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What did Morgan's Men really do?

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ABSTRACT

Before 1914, London, the financial centre of a country half the USA's size, had a stock exchange that was larger and qualitatively more developed than New York for both domestic and overseas financing needs. J. P. Morgan's higher profits in New York arose partly from conflicted deals that would later be illegal, as they already were in London. His contributions to the rapid catch-up process by New York are more plausibly seen in terms of successful emulation of European precedents than the information signalling alleged in over-determined, "Whig" models of American financial innovation.

"Currency, banking and finance have always been the stumbling blocks of American industry. Again and again they have brought it to utter grief. If the Americans had natural aptitude for finance they would have given themselves long ago a sound currency and banking system…. The Wall Street oligarchy has no counterpart in Europe and its existence here is inconceivable…. The American…. gorgeous style of capitalisation may not serve him so well on this side of the Atlantic as it has done on his own."

Lawson, *American Industrial Problems*, London, 1903, pp. 23, 222, 392.

"The investment business is not yet with us as well developed or as well understood as it is in England."

Lyon, *Capitalization*, Boston, 1913, p. 207.

I

In the decades before the First World War, Britain dominated the world financial system and its richer citizens were prolific owners of stock exchange securities both at home and abroad. The contemporary French financial analyst, Alfred Neymarck, estimated that in 1910 nearly £6 billions of tradable securities– a quarter of the global total - were owned by Britons: that is, in per capita terms, more than three times the level in the USA and Germany.[1] At the turn of the century, London had more banks than any other city in the world, more than a third of them foreign banks and British banks operating primarily overseas, and nearly half of the global stock of multinational investment in 1914 originated in the UK.[2] Of the major international corporate borrowers, only Russians favoured Paris and Brussels over London. London perhaps had an unfair advantage in attracting listings of Indian, Australian and Canadian companies, but enterprises operating in the Netherlands, the Transvaal, Japan, Mexico, the USA and Argentina also preferred London for their international borrowing. This leading global position was bolstered by an unparalleled network of banking correspondent relationships and by an impressively large and forward-looking British commercial diaspora. In a market promising new opportunities, like Japan, there were more resident UK nationals and British-owned firms than the totals from the USA and Germany combined.[3] If any city can be said to link global entrepreneurial communities in 1900, it was cosmopolitan London, and, in so far as it had a rival, that was Paris.

London's continuing lead over New York – the commercial and financial capital of a country with twice the UK's GDP - is particularly striking. In 1902, at the end of a major flotation and merger wave that greatly increased industrial listings, the value of all securities traded on the New York Stock Exchange (NYSE) was still less

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[1] Neymarck, *Statistique international*, p. 23. This is lower than later estimates of Britain's overseas and domestic capital stock, but, of course, much of that was not in tradable securities.

[2] Whitaker, *Almanack*, pp. 291-296, 310-320; Dunning, *Explaining*, p. 73.

[3] Sugiyama, *Japan's industrialization*, p. 41 for 1895 ; Anon, *Japan year book*, p. 21 for 1905.

than a third of London's.[4] It was still not much more than half as late as 1917.[5] If the comparison is confined to domestic equities, in which the London market has traditionally been portrayed as lacklustre, the London market's total value was still in 1900 at least 50% larger than New York in absolute terms. This implies that, in relation to the size of its host economy, London started the century with three times New York's *domestic* metropolitan equity capacity.[6] For *international* securities, there was simply no contest: New York's role was negligible, not only compared with London, but with Paris, Brussels, Amsterdam or Berlin. Hundreds of American and German companies paid to list in London, but only a few British companies paid to list in Berlin and none until well after the turn of the century in New York.[7] In 1900, investors in London could buy shares not only in American railroads (which had long been a staple) but in Chicago meatpacking, Milwaukee breweries, America's largest flour miller and Kodak cameras, none of these being available on the NYSE. America's largest business corporation of the nineteenth century, the Pennsylvania Railroad, had been paying to list in London (as well as on its native Philadelphia exchange and on Paris) for decades when, as late as December 1900, it reluctantly agreed to a formal listing on the NYSE. In 1901 well over four thousand British and foreign companies were listed in London's *Stock Exchange Official Intelligence*, but just over 200 corporations had stocks traded on the NYSE.[8] As late as 1912, London listed the securities of 71 of the world's largest 100 enterprises by equity capitalization (30 US-headquartered, 28 British-headquartered and 13 headquartered elsewhere), while the NYSE dealt in only

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[4] Pratt, *The work*, pp. 81-2; *Stock Exchange Daily Official Intelligence 1902,* p.1098. This comparison is at nominal (par) values. In view of the greater prevalence of stock watering in New York, the discrepancy at market values was likely greater.

[5] Martin, *New York*, p. 179; *Stock Exchange Official Intelligence 1918*, p. 1682.

[6] Dimson et al., *Triumph*, p. 23. These figures are arguably an underestimate of London's domestic equity lead, since they exclude the Bank of England (then investor-owned and with no New York equivalent), all except the largest equity classes in any company where there were two or more classes of ordinary/deferred (multiple cases in London; unknown in New York) and the unlisted/supplementary lists (possibly larger in London than New York).

[7] As is clear from the listings in the *Stock Exchange Official Intelligence, Saling's Bőrsenjahrbuch* and the *Commercial and Financial Chronicle*.

[8] Fisher, "President's Address," p. 1109 for the UK; *Commercial and Financial Chronicle* for 1901 (NYSE railroads and "miscellaneous" stocks).

40 of them (all but the Canadian Pacific US-headquartered).[9] New York was probably then near London's scale for *domestic* issues, but it was many decades before it achieved international listings at the level London had earlier attained.

There are multiple books and articles on London as a financial centre, but this literature contains surprisingly few explicit discussions of the sources of this remarkable and sustained competitive success.[10] Lance Davis's classic comparative article emphasized the incapacity of US markets to keep up with the enormous financial mobilization demands of the rapidly growing US economy and the consequently greater reliance on plutocratic, concentrated ownership structures there, findings later reinforced by Rubinstein's analysis of the relative scale of US and UK business fortunes.[11] Much recent analysis of barriers to financial development has focused on information asymmetries. Sylla and Smith diagnosed an initial British lead in provision of information to investors and Hannah supports this perspective, suggesting that accounting historians may have underestimated the scope and quality of UK auditing.[12] Market structure and business conduct may also have played a role: Michie showed that, until just before the First World War, the London Stock Exchange retained a remarkably flexible and competitive structure which encouraged firms to seek a public quotation, whereas New York was hampered by monopolistic restrictions.[13] Broadberry has recently underlined the exceptionally large share of UK resources devoted to finance and Britain's initial productivity lead in these services.[14]

More generally, it is plausible that London retained a first mover advantage in this sector, long after its output had been overtaken by larger, follower countries in commodity businesses such as steel or coal, with lower barriers to entry. Because it provided the world's largest pool of liquidity, London attracted skilled financiers from around the world, reinforcing local knowledge spillovers and external economies of scale. In the absence of major disequilibrium of the kind that enveloped

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[9] Author's calculation from Wardley's global list ("Top 100") and listing details in *Stock Exchange Official Intelligence* and *Commercial and Financial Chronicle Bank and Quotation Section*.

[10] For a sample, see Michie, ed., *Development.*

[11] Davis, "The capital markets;" Rubinstein, ed., *Wealth.*

[12] Sylla and Smith, "Information;" Hannah, "The 'Hollywood History' of Corporate Governance."

[13] Michie. *London and New York*, pp. 274-6.

[14] Broadberry, "Forging ahead," pp. 7, 11.

Europe from 1914, this made its initial lead relatively impregnable and self-reinforcing. Other countries could quickly emulate London innovations or even invent new financial techniques before London (as Paris and Amsterdam had long shown), but the scale economies and concentrated financial skills of London at the end of the nineteenth century were difficult to match. The effects were similar to the dominant role of sterling in international trade and merchants' preference for the bill on London to settle trade accounts: financial accommodation was convenient and cheap in the world's most liquid market. The main global liquidity pools for trade finance and stock exchange finance were mutually reinforcing, through the operations of the London money market.[15]

Yet there is a voluminous tradition of complaint – emanating more from armchair critics rather than the businessmen, financiers and investors who used these facilities - that other countries' stock markets were qualitatively superior and that London's performance in this sector burdened the home economy. The whole British "declinist" literature has this undercurrent: British merchant banks favoured international business at the expense of domestic firms; gentlemanly capitalists pursued imperial satisficing at the expense of profitable domestic technological innovation; mergers between old enterprises were financed, while small and vigorous firms were locked out.[16] Kennedy suggested that the British financial markets were particularly inept at shifting resources to new industries like electricity and automobiles.[17] De Long argued that competitive banking was a grave disadvantage to London because it inhibited the emergence of a quality certifying oligopoly that privileged the NYSE's development.[18] Chandler asserted that early twentieth century British capitalists were damagingly bent on preserving personal ownership, while American plutocrats and their families were more inclined to accept the divorce of ownership from professional management control.[19] It is a measure of the intuitive appeal of "declinist" perspectives in the British narrative (and of the converse "Whig" or functionalist modernisation perspectives in American history) that clear contrary

[15] Michie, *London and New York*, pp. 132-64.

[16] For a summary and critique of this literature, see Clarke and Trebilcock, eds., *Understanding decline*.

[17] Kennedy, *Industrial structure*.

[18] De Long, "Did J. P. Morgan's Men."

[19]Chandler, *Scale and Scope*.

evidence – in fact, British firms already in 1900 had more substantially divorced ownership from control - could simply be ignored[20]

One banker with an unusually favourable vantage point from which to reflect on London and New York at the turn of the century was the colossus of Wall Street, John Pierpont Morgan. The Morgan partnership at 22 Old Broad Street, London was originally the main business of Pierpont's father, and for two decades after his death was still known as J S Morgan & Co.[21] Morgans in London had been second only to Barings in floating US railroad issues in the classic period of overseas financing of US corporations. Morgans began the 1890s with as large a position in Old Broad Street as in 23 Wall Street and many of its US clients were "inheritances" from the London partnership.[22] Pierpont, in the 1890s, decisively shifted the balance of his family businesses to New York, seeing himself as the bearer of the sound London practices of an ethical conservative banker, worthy of public credit, to a new venue where they were badly needed.[23] He referred to his New York firm as "merchant bankers" in the English fashion, rather than using the new-fangled American "investment banker."[24] French and German corporate banks had extensive London operations but their American equivalents had none before 1919 (being barred by their government from operating abroad), giving private partnerships like Morgan's a striking competitive advantage in linking New York with the world's financial heartland. Morgan still worked and played in London, where he owned two houses, for around three months every spring. His son (and successor in 1913), the even more Anglophile "Jack" Morgan, served his apprenticeship as a partner in London for eight years beginning in 1898. Both Morgans routinely cooperated with British capitalists, for whom their firms had long been a conduit to American wealth-building opportunities: Sir Charles Tennant, for example, was one of the three voting trustees of the Erie Railroad, along with Pierpont. When Pierpont successfully thwarted Harriman's bid for the Northern Pacific Railroad in 1901, it was by virtue of Jack's purchases of the pivotal final shares in London.[25]

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[20]Hannah, "Divorce;" see also Colli, *History*, pp. 85-97; Becht and De Long, "Why has there been so little blockholding." On the Whig fallacy in American business history more generally, see Lamoreaux et al., "Against Whig History."

[21] Carosso, *The Morgans*, pp. 273, 276.

[22] Ibid, pp. 12, 77-8, 224, 249, 290, 354, 390. .

[23] Ibid, p. 294; see also pp. 352, 647.

[24] Roberts, "What's in a Name?" p. 34.

[25] Carosso, *The Morgans*, pp. 373,376,477.

Yet the financial results of Morgan's twin operations appear strikingly different. In the period 1900-1913 the New York partnership averaged net profits (after interest) of $5.9 million a year, while the British house only averaged $0.3 million annually between 1900 and 1909.[26] These figures need to be related to the human and capital resources employed. There were in the early twentieth century about 150 employed by Morgan in New York, in addition to partners and associates, and a further 75 at Drexel & Co in Philadelphia, all generating the reported American partnership profits, while the London house employed under 50.[27] This is compatible with profits per employee more than four times higher on the American side. Returns to capital are more difficult to compare. The average capital in the London partnership accounts for 1900-1909 was $8.7 million, a figure very similar to Pierpont's father's core London operation of the 1880s; and this implies an average net, post-interest return in the first decade of the century of only 3.5%. This was about what a conservative, gentlemanly, English banker, leveraging his father's reputation, could, with an above average share of luck, earn, but – American citizenship apart – that is a not wholly inaccurate description of Morgan. The reported figure for J. P. Morgan's partnership interest when he died in 1913 implies a total capital in the US partnership that had then risen to $75.9 million, a sharp increase from the 1895 figure at only $7.1-7.3 million.[28] The American balance sheets are not available annually, but, assuming constant annual growth in partnership capital, the rate of profit (in addition to normal interest) on the American partners' capital would have averaged 13.5% between 1900 and 1913.[29]

II

Why, then, were Morgan partners so much more handsomely rewarded in New York? In order to answer that question we have to look at their main source of fees: business corporations. Carosso's history of the firm identifies two kinds of high fee

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[26] Ibid, pp. 615-16; Burk, *Morgan Grenfell*, p. 265.

[27] Carosso, *The Morgans*, pp. 436, 459.

[28] Ibid, pp. 273, 276, 644, 745 n. 124.

[29] These figures may seem surprisingly modest considering the alleged price gouging of the "money trust." However, these figures for "net profit" exclude interest paid to the partners, so are a measure of economic rent (monopoly profit in excess of normal capital charges) rather than total profit on capital.

transactions: railroad reorganisations (especially in the last decade of the nineteenth century) and industrial mergers (especially in the first decade of the twentieth). Railroads provoked lively contemporary debate on the "Europe versus America" question and the transatlantic differences were striking. European railroads were run by the state, as in Germany or Belgium, or, where private, as in France and Britain, by stable, professional boards of directors (typically business users, managers and bankers) and the railway professionals that they appointed. As Colleen Dunlavy has emphasised, this was partly underpinned by "democratic" or "prudent mean" voting rules (one-*shareholder* one-vote, or reduced voting power with cumulative blocks of shares), which prevented plutocratic shareholders exercising control over European railways.[30] In the United States, by contrast, "plutocratic" (i.e the, now normal, one-*share* one-vote) voting was the corporate norm, there was an active market in corporate control, and (apart from a few roads such as the Pennsylvania, with European-style professional management and widespread share-ownership) personal ownership of US railroads by plutocrats with a large, sometimes majority, stockholding was common.[31] That control could, however, be precarious, both because others could acquire stock - in the market or from other large holders - to challenge minority control and because American railroads were more heavily leveraged by bonds (and by fixed-interest preferred stocks) than their European equivalents, laying them open to foreclosure by bondholders if payments were missed. This unusually high leverage was partly because their early European investors had wanted to limit the managerial discretion of distant corporations, partly because the equity culture in America was then underdeveloped, while bonds were well understood by NYSE investors and dominated the market. As in the United States, large European railroad corporations were the core of the quoted corporate economy in the 1890s, but they had a higher proportion of equity capital and they hardly ever (and, in the case of major lines, never) went bankrupt. In the USA, in the 1893 crisis, nearly a quarter of all railroad mileage – at a time when railroads completely dominated the NYSE stock and bond list - was in receivership. To European observers, one distinctive characteristic of American financial capitalism was that it was bankrupt.

Morgan saw more clearly than anyone how to remedy this, because he understood the weaknesses of American finance and governance.[32] His railroad

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[30] Dunlavy, "Corporate Governance."

[31] Hannah, "Divorce."

[32] Carosso, *Morgans*, pp. 363-70; Tufano, "Business Failure."

reorganisations have two hallmarks, both tending to propel America closer to European norms. The first was the voting trust. If any large stockholder or director– like William P. Clyde in the Southern reorganisation – refused to put controlling shares in a trust, Morgan simply walked away (seven months later Clyde came begging and Morgan resumed work). He wanted to install professional railway managers on whom he could rely to use new money to reorganise the road technically and commercially and he wanted to prevent marauding plutocrats gaining control and sabotaging that work for short-term gain.[33] The voting trust, typically for five years initially, but often renewed for longer, essentially gave that stability, by taking the voting rights away from stockholders and putting them in the hands of Morgan's men and their fellow voting trustees. Both Morgan and his partner, Henry Davison, explicitly stated that they saw this as the equivalent of the European norm of what Dunlavy calls "democratic" voting.[34] However, as in Europe, its principal effect was to ensure incumbent (Morgan-appointed) board control, even when the board did not personally own a majority of a road's stock.

At the same time, Morgan's men undertook a thorough review of the revenue-earning power of the railroad and of its needs for new investment funds to improve that earning power, usually resulting in the second hallmark of the Morgan method: that the proportion of bond capital had to be reduced, while that of equity was increased. Again lowering excessive leverage ratios was standard British practice; indeed the pattern was set by the Atchison, Topeka & Santa Fe, reconstructed in 1892 by the London office. Moving more US roads in that direction required full-time attention (New York partner and railroad specialist, Charles Coster, gave it) as well as some fine judgments among local contending interests. Often, stockholders were forced, by the threat of foreclosure, to put in more equity, via direct assessments or heavily discounted issues. Preferred stock was also widely issued, with British-style restraints on senior debt issues to enhance the appeal of such stocks.[35] In some reconstructions, like the Erie and Southern, it was difficult to make a settlement that gave a realistic chance of raising future capital by stock rather than bonds and leverage remained high.

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[33] One can, of course, debate whether a fluid market in corporate control is better than entrenching stable management teams in self-perpetuating corporate boards. That was not, however, a debate that Morgan – or European railway directors – cared to have: they were closet Chandlerians on this issue.

[34] Pujo, *Hearings*, pp.1058-60, 1970-72.

[35] Tufano, "Business failure," pp. 22-3.

Yet, the confidence in Morgan's men's ability to get this difficult balance right, guaranteeing a return to preferred stockholders and – if things went well - perhaps eventually to common stockholders also, was the key to successful re-financing. That they – and others with similar skills - generally got this right is shown by the dramatic improvement in railroad finances in the decades before World War One. In 1901-10, the overall return on railroad common stocks was 121%, substantially influenced not by the modest dividends, but by capital gains, as confidence they would not again be worthless improved. This was slightly better than the return on industrials and well above the 21% on other utilities.[36] In the crisis of 1907-08, less than 5 % of US railroads were in receivership, a dramatic improvement on the 1890s, though still the Wild West to Europeans.[37]

Of course, stable and well-run US railroads, like the Pennsylvania or the New York Central, had no need of de-leveraging or corporate restructuring and the ordinary issue business that the firm conducted for such roads was, accordingly, not especially remunerative.[38] However, elsewhere the reorganisation skills of Morgan and his team of railroad company doctors were at a premium: it is here that the largest profits of the partnership were made in the 1890s. For example, the Reading deal of 1895-1897 netted them $3.4 million in reorganisation and underwriting fees.[39] They earned such fees because they were the best in the business. They could not earn such fees in Europe because the financial and management problems addressed generally did not exist there. This was also why, by the turn of the century, Morgan's market share was higher in New York than in London.

III

The railroads were already publicly quoted firms, but Morgan's major industrial initiatives often involved the flotation of firms that were previously owned by entrepreneurs or their descendants. Even in the case of US Steel, where most of the initial assets except Carnegie Steel had been previously quoted, it was only a few years since Morgan or others had first sponsored their IPOs. This was a relatively new business everywhere, but newer in New York than on the main European bourses. It

[36] Cowles, *Common-Stock Indexes*, p. 48.

[37] Ramirez, "Did J. P. Morgan's Men," p. 675.

[38] Carosso, *Morgans*, pp. 358-61.

[39] Ibid., pp. 382-83.

offered rich pickings, since the gap between the profits made by entrepreneurially-owned firms and the expectations of dividend returns of the investing public were so large. The price-earnings ratio for NYSE industrial stocks in the first decade of the twentieth century averaged 13 (and the dividend yield was even more generous), while private sales of businesses to new principals achieved less than half that.[40] In an IPO, if the decline in profitability from reducing the incentives of personal ownership could be neutralised or limited, by appropriate governance, information and management structures, there was a considerable surplus to be shared between the vendors (whose knowledge of such affairs was, by definition, limited) and promoters (who knew what the market would bear). This led to some quite extraordinary returns, both in Europe and in America, to some intermediaries with dubious skills, and some who were downright crooked, especially if they manipulated information asymmetries to mislead investors or vendors. Stories of promoters buying from vendors at a low price and selling to investors at substantially higher prices were then routine. Although both competition and publicity soon limited the potential gain, some of Morgan's profits from this business were possibly of such windfall kinds.[41] Morgan's distinctive deals were, however, in merging already quoted enterprises and it seems to have been in large deals of this kind that he began to match railroad profits. The 1898 Federal Steel merger of five companies had netted the Morgan syndicate nearly $2.3 million, 16% of the $14 million new capital raised, though the firm also arranged the exchange of existing paper in the merger for this fee.[42]

Morgan's largest ever deal was the 1901 US Steel merger, which took fees beyond this level. On the face of it, this transaction was a very large-scale, but straightforward exchange of shares (no new capital was raised by public subscription), together with a large printing job for $303 million par value bonds, issued to Andrew Carnegie and his five partners for the previously unquoted component in the merger (the five partners also took part payment in US Steel stock of $189 million par value).[43]

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[40] Cowles, *Common-Stock Indexes*, p. 44; Van Oss, "The "Limited Company" Craze," p. 733; Fear and Kobrak, "Diverging Paths," p. 14..

[41] O'Hagan, *Leaves*, for the effects of competition on eroding early windfalls.

[42] Bureau, *Steel Industry*, pp. 125-6; treating US Steel as one large merger extending over the years 1897-1901 and counting all IPO/merger fees in that period as a proportion of the ultimate firm's total first year market value, produces the more moderate profit, net of costs, for all involved issuers, of 7.7%, see ibid., p. 251.

[43] The 5% bonds were worth $349 million, on the basis of infrequent trades averaging 115 in

The main risk arose from the possible unwillingness of existing equity investors in some or all of the other merging firms to accept that Carnegie's bonds should have a massive prior charge. Such high levels of leverage were unusual except for stable railroad stocks, so stockholder acquiescence could not be taken for granted.[44] Morgan risked not only $3 million expenses, but also the underwriting of the equity share of the commitment to the Carnegie partners, if obligated to go ahead with that separately. However, the stockholders in Federal Steel and the other merging companies would rationally only exchange their shares if they felt that the increased profits (from future monopoly or cost savings) compensated for the increased risk of the new prior charge *and* for the dilution of their existing (perfectly good and already expensively intermediated) equity by the new stock issued to pay the Morgan syndicate's fee. Since both of these effects were very large, this was quite a tall order and signalling accurate information about them was probably the last thing in the minds of the Morgan partners. The problem that investors might baulk at this double dilution was simply resolved by offering the directors of the merging firms an insider deal (via participation in the underwriting syndicate) to induce them to recommend acceptance of the US Steel paper. Their stockholders, in the opaque offer document sent to them early in March 1901, were not informed of the level of fees, nor that their directors were beneficiaries.[45] As Morgan later acknowledged, he understood why in London such non-disclosure was criminal. He also knew that in New York it was perfectly legal.[46]

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the first year, as the Carnegie partners trickled their bonds to the market. (Ibid, pp. 174, 242).

[44] In 1899, the top 100 US industrials had, at par, only 8% bonds, 23% preferred and 69% common (Bunting, *Rise,* p. 118); the previously quoted merging steel companies also had only 8% bonds, while US Steel at par had 27% bonds, 36% preferred and 36% common (Bureau, *The Steel Industry, 1*, pp. 170, 242). At average first year market prices, the leverage was even higher: 34% bonds, 42% preferred and only 20% common. It was not unusual in London for one third of the capital of an industrial to be in bonds, one third in preference and one third in ordinary.

[45] Bureau, *Steel Industry*, pp. 243-49; Carosso, *Morgans*, pp. 466-74; *Commercial and Financial Chronicle*, 72, 9 March 1901, pp. ix-x. The syndicate's stock entitlement – but not the insider participation – was disclosed in the accounts for 1902.

[46] Pujo, *Hearings*, p. 1088. He stated it would be desirable to outlaw this behavior in New York, but difficult because of competition between stock exchanges, ignoring the point that in Britain (as in America later) it was legislation, not a stock exchange rule, that achieved

Morgan proposed this integrated multi-firm merger with strong market power partly for well-known industrial reasons: Carnegie was threatening to integrate forward to downstream steel fabrication, which would threaten the profits of Morgan's fabricating companies. The financing imperatives of the deal have been less noted. Carnegie wanted to retire, to which the obvious solution was an IPO for an independent Carnegie Steel. An offering for the world's largest and most efficient steel company might attract the investing public, but it would also, at $480 million, have been the world's biggest-ever IPO, and by a large margin. It was far from clear that the New York market had this capacity: the amount of cash raised in 1900-1904 from the general public totalled only $40 million a year from all common stock issues and $29 million from preferred; bonds - mainly for the railroads - raised another $521 million annually.[47] London could have taken some of the strain, but in 1900-1904 even London was able to direct to all private overseas borrowers only $230 million annually of its $771 million new issues.[48] It becomes evident that an IPO was probably not the answer. The decisive brilliance of the Morgan plan was that it was all-paper and avoided an immediate and large call for cash subscriptions. It required the underwriting syndicate only to provide a (more manageable) $25 million of new cash for operations, though they were potentially liable for a further $175 million, in the event that both preferred and common stock prices fell to zero, so the paper element in the Carnegie offer price could not be met. The "world's first billion dollar manufacturer" simply merged existing paper, with some questionable adjustment of rights, into one federation.[49] It was not so much an IPO, more a highly creative way of sidestepping an IPO that might have failed.

There is something faintly comic in this situation. When Andrew Carnegie - who owned 55% of Carnegie Steel – assented to the deal, Morgan, probably correctly, congratulated him on having become the richest man in the world. It is difficult to think of anyone who could more appropriately shoulder equity risk, even in a retirement and philanthropy portfolio. Yet he had no faith in Wall Street, in Morgan, or in the new company: he knew that Federal Steel, the main Morgan component and a virtually

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this.

[47] Goldsmith, *Study*, pp. 489, 503, 505. The much higher figures routinely quoted do not allow for issues below par, exchanges, stock retained by vendors etc.

[48] Davis and Huttenback, *Mammon*, p. 41.

[49] Its securities were worth $1,133 million (Bureau, *The Steel Industry*, p. 242), but it was not the world's first billion dollar corporation. The Paris-Lyon-Méditerranée Railway had already exceeded that in the nineteenth century.

identical business to Carnegie Steel in all except size, had been so managed that its rate of return was well below that of his own steel partnership.[50] He therefore insisted on payment in 5% gold bonds. This was not a matter on which Morgan could rely on European precedent: European business owners usually wanted to retain some of the equity action when going public; and efficient firms acquired inefficient ones, rather than vice-versa. Moreover, no European manufacturer was even one-third the value of Carnegie Steel and the only American industrial that was bigger - Standard Oil – was not listed on the NYSE until 1920.[51] This was a unique challenge.

US Steel would, therefore, naturally find it difficult to benchmark fees, but discussion of the matter was no doubt simplified by Morgan partner George Perkins, who chaired its finance committee. Such conflicts of interest may be against elementary rules of corporate governance (and the Bureau of Corporations and the Pujo Committee were suitably shocked), but in 1901 the rule book was still being written by Morgan. Effectively the only restraint on his profits in this exceptional transaction - in which he was, effectively, both client and banker - was his sense of moral responsibility and the threat of competition. Moral compasses are often erratic when such large sums are involved, but we can analyse potential competition. It certainly existed: in 1899 Carnegie had conditionally sold Carnegie Steel to the Moore brothers of Chicago for a third of what he later got from Morgan, but they had failed to deliver, forfeiting the $1 million penalty specified in the contract. There were other large investment banks undertaking significant corporate business, but this failure would have given all pause for thought. Morgan was already the most respected investment banker, and he would have to share underwriting commissions quite broadly. He had successfully launched Federal Steel, reconstructed leading railroads and, acting as a surrogate central banker in a country that lacked one, rescued New York from the 1895 panic. It was now payback time: his reputation was at its height and he had a bold, new idea. In Europe,

[50] Warren *Big Steel*, p. 16.

[51] Its stock was still owned by the Rockefellers and other founding families, who trickled it out slowly to the public on the curb over many years. A major difference between London and New York was that in New York stock was gradually released by families in this way (and also vendors by syndicate members after IPOs), rather than in a simultaneous, transparent public subscription, as in London. London's listing rules, requiring that at least two-thirds of an issue be sold to the public, partly explain why London more closely resembled modern IPO practice and had lower levels of family ownership, see Hannah, "Divorce.".

liquidity for developing large public issues was provided by giant, multi-branch commercial banks with substantial capital and large retail deposits, but America's banking laws kept all but a few banks small. Morgan's networking with these few banks and rich individuals gave him access to the short-term funding that could be required on a scale that probably no one else in New York could match.[52] In effect, because of a mixture of retarded equity market development, small commercial banks and an uncharacteristic burst of (dubiously ethical) originality, Morgan was a monopolist for this transaction.

The total fee for Morgan & Co and the underwriting syndicate was fixed at $130 million stock at par, half in common, half in preferred. Out of this, $3 million actual cash expenses, and the $25 million cash paid by the syndicate to the corporation, need to be deducted to determine the gross profit of the syndicate. The fee was paid in paper (there was nothing else in which to pay it), so Morgan also had to unload the stock onto the market on behalf of syndicate members. In the first year the stock traded at 31% below par, so the syndicate realised $62.5 million net cash.[53] This was a complex and creative transaction and surely justified more than the few million dollar fees for a large railroad reconstruction, but twenty or thirty times more? This transaction would simply not have been possible in Britain – not only was it illegal but merger for monopoly was less attractive in a tariff-free country – but at competitive fee rates it would notionally have cost $6 million, only one-tenth as much.[54] In essence, the transaction had three elements. Allocating the actual profit of $62.5 million arbitrarily among these in the ratio 1:2:3 suggests net profit rates of 42% on the $25 million new cash the underwriters subscribed, 16% on the further $175 million underwritten and 6% on the $1,133 million value of paper shuffled. To present any part of this transaction as a payment for "information signalling" would require someone with the imagination of Mark Twain (and he was on the other side). I do not know of any other significant transaction in the twentieth century where such high fee rates have been charged.[55]

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[52] Vanderlip, *From Farmboy*, p. 193 and see n. 6, above.

[53] Bureau, *Steel Industry*, p. 38. $12.5 million of this was Morgan's but it is not clear how much of the $50 million syndicate profit they also retained

[54] 1% on the cash subscribed, 3% for underwriting, with rounding up to cover the paperwork. See pp. 25-6, below for London fee rates and Calomiris and Raff, "Evolution," p. 111 for similarly low German issue costs.

[55] Ibid., pp. 103-104, 117-119, 122 show a few higher percentages for "underwriting" small US issues, but their figures combine all three elements in issue costs.

This was an exceptional transaction and these were exceptional fees.

The rose-coloured view that "the enterprise was not in the business of enriching its insider financiers at the expense of its broader community of shareholders" is not easy to sustain at its birth, but Morgan's men had done a workmanlike job establishing the new firm.[56] Steel was a growth industry (capacity was doubled in ten years) and Judge Gary, the president, if unable to match Carnegie as a steelman, excelled at running a large bureaucratic federation with capable managers (building the image of a "good trust" by cultivating price stability, profit sharing and exemplary accounting transparency). The company had curtailed the immediately threatened competitive investments being planned by the merging partners and had more than half the market in many steel products. It was also able to buy some troublesome competitors and controlled America's best ore reserves, while massive protective tariffs locked out foreign competition, so it is difficult to believe market power did not play a part in its rising profits, particularly as economies of scale in steelmaking at a size larger than Carnegie Steel were unlikely. Wherever the profits came from, they fully covered interest and dividend payments on bonds and preferred and still left something for the common.[57] This was, then, a merger which did not turn out too badly for investors, and turned out immensely well for the insider managers and bankers in the syndicate.

Given that Tobin's q approached 2 for US Steel, the puzzling question (to which American economic history has not given a satisfactory answer) is why more new plants were not built to force steel prices down nearer to long-run marginal cost. Maybe the rapidly growing American economy had so many financial needs, for capital widening and deepening, and so little financial capacity, that disequilibrium conditions could persist for a long time. There was a fringe of competitors but their costs were high. The question really boils down to why only US Steel (rather than a fringe firm or a new entrant) built a new, state-of-the-art $70 million multi-plant lakeshore complex, like

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[56] Nohria et al., *Changing Fortunes*, p.166.

[57] The market in 1899-1900 valued the constituent firms' equity and bonds at $793 million, 17% above their asset value; after the merger they were valued (at average first year prices) at $1,133 million, 94% above asset value (Bureau, *Steel Industry*, pp. 20-1, 37, 170). The difference between the two percentages suggests the capitalized value of expected future increased monopoly profits and/or management savings around 1901 was $287 million. The value of the common stock then was $223 million, implying that, without these expectations, the common would have been worthless.

that at Gary, Indiana.[58] The answer may lie in vertical restraints (ore ownership or predatory pricing threats), or in the discouragement of competitive investment by the price "umbrella" that enabled inefficient rivals to make satisfactory profits even in downturns, or it may be that US capital markets still had only one man who could undertake risky financings on that scale: if so, Morgan was a formidable barrier to entry.

Whatever the correct answer to this question for the early twentieth century, it soon changed and US Steel accordingly began its long and inexorable relative decline. The world's largest manufacturer was hardly a trendsetting precedent for the future of US finance and market structure and Redlich's judicious summary of Morgan's last decade or so - "profitable rather than economically desirable" - still carries some weight.[59] Far more typical of America's oligopoly future was the electrical industry, with three strong competitors (General Electric, Westinghouse and Western Electric), but - although Morgan had all three as clients - their issue business was sparser and less profitable. The highly leveraged steel merger (at average first-year market prices, there was four times as much capital in bonds and fixed interest preferred as in common stock) was also more like old-style railroad finance or new monopoly utilities than the lower levels of leverage which had been, and later again became, the corporate norm in competitive industries. Morgan's vision of a capitalism of controlled competition of railroad-like, quasi-monopoly industrials receded, though he did win the business of that archetype of the centrally planned utility, AT&T, from Kidder Peabody in Boston, when the telephone company's needs expanded sufficiently to require access to the NYSE.[60] By 1910, a new generation of more competitive and diverse American banks was taking over from the Pierpont generation, exploiting new ideas and opportunities, soon lauding equities over bonds and democratising the limited and unusually plutocratic stockholding population that Morgan knew.[61] The New York capital market of the 1920s was wider, deeper and more competitive. Even Morgan's insider dealing

[58] Bureau, *Steel,* p. 265; Stigler, "Dominant Firm."

[59] Redlich, *Molding*, p. 384. Chandler (*Scale*, pp. 132-6) also takes a dim view of US Steel management.

[60] Ziegler, *Sixth Great Power*, p. 293.

[61] Carosso, *Morgans*, pp. 376, 380-81, 383. Calomiris and Raff ("Evolution") place more emphasis on information improvements than reduced market power, a view more clearly plausible after the 1930s legislative changes, though voluntary disclosure in the USA had by the 1920s made some progress, as it had in Britain prior to 1900.

and conflicted roles became disapproved, and, eventually, illegal.

IV

A test of whether protection and quasi-monopoly in product markets, and market power and conflicted roles in a developing financial market, jointly explain some of Morgan's high profits in American deals is to compare the outcome of his similar activities in Britain, a tariff-free economy with a larger and more competitive financial market, that also required more disclosure. Rumours of Morgan merger initiatives multiplied on the other side of the water in the early twentieth century, as Europeans looked with incredulity at the merger into the steel behemoth of the giant Carnegie Steel, itself already six times larger than *any* European steelmaker.[62] Yet if Morgan felt that European steelmakers were too small, he apparently refrained from doing anything about it. The steelworks of Britain, Belgium, France and Germany continued to operate profitably at much smaller scale. The Morgan partners in London (and the, rather smaller, Morgan Harjes partnership in Paris) could do little business of the kind that preoccupied their American colleagues. In 1901, Morgans were clearly making a major effort, but seem to be merely scrabbling for low quality business. They floated £1 million of United Collieries debentures, at 10% commission, but they soon had to lend this poorly managed Scottish coal company the interest payments to prevent default, while its two Morgan directors sorted out problems.[63] They were able to charge 6% for brokerage and underwriting of the National Telephone Company's 1901 £1 million offering of preference shares, but this company was no British AT&T. British investors knew its franchise was insecure (it was competing with the Post Office, which eventually took it over) and only 15% of the shares were subscribed, leaving Morgans barely covering costs on the deal. The London house also spearheaded a takeover of a London underground railway (built forty years before New York's and badly needing modernisation), but were beaten to it

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[62] The only steelmakers of remotely similar scale in Europe - Armstrong-Whitworth and Vickers in the UK and Krupp in Germany - had 1900 capitalisations in the \$47-\$67 million range. These three specialist firms in the European military-industrial complex apart, *all* the rest of the world's steelmakers were smaller than *all* the main firms merged into US Steel.

[63] *Economist*, 28 June 1902, pp. 1007-08, Carosso, *Morgans,* p. 497.

by Speyer Brothers, an American investment bank also operating in London.[64]

However, Morgan was already contemplating a European deal to replicate his American coup of the previous year: his blockbuster was announced to an astonished public in 1902. International Mercantile Marine (IMM) was essentially a merger of British shipping lines: its US-flagged ships accounted for only 15% of its assets. This was the USA's largest, one-off, private, foreign direct investment before 1914[65] The north Atlantic freight and passenger trade was the largest world market for shipping and, by the turn of the century, several American, German and British interests were planning to consolidate it. One such was John Ellerman, an analytical, 36-year old accountant and venture capitalist, involved at the time in breweries, shipping and meatpacking. As chairman of Britain's Leyland Line, having failed to buy his smaller British rival, Cunard, he bid for Atlantic Transport, a Baltimore-based shipowner. Clarence Griscom was then president of the Philadelphia-based International Navigation Company, which owned the, loss-making, US-flagged "American Line" on the key New York-Southampton route but made profits on its European-flagged niche routes operating between Philadelphia, Antwerp and Liverpool. He had obtained some congressional favours in the 1890s and interested Morgan in his plans to expand further as an American champion on the north Atlantic. Ellerman could hardly believe the reckless prices - 50% above replacement cost – that Morgan was willing to pay for shipping assets, so he changed tack and agreed to sell Leyland. Morgan suggested an insider deal for recommending the offer to shareholders (this was probably legal but considered unethical by some). Ellerman insisted on full disclosure and the insider price for all shareholders, and all in cash not paper. Morgan paid up, buying the line for $11 million on his personal account, and was sufficiently impressed by his young adversary to ask him to stay on as part-time chairman, though Ellerman remained only for a year.

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[64] *Economist*, 1 November 1902, pp. 1674-75; Barker and Robbins, *History,* pp. 70-74, 77-84..

[65] Yet this massive failure is substantially airbrushed out of "upward and onward" Whiggish narratives of American multinational success (Wilkins, *Emergence,* p. 71, Chandler, *Visible Hand*, pp.192, 337). Among the all-time least cited US articles are those on IMM: Navin and Sears, "A Study;" Saliers, "Some Financial Aspects" and Fields, "International Mercantile Marine." See also, for parts of the story, Carosso, *Morgans,* pp. 481-86, 491-93; Moss and Hume, *Shipbuilders,* pp. 96-174*;* O'Hagan*, Leaves*, pp. 384-85; Taylor*, Ellermans*; Huldermann, *Ballin*, pp. 40-130; Vale, *American peril*; Yui and Nakagawa, eds., *Business history*.

Wider talks – involving both European and American partners – then took place, with the world's largest shipbuilder (Harland & Wolff of Belfast), the upmarket British line (White Star), smaller British fleets, and the leading, continental owners: Hamburg-based HAPAG, Bremen-based NDL and the Holland-Amerika line (the Compagnie Générale Transatlantique was excluded because it was known that its French government contract barred foreign ownership). Eventually it was agreed that some competition would be neutralised by a ten-year, profit-sharing cartel agreement with the two German lines, while the new company would have a priority-guaranteed, cost-plus ship supply contract with Harlands. The German and American cartel partners also jointly secured majority control of the Holland-Amerika line, using a nominee to overcome the bar on non-Dutch control. The new, American-registered, IMM was the vehicle for the full 1902-03 merger of the core Anglo-American shipping partners. It would be the largest marine company in the world, with an unprecedented million tons capacity (equalling the entire French merchant marine, even without its cartel partners), operating a scheduled service on 32 transatlantic routes with 127 ships, including most of the world's fastest and largest liners built for the premium transatlantic passenger trade. It was essentially a merger of three British-flagged lines - Leyland, Dominion and White Star - with the Baltimore and Philadelphia companies (one of which already owned the Belgian Red Star line). Most of the company's ships would continue to fly the British flag: America was exceptional in normally banning the use of its flag on foreign-built ships and Morgan partner Sir Clinton Dawkins had smoothed ruffled British feathers by negotiating an agreement that these assets would be available to the British government in time of war. However, the balance of ownership and control had decisively shifted and – only a year after Morgan bought Leyland – the British-owned liner companies on the north Atlantic were relegated from first to third rank, behind the USA and Germany.

Substantial cash payments were required both for the existing British assets and for new ships ordered from Belfast, swallowing almost all the cash proceeds of the $50 million bond issue, underwritten by a Morgan syndicate. Perhaps half the preferred stock went initially to the British interests, but more than half of the $50 million common and some preferred were the Morgan syndicate's fee. This was, at par and proportionately to capital, of the same ample proportions as the US Steel fee. Morgan avoided the problem of the competitive London banking market in setting fees, as in the USA, by setting them himself. This was perfectly legal in Britain, but, as the offer document was to go to a British company's shareholders, *only* if the fee were disclosed. It was, in May 1902. To the British press this appeared excessive dilution and, since the deal would put the New Jersey company's paper beyond British shareholder protections, the *Economist* advised that shareholders should, like Ellerman the previous year, insist on full cash payment and bail out.[66] However a third of the key White Star shares were owned by its British managers, whom Morgan persuaded to stay, genuinely inspiring them by his financial power and business vision. They carried the shareholder vote to accept only 25% in cash, taking the rest in IMM stock. It was recognised that there was a good deal of water in the capitalisation, but most of the upside lay in American hands. No one, for obvious reasons, mentioned New York capital being cheaper than London's, but the aim was for increased market power, better fleet scheduling to improve load factors, management savings from applying American methods, and a growing, modernised fleet. The *Wall Street Journal* expected the new management would raise profits from $6.5 million to $11 million, enabling the company to pay the full preferred 6% dividend and 3% on the common. Though smaller than US Steel, IMM would, if that performance were met, be worth a substantial proportion of the $160 million par value of its securities, thus exceeding the value of any contemporary European industrial or commercial company.[67]

For all except those who took the Morgan dollar and ran, the outcome was a disaster. It is no accident that John Ellerman - the British financier who initiated the merger process, then yielded to Morgan's superior firepower, while insisting on payment in cash - is the *only* contemporary Briton known to have died richer than Pierpont Morgan, who lost at least a million dollars on this deal, while others lost a good deal more.[68] Morgan & Co and their underwriting syndicate members could only unload IMM securities on the public at a heavy discount (by January 1904 the common traded on the New York curb at 95% below par and the preferred at 80% below par). No dividends were paid on any stock, except to the continuing minority holders of Leyland preference shares (Ellerman, puzzled at how Morgan could pay a dividend, had put his lawyer on the board and left a ring-fenced structure to protect them). IMM's 4½% bonds

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[66] *Statist*, 3 May 1902, p. 893; *Economist*, 10 May 1902, p. 733.

[67] In 1900 the largest British quoted industrial, J & P Coats, was worth $120 million and the largest German quoted industrial, AEG, $40 million, though British, French and German banks (and the Suez Canal and many railways) had higher market capitalisations.

[68]Son of an immigrant merchant who left a few thousand, the self-made, uncelebrated Ellerman left $179 millions in 1933: in real terms the largest ever British fortune. The celebrated Morgan, inheritor of $10 million in 1890, left $68 millions in 1914 (though that figure undervalues his art treasures).

also fell below par and by 1906 Morgan had still only been able to dispose of barely a quarter of them, forcing the underwriters to shoulder the rest. Morgan saved face by paying the bond interest in some years when IMM itself could not, but the shipping giant finally defaulted on its bond interest payments in 1914. The cartel arrangement with the German lines was ineffective in raising prices and was not renewed when it expired in 1912, while the expanding German merchant marine edged America's down to third rank, globally, in the years before the war.

Ellerman thought that Morgan had overpaid for the assets, but, by the same metric of price paid to book value, he had also overpaid – and by a wider margin - for US Steel. IMM, however, could not generate the monopoly profits or management savings required to recover from the over-valuation and its failings were even greater than the dismal financial results indicated. The White Star line had previously ploughed back 85% of its profits into the development of the business (a figure also approached by its rivals, Cunard and HAPAG), but Morgan's generous capitalisation had been based on the idea of reducing this to 30% by increasing the investor payout. The expected "savings from American management" did not materialise and profits often fell below those earned by its predecessors, and this doubly reduced investment flow was absorbed by losses in the inefficient partner lines. While British and German companies made 5-6% annual depreciation allowances, IMM allowed less than 3½%: clearly too little for a line aspiring to upmarket liner service, especially one whose ships proved accident-prone (IMM's underinsured *Titanic* sank on its maiden voyage in 1912, but that was only the most infamous of several losses; while its rival, Cunard, with many more decades of risks at sea, had never lost a passenger).

IMM - a takeover of a formerly well-run core firm by apparently weaker managers, organised as a holding company, with high leverage and "world-beating" scale – shared all these key characteristics with US Steel. The efficient scale in both industries was similar. The Gary, Indiana multi-plant complex that US Steel built to meet expanding demand may be taken as that company's own estimate (at $70 million) of optimal scale and scope: it was vertically integrated and its many fabricating plants, managed by separate federated subsidiaries, produced a wide range of steel products. In the case of shipping, $70 million would buy 14 of the largest state-of-the-art liners at $5 million each, or more likely a mix with smaller ones (not all routes had the heavy traffic and premium passengers of New York-Southampton or New York-Liverpool). A shipping line that size could offer frequent scheduled liner service between a range of ports. There may have been some agglomeration economies available to larger firms that a $70 million investment could not capture (for example, shared marketing), but they are not obviously substantial. IMM was less vertically integrated than US Steel, but it seems unlikely that owning Harland's would have produced cheaper ships than its long-term supply contract. Harlands was one of half a dozen shipyards worldwide (others were on the Tyne, Clyde and Baltic) that could assemble the very largest state-of-the-art ships, so there was no realistic prospect of using vertical restraints to deter entry, on the lines US Steel found easier within the USA.

The fact that the White Star and Leyland lines (before IMM took them over) and their British rivals on the Atlantic like Furness and Cunard (thereafter) were well managed and financially successful suggests Boyce is right about the effectiveness of British approaches to finance and information asymmetries in this industry.[69] Within ten years, Cunard had regained the Blue Riband liner speed record: important to first class passengers and the result of pioneering turbine propulsion. Britain again had the largest national share of north Atlantic tonnage, with a good part of the premium passenger market and clear dominance in freight. British tramps could easily move in and out of the north Atlantic trade from other markets, responding flexibly to changing profitability. For the Irish shipbuilder partner, Harland & Wolff, IMM's cost-plus orders (modernising the fleet but increasing its size by only 10%) preserved high profits, though it fell from first to fifth rank among world shipbuilders, as IMM's British and German rivals directed much of their, more rapidly expanding, business elsewhere. Ellerman, though barred by agreement from the North Atlantic for fourteen years, spent his cash pile from Morgan on building a new shipping line, soon one of the largest in the world and paying investors initial 6% dividends, rising to 7%. Of course, that did not mean that other British managers and financiers were incapable of matching Morgan's delusions of boardroom competence and financial omnipotence: Sir Owen Phillips did later create the Royal Mail Group - as large and dysfunctional as IMM - but that, too, eventually disintegrated. All dysfunctional firms in this industry disappeared; it simply took large ones a little longer.

That points to the degree of competition they faced as the key difference between the IMM and US Steel cases. Playing on a more open and diverse stage than he was used to at home, Morgan found the business skills required to achieve a competitive edge internationally were very different from those required to preside over a protected national monopoly. Griscom was no Gary, but it is a moot point whether Gary would have been as successful in a more competitive industry. Estimates of IMM's initial market share vary markedly depending on how the market is defined and whether the

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[69] Boyce, "64thers."

cartel partners are included, but this merely betrays the weakness of its competitive position. Critically, IMM also lacked the tariff protection (inherently impossible on the high seas) that most American firms took for granted; and there were limits to the shipping subsidies that even Senator Mark Hanna could extract from Congress. The American bluster of the affair did, however, panic the normally laissez-faire British government into (quite unnecessary) retaliatory subsidies for one of the British competitors, Cunard. If – as rivals feared - Morgan attempted to engineer discriminatory through-rates for passengers or freight for IMM on his railroads, it appears to have had little effect (the German state, by contrast, was far more effective at doing this). The president of the Pennsylvania Railroad, A. J. Cassatt (who pointedly resigned from Griscom's board before he merged into IMM), explicitly re-assured European ship-owners he would refuse to discriminate: he was anxious to expand his Atlantic port business, not restrict it. US Steel did supply Harlands with steel at three-quarters of the price they charged American shipbuilders and, since its ship contracts were cost-plus, the cost-saving fed right back to IMM, but this was insignificant, since British and Belgian steel was anyhow available to rivals at below the American monopoly's price. Nor could Morgan create a stronger shipping monopoly: offers were made to Cunard, but at too low a price to compensate for the likely future profitability of beating an unprotected high-cost competitor. British capital markets played a key part in facilitating new entry that New York apparently did not play, until after 1910, in US Steel's case. Investors and rich individuals were already by 1902 enthusiastically financing British lines' ship purchases, at two-thirds of the price they knew Morgan had paid for his ships. In capital-rich pre-1914 Britain – as in the capital-rich 1920s USA - Tobin's q often elicited the predicted response. There was sufficient finance quickly to penalise Morgan's error of judgment: disequilibrium was short-lived.

The key problem for Morgan was the UK's commitment to free and open markets, a doctrine known to contemporaries as "the Manchester School" or *Manchesterismus*, but now more commonly referred to as "the Washington consensus." In the Washington of 1900 - as in 23 Wall Street - that viewpoint was considered extremist and crackpot, but, in London, it "was a doctrine still held with quasi-religious fervour by the majority of her office-holders, businessmen and general public. To them its benefits appeared self-evident."[70] Accordingly, British Empire ports were open to all-comers (for UK domestic and imperial cabotage as well as for foreign trade) and

[70] Vale, *American peril*, p. 191.

there were few protectionist tariffs in Britain or its colonies. The imperial government, it is true, was unable to induce self-governing dominions like Canada to accept free trade policies: their views on such matters were American. Occasionally there were also other lapses from openness, but, until the 1930s, these were trivial by comparison with the multiple tariff and non-tariff barriers erected by the United States – and, to a lesser extent, Germany and France - at home and in their expanding empires.

In marked contrast to the globalisation that followed American-led, *multilateral,* tariff disarmament after World War Two, British policy was - as Economics 101 says it should be – *unilateral* (and generally unreciprocated), so it had more profoundly concentrated effects on its only large practitioner. British business activities strikingly clustered by 1912/13 in areas that served, or especially benefited from, this openness, like the financial services we have described, but also shipping (40% of world tonnage), giant corporations (headquartering 28 of the global top 100 quoted firms) and manufactured exports (32% of the world total). London – a city twice the size of New York - was at the node of a larger economic space than the country of which it was the capital; and in areas like these it naturally punched well above the UK's economic weight. At that time that archipelago off the northwest coast of Europe accounted for only 16% of world manufacturing production and 8% of world GDP.[71]

Yet, it is easy to see why – the personal and cultural draws that he felt to Europe apart – the richest financier in the world's largest economy might also want to cut a figure in another larger, international and affluent marketplace. However, any innovative banking routines developed in New York faced tougher market tests there. Morgan could follow US Steel precedent and apparently (at par) evade London's tiresomely competitive IPO fees, by making himself both client and banker at IMM, but he could not as easily create a dominant monopoly, nor foist on a more informed investing public the lower-quality securities that resulted, so his fees proved (at market) worthless, indeed negative. In this more demanding economic space, even a man used to throwing his financial weight around could more easily be cut down to size. That Morgan, despite trying hard, could not do much premium corporate finance business in Britain after the IMM fiasco – while Barings (with Cunard, Guinness and Vickers in their stable) and Rothschilds (with De Beers and Rio Tinto in theirs) disdainfully turned down all except the top industrial clients - is hardly a surprise. The Barings' privately stated view of the London Morgan operation ("so entirely useless and so out of touch

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71 Kircaldy, *British shipping*, appendix; Wardley, "Top 100;" Maizels, *Industrial Growth,* p. 220; Maddison, *World Economy*, p. 259.

with anything that is of value in English financial and commercial life") was an informed assessment based on performance, not just the prejudice of a competitor.[72] In London, the Morgan reputation still counted for an international bond, or for an American industrial with market power, but, in European corporate finance, it was tarnished.

V

Morgan met livelier competition in the London securities business from boutique finance houses, stockbrokers, accountants, lawyers, banks, sector specialists and company promoters (or "issuing houses" as the more respectable were being called). Some of these were bigger players: their London market share was not smaller than Morgan's in New York because of their size, but because they operated in a larger market. In 1900, the Rothschild banks - in London, Vienna and Paris - together had $180 million capital. The self-made, German-born, British-naturalised partners in Wernher Beit, the specialist London mining finance house, were also personally (jointly) worth more than Morgan and they controlled investments worth $359 million.[73] Although there was considerable specialization of London's financial institutions, those serving overseas clients, like Morgans themselves, extensively overlapped with those serving domestic companies. In a largely passport-less world, in which English corporate law, accountancy and language, as well as the pound sterling, all had international currency, London saw little difference between a "foreign" Buenos Ayres tramway and a "home" Dublin stout brewery: Barings had launched IPOs for both of them in 1886. Wernher Beit was the leading overseas mining finance house, but it was also involved, with the Rothschilds, in financing London's central underground electric line.[74] London's standard reference manual, the *Stock Exchange Official Intelligence,* urbanely classified companies by business sector, not nationality (the classification that has obsessed most historians).[75] In this cosmopolitan city, overseas and domestic issues were thought of as one business: the same polyglot, globally-minded lawyers, stockbrokers, bankers and accountants serviced both. Merchant banks did not, however,

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[72] Baring family letter of 1905, quoted in Ziegler*, Sixth Great Power*, p. 298.

[73] Ferguson, *World's Banker*, p. 1039; Chapman, *Merchant Enterprise*, p. 278.

[74] Barker and Robbins. *History*, pp. 25, 39-42.

[75] The exception being railways, a section of the directory so large that it was divided among "British," "Colonial," "Indian," "American," and "Foreign."

have things all their own way domestically, as in large overseas government issues. In so far as anyone dominated the local corporate new issues business, it was a neighbour of Morgan's in Old Broad Street, Henry Osborne O'Hagan's City of London Contract Corporation (CLCC). O'Hagan sometimes collaborated on new issues with Phillips & Drew, the stockbrokers, and with John Ellerman, achieving a market share of perhaps 10% of home issues in the 1890s. CLCC offered a modestly priced, honest service and its solid reputation with the commercial banks meant that, even with its own, small ($1.6 million) assets, it could readily buy out industry vendors and carry their larger assets prior to public issue, when required. However, its massive (but under-subscribed) issue of Associated Portland Cement shares in 1900 overstretched the firm and obliged it to cut back operations in the following decade, with O'Hagan working part-time on managing the largest cement company in the world that he had created.[76]

Such "first class firms whose reputations and profits are dependent on fair dealing" naturally tried to gain a reputation as quality certifiers of new issues, taking some responsibility in this way when things went unexpectedly wrong.[77] Competition did, however, mean that their quality certificate really had to mean something to command premium fees and charges were more closely related to costs than in New York, where Morgan and a few other banks dominated the market. Hence, issue costs were generally lower in London, particularly for the larger issues. The trend-setting 1886 Guinness IPO for £5.2 million ($25 million), it is true, mildly embarrassed Barings by yielding what in Britain were thought excessive returns of 10% of the amount raised (their fees were lower: this also includes their post-issue capital gains on the 15% of the capital Barings subscribed themselves)[78] Fees as high as 12% charged in the 1890s by the unscrupulous promoter, Ernest Terah Hooley (who went bankrupt in 1898), appear as textbook indicators of the high prices British clients (who included Dunlop, Bovril and Schweppes) had to pay for poorer issuing services than Morgan offered in the USA, though Morgan's own US fees (often higher) revealingly go unmentioned in such "comparisons".[79] Yet, by then, many respectable British promoters and bankers less flamboyantly offered more reasonable fees. Even for small IPOs equivalent to around

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[76] O'Hagan, *Leaves;* Taylor, *Ellermans*, pp.11-15; CLCC, *Annual Reports 1895-1910* (in Guildhall Library, London). Its declared profits fell from £20,000 a year before 1900 to around £8,000 afterwards.

[77] Lavington, *English capital market*, p. 192.

[78] Ziegler, *Sixth great power*, pp. 199-200.

[79] Boyce and Ville, *Development*, p. 107.

two million dollars – smaller than the New York partners would normally look at – the British merchant bank, Hambros, charged fees similar to CLCC's: only 1-2% of the money raised, with 3% optional extra for underwriting. Barings charged similarly modest fees for bond issues for established public utility clients.[80]

Investors and companies alike seemed happy with the competitive London market and it is hard to see a serious objection to the operations of men like O'Hagan and Ellerman, with a deserved reputation for looking after their investors and the ability to build some cheaply financed, competitive, manufacturing and service businesses, or to wish on their investors some of the Morgan practices from which, we have seen, they were protected. However, J Bradford De Long has made the claim that Morgan's high fees in New York were justified by the innovative "information signalling" that he provided to US investors, while London was blighted by its more competitive banking structure.[81] London, he argues, would actually have been better off with *fewer* banks, which would then have had a stronger incentive to certify quality, which in turn would have strengthened their market power, as they ascended in a virtuous spiral to Morgan-like excellence. The point is that, with many banks, each with a small market share, "the future returns expected from a reputation as an honest broker might … be small, and less than the present benefits of exploiting to the fullest one unsound deal."[82]

De Long's argument is bolstered by a battery of quantitative tests of US investment performance, though London's allegedly inferior performance is not subjected to similar tests: London finance is, curiously, held to have failed by assumption. His first performance indicator for US investments is the ratio of the market value of a (non-random) sample of Morgan securities to the book value of their assets, compared to a control group of non-Morgan firms.[83] He strikingly concludes that

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[80] Rutterford, "Merchant banker," Ziegler, *Sixth great power*, p. 288; O'Hagan, *Leaves*.

[81] De Long, "Did J. P. Morgan's men." The article is one of the most frequently cited in economic history. This perhaps owes more to the intellectual appeal of its inventive ratiocination on the fashionable subject of information asymmetries than to the quality of its empirical underpinning, on which the author's own claims at the time were appropriately modest. I have been unable to replicate his results from the sources cited (some of the problems are outlined in the following footnotes), or to obtain any explanation from the author.

[82] Ibid., p. 210.

[83] It was based on the twenty companies – three utilities, nine railroads and eight others –

Morgan directors added 30% to the value of firms on whose board they served. The non-standard nature of contemporary accounting rules on matters like depreciation of balance sheet assets and stock watering counsels caution in interpreting such a test in America, or, indeed, in any country, but, for what they are worth, similar tests can be deployed in Britain.[84] For the market as a whole, ratios of market value to par or nominal values of issued capital were significantly higher in the UK than in the USA, implying, by analogy with De Long, higher overall "value added" by British directors in general. However, American interstate competition to the bottom in prospectus and securities regulation may explain this American deficiency: in other words this is probably a measure of the "value added" by British legislators, not by London directors or financiers.[85] His narrower US test can also be replicated for London, substituting Rothschild, Baring and CLCC corporate clients for Morgan's (who, as we have seen, struggled in the London market). By De Long's chosen measure, there is an out-performance by these leading British issuers, parallel to Morgan's in the USA.[86]

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that the Pujo Committee allegedly identified as having Morgan directors in 1913, though the population studied is, in fact, a non-random sample of less than half the 43 such firms (Pujo, *Report*, pp. 57-65). De Long admits (p. 225) to only two of the omitted 23, for which he says "satisfactory data" were "unavailable." There is data on one of these two - the Pere Marquette Railroad – and on many of the 21 unmentioned ones in the *Commercial and Financial Chronicle*. Pere Marquette's common stocks were near worthless and its predicament derived from a serious Morgan misjudgment, see Hungerford, *Men*, p. 220. The nine omitted banks with Morgan directors had a slightly worse performance than the nearest size-matched pairs in the same cities (author's calculation from data in *Commercial and Financial Chronicle Bank and Quotation Section*, 94, January 1912, pp. 60, 62).

[84] The Bureau of Corporations (*Steel Industry*, p. 16), in its careful forensic accounting assessment of the constituents of US Steel, noted that there was much less water in Morgan's flagship Federal Steel promotion than in the four steel companies promoted by Moore. Such effects could account for De Long's results without any director out-performance. De Long asserts there was a reverse bias, strengthening his result, but provides no similar accounting evidence. Compare also Nelson, *Merger Movements*, p. 99.

[85] Grandy, "New Jersey Corporate Chartermongering."

[86] The Rothschild, Baring and CLCC clients were identified from their corporate histories and O'Hagan's autobiography, and include companies whose issues were sponsored in 1886-1900, not just those on whose boards partners sat in 1900. Ratios of market value to book assets were calculated for 2 January 1900 from stock prices in the *Stock Exchange*

The finding that issuer-underwriter reputation counted in both places is hardly surprising. It is not sensible to replicate De Long's second test - of longer-run investment performance of Morgan firms relative to the NYSE index - because his specification is obscure and apparently defective.[87] Moreover, some of the long-run investments he thus measures were not public offerings, but available only to insiders.[88] However, John Ellerman, did offer a service to London investors that was the logical way of marketing the long-run investment certifying skills that Morgan's men are alleged to have demonstrated (though there is no indication that Morgan thought of this): that is, by managing investment trusts. Ellerman's trusts – and they were by no means alone in the British market - performed better than the relevant benchmarks.[89]

Modern financial regulators are, however, known to prohibit appeals to such evidence – typically compromised by *ex post* bias – without strong health warnings, and similar caveats apply just as strongly to De Long-style tests. Both the US and UK results are likely contaminated by survivor bias and should be taken with a very large pinch of salt. It is, for example, not implausible that bankers in both countries were more inclined to stay on the boards of successful than unsuccessful companies.

Daily Official Intelligence and from balance sheet data in the companies' reports in the Guildhall Library collection. The control group was a random sample of 30 other London-listed firms. The top issuers "outperformed" the control group by 12%.To correct for leverage, I included all securities (including debentures and preference shares, as well as ordinaries) in the numerator, so these figures are more appropriately compared to Ramirez's ("Did J. P. Morgan's Men," p. 669) corrected Morgan US out-performance figure of 14%, not to De Long's original 30%.

[87] De Long evaluates an *equal-weighted* rate of return for an (even further truncated) sample of 15 Morgan stocks over various periods within the period *1895-1913*, against a *size-weighted* NYSE index return for the longer *1890-1914* period (Cowles Commission, *Common-Stock Indexes*). The logic is obscure. It is clear that it would not be hard to produce similar results for the UK with a similarly arbitrary choice among chronologically non-coincident and incompatibly-weighted indexes, but the resultant "findings" would be as meaningless as De Long's for the USA.

[88] A rate of return is, for example, calculated for International Harvester from 1902; yet the stock was not available to NYSE investors, as opposed to the owners' relatives and Morgan insiders, until 1908. It is unclear how De Long calculated market returns for unquoted securities.

[89] Glasgow, *English investment trust companies*, pp. 38-39, 76-77, 116-17.

Investors attempting to decide *ex ante* where to invest did not have De Long's *ex post* knowledge. Contemporary New York and Philadelphia directories for 1899/1900 show Morgan partners then held 101 directorships, only a minority of which were the predecessor firms of the 15-21 firms De Long selected for analysis from a 1913 list of 43.[90] He rests his case for presuming survivor bias is not a problem on his standard argument: Morgan's market share was so large that partners would not sully their reputation by cheating investors, whereas lesser mortals would be tempted by the fast buck. He instances (p. 210) the notorious Amalgamated Copper stock manipulation as the kind of investor "scam" that Morgan partners, following his logic, would avoid. He was evidently unaware of the extent to which the partners quite failed to understand their alleged strategy: the New York directory shows Morgan partner Robert Bacon was, in fact, on the board of Amalgamated Copper! That De Long's flimsy evidence has been extensively and approvingly cited - as demonstrating a decisive American innovation in investment banking that London was unable to match - is symptomatic of the "Whig" bias in American historiography and the "declinist" bias in British. The kindest verdict on his hypothesis is "not proven". It is noteworthy that, in Japan and Germany, where he suggests similar bank director effects are observed, others have also cast reasonable doubt on the hypothesis.[91]

VI

None of this, of course, denies that the New York Stock Exchange was rapidly expanding its domestic business, nor that J. P. Morgan & Co contributed to that catch-up process. However, in a relatively backward and unregulated market like New York, rather more elementary "informational" innovations were clearly the priority. In 1900, when the president of the (then largest NYSE-traded) industrial, American Sugar, thundered to Congressmen that "You cannot wet-nurse people from the cradle to the grave," he was not condemning socialized medicine, but the publication of corporate accounts, then considered by some American businessmen an outrageous foreign deviation.[92] At that time, 43% of even the largest 100 US industrials did not so

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[90] Audit Company, *Directory*; Anon, *Financiers.*

[91] Miwa and Ramseyer, *The fable*; Fohlin, *Finance capitalism*.

[92] Industrial Commission, *Preliminary report*, p. 122; see also Vanderlip, *From farmboy*, pp. 208-09.

much as publish balance sheets, much less income statements.[93] Firms like Standard Oil, Singer or Amalgamated Copper were, in the expressive Yankee financial jargon of the day, "blind pools:" their directors refused to publish accounts to mere stockholders. In the later 1890s, some quoted companies that did publish accounts, like Anaconda (when the Rockefellers acquired a controlling interest from the Rothschilds) and Procter & Gamble (worried publication was aiding competitors), ceased doing so. The NYSE committee from 1895 followed London and required listed companies to publish accounts, finally de-listing Procter & Gamble in 1903 for repeatedly failing to comply (it was not re-listed until 1929).[94] However – unwilling to endanger its members' commissions on more frequently traded stocks – the NYSE allowed many other firms not publishing accounts to continue "unlisted" trading, until that was abolished in 1910. Morgan apparently did not subscribe to the obscurantists' views, but supported the NYSE committee: at least, all his firms appear to have published accounts[95]. This naturally strained local auditing capacity (New York had certificated only 303 public accountants by 1901), but the annual accounts of Morgan firms were a mainstay of the English firm, Price Waterhouse, which had access to the pool of thousands of British accountants well trained in the basics of merger accounting, valuations and corporate audit. PW had opened its New York office in 1890, initially to service O'Hagan's US business, but it was soon also helping Morgan. The New York office had to cable London for reinforcements, increasing its staff from fifteen to seventy-three in 1901-1903 alone, to cope with merger investigations and subsequent regular audits of US Steel and others.[96]

The half dozen leading New York investment banks, with Morgans in the lead, also played a part in certifying the quality of new issues, as investors cautiously learned to value that signal above that of earlier promoters like Moore, Flint or Dos Passos. The Pujo committee complained that they thereby came to monopolise the New York issue market, though the strikingly distinctive feature of the USA's financial

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[93] Bunting, *Rise*, pp. 155-56. For the much wider voluntary spread of outside professional auditing among British companies, even before the law was tightened in 1900 and 1907, compare Fisher, "President's address."

[94] Schisgall, *Eyes*, p. 51.

[95] Judging both from the collection of American company accounts in the Guildhall Library and the briefer account summaries in Moody's *Manual of Corporate Securities.*

[96] Jones, *True and fair*, pp. 75-78, 90-97; DeMond, *Price, Waterhouse*, pp. 32-36, 58-66.

development is not the NYSE's increasing success, but the continuing diversity and regional decentralisation away from New York of American finance. Morgan's high fees and other monopolistic restrictions of the Wall Street oligarchy no doubt reinforced that tendency. There were in the USA many tens of thousands of family-owned incorporated enterprises, considerably more than in Britain. Most American corporations were traded, if at all, on the dozens of local stock exchanges, or simply "over-the-counter" on the basis of local knowledge by thousands of local dealers and banks, linked in some cases by ticker and telephone to New York, but often with purely local markets. Securities of almost all the large British companies in Payne's list for 1905 were traded on the London Stock Exchange, but barely half the similarly-sized American industrials traded on the NYSE at the same date.[97] Among Pittsburgh's leading companies, US Steel became a mainstay of the NYSE, but the (closely-held) Alcoa, Gulf Oil and Koppers coke and chemical enterprises preferred local financing by the Mellon Bank, eschewing listing for decades, while Pittsburgh Plate Glass and Heinz remained family enterprises. Pittsburgh's independent spirit may have limited the size of New York's pool of liquid securities, but it may also have generated locally rich information flows and shared incentives which were no less supportive of business success. By contrast, London's central liquidity and scale advantages and early enthusiastic espousal of the

[97] Author's calculations from the lists in Payne ("Emergence," pp. 539-40) and Bunting (*Rise*, pp 163-4.) and listing data in the (UK) *Stock Exchange Daily Official List* and (US) *Commercial and Financial Chronicle.* 12% of the British firms were provincially listed but they may also have been traded in the supplementary list or "over-the-counter" in London (whose brokers worked in symbiosis with provincial brokers). In the USA, by contrast, the NYSE, in pursuit of greater monopoly advantage from its unrivalled liquidity pool, generally banned joint listings and trading with regional exchanges (though permitting this with London). Many large American companies were unlisted or listed on other organised exchanges (including Philadelphia, Boston, Pittsburgh, Chicago, Baltimore and London) and/or the (still informal) New York curb rather than traded on the NYSE (including in the "unlisted department"). It is sometimes forgotten by those who cite the classic article by Navin and Sears ("The rise of a market for industrial securities, 1887-1902") that it describes a market developing later (albeit faster) than European equivalents, that was still half empty. Of course, the regional exchanges had a higher share of smaller companies: as late as the 1930s, the NYSE share of the market value of all common and preferred stocks quoted on all American stock exchanges was only 34% (Committee on Banking And Currency, *Stock Exchange Practices*, pp. 8-9.)

divorce of ownership from control obviously helped some modern, large-scale business corporations grow, but may not have been unequivocally positive.[98] Such an analysis sits uncomfortably within a teleology that requires everything in modern, successful America to be new, path-breaking, professional and of dominant scale, while archaic, failing Britain is hidebound, amateur, nepotistic and provincial. Yet, if we wish accurately to reflect corporate reality, we may sometimes have to dump the standard modernization myth that seriously distorts the two countries' business historiographies, even if it serves as a useful heuristic in some other contexts. There was a rich variety of possible capitalist paths to twentieth century prosperity, not one standard, financially centralized and fully securitized road to modernity.

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[98] As is suggested by the weaker performance of London-quoted breweries relative to provincial ones, by a measure similar to De Long's, in Hannah, "Hollywood History."

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