

# Reframing GM's Strategy 1909-1940: A Financialized Account

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## Abstract

This article focuses on resource management at General Motors' during the period 1909-1940. It argues that the Chandlerian understanding of the management of physical and financial resources within a decentralised and co-ordinated divisional structure was also infused with significant elements of a financialized business model. This alternative framing reveals how a range of interventions, sponsored by senior GM executives, financialized the management of resources across time and space. A broader understanding of resource management at GM frustrates the use of clear-cut organising stereotypes and it also reveals how ambiguities and contradictions are often in play limiting financial transformation.

Key words: General Motors; Strategy and Structure; Financialization.

## Introduction

The paper aims to reframe our understanding of General Motors (henceforth GM) during its formative years from 1909 to 1940. GM holds an iconic place in international business history as it is one of the American industrial groups at the centre of Chandler's analysis of the dynamics of managerial capitalism. Significantly, Chandler's work led to a lasting legacy in contemporary business history, namely the conceptualization and implementation of a general interpretative paradigm to analyse the emergence and development of modern industrial capitalism. This revolved around the relation between strategy and structure and how these elements interconnect in a way that underwrites long-term competitive industrial groups. Accordingly, it was possible to identify common trajectories and dynamics. These centred on the implementation of 'investments' in productive capacity and its coordination (multi-divisional structure) and how in combination these would minimize transaction costs, maximize throughput, and inflate returns on capital. Thus, investments in minimum efficient size and a separation between ownership and control associated with M-form organization provide a 'template' upon which to judge the presence of national and regional trends towards modern economic development (or the lack thereof).

Over the years, empirical research exposed various limitations in Chandler's work. For example, the author did not entirely grasp how national differences in institutional frameworks of corporate governance affect managerial accountability and variations in scale and scope economies.<sup>1</sup> Furthermore, Chandler's narrative tends to depict the emergence of multi-divisionalization as the outcome of a "discovery" that suddenly changed the US economy from the 1910s onwards.<sup>2</sup> Nonetheless, empirical research suggests that in most cases multi-divisionalization was actually the outcome of a path-dependent process of incremental transformation.<sup>3</sup> Finally, Chandler identifies the separation between ownership

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<sup>1</sup> Steven Toms & John Wilson, "Scale, Scope and Accountability: Towards a new Paradigm of British Business History," *Business History* 45:4 (2010): 1-23.

<sup>2</sup> Alfred J. Chandler, *Strategy and Structures. Chapters in the History of Industrial Enterprises*, (Cambridge Mass., 1962).

<sup>3</sup> John Quail, "Becoming Fully Functional: The Conceptual Struggle for a new Structure for the Giant Corporation in the US and UK in the First Half of the Twentieth Century," *Business History* 50:2 (March 2008): 127-146.

and control as the “historical” phenomenon that defines “modern” American industrial capitalism. Yet, it has been noted that ownership was more separated from control in the largest stock market of 1911 (London) than in the largest stock market in 1995 (New York).<sup>4</sup>

Nonetheless, by addressing organizations as evolving institutional forms, Chandler changed the way corporations were perceived. His analysis implied a business model based on the coordinated and efficient expansion of physical assets that could achieve efficiency combined with growth.<sup>5</sup> Thus, in spite of its limitation, Chandler’s interpretative framework still holds substantial currency in business history and business economics. For example, Lazonick employs a specific interpretation of the ‘Chandlerian’ corporation to construct a dichotomy between ‘old economy’ business models which are committed to product and process renewal, employment and reinvestment, and a ‘new economy’ business models characterized as being ‘financialized’.<sup>6</sup> Lazonick argues that the US financialized ‘new economy’ business model has undermined corporate commitment to product and process renewal for competitiveness because senior executives are motivated to deliver shareholder value, distribute excessive amounts of profit and downsize.

In this paper we question whether such a sharp distinction can be established between the old and new economy financialized business model. Our argument is that many of the elements of the so-called ‘financialized’ corporate enterprise are present at an early stage in GM and also within the US corporate sector more generally. To develop our argument we focus on the early history of GM from 1909 to 1940 and consider to what extent ‘elements’ of financialization and the financialized organization are present or absent during this period. To develop this investigative position we employ four organizing elements that are drawn from the financialization literature. Krippner’s observation that financialization is about the shift from investment and financial accumulation of tangible towards more liquid and tradable financial assets;<sup>7</sup> Lazonick’s observation about how financialized firms

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<sup>4</sup> James Foreman-Peck & Leslie Hannah, “Some Consequences of the Early Twentieth-Century British Divorce of Ownership from Control,” *Business History* 55:4 (2013): 543-564.

<sup>5</sup> Quail, “Becoming Fully Functional,” 127.

<sup>6</sup> William Lazonick, “Innovative Business Models and Varieties of Capitalism: Financialization of the U.S. Corporation,” *Business History Review* 84 (Winter 2010): 675–702.

<sup>7</sup> Greta R. Krippner, “The Financialization of the American Economy,” *Socio-Economic Review* 3 (2005): 2.

distribute more profit and sacrifice reinvestment because the financial motivations of senior executives, driven by their excessive remuneration, closes the agency gap;<sup>8</sup> and Froud et al. who argue that the financialization is about narratives that promise transformation for shareholder value but bottom line financial results are often disappointing.<sup>9</sup>

Our findings suggest that many of these ‘financialized’ elements are discernible in GM’s corporate strategy in terms of the management and deployment of resources and performativity during the period 1909 to 1940. We note that Chandler frames his analysis of GM as structure following strategy and the importance therein of the decentralized but co-ordinated organization for managing expansion and complexity.<sup>10</sup> Sloan, in his text *My Years with General Motors*, also reinforces the importance of policy formation (strategy) and the co-ordination of GM’s resource management through ‘co-ordination by committee’ and its associated use of ‘financial controls’.<sup>11</sup> However, Sloan also devotes a chapter to the General Motors Acceptance Corporation (henceforth GMAC) and the importance of providing credit finance to customers and another chapter on the creation of, and investment by, GM into a holding company to underwrite dealership financing and risk management.<sup>12</sup> Both GMAC and the Holding Company were established to facilitate the conversion of mass-produced outputs into costs recovered and profits realized. Furthermore, Sloan devotes yet another chapter to ‘incentive compensation’ where the purpose of a variety of bonus schemes was to ensure senior executives and employees were ‘partners’ sharing in profits and capital gains from stock price increases on the basis of their contribution to GM’s performance.<sup>13</sup> The purpose of these incentive plans was not only to hold on to or limit senior staff turnover but also align commitment(s) to the financial interests of stockholders. In the chapter ‘Financial Growth’ Sloan observes that stockholders were not only beneficiaries of substantial and generous dividends out of income but they needed to be called upon to provide on-going refinancing.

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<sup>8</sup> Lazonick, “Innovative Business Models,” 680-685.

<sup>9</sup> Julie Froud, Sukhdev Johal, Karel Williams and Adam Leaver, *Financialization and Strategy* (London, 2006).

<sup>10</sup> Chandler, *Strategy and Structures*.

<sup>11</sup> Alfred P. Sloan, John McDonald (ed.), *My Years with General Motors* (New York, 1964).

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

Our argument is that the Chandlerian framing of analysis as ‘strategy and structure’ limits the field of the visible and it is important to look for undisclosed differences and multiplicities. This would facilitate the development of alternative framing devices that capture the complexity and often contradictory aspects of business activity as history. In addition structuring our understanding of corporate affairs within typologies such as ‘old’ or ‘new’, ‘Chandlerian or Financialized’ is not so helpful when accounting for corporate policy and outcomes. Especially when elements of the either/or are simultaneously present over time and space. Moreover, the key ingredients of GMs financialized strategy are not elements that straightforwardly translate into higher returns on investment because contradictory forces are in play. In the following section we review the framing of Chandler’s organizing concept of ‘structure and strategy’ before turning to the literature on financialization and its key organizing elements.

### General Motors: Strategy, Structure and Financialization

Chandler’s classic text *Strategy and Structures*’ and Sloan’s *My Years with General Motors* provide a reflective account of the development of GM during its early history.<sup>14</sup> These accounts of GM’s industrial development also provide a more general template upon which to analyse the emergence and development of modern industrial capitalism. In Chandler’s work on the modern American corporation the thesis is that carrying out policies to secure growth in output can be considered as ‘*strategy*’ and that the ‘organization devised to administer these enlarged activities and resources, a ‘*structure*’.<sup>15</sup> Thus as the demand for industrial output expands this, in turn, generates the need for an appropriate structure which ‘can be defined as the design of the organization through which the enterprise is administered’.<sup>16</sup> An organization’s structure is a response to the need to manage increasing complexity as volumes increase and geographic dispersion is brought about by the need to produce and sell into a larger market.

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<sup>14</sup> Chandler, *Strategy and Structures*; Sloan, *My Years*.

<sup>15</sup> Chandler, *Strategy and Structures*, 13.

<sup>16</sup> *Ibid.*, 14.

Chandler observes that, in the case of GM, the expansion of business volume, mix of products and geographic span of operations led to problems of organization. 'The relations between operating divisions and between the divisions and the general office became more haphazard, less coordinated, and less supervised than they had been under Storrow and Nash.'<sup>17</sup> This interpretation of events conjoins issues of organization with personality and leadership. Chandler observed: 'Although the lack of any effective over-all administrative structure failed to disturb Durant... it did trouble the du Ponts'.<sup>18</sup> The du Ponts made their move to install changes after their first major investment in GM requesting capital appropriations be managed in a similar way to that at du Pont. Sloan recalls this change in approach at the Finance Committee meeting in November of 1919 during which GM executives had agreed to raise \$50 million in debenture stock and a possible additional \$50 million. The failure to generate this external funding (only \$11 million was raised) illuminated, according to Sloan, a conflict of realities whereby appropriations of capital needed to be competed for rather than allocated on the basis of a vote.

The failure to generate external funding and the subsequent collapse in revenues forced GM into a series of organizational adjustments focused upon the central co-ordination and management of capital allocations into the divisions, cash control, inventory management and production control. In each case the responsibility for financial control becomes located within the Executive and Finance Committee. In turn this committee needed to be furnished with information about sales, production inventory and cash management and competitive bids for financial capital working back from a forecast of how many cars GM could be expected to sell. In terms of facilitating the decentralized responsibilities with co-ordinated divisional control within GM Sloan observes that the critical element is the financial side of things.

"It was on the financial side that the last necessary key to decentralization with co-ordinated control was found. That key, in principle, was the concept that, if we had the means to review and judge the effectiveness of operations, we could safely leave the prosecution of these operations to the men in charge of them. The means as it turned out was a method of financial control which converted the broad principle of return on investment into one of the important working instruments for measuring

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<sup>17</sup> Ibid., 125.

<sup>18</sup> Ibid.

the operations of the divisions. The basic elements of financial control in General Motors are cost, price, volume and rate of return on investment”<sup>19</sup>

The central contribution of both Chandler and Sloan is that they draw our attention to business strategy as being decided and formulated by boards of senior executives in responses to changes in market demand, new product technologies and opportunities to generate a return on investment for shareholders. This process of strategy formulation is supplemented with another supportive narrative that describes how divisional managers are free to manage their own divisions subject to policies established by the executive committee, for example, volume of production, type of product and price bracket, and within certain cost limits.

“The co-ordination of the activities of all these division must be such that there will be no undue conflict, competitively, between the product of one division and that of another. General policies must be determined from the standpoint of the corporation as a whole, rather than from that of any one division. Each of these divisions is conducted as a business in itself. The responsible head operates the business with no other limitation than at which has been established by the policy of the corporation, expressed through its executive committee”.<sup>20</sup>

Chandler develops and extends his thesis about the nature and operation of business strategy and structure in *The Visible Hand* (1977)<sup>21</sup> in terms of the nature of hierarchy and the internalization of transactions within organizations rather than markets. This is again further reinforced in ‘economies of scope’. The object of these texts is to provide an explanation for the development of industrial capitalism and its dynamics within a ‘productionist’ framework. Chandler’s organizing elements focus on production, distribution and management where marketing and market sensing provide information to plan physical production schedules, product mix, revenues, expenses and return on capital within organization structures that facilitate professional management.

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<sup>19</sup> Sloan, *My Years*, 140.

<sup>20</sup> John J. Raskob. “Management: the Major Factor in All Industry,” *Industrial Management: the Engineering Magazine* LXXIV (July-Dec 1927): 131-132.

<sup>21</sup> Alfred J. Chandler, *The Visible Hand* (Cambridge, Mass. 1977).

In contrast the term financialization is a relatively new organizing concept and it is often employed to describe the behaviour of contemporary business enterprise and trajectory of economic development. At a macro-economy level Krippner describes economic development as a compositional shift in national balance sheets from productive tangible assets to financial assets that can be more easily traded or used to lever additional profit.

“I define financialization as a pattern of accumulation in which profits accrue primarily through financial channels rather than through trade and commodity production....’Financial’ here refers to activities relating to the provision (or transfer) of liquid capital in expectation of future interest, dividends and capital gains”.<sup>22</sup>

Lazonick and O’Sullivan and Lazonick<sup>23</sup> argue that financialization is about changes in corporate priorities away from productive investment in innovation for economic development towards the interests of shareholders. This is evidenced as a shift in the use of profits from productive reinvestment towards dividends distribution and share buybacks. In a recent *Guardian* article Lazonick observes that ‘for the period 2001-2010, 86 of Britain’s largest companies that are included in the S&P Europe 350 index made €882bn in net profits of which 63% was paid out in dividends.’<sup>24</sup>

“By financialization, I mean the evaluation of the performance of a company by a financial measure such as earnings per share. The manifestation of the financialization of the US economy is the obsession of corporate executives with distributing ‘value’ to shareholders in the form of stock repurchases, even if it is at the expense of investment in innovation and the creation of US employment opportunities”.<sup>25</sup>

Froud et al. point to the alignment of managerial and investor interests (a closure of the agency gap) because shareholder value metrics are embedded with executive remuneration packages which take the form of considerable cash bonuses and stock options.<sup>26</sup> However, in a financialized world narratives and numbers tend to exaggerate corporate transformation in order to help inflate share prices and market value.

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<sup>22</sup> Krippner, “Financialization,” 175.

<sup>23</sup> William Lazonick and Mary O’Sullivan, “Maximising Shareholder Value,” *Economy and Society* 29 (2000): 13-25; Lazonick, “Innovative Business Models.”

<sup>24</sup> William Lazonick, “Big payouts to shareholders are holding back prosperity”, *Guardian*, August 27, 2012.

<sup>25</sup> Lazonick, “Innovative Business Models,” 6.

<sup>26</sup> Froud et al., *Financialization*.



As mentioned earlier, Sloan himself emphasises the relevance of the financial side of the business in explaining multi-divisionalization.<sup>27</sup> This raises two interconnected questions: to what extent did GM's management of resources embody elements of the 'financialized' firm in its early history from 1909 to 1940, and how did these elements contribute to the physical, financial and managerial development of this company? We first argue that GM distributed a significant share of its profits as dividends during the period from 1909 to 1940 and that this represented the need to manage stockholder expectations and confidence so that GM would obtain on-going refinancing. Second, we observe that GM's balance sheet capital structure shifts from tangible assets (plant and equipment land and buildings) towards financial assets (loans). This is the deliberate outcome of activities carried out by the General Motors Acceptance Corporation (GMACs) of issuing loan finance to underwrite consumer credit purchases of GM vehicles. This changes the composition of the balance sheet and inflates balance sheet capitalization ahead of corporate earnings. Third, GM operated a substantial stock option bonus scheme for senior executives and also for other less senior employees. This may have helped to reduce employee turnover but would certainly help to close the agency gap between the interests and calculations of senior executives and their stockholders.

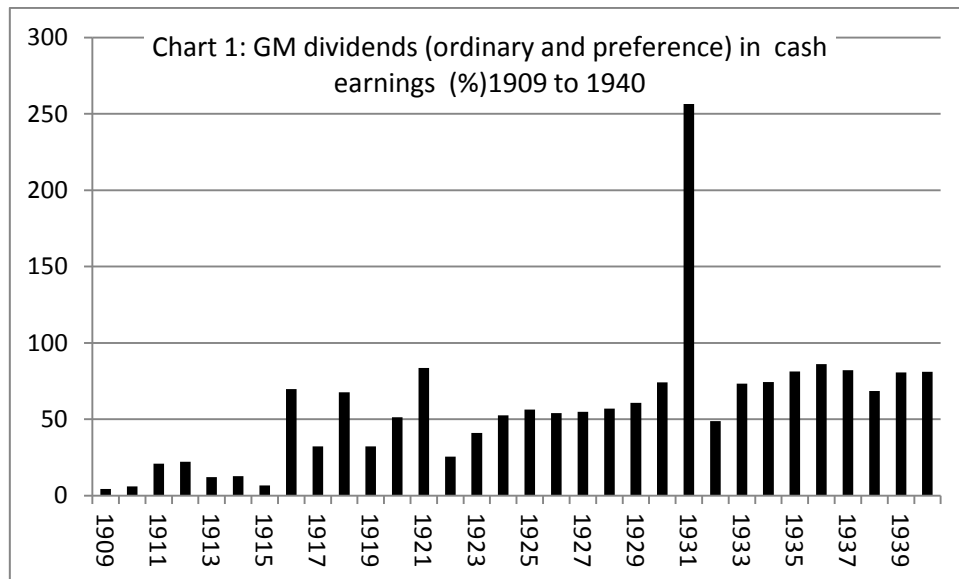
#### Strategy Financialized at GM, 1909-1940

We have noted how Lazonick bemoans the way in which corporations have in recent decades distributed over 60 per cent of their profits as dividends. Lazonick argues that the old corporate 'productionist' objectives of US corporations of reinvesting for innovation and competitiveness have been replaced with a policy of 'downsize and distribute'. In chart 1 we show GM's dividends paid out of cash earnings. At the start of the period a relatively low share of cash is distributed but this builds up quickly such that in a majority of years over half of cash earnings are distributed and on average during the whole period covered the share dividends distributed out of cash stands at 70 per cent (and relative to net earnings before dividends are paid 86 per cent). The share of dividends paid out of net income by GM

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<sup>27</sup> Sloan, *My Years*, 140.

is above is that for US manufacturers during a similar period 1914- 1940 which we estimate to be averaging approximately 70 per cent (see table 1).



Source: Source: For dividends GMI Alumni Foundations Collection of Industrial History, Flint Michigan, also

<http://www.library.upenn.edu/collections/lippincott/corprpts/gm/gm1932.pdf>

Note: Cash earnings are net income plus depreciation.

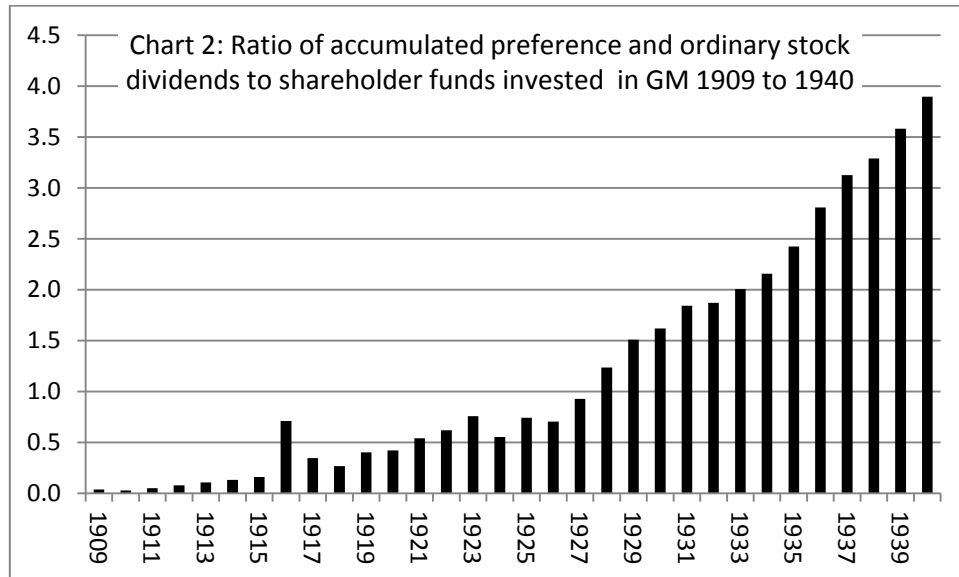
Table 1: US manufacturing dividends in net Income, 1914-1940

	Total net Income	Total Dividends	Dividends in net Income
	\$bn	\$bn	%
1914-1940	21.8	15.2	69.9

US Department of Commerce Bureau of Census (1975) Historical Statistics of the US Colonial Times to 1970, part 2. Washington DC, US. Table series V 285-305: Assets, Liabilities and Selected Income items for two samples of large manufacturing corporations.

The value of dividends distributed to stockholders accumulates relative to the funding that they put in as equity and preference share capital. By the end of our period of analysis accumulated dividends paid out to stockholders relative to their paid in investment stood at 4:1. That is, for every \$1 of capital invested stock holders were paid dividends equivalent to \$4 (Chart 2).

“Our shareholders have derived a substantial monetary benefit from the success of the business through the distribution of about two thirds<sup>28</sup> of the income realised since inception a proportion which is larger than that distributed by most businesses. In order to secure these benefits, the shareholders have underwritten the growth of the enterprise by their willingness to reinvest substantial sums required to meet the needs of the business as it grew”.<sup>29</sup>



Source: Source: GMI Alumi Foundations Collection of Industrial History, Flint Michigan, also <http://www.library.upenn.edu/collections/lippincott/corprpts/gm/gm1932.pdf>.

Notes: Ordinary and preference dividends as a per cent of shareholder capital (preference and ordinary common stock investment made over the period 1909 to 1940)

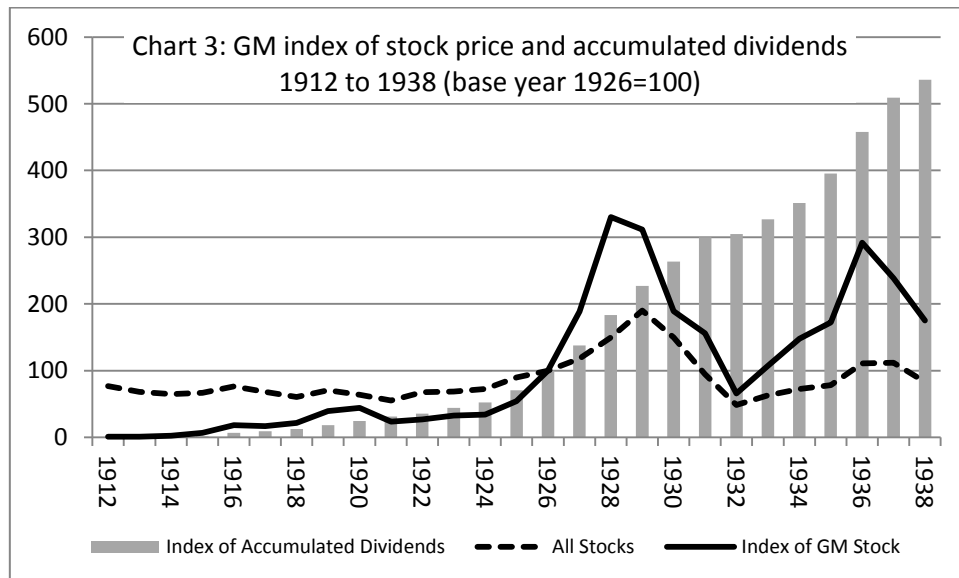
The challenge facing GM during this period was to secure shareholder confidence through the distribution of profits as dividends because, as Chart 9 reveals, stock market capital gains were much less certain. The index of GM common stock prices starting from 1912 (when first listed on the New York Stock Exchange) runs until 1938<sup>30</sup> and we compare this growth in stock prices with an aggregate industry index for the same period. In the period 1912 to 1925 GM stock underperforms the aggregate index of US industry stocks but the price per share trajectory is stronger after 1926. In the latter period GM stock outperforms the US industry average although it is clear from chart 9 that market value becomes

<sup>28</sup> Note Sloan’s period covers 1917 -1962 in *My Years with GM*.

<sup>29</sup> Sloan, *My Years*. 191.

<sup>30</sup> <http://som.yale.edu/faculty-research/our-centers-initiatives/international-center-finance/data/historical-cowles>

increasingly cyclical and GM's stock prices are no higher in 1938 than they were in 1928. In contrast investor returns during this period are driven by accumulated dividends. The dividends index has a steady upwards trajectory and moves progressively ahead of the stock return index during the early to late 1930s (see Chart 3).



Source: For dividends GMI Alumni Foundations Collection of Industrial History, Flint Michigan, also <http://www.library.upenn.edu/collections/lippincott/corprpts/gm/gm1932.pdf>  
 For US and GM stock prices and all US industry sectors  
<http://som.yale.edu/faculty-research/our-centers-initiatives/international-center-finance/data/historical-cowles>

In the next section of this analysis we consider the extent to which GM's balance sheet shifts from assets located in physical and tangible assets to that which are financial and more liquid assets.

### GM's financialized balance Sheet 1909 to 1940

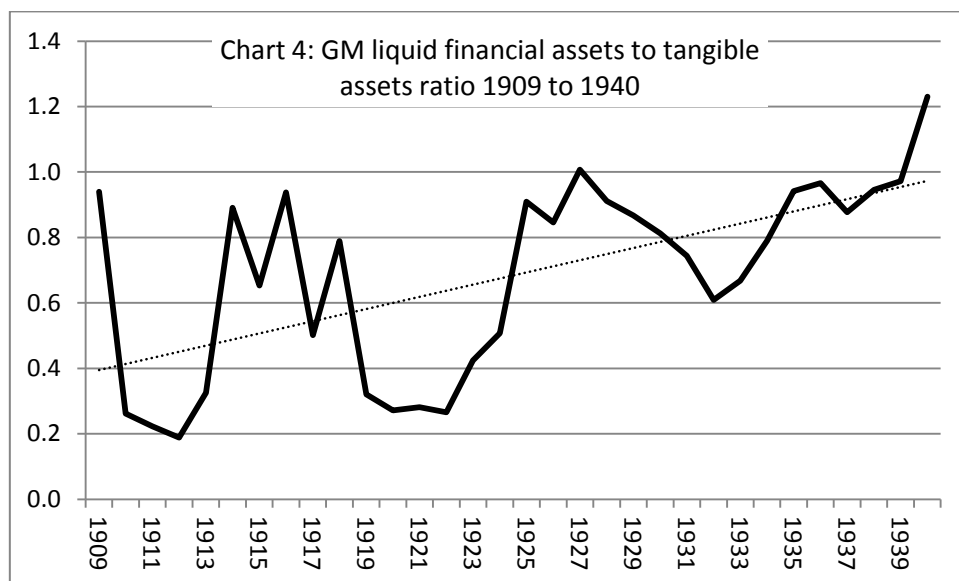
During the period 1909 to 1940 GMs assets structure changes from a tangible assets to a blend of both tangible and financial and assets. Our measure of tangible assets is that for real estate plant and equipment and our measure of liquid and financial assets include: cash balances, marketable investments and loan notes outstanding (when GMAC<sup>31</sup> starts its operations). Loan notes outstanding are those issued by GMAC to customers to finance credit purchases of GM autos and commercial vehicles. This financing also extended to the purchase of the second hand car when it was traded in 'two or three times on the way to

<sup>31</sup> GMAC = General Motors Acceptance Corporation

the scrap heap'.<sup>32</sup> Sloan observed that the banks failed to provide consumer credit 'they thought of the automobile as a sport and a pleasure...they had a moral objection to financing a luxury, believing apparently that whatever fostered consumption must discourage thrift. Consequently, automobiles were sold to customers mainly for cash.'<sup>33</sup> Not only were customers deprived of credit but also dealers wishing to finance stock within their retail sites for distribution.

"General Motors Acceptance Corporation was organized in 1919 under the banking law of the State of New York for the purpose of assisting General Motors distributors, dealers and customers in financing cars purchased on credit. It was stated in the last annual report that this activity was assuming an increasing importance in the operations of General Motors to a degree that could hardly be overestimated".<sup>34</sup>

"We have built up a banking institution, the reputation of which is unquestioned. Its securities are considered of the highest rank by most conservative bankers and investors. Its record from the operating standpoint bears the closest inspection. As a matter of fact, I feel that its operations have had an important influence in establishing consumer credit as a sound and important principle in our business life".<sup>35</sup>



Sources: GMI Alumni Foundations Collection of Industrial History, Flint Michigan, also <http://www.library.upenn.edu/collections/lippincott/corprpts/gm/gm1932.pdf>

Notes: During the periods 1910-11, 1915-20 and 1919-34 cash balances are depleted and loans notes also lower due to the downturn in car sales in these recessionary periods.

<sup>32</sup> Sloan, *My Years*, 152.

<sup>33</sup> *Ibid.*, 304.

<sup>34</sup> GM Annual Report, 1926, 9.

<sup>35</sup> Sloan, A. P., 28 Sept, 1927 GMI Institute Sloan A.P Biography Box C.2.

“So far as GMAC is concerned, I would say in brief that it offers a service related to the product and in the interest of the consumer. The advantages to the customer, the dealer, and the corporation seem obvious to me”.<sup>36</sup>

In chart 4 we calculate the ratio of financial liquid assets (cash, marketable securities and notes receivable in the GM accounts) to tangible assets (real estate plant and equipment) and we find that a simple trend reveals a progressive increase in the financialization of GM's balance sheet as the share of financial and liquid assets reaches and eventually exceeds the value of tangible assets. In 1920 financial and liquid assets to total tangible assets stood at 27 per cent and by 1940 this ratio had shifted to 129 per cent

In 1927 GM established the Motors Accounting Company which provided an accounting service for dealerships and this subsidiary later became the Motor Holdings Division which was financed with \$2.5 million of GM funds whereby dealers would put in a minimum of 25 per cent of the capital and GM would make up the rest. The holding company would pay the dealership a share of the profit as additional bonus, that is, until the dealer was able to pay off the full capital to buy out from the Holdings Company.

#### Closing the agency gap: GM stock options and bonus system(s)

In GM the average employee earned roughly \$600 per annum in 1909 and earnings had risen to a peak of \$1800 in 1928 only to recover back to and then surpass this level some ten years later in 1940 at roughly \$2,000 per annum (see Chart 5). The GM annual report published in 1937 adjusts the average payroll per employee by the cost of living index to make the case that, in real terms, employees were, on average, better off that they were in 1929.

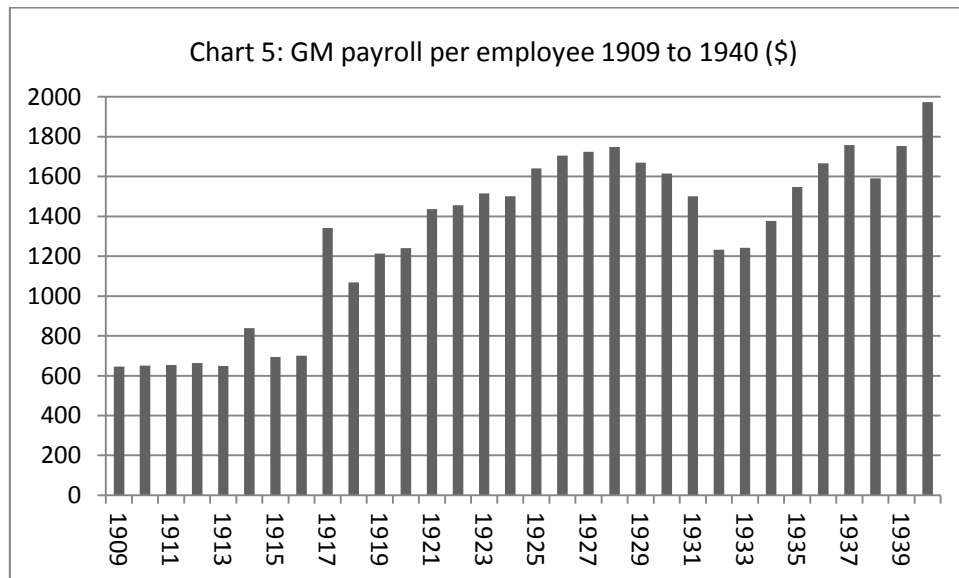
In the Economic Review provided in the 1937 annual report we are told that:

“In 1929 the average annual earnings were approximately \$1,440. In 1937, as has already been stated, they were \$1,618. Thus a General Motors worker regularly

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<sup>36</sup> Sloan, *My Years*, 312.

employed throughout the year received 12% more in his pay envelope than he did in 1929. The cost of livings index of the United States Bureau of Labor Statistics was about 15% lower than in 1929, so that the 1937 average annual earnings of a General Motors worker, in terms of the goods he could buy, were approximately 32% greater than in 1919”.<sup>37</sup>



Sources: GMI Alumi Foundations Collection of Industrial History, Flint Michigan, also <http://www.library.upenn.edu/collections/lippincott/corprpts/gm/gm1932.pdf>

In addition to a basic pay GM operated a series of bonus and investment schemes that encouraged senior, middle and lower ranking employees into GM stock ownership. According to Holdon:<sup>38</sup>

“Du Pont and General Motors were among the first to confront the acute need to align the interests of management with shareholders—arising from the fact that, as large firms, it was not feasible for managers to own 100 per cent of the firm. These plans took a somewhat different form than modern stock option schemes”.

It was not uncommon by the mid-1920s for many of the major US corporates to offer their senior employees a stock option bonus scheme. According to Landry:

“By 1929, two-thirds of 100 largest manufacturing companies gave their president and vice-presidents both salaries and performance-based compensation. Academics and other observers in the 1920s applauded the rapid spread of bonus plans”.<sup>39</sup>

<sup>37</sup> GM Annual Report, 1937, 45.

<sup>38</sup> R.T.Holdon, “The original management incentive schemes,” *Journal of Economic Perspectives* 19:4, 135

<sup>39</sup> J. Landry, “Corporate Incentives for Managers in American Industry, 1900-1940,” *Brown University. Business and Economic History* 24:1 (1995) <http://www.thebhc.org/publications/BEHprint/v024n1/p0013-p0017.pdf>

In GM four bonus schemes were introduced: the managers' securities company, the bonus plan for salaries employees, and two opportunities for other employees: a savings and investment plan and as these savings matured they could be invested in GM preferred stock at a 7 per cent return per annum. It is significant that Sloan commits a full chapter to 'incentive compensation' (Chapter 22: 22 pages) compared with the chapter on coordination by committee and divisionalization (chapter 7: 17 pages). But, according to Sloan the policy of decentralization and the bonus plans 'are related':

"decentralization gives executives the opportunity for accomplishment, and the Bonus Plan, makes it possible for each executive to earn a reward commensurate with his own performance, and so gives him an incentive to put forth his best effort at all times"<sup>40</sup>

At a senior level GM established the so-called managers Securities Company (1923) and this was established with an authorized capital stock of \$33.8 million split into \$28.8 million of 7 per cent preferred stock; \$4 million of class A stock (par value \$100) and \$1 million of class B stock par value \$25. On formation this company purchased 2.25 million GM common stock. GM undertook to pay the equivalent of 5 per cent of net earnings minus a 7 per cent cost of using capital into this fund. And, if this amount was less than \$2 million, then GM was to make up the difference. Senior managers in the scheme would be evaluated each year to determine if 'participation was out of line compared to other executives'. Over a period of seven years the investment of \$1,000 into this scheme generated a return to senior managers of \$9,800.<sup>41</sup> Raskob, GM's Chairman of its Finance Committee observed that these senior executives, by virtue of their *extensive responsibility and authority*, 'have a definite financial share in the business, the equivalent of the rewards of private enterprise'.<sup>42</sup> In 1937 the total remuneration package of the highest-paid executives was 271 times that of the average employee costs at GM in the same year (see table2).

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<sup>40</sup> Sloan, *My Years*, 407.

<sup>41</sup> We need a reference for the data above.

<sup>42</sup> Raskob, "Management," 132.



Table 2: GM senior management salary and bonuses, 1937

All figures in \$	Highest Paid Executive Management Group	Second Highest paid	Third Highest Paid	Relative to Average Employee salary (times)
Salary High	150,000	120,000	120,000	76
Salary Low	112,500	76,666	90,000	53
Profit Participation	411,161	387,450	258,615	201
<b>Total Annual</b>	<b>561,161</b>	<b>507,450</b>	<b>353,655</b>	<b>271</b>

Sources: 1937 GM annual report 1937, 45-48.

<http://www.library.upenn.edu/collections/lippincott/corprpts/gm/gm1937.pdf>

Notes to compute the factor in the final column we average the salaries of the top, second- and third-highest member of the management group and divide this by the average worker payroll of \$1,758 in 1937.

In the GM 1937 annual reports the senior executive group of administrative managers comprised 186 staff members who received not only salaries but profit participation as well and this was equivalent to \$0.16 per share when earnings per share were \$4.38. We estimate that this was equivalent to an average compensation per senior executive of \$47,000 or 27 times the average employee payroll.

“the principal executive officers of the Corporation; the executive heads of its General Administration Staffs; the executive heads of the Operating Divisions and wholly owned subsidiaries; the four principal functional executives of the more important operating units; and the executives in charge of each of the assembly and manufacturing plants in the United States located away from divisional headquarters and of the overseas assembly and merchandising operations”<sup>43</sup>

Furthermore, Raskob (Chairman of the Finance Committee) observed:

“It is the purpose of the General Motors’ plan of decentralized operations with co-ordinated control to forge all these links in the chain of organization so as to unite in one common interest the welfare of the owners of the business with that of all members of the staff and working force; so that increased profits to the stockholders bring increased profits to those who helped earn them”.

With regards to GMs administrative group

“The remuneration of the Corporation’s administrative staff is a personal relationship between each individual involved and the Corporation itself. It is held to

<sup>43</sup> GM Annual Report 1937, 49.

<http://www.library.upenn.edu/collections/lippincott/corprpts/gm/gm1937.pdf>

be highly undesirable and contrary to the interest of the stockholders to approach the question from any other standpoint. On the other hand, it is recognised that the stockholders should be concerned, and have a right to be concerned, as to the cost of administering the business".<sup>44</sup>

In 1937 all members of the organisation receiving more than \$4,200 were eligible to participate in the bonus fund. We estimate that the average benefit per executive employee would have been around \$100 per annum over the period 1918 to 1940 while the bonus plan operated.

Investment plans for all employees included the savings and investment plan introduced in 1919. An employee with three months or more of employment could deposit a maximum of \$300 per annum and GM would match this with \$0.50 for every dollar deposited. An employee depositing this maximum over the period 1919 to 1927 would have accumulated a market value in excess of \$6,000. At the end of the investment term as they matured they could be invested in GM preferred stock with GM adding an extra \$2 per share and a dividend of 7 per cent per annum. Thus while the impact of the bonus plan could not be mathematically proven Sloan was assured that it contributed to the extraordinary successful performance of GM and the 'retention of outstanding men'.<sup>45</sup>

In the following section we turn to consider the extent to which these policies which collectively informed strategy at GM during the period 1909 to 1940 also align with a transformation of physical and financial productivity and financial results.

#### GM: Sales and productivity 1909 to 1940

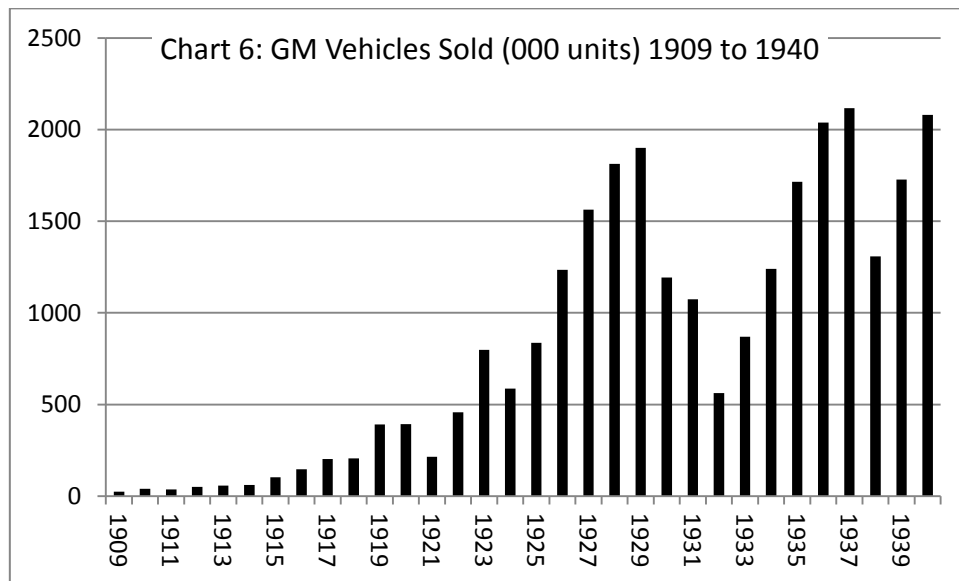
Our analysis starts with the growth and trajectory of GM in terms of its physical output of cars and commercial vehicles over the period 1909 to 1940. This reveals two distinct periods: 1909 to 1929 and then a period of collapse and recovery from 1930 to 1940. GM shared a similar problem to its competitors namely market volatility and cyclicity. The years 1920-21 saw output drop 45 per cent and then in 1923-24 sales dropped by 27 per

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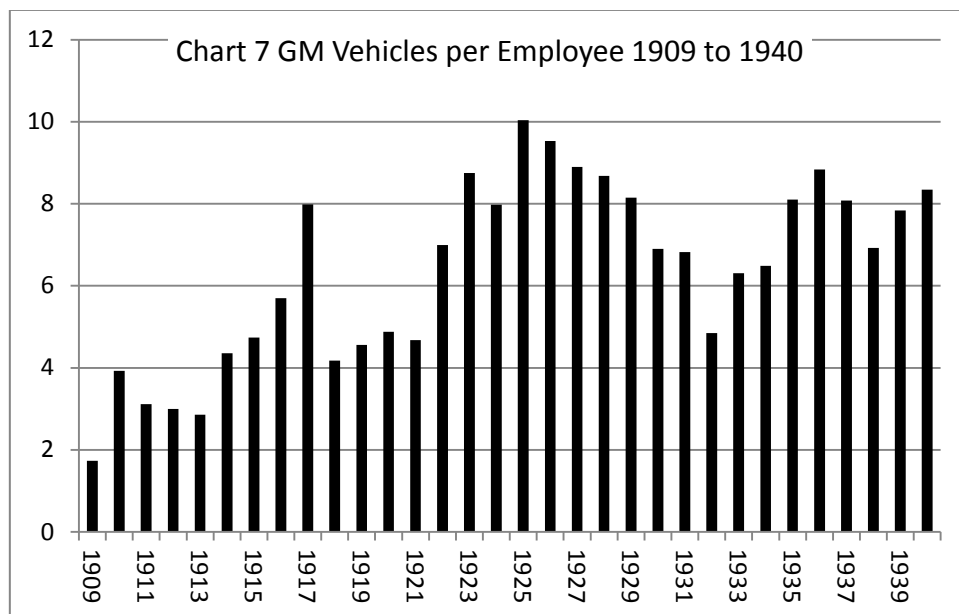
<sup>44</sup> GM Annual Report, 1937, 46.

<sup>45</sup> Sloan, *My Years*, 428.

cent while the period from 1929 to 1932 saw a reduction in output of 70 per cent and these downturns had a significant negative impact on revenues and profit (Chart 6).



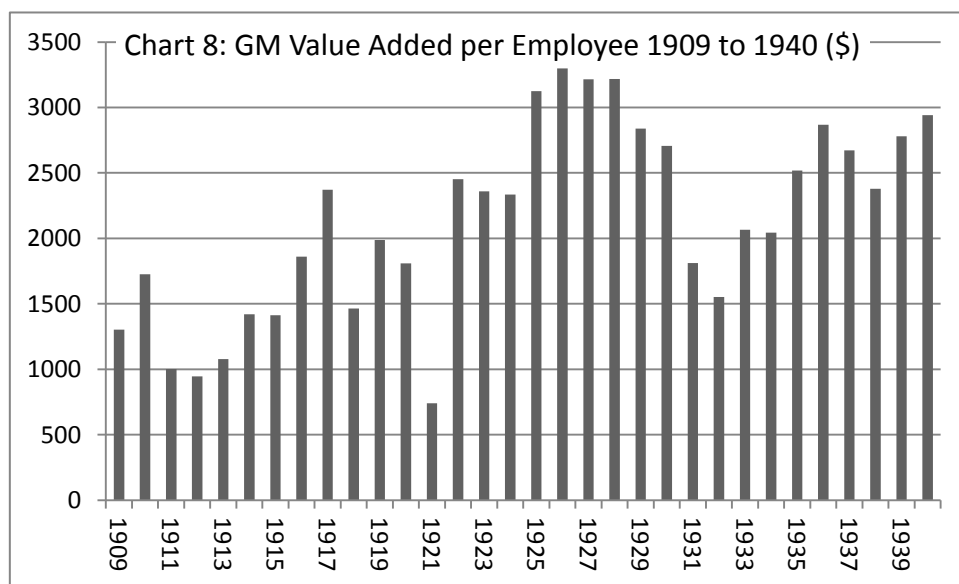
Source: GMI Alumni Foundation Collection of Industrial History, Flint Michigan, also <http://www.library.upenn.edu/collections/lippincott/corprpts/gm/gm1932.pdf>



Source: GMI Alumni Foundation Collection of Industrial History, Flint Michigan, also <http://www.library.upenn.edu/collections/lippincott/corprpts/gm/gm1932.pdf>

Note: This calculation is total vehicles per employee

Chart 7 reveals that physical productivity as vehicles per employee moves up from 2-4 vehicles per employee from 1909 to 1913 to 10 vehicles per employee by 1925 but thereafter drops back to 5 vehicles per employee by 1932 before again recovering to 8 vehicles per employee by 1940. This pattern of physical productivity is also mimicked by the value added per employee, a financial measure of productivity. Value added is that share of the value chain captured by GM within its own financial reporting boundary after deducting all external expenses.<sup>46</sup> For the period from 1909 to 1913 value added is about \$1,000 per employee and reaches roughly \$2,000 before the cyclical downturn 1919-21 but then again recovers moving up to a peak in 1926 when the value added per employee reached \$3,300. The period after the 1929 collapse in market demand sees value added per employee drop back to \$1,500 before again recovering to roughly \$3,000 but no higher than the peak levels achieved in the mid-1920s (Chart 8).



Source: GMI Alumni Foundation Collection of Industrial History, Flint Michigan, also <http://www.library.upenn.edu/collections/lippincott/corprpts/gm/gm1932.pdf>

Note: Value added is calculated as net income plus depreciation expenses plus total employee payroll expenses

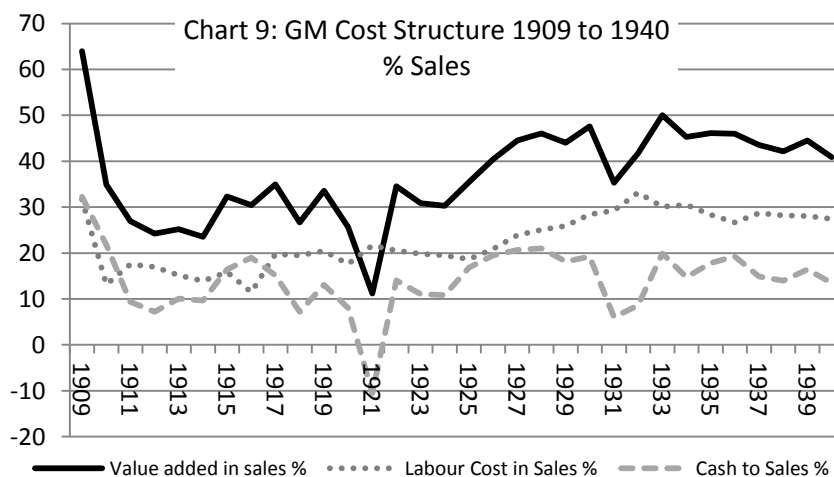
In terms of physical and financial productivity the period 1909-1940 can be broadly split into two halves. The first, from 1909 to 1929, is one of growth in physical and financial productivity with some cyclical interference, while the period from 1930 to 1940 is marked

<sup>46</sup> Value added is employee costs plus depreciation plus earnings before interest and tax.

by a substantial collapse in physical and financial productivity associated with the 1929 crash. But thereafter recovery takes GM back to levels achieved in the mid-1920s.

GM Cost Structure, Margins and Return on Capital Employed, 1909-1940

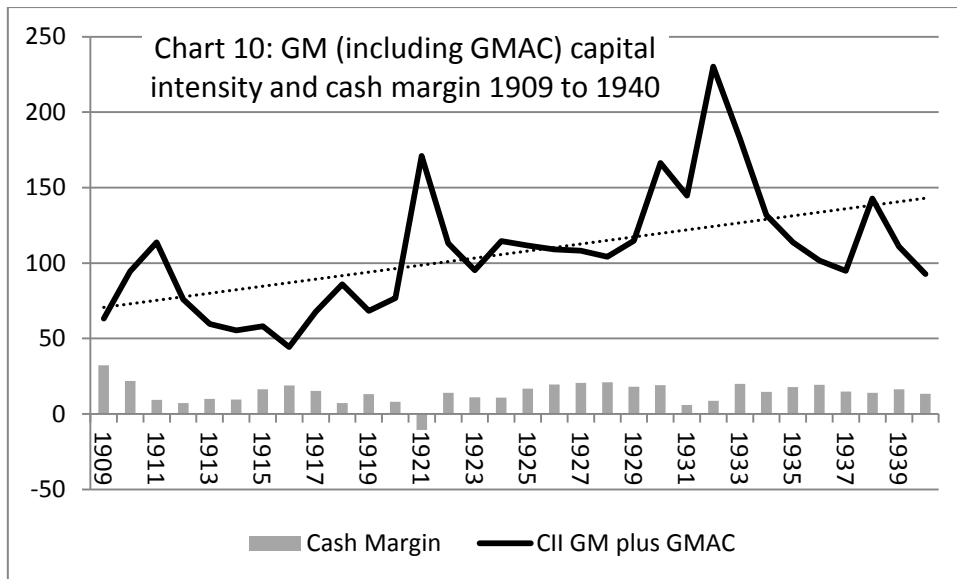
In this section we consider the evolution of GM’s consolidated financial cost structure over the period 1909-1940 as shown in chart 9. This chart contains three significant ratios used to describe changes in GM’s operating cost structure. The first of these is the value added to sales ratio. This describes GM’s share of its financial value chain after deducting all external costs and expenses for materials and other services supplied. During the period 1911-1924 this remains relatively stable (apart from the initial start-up year) at roughly 30 per cent before then gently rising towards 50 per cent and then levelling off in the range 40-50 per cent. This change in the value added to sales ratio is driven upwards by an increase in ‘internal’ labour costs from 20 to 30 per cent of sales and this has the effect of dampening the cash margin which remains in the 10-20 per cent range with bouts of cyclicity. Although the cash margin remains relatively untransformed this might not be the case for the return on capital which is found as:  $[Cash / Sales] / [Capital / Sales]$ . There is the possibility that capital intensity, that is, capital employed (debt and equity) required to generate a dollar of sales revenue could have been reduced.



Source: GM Annual Reports and Financial Statements 1909 to 1940 GMI Alumni Foundation Collection of Industrial History, Flint Michigan, also

<http://www.library.upenn.edu/collections/lippincott/corprpts/gm/gm1932.pdf>

Note: Value added, labour costs and cash margin as a per cent of sales income



Source: GM Annual Reports and Financial Statements 1909 to 1940 GMI Alumni Foundation Collection of Industrial History, Flint Michigan, also <http://www.library.upenn.edu/collections/lippincott/corprpts/gm/gm1932.pdf>  
 Note: CII GMAC= capital intensity as sales divided by capital employed where capital employed is long term debt plus equity. From 1923 we also include notes receivable recorded in the GMAC accounts.

What we find is that GM’s capital intensity<sup>47</sup> (including GMAC loan notes), increases from around 50 per cent of sales revenue during the 1910s to a level that was equivalent, and at times, above sales revenue during the 1930s<sup>48</sup>. Thus, the combination of a relatively untransformed cash margin combines with a generally higher level of capital intensity (capital to sales ratio) and this frustrates a structural transformation of GM’s return on capital (Chart 10). It is interesting to note how Donaldson Brown understood and analysed return on investment.<sup>49</sup> In this respect, Sloan observed that: ‘Brown defined the return on investment as a function of the profit margin and the rate of turnover of invested capital.’<sup>50</sup>

“If this seems obscure, pass over it and note only that you can get an increase in return on investment by increasing the rate of turnover of capital in relation to sales as well as by increasing profit margins. Each of these two elements –profit margin and rate of turnover of capital –Mr Brown broke into its detailed components, a case you might say of aggregating and disaggregating figures to bring about a recognition

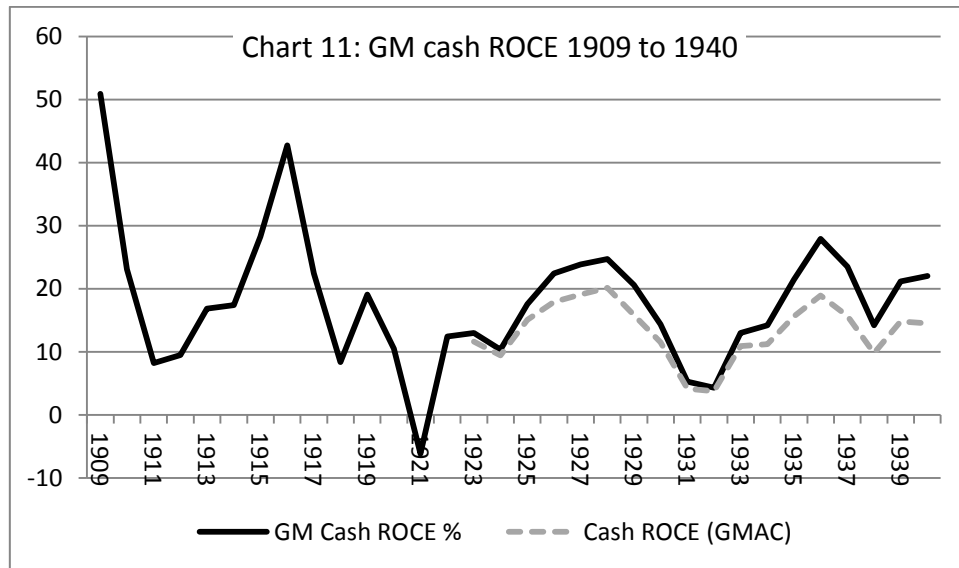
<sup>47</sup> Capital intensity is debt plus equity in GM plus GMAV loan notes outstanding

<sup>48</sup> Using a simple trend line in chart 10

<sup>49</sup> Donaldson Brown arrived at GM in 1922 and was elected to the Executive Committee. He was experienced in financial operations.

<sup>50</sup> Sloan, *My Years*, 141.

of the structure of the profit and loss in operations. Essentially it was a matter of making things visible”.<sup>51</sup>



Source: GM Annual Reports and Financial Statements 1909 to 1940 GMI Alumi Foundation Collection of Industrial History, Flint Michigan, also <http://www.library.upenn.edu/collections/lippincott/corprpts/gm/gm1932.pdf>  
 Note: Cash ROCE is net earnings before depreciation divided into capital employed. The Cash ROCE (GMAC) includes notes receivable at GMAC in the capital employed figure for illustration.

In chart 11 we combine capital turnover (sales / capital employed) and cash margin (cash / sales) to obtain the cash return on capital employed. We find that over the period 1909-1940 there is a cyclical pattern to the return on investment and that a simple trend line registers a relatively flat overall picture of roughly a 20 per cent cash return on capital. Splitting this into two sub-periods before Sloan’s chairmanship of GM the average cash ROCE was 16 per cent and the period of his chairmanship (1923 to 1940) the average stood at 17 per cent. We should also note that GM distributed over 80 per cent of its net income under Sloan’s chairmanship and this would have mechanically slowed down the accumulation of shareholder funds (because lower retained profits are carried forward) and this, in turn , would inflate capital turnover and thereby uplift the reported return on capital (see chart 7).

<sup>51</sup> Ibid.142

Our analysis of financial and physical productivity reveals progress until the 1929 crash and although the ratios recover they do not exceed the peak achieved before the crisis. In terms of financial transformation we find that the value retained in sales moves up from 30 to nearly 40 per cent by 1940 but this gain is lost because labour costs track upwards to leave the cash margin relatively untransformed (albeit cyclical). The second component in the return on investment, namely capital turnover, deteriorates and this acts to put a brake on the profit ROCE with an average under Sloan's management not so different from that of his predecessors.

The bottom line return on capital reported by GM was, as Donaldson Brown would have appreciated, the product of a complex series of inter-related disaggregated components. That is, increases physical productivity did not simply translate into improved return on capital. After a period of improvements to productivity in terms of vehicles per employee and its financial correlate, value added per employee, this transformation reaches a peak in 1929 and then moves on to a cyclical pattern. GM's operating ratios do, on the one hand, change quite significantly because GM progressively captures more of the financial value chain up from 30 to 40 per cent of total revenues generated. However, internal labour costs also increase and this limits the transformation in cash margin which remains in the range 10-20 per cent with bouts of cyclicity. This cash margin does not straightforwardly translate into a higher return on capital because the capital turnover ratio also deteriorates as GM was inflating its capital employed relative to income and profit. Significantly GM through GMAC was raising debt finance to cover the issuance of loan notes to customers to secure demand for its output. Thus the connection between strategic interventions and financial outcomes is often contradictory and not straightforward.

### Summary/ Discussion

The relevance of our findings is threefold. Firstly, they cast a new light on General Motors as an iconic example of a Chandlerian firm. Secondly, they help to refine our views on the construction of stereo-types between "Chandlerian old industrial capitalism" and 'financialized new economy business models'. Finally, our findings encourage a broader reflection upon the notion of performativity (as formulated by firms as point values in time



and space) and the importance of deconstructing point values to reveal contradictions and ambiguities.

The traditional notion of Chandlerian firms implies a “productionist” business model driven by a high level of commitment into fixed assets and profits reinvested into research and development and innovation-driven competition. On the other hand, our paper shows that, since the early stages of its growth, General Motors featured clear elements of a highly financialized business model.

First, there was a progressive shift in the balance sheet towards liquid financial (as opposed to tangible productive) assets. This asset liquidity reflects the use of financial instruments within GMAC to underwrite the provision of consumer credit facilities which helped to also inflate GM’s consolidated income and profits. This is consistent with the current understanding of financialized business models.<sup>52</sup> Second, a significant share of profit was distributed as dividends to GM stockholders and we estimate that the distribution ratio out of profits averaged over 80 per cent. These dividends provided stockholders with a substantial return on their equity capital but, as Sloan observes, these stockholders were needed for critical refinancing events. Third GM operated a stock options bonus and profits scheme for senior executives, administrators and employees, and this was not uncommon practice at this time. For Sloan the retention of senior executives and key employees was a driving force in addition to also aligning the values and motivations of executives and employees with the interests of stockholders especially when bonuses were in the form of stock options. This is also consistent with financialized business models.<sup>53</sup> Finally, return on capital deployed, productivity and profits were all cyclical (and, after 1925 cyclically disappointing). This is consistent with a common characteristic of financialized business models, namely an asymmetry between strategic narratives revolving around physical operating efficiency and disappointing financial indicators that combine earnings with balance sheet capitalisation.<sup>54</sup>

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<sup>52</sup> Krippner, “Financialization.”

<sup>53</sup> Lazonick and O’Sullivan, “Maximising.”

<sup>54</sup> Froud et al., *Financialization*.

Our argument is that elements of both the Financialized and Chandlerian notions of resource management and deployment are present in GM during the period 1909 to 1904. The traditional view of Chandlerian firms is that of the oligopolistic organization committed to innovation and innovation-based competition and this is the pivot of Baumol's model of innovation-driven growth. That is, the combination of Chandlerian firms and the free market creates a virtuous economic circle sustained by continuous competitive product and process innovation and renewal. This model of the 'old economy' has been pitted against a 'new economic' model based on the financialization<sup>55</sup> of corporate strategy. Where the process of financialization progressively undermined US corporate commitment to innovation, product and process renewal and instead forced firms to downsize and distribute as managerial and shareholder interests became aligned.

Our paper shows that since the early days of its history GM's business model encompassed both the elements of the productionist "virtuous" business model envisaged by Chandler, Baumol<sup>56</sup> and Lazonick but also key elements of a financialized business model. Our argument is that it is not possible to construct a clear dichotomy between the old and the new and then to use this as an organising stereotype. In the development of the modern corporation at GM there is an infusion of both productive and financialized interventions for the management and deployment of resources. Lazonick's distinction between an old economic paradigm and a new economic paradigm based on a financialized business model is problematic especially when elements of both organising concepts are present in time and space.

This leads to a further argument within our paper which relates to how a Chandlerian framing of business history implicitly employs performativity to describe temporal economic progress. Chandler identified throughput as the performance measure underpinning strategic investments in infrastructures for production and distribution, as well as managerial hierarchies.<sup>57</sup> Within competitive markets, throughput optimization required technical investments towards improving cycle time and lead times, which have an assumed

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<sup>55</sup> Lazonick, "Innovative Business Models."

<sup>56</sup> William J. Baumol, *The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism* (Princeton, 2002).

<sup>57</sup> Alfred J. Chandler, *Scale and Scope* (Cambridge, Mass., 1990).

direct impact on total factor productivity, operating costs and profits. A separation between ownership and control enabled professional managers to use capital to optimize throughput. Thus, throughput as a measure of efficiency became the underpinning notion of modernity, in which modern industrial capitalism was characterized by the separation between management and control,<sup>58</sup> throughput optimization and transformation of investments into sustainable competition.<sup>59</sup>

Our argument is that physical ratios such as that relating to productivity do not easily or straightforwardly translate into improved financial performance. Our inspiration for this argument arises out of Sloan's remarks about how Donaldson Brown deconstructed returns on investment.<sup>60</sup> Point values and ratios are often utilised by analysts and business historians to construct narratives and interpretations about performance. Donaldson Brown reminds us that these point values need to be deconstructed in order to capture interpretive inflexions and reveal contradictions between one aspect and another. Brown describes the return on capital invested as a function of profit margins and the rate of capital turnover. Profit margins can be affected by contradictory forces that need to be deconstructed to make these visible. So that whilst GM captures more of the financial value chain it is also increased expenditure on employment costs which constrain margin transformation. Whilst the return on capital is also affected by capital intensity or as Donaldson Brown considered it: capital turnover (sales revenues divided by capital employed). Thus the inflation of capital employed, arising out of the issuance of loan credit to customers, helped GM to recover additional revenue and profits but it came at the expense of a reduced rate of capital turnover. Thus a combination of factors limit the scope for a financial transformation of the bottom line return on capital employed. Yet Sloan and Brown seemed to be aware of the contradictory nature of performativity measures and strategized accordingly.

In our view, all this suggests that business history should depart not only from paradigmatic notions of what makes firms competitive, sustainable in the long term and, therefore,

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<sup>58</sup> Chandler, *Strategy and Structure*; Alfred J. Chandler, *Managerial Hierarchies* (Cambridge, Mass., 1980).

<sup>59</sup> Chandler, *Scale and Scope*.

<sup>60</sup> Sloan, *My Years*, 141.

historically relevant to the notion of modern economic growth,<sup>61</sup> but also and more importantly it should depart from the idea implicit in Chandlerian business history that we can measure performance in a way that is consistent across time and space. On the contrary, different and contradictory notions of performativity can coexist and interact in various ways across time and space.

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<sup>61</sup> Chandler, *Scale and Scope*; Baumol, *Free-Market Innovation Machine*.