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MPIfG Working Paper 03/9, September 2003

The Politics of the German Company Network

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Abstract

For over 100 years, the German company network was a major feature of organized corporate governance in Germany. This paper uses network visualization techniques and qualitative-historical analysis to discuss the structure, origins and development of this network and to analyze the reasons for its recent erosion. Network visualization makes it possible to identify crucial entanglement patterns that can be traced back historically. In three phases of network formation – the 1880s, 1920s and the 1950s –, capital entanglement resulted from the interplay of company behavior and government policy. In its heyday, the company network was de facto encompassing and provided its core participants, especially the banks, with a national, macroeconomic perspective. In the 1970s, a process of increased competition among financial companies set in. In the 1980s and 1990s, declining returns from blockholding and increased opportunity costs made network dissolution a thinkable option for companies. Because of the strategic reorientation of the largest banks toward investment banking, ties between banks and industry underwent functional changes. Since the year 2000, the German government's tax policy has sped up network erosion. Vanishing capital ties imply a declining degree of strategic coordination among large German companies.

Zusammenfassung

Ausgehend von einer Kombination von Netzwerkvisualisierung und historischer Analyse werden in diesem Papier Struktur, Entstehung und Entwicklung des deutschen Unternehmensnetzwerks sowie die Gründe für seine Erosion diskutiert. Die Visualisierungstechnik ermöglicht die Identifikation auffälliger Merkmale des Netzwerks, die anschließend geschichtlich zurückverfolgt werden können. In den drei Phasen der Netzwerkentstehung – den 1880er, 1920er und 1950er Jahren – resultierten Unternehmensverflechtungen aus einem Zusammenspiel von strategischen Unternehmensentscheidungen und Unterstützung auf politischer Ebene. In seiner Blütezeit umfasste das Netzwerk die größten deutschen Unternehmen und führte dazu, dass die Banken im Verflechtungskern eine nationale, makroökonomische Orientierung entwickelten. In den siebziger Jahren setzte ein Prozess zunehmender Konkurrenz unter Finanzunternehmen ein. In den achtziger und neunziger Jahren machten sinkende Erträge aus dem Halten großer Aktienpakete und gestiegene Opportunitätskosten die Netzwerkauflösung zu einer strategischen Option. Wegen der Umorientierung der Großbanken zum Investmentbanking unterlagen Verbindungen zwischen Banken und Industrie einem funktionalen Wandel. Seit dem Jahr 2000 unterstützte die Bundesregierung die Netzwerkauflösung steuerpolitisch. Dieser Prozess resultiert in einer rückläufigen strategischen Koordinierung zwischen großen deutschen Unternehmen.

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Introduction

This paper discusses structure, history and current developments of the German company network. [1] What kind of network structure do the largest German companies establish? In which stages did it evolve? Is it eroding? And, if so, why?

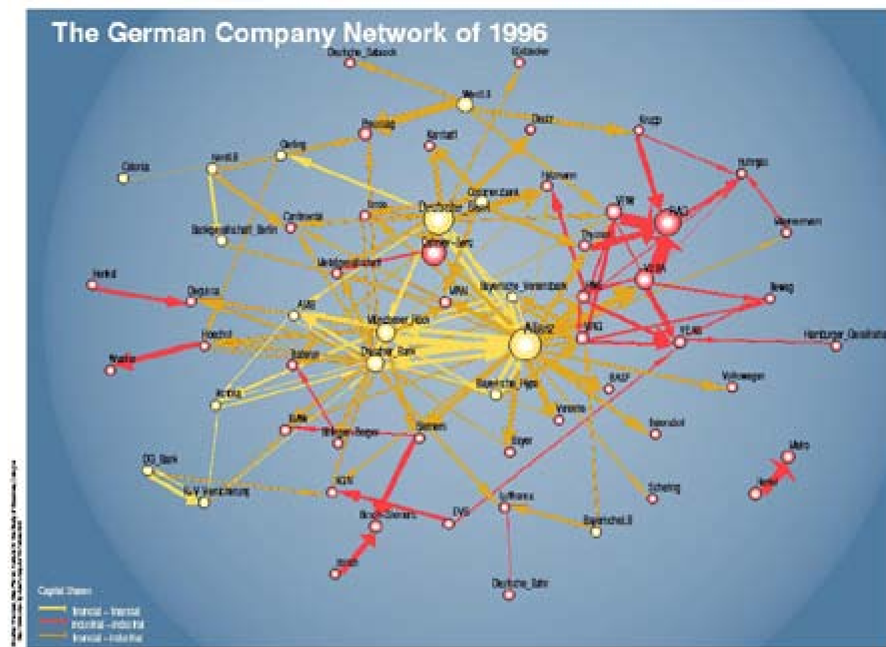
The purpose of our discussion is threefold. Our first claim is a methodological one. We show that network analysis can be improved by combining network visualization techniques, which provides information about structural entanglement features, with qualitative-historical narratives. Second, we point to the contingency of network evolution, driven by interplay of company behavior and political ideology of governments. The network was rooted in the era of industrialization and expanded in two waves in the 1920s and the 1950s. We show that the stability of the capital network was no forgone conclusion in German history and that, at two historical moments, network dissolution by law was a conceivable option for governments: in the Nazi era and at the end of the Social Democrat/Liberal coalition period which was abruptly ended by the fall of the Schmidt government in 1982. Tensions and increased competition inside the network core, which led to disentanglement in the 1990s, can be traced back to the 1970s. Third, we argue that qualitative network analysis has to pay attention to the changing functionality of the network. In the 1970s, the network was used to protect companies from hostile takeovers; in 1997, by contrast, *Deutsche Bank* used its supervisory board seat in *Thyssen* to arrange *Krupp's* hostile takeover attempt. Links between companies, like other institutions (Thelen 2003), can be used as tools for aims different from their initial historical goals.

As the company network was part of a wider range of institutions of German "organized" capitalism, our combination of network visualization and historical narrative contributes to the debate over national varieties of capitalism. In Germany, competition among companies was embedded in inter-firm cooperation, institutionalized by interlocking shareholdings and interlocking directorates (Beyer 1998; Windolf and Beyer 1996; Windolf and Nollert 2001). In its heydays, the network established a "quasi cartel", internally organized and protected against influence from outside, and provided its core participants – above all, the large banks – with a common shared macroeconomic

orientation. Our qualitative analysis comes to the conclusion that these heydays are over, which implies a declining "coordination" and "organization" degree of the German production regime.

We begin our analysis by visualizing the company network in its state in early 1996 (Figure 1). The figure draws on data provided by the Monopoly Commission (Monopolkommission 1998; 2002) and shows all the companies that were among the 100 largest Germanbased companies in 1996 and were entangled with other companies from the same sample. Companies are displayed as points, and capital interlocks between them as arrows. An arrow that points from *Deutsche Bank* to *Metallgesellschaft* means that *Deutsche Bank* holds shares in *Metallgesellschaft*. Point sizes represent not company sizes, but degrees of involvement in the network. We calculated the degrees of involvement by combining both the active network participation (i.e. the company shareholding in other companies) and the passive network participation (i.e. the shares of the company held by other companies) in terms of the amount of the firm's net value added represented by the respective share blocks. The advantage of using net value added is that this measure is not biased towards different capital market valuations (which would be the case if share block prices were used) or towards the vertical range of manufacture (which would be the case if yearly sales were used). Net value added, therefore, is a good measure of the "real" size of company shares, being highly correlated with the number of employees represented by those shares. We also use colours as distinguishing features. We chart financial companies as yellow points and nonfinancial companies as red points. Finally, we distinguish three different kinds of links between firms: yellow arrows mean that financial companies are entangled; red arrows represent connections between industrial companies [2]; and orange lines indicate industrial shares held by financial companies and, which is rare, vice versa (for further information on the visualization technique, see Krempel 2003). We argue that our visualization technique is a good complement to statistical network analysis (Brandes 2001; Krempel 1999) [3]. The aim of descriptive statistics is to make complex data structures visible by condensing data into indexes. Our technique does the same by transforming a complicated dataset into one readable figure.

Figure 1



[please click on the image to enlarge]

What can be learned from Figure 1? Instead of a group of isolated networks (like the Japanese *keiretsu*), 60 of the 100 largest German companies establish *one* network component with a complicated structure in which most of the companies are connected with more than one other company. The network has an identifiable core that consists predominantly of financial companies. In this core, we find heterarchical connections. Companies like *Deutsche Bank* and *Dresdner Bank* are both actively and passively involved at the same time. We also find reciprocal cross-shareholdings: *Deutsche Bank*, for example, holds shares in *Allianz*, and *Allianz* owns shares in *Deutsche Bank* [4]. However, cross-shareholdings are virtually absent in the industrial sector. Even hierarchical connections between the largest industrial companies are rare (which the low number of red lines in Figure 1 indicates). An exception to this rule is the relatively large company cluster located in the northeast of Figure 1, consisting mostly of companies from the energy sector and complemented by some heavy-industry companies [5]. These companies are characterized by differing amounts of Land and state ownership, and most of them were regionally oriented state monopolies which, until the liberalization of the European energy sector, did not compete anyway. A second, much smaller, cluster of shareholdings among the largest German industrial corporations is connected to *Siemens*, which holds shares in *BMW* and in *Bosch-Siemens* (which, in turn, is co-owned by Bosch). All other connections between industrial companies represent single investments [6].

Heterarchical links are therefore not a characteristic of the company network as a whole, but typical of the financial sector. And, as Beyer (2002: 14) has pointed out, direct reciprocal shareholdings (A holds B, B holds A) tend to be more characteristic of *Allianz* than a typical German feature. Industrial companies are connected by hierarchical lines that belong to one (or more than one) of the financial core companies. We provide information on the origins of these company links, on the political support they receive as well as on the political countermovements in the forthcoming sections.

The Origins of the Company Network

Kaiserreich

Close relationships between financial and industrial companies as well as between different financial companies themselves can be traced back to the years of industrialization. When *Deutsche Bank* was founded in 1870, its first spokesman for the board of management was Georg von Siemens from the *Siemens* family. From the outset, cooperation between *Siemens* and *Deutsche Bank* was eminently close. *Commerzbank*, likewise founded in 1870, started out by cooperating closely with trading companies (Kurzrock 1970: 39). Since its foundation in 1889, the insurance company *Allianz* was entangled with other financial companies: one of its founders, Carl Thieme, was a former director of *Münchner Rück*, and *Deutsche Bank*, *Dresdner Bank* and *Bayerische Vereinsbank* all held shares in *Allianz* (see arrows in Figure 1).

The big banks' commitment to founding and financing industrial companies began after the "start-up crisis" of 1873-79. When banks organized the distribution of shares from newly founded corporations or from increases in capital stock, they often – sometimes by accident, when shares sold worse than expected – incorporated a part of the shares into their own portfolio. In order to limit risks from large financial transactions, banks

syndicated consortiums. The conversion of frozen credits into shares owned by banks also commenced in the 1880s. From this time on, it was typical of large German banks to attend industrial companies "from the cradle to the grave". An example of this is the founding of *AEG* in 1883/87: *Deutsche Bank*, heading a large consortium, organized the distribution of shares and took around one fourth of the shares into its own portfolio (Eglau 1989: 20) – and, in fact, *Deutsche Bank* intervened in *AEG* issues until the end of *AEG* in 1996. *Deutsche Bank*, together with *Siemens*, was also involved in the founding of *Mannesmann* in 1890. Max Steinthal's handling of the *Mannesmann* crises as its supervisory board chairman until 1905 is a good example of bankers crucially intervening in the matters of industrial firms (Gall 1995: 40-44; Pohl 1982: 263).

Cooperation among firms was supported politically. The Stock Corporation Act of 1884, an amendment to the 1843 Prussian act regulating stock corporations, conferred supervisory power on the supervisory board instead of the shareholders' meeting (Jackson 2001: 132). Both at company level and in the political sphere, the view of how companies should organize their relationships with other firms was not based on pure competition. It was best expressed in the state's promotion of cartels. In 1879, this issue was discussed in the Reichstag in the so-called "cartel debate", which was initiated in the main by Bismarck's change of course from free trade to protectionism. At the same time, national peak associations of economic interests emerged and developed rapidly; the "Central Association of German Industrialists" was founded in 1876 (Lehmbruch 2001). The cartelization process got underway in the mid-1880s, and cartels were seen to operate most effectively in the coal, iron, steel, and chemical sectors. In 1897, the supreme imperial court in a decision of general principle ruled that cartels were consistent with basic principles. At the same time in the USA, cartels were prohibited by the Sherman Anti-Trust Act of 1890.

Weimar Republic

Company cooperation in the Weimar Republic can be understood as an accumulation of the tendencies that first arose in the 1870-1917 era. Lehmbruch (2001) locates the decisive historical break towards organized, non-market economic regulation after the First World War. Characteristic features of this period were waves of additional entanglement among financial and industrial companies, especially during the 1923-24 and 1929-1933 crises; mergers and the formation of cartels; new forms of company cooperation like the "community of interests"; and the first emergence of "corporatist" interest mediation (Lehmbruch 2001: 71). The 1920s were also the glory days for banks transforming frozen credits into long-term industrial shareholdings.

One of the most eye-catching entanglement patterns in Figure 1, the large cross-shareholding between the insurance companies *Allianz* and *Münchner Rück*, is a good example of the organization of markets among large companies in the 1920s (Feldman 2001: 10). In 1921, the CEOs of both companies signed a cooperation contract that set *Münchner Rück's Allianz* capital participation at 25 per cent. At least three managers of each insurance company were allowed to sit on the supervisory board of the other. *Allianz* agreed to restrict itself to direct insurance business and *Münchner Rück* to indirect insurance business. *Münchner Rück's* already existing direct insurance subsidiary companies were transferred to *Allianz*.

In the heavy-industry sector, the formation of the trust *Vereinigte Stahlwerke* was the outstanding event in 1925 (Reckendrees 2000). A parallel development also occurred in

the chemical sector in 1925 with the integration of formerly competing chemical firms, among them the precursors of the three large firms *Bayer*, *BASF* and *Hoechst*, into the *IG Farbenindustrie* (Pohl 1982: 302-303). The degree of bank involvement in these concentration and organization processes differed. An example of a high degree of bank interference is the merger of *Daimler* and *Benz* in the year 1926, which was essentially planned by *Deutsche Bank* board member Emil von Strauss (Eglau 1989: 30-31; Pfeiffer 1987: 49). Strauss's aim was to build a large automobile trust involving *BMW*, but the realization of this plan did not go beyond a reciprocal cross-shareholding and interlocking directorate between *Daimler-Benz* and *BMW*. In the process, *Deutsche Bank* acquired *Daimler-Benz* shares that it held on to for decades (see Figure 1). Examples of share ownerships that resulted from frozen credits or from the attempts of banks to prevent unwanted takeovers are *Deutsche Bank's Südzucker* investment in the late 1920s and *Commerzbank's* shareholding in the trading company *Karstadt*, which stemmed from the crisis years of the early 1930s (for both share ownerships, see Figure 1).

In the Weimar Republic, markets were replaced by company coordination in order to prevent overproduction, stop prices from decreasing in times of reduced demand and guarantee a predictable share of profits to a large number of firms even in times of crises, which was especially important for creditors (Beyer 2002: 7). However, the role of bank credits in German industrial financing should not be overestimated. The low degree of dividend pressures exerted by underdeveloped capital markets resulted in a large amount of retained earnings and, as a consequence, in a great ability to avoid external finance. In the formative phases of organized capitalism discussed in this paper – the period of promoterism, the 1920s, the 1950s and the period of dictatorship of 1933-1945 – internal finance dominated over credits and recapitalization measures (Abelshauser 1983: 72; Holtfrerich 1995: 574; Pohl 1982: 300, 353, 406; Vitols 2001: 181). The banks' positions as centres and junctures of industrial policy thus resulted not from exceptional financing patterns, but from the multidimensional access to industrial matters that German universal banks enjoyed. They were simultaneously supervisory board members, creditors, share owners, organizers of consortiums, and executors of the voting rights of dispersed share owners (which included large voting blocks in their own shareholders' meetings).

The significance of company cooperation and the importance of banks were also expressed in the composition of industrial supervisory boards. Ziegler's survey on the supervisory boards of 78 large German firms in 1927 provides an insight into the extent of entanglement in the latter days of the Weimer Republic. In stock corporations from the iron and steel industry, Ziegler (1997: 106-111) found that 28 per cent of supervisory board members belonged to banks, and an additional 36 per cent represented industrial interests. The supervisory board was not only used to exercise supervision over companies but also – and increasingly so – as a tool for business cooperation in the fields of production and finance (Jackson 2001: 134). Until 1931, when the size of supervisory boards was limited to 30, no rules governing the size of supervisory boards existed. In its "natural state", for example, the *AEG* supervisory board had 36 members (Ziegler 1997: 10-11) and was much more capable of providing cooperation and information flows between business partners than of effecting supervision.

Until 1923, no state regulation of cartels and competition existed at all, which contrasted with the situation in the USA, England and France, where anti-cartel legislation was introduced before World War I. When the grand coalition government of Gustav Stresemann passed the first cartel law in 1923, its aim was to protect the interests of cartels rather than stop cartel building and company cooperation (Jackson 2001: 135). The idea of the organized markets being superior to pure competition relied on a large societal

consensus (Lehmbruch 2001). It was not only supported by laissez-faire clientelism, but also by the ideas of the political left, which were best expressed in the writings and speeches of Naphtali (1928/1969) and the late Hilferding (1924). For trade unionists and Social Democrats in the late Weimar Republic, entangled capital represented the more developed model of capitalism and was therefore nearer to socialism. The relationship between the organized economy and the public sphere was increasingly seen as a reciprocal one, in which – in contrast to the Leninist view – firms used the state and politics used organized capital as tools to achieve their respective aims. Liberal competition policy, in the view of the left, would therefore have been a backward rather than a forward move (for details, see Höpner 2003b).

The Company Network during the Nazi Dictatorship

The consensus that a rigid competition policy was not required implied no consensus on the conflict line between laissez-faire and state interventionism. The economic crisis of 1929-1933 was also a crisis of the idea of laissez-faire. After the 1932 elections, at least two thirds of Reichstag members represented anti-laissez-faire ideas: Communists and Social Democrats on the left and the Nazi party on the far-right with its 37.3 per cent share of votes. A radical transformation of the German financial system was a manifest option for additional reasons: after the banking crisis of 1931, the topic was on the political agenda anyway – as a first step, this resulted in an increase in banking supervision in 1932 – and, above all, a large part of bank shares were held by the state as a result of the support measures necessary in the early 1930s.

Right from the start, the NSDAP ideology was hostile to the financial sector. Financial capital, according to Nazi ideology, was more profit-earning than working capital, was disembedded from its national context and was in the service of Jewish interests. In his 1925 published pamphlet "Mein Kampf", Hitler (1925/1999: 213) wrote, "the hardest battle would have to be fought, not against hostile nations, but against international capital" which was "robbing the enterprises" (ibid: 314). Thus the strong continuity of the bank's entanglement with industrial corporations over the Nazi period and beyond was not a forgone conclusion. The relationship between different groups of industry and the NSDAP is the subject of numerous controversial debates (see the overview in Turner 1974), but there seems to be a consensus that "Hitler's assistants" were located more in the heavy-industry sector – the political commitment of Fritz Thyssen is a well-known example of this – than in the financial sector [7].

Initially meant as a starting point for a more large-scale reform of the financial sector, the Nazis inaugurated an enquiry board on bank affairs. Its chairman Wilhelm Keppler explicitly focused on bank–industry relationships, saying that "finance capital seeks to rule the economy instead of serving it. Share block ownerships and voting battles in supervisory boards and shareholders' meetings do not belong to the scope of functions of banks" (quote from James 1995: 323; own translation). However, it transpired that the Nazi elite failed to make an extensive reform of the banking sector their top priority. The cartel-like banking system and the banks' ties with industrial corporations were not dissolved, and the new credit law passed in December 1933 was limited to a further increase in banking supervision and some risk-minimizing restrictions on large credits. In the years 1936 and 1937, the re-privatization of the large banks and insurance companies was completed (Kurzrock 1970: 73).

The Nazis assumed two different stances in their policy towards the financial sector. First,

starting in 1937, private banks were subject to "Aryanization", which meant in practice the expropriation of Jewish holdings in banks. Second, they controlled the investment flows of banks politically in order to use them for war preparation. For the Nazis, banks and insurance companies were agents that had to manage their funds with respect to the needs of the state. In 1934, corporations were prohibited from paying more than six per cent – in exceptional cases, eight per cent – as dividends, which had the effect of supporting industrial self-financing and limiting the attractiveness of shares (Pohl 1982: 405). Increases in capital stocks required state agreements. This held the demand side of the capital market open for the enormous purchases of government bonds. In 1938, insurance companies were prohibited from investing in the construction sector; after 1939, at least two thirds of investment flows had to be spent on government bonds and a catalogue of permitted investment alternatives was introduced for the last third (Arps 1976: 214).

After the failure of the "Barbarossa" campaign against Russia in 1941, the German economy ultimately shifted towards an "organized" system in which private property remained intact, but wages, prices and investment flows were controlled by the state. In this phase, a second wave of verbal attacks on banks occurred, and in particular the security service of the "Schutzstaffel" (SS) agitated against banks as rent seekers of the war and demanded the nationalization of the large banks. Again, the banks' influence over industrial companies was a main point of criticism (James 1995: 390-395). Hitler refused such demands, arguing that National Socialists should not assume any responsibility towards banks.

By and large, the company network remained stable in the years of the Nazi dictatorship. Gradual disentanglement measures in some cases were counterbalanced by reinforced ties in other cases. For example, when the automobile and armaments manufacturer *BMW* increased its share capital in 1936, *Deutsche Bank* added a part of the shares to its own portfolio. In 1942, in order to help crisis-ridden *BMW*, the steel trust *Vereinigte Stahlwerke* acquired a *BMW* share block (James 1995: 396, 398). In the early 1940s, the industrialist Günther Quandt (a member of the family that owned *BMW*) collected shares in the construction company *Holzmann* until he held 25 per cent of the shares. Since this breached a state decree that prohibited unauthorized changes in ownership structures during wartime, Quandt transferred the share block to *Deutsche Bank*, which retained a part of it and therefore increased its stockholding in *Holzmann* (see Figure 1). Further parts of the share block were sold to industrial companies like *Reemtsma* and *Henkel* (Eglau 1989: 68).

Federal Republic of Germany

After World War II, the disintegration of the largest trusts such as *IG Farben* and *Vereinigte Stahlwerke* and the separation of the largest banks into regional units (revised in 1957) were not combined with an expropriation of the industrial ownership that the banks had acquired during the previous decades. Furthermore, as regards the public access to the financial resources of banks and insurance companies, the year 1945 did not represent a radical historical break. Steadily rather than abruptly, the unambiguous state dominance over financial companies eroded and made way for a more reciprocal interpenetration, in which it was increasingly difficult to decide who embedded whom.

Until the early 1950s, economic planning remained important in Germany. The import and export of raw materials, all infrastructural issues, housing, food markets, and the

capital market remained highly regulated. As before 1945, the resources of financial companies were not seen as private matters. They were subject to political negotiations and were therefore treated like a national infrastructure. Trade unions, for example, demanded that insurance companies should have to invest four fifths of their funds in mining and electricity, while the Association of Social Housing wanted to oblige them to invest 70 per cent of their assets in house building (Borscheid 1993: 27).

Ironically, in the context of the Korean crisis, the American Allies blamed the German economic system for being too market-driven, as too many investment resources were spent on the "useless" consumption sector (Abelshauser 1983: 76). In addition, the 1950 energy crisis increased the demands for more economic planning. In 1950/51, in order to prevent state pressure, peak associations jumped at the chance and constructed a "voluntary" body of investment flow rules that governed the allocation of capital and raw materials for different economic sectors. Again, company cooperation and industrial associations – the peak association BDI (*Bundesverband der Deutschen Industrie*) in particular gained in importance in these years of economic planning – evolved in a parallel manner. The hierarchical corporativism of the Nazi years turned into a "*neo*-corporatism". However, it would be misleading to overemphasize the voluntary character of these investment activities, as resistance against the desires of the state, the public and, above all, the Allies would obviously have been futile.

In this context, insurance companies invested large amounts of their funds in house building as well as in coal mining, steel, and electricity. Firstly in 1951, then in collaboration with the economic ministry, the insurance companies' association developed lists of qualified investment objects. What is crucial here is that a large part of *Allianz's* industrial ownership, seen in Figure 1, smacks in these years of – at best – "corporatist" investment decisions (Borscheid 1990: 429-431).

In the Adenauer era, criticism of the power of the banks and of their industrial ownership was practically absent, and political attitudes towards banks were largely clientelistic. The state's influence over banks was increasingly counterbalanced, maybe overbalanced, by the banks' control over resources of the state. A good example of this is the relationship between *Deutsche Bank* and state-owned *Kreditanstalt für Wiederaufbau*, which had distributed the Marshall Plan funds. Industrial ownership by banks was not simply accepted, but rather encouraged, by the state. An important basic condition for this was the affiliation privilege, which ruled that dividend payouts from the ownership of more than 25 per cent of companies were not subject to taxation. At the same time, profits from sales of share blocks were heavily taxed. As a consequence, incentives to retain industrial ownership were much greater than incentives to dispose of it. In this context, for example, *Dresdner Bank* acquired a 25 per cent ownership of *Metallgesellschaft* which, since then, has been subject to a shared *Deutsche Bank* and *Dresdner Bank* influence (see Fig. 1) (Eglau 1989: 63, 67). Likewise, (still disintegrated) *Deutsche Bank* with its de facto chairman Hermann Josef Abs enlarged its shareholding in *Südzucker* until it reached the 25 per cent treshold in 1956.

Another basic condition for the development of the company network was that practically no regulation governing the transparency of share block ownership existed until 1965 when the Stock Corporations Act Amendment was passed. Unimaginable in the context of today's standards of transparency, not even industrial share blocks greater than 25 per cent had to be published in the annual reports of financial companies and could therefore evolve unhindered. Abs was quoted as saying "we don't want to shout this from the rooftops" (Spiegel 16/1966). Accordingly, in 1959, when *Deutsche Bank* made a second

attempt to build a large automobile conglomerate by merging *BMW* with *Mercedes-Benz* and the shareholders' meeting of *BMW* was convened to decide on the merger, the *BMW* supervisory board chairman was obliged to admit that his company, *Deutsche Bank*, owned 25 per cent of *Mercedes-Benz* and that *Deutsche Bank* was therefore prone to an obvious conflict of interests. After that, the *BMW* shareholders voted against the merger.

The Stock Corporations Act Amendment of 1965 also limited both the number of supervisory mandates allowed per person, as well as limiting the permitted size of supervisory boards. It transpired that the impact of both measures was close to zero. As bank managers passed supervisory board mandates to other managers from the same corporations, the overall structure of interlocking directorates remained the same (Albach and Kless 1980; Beyer 2002). The aim of limiting supervisory board sizes was to gradually shift their activity back from company cooperation to company supervision and thereby put an end to the gradual change in their function that had been taking place in previous decades. The supervisory boards of banks in particular were seen as being much too large to allow effective supervision to occur. As a reaction to the reduction in their supervisory board sizes, *Commerzbank*, *Deutsche Bank* and *Dresdner Bank* founded additional committees, with the same sizes and composition of personnel (and also the same salaries for their members) as their initial supervisory boards. "I don't mind whether or not we call ourselves supervisory board members, as long as we can meet routinely in order to discuss our economic problems", said one industrial member of *Dresdner Bank* supervisory board in 1966 (Spiegel 25/1966).

With regard to the conflict line between liberalism and clientelism, Economic Minister (and, since 1963, Chancellor) Erhard had always been in a minority position in the CDU, and Adenauer's support for Erhard's liberal ideas in particular was limited. It was not until the time of the Social Democrat/Liberal coalition that some significant liberalization measures were passed against the resistance of economic interests, among them the 1973 anti-cartel law. Furthermore, Social Democrats pushed the public banking sector into greater competition with private banks in order to break up de facto cartels. At first glance, it may seem puzzling that Social Democrats behaved in a more liberal manner here than the CDU. Besides the liberal attitude that Social Democrats and trade unions adopted to such competition and corporate governance issues as a result of German companies collaborating with the Nazis during the Third Reich, one explanation for this is the prevalence of Keynesian thinking among politicians like Schiller (economic minister 1966-1972) and Schmidt (economic minister 1972-1974 and chancellor 1974-1982), who were convinced that Keynesian monetary and demand policy required markets.

The SPD attitude towards the company network was much more ambivalent than the position of the governments of the 1950s and 1960s. On the one hand, in some exceptional cases, state representatives called upon banks to invest in industrial companies when sheiks from oil-producing countries used the so-called "petrodollars" to acquire stakes in German companies or in order to prevent bankruptcies. This led not to a third wave of entanglement, but to some spectacular incidents, such as *Deutsche Bank's* acquisition of *Mercedes-Benz* shares in 1974, which made *Deutsche Bank* temporarily the majority shareholder of *Mercedes-Benz* with a 57.5 per cent share block (Büschgen 1995: 657). On the other hand, Social Democrats – supported in the process by a public debate on the power of banks – used the bankruptcy of the private bank *Herstatt* in 1974 to introduce a commission on banking issues so it could initiate a discussion on a broader reform of the banking system in Germany. The commission published its report in 1979, in which it suggested that banks should be forbidden to own more than 25 per cent of

industrial companies (Studienkommission 1979: 267).

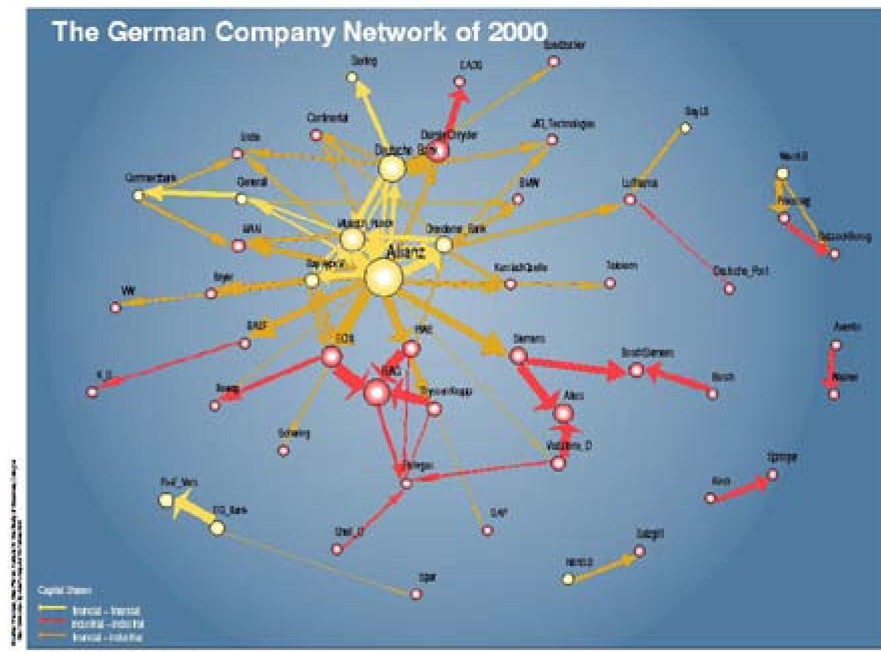
At the same time, the Liberal Party, encouraged by its economic expert Graf Lambsdorff, took some significant steps away from economic clientelism towards economic liberalism, the first of which were expressed in a programme published by the FDP economic committee in 1975 (Spiegel 40/1975). In 1979, Lambsdorff surprised both public and bank managers alike when he used the "Bankentag" (the meeting of the peak association of German banks) to announce that a federal law ought to go beyond the suggestion of the banking commission and should actually forbid banks to hold industrial share blocks greater than 15 per cent, in preference to the 25 per cent originally proposed (Spiegel 14/1979). After the 1980 elections, finance minister Matthöfer announced the government's intention to pass an appropriate act in the incoming legislative period (Spiegel 50/1980).

At no point in German history, including the Nazi era, was an act of prohibition that would have statutorily reduced capital ties between companies more on the political agenda than during the years 1979 to 1981. It was only the coalition change initiated by the FDP in 1982 that saved the financial companies from this measure. The government of the new chancellor Helmut Kohl, instead of passing a prohibition act, lowered the threshold of the affiliation privilege from 25 per cent to 10 per cent in 1993 (Eglau 1989: 78). In response, *Deutsche Bank* enlarged its shareholding in *Allianz* until it reached the new 10 per cent threshold (Figure 1). We believe that the 1980s were already a decade of change rather than of stable reproduction of the German company network. When *Deutsche Bank* increased its shareholding in the tyre producer *Continental* (Fig. 1) in order to help the company's management fight the hostile takeover attempt by the Italian company of *Pirelli* in 1992/93 (Höpner and Jackson 2001), it was the last time that the mechanisms of "Germany Inc." dominated the principles of investment banking. Just four years later, the dominating logic had ultimately changed in favour of principles that were rooted, as we now show, in the 1970s.

Competition and Change: Cutting Back Capital Ties

Although the actual erosion of the capital network took place in the second half of the 1990s, we argue that the underlying changes in the core of the network began in the 1970s. Figure 2, which shows the state of the company network in 2000, provides first indications of an erosion process [8]. Between 1996 and 2000, a huge number of restructurings, mergers and acquisitions took place, which makes only 23 of the network participants in 1996 and 2000 directly comparable [9]. In 2000, 41 companies can be seen to establish a connected component, compared to 60 in 1996. The number of capital ties between the 100 largest companies has dropped from 168 to 80, while the number of capital ties between the companies in the connected component has fallen from 143 to 72. The amount of net value added represented by the capital links has declined to a nominal 86 per cent from the 1996 amount. The complex energy and steel cluster of 1996 has been reduced to the three companies e.on, *RWE* and *ThyssenKrupp*, which are owners of *RAG* (*Ruhrkohle AG*). However, the most significant changes have occurred in the centre of the network. The core of financial companies still exists, but has become smaller, less entangled and less connected with industrial companies. By combining these indications with qualitative information, we now show that the three waves of network formation were followed by a process of increased competition and network dissolution.

Figure 2



[please click on the image to enlarge]

In the 1950s and 1960s, the core of the company network was characterized by a commonly shared, overall national orientation. The large financial companies had invested in so many industrial companies that every single hot spot in German industry, in the event of it reaching a significant size, must have endangered the stocks and credits of every participant at the centre of entanglement. A precondition for the nation-wide economic orientation of the network core participants was the readiness of every participant to intervene in order to prevent company crises. From the 1970s onward, the shared perception inside the core was increasingly fragile. Tensions, divergent strategies and competition arose inside the financial sector and led to creeping erosion of the common economic orientation.

Starting in the year of the first major economic crisis in the Federal Republic, 1967, *Dresdner Bank* took significant steps to abandon its macroeconomic orientation and was blamed for "rough" business methods (Spiegel 32/1976) – which meant a lack of a societal, national perspective. During the crisis of the steel company *Krupp* in 1967, *Dresdner Bank* was criticized for its reluctance in the anti-crisis cartel although it had traditionally cooperated closely with *Krupp*. In the early 1970s, *Dresdner Bank* was the first large German bank that centralized its decision-making by adopting an Anglo-American style CEO management model (Hanley et al. 1986). Different bank strategies clashed in 1974 when *Dresdner Bank* CEO Ponto helped the *Quandt* group to sell its *Mercedes-Benz* share block to an investor group in Kuwait. Both government and opposition, along with key representatives from the business community were unanimous in blaming *Dresdner Bank* for its inconsiderateness (see the interview with Ponto in Spiegel 51/1974).

Facing the threat of petrodollar reflows, the conflict between *Deutsche Bank* and *Dresdner Bank* split the German company network into two camps: industrial companies that collaborated with *Deutsche Bank* like *Mannesmann*, *Bayer* and *BASF* adopted unequal voting rights to prevent unsolicited influence from outside "Germany Inc.", while *Dresdner Bank* advised "its" industrial companies such as *Hoechst* not to do so (Spiegel

7/1975). A further significant indication of increasingly diverging orientations occurred in the early 1980s: in the run-up to the shareholders' meeting of the crisis-ridden *Commerzbank* in 1981, *Dresdner Bank* refused to advise its share depot customers to vote for the exoneration of the *Commerzbank* board of directors, which was a unique event in German banking history. The network core companies' trust in each other's macro-orientation was decreasing, which implied free-rider problems and called the encompassingness of the network into question.

At the same time, financial companies began to retreat from their strategy of expanding their links with industrial companies. In 1973, *Deutsche Bank* chief Ulrich announced for the first time that the bank was not willing to add more industrial share blocks greater than 25 per cent to its portfolio and that *Deutsche Bank* was willing to sell some of its industrial shareholdings. This was more than lip service, for *Deutsche Bank* sold the *Mercedes-Benz* share block that it acquired from the *Flick* group in 1975 by offering it on the stock exchange between 1975 and 1977, and it also sold parts of its traditional shareholdings, for example its *Stollwerck* shares in 1972 and 1973, its *Continental* shares in 1978, and its *Phoenix* shares in 1978 (Eglau 1989: 75). In 1981, *Commerzbank* sold a large part of its *Hochtief* shares. When the banking commission suggested forbidding banks from owning more than 25 per cent of industrial companies, the banks – not surprisingly – protested. Hackl, a speaker for *Bayerische Vereinsbank*, said for example that a prohibition act would be inconsistent with the protection of property guaranteed by basic rights, and that banks would definitely complain at the Federal Constitutional Court if such an act were passed. Interestingly, speakers from the largest banks were not at the forefront of the protests, and *Deutsche Bank* chief Herrhausen explicitly stated that such a prohibition act would not be excessive (see the interview with Herrhausen in Spiegel 25/1979). This indicates that *Deutsche Bank* perceived its position in the "frozen" company network as no longer adequate. Bankers hoped that a prohibition act would be combined with exceptional tax treatment of the profits on share block sales, which would allow activation of "hidden reserves". There are, in other words, good reasons for believing that tax policy conserved the company network longer than its core actors actually favoured. Some bankers might have seen the end of the discussion on the prohibition act, which resulted from the change in government in 1982, as an ambivalent outcome.

Competition in the financial sector increased in the 1980s when concepts of financial conglomeration tested the willingness of banks to call the traditional division of influence spheres between banks and insurance companies into question. Initial attempts by banks to break into the insurance market date from 1983. In 1986, it was viewed as something of a sensation that the insurance holding *Aachener* und *Münchner Beteiligungs-AG* acquired formerly trade union-owned *Bank für Gemeinwirtschaft*. At the same time, *Deutsche Bank* founded its own home loan bank, and – reciprocally – market leader *Wüstenrot* founded a credit bank. Tensions increased in 1988 when *Deutsche Bank* announced its intention to found its own life insurance company. This provoked fierce reactions in the insurance sector, and insurance companies demanded that *Deutsche Bank* should retreat from its plan. When *Deutsche Bank* refused, *Allianz* CEO Schieren left the "Beraterkreis" of *Deutsche Bank* (Büschgen 1995: 794). Unlike capital entanglement, interlocking directorates were not protected by tax law, and the abolishment of personal ties began earlier than the actual erosion of capital ties. Since 1985, at the latest, the degree of interlocking directorates between the 100 largest German companies had been decreasing (Höpner 2003a: 137).

In addition, there are indications that the positive returns from share block holding had

started to dwindle. Various economic studies have observed the economic effects of different types of ownership structures in Germany. In their study on the economic impact of bank ownership on company performance, Gorton and Schmid (2000) show that the slight positive effect of 1974 had vanished by 1985. Cable (1985) finds a profitability increasing effect of bank ownership among the 100 largest German corporations in the early 1970s. By contrast, studies that focus on profitability effects of large share blocks in the 1980s and 1990s tend to find a negative impact (see the excellent overview that Frick and Lehmann (2003) provide). Lehmann and Weigand (2000) report a negative impact of ownership concentration on profitability by observing a sample of 361 firms in the years 1991 to 1996; Clark and Wójcik (2003) find a significant negative relationship between ownership concentration and share price increases over the period 1997 to 2001. This finding is puzzling, as some of these blockholders – at least, banks and insurance companies – had started to manage their assets more actively, and more efforts to "pick winners" should lead to increasing, not decreasing benefits from blockholding.

How can this change in the functionality of blockholding be explained? Let us assume, in accordance with Roe (2003: 129), that positive effects of blockholding are associated with limited competition. Imperfect competition provides insiders with an opportunity to extract rents by, for example, using cash flows for ineffective prestige investments without endangering the survival probability of the firm. In this situation, supervision by blockholders prevents insiders from rent seeking and, therefore, leads to positive returns. This effect vanishes under conditions of increased competition, which limits the room for manoeuvre for rent seeking. The costs of blockholding may therefore start to dominate private benefits (for general discussions on private benefits, see Roe 2001). Blockholding may, in other words, lose its mission under conditions of strong competition. Beyer's case study of the strategic reorientations of *Deutsche Bank* and *Allianz* explores a further effect that decreases the gains from industrial ownership especially for banks: industrial ownership originally helped banks to reduce credit risks, but as internationalization increased the general risks to business from outside the sphere of influence of domestic banks (see the data in Albach et al. 1999), the competitive edge that industrial ownership had given banks was gradually lost (Beyer 2002: 9). However, from both points of view, internationalization led to declining net benefits from blockholding and therefore set incentives to cut capital ties.

Both increased competition in the financial sector and international competition together led to a creeping reorientation of the large banks towards investment banking. The year 1997 marks a watershed in German banking history. It was in this year that *Deutsche Bank* first supported a hostile takeover attempt, with the German steel company *Thyssen* as takeover target. We believe that the coexistence of investment bank strategies and the (decreasingly) close ties with industrial companies marks a transitional stage. However, in this transitional stage, capital ties are again subject to functional change: traditionally, the company network was seen as an instrument for shielding companies from capital market influences. In 1997, *Deutsche Bank* used its presence on the *Thyssen* supervisory board to arrange *Krupp's* hostile takeover attempt, which turns the traditional functionality on its head.

As to the changing relationship between bank–industry ties and capital market demands, *Thyssen* was an extreme, but not an exceptional, case. In the late 1990s, "shareholder value" strategies evolved both inside and outside the company network, and some of the managers with the largest number of supervisory board seats in the company network represented concepts of capital market-oriented company management. These included

Paul Achleitner (*Allianz*), Rolf-E. Breuer (*Deutsche Bank*), Gerhard Cromme (*ThyssenKrupp*), Heinrich von Pierer (*Siemens*) and Jürgen Schrempp (*DaimlerChrysler*) (Beyer and Höpner 2003). While the diffusion of high standards of capital market orientation inside the network grew, the macroeconomic orientation of core participants and therefore the internalization of risks declined. This is best expressed by chancellor Schröder's difficulties when he tried to convince banks to invest in the crisis-ridden *Holzmann* company in 1999.

The reorientation towards investment banking produced further tensions that called the industrial ownership of banks into question. Close ties with industrial companies are not compatible with the acquisition of orders in international investment banking (Beyer and Höpner 2003; Dziobek and Garrett 1998): reputation building in investment banking would be impossible if the suppliers of such services defined the protection of domestic industrial companies as a business objective. Hence the reorientation process speeded up network dissolution dramatically, as Figure 2 shows. Furthermore, large banks started to reduce their supervision of industrial companies by abolishing interlocking directorates. In 2001, *Deutsche Bank* announced a general retreat from non-financial supervisory board chairs. Figure 2 indicates that the insurance company *Allianz* continues to be highly entangled with industrial companies. However, as Beyer (2002) shows, *Allianz* has undergone reorientations that are comparable to the strategic moves of the large banks. *Allianz* has started to change its investment behaviour from stable industrial ownership towards active asset management. The major restructuring that, among other goals, has sought to increase the freedom of action in investment policy dates from 1985. Even in the decades before active asset management, *Allianz'* strategy was not so much aimed at gaining industrial influence by acquiring large share blocks, but at diversifying its portfolio by acquiring small share blocks from a large number of companies. *Allianz* today, therefore, is more comparable to a mutual fund than to a strategic actor in old-style "Germany Inc".

The government change in 1998 placed the company network back on the political agenda. In contrast to previous decades, both network participants and politics called its existence into question. When the KonTraG (Corporate Governance and Transparency Act) – a reform act that abolished unequal voting rights and legalized share buybacks and stock options – was discussed in 1997/98, the SPD opposition introduced its own reform blueprint and demanded the prohibition of capital ties between banks and industrial companies greater than 5 per cent (Cioffi 2002; Höpner 2003b). In the context of the major tax reform in 2000/2001, the Schröder government surprised the public as well as capital market participants by opting for the total abolition of the tax on profits from the sale of large share blocks without hurting banks with any prohibition act. Chancellor Schröder and his finance minister Eichel were convinced that the company network was eroding anyway. They therefore saw no need to engage in conflicts with large companies. The CDU opposition criticized the reform as a tax gift for banks. In his election campaign in 2002, the conservative candidate for chancellor, Stoiber, announced his intention to reintroduce the tax if he were elected chancellor.

Conclusion

We discussed the development of the German company network by combining two methods of network analysis: network visualization techniques and qualitative-historical analysis. Network visualization allows identification of structural patterns of the network that can be traced back historically. Our narrative focused on the most eye-catching bank-

industry relationships. Figures 1 and 2 reveal further outstanding entanglement patterns such as the complex energy/heavy industry cluster in the northeast of Figure 1 that can be subject to future research. Furthermore, historical analysis discovers functional changes of company links that would be ignored by a purely structural-quantitative analysis.

We distinguished three crucial phases of network formation – the 1880s, the 1920s and the 1950s – in which capital entanglement resulted from interplay of both company behavior and politics. The role of politics turned out to be highly contingent and dependent on the ideology of governments. During the Nazi era and in the latter years of the Social Democrat/Liberal coalition (1969-1982), network dissolution by law was on the political agenda. The political support for the company network was therefore no forgone conclusion in German history.

Network visualization provided us with first indications of declining network density. Qualitative analysis added evidence for a process of network dissolution. We paid special attention to the reasons of this process. We argue that they are threefold. First, until the 1970s, a process of increased competition among financial companies set in. This resulted in a decline of the common shared macroeconomic orientation of the network core participants. Second, in the 1980s and 1990s, a mixture of push and pull factors made network dissolution a thinkable option for financial companies. Under conditions of increased international competition, returns from blockholding declined. At the same time, opportunity costs increased, as close cooperation with industrial companies was not compatible with competing internationally in the field of investment banking. Third, until the end of 1999, the government speeded up network dissolution by means of tax policy.

Our narrative stopped in the year 2000. This year marks no endpoint of network dissolution. The abolishment of capital ties between banks and industrial companies continued in the year 2000-2003. As a result of the tax reform, and bucking the worldwide trend, German mergers and acquisitions activity rose after the year 2000. We believe that the existence of a nation-wide encompassing company network that provides its core participants with a macroeconomic perspective is a closed episode of German economic history. It will not re-emerge on a national basis, and it is an open question whether a network of similar deepness will ever emerge at the European level.

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Notes

1

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2

To simplify our terms, we will refer to non-financial companies as industrial companies, which by definition include both manufacturing and trade.

3

For statistical analysis of the structure of the German company network, see Beyer (1998); Heinze (2002); Kogut and Walker (2001); Windolf and Beyer (1997); Windolf and Nollert (2001); Ziegler (1984).

4

Münchner Rück, *Bayerische Vereinsbank*, *Bayerische Hypobank* and *Commerzbank* also belong to the network core and are both actively and passively involved.

5

This cluster is centered on the *RAG* (*Ruhrkohle AG*) and its shareholders *VEBA*, *VEW, Krupp* and *Thyssen*. *RAG*, in turn, holds shares in *Ruhrgas*. Additional *Ruhrgas* shares are held by *Mannesmann*, *Krupp*, *RWE* and *VEBA*. Further energy and utilities companies are to be found in the periphery of this cluster: *Viag*, *Veag*, *Bewag*, *EVS* and *Hamburger Gesellschaft für Beteiligungsverwaltung*.

6
Daimler-Benz/Metallgesellschaft, Henkel/Degussa, Deutsche Bahn/Lufthansa, Bilfinger+Berger/Buderus.

7
However, the example of Deutsche Bank board (since 1933, supervisory board) member Emil Georg von Strauss, who was the vice-president of the Reichstag after 1933, shows that NSDAP involvement could also be found among bankers.

8
We also call attention to disconnected components here.

9
Some mergers and takeovers have reduced the number of companies. *Mannesmann* has been acquired by *Vodafone*, *Thyssen* and *Krupp* have merged, *VEBA* and *Viag* have merged (now *e.on*), and *RWE* and *VEW* have merged. A Swedish energy company has acquired *VEAG* and *Bewag*. The structure of the energy cluster will be further simplified by the acquisition of *Ruhrgas* by *e.on*. In the financial sector, *Bayerische Hypobank* and *Bayerische Vereinsbank* have merged to form *Bayerische Hypo-Vereinsbank*, and *Allianz* has acquired *Vereinte Versicherungen*. In the retail sector, *Schiekedanz* and *Karstadt* have formed the new company *Karstadt-Quelle*. The chemical firm *Hoechst* has merged with the French company of *Rhone-Poulenc*; the new company, *Aventis*, has its home base in France. In the insurance sector, Italy's *Generali* has acquired *AMB*. Furthermore, some dropouts and new entrants have changed the structure of the network. *Bilfiger+Berger*, *Deutz*, *Degussa*, *VEAG* and *Victoria* (acquired by *Allianz*) have dropped out. New entrants are privatized companies like *Deutsche Telekom* and *Deutsche Post*; the software producer *SAP*; the media companies *Kirch* and *Springer*; *EADS*, which was formerly the aerospace section of *Daimler-Benz*, has become a separate company, as well as the de-merged parts of former *Mannesmann*.

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The German Company Network of 1996

Deutsche_Babcock
Südzucker
WestLB
Preussag
Deutz
Krupp
Karstadt
Gerling
NordLB
Colonia
Ruhrgas
Holzmann
Commerzbank
VEW
Linde
Deutsche_Bank
RAG
Continental
Mannesmann
Bankgesellschaft_Berlin
Thyssen
Daimler–Benz
Metallgesellschaft
VEBA
Henkel
Bayerische_Vereinsbank
RWE
Bewag
MAN
Degussa
AMB
Münchener_Rück
VIAG
Allianz
VEAG
Hamburger_Gesellschaf
Hoechst
Wacker
Buderus
Dresdner_Bank
BASF
Volkswagen
Bayerische_Hypo
Victoria
Vereinte
BMW
Beiersdorf
Bilfinger+Berger
Siemens
Bayer
Metro
DG_Bank
AGIV
Schering
Haniel
R+V_Versicherung
Lufthansa
EVS
Bosch–Siemens
BayerischeLB
Bosch
Deutsche_Bahn

Capital Shares
financial – financial
industrial – industrial
financial – industrial

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The German Company Network of 2000

Suedzucker
Gerling
EADS
BayLB
Continental
MG_Technologies
DaimlerChrysler
Linde
Deutsche_Bank
WestLB
Commerzbank
Generali
BMW
Lufthansa
Preussag
Muench_Rueck
MAN
Dresdener_Bank
BabcockBorsig
Allianz
BayHypoV
KarstadtQuelle
Telekom
Deutsche_Post
Bayer
VW
BASF
RWE
EON
Siemens
Aventis
BoschSiemens
K_S
RAG
Bosch
Wacker
Bewag
ThyssenKrupp
Atecs
Schering
Vodafone_D
Springer
Ruhrgas
Kirch
R+V_Vers
DG_Bank
SAP
Shell_D
Salzgitt
NordLB
Spar

Capital Shares

- financial – financial
- industrial – industrial
- financial – industrial

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