

General Motors: A financialized account of corporate behaviour 1909-1940

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Abstract

This paper constructs an alternative account of resource stewardship at General Motors (GM) during the period 1909-1940. Alfred Chandler employed GM in his text 'Strategy and Structure' to explain the development of the modern corporation. This understanding can be employed to contrast an 'old-economy' with a 'new-economy' financialized corporate business model. In this paper we find that many elements of the financialized firm were present in the early history of GM's development. Our analysis reveals the financialization of a non-financial corporation and how this influenced corporate behaviour and impacted on financial performance at GM during the period 1909 to 1940.

Key words: General Motors; Strategy and Structure; Financialization; Corporate Behaviour

Highlights

General Motors is a key case study in Alfred Chandler's (1962) text 'Strategy and Structure'

US corporations are now financialized with this 'new-economy business model' displacing the 'old-economy' productive business model

We find that many elements of a financialized firm/new economy business model influenced corporate behaviour at GM during its early development phase 1909 to 1940

This study on GM explores to what extent the financialization of a non-financial corporation not only modified corporate behaviour but also transformed financial performance.

1. Introduction

This paper aims to modify our understanding of the management and stewardship of corporate resources in General Motors (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 (Fligstein, N, 2007; Wilson and Toms, 2012). 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 within a multi-divisional structure or M-form organisation. And how, in combination, investment within the M-form organization could help to 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 provided 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, Chandler did not entirely grasp how national differences in institutional frameworks of corporate governance affect managerial accountability and variations in scale and scope economies (Toms and Wilson, 2010). 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 (Chandler, 1962). Nonetheless, empirical research suggests that in most cases multi-divisionalization was actually the outcome of a path-dependent process of incremental transformation (Quail, 2008). Finally, Chandler identifies the separation between ownership and control as the 'historical' phenomenon that defines 'modern' American industrial capitalism. Although it has been noted by Foreman-Peck and Hannah (2013) 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).

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 (Quail, 2008:127). Thus, in spite of its limitation, Chandler's interpretative framework still holds substantial currency in contemporary debates about industrial development and sustaining competitiveness. 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 'new economy' business models characterized as being 'financialized' (Lazonick, 2010 and 2013). Lazonick employs the term financialization to describe how a 'new economy' business model replaced an 'old economy' business model where managers were committed to product and process innovation. This change to a 'new economy' form of corporate behaviour has, since the 1980s' according to Lazonick, progressively undermined US competitiveness and economic growth. Lazonick's argument is that senior executives, in the financialized corporation, are motivated by financial incentives tied to delivering shareholder value performance metrics. These financial metrics coupled to the award of stock options and additional bonuses have encouraged US managers to distribute profit rather than reinvest in productive innovation necessary to sustain US competitiveness. Lazonick notes that 'by the 1980s ... the retain-and-reinvest investment strategies of many established U.S. industrial corporations had become vulnerable' (Lazonick, 2015:6). This recent financialization of the US corporation has been represented as a new form of institutional and cultural logic which drives managers to adhere to shareholders demands and which has 'profoundly reorganized the American Corporation' (Soener, 2015).

In Chandler's 1962 text 'Strategy and Structure' GM is one of four extended company cases employed to describe how changes in organisation form facilitated the productive coordination and stewardship of resources from 'the purchase of supplies to the final sale to the customer' (Chandler, 1962:145). In this paper we argue that many elements of the 'new economy' or 'financialized' corporation are also present influencing GMs corporate behaviour and financial development. To structure our argument and the supporting analysis we employ four organizing elements drawn from the financialization literature. Krippner, for example, observes that financialization is about changes in the composition of corporate

balance sheets from tangible to financial asset accumulations where: 'Non-financial corporations are beginning to resemble financial corporations – in some cases, *closely* – and we need to take this insight to our studies of corporate behaviour' (Krippner, 2005:201). Second, financial incentives included in remuneration packages, such as stock options and profit share schemes encourage the alignment of managerial and employee interests with that of stockholders (Lazonick, 2015; Fligstein and Shin, 2007). Third, these incentives manifest in the financialized firm as a commitment, by managers, to 'downsize and distribute', that is, prioritise the distribution of profits to satisfy the demands from shareholders at the expense of reinvesting in firm competitiveness (Lazonick, 2015). Finally, we draw upon the Froud et al's (2006) argument that financialization can be understood as the intrusion of capital markets and how this encourages optimistic managerial narratives about strategic intervention(s) and financial transformation. Using reported financial numbers at both a macro and firm-level Froud et al reveal that, in the financialized firm, contradictory forces are in play limiting the transformation of a firm's return on capital employed for shareholder value (Froud et al, 2006: 65-94).

Chandler (1962) frames his analysis of the development of GM as structure and strategy whereby a decentralized co-ordinated organization structure facilitates the stewardship and deployment of resources. Alfred Sloan, in his text *My Years with General Motors*, also reinforces the importance of policy formation (strategy) and the co-ordination of GM's divisional resource management through 'co-ordination by committee' and its associated use of 'financial controls' (Sloan, 1964). Our supplementary argument is that at an early stage in its development GM's corporate behaviour incorporates many elements of the new economy financialized firm.

Sloan, for example, devotes a chapter in *My Years with General Motors* to the General Motors Acceptance Corporation (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. Both GMAC and the Holding Company were heavily capitalized to facilitate credit finance to customers and thereby support the conversion of mass-produced outputs into costs recovered and profits realized. GM's corporate behaviour, at this early stage of its development, resembled the *modus operandi*

of a financial corporation in terms of raising and issuing bonds, generating wholesale funds and providing different types of credit funding and insurance products to customers¹. Sloan devotes yet another chapter to broad company-level 'incentive compensation' schemes where the purpose of these was to ensure senior executives and employees were 'partners' sharing in profits and capital gains from GM's profit and stock price performance. The purpose of these incentive plans was not only to hold on to or limit senior staff turnover but also align staff financial interests with those of GM's stockholders. In a further chapter 'Financial Growth' Sloan justifies the generous distribution of profit to stockholders on the basis that they would, at times, be called upon to provide additional refinancing facilities if, and when, GM was short of cash. He was also aware that contradictory forces operated to constrain the transformation of GM's return on capital noting that: 'Due to the force of economic necessity and through a process of evolution, the units of industry have become larger and larger....The effect of such an evolution on the capital structure is to require ever increasing amounts of capital' (Sloan, 1964:213). There is a trade-off between lowering prices to stimulate demand and the additional capital required to increase supply 'Reduction of price might broaden the scope of demand, and afford an enlargement of volume highly beneficial, even though the rate of return on capital might be lower' (Sloan, 1964:141).

2. General Motors Corporate Behaviour: Strategy, Structure and Financialization

Chandler's classic text *Strategy and Structure (1962)* and Sloan's *My Years with General Motors (1964)* are reflective accounts of the development of GM during its early history. 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 framing sets up policies to secure growth in output as '*strategy*' and that the organization devised to administer these enlarged activities and resources, a '*structure*' (Chandler, 1962:13). As the demand for industrial output expanded this, in turn, generated the need for an appropriate structure which 'can be defined as the design of the organization through which the enterprise is administered'

¹ As from 1925 GM provided customers with insurance protection policies against fire, theft and collision through GM's subsidiary 'General Exchange Insurance Corporation' (Sloan, 1964:307)

(Chandler, 1962:13). 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 global market.

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' (Chandler, 1962:125). This interpretation of events conjoins issues of organization with personality and leadership and Chandler observed: 'Although the lack of any effective over-all administrative structure failed to disturb Durant... it did trouble the du Ponts' Chandler, 1964:125). The du Ponts made moves to install changes after their first major investment in GM, for example, requesting that 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 raising funds from the capital market needed to be juxtaposed with an internal system of capital appropriation arrangements that established a competition for funds rather than allocation by committee 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 the operations of the divisions. The basic elements of financial control in General Motors are cost, price, volume and rate of return on investment (Sloan, 1964:140).

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, subject to certain cost limits.

The co-ordination of the activities of all these divisions 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 (Raskob, 1927:131).

Chandler develops and extends his thesis about business strategy and structure in *The Visible Hand* (1977) in terms of the nature of hierarchy and the internalization of transactions within organizations rather than markets. This is again further reinforced in his text *Scale and Scope* (1990). 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.

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 this 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. However, this macro-analysis is then employed to frame an argument for future research about corporate behaviour where 'non-financial corporations are beginning to resemble financial corporations' (Krippner, 2005:202)

Lazonick and O'Sullivan (2000) and Lazonick (2012) argue that financialization modifies corporate governance and resource stewardship from its traditional productionist values. The business model of re-investing funds into the firm to promote innovation for economic development and competitiveness has been replaced with one that promotes the distribution of cash earnings to shareholders. Lazonick argues that performance metrics linked to managerial remuneration and specifically the award of stock option bonuses encouraged US managers to progressively 'downsize and distribute'. This is evidenced, by Lazonick, as a shift away from profits reinvested towards earnings distributed to fund dividends and/or finance the buyback of shares for treasury stock. 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.

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 (Lazonick, 2010:6).

Froud et al (2006) reinforce this idea about the intrusion of the capital market into firms and how this serves to align managerial and investor interests. However, Froud et al argue, are careful to avoid the argument that this financialization of corporate strategy also transformed financial performance. Rather they observe that in the financialized firm managerial narratives often tend to exaggerate the potential for corporate financial transformation in an attempt to boost stock prices. Using national accounting data and detailed firm-level case studies Froud et al argue that the transformation in return on capital employed (ROCE) has generally been disappointing. Their argument is that in the financialized firm the financial

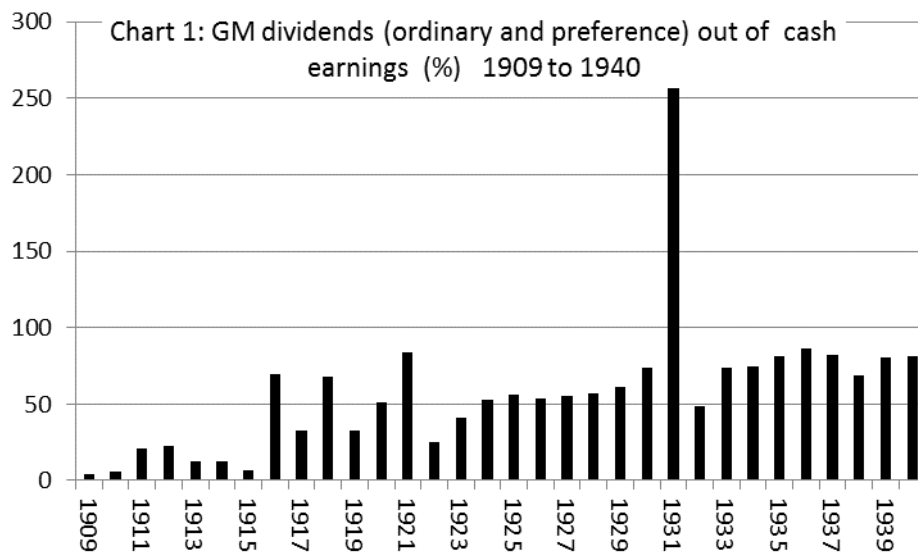
numbers congeal the impact of contradictory forces and that these often frustrate a straightforward transformation in corporate return on capital employed (Froud et al, 2006: 65-94).

We have already noted that Sloan emphasised the relevance of the financial side of the business in explaining multi-divisionalization at GM (Sloan, 1964:140). This raises two interconnected questions: to what extent did GM's corporate management of resources embody elements of the 'financialized' firm business model in its early history from 1909 to 1940? And, if so, how did these elements contribute to the corporate 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. These distributions were significant relative to the finance provided by stockholders but as Sloan also notes these stockholders needed to be called upon to re-finance GM as was the case intermittently over the period 1909 to 1940. Second we observe that GM's balance sheet asset structure shifts from predominantly tangible assets (plant and equipment land and buildings) towards financial assets (loans and notes receivable). This change in the structure of GM's balance sheet is explained by consolidating the financial activities of the General Motors Acceptance Corporation (GMACs) which issued credit/loans to customers to finance their car and truck purchases. This arrangement not only modified the composition of the asset-side of the balance sheet it also had the effect of inflating balance sheet capitalization relative to income. Third, GM operated a substantial stock option bonus scheme for senior executives and also for other less senior employees. This may have contributed to reducing employee turnover but it would also have served another purpose, as Sloan saw it, that of aligning the financial fortunes of the company with that of senior executives, employees and GM's stockholders. Finally we consider the extent to which GM's financial performance was transformed by deconstructing the return on capital ratio into its constituent elements. In so doing we reveal that contradictory forces are in play limiting a transformation in the return on capital employed

3. Financialized corporate behaviour in GM 1909-1940

Lazonick (2015) has argued that US corporations have become financialized and in recent times are distributing over 60 per cent of their profits as dividends. This strategy of 'downsize

and distribute, Lazonick argues, undermines the competitiveness of US corporations because they are not re-investing in product and process renewal which are essential for sustaining growth (Baumol, 2002). Chart 1 reveals the share of dividends paid out of cash earnings for GM over the period 1909 to 1940. At the start of this period a relatively low share of cash earnings² are distributed but thereafter, and for a majority of years, more than half of cash earnings are distributed. The average distribution ratio for the whole period 1909-1940 averaged 70 per cent and the ratio using net earnings rather than cash earnings averaged 86 per cent for the same period. The share of dividends paid out of net income by GM is generally above is that for US manufacturing as a whole where we estimate dividends averaged 70 per cent of reported net income (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 approximated as net income adding back depreciation.

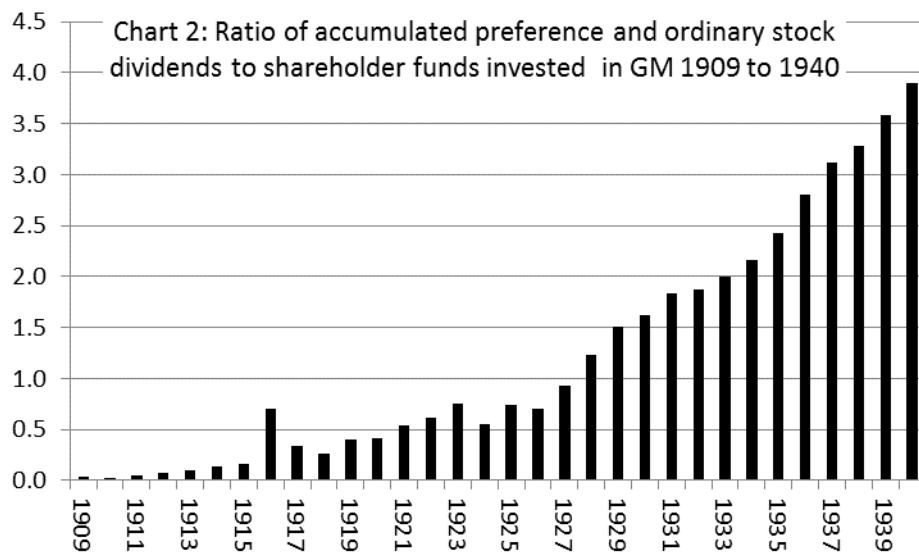
Table 1: Total US manufacturing dividends and net Income for the period 1914-1940

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

Source 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.

² cash earnings defined as net income adding back depreciation

Over the whole period 1909 to 1940 the accumulated value of dividends distributed to stockholders runs ahead of the original funds invested in the form of both ordinary and preference share capital. By the end of our period of analysis, 1940, had stock holders participated in all follow-on financing events they would have collected accumulated dividends that exceeded their paid in capital by a ratio of 4:1. That is, for every \$1 of capital invested stock holders would have received accumulated dividends equivalent to \$4 (see chart 2).



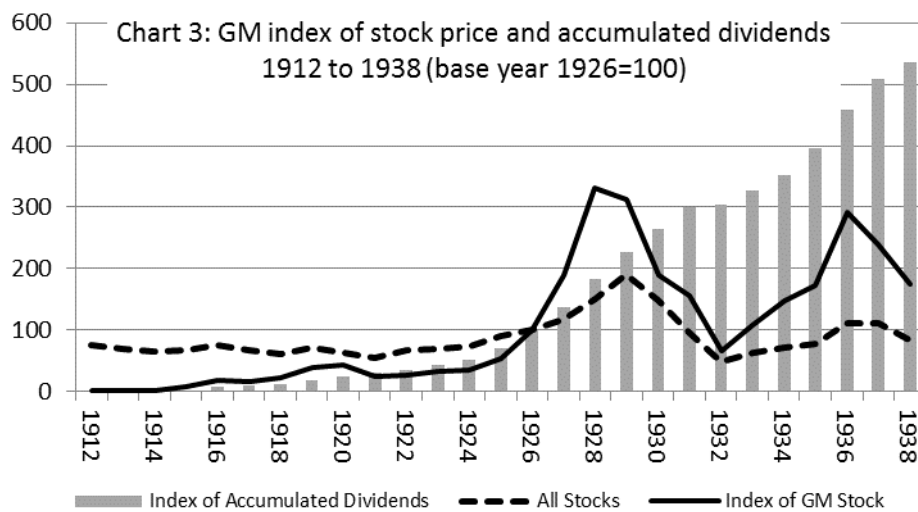
Source: Source: GMI Alumni Foundations Collection of Industrial History, Flint Michigan, also <http://www.library.upenn.edu/collections/lippincott/corprpts/gm/gm1932.pdf>.

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)

One explanation for GM's high dividend pay-out ratio could be that capital gains from holding GM stock were uncertain and volatile which was indeed the case. Chart 3 reveals for the period 1912 to 1925 GM stock prices are volatile and underperform the aggregate value index for US industry stocks. Although after 1925 GM's stock generally outperforms the industry average but market prices are still volatile. Throughout the whole period 1912-1938 shareholder returns are increasingly driven by accumulated dividends received which from the mid-1930s run ahead of windfall gains accumulated from changes in GM's quoted stock market prices (Chart 3). Another explanation provided by Sloan is that the high dividends

distribution ratio secured the confidence of shareholders that might, at times, need to be called upon to provide refinancing to GM.

Our shareholders have derived a substantial monetary benefit from the success of the business through the distribution of about two thirds³ 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. (Sloan, 1964: 191)



Source: For dividends GMI Alumi 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 paper we review the changed structure of GMs balance sheet in terms of the ratio of tangible to financial assets and their financing.

3.1 GM’s financialized balance sheet 1909 to 1940

During the period 1909 to 1940 the asset structure of GMs balance sheet changes from predominantly tangible assets towards financial and more liquid assets. Tangible assets include: real estate plant and equipment whilst more liquid financial assets include: cash

³ Note Sloan’s period covers 1917 -1962 in *My Years with GM*.

balances, marketable investments and loan notes outstanding (when GMAC⁴ starts its operations). Loan notes outstanding are those issued by GMAC to customers to finance credit purchases of GM cars and commercial vehicles and these are backed by equivalent liabilities (such as bonds). A significant development at GM was the use of bond finance to generate funds that could then be issued as loans to customers not only to purchase their first car from GM but to finance the purchase of second hand cars when these are traded in 'two or three times on the way to the scrap heap' (Sloan, 1964: 152). Sloan comments that US retail banks had 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' (Sloan, 1964: 304) and not only were customers deprived of credit but also dealers seeking to finance inventory sitting on their retail sites and awaiting sale. Setting up GMAC not only facilitated the provision of loan finance to customers but helped to inflate demand and indirectly fuelled the imperative to co-ordinate productive facilities.

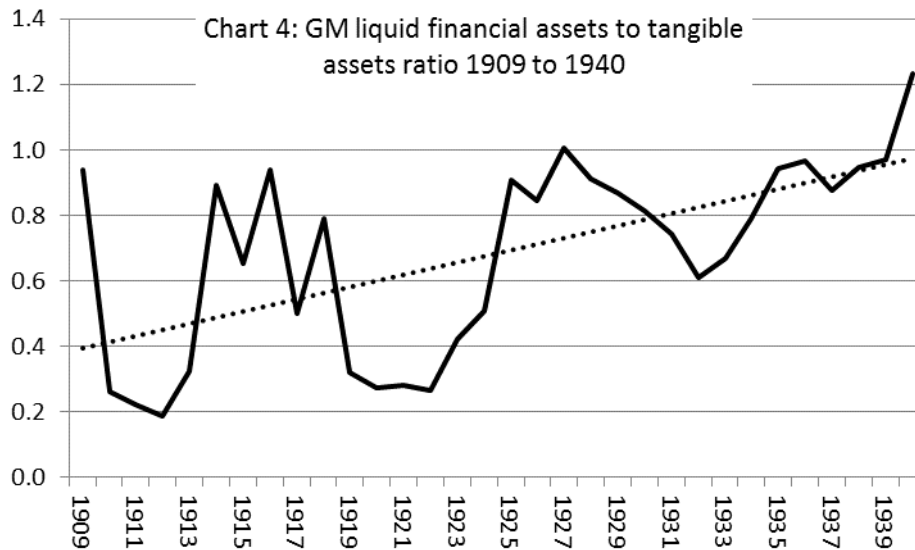
General Motors Acceptance Corporation was organized in 1919 under the banking law of the State of New York for the purpose of assisting General Motors distributors, dealers and customers in financing cars purchased on credit. It was stated in the last annual report that this activity was assuming an increasing importance in the operations of General Motors to a degree that could hardly be overestimated. (General Motors Annual Report, 1926:9)

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.⁵

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 (Sloan, 1964: 312)

⁴ GMAC = General Motors Acceptance Corporation founded in 1919

⁵ Sloan, A. P., 28 Sept, 1927 GMI Institute Sloan A.P Biography Box C.2.



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.

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). A simple trend of this ratio reveals a progressive adjustment in the composition of GM's balance sheet as the ratio of financial and liquid assets to tangible assets increases. In 1920, after the establishment of GMAC, financial and liquid assets were equivalent to 27 per cent of tangible assets but by 1940 this ratio had inflated to the equivalent of 129 per cent of tangible asset values. In 1927 GM also established the Motors Accounting Company which provided an accounting and financial service to dealerships and this subsidiary later became the Motor Holdings Division which was financed with \$2.5 million of GM funds. GM dealers were expected to put in a minimum of 25 per cent of their own capital and GM would make up the rest. GM's share-holding in dealerships could be progressively purchased back by the dealer from bonuses received from the Motor Holdings Division so that eventually dealers could take full ownership of their dealership

GMs balance sheet was progressively financialized during the period 1909 to 1940 driven by the provision of credit finance to customers that was otherwise not generally forthcoming from US retail banks. Analysis of GM's annual report and accounts reveals that financial assets

(loans outstanding), associated with the provision of credit to customers, are an increasingly important component of balance sheet assets relative to tangible investment in buildings, plant and equipment. This financialization of GM's balance sheet reflects a progressive changes in corporate priorities in terms of the need to underwrite dealership stock, finance car sales and realize a higher aggregate level of profit from volumes sold. We argue later that this increased capitalisation of GMs balance sheet reduced capital turnover (capital employed divided by sales) which acted to put a brake on the transformation of the return on capital employed. In the next section of this paper we turn to consider the use of stock options and bonuses at GM and note that whilst these schemes differ from modern company stock option schemes they served a similar purpose. This was to reward managers for improving GMs corporate profit (not individual divisions) and, as Sloan, understood it establishing 'an identity of interest between management and shareholders' (Sloan, 1964:408)

3.2 Stock options and bonus schemes at GM

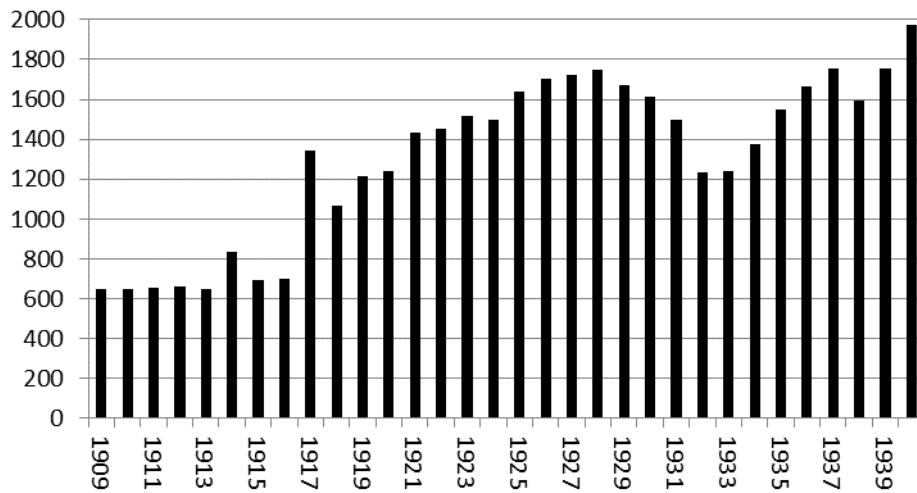
In GM the average employee earned roughly \$600 per annum in 1909 and earnings had risen to a peak of \$1800 in 1928 only to recover back to and then surpass this level some ten years later in 1940 when average employee wages were roughly \$2,000 per annum (see Chart 5). The GM annual report published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

(General Motors Annual report 1937:45)

Chart 5: GM payroll per employee 1909 to 1940 (\$)



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 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:

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 (Holdon, 2005:135).

Although Holdon points out that the GM stock bonus scheme differs from that of a modern stock option scheme it was a logical step in aligning managerial financial interest(s) with those of the shareholders (Holdon, 2005: 139). Participants in the GM stock option scheme would have been able to exercise their options after 18 months in employment even though issued options were good for 10 years (Sloan, 1964: 421). It was not uncommon by the mid-1920s for many of the major US corporations 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 (Landry, 1995:15)

In GM four financial incentive 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 when these savings matured these funds could be converted to GM preferred stock at a 7 per cent return. Significantly, Sloan commits a full chapter to 'incentive compensation' (Sloan, 1964: Chapter 22) this chapter is twenty-two pages in length compared the chapter on co-ordination by committee and divisionalization (Sloan, 1964: Chapter 7) which is seventeen pages in length.

At a senior level GM established the so-called Managers Securities Company in 1923⁶, and this was funded by GM 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. An investment of \$1,000 by a senior manager would have purchased 450 class A and B stock in 1923 but by 1930 an individuals holdings would have increased to 902 shares through exchanges, stock dividends and additional purchases made by the Management Securities Company (Raskob: 1927 132; Sloan, 1964:414). Raskob, then Chairman of its Finance Committee, observing that 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' (Raskob, 1927:132). In 1930 the Managers Securities Company was closed and replaced by the 'Management Corporation' which purchased 1,375,000 GM shares at \$40 per share (a total investment of \$55 million). This initial transaction was financed by the sale of \$5 million of Management Corporation shares to GM and issuance of a bond by the Management Corporation for \$50 million also subscribed to by GM. Sloan (1964) observed that by 1937 the market price of GM stock held by the Management Corporation had increased from \$40 to \$65.375 and so the average executive shareholding of 179 shares had increased in value to \$12,595 including dividends.

In 1937 the highest-paid executives at GM were being paid 200 to 300 times the average earnings per employee (see table 2) with a significant component of remuneration derived from company-level profit participation schemes. This 300:1 ratio between senior staff and average employee pay was not out of line with ratios reported for the S&P 500 group in 2014⁷

⁶ Later replaced by the Management Corporation in 1930

⁷ <http://www.epi.org/publication/top-ceos-make-300-times-more-than-workers-pay-growth-surpasses-market-gains-and-the-rest-of-the-0-1-percent/>

Table 2: GM senior management salary and bonuses, 1937

All figures in \$	Highest Paid Executive Management Group	Second Highest paid	Third Highest Paid
Salary High	150,000	120,000	120,000
Salary Low	112,500	76,666	90,000
Profit Participation	411,161	387,450	258,615
Total Annual	561,161	507,450	353,655
Relative to the average worker	319	288.6	201.1

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

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

Note: Average worker payroll was \$1,758 in 1937.

In the GM 1937 annual reports investors are informed that the senior executive group of administrative managers comprising 186 staff all received not only salaries but a share of profits. In 1937 this was equivalent to \$0.16 per share when earnings per share were \$4.38.

Raskob observing that:

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.

(Raskob, 1927:134)

And 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 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

(General Motors Annual Report 1937:46)

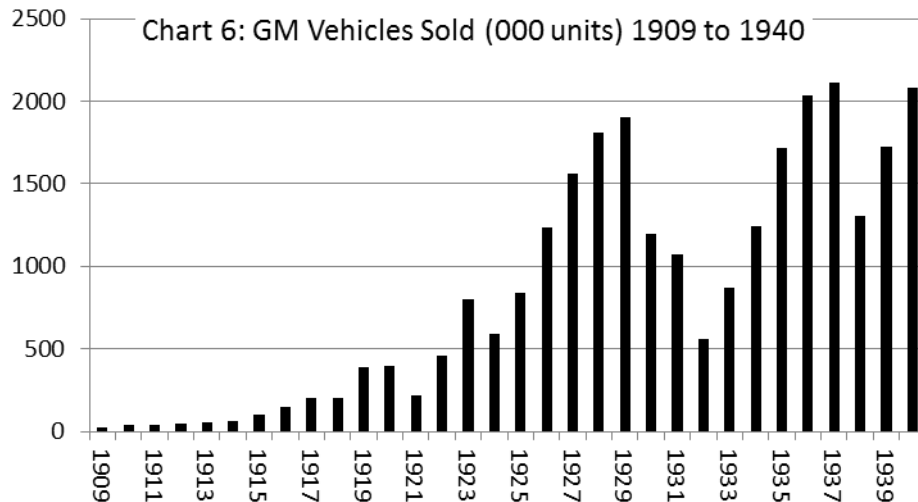
In 1937 all members of the organisation receiving an income of more than \$4,200 were eligible to participate in the bonus fund. We estimate that the average benefit per employee involved in this scheme would have been around \$100 per annum over the period 1918 to 1940. Bonuses for all employees also included opportunities to be included in the savings and

investment plan introduced in 1919 where employees with three months or more of employment could enrol. This involved making a deposit up to a maximum of \$300 per annum that GM would match with \$0.50 for every dollar deposited. At the end of the investment term matured funds could be invested in GM preferred stock with GM adding an extra \$2 per share invested and a follow-on fixed dividend of 7 per cent per annum. An employee depositing the maximum allowed over the period 1919 to 1927 would have accumulated a market value investment fund in excess of \$6,000. Thus while the impact of bonus plan(s) could not be mathematically proven Sloan was assured that these contributed to the extraordinary successful performance of GM and the 'retention of outstanding men' (Sloan, 1964:46).

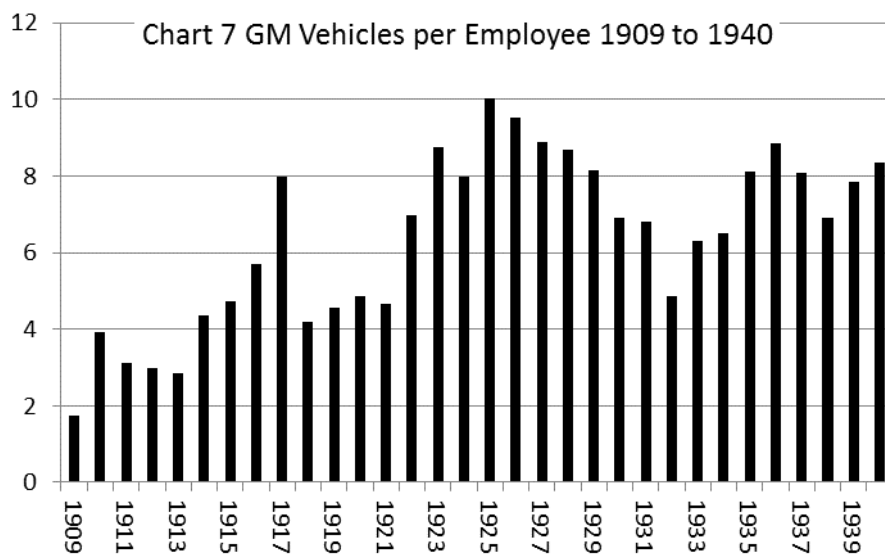
In the following section we consider the extent financialized corporate behaviour at GM transformed its return on capital employed over the period 1909 to 1940. This financial analysis differs from the return on invested assets often employed to evaluate divisional performance. The return on capital employed utilised in the analysis for this paper reflects the financial performance of the corporation as a whole and extent to which a higher level of earnings are being generated by capital employed.

4.0. Financialization and corporate performance at GM (1909 to 1940)

Our analysis starts with the GM's physical output of cars and commercial vehicles over the period 1909 to 1940. Chart 6 reveals two distinct periods: a period of growth 1909 to 1929 that is interrupted by cyclicity and a period from 1929 to 1939 where output peaked at roughly 2 million units in combination with significant bouts of cyclicity.



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

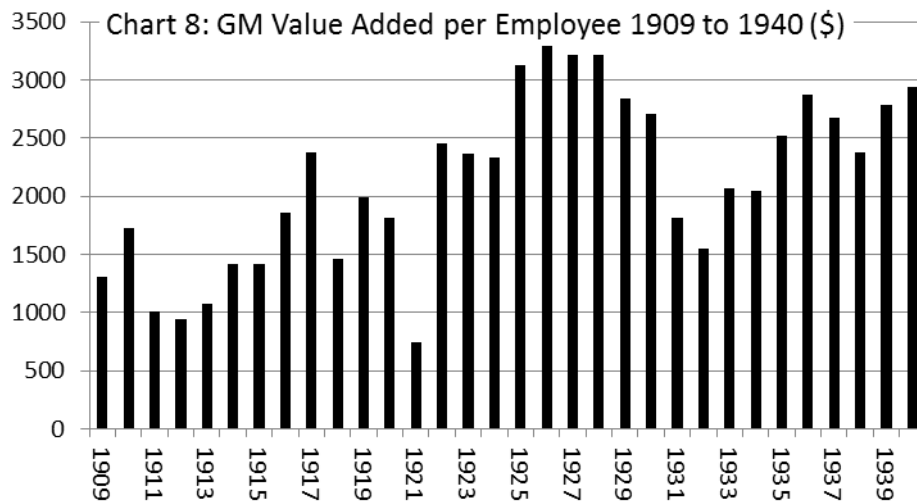


Source: GMI Alumi Foundation Collection of Industrial History, Flint Michigan, also <http://www.library.upenn.edu/collections/lippincott/corprpts/gm/gm1932.pdf>

Note: This calculation is total vehicles per employee

Chart 7 reveals GMs productivity in terms of vehicles produced per employee that moves up from 2 vehicles per employee in 1909 to a peak of 10 vehicles per employee in 1925 but with a number of significant downturns during this time period. Thereafter productivity drops back to 5 vehicles per employee by 1932 before recovering back to 8 vehicles per employee by the mid to late 1930's. This pattern of cyclical physical productivity has an approximate financial

correlate which is value added per employee.⁸ During the period 1909 to 1913 value added generated is about \$1,000 per employee and reaches a peak in 1926 when the value added per employee reached \$3,300 (Chart 8). As with physical productivity, financial productivity recovers after the 1929 to 1931 collapse but is no higher in 1940 than it was in 1925.



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

4.1 GM: Cost Structure, margins and return on capital, 1909-1940

In this section we consider the evolution of GM’s cost structure, profit margin and return on capital employed over the period 1909-1940. Our first key operating ratio is the value added to sales ratio. Value added is the financial fund that is captured by the firm after all external costs are deducted from sales revenue and the value added to sales ratio is an approximation of GM’s share of value captured from its value chain. During the period 1911-1924 this ratio remains relatively stable (apart from the initial start-up year) at roughly 30 per cent before gently rising towards 45 per cent. This increase in the value added to sales ratio reveals that GM had captured more of the total financial value chain within its own financial reporting boundary. However capturing more of the value chain did not translate into higher operating margins (cash earnings⁹ as a percent of sales) because an increased share of sales revenue

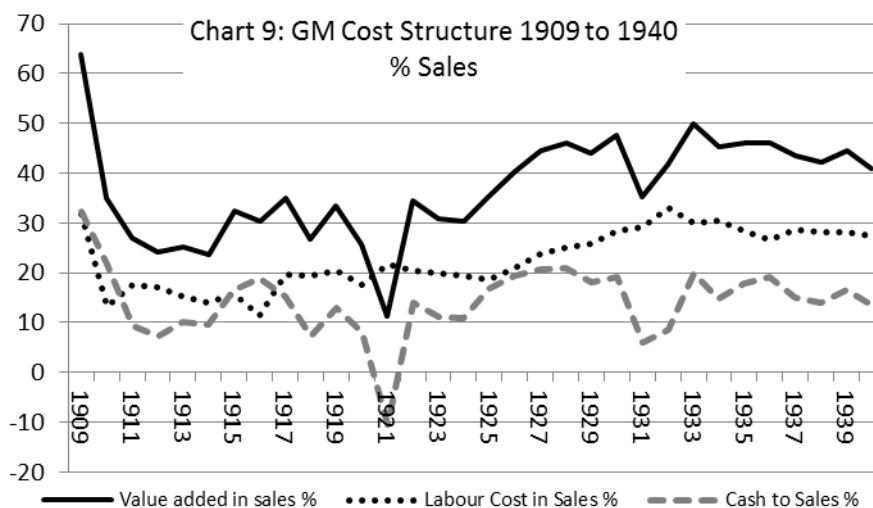
⁸ Value added is employee costs plus earnings before depreciation, interest and tax.

⁹ In this analysis for GM we define cash earnings as net income adding back depreciation.

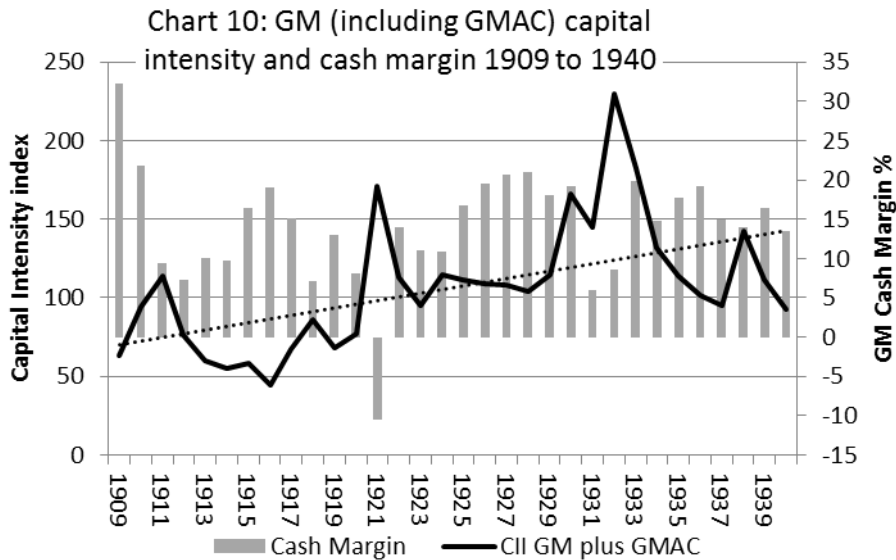
was spent on employment costs with these rising from 20 to 30 percent of sales as more work is undertaken in-house. This leaves GM's cash margin structurally untransformed and cyclical corresponding to the changes in output and oscillating sales revenue. Although the cash margin remains relatively untransformed we now turn to consider if this was this also the case for the cash return on capital employed. The cash return on capital employed is found by dividing capital intensity (capital employed/ sales) into the cash margin (cash earnings /sales)

$$\frac{[\text{Cash earnings} / \text{Sales}]}{[\text{Capital Employed} / \text{Sales}]}$$

Although the cash margin was relatively untransformed at GM it is possible that capital intensity is falling (capital employed / sales) thereby inflating the return on capital.



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 expressed as a percent of sales income



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>

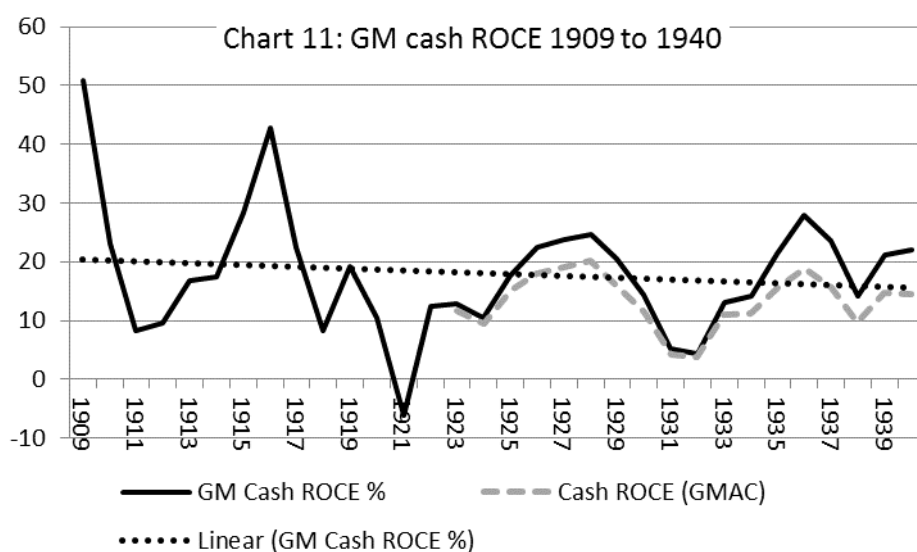
Note: CII GMAC= capital intensity index which is capital employed divided by sales where capital employed is long term debt plus equity. From 1923 onwards we also include notes receivable recorded in the GMAC accounts.

The analysis reveals that GM's capital intensity¹⁰ (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. In combination a relatively untransformed cash margin combined with higher capital intensity as GM employed more capital to finance loans to customers and finance its dealerships. GM's financing of loans to customers also acts to put a structural brake on the transformation of GM's return on capital (Chart 11). These trade-offs between the cash margin, capital intensity and return on capital employed were understood by Donaldson Brown.¹¹ Sloan himself observed that: 'Brown defined the return on investment as a function of the profit margin and the rate of turnover of invested capital (Sloan, 1964:141).

¹⁰ Capital intensity is calculated capital employed [debt plus equity in GM plus GMAC loan notes outstanding' divided by sales

¹¹ Donaldson Brown arrived at GM in 1922 and was elected to the Executive Committee. He was experienced in financial operations.

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 of the structure of the profit and loss in operations. Essentially it was a matter of making things visible (Sloan, 1964:142)



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 and cash margin to obtain the cash return on capital employed (CROCE). We find that over the period 1909-1940 there is a cyclical pattern to the return on capital invested 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 CROCE was 16 per cent and in the period of his chairmanship (1923 to 1940) the average stood at 17 per cent. We should also note that under Sloan’s chairmanship GM distributed over 80 per cent of its net income and this would have mechanically slowed down the accumulation of shareholder funds (retained profits carried forward would be lower) and this, in turn, would mechanically inflate capital turnover generating an additional uplift to the reported CROCE (see chart 7).

Our analysis of both financial and physical productivity at GM during the period 1909 to 1940 reveals that growth was interrupted by significant bouts of cyclicity. Although GM managed to capture a greater share of its financial value chain this did not translate into a higher cash margin because there is an offsetting increase in labour costs in sales revenue. We observe a similar trade-off between the cash margin and capital intensity as GM accumulated additional capital to finance loans made to customers. However these trades offs were well known to those managing GM's operations. Donaldson Brown understood that inflated balance sheet capitalisation from loans made to customers would reduce capital turnover but this was a necessary sacrifice if volume sales were to be maintained. Froud et al (2006) in their chapter on 'Financialization and Corporate Performance' argue that claims about financial transformation (such as that regarding the return on capital employed) often turn out to be disappointing because contradictory forces are in play noting that:

'the responsibility of management is not simply to raise earnings but also to resist any increase in the capital base that is not justified by current or future earnings. In practice, this may be hard to do if acquisitions or development of new activities such as financial services are attractive because, for instance, they help reduce cyclicity of earnings or boost top-line growth, even if they also bring significant additional debt or other liabilities'.
(Froud et al, 2006:81)

In this paper we have deconstructed the bottom line CROCE for GM to reveal how trade-offs between: growth in revenue, profits and balance sheet capitalisation and how these interlocking arrangements captured in the numerator and denominator of the ratio can frustrate financial transformation.

5. Summary/ Discussion

Chandler's (1964) text on 'Strategy and Structure' emphasised the importance of organisation structure and strategy governing the productive stewardship of resources and how this explained the rise of the modern corporation. Lazonick (2015) compares this productive 'old economy' business model with that of a 'new economy' 'financialized business model' where financial incentives have encouraged managers to extract value for their shareholders. This

Lazonick argues, leaves US firms vulnerable because resources are not being re-invested to sustain innovation, growth and competitiveness. The new economy mode of corporate behaviour is described as being 'financialized' because managers are focussed on reconciling resource stewardship with the financial demands of shareholders and the capital market. In this paper we employ the literature on financialization to frame the argument and analysis: first Krippner's (2005) observation that financialization is about the growth of corporate financial assets relative to tangible assets where non-financial firms are beginning to resemble financial firms in some cases '*closely*'. Second Lazonick's observations about how managerial incentives, in the form of bonuses and stock options, encouraged higher levels of earnings distribution at the expense of productive renewal. Finally Froud et al's (2006) argument that managers, in financialized firms, construct narratives that often exaggerate the potential for financial transformation to boost stock prices. The discrepancy between narrative promise(s) and financial performance outcomes can be understood by deconstructing ratios such as the return on capital employed. This process of deconstruction, employed by Froud et al, reveals how contradictory forces are in play in the financialized firm, for example, additional investment may stimulate growth in sales but not necessarily deliver a growth in earnings and so the return on capital is not transformed.

Our analysis reveals that there was a progressive shift in the asset structure of GMs balance sheet from tangible to more liquid financial assets. This change in asset structure reflects the use of financial instruments within GMAC (and GM) to underwrite the provision of credit to customers which, in turn, sustained higher demand, revenues and profits than would otherwise have been the case. We also find that a significant share of GM's earnings were distributed to its stockholders and we estimate that the distribution ratio out of profits (net income) averaged over 80 per cent compared to the US manufacturing average of 70 percent over a similar time period. This provided stockholder rentiers with a substantial return on their original and follow-on invested equity capital. GM's financial underwriting established bonus schemes for administrators and employees, including the Managers Securities Company (later Management Corporation) which purchased GM stock options for senior executives. Sloan (1964) observed that the stock option and bonus schemes helped retain senior executives but also served the purpose of aligning the financial interests of senior executives and employees with those of GMs stockholders.

Point values and ratios are often utilised by analysts and researchers to construct narratives and interpretations about the transformation of corporate financial performance (Haslam et al, 2013). Froud et al (2006) argue that in the financialized firm managerial narratives often promise more than they can deliver and deconstruct key financial ratios such as ROCE to reveal how contradictory forces limit financial transformation. Donaldson Brown also understood that GM's return on capital employed is a ratio with a numerator and denominator that could be deconstructed into constituent elements to reveal confounding and contradictory forces. Brown describes the return on capital invested as a function of profit margins combined with the rate of capital turnover. Profit margins can be affected by changes in value added captured from the firm's value chain and how much of this is then distributed to employees as wages and salaries. So that whilst GM captured more of the financial value chain the company's increased expenditure on employment costs restricted transformation of the profit margin. Furthermore, return on capital employed as Donaldson Brown considered it was also affected by capital turnover (sales revenues divided by capital employed). The inflation of capital employed, resulting from financing loan credit to customers, enabled GM to recover additional revenue and profits but it also came at the expense of reducing the rate of capital turnover and this, in turn, limited the transformation of return on capital.

The purpose of this paper has been to explore the extent to which elements of a new economy financialized business model were present during GMs early corporate development. At a company level we find that many of these elements were present and had an impact on resource stewardship and corporate behaviour. There are of course various corporate logics and arguments employed to justify the shift by GM into financial services, introduce stock options and incentives and distribute a high proportion of earnings back to shareholders. Behind all of these interventions is a motivation to improve financial performance, in terms of generating a higher return on capital. However, as Froud et al observe, these financialized endeavours are also fraught with contradiction and ambiguity and these are rendered visible when financial ratios are deconstructed into their constituent top and bottom line elements.

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