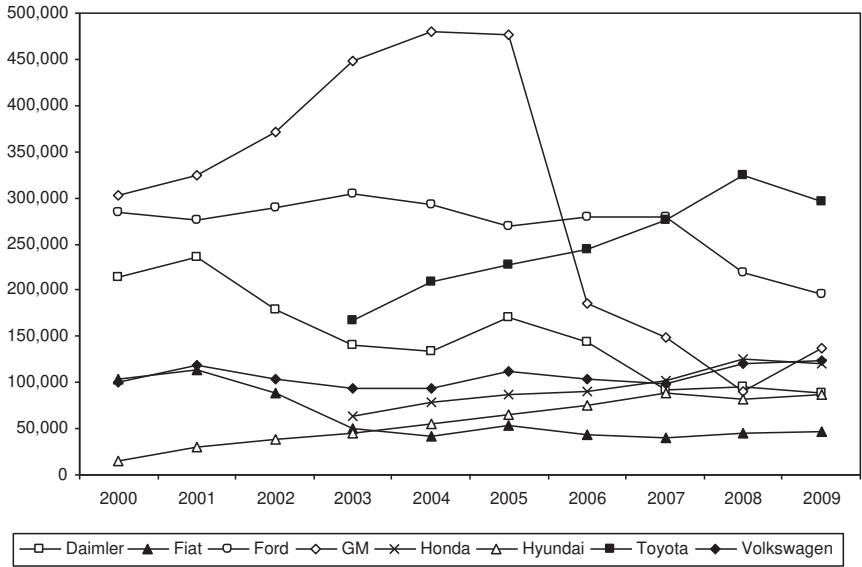


Figure 1 Evolution of assets of selected carmakers, 2000–09 (US\$ million)

Source: Authors' calculations based on corporations' balance sheet data.

Notes: (1) From 2007 onwards data for Daimler refer only to the Daimler Group; in the period before, data refer to DaimlerChrysler. This explains the decrease in assets from 2006 to 2007. (2) Sale of GM's financial arm, the General Motors Acceptance Corporation (GMAC), in November 30, 2006, thus resulting in a sharp reduction of the company's assets from 2005 to 2006. (3) GM's restructuring process in 2009, releasing in that year just balance sheet data of the new company, from July 10, 2009 onwards.

In addition to fiercer competition in the domestic market, American companies faced some difficulties in dealing with high labor and pension costs, although their debt with retired workers also represented a funding source for them.¹⁴ With the increasing fragility of their financial structure and a number of other factors, American and, to a lesser extent, European carmakers embarked on a productive restructuring process in the quest for cost reduction through downsizing by firing workers, negotiating with the US automotive trade union (the United Auto Workers, UAW) to flexibilize contracts, relocating global production or closing some facilities.¹⁵ Hence, even before the international economic crisis of 2008, the fragile situation of American corporations could be observed.¹⁶

Asian companies, such as Honda, Hyundai, and particularly Toyota, registered a great expansion of their assets in this period. Toyota's total assets were around US\$325 billion in 2008, when the company became the world's major carmaker. Among the European groups, different patterns are observed. Whereas Volkswagen

showed an increase in its assets, Fiat presented a decline early on in the decade as a consequence of some difficulties faced after the partnership with GM in 2000 regarding competitiveness loss, sales decrease and high indebtedness degree¹⁷ (Figure 1).

Important patrimonial changes occurred during the decade and these were reflected in the assets and the following indicators. Due to the sale of its financial arm at the end of 2006, GM reduced its assets by approximately US\$290 billion from 2005 to 2006. By adopting downsizing strategies, GM and Ford promoted asset shrinkage through the sale of low-profitable brands as part of their restructuring plans and as a way to raise funds.¹⁸ The end of the merger between Daimler and Chrysler in 2007 also represented a decrease in the total assets of the Daimler group.

According to the corporations' balance sheet data, current assets, which were mostly composed of short-term financial investments (cash, cash equivalents and short-term securities), financial receivables and inventories, tended to predominate in American companies (Ford, GM until 2005 and DaimlerChrysler) and some European groups (Fiat and Volkswagen in some years). For the Asian companies Honda, Toyota and especially Hyundai, long-term assets had a higher rate with emphasis on the amount invested in fixed capital (property, plant and equipment) and long-term receivables (loans and leasing), which were important for Japanese companies. In the Big Three's long-term assets, besides fixed capital, equipment on operating leases, which means the residual value of leased vehicles financed by their financial arms, also represented an important share.

The analysis should not only focus on companies' asset structure, but also on their capital structure. Figure 2 shows that while Asian carmakers presented in general an equity share of 30 percent to 40 percent (less in Hyundai), in European companies this share was around 20 percent (lower in Fiat) and below 10 percent in the American case. That points to different indebtedness degrees of each group. As a first proxy, it highlights a sharp fragility of American carmakers' capital structures, which were basically composed of liabilities.

Therefore, it is clear that all automobile companies considered in this article operated with a leverage degree (TL/E) greater than 1, i.e. the amount of debt was higher than resources owned by shareholders and accumulated as results of companies' performance. In general, it was more than twice or three times the equity amount. The leverage degree tended to be lower in Japanese companies, followed by the South Korean Hyundai, European and American companies. The latter presented an extremely high leverage during the decade. Even just taking into account the short-term obligations in relation to equity (STL/E), a considerably high leverage could be observed, being less than 1 in the whole period only for Toyota. This fact points to a substantial indebtedness and dependence on external sources

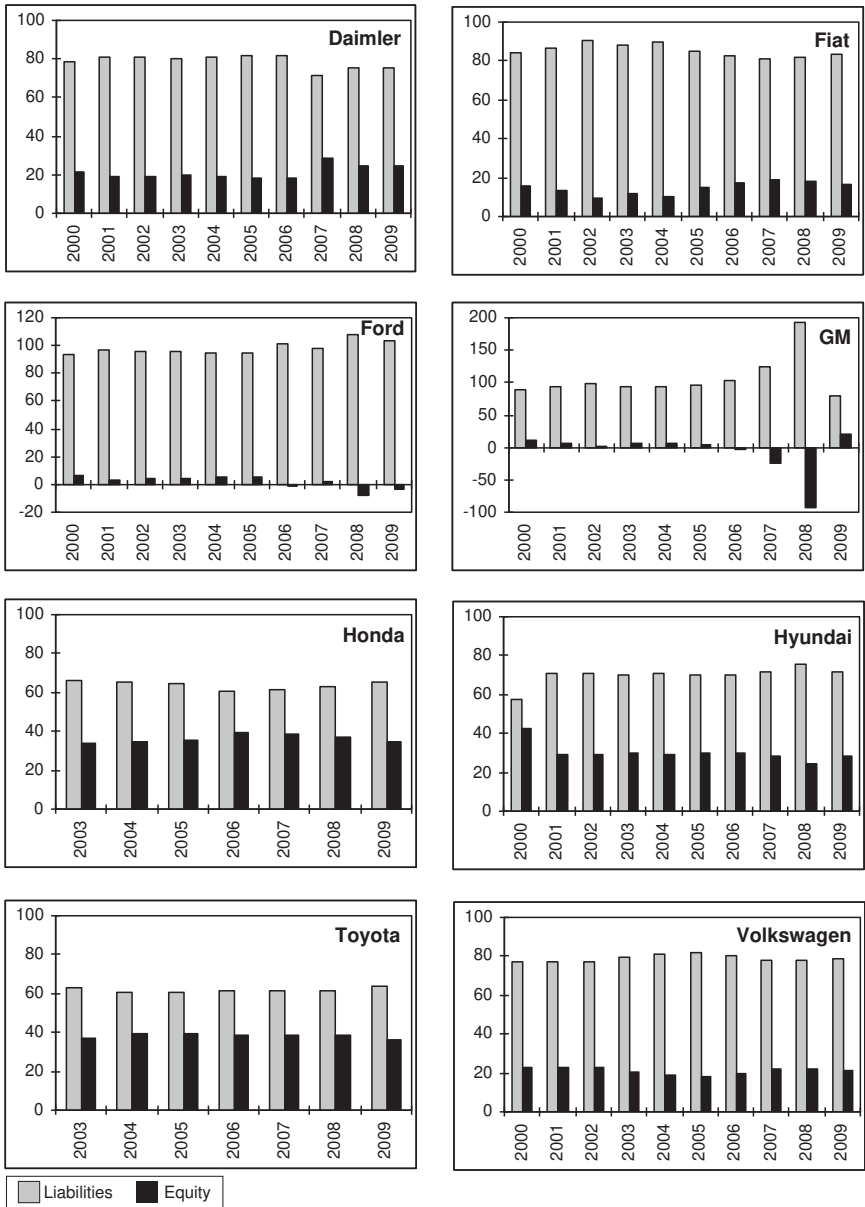


Figure 2 Capital structure of selected carmakers: liabilities and equity (%)

Source: Authors' calculations based on corporations' balance sheet data.

Note: The sum of the columns for each year equals 100%.

Table 1 Indicators of capital structure and indebtedness of selected carmakers (%)

	Daimler			Fiat		
	TL/E	STL/E	STL/TL	TL/E	STL/E	STL/TL
2000	364.2	191.7	52.6	529.6	260.4	49.2
2001	426.1	210.2	49.3	640.4	292.4	45.7
2002	430.0	209.6	48.7	966.0	366.8	38.0
2003	410.1	192.2	46.9	736.8	356.8	48.4
2004	430.3	221.8	51.5	894.3	493.5	55.2
2005	443.5	230.3	51.9	563.5	339.3	60.2
2006	445.8	220.1	49.4	480.9	257.7	53.6
2007	253.4	128.0	50.5	433.2	250.7	57.9
2008	304.0	159.5	52.4	456.5	267.2	58.5
2009	304.8	149.4	49.0	504.9	258.1	51.1
	Ford			GM		
	TL/E	STL/E	STL/TL	TL/E	STL/E	STL/TL
2000	1,375.0	649.7	47.3	877.1	451.0	51.4
2001	3,169.6	1,236.2	39.0	1,484.0	603.9	40.7
2002	2,469.8	868.6	35.2	4,748.1	1,779.5	37.5
2003	2,374.4	967.5	40.7	1,653.7	592.2	35.8
2004	1,629.4	760.8	46.7	1,605.4	597.7	37.2
2005	1,814.0	682.5	37.6	2,944.8	1,068.6	36.3
2006	-12,179.5	-4,112.1	33.8	-4,480.0	-1,624.5	36.3
2007	3,861.8	1,241.5	32.1	-519.6	-198.3	38.2
2008	-1,454.7	-478.3	32.9	-206.7	-88.0	42.6
2009	-3,090.8	-893.2	28.9	370.7	181.1	48.8
	Honda			Hyundai		
	TL/E	STL/E	STL/TL	TL/E	STL/E	STL/TL
2000	—	—	—	135.7	87.9	64.7
2001	—	—	—	247.2	155.7	63.0
2002	—	—	—	243.2	155.0	63.7
2003	192.1	118.7	61.8	233.8	155.8	66.6
2004	189.8	116.0	61.1	240.7	156.0	64.8
2005	183.3	114.0	62.2	235.5	153.0	65.0
2006	156.2	96.7	61.9	237.3	147.6	62.2
2007	161.3	93.1	57.7	253.6	156.0	61.5
2008	169.2	99.8	59.0	307.1	189.7	61.8
2009	186.1	102.6	55.1	253.3	149.4	59.0
	Toyota			Volkswagen		
	TL/E	STL/E	STL/TL	TL/E	STL/E	STL/TL
2000	—	—	—	332.1	226.7	68.3
2001	—	—	—	334.2	219.2	65.6
2002	—	—	—	341.0	197.6	58.0
2003	171.0	94.9	55.5	385.6	213.8	55.4
2004	155.5	88.1	56.6	430.0	203.2	47.2
2005	154.8	86.2	55.6	462.8	225.4	48.7
2006	157.7	89.9	57.0	406.7	198.4	48.8
2007	161.3	94.4	58.5	355.1	175.6	49.4
2008	159.1	95.3	59.9	349.1	173.3	49.6
2009	174.2	99.9	57.4	373.4	185.8	49.8

Source: Authors' calculations based on corporations' balance sheet data.

Notes: Leverage degree = total liabilities (TL) / equity (E); relation between short-term liabilities (STL) and equity (E); indebtedness composition = short-term liabilities (STL) / total liabilities (TL). There were negative indicators in some years for American companies due to their negative equity resulted mainly from their accumulated losses. In 2006, Ford's equity was negative and low, distorting the indices values.

to finance their resource applications. Additionally, the indebtedness composition (STL/TL) shows that around 50 percent to 60 percent of total indebtedness corresponded to short-term liabilities. Long-term liabilities tended to be greater for American corporations, which registered the lowest relations between short-term and total liabilities, followed by European and Asian companies (Table 1).

One of the most important components of long-term liabilities was the retirement and pension debts. In some companies, such as GM and Volkswagen, they represented more than 10 percent of total indebtedness (Figure 3). For American corporations this debt was above US\$10 billion and only Volkswagen had a debt close to this value. As noted above, the split of DaimlerChrysler meant an expressive reduction of the debt stock with such obligations, as observed from 2006 to 2007. They tended to increase in Ford in relation to the total debt amount since 2004. They almost doubled from 2004 to 2007, registering US\$15.3 billion and US\$30.4 billion, respectively. In General Motors, these debts surpassed US\$62 billion in 2006. The share of long-term retirement and pension debts in total indebtedness which was higher than 30 percent since 2006 is explained by the increase in such obligations from 2005 to 2006 and, above all, by the reduction of the company's total liabilities from US\$460 billion in 2005 to US\$190 billion in 2006 due to the sale of GMAC.

Nevertheless, although this liability amount and its cost-related obligations were an additional challenge, especially for American companies as they struggled to

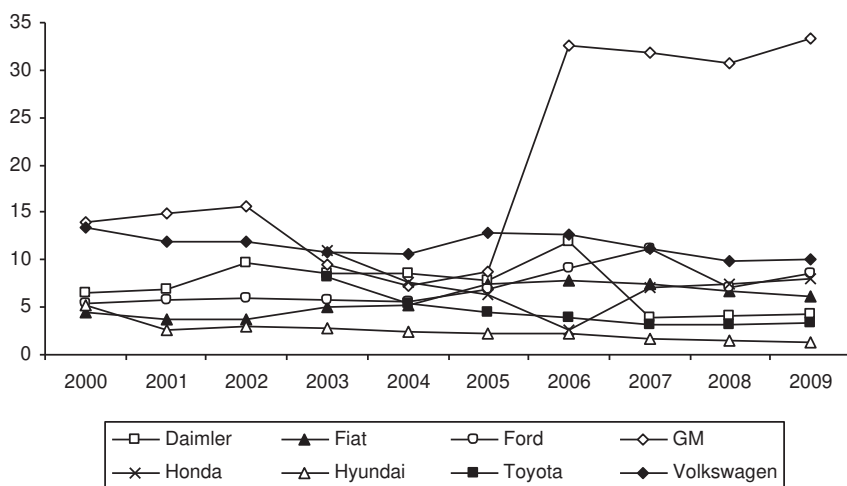


Figure 3 Share of long-term retirement and pension debts in total indebtedness by selected carmakers, 2000–09 (%)

Source: Authors' calculations based on corporations' balance sheet data.

maintain their competitiveness, it should be argued that their more fragile situation was not simply a result of production costs disadvantages or of their pension benefits model. American corporations presented a distorted capital structure with extremely high indebtedness which was a consequence of financial operations conducted within the group by their financial arms that were not necessarily related to their productive activities or even vehicle financing. Despite being generally and increasingly adopted among all companies, financial practices were more pronounced among American carmakers as the following sections may suggest.

Participation of the Financial Segment in the Corporate Activities

The previous asset and capital structures resulted in part from the increasing weight of the financial segment within the corporation. As vehicles were relatively expensive goods, sales depended on credit. Carmakers' financial subsidiaries or captive finance companies¹⁹ were thus initially created as a way to ease the production spreading through sales financing.

The General Motors Acceptance Corporation (GMAC) was founded in 1919 by GM and in 1920 it expanded its operations to the United Kingdom. The consolidation of the financial arm of its main competitor Ford only occurred in 1959 with the establishment of Ford Motor Credit Company. One year before, GMAC had already registered 40 million financed vehicles. In 1964, Chrysler Credit Corporation was set up and through an acquisition originated the Chrysler Financial Corporation in 1967. Volkswagen's bank appeared some years before, in 1949, as the Volkswagen Finanzierungsgesellschaft mbH. In 1966, the leasing company, Volkswagen Leasing GmbH, was created.

During the 1980s and in parallel to the strengthening of Japanese carmakers in the United States, their financial subsidiaries were established: the American Honda Finance Corporation in 1980 (although it started car financing in 1986), Toyota Financial Services in 1983 (including credit and insurance companies) and Hyundai Motor Finance in 1989.²⁰ As a comparative parameter for the degree of financial activities development in the US, the case of GMAC may be mentioned. In 1985, it registered for the first time earnings above US\$1 billion and more than 100 million financed vehicles, besides the diversification of its operations towards the real estate mortgage segment with the creation of GMAC Mortgage.²¹

In more recent years some patrimonial reorganization occurred. In 1994, Volkswagen Financial Services AG was created in Volkswagen group to manage the corporate activities of the financial segment in Europe. In order to coordinate the worldwide operations of Toyota's financial subsidiaries, the Toyota Financial Services Corporation was established in 2000. Among American corporations, major changes were verified in General Motors and Chrysler. In 2005, GMAC

launched a new holding to its mortgage operations, the Residential Capital LLC (ResCap). In the following year, due to the downgrade of GM's and GMAC's bonds (a similar situation was faced by Ford) by rating agencies to speculative grade (or junk status) and consequent greater refinancing difficulties, the corporation decided to sell 51 percent of the shares of its profitable financial arm to Cerberus Capital Management. The attempt was to reduce GMAC's risk perception by investors and let it raise funds under more favorable conditions in order to keep the vehicles financing.²²

It is worth mentioning that Cerberus Capital Management also became the major shareholder of Chrysler Financial after 2007 after the end of the merger DaimlerChrysler originated in 1998 and its acquisition of Chrysler group. During the financial crisis, at the end of 2008, GMAC obtained the Federal Reserve's (Fed) approval to become a banking holding (Dash and Bajaj 2008). In the following year, its financing activities were extended to Chrysler's products and the Ally Bank was established, called Ally Financial since 2010.²³ Also in that year GM bought AmeriCredit, an important company in the segment of subprime loans to vehicle acquisition, for US\$3.5 billion (The Economist 2010b).

This expansion of financial activities is reflected in the corporations' asset composition divided into automotive and financial services segments (Figure 4). In spite of the predominance of assets from the productive segment in most companies, except for General Motors and Ford, companies' asset composition indicates an increasing share of financial assets in total wealth during the 2000s, more sharply in Honda, Hyundai and Toyota. For Volkswagen and Daimler, this participation was already large at nearly 50 percent. In GM and Ford, a different pattern was verified, since the presence of assets from financial services was expressive. Most of these assets were related to financial receivables, highlighting the importance of their diversified financial arms within the corporation. The abrupt change in the trajectory of increasing participation of the financial segment in GM is obviously explained by the sale of GMAC in 2006.

Although there is a general trend of intensification of assets from the financial segment within corporations, the degree and rhythm of this trend vary among companies. To some extent, lower barriers to capital and goods circulation under the globalization process and the consequent worldwide expansion of business activities in the search both for producer and consumer markets may have reinforced this logic. However, differences observed among companies point to the fact that corporations' and governments' decisions still matter, i.e. changes under globalization have not simply resulted in a flat world. Such differences are probably conditioned by the institutional framework of corporations' countries of origin and main markets as they may present particular characteristics that may interact with the company's behavior. The trend verified for American groups

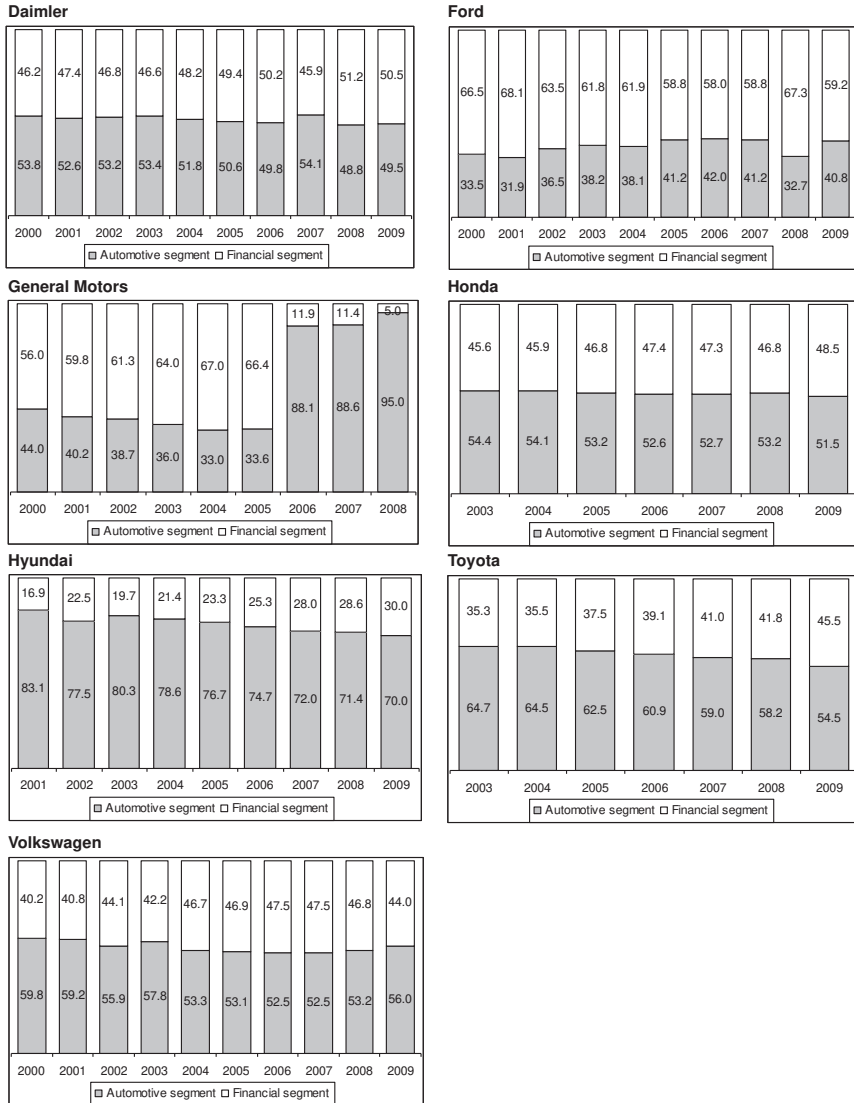


Figure 4 Participation of assets from the financial and the automotive segments in the total wealth of selected carmakers, 2000–09 (%)

Source: Authors' calculations based on data from corporations' annual financial statements.

Notes: (1) Charts for the companies which presented in their statements the asset division by segment (automotive and financial)—from 2001 onwards for Hyundai and until 2008 for GM, which restructured itself in 2009 (in that year, released data were separated between the previous company, until July 9, 2009, and the new company, from July 10, 2009 onwards, and not by segment anymore). (2) From 2007 onwards data for Daimler refer only to the Daimler Group (with Daimler Financial Services); in the period before, data refer to DaimlerChrysler. (3) Change in GM's assets composition from 2006 onwards due to the sale of its financial arm GMAC.

seems to be more restrained and later for the European²⁴ and especially the Asian companies.

This marked presence of the financial segment in the corporations' structure may also be viewed under a performance perspective. Figure 5 shows the overall performance by company according to its net profits. Whereas Toyota and Honda registered high net profits in most part of the period and Hyundai and Volkswagen kept at least positive results in the decade, DaimlerChrysler, Ford and General Motors, especially these two, presented substantial losses at many moments. It exemplifies the crisis faced by American carmakers even before the world economic slowdown in 2008.

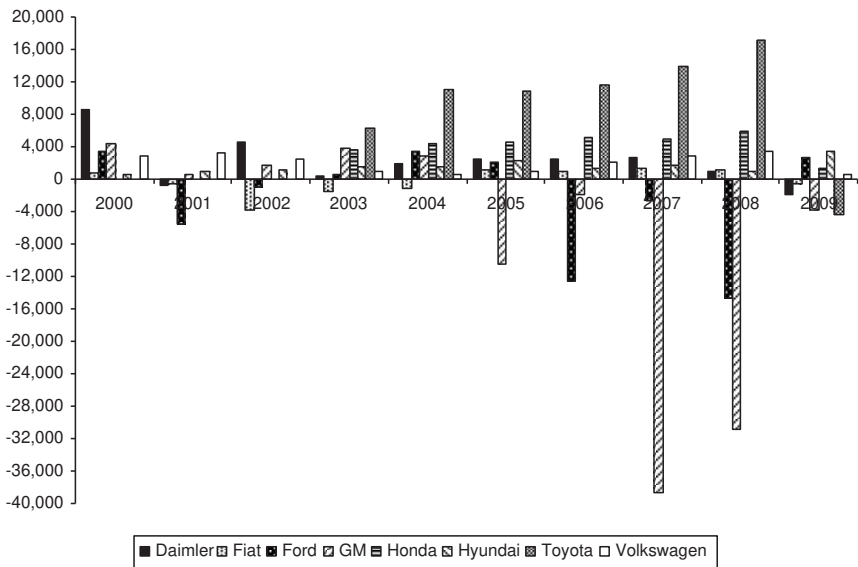


Figure 5 Net profits of selected carmakers, 2000–09 (US\$ million)

Source: Authors' calculations based on data from corporations' annual financial statements.

Notes: (1) From 2007 onwards data for Daimler refer only to the Daimler Group; in the period before, data refer to DaimlerChrysler. (2) In 2009, GM restructured itself; released data were separated between the previous company, until July 9, 2009, and the new company, from July 10, 2009 onwards. It was considered here only net profits of the new company, created after GM's bankruptcy, in order to avoid a distortion in values, since net profits of the previous company were US\$109,003 million under effect of reorganization gains and accounting changes.

However, the origin of these results should be emphasized. Figure 6 points out that GM had a strong dependence upon the financial segment. Contrary to GM, Toyota and Hyundai relied much more on the productive segment. For Daimler

(or DaimlerChrysler), despite the predominance of net profits from the automotive operations, the difference between productive and financial profits was not very expressive over many years.

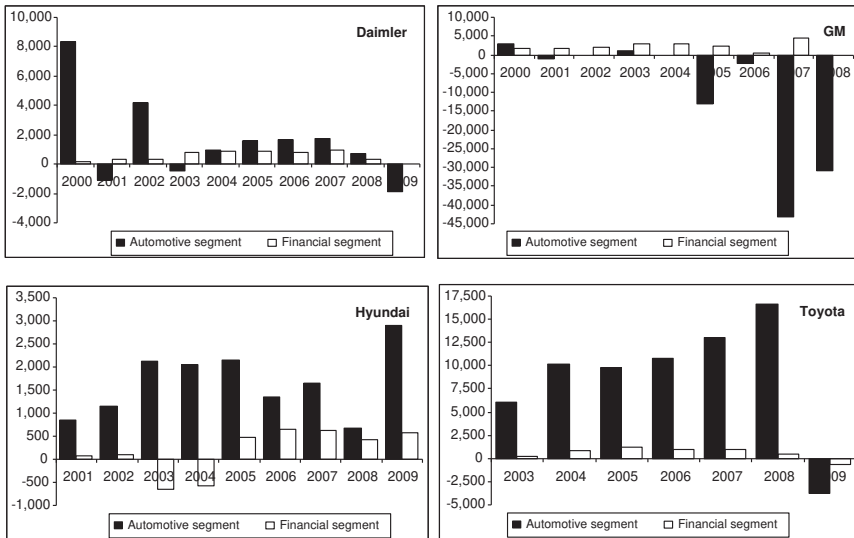


Figure 6 Net profits of selected carmakers by segment (automotive and financial), 2000–09 (US\$ million)

Source: Authors' calculations based on data from corporations' annual financial statements.

Notes: (1) Charts for the companies which presented in their statements net profits by segment (automotive and financial)—from 2001 onwards for Hyundai and until 2008 for GM, which restructured itself in 2009 (in that year, released data were separated between the previous company, until July 9, 2009, and the new company, from July 10, 2009 onwards, and not by segment anymore). (2) From 2007 onwards data for Daimler refer only to the Daimler Group (with Daimler Financial Services); in the period before, data refer to DaimlerChrysler. Although it does not appear, the result of the financial segment in 2009 was US\$2 million. (3) From 2006 onwards, after GMAC's sale in November 30, 2006, there was a change in presenting GM's results, being the separation by segment only released for some few accounts. In the case of net profits, the results of continuing and discontinued operations were used as proxies to the automotive and financial segments, respectively. In 2002 and 2004, the result of the automotive segment was negative in US\$146 million and US\$89 million, respectively. In 2008, the result of the financial segment was zero.

Moreover, the financial services segment rarely registered net losses. Consequently, profits from these activities could contribute to an even higher total profit, when the automotive segment had surpluses (in Toyota's case, for example), or to minimize losses obtained from productive operations (as in GM),²⁵ denoting the importance of financial activities in corporations. As pointed out by Mercer (2009: 187, author's emphasis) with respect to Ford—which could be

extended to the other American companies—the corporation “was increasingly dependent, for better or worse, on financial services as a source of income,” indicating a “financialized” pattern, partially “defined as a growing reliance on profits from services related to car *transactions*, rather than profits derived from car *manufacturing*.” It should also be added that sometimes these profits were not even related to car transactions, but to other financial activities that resulted from a massive diversification of their operations.

These findings highlight the importance of financial activities within corporations. In the automobile industry, as carmakers have financial arms, originally created to ease the acquisition of goods produced by them through the sales financing, certain financial presence is expected to be identified into the companies’ dynamics. However, financial practices have been generalized in their behavior so that they could achieve liquidity and profitability by different portfolio combinations with a short-term horizon. An excessive diversification of their operations, as observed in the American groups, was also a strategy in this direction. These movements are associated with the dominance of the logic of maximizing shareholder value that guides corporations in order to fulfill financial markets requirements and keep being well-evaluated through their shares negotiated in the Stock Exchange. The next section deals with some of these features.

Financial Exposure of Automobile Corporations

The previous analysis of corporations’ assets and liabilities is complemented by an examination of their cash flows. Results may show, on the one hand, the presence of the logic of financial valorization within companies and, on the other, may reinforce differences between the set of corporations by highlighting features of higher financial fragility in the American case.

Corporations’ degree of financial exposure could be exemplified by the proportion of their total revenues committed to interest and dividend payments. The greatest share of revenues spent with interest payments was observed in American corporations, which was expected given their higher indebtedness level. In many years this share surpassed 5 percent for GM and Ford. The sale of GMAC affected the revenues but especially the financial expenses, thus resulting in a lower share from 2006 to 2007. Among other companies, the relative weight of interest payments was less significant. In some cases, such as for Honda, Hyundai, Daimler and Volkswagen, even net financial incomes were observed (Table 2).

Dividend payments as a proportion of revenues were, in general, less than the share of interest expenses and presented little difference among corporations. The relatively low and even declining dividend expenses among American corporations may have resulted from their conditions of more accentuated financial fragility

Table 2 Net financial incomes (or expenses) as a proportion of total revenues,* by carmaker, 2000–09 (%)

	<i>Daimler</i>	<i>Fiat</i>	<i>Ford</i>	<i>GM</i>	<i>Honda</i>	<i>Hyundai</i>	<i>Toyota</i>	<i>Volkswagen</i>
<i>Interests (% of total revenues)</i>								
2000	0.1	-1.0	-5.5	-5.2	–	2.3	–	-0.4
2001	0.1	-1.1	-6.2	-4.8	–	1.4	–	-1.1
2002	1.5	-1.2	-5.4	-4.1	–	0.4	–	-0.9
2003	-2.1	-1.9	-4.7	-5.1	-0.1	0.1	-0.2	-0.3
2004	-0.8	-1.3	-4.1	-6.2	0.0	0.0	-0.1	-0.6
2005	0.1	-1.8	-4.3	-8.2	0.0	-0.2	-0.1	-1.1
2006	0.4	-1.1	-5.5	-8.2	0.2	-0.4	-0.1	-0.2
2007	0.5	-1.0	-6.3	-1.7	0.3	-0.6	-0.2	0.4
2008	0.1	-1.6	-6.6	-1.7	0.3	-0.3	-0.2	0.2
2009	-1.0	-1.5	-5.8	-5.9	0.2	-1.0	-0.2	-0.6
<i>Dividends (% of total revenues)</i>								
2000	-1.5	-0.6	-1.6	-0.7	–	-0.8	–	-0.4
2001	-1.5	-0.6	-1.2	-0.7	–	-0.4	–	-0.5
2002	-0.7	-0.4	-0.5	-0.6	–	-0.6	–	-0.6
2003	-1.1	0.0	-0.4	-0.6	-0.4	-0.8	-0.7	-0.6
2004	-1.1	0.0	-0.4	-0.6	-0.4	-0.5	-0.8	-0.5
2005	-1.1	-0.1	-0.4	-0.6	-0.6	-0.7	-0.9	-0.4
2006	-1.0	0.0	-0.3	-0.3	-0.7	-0.6	-1.2	-0.4
2007	-1.6	-0.5	–	-0.3	-1.3	-0.5	-1.4	-0.5
2008	-2.1	-0.9	–	-0.2	-1.4	-0.5	-1.6	-0.6
2009	-0.8	-0.1	–	-0.1	-1.5	-0.3	-2.1	-0.8

Source: Authors' calculations based on data from corporations' annual financial statements (including cash flows).

* Net financial incomes (or expenses) are represented by interest incomes or payments and by dividend payments, both as a proportion of corporation's total revenues.

Notes: (1) Results of "0.0" refer to negative values with significant digits after the second decimal. Non-existent values for certain years are represented by "–". (2) From 2007 onwards data for Daimler refer only to the Daimler Group; in the period before, data refer to DaimlerChrysler. (3) GM's restructuring process in 2009. Both added results of the previous company, until July 9, 2009, and the new company, from July 10, 2009 onwards, were considered.

and lower profitability in the period. Only Daimler (including the DaimlerChrysler period) kept dividend payments higher than 1 percent of total revenues over many years. A similar trend has recently been observed among the Japanese companies Honda and Toyota, which have increased dividend expenses more than the rises in their revenues under a strategy of creating shareholder value (Table 2).

An additional feature of this discussion showing the greater interpenetration between the functioning of financial markets and the performance of big corporations concerns the net issuance of stocks, which was negative for many corporations during the 2000s (Table 3). That means there were important buyback movements. Most expressive repurchasing operations were observed in Toyota and to a lower degree in Honda. This practice, common to American corporations

since the 1980s, has more recently been adopted quite often by other companies as well in order to keep their stock prices high, besides the possibility of increasing dividend payments.

Table 3 Net sales (or purchases) of stocks, by carmaker, 2000–09 (US\$ million)

	<i>Daimler</i>	<i>Fiat</i>	<i>Ford</i>	<i>GM</i>	<i>Honda</i>	<i>Hyundai</i>	<i>Toyota</i>	<i>Volkswagen</i>
2000	26	2,764	-1,229	1,179	–	342	–	-1,512
2001	10	-302	-1,385	253	–	114	–	-238
2002	0	1,085	287	-16	–	49	–	31
2003	6	1,458	9	60	-472	198	-3,782	-2
2004	0	15	-151	0	-902	6	-3,382	5
2005	170	0	325	0	-784	6	-2,459	67
2006	235	17	248	–	-656	–	-1,104	258
2007	-1,241	-265	219	–	-226	–	-2,505	143
2008	-2,963	-160	756	–	-307	–	-3,111	-103
2009	1,356	9	2,450	–	1	–	-719	-269

Source: Authors' calculations based on data from corporations' annual financial statements (including cash flows).

Notes: (1) Non-existent values for certain years are represented by "–". (2) From 2007 onwards data for Daimler refer only to the Daimler Group; in the period before, data refer to DaimlerChrysler.

For the selected carmakers in this article, it could be stated that, in general, whenever more stocks were repurchased than issued the traded amount tended to be higher and whenever more stocks were issued than repurchased the traded amount tended to be lower. This fact indicates that during this period stock operations represented much more profitability and volume adjustments to the requirements of financial markets than an important source of investment financing, once again reinforcing the presence of a financial logic within corporations, which despite important differences among groups can be generalized as a dominant feature of their behavior.

Concluding Remarks

The aim of this article was to analyze the increasing role of finance in the dynamics of automobile corporations, in order to verify the occurrence of a "financialization" movement in this industry by discussing their financial structures. All patterns were characterized by a strong presence of finance within the groups' dynamics, which was accentuated in the context of lower restrictions on capital mobility at global level and reflected in the companies' "financialized" structures. The data suggested that this process of "financialization" worsened during the 2000s as financial practices commonly and increasingly became part of carmakers' operations. However, data also showed that these financial patterns could be distinguished

from each other in accordance with the corporate dependence upon activities from the financial segment and the degree of exposure of their financial structures.

It is reasonable to expect that financial operations in support of production, investments and sales increase when a carmaker's global productive expansion takes place. This match between productive and financial dimensions is a requisite for the corporation's growth as observed in the case of Asian companies. They also presented a pattern which was heavily based on the accumulation of internal funds originating, above all, from productive operations and to a lower degree of financial exposure.

The American corporations, on the contrary, registered an excessive dependence upon financial activities. A clear mismatch between the financial and productive segments within the corporations could be observed. In spite of its role in relation to production, finance acquired its own dynamic, reflected in its autonomy from productive activities, a large importance in the company's performance and a diversification to areas not related to its core business, i.e. sales financing. The American pattern was, moreover, marked by high indebtedness and consequently a high leverage ratio not necessarily associated with the productive needs and by a greater commitment of the group's income to financial expenditures as well, thus denoting more fragile financial structures.

A third and intermediate pattern between the American and the Asian structures was identified in the European carmakers, a heterogeneous group. Financial activities tended to show a significant weight. They played their complementary and essential role in the corporation's productive dynamics, but without a growing or clear mismatch from their core business, except for specific moments. Although it did not mean a particular strategy in this direction of "finance by itself," it could not be denied that European groups as well as other carmakers were deeply embedded in a broader logic conducted by financial markets.

As the recent international crisis showed, despite all companies being affected by the credit crunch in late 2008, the previous different financial patterns resulted in more severe constraints for American corporations. Their higher financial fragility was immediately translated into insolvency risk. It was not by chance that General Motors and Chrysler received bail-outs from the US government in order to maintain their activities, even at a lower level, and promote through state intervention a restructuring process in 2009. Hence, the crisis developments suggest the need to rethink the articulation pattern between finance and production within automobile groups, especially of American carmakers, which means in broader terms to re-establish the role played by the financial dimension in corporate dynamics.

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Notes

1. As Chesnais (2005b: 46, authors' translation) stresses, the financial globalization, or "mundialization" in the author's words, results from three processes: "the monetary and financial deregulation or liberalization, the compartmentalization of national financial markets and the disintermediation, i.e. the expansion of lending operations, previously reserved to the banks, to all sort of institutional investor."
2. A broad definition of this concept can be found in Epstein (2005) and Palley (2007).
3. These investors "adopt portfolio management strategies, reducing the average time of holding shares in accordance with more 'immediate' capital gains, internationalizing their applications and feeding the growth of derivatives markets" (Braga 1997: 206, authors' translation).
4. In Guttman's words (2008: 15–16, authors' translation), "key innovations, although they gave to the general credit system flexibility and reaction capacity in relation to creditors' and debtors' needs, they also encouraged asset bubbles, risks underestimation and excessive leverage."
5. See Chandler (1990), Braga (1997) and Gonçalves (2002).
6. Braga (1997: 216, authors' translation) emphasizes this fact: "as a result imposed by competition and risk management, companies engage themselves in finance that does not only imply an adequate debt and liability structure (to immobilize capital), but at the same time build an adequate creditor/asset position to have mobility, flexibility, innovative agility and velocity in capturing profitable opportunities in the several national productive and financial markets."
7. According to Chesnais (1995: 11, authors' translation), "the groups' 'financialization' degree has increased in a considerable manner. This refers more and more to financial groups, undoubtedly with industrial dominance, but also with a diversification to the financial services, besides an increasingly important activity as operators in the exchange market."
8. Process initiated through the separation between the company's property and control and intensified by the depth of the increasingly broad and liquid financial markets.
9. For more details about different features of the corporations' "financialization" process, see Aglietta and Rebiéroux (2005), Borghi and Rocha (2010), Chesnais (1994, 2005a, 2005b), Coutinho and Belluzzo (1998), Crotty (2002), Farhi and Borghi (2009) and Plihon (2005).
10. About the company's growth with a long-term perspective, see Penrose (1959).
11. This choice of carmakers was based on their relevance within the industry in terms of world production and sales, as well as the diversity of their regions of origin (United States, Europe and Asia). The period, in its turn, was selected due to data availability for most of the companies. It should be emphasized that data for Honda and Toyota only begin in 2003. However, in order to avoid information losses, it was decided to use data from 2000 onwards for all other companies. Moreover, different from other companies' fiscal year, which ends on December 31st of each year, in the case of Japanese corporations the fiscal year ends on March 31st of the referred year. All data were extracted from the annual financial statements released by the respective carmakers on their websites, listed at the end of this article.
12. The merger, one of the biggest in this sector, ended after the sale of Chrysler at US\$7.4 billion for Cerberus Capital Management, which acquired 80.1 percent of its shares and operations in financial services in 2007. As a result, Daimler extricated itself from financial obligations related to retirement costs and pension funds (US\$19 billion), one of the challenges faced by American

- carmakers (Valor Econômico 2007). About the problems of this controversial merger, see Köhler (2009).
13. See, for instance, Womack, Roos and Jones (1990), Shimokawa (1996), Freyssenet and Lung (1999) and ECLAC (2004).
 14. Total costs of the Big Three's benefits model were estimated between US\$90 billion and US\$95 billion in 2007. In September 2007, a general strike in GM's facilities in the United States occurred. It was only solved after an agreement with the UAW trade union, establishing a partial transference of the company's liabilities with the health plan of retired workers to an independent fund and the creation of a program of resignation, in order to allow cost reduction. As White and McCracken (2007, authors' translation) point out, "Detroit's problems are derived from a permanent reorganization of the world automobile industry in the face of globalization," stressing "what has been increasingly clearer in recent years: that it is Toyota Motor Corp., not GM or the UAW, who establishes the parameters of labor cost in the American automobile industry," since the difference between the cost of unionized operations in the US and facilities of Toyota and other Asian and European carmakers without trade unions was about US\$25 and US\$30 per hour.
 15. About labor and other challenges faced by American companies, see for instance Osang (2006a, 2006b, 2006c) and The Economist (2005a, 2005b, 2005c, 2006). For some strategies adopted by GM, Ford, Chrysler, Volkswagen and Renault in reaction to the rise of the Asian competitors, see Mackintosh (2006).
 16. About this discussion, see Borghi (2007) and Andrade (2009).
 17. See The Economist (2002) for the problems faced by Fiat and the partnership with GM, and The Economist (2005d) for the company's recovering, which involved not only the end of GM's 20 percent stock ownership agreement—in 2000 GM invested US\$2.4 billion and in 2005 it had to spend US\$2 billion to undo the transaction—but also the restructuring promoted by Marchionne when he became Fiat's CEO. The restructuring plan consisted of launching new vehicles, using common platforms in producing vehicles from Alfa Romeo's brand, sharing components with other brands of the group (Maserati) and establishing alliances with other corporations in order to reduce costs and take advantage of economies of scale. About the group reorganization, see also Volpato (2009).
 18. Part of Ford's restructuring plan consisted of selling luxury brands of its Premier Automotive Group (PAG). In 2007, Ford sold Aston Martin to a British consortium at US\$848 million and in 2008 Jaguar and Land Rover to the Indian Tata Motors at US\$2.3 billion (The Economist 2010a). This brand sales process accelerated after the international economic crisis.
 19. They are called in this way, because they are subsidiaries of a group from the productive sector whose purpose is to provide credit to consumers for the acquisition of goods produced by the corporation.
 20. Information on carmakers' financial arms was extracted from their websites, listed at the end of this article.
 21. Like GMAC, Ford's financial arm also started its diversification process not necessarily related to vehicles. In 1985, it acquired the First Nationwide Financial Corporation, a savings and loan institution sold in 1994. In 1987, it bought the U.S. Leasing International Inc. and, in 1989, the Associates Corporation of North America (at US\$3.35 billion), which would become independent in 1998 and be acquired by Citigroup in 2000. In 1994, the financial arm bought Hertz, a rental car company, which was then sold in 2005 (Bordenave 2000: 250–251; Mercer 2009: 187 and 199–200).
 22. About this discussion, see Senter Jr. and McManus (2009: 168–169).
 23. Ally Bank has been the main financing agent of Chrysler's dealers (Wernle 2011). Chrysler Financial was sold to the Canadian bank Toronto Dominion, an important institution of vehicles financing in Canada, at US\$6.3 billion in 2010 and still keeps a huge dealers network (Cleto 2010; The Economist 2010b).
 24. Jürgens (2009: 238) stresses this feature for Volkswagen: "...it is clear that VW has not taken the path that famous role models of the New Economy era had traced. Despite the expansion

of financial services, VW has not followed Ford and other companies in officially announcing a strategy of 'value migration' away from automobile manufacturing as a low-margin activity towards higher-margin activities downstream the value chain. The official policy is that financial services support VW's core business activities of auto manufacturing."

25. Such a case was also verified for Ford. As there were not net profits by segment, it was not possible to present a chart for the company. However, a similar trend could be observed through the profit before income taxes by segment. In this case, only in 2008 was there a financial loss (US\$2.6 billion), contributing to an even higher corporation's loss, since the productive segment registered a US\$11.8 billion loss. In all other years within the period 2000–09, the financial services segment presented a positive profit before income taxes and, except for 2000, higher than the profit from the productive sector which, in its turn, registered losses before income taxes from 2001 to 2008. Thus, the results from the financial services segment contributed in almost the whole period to decrease the corporation's losses and also to turn them positive between 2002 and 2005 (in the case of the profit before income taxes).

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- Ford: <http://www.ford.com/> and <http://www.fordcredit.com/index.jhtml>
- General Motors: <http://www.gm.com/> and <http://www.ally.com/>
- Honda: <http://world.honda.com/> and <https://www.hondafinancialservices.com/index.asp>
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