5

ISSUES AND CASE STUDIES IN THE NEW URBAN ECONOMY

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Several of the questions raised in Chapter 4 can be fruitfully addressed through a closer look at how individual cities developed global city functions. A first set of cities (Miami, Toronto, Sydney) helps us explore empirically one of the key organizing propositions of this chapter: the growing concentration and specialization of financial and service functions that lies at the heart of the new urban economy at a time when we might expect the development of global telecommunications to be pushing these sectors toward geographic dispersal. These specific case studies provide insights into how cities that were not quite global became global; this shift illuminates how globalization materializes in specific places. These cases also present, in somewhat schematic form, a logic for inquiry into these issues that can be replicated in studies of other cities. To illustrate these diverse issues, I chose cities that are neither in the absolute top tier nor as familiar as New York or London. These cases all function as natural experiments. A second set of cities (Hong Kong and Shanghai, the Gulf city-states, Istanbul) helps us explore empirically how cities navigate some of the major challenges and opportunities in the current decade.

I begin by examining the formation of global city functions. I chose Miami to illustrate this process because it captures the implantation of the growth dynamic described in Chapter 4. The question here is this: under what conditions do global city functions materialize? Miami brings an additional issue into the discussion: can a city lacking a history as a world trade and banking center become a global city? The second case study is Toronto, a city that partly rebuilt its financial district in the mid-1980s and hence could have opted for far more spatial dispersal than old financial centers could. This helps disentangle something that is not clear in older centers where spatial concentration of the financial center might be a

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function of an old, already-built environment inherited from an earlier economic era. The third city, Sydney, shows how these tendencies toward concentration operate in the case of a multipolar urban system and a vast, rich, continent-sized economy, as is Australia. Can we expect a similar multipolarity in the distribution of global city functions?

The second set of cities helps us explore three additional dynamics. The complex relation between Hong Kong and Shanghai, China's two leading financial and business centers, illuminates the shifting interaction between competition and specialized differentiation: they may have started as competitors, but they are increasingly strengthened through their specialized differences. I see a similar evolution for the case of Sydney and Melbourne, from competition in the 1980s to a more settled specialized differentiation in the current decade. More generally, I see this as a key aspect of the relationship among global cities: (1) competition is far less significant than is commonly asserted, and (2) the specialized differences of cities, which matter much more than is commonly understood (Xu and Yeh 2010: chap. 5). The case of the Gulf States helps us see a complex process of repositioning: from relying on oil exports, Gulf States are now in the process of developing a far more complex operational space, including Islamic finance, renewable energy, and culture. Finally, Istanbul shows us how a 3,000-year-old imperial capital becomes a strategic node in the new East–West axis that organizes today's world and overrides the older dominance of the North–South axis.

After examining these cities as laboratory cases, we turn to the general trend of sharp concentration of financial and top-level service functions at a time of advanced digital technologies. Is this a new trend? Is it likely to remain unchanged? We conclude with the question of urban form: have the new information technologies changed the spatial correlates of the center, the terrain where the international financial and business center and the producer-services complex materialize? Can the emerging megaregions incorporate two very different types of economic spaces—the "winners" (global cities) and the "losers" (de-industrializing cities)—in today's global economy, and can they do so in ways that benefit the "losers" in this brutal economic competition rather than merely further strengthening the winners, as seems to happen today?

THE DEVELOPMENT OF GLOBAL CITY FUNCTIONS: THE CASE OF MIAMI

Each of today's global cities has a specific history that has contributed to its current status. Many of the world's major cities enjoyed a long history as banking and trading centers or as capitals of commercial empires.[1] This fact raises two immediate questions: What aspects of today's global cities are continuations of past functions? How can global city functions emerge in cities that lack a long history as international banking and trading centers?

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Miami is a case in point. On the one hand, it is a city with a short history, one mostly lacking any significant international functions. On the other hand, its large Cuban immigration led to the development in the 1960s and 1970s of an international trading complex oriented to Latin America and the Caribbean and small-scale investments into real estate by individuals and firms from Latin America. The relative simplicity of Miami's history and international trading functions makes it relatively easy to disentangle two key processes: (1) the continuity of the Cuban-led trading complex and (2) the formation of a new business complex in the late 1980s that was not connected to the Cuban immigration but rather to the demands created by current processes of globalization.

The case of Miami thus helps us, first, to understand how a city that lacks a significant history as a world financial and business center can become a site for global city functions, and second, to disentangle the ways in which global city formation may or may not be related to an older internationalism.

The city already had a concentration of international trading operations in the 1970s, built and owned in good part by the prosperous resident Cuban elite (Portes and Stepick 1993). Since their arrival in the 1960s after the 1959 Castro revolution, the Cuban community members have built an impressive international trading entrepôt, with a strong presence of firms and banks from Latin America and the Caribbean. Is the existence of the Cuban enclave, then, with its multiple trading operations for the Caribbean and Latin America, the base on which these new global city functions developed? Or is the latter a somewhat autonomous process that may benefit from the concentration of trading operations in Miami but that responds to a different logic? Does it represent a type of development that would have taken place anyway in the southern Atlantic region, although perhaps not in Miami without the Cuban enclave? In brief, what is the relationship between these two processes, one shaped by past events and the other by the current demands of economic globalization?

Some hypotheses in the research literature on global cities are of interest here, especially those that examine the spatial and organizational forms assumed by economic globalization today and the actual work of running transnational economic operations. Figures on the growth of Miami's foreign banks, foreign headquarters, prime office-space market, installation of major telecommunications facilities, high-income residential and commercial gentrification, and high-priced international tourism all point to developments that transcend both the Cuban enclave and the Caribbean import–export enterprises in its midst. These developments point to another dynamic, one at least partly rooted in the new forms of economic globalization, and suggest that the growth of Miami's new international corporate sector is part of this new dynamic rather than a mere expansion of the Cuban enclave's Latin American and Caribbean trading operations.

Overall, international business transactions with Latin America rose sharply over a short period, from the end of the 1980s to the 1990s (see also Chapter 2). Total foreign direct investment (FDI) in the Latin American economies grew from an average of US$6.1 billion in 1984 to $28.7 billion in 1994,

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nearly doubled to $56.1 billion in 1997, and reached more than US$95 billion in 1999; after this, FDI declined and stood at US$55 billion by 2004 (pp.17–24). Despite struggling during the 2008 financial crisis, FDI has since grown tremendously, amounting to US$167 billion in 2017 (ECLAC 2017).

Much of this capital was part of active entry by many foreign firms into several Latin American countries: they bought hotels, airlines, factories, and so forth. This, in turn, expanded the management and coordination work of these firms, which increasingly used Miami as regional headquarters locations. Privatization, deregulation of stock markets and other financial markets, and the new export-oriented development model in most of Latin America were major factors. These are all extremely complicated transactions that require vast specialized inputs—a far cry from the earlier type of trading that initiated the growth of Miami in the 1970s.

In the 1980s, a growing number of U.S., European, and Asian firms began to set up offices in Miami. Eastman Kodak moved its headquarters for Latin American operations from Rochester, New York, to Miami; Hewlett-Packard made a similar move from Mexico City to Miami; and General Motors (GM) relocated its headquarters for coordinating and managing Latin American operations from São Paulo, Brazil, to Miami. Firms and banks from Germany, France, Italy, South Korea, Hong Kong, and Japan, to name only a few, opened offices and brought in significant numbers of high-level personnel. Among these were major companies such as France's Aerospatiale, Italy's Rimoldi, and Japan's Mitsui, all of which opened operations in Miami. The city also received a significant inflow of secondary headquarters. Large U.S. firms reorganized and expanded their Miami offices to handle new trade with Latin America. For example, Texaco's Miami office increased its staff by 33% from the late 1980s to the early 1990s to handle new operations in Colombia and Venezuela. And so did Miami's AT&T headquarters, which at the time won 60% of a contract to upgrade Mexico's telecommunications infrastructure—no small job. The international shipping company DHL moved its headquarters near Miami, and Japan's Mitsubishi Power Systems chose the area for its American headquarters. By 2005, Southern Florida was home to 1,300 multinational corporations (Enterprise Florida 2005a; Nijman 2010. See Exhibit 5.1). As of today, the region is home to over 1,400 multinationals hailing from 55 different countries (Roberts 2016).

Miami has a significant international banking presence—from Latin America, the Caribbean, Europe, and Asia. By 1992, Miami had 65 foreign bank offices, a small number compared with the 464 in New York and 133 in Los Angeles at the time, but close to Chicago's 80. This made Miami the fourth-ranking U.S. city in number of foreign bank offices, putting it ahead of San Francisco, Boston, and Atlanta. By 1998, Miami's number had grown to 77, and by 2005, it had about 100 international banking institutions (Enterprise Florida 2005b). This is not insignificant, considering that the ten top cities (including Miami) accounted for more than 90% of all foreign bank offices in the United States, with New York City accounting for almost half. Almost all Miami offices were bank agencies and

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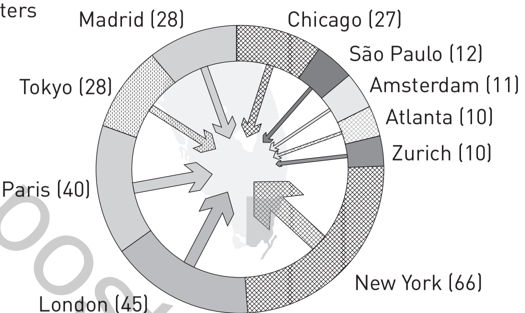
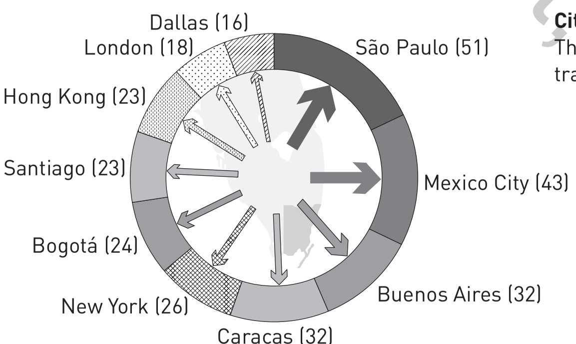
EXHIBIT 5.1 ■ Miami Linkages, 2011

Cities with the greatest corporate influence on Miami
The ten cities with the largest number of headquarters of transnational companies active in South Florida



Cities most influenced by Miami-based corporations
The ten cities with the largest number of branches of transnational companies headquartered in South Florida



Source: "The Transnational City," Jan Nijman and Michael Shin in *Atlas of Cities*, edited by Paul Knox. Copyright © 2014 Ivy Press Limited. Reprinted by permission of Princeton University Press.

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representative offices, both of which are full banking offices. Today, Miami has the second largest concentration of foreign banks in the United States after New York (Nijman 2010).

Miami is also a key platform for the operations of Latin American firms in the United States and perhaps, eventually, will be so even for operations with other Latin American countries. A specific role that Miami plays is as a bridge between cities and countries that are not particularly well articulated with the global economy. This is the case with many of Central America's banks. Nijman (2000) reports on a study that is worth elaborating. In 2000, the 22 most important banks headquartered in Central America maintained ties with a cumulative total of 319 "correspondent banks" outside the region; such correspondent banks provide services to clients of Central American banks when these banks cannot provide them, for example, because they do not have their own branches where the service needs to be provided. Of these 319 links, 168 were with Miami. New York was second with only 35 links. Miami is a major player in the external financial connections of Central America.

Finally, Miami is becoming a major telecommunications center for the region. For example, AT&T laid the first undersea fiber-optic cable to South America, connecting southern Florida to Puerto Rico, the Dominican Republic, Jamaica, and Colombia. The company worked with Italy, Spain, and Mexico to build another fiber-optic link connecting those countries with the Caribbean and Florida. Finally, the significant concentration of telecommunication facilities is associated with the large regional Central Intelligence Agency (CIA) headquarters, which can benefit, often indirectly, commercial operations (Grosfoguel 1993), notably through established networks of highly specialized suppliers and a talent pool for servicing these often complex infrastructures.

These developments brought growth in financial and specialized services for business, which raised their share in the region's employment structure. Employment in services generally grew by 46.3% from 1970 to 1990 and was 90% of all employment in Dade County by 2003 (Miami-Dade County, Florida 2003). Although this growth is partly a function of population growth and general economic restructuring, there also has been a marked recomposition in the components of services. In the recent past, the driving growth sectors had been domestic tourism and retail; by the late 1980s, they were finance and producer services, as well as new types of tourism—mostly international and high priced—and new types of retail—mostly upscale and catering to the expanded national and foreign corporate sector and design world. One critical factor in the newly emergent Miami-area economy was the growth of producer-services industries. Employment in these sectors almost doubled from 1970 to 1989 in Dade County, particularly in the Miami metropolitan area, reaching 20% of all private sector employment (Perez-Stable and Uriarte 1993). Employment in banking and in credit agencies almost tripled. Business services more than doubled, as did specialized services, from engineering to accounting. The sharpest increase was the quadrupling in legal services employment. (Although part of this increase

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may be a result of the growth of Miami's other major industries, drugs and guns, at least some of it is linked to the growth of international finance and service functions.) In the mid-1990s, employment in the leading sectors stabilized. By 2004, producer services were 42% of all private-sector employment; major components were financial- and credit-services employment, at 19.4% of private-sector employment, and business services, at 17.8% (Florida Agency for Workforce Innovation 2005).

Industrial services are also a factor in these developments. Miami is a great transportation hub, with ports and airports that are among the busiest in the United States. The city and its neighboring ports move more containerized cargo to Latin America than any other U.S. port. In turnover of foreign passengers and cargo to Latin America, Miami International Airport is second only to New York City's John F. Kennedy Airport. In addition, the region now has a growing concentration of manufacturing firms aimed at the export market in the Caribbean and Latin America because these areas become major buyers of U.S. goods. Miami's free-trade zone is one of the largest in the country.

All this activity around growth needs to be housed. By the end of the 1980s, Miami was in the top fifteen U.S. metropolitan areas in prime rental office-space supply. Although Miami's space of 44 million square feet were a fraction of top-listed New York City's 456.6 million square feet at the time, it was not insignificant. In addition, private investment in real estate, often for company housing by German, French, and Italian firms, grew sharply in the 1990s. By 1999, the Miami metropolitan area had 96.9 million square feet of office space compared with the New York metropolitan area's 688.4 million square feet (Lang 2000).

Why has this growth of a new international corporate sector taken place in Miami? One could argue that democratization and the opening of Latin American economies to foreign trade and investment should have made Miami less rather than more important. Yet Miami saw sharp growth in the concentration of top-level managerial and specialized service activities aimed at operations in Latin America. And, as described in Chapters 3 and 4, this is one type of evidence for cities that function as international business centers. This, in turn, raises a second question: Would these functions have been performed elsewhere had it not been for the Cuban enclave? The growth of the Cuban enclave supported the internationalization of the city by creating a pool of bilingual managers and entrepreneurs skilled in international business. This resource gave the city an edge in the competition for Latin American trade. But is it sufficient to explain the subsequent agglomeration of U.S., European, and Asian corporate headquarters and bank offices and the sharp expansion in financial services?

One angle into the role of the Cuban enclave in engendering these developments is offered by Nijman (2000), the leading researcher on Miami as a global city. He observes that while much attention has gone to the Cuban enclave, Miami actually has the highest international immigrant population of all major U.S. cities and is unique in the sense that no other major U.S. city has an absolute majority of recent immigrants. The size of this population is much smaller

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than that of Los Angeles and any other major U.S. city, but the incidence is much higher: at 51.1%, Miami has the highest proportion of foreign-born residents of any major city in the United States, as well as the largest proportion of inhabitants who speak a language other than English (U.S. Census Bureau 2015; Urban Age 2017). Finally, the socioeconomic status of a good share of its immigrant population is much higher than is typical in U.S. cities. A relatively large number of immigrants in Miami are wealthy, educated, and in possession of considerable entrepreneurial skills and experience; this holds true for the first waves of Cuban migration and for more recent migration from other Caribbean and Latin American nations, as well as other parts of the world, including high-level professionals and managers and leading design and fashion people from Europe and Asia. Unlike what is common in other major U.S. cities, in Miami, many of the wealthiest people, entrepreneurs, politicians, and real estate owners are recent immigrants. In the words of Nijman, "Miami's elite is a footloose cosmopolitan elite . . . Los Angeles is the ultimate American place, made in America, with a mainstream American culture . . . Miami, to most Americans, appears a 'foreign' place: hard to grasp and hard to say where it belongs. Perhaps that is because Miami is ahead of the curve, offering a glimpse of the urban future" (2000: 135).

Putting these immigration facts alongside the scale of developments described earlier suggests that although it is not quite a global city of the first rank, Miami has emerged as a site for global city functions. Because Miami's media image was so strongly associated with immigration and drugs, it took time for the media to recognize the formation of a new international corporate sector. Miami did not erupt on the global media stage until the mid-1990s, when it also become a destination for major and minor figures in the international fashion and design worlds. But the actual processes had started a decade earlier. Today, Miami concentrates multiple transnational-level functions that used to be located in a variety of other areas. We can think of the Miami metropolitan area as a platform for international business and the long-distance coordination of the Latin American and Caribbean transactions of firms from any part of the world.

The development of global city functions in Miami is centered on the recent sharp growth in the absolute levels of international investment in Latin America, the growing complexity of the transactions involved, and the trend for firms all over the world to operate globally—all three discussed in preceding chapters. The Cuban enclave represents a significant set of resources, from the know-how to provide international servicing to Spanish-speaking personnel. But the particular forms of economic globalization evident during the last decade have implanted a growth dynamic in Miami that is distinct from the enclave, although benefiting from it. At the same time, although the new international corporate sector has made Miami a site for the transnational operations of firms from all over the world, these operations are still largely confined to Latin America and the Caribbean. In that sense, Miami is a site for global city functions, although not a global city in the way that Paris and London are.

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Though driven in major part by immigrants and the legitimate international business experience that they brought to the city, Nijman (2010) argues that Miami's incredible transformation from the late 1960s to the mid-1980s also results from the changes in banking laws that allowed the growth of international banking, banking revenue to be generated from massive amounts of money coming from cocaine profits, and construction and real estate development. But even after the crackdown on cocaine stopped the depositing of millions of dollars in the form of sacks of twenty-dollar bills at Miami banks, the banking sector continued to flourish, largely based on the reliable immigrant business community and the construction and real estate sectors that had developed during the cocaine years. And the banking sector continues to grow: the number of FDIC-insured institutions in Miami and the number of deposits in those institutions has nearly doubled from 2000 to 2009 (Miami-Dade County, Florida 2010). By 2013, a brief walk down Brickell Avenue, Miami's financial district, led one through a tour of the city's fifty-three banking offices. These offices hold $6.7 billion in nonresident alien deposits and double that in domestic funds (Blake 2013).

Unlike many other major cities, Miami did not have the opportunity or need to develop a major manufacturing base because by the time it was prepared to do so, the work was more cheaply obtained from neighboring Caribbean countries, making Miami instead a perfect services hub (Nijman 2010). With the multiple forms of connection to Latin America, by the early 1990s, Miami began to be seen by its former skeptics as the "Hong Kong of the Americas" because of its unique positioning as a well-managed financial capital with close proximity to and interconnectedness with a fast-developing region of the world (Booth and Long 1993). Miami has no stock market and few major corporate headquarters compared with such cities as New York, London, and Tokyo. Miami's strengths lie elsewhere—in the fact that it is highly connected and that it is, in many cases, the network broker between the world's financial capitals and major South American capitals (Nijman 2010). For instance, in 2009, Miami ports imported US$37.9 billion in goods, $34.7 billion of which came from Latin America (92% of total), and exported US$21.8 billion in goods, $16.7 billion of which went to Latin America (77% of total; Miami-Dade County 2010). By 2013, the total international trade passing through Miami International Airport amounted to $69.8 billion. While imports into the city have declined since 2009, reaching $31.3 billion for 2013, exports have since grown, reaching $38.6 billion during the same period (Miami-Dade County 2014). Miami's global importance, directly connected to its continued position as an important broker between north and south, may have plateaued, but additional growth and prominence may be possible because of the predicted economic growth of Latin America in the next several decades.

The case of Miami is not atypical. Global city capabilities are not ready made. They need to be developed over time. And globalizing tendencies are found in cities at various stages of development and in all parts of the world. Often, these tendencies begin at regional bridgeheads. The cases of Singapore and Dubai have

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received much attention in recent years. Although Singapore has become more established as a global city than Dubai has, both have promoted a growth strategy that aims at being global actors.

Singapore has become well established as a global city. By the early 1990s, Singapore had implemented a strategy for developing knowledge-intensive companies. The Singapore Science Park, for instance, was constructed under a 1980 government initiative to attract research and development (R&D) investment. In May 1997, the Committee on Singapore's Competitiveness (CSC) was formed to promote Singapore's development of global city capacities. Singapore transferred resource-dependent production activities to developing areas while concentrating high-value-added activities in the center. The territory for this redeployment of activities was basically the growth triangle of Singapore, Malaysia, and Indonesia (Debrah, McGovern, and Budhwar 2010). Singaporean government-linked companies (GLCs) are extending their reach into international markets by buying strategic positions in foreign firms (Parsa et. al 2002). For instance, Singapore Telecommunications acquired the second largest Australian telecommunications company, Optus, in 2001 (Singtel 2001). These strategies have made Singapore a regional hub and coordinating center. As of today, Singapore has sustained these developments, playing a crucial role in the international market. Celebrating what has been one of the most prosperous free trade agreements on record, the United States and Singapore commemorated fifty years of formal bilateral trade relations in 2016. Trade between these two countries has been steadily growing, amounting to $47 billion in 2015 (U.S. Department of State 2016). Singapore stands as the United States' nineteenth largest trading partner and thirteenth largest export market. Beyond relations with the United States, the city-state has asserted itself as an invaluable player in the global market, ranked by the World Bank as the second best in the world for ease of doing business (International Trade Administration 2017). Heavily trade dependent, Singapore's economic partners range from countries across Europe, the Middle East, Asia, and North America. What is more, much of the country's success is thanks to domestic investments through GLCs, as well as through various nations; by 2015, Singapore's top-five foreign investors were the United States, Japan, the British Virgin Islands, the Cayman Islands, and the Netherlands (Department of Statistics Singapore 2015).

Dubai has a more recent history of aggressive programs aimed at building global city capacities. The emirate has almost depleted its oil reserves and has therefore relied on expanding regional trade, business services, transportation services, and tourism. For instance, between 1980 and 2000, the critical period for Dubai's shift, the share of the service sector rose from 22% to 42% and manufacturing rose from 3.8% to 11.4% (Parsa et. al 2002). Efforts to attract foreign investment and tourism have manifested in several ways in the country; compared with neighboring nations, the United Arab Emirates (UAE) has historically promoted free trade, outlining nearly forty free-trade zones across cities such as Abu Dhabi, Umm Al Qwain, Sharjah, Ajman, Ras al Khaimah, Fujairah, and Dubai. In these zones, unique customs, imports, and tax regimes reign,

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privileging businesses with an array of exemptions or aid, including 100% repatriation of capital and profits, 100% foreign ownership of enterprises, 100% import and export tax exemptions, corporate tax exemptions lasting up to 50 years, zero personal income tax, and business assistance ranging from labor recruitment to housing and sponsorship.

Free-trade zones are only one example of the United Arab Emirates' moves to carve out a space for itself and its cities in the global landscape. Dubai is increasingly becoming a global event city. Hosting the annual World Government Summit and the upcoming 2020 World Expo, as well as a plethora of other events aimed at positioning the city as a strategic site for dialogue between governments, industry professionals, global citizens, and others, Dubai seeks to bridge the gap between the East and the West and assert itself as a global center. What is more, Dubai is continually revising and introducing new legislation to compete with global cities such as Singapore. In fact, the World Bank ranked the United Arab Emirates twenty-sixth in ease of doing business index, within which, as previously mentioned, Singapore ranks second (World Bank 2017). This is a significant leap forward in comparison to ten years ago when Dubai was ranked seventy-seventh; its current ranking renders it the top country in the Middle Easter North Africa (MENA) region.

However, increased integration into global markets also exposed Dubai to the 2008 global financial crisis, especially because of the internationalization of its real estate markets. This raised concerns about Dubai's solvency, and in February 2009, Dubai launched a $20 billion bond program to meet its debt obligations, which was complemented by an additional $10 billion loan from the emirate of Abu Dhabi (CIA World Factbook 2010). Despite the United Arab Emirates' dramatic development and economic success, many firms have not been able to recover from the financial crisis. In September 2016, the country issued Federal Degree Law No. 9 on Bankruptcy, outlining strategies to bail out businesses carrying financial burdens outside of their means. Prime Minister and Ruler of Dubai Sheikh Mohammed bin Rashid explained the goal of the law, stating, "The draft law aims to mitigate risk of bankruptcy and ensure a safe and attractive business environment in the UAE that nurtures and supports investments" (Everington 2015).

THE GROWING DENSITY AND SPECIALIZATION OF FUNCTIONS IN FINANCIAL DISTRICTS: TORONTO

The leading financial districts in the world have all had rapid increases in the density of office buildings since the 1980s. Also, a strong tendency toward growing specialization in the major activities has been housed in these buildings. It could be argued that one of the reasons for this growing concentration in a digital age is

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that these are mostly old districts that have inherited an infrastructure built in an earlier, pre-telecommunications era and hence do not reflect a *necessary* built form for advanced financial and corporate services. In other words, the new growing density of city centers we see today, along with increased specialization, would be an imposed physical form from the past—they would not reflect the actual needs of advanced finance.

The case of Toronto is interesting because so much of the city's current financial district was built in the mid- to late-1980s, a time when finance was beginning to boom, the use of new technologies had become fairly established, and spatial dispersal was a real option. Toronto entered the 1980s with a far smaller and less prominent financial district than did cities such as New York, London, or Amsterdam (Todd 1993, 1995), thus it was conceivably quite free to redevelop its financial center according to the most desirable spatial pattern. Toronto had not yet gained ascendance over Montreal as a financial and business center (Levine 1990). Furthermore, massive construction of state-of-the-art office buildings for corporate users in the 1980s was shifting from the city to the wider metropolitan region and included installation of all the most advanced communications facilities the 1980s offered. Relative to building and telecommunications technology, this might seem to be a case in which much of the office infrastructure of the financial sector could have been located outside the small confines of the downtown.

But that did not happen. According to Gunther Gad, a leading analyst of the spatial aspects of the office economy in Toronto, financial firms wanted a high-density office district. A survey aimed at these issues found that a fifteen-minute walk was seen as a "long walk" and was "resented" (Gad 1991: 206–207; see also Canadian Urban Institute 1993). The first trend that Toronto illustrates is that given the option of moving to a beautifully landscaped setting, surrounded by other major corporate headquarters, the financial sector insisted on a dense downtown location.

The second trend that Toronto illustrates sharply is the growing specialization of the downtown in financial and related specialized services. At one time, Toronto's downtown office district housed the headquarters of manufacturing and wholesaling firms, the printing plants of the two main newspapers, and a large number of insurance firms. Much space was also allocated to retail; at one time, there were street-level shops and eating places on most blocks, all of which were later put underground, further raising the actual and visual office density of the district. Until the 1950s, the present financial district was still the general office district of the metropolitan area, containing the headquarters of firms in all major industries. Beginning at that time and continuing into the subsequent two decades, firms in a broad range of industries—insurance, publishing, architecture, engineering—moved out. This pattern is evident in other major cities, all of which saw the departure of the corporate headquarters of manufacturing firms, insurance companies, and other large offices. London lost many of its insurance headquarters; the downtowns of Frankfurt and Zurich became increasingly

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specialized financial districts; and in New York, a new midtown office district along Madison Avenue developed that accommodated growing industries such as advertising and legal services, leaving Wall Street to become an increasingly specialized financial district.

Between 1970 and 1989, office employment in Toronto's financial district doubled, and its share of all employment rose from 77.6% to 92.3%, with a corresponding fall in non-office jobs. However, the composition of office jobs also changed from 1970 to 1989. Thus, the share of the insurance industry in all office activities fell from 14.6% to 9.8%, although it grew in absolute numbers; further, between 1996 and 1999, employment in Toronto's insurance industry fell by 11%, though professional jobs grew by 24% from 1996 to 1998. By 1989, well over half of all office employment was in finance, insurance, and real estate (FIRE), and 28% was in producer services. Banks, trust companies, investment services (including securities dealers), and real estate developers grew strongly in the 1980s (Gad 1991). So did other producer services: legal services, accounting, management consulting, and computer services. But some, such as architectural and engineering consulting, did not. Since the 1990s, most of the new employment has been in business and technical services, including accounting, legal, management, computer, and engineering firms, followed by sectors with longer-term growth, especially finance and real estate services. According to a Central Area Trends Report published by the city of Toronto (1990), "The FIRE sector grew at a rate of 38% between 1981 and 1996, exceeding that of Boston, Chicago, and San Francisco but it was outpaced by growth in Atlanta, Dallas, Minneapolis, Philadelphia, and Seattle" (City of Toronto 2001). Today, the financial services sector is heavily concentrated in Toronto, home to 30% of all Canadian financial services headquarters—more than two times that of the city's closest competitor, Vancouver. Throughout the 1990s and into 2000, the sector accounted for 9% to 11% of Toronto's total employment. During the past two decades, it has continued to generate jobs, accounting for a share of employment reaching 32.2% today. What is more, the sector accounts for 13.3% of Toronto's overall gross domestic product (GDP). Beyond Canada's domestic context, Toronto is regarded as a crucial financial hub on the global scale (Conference Board of Canada 2015).

By the early 1990s, Toronto also had the largest concentration of corporate offices in Canada. At the time, fifty of Canada's largest financial institutions were headquartered in Toronto, with thirty-nine of them in the financial district. They included the majority of Canada's banks, foreign banks, and trust companies. Canada's largest investment firms, several of the largest pension funds, and the various trade associations involved with finance and banking were also there by the early 1990s (Todd 1995). By 2017, Toronto was home to Canada's five largest banks, the majority of Canada's foreign banks, 80% of its mutual funds industry, and the vast majority of the country's venture capital firms (City of Toronto 2017). In aggregate, Toronto's top five banks control roughly 80% of Canada's domestic assets and manage around $3.7 trillion of the nation's overall assets.

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Many other financial institutions have Toronto head-office subsidiaries, and some insurance companies located elsewhere have investment departments in the city. Further, most pension funds—including four of Canada's biggest public pension plans, whose combined assets exceed $450 billion—are based in the city. In 2017, the Global Financial Centres Index ranked Toronto tenth in the world, a slot determined by measuring an aggregate of indicators including "business environment," "financial sector development," "infrastructure factors," "human capital," and "reputation and general factors" (Z/Yen Group 2017). Toronto had moved up three places in this ranking since the year before, surpassing Zurich, Washington, D.C., and Shanghai.

In addition to the increasing specialization of Toronto's financial district, a more detailed analysis of the banking industry yields new patterns. Until the 1970s, a large bank in a major city of a developed country typically consolidated all its operations in one building in a city's financial district. By the early 1980s, such institutions commonly relocated back-office jobs and branch functions from the main office in the financial district to other parts of a city's larger metropolitan region. This pattern was evident in Toronto. Spatial dispersal of more routine operations also took place within other industries—again, a pattern fairly typical for all major business centers. These trends, together with the growth in the share of high-level professional and managerial jobs, led to an employment structure in Toronto's financial district that is highly bimodal, with 41% of all workers in top-level jobs by the end of the 1990s—up from 31.5% in 1980—and up to 52% by 2004 (TFSA 2010). Today, Toronto's financial services sector continues to benefit from a highly skilled workforce. Toronto is home to one of the three largest Chartered Financial Analysts (CFA) Society chapters in the world, now surpassing 8,500 members (CFA Society Toronto 2017).

Generally, top-level functions and the most complex and innovative activities are carried out in the financial districts of major cities. Routine operations can be moved outside of these financial districts. The more risk-laden, speculative activities, such as securities trading, have increased their share of activity in financial districts. The financial district in Toronto is the place where large, complex loans can be put together; where complicated mergers and acquisitions can be executed; and where large firms requiring massive investment capital for risky activities, such as real estate development or mining, can secure what they need, often through combining several lenders and multiple lending strategies.

This specialized production process takes place in the financial districts of today's major cities. The nature of these activities—the large amounts of capital, the complexity, the risk, and the multiplicity of firms involved in each transaction—also contributes to the high density. There is a built-in advantage in being located in a financial district where all the crucial players are located; the risk, complexity, and speculative character of much of this activity raises the importance of face-to-face interaction. The financial district offers multiple possibilities for face-to-face contact: breakfast meetings, lunches, inter- and intrafirm meetings, cocktail parties, and, most recently, health clubs. These are all opportunities for regularly meeting with many crucial individuals, for

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developing trust (of a specific sort) with potential partners in joint offerings, and for making innovative proposals regarding mergers and acquisitions or joint ventures. Further, as I have shown in Chapter 4, a work process benefits from intersecting with multiple specialized forms of knowledge, including knowledge about conditions in other countries. Telecommunications cannot replace these networks (Garcia 2002). The complexity, imperfect knowledge, high risk, and speculative character of many endeavors, as well as acceleration in the circulation of information and in the execution of transactions, heighten the importance of both personal contact and spatial concentration. The continuing necessity of face-to-face and real-time contact in the financial industry, even after physical trading floors are no longer necessary, was evident during the G20 Summit in Toronto in June 2010.

The growth and concentration of the financial district in Toronto continues to expand, often upward as well as outward, to keep up with the demand for space in this desirable area (Hume 2010). The district, in which 223,000 financial services employees worked at the time, was physically relocated to a secret suburban space; this involved the coordinated efforts of the Toronto Stock Exchange and several leading banks and brokerage houses (Pasternak 2010)—producing a sort of central planning episode in the financial sector. The fact itself that the exchanges, banks, and brokerage houses had to physically relocate employees to full-facility suburban locations points to the limits of advanced communications technologies—which in the case of Toronto represent the highest concentration of fiber-optic cables in North America (City of Toronto 2010). After the G20 Summit, they voted with their feet: despite having functioned relatively well at their suburban locations, exchanges and firms markets returned immediately to the concentrated financial district, where they evidently function best.

The case of Toronto suggests that the high density and specialization evident in all major financial districts is a response to the needs generated by current trends in the organization of the financial and related industries. Toronto could have built its financial sector on a more dispersed model, as did the headquarters of the major national and foreign firms that spread over Toronto's metropolitan area along hypermodern communications facilities. But it did not, suggesting, first, that the density of Toronto's downtown financial district is not the result of an inherited, old-fashioned built infrastructure, but rather a response to current economic requirements, and, second, that the locational patterns and constraints of the financial sector in a global city are different from those of corporate headquarters.

THE CONCENTRATION OF FUNCTIONS AND GEOGRAPHIC SCALE: SYDNEY

The analysis of Toronto revealed two forms of concentration: The first, the main focus of the previous section, was the disproportionate concentration of financial functions in one small district in the city when there was the option of locating

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in a larger metropolitan area with state-of-the-art infrastructure and building. The second is the disproportionate concentration of all national, financial, and headquarters functions of Canada in a single city, Toronto. Is it unusual to have such sharp concentration of top-level economic functions in one city when the country is the size of a continent and has a history of multiple growth poles oriented toward world markets?

Here, I examine in some detail this second tendency by focusing on Australia. Along with Canada and the United States, Australia has an urban system characterized by considerable multipolarity. This effect has been strengthened in Australia by the fact that it is an island-continent, which has promoted a strong outward orientation in each of its major cities. We might expect, accordingly, to find strong tendencies toward the emergence of several highly internationalized financial and business centers. Or is Australia's space economy also characterized by a disproportionate concentration of international business and financial functions in one city? If both Canada and Australia have gone from multipolar to a strengthened dominance of one city, we can posit a systemic trend in current economic dynamics (see Chapter 4). During the period from World War II to the 1970s, Australia became a very rich country with thriving agricultural and manufacturing exports and low unemployment. In that period, Australia had several major urban areas and many growth poles. Melbourne, the old capital of the state of Victoria, had been and remained the traditional focus for commerce, banking, and headquarters and was generally the place of old wealth in Australia.

As did other developed economies, Australia experienced considerable restructuring beginning in the early 1970s: declines in manufacturing employment, growth in service employment, a shift to information-intensive industries, and a growing internationalization of production processes, services, and investment. In the mid-1980s, financial institutions were deregulated and integrated into global financial markets. There were massive increases in foreign direct investment, with a shift from agriculture, mining, and manufacturing to real estate and services. There was also a noticeable shift from European to Asian sources (Daly and Stimson 1992). Asian countries became the main source of foreign investment in all major industries and remain so, contributing to what is generally a greater orientation of trading and investment toward the Pacific Rim. In the 1980s, producer services emerged as the major growth sector throughout all the metropolitan areas and (combined with wholesale and retail and community services) accounted for 48% of all employment throughout Australia by the end of the 1980s. The fastest-growing export sectors were producer services and tourism.

The shift in investment in the 1980s from manufacturing to finance, real estate, and services became particularly evident in metropolitan areas (Stimson 1993). From this conjunction, Sydney emerged as the major destination of investment in real estate and finance. From 1982 to 1983, investment in manufacturing in Sydney was A$1.15 billion, compared with A$1.32 billion in finance, real estate, and business services. In 1984, and again in 1985, these levels of investment had changed to, respectively, A$0.82 billion and A$1.49 billion. At lower

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levels, these trends were evident in other major urban areas (Stimson 1993: 5). By 1986, however, the disproportionate concentration of finance and business services in Sydney increasingly outdistanced that of other major cities. A massive real estate boom from 1985 to 1988 made Sydney the dominant market in Australia, both in levels of investment and in prime office space.

According to Daly and Stimson, Sydney became Australia's main international gateway city and its only "world city" (1992; see also Brotchie et al. 1995). By the late 1980s, Sydney had the largest concentration of international business and financial firms in Australia, surpassing Melbourne, once the main economic capital of the country (see Exhibit 5.2).

By 2016, 92 of the country's top 232 firms were headquartered in Sydney, compared with Melbourne's 82 firms. Of the country's top 100 companies, 60% were Sydney based (Emerge Capital 2014). Similar concentration exists in the banking sector. Sydney has also garnered a larger share of national employment in the major producer service sectors; it is home to 35% of the financial and insurance services sector, 27.6% of scientific and technical services, and 31.3% of the information, media, and telecommunications sector (for Melbourne, 23.2%, 23.1%, and 23.5%, respectively). By 1990, Sydney's stock market ranked tenth in the world. By 2009, approximately 25% of multinational corporations that established an Asia-Pacific regional headquarters in Australia did so in Sydney (Enright, Scott, & Associates 2009). Within the finance and insurance sector, that number is far higher. Australia has also become an attractive location for secondary headquarters of Asian firms, and Sydney, by far the country's most international city, became the preferred choice in the 1980s (O'Connor 1990) and remained so well into the 2000s (Fitzgerald 2005; see Exhibit 5.3).

The 1980s are the critical period for understanding the character of the change. Australia had long been dependent on foreign investment to develop its manufacturing, mining, and agricultural sectors, but the share, composition, origins, and size of foreign investment in the 1980s point to a qualitative transformation and, in that sense, to a distinct process of economic internationalization. From 1983–1984 to 1988–1989, FDI in Australia grew at an average of 34% a year, from A$81.9 billion to A$222.9 billion. Foreign investment in manufacturing also grew at a high rate, at 29% per year. But foreign investment grew at 83% a year in finance, real estate, and business services. This investment increasingly came from Japan and Asia, with declining shares coming from the United States and the United Kingdom, the two major investors in the past. Japan's share rose by 280%, reaching almost 15% of all FDI by 1989. In the 1990s, Singapore, Hong Kong, Taiwan, Canada, and Germany also became and remain significant investors. In the second half of the 1980s, particularly following the deregulation of financial institutions, trading enterprises and banks were the major conduits through which capital entered the country. The real estate boom was directly linked to foreign investment, as was the real estate crisis of 1989 to 1990, when foreign investors ceased pouring money into these markets. More than 28% of all FDI in 1985 through 1986 went into real estate, rising to 46% by 1988 through

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EXHIBIT 5.2 ■ Corporate Concentration in Sydney and Melbourne

City	% of Businesses in the Country, 2017[a]	Australian-Owned Banks' Headquarters, 2015[b]	Foreign Subsidiary Banking Headquarters, 2015[b]	Branches of Foreign Banks, 2015[c]	Share of City and National Employment, 2011 (%)[d]					
					Financial & Insurance Services		Professional Scientific & Technical Service		Information, Media & Telecommunications	
					City	National	City	National	City	National
Sydney	22%	11	6	34	19.7	3.8	18.6	7.4	6.6	1.8
Melbourne	20%	8	1	5	4.8	0.8	8.9	1.5	2.3	.03

Sources:

a. Australian Bureau of Statistics (2017).

b. Association of Professional Researchers for Advancement (APRA) (2017). The set of banks is limited to those with licenses to act as authorized deposit-taking institutions (ADIs) and, as such, does not include investment banks. Some foreign ADIs operate both subsidiary banks and branches in Australia.

c. Manta (2017).

d. Australian Bureau of Statistics (2017) and .id (2017), data from Australian Bureau of Statistics, Census of Population and Housing 2006 and 2011.

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EXHIBIT 5.3 ■ Locations of Regional Headquarters (RHQ), Regional Offices (RO), or Local Offices (LO): Percent of Companies Reporting RHQs, ROs, and LOs in Asian Pacific Regional Centers, 2009

City	RHQ	RO	LO
Sydney	25	18	27
Singapore	22	8	27
Hong Kong	13	4	32
Shanghai	12	5	39
Tokyo	2	1	36
Beijing	1	2	39
Taipei	1	0	35

Source: Compiled from data in Enright, Scott, & Associates Ltd. (2009).

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1989. Japanese investors accounted for more than one-third of this investment. The subsequent financial and real estate crisis brought these shares down sharply, but from 1996 to 2004, the share of foreign investment in real estate rose once again, going from 21.5% to 28.2%; the composition of countries investing has become much more internationalized, with Singapore being the largest single investor in 2004 at only 12%. Today, China dominates foreign real estate investments in Australia. For the year 2016, Chinese investments were more than three times that of Australia's second largest investor, the United States. Mainland Chinese investors made up 36% of foreign real estate investments, including both commercial and residential properties. China played a significant role in Australia in 2016, and its economic influence is growing. A report published by KPMG and Sydney University reveals a surge in Chinese investment by almost 60% compared with the previous year. Almost half of those investments were in the commercial property sector (Janda 2016). Agriculture and infrastructure development also made up a large portion of Chinese investment initiatives.

In general, foreign investment in the 1980s—the decade that marks the sharp shift toward Sydney—was disproportionately concentrated in New South Wales (home to Sydney) and Queensland, with each typically absorbing around one-third of total investment, rather than in the older regions such as Victoria, home to Melbourne. Almost half of all investments in New South Wales were in commercial real estate. The geography of these investments is even more specific than the regional dimensions discussed earlier. The bulk of these investments were

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in the central business districts (CBDs) of major cities, with Sydney the leading recipient. Between 1975 and 1984, foreign investors had financed about 10% of total investment in commercial real estate; between 1980 and 1984, there were actually declines, reflecting the fall in global foreign investment in the early 1980s. But investments picked up shortly after that, and by 1984, about 15% of CBD offices in Sydney were foreign owned, compared with about 12.5% in Melbourne (Adrian 1984). In the second half of the 1980s, there were sharp increases in investments in all CBDs of major cities but especially in Sydney, Melbourne, and Brisbane. Stimson (1993) notes that by 1990, the value of land held by Japanese investors in Sydney's CBD was estimated at A$1.55 billion, all of which had been invested in the second half of the 1980s. At the height of the boom in 1988 to 1989, the officially estimated value of land in Sydney's CBD was put at $A17.4 billion, a tenth of which was owned by Japanese investors.

Melbourne's CBD was also the object of much foreign investment and acquisition, with record levels of construction in commercial real estate. In Brisbane, more than 40% of the total office floor space was built between 1983 and 1990. Since those boom years, levels of foreign investment have fallen equally sharply, leaving a depressed office market in CBDs, a situation evident in major business centers across the world at the time.

The 1990s and into the 2000s were years of great prosperity for Australia. But even so, Sydney captured a disproportionate share of that growth (Connell 2000; O'Neill and McGuirk 2002). For the years 2013 and 2014, Sydney accounted for one-fifth of Australia's GDP (Regional Development Australia Sydney 2017). The city is home to the regional headquarters of over 500 global corporations operating in the Asia-Pacific area, and has further raised its concentration of financial and business services in Australia to approximately 65% of all of such activity in the country. Of the foreign and domestic banks located in Australia, more than 75% are headquartered in Sydney (City of Sydney 2017). The floor space in the city dedicated to property and business services has kept growing, as has that for financial services (Salmon 2006). Finance and insurance continues to be the fastest-growing industry in New South Wales, recording an annual average growth of 3.5% in real terms as of 2015 (Narayan 2015). The sector's annual growth rate actually outperformed that of all of Australia's industries combined, which came in at 3.3%. The city continues to seek new businesses and investors by emphasizing the market time zone that bridges the New York and London markets, its multilingual culture, and its development of a large environmentally conscious business zone in its harbor area (New South Wales Government [NSW] 2010).

It would seem, then, that even at the geographic scale and economic magnitude of a country such as Australia, the ascendance of finance and services along with the internationalization of investment contributed to the disproportionate concentration of strategic functions and investment in one city. Several experts on the Australian economy have noted that its increasing internationalization and the formation of new linkages connecting regions, sectors, and cities to the global economy have been central elements in the economic restructuring of

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that country (Rimmer 1988; O'Connor 1990; Daly and Stimson 1992; Stimson 1993; Connell 2000; O'Neill and McGuirk 2002). Foreign investment patterns, international air passenger travel and tourism, and the location of activities and headquarters dependent on global networks all reflect this process of internationalization and concentration. But beneath these general trends lies the fact that Sydney has experienced much of this growth far more sharply than most other cities in Australia.

At the same time, as this global phase entered its third decade in 2010, it had become clear that precisely this differentiation marked the current expanded phase of the global economy: Melbourne does not compete with Sydney for what Sydney has. Melbourne is its own specialized global city. We see this same pattern in the case of Shanghai and Hong Kong, discussed next.

COMPETITION OR SPECIALIZED DIFFERENCES: THE FINANCIAL CENTERS OF HONG KONG AND SHANGHAI

Despite the common perception that Hong Kong and Shanghai, the two leading financial and business centers in China, are in direct competition for business, the two cities compete far less with each other than is commonly thought. Globalization homogenizes standards and engenders global markets for standardized products, but the diversity of the functions and specialized capabilities performed by these cities might strengthen their role in the global economy.

Hong Kong, with its open economy and historical connection to international trade, has long been the financial leader in China. Historically, Hong Kong developed as a global financial center partly because of skilled and internationally connected refugees arriving from regional communist regimes, especially from Shanghai—of all places! Here there are some vague similarities with Miami in this regard (Nijman 2010). Hong Kong's free-market economy, complemented by few legal restrictions to enter its exchanges and its historical lack of a *hukou* (household registration) system, made it the choice for Chinese investors to enter the international market and the choice place for foreign investors to enter the Chinese market. With more than 1,548 listed companies and a tax rate of 16.5%, Hong Kong remains a key global destination for investors (PwC 2017a, 2017b). Hong Kong has also been the leader in such complex financial activities as arbitrage and program trading, partly because of some of the inefficiencies remaining between itself and the mainland. In the fall of 2010, the city surpassed Tokyo for the first time, leading Asia in short sales (Thomasson 2010). (See Exhibits 4.1 to 4.5; A.4.1 and A.4.2.)

Hong Kong remains primarily financial, with financing and insurance services contributing 17% of the national GDP and with each person in that sector adding an average value of $1.55 million (Hong Kong Monthly Digest of

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Statistics 2016). Some view this focus on finance as a major weakness given the fluctuations in the global economy (Fernando 2010). Further, some of the growth of Hong Kong's financial and services sector as a percentage of its GDP can be attributed to the movement of its manufacturing industry to the mainland and, in particular, nearby Shenzhen. Both Hong Kong and Shenzhen seek to benefit from their proximity to one another, in building a "Shen-Kong metropolis" in which Shenzhen functions as the backyard of Hong Kong, the region's financial hub (Chen 2009; Chen and de'Medici 2010). But Hong Kong is highly dependent on mainland China historically for natural resources, food, and raw materials. Increasing its dependence on the mainland since the transfer of sovereignty, it has been quickly integrated further into the Chinese system through financial, trade, and tourist links, and its connections with the mainland may have cushioned it from the global economic downturn of 2008 through 2009. Roughly 51% of firms listed on the Hong Kong Stock Exchange are from the mainland, accounting for about 62.1% of market capitalization (CIA World Factbook 2017).

With a highly diversified economy closely linked to that of the whole country, Shanghai is largely a national financial center (Chen 2009; see Exhibits 4.1 to 4.5; A.4.1 and A.4.2). These characteristics constitute its strengths and mark its differences from Hong Kong. At this point, there is far less competition than experts foresaw in the late 1990s (Sassen 1999); there is, above all, a highly specialized division of financial functions. For several years following the reopening of the Shanghai Stock Exchange (SSE) and other economic reforms of the early 1990s, the market remained largely controlled by state resources. Even today, it is subject to extensive legal restrictions on foreign investors. In 2010, all the SSE A-share investments were restricted to mainland Chinese, and even B-share stocks remained 87% mainland Chinese and 8% Chinese overseas, leaving the remaining share of B-share stocks owned by all other countries and regions at about 5% (Shanghai Stock Exchange 2010). In 2014, the Shanghai Stock Exchange opened to foreign investors via Hong Kong, allowing foreign investment to flow into 569 Chinese companies. However, over time, money began to flow out of Shanghai and back into Hong Kong (see Exhibit 2.7a; Bloomberg News 2016).

Though it has a growing stock exchange with over 1,800 companies listed, Shanghai continues to thrive through other sectors in its economy (Shanghai Stock Exchange 2016). Shanghai remains a major port city that connects foreign trade to the Yangtze River, the third-longest river in the world, and its surrounding region, home to one-third of China's population. This major artery to international trade carries passengers, mined resources such as coal, and manufacturing industry of all sorts to and from deep within China's interior. Shanghai's position as a critical player connecting China to the world cannot be underestimated. However, even with Shanghai's 2020 plans for a somewhat liberalized economic system, I have long thought that the city may remain more comparable to Chicago while Hong Kong remains reminiscent of New York (Urban Geography 2008).

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Additionally, an area in which Shanghai is, perhaps inadvertently, gaining the attention of foreign investors is "new town" development, which was initially a policy to expand suburban areas and de-densify the crowded city center. Partly because of the lack of amenities, such as restaurants and transportation, "new towns" have instead developed more in the direction of weekend homes for elite urban residents or as property investments (Wang, Kundu, and Chen 2010). Rather than being compared with Hong Kong, Shanghai is perhaps more comparable to Shenzhen, which has grown quickly as an "instant city" partly because of its proximity to Hong Kong (Chen and de'Medici 2010). Hong Kong and Shenzhen share many resources, including human resources through the commuters that travel between the two cities daily. Its sectoral diversity and massive material economy makes Shanghai far less dependent on finance than other major global cities are. This, along with its close economic ties to both the Chinese interior and the central government, significantly reduced the impact of the global economic downturn of 2008 through 2009 on Shanghai, compared with its impact on Hong Kong.

MAKING NEW GLOBAL CIRCUITS IN ENERGY AND FINANCE: THE GULF STATES

The geopolitics of oil has been one major factor shaping the Gulf's global circuits. But so will the geopolitics of declining oil reserves. The Gulf States have acted on this changing history by diversifying their economic base.

Dubai is the most extreme version of this transformation: it has changed itself from an oil exporter and entrepôt to a state-of-the art platform for firms and households whose business space extends far beyond the Gulf. Firms from a large number of foreign countries—India, the United States, the United Kingdom, and many more—have set up headquarters in Dubai. And so have professionals from many different nationalities. During the last two decades, several Gulf cities have become major actors in the global financial system—through participation in financial trading networks, creation of new financial exchanges, and formation of sovereign investment funds.[2] Several of the Gulf States are now also positioning themselves as centers for Islamic finance, a sector where Malaysia, Indonesia, and Singapore are the fastest-growing markets.[3] Some Gulf cities are aiming at becoming airport hubs for long-distance passengers who in the past might have made connections in London, Amsterdam, or Frankfurt. Finally, entering the field of renewable energy is a strong option at least for some oil-based economies. The substantive projects we see in Abu Dhabi around renewable energy and eco cities, and in Sharjah around educational and cultural circuits, are important alternatives to mere oil extraction.[4]

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Here, I want to focus briefly on an intermediate step in such a switch, a step often overlooked and that involves the *making of complex capabilities* well beyond the production of energy as such. These are, in turn, capabilities for the *making* of global markets and the global circuits through which those markets will function. This step often gets eliminated from the discussion: thus, in the much-heard phrase "to replace oil with renewable energy," the word "replace" shifts the focus away from the work that needs to be done beyond choosing an alternative energy. Nor is it enough to develop "free-trade zones," an arrangement that gives special rights to foreign investors and firms, bypassing the confines of federal legislature on business. It seems to me that the status of free-trade zone is merely one element in such a project and that the project cannot simply be thought of as developing such a zone.

What it takes is the launching and maintaining of a range of necessary types of circuits—for the engineering and the science, for the financing and the setting up of new types of financial exchanges, for connecting with new buyers and new intermediaries, for the implementing of new kinds of shipping and piping, and so on.

The development of global markets for alternative renewable energy and the development of global markets for Islamic finance will both require specific complex capabilities. The new geopolitics of energy and finance generate a need for a more complex global space than that of conventional free-trade zones—that is, they are about more than merely facilitating the operations of foreign actors.[5] These new geopolitics will demand the type of complex global space that is the global city. Free-trade zones are not global cities. The global city is a space for the making of such complex capabilities (which can be used for good or not-so-good aims).[6] And this process of making constitutes the space that is the global city.[7] As for renewable energy, Abu Dhabi's Masdar City is probably the most significant move toward a space for the making of these types of complex capabilities. The city also sponsors an Abu Dhabi Sustainability week as part of its high profile annual World Future Energy Summit. The United Arab Emirates also introduced the Zayed Future Energy Prize in 2008 to support innovation in renewable energy and sustainability (Zayed Future Energy Prize 2017). Manama, Doha, Dubai, and Abu Dhabi are all developing global platforms for renewable energy, as is Saudi Arabia.

In brief, the Gulf cities have generated an alternative set of global circuits, most notably in energy and finance, but also in education and culture. The dominant image of the Gulf in the global imagination is that of Dubai, with its glamorous excess built on whole armies of low-wage guest workers. But the Gulf cities have kept moving toward different possible futures, perhaps none as much as Abu Dhabi and Sharjah. To this should be added the educational and cultural developments that have grown in the region. There is an enormous potential for a radically diversified range of developments given the region's vast resources, the complex capabilities that have developed over the last decades, and the new ones that will have to be developed for the Gulf cities' new plans. The outcome should be a vastly expanded range of global circuits that articulate Gulf cities with whole new sets of cities in the rest of the world.

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AN OLD IMPERIAL CITY IN TODAY'S NEW EAST–WEST GEOPOLITICS: ISTANBUL

A 3,000-year-old city is emerging today as a key strategic node in the developing geopolitics of East–West flows. Within its region, Istanbul has long been the intersection of vast and diverse mobilities of people and goods across the world's East–West and the North–South axes. The period of nation building in Turkey, as in other nation-states, was one of internal transformation and included the development of a national economy. In today's global age, the world's key axis is shifting from the North–South, which dominated an earlier colonial history, to that of the East–West. Within this shift, Istanbul's strategic location is ascendant.

However, location is not enough to explain Istanbul's ascendance. It is also the deep history of this city and the specialized capabilities it has generated. From this long history of intersections comes the *need* to develop specific capabilities for handling and enhancing network functions; it is not simply a question of location *at* intersections. It seems to me that developing such capabilities across diverse histories and geographies is a particularity of Istanbul's deep history. It is also one of growing importance in today's networked world. Several major trends make this visible. Here, I limit myself to three. The first trend concerns flows of capital: Istanbul is at the center of a geography of capital flows that stretches both East and West. Even though the European Union is Turkey's dominant trade and investment partner, current post–Cold War geopolitics make Asian countries increasingly important. The second trend concerns the in- and outflows of people; here, again, we see a remarkable bimodality between Europe and Asia.

The diversity of people migrating to and through Istanbul raises a question about the specific forms of knowledge that arise from these intersections: a question about what is at the heart of networked flows at a time when diverse, complex cultures in the world are integrating. The answer, perhaps, is reflected in a third trend coming out of a study of the top sixty cities in the world relative to political and cultural variables (Hales et. al 2017). Istanbul sits in the top twenty-five of the Global City Index, specifically because of its wealth in information exchange, human capital, and business activity. Next, I discuss these three trends in some detail.

Regarding capital flows, Turkey's dominant trade and investment partnership is with the European Union. In 2016, trade between Turkey and the European Union stood at US$11.3 billion, an astounding near thirty-fold increase from the annual average of the years 1990 to 2000 (European Commission 2017). For the year 2014, of all EU countries, the Netherlands was the largest single investor in Turkey, investing US$2 billion. A group of smaller EU countries together accounted for another US$2.5 billion. Dutch funds make up about 23% of all FDIs entering the country (Consulate General of the Kingdom of the Netherlands

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2015). The long history of economic interactions with Europe since World War II and during the Cold War has fed this overwhelming dominance.

However, Asia is rising fast. At the end of 2013, by far the two largest recipients of Turkish FDI were Azerbaijan and Germany, a striking juxtaposition that fully captures Turkey's geographic articulation of East and West. These countries were followed by the United States, the United Kingdom, Luxembourg, Austria, Russia, and India (OECD 2017a). Regarding the major sectors of these investments, in 2016, the finance and insurance sector and the manufacturing sector together accounted for 49% of the main invested industries operating in Turkey. Another major industry in the country, construction, also serves as a major source of wealth and development. Turkish construction attracts foreign investments, and many Turkish construction firms work in numerous foreign countries: the most significant concentration of cumulative value from 1980 to 2009 was in Italy (US$102 billion), Libya (US$50 billion), and Ukraine (US$21billion). A number of countries follow, with cumulative investments ranging between US$10 billion and US$16 billion, including Switzerland, Luxembourg, Russia, and Sudan, once again highlighting Turkey's bridging of different historical geographies (Turkish Government Statistical Institute 2009).

Along with a trade orientation that spans its geopolitical region (see Urban Age 2008; Istanbul Metropolitan Municipality 2008: 38) has been a dramatic increase in Turkey's total FDI stock abroad. By 2013, Turkey's FDI stood at US$3.1 billion, a six-fold increase compared with 2003 (US$499 million). Similarly, while capital began flowing out of Turkey at exponential rates, by 2013, the inward flow of FDI stood at US$12.9 billion, a seven-fold increase over 2003 (US$1.7 billion; see Exhibit 5.4).

In 2015, these numbers showed a significant growth of 23% as the country's FDI inflows amounted to US$17.5 billion. This growth largely manifested in the manufacturing sector, followed by the financial services and the transportation sector. The following year, however, this success wavered: affected by global contraction and a high ration of U.S. dollar–dominated debt, Turkey's FDI declined during the first half of 2016 by nearly 50% year-on-year (Eraz 2017). What is more, several factors, namely sustained political unrest and the refugee crisis, have compromised foreign investors' perceptions of and confidence in the country. Nonetheless, thanks to measures taken by the Turkish government in the wake of the failed July 15 coup attempt, FDI momentum picked up in the second half of 2016 as foreign confidence rebounded. Despite this relative recovery, FDI flows for 2016 did not amount to those of the previous year. FDI inflows in 2016 ultimately grew at only 3%, coming in at US$12.3 billion by the year's close. Despite the waxing and waning of foreign interest in the Turkish economy, the combination of funds flowing into, out of, and through the region marks this very intersection of capital mobilities in Istanbul. Such a dramatic increase in capital relations across and throughout the region within the span of two decades has led to the developing capacity of Istanbul's changing manufacturing, financial, and service industries, now a magnet for human capital and innovation.

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EXHIBIT 5.4 ■ FDI Flows 2007–2013 and Foreign International Firms Operating in Turkey (2007)

Country, Region, or Continent	International Firms Operating in Turkey in 2007	FDI Into Turkey 2007–2013 (US$ Millions)	FDI out of Turkey 2007–2013 (US$ Millions)
European Union (27)	10,720	60,732	9,678
Germany	3,125	7,432	703
The Netherlands	1,419	13,159	5,408
United Kingdom	1,831	7,171	165
France	—	3,564	72
Italy	—	641	141
Other EU Countries	4,345	21,954	3,814
Other European Countries (Excluding EU)	1,691	4,870	1,691
Africa	309	345	461
USA	834	6,886	1,062
Canada	120	241	38
Central–South America and Caribbean	105	501	64
Near and Middle Eastern Countries	3,072	10,067	2,905
Azerbaijan	453	2,679	2,197
Iraq	511	49	117
Iran	910	158	147
Gulf Arabian Countries	—	5,692	168
China	300	37	69
South Korea	134	476	74
Japan	—	1,146	69
Other Asian countries	796	12,124	3,551

Source: Data sourced from Turkish Government Statistical Institute (2017).

Note: More than half of these international firms have their main offices in Istanbul.

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Istanbul concentrates a disproportionate share of foreign firms operating in Turkey (Istanbul Metropolitan Municipality, Annual; Turkish Government Statistical Institute, Annual). By 2007, of the more than 19,000 foreign firms operating in Turkey, well over half were headquartered in Istanbul. About 10,700 were EU firms, including 3,100 from Germany and 1,800 from Britain. At the other end, 4,300 foreign firms were from Asia, including 910 from Iran, 450 from Azerbaijan, and 300 from China. In 2017, a Turkish state-run news source, Anadolu Agency, reported that 54,493 companies with international capital are in Turkey; of these, 40% are funded by EU member states, including 13% from Germany, 6% from the United Kingdom, and 5% from the Netherlands (Sahin 2017). Although EU firms are still dominant, the rise of Asia and the changing geopolitics of its immediate region put Istanbul at the center of a vast space now characterized by the copresence of multiple and diverse firms and projects from all over the world. According to a study of globalization and world cities, both established and emerging, Istanbul is one of the key cities in what is considered to be an emergent urban network, reflecting its crucial positioning—a geographic space that runs between Western Europe and West Asia (see Exhibit 5.5).

EXHIBIT 5.5 ■ Top Ten Emerging World Cities, 2015

Rank	City	Country
1	Shanghai	China
2	Beijing	China
3	Dubai	United Arab Emirates
4	Mumbai	India
5	Moscow	Russia
6	São Paolo	Brazil
7	Mexico City	Mexico
8	Kuala Lumpur	Malaysia
9	Johannesburg	South Africa
10	Buenos Aires	Argentina
11	Istanbul	Turkey
12	Jakarta	Indonesia
13	Warsaw	Poland
14	Delhi	India
15	Bangkok	Thailand

Source: Compiled from data in City Research Center (2015).

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Although capital flows are one way of identifying economic relations extending to and through the city, the flow of people brings skills, inventiveness, and cultures. These are all elements easily overlooked in debates about migration. The fine grain of cultures shaped by people on the move and by the intersections of global and local get wired into cities and feed "citiness." All of this has affected Istanbul's unique geopolitics and cultures. Turkey's global emigration map has historically been dominated by one recipient country: Germany. Whether we are counting the 1.7 million Turkish nationals, the 2.7 million born in Turkey though not necessarily holding Turkish nationality, or the even larger number of second- and third-generation Turkish Germans who, now thanks to a change in Germany's naturalization law, no longer hold an ambiguous citizenship status, the Turkish presence in Germany is very strong. The next largest foreign resident Turkish populations are in France (229,000), the Netherlands (171,000), Austria (150,000), and Belgium (111,000), followed by a large number of countries with smaller numbers of Turkish immigrants.

The global geography of Turkish emigration is changing. Mirroring the flows of capital that move East and West, those leaving Turkey continue to settle in European countries (see Exhibit 5.6). Next to Moroccans, Turkish nationals constitute the largest migrant group in Europe. Turkish-born immigrants living abroad stand at 2.9 million, 2.5 million of whom have settled in Europe (De Bel-Air 2016). Of those remaining 400,000 immigrants, however, we are seeing growing, although still smaller, flows of Turks to Asia. Cumulative departures from 2000 to 2006 were 322,000 to Germany, 57,000 to France, and 55,700 to Austria, followed by smaller numbers to a variety of other countries (Burdett 2009). But the dominance of Turkey's relationship with the European Union can mask the shifting geography of its migrations. In 2006, for example, departures for Germany were 30,000, followed by 20,000 to Saudi Arabia, 8,300 to France, and a number of smaller but significant flows to the post-Soviet Asian republics. By 2015, 47% of Turkey's 2.9 million emigrants resided in Germany; France is the next most popular destination, hosting 9% of those moving from the country.

In 2015, migration into Turkey remained small with only 2% foreign-born among the total population, a figure that includes return migrants from Germany and elsewhere. Today, with large groups of refugees now entering and settling in the country, Turkey's foreign-born population has grown to 5.6%. But also, here we see new geographies of origin beyond the European Union. In 2006, 191,000 foreigners moved into Turkey, mostly from Bulgaria and Azerbaijan. These two nationalities also dominated the cumulative inflow from 2000 to 2006, with 373,700 from Bulgaria and 73,000 from Azerbaijan, while only 48,400 migrated from Germany. These dominant inflows were followed by smaller but significant populations coming from Greece, Russia, the United States, Iran, Iraq, the United Kingdom, and elsewhere. The origins of migrations are shifting from West to East. From 2000 to 2006, most of the inflow came from Bulgaria and Azerbaijan, while most of the outflow went to Germany and France. In 2015, most inflow still came from Bulgaria. However, Germany, rather than

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EXHIBIT 5.6 ■ Outflow of Migrants From Turkey, 2015

Countries	Number of Migrants	% of all Emigrants
Europe 28+ Switzerland and Norway	2,500,000	86%
Germany	1,364,000	
France	248,640	
Netherlands	192,676	
Austria	160,039	
Belgium	98,639	
UK	87,000	
Switzerland	78,240	
Sweden	46,146	
North America	134,678	3%
USA	109,408	
Canada	25,270	
Arab Countries	100,000	3%
Gulf States	25,000	
Iraq	17,525	
Others (est.)	137,000	5%
Kazakhstan	46,894	
Australia	40,660	
Israel	22,780	
Est. total emigrants	2,900,000	100%

Source: Compiled from data in De Bel-Air (2016).

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Azerbaijan, now comes in second, the source country for 17% of foreigners settling in Turkey (See Exhibit 5.7).

Another important but more temporary intersection of work and national cultures occurs on short-term trips (Turkish Government's Statistical Institute,

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EXHIBIT 5.7 ■ Inflow of Migrants Into Turkey, 2015

Place of Birth	2000	2015	
	Number of Migrants	Number of Migrants	% of Total Migrants
Europe	–	953,837	60
Bulgaria	480,817	378,658	24
Germany	273,535	263,318	17
Macedonia	31,515	43,400	3
Netherlands	21,823	32,345	2
United Kingdom	18,914	32,140	2
France	16,787	28,507	2
Greece	59,217	26,928	2
Austria	14,335	18,609	1
Arab Countries	–	232,308	15
Iraq	–	97,528	6
Syria	–	76,413	5
Libya	–	16,442	1
Saudi Arabia	–	14,573	1
CIS	–	212,323	13
Azerbaijan	16,787	52,836	3
Uzbekistan		36,083	2
Russia	19,856	34,486	2
Turkmenistan	–	24,937	2
Kazakhstan	–	21,546	1
Armenia	–	2,346	0
Asia	–	156,679	10
Afghanistan	–	38,692	2
Iran	12,957	36,226	2
Georgia	–	25,019	2
China	–	5,029	1
North America	–	27,038	2
USA	13,566	24,026	2
Other Countries	–	23,724	1
Total Born Abroad	1,278,671	1,592,437	100

Source: Compiled from data in De Bel-Air (2016).

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Annual). As is the case in most countries, migration figures are dwarfed by the numbers of foreigners entering Turkey for various short-term purposes as well as citizens coming for short-term visits. In 2006, the largest single purposes for short-term trips were travel, entertainment, culture, and visits to family and friends. However, people do travel to Turkey for work. In 2006, the largest single groups of foreigners were the 7 million managers and professionals and another 1.1 million in secondary service professions. The number of arriving and departing foreigners, visitors, and citizens reached 25.3 million in 2016 (Republic of Turkey Ministry of Culture and Tourism 2017). These numbers include citizens, but it nonetheless suggests a growth in Turkey's rates of tourism and temporary visits. Numbers regarding solely the amount of foreigners visiting the country were at 19.3 million for the year 2006, up from 13.7 million in 2004 and 11.3 million in 2001. Between 2001 and 2006, more than 23 million people visited Turkey from Germany, nearly 9 million from Russia and the United Kingdom each, 7 million from Bulgaria, and 4 million from Iran. For the year 2016 alone, almost 3.9 million Germans (business people and tourists) arrived and departed across the Turkish border. Citizens from Georgia were the second largest group for arrivals and departures, with 2.2 million, and UK citizens made up the third largest group, with 1.7 million people. In addition to these migrations, 1.7 million people crossed the Turkish border from Bulgaria, and 1.6 million from Iran (Republic of Turkey Ministry of Culture and Tourism 2017). These are far from insignificant numbers. They represent the incredibly diverse range of people moving into and out of the country, all carrying with them specific histories and cultures, feeding Istanbul's cosmopolitanism (Turkish Government Statistical Institute, Annual).

Some of these emergent geographies of the flows of capital and of people feed into the two final variables I want to discuss. One is the significant role of Istanbul as a center for global policy exchange. A.T. Kearney's 2010 study of sixty cities along five variables (business activity, human capital, information exchange, culture, and policy engagement) found Istanbul in the top ten cities worldwide on the policy engagement variable, along with Washington D.C., Beijing, Paris, Cairo, London, and Brussels, among others (see Exhibit 5.8). The study defines the policy engagement variable as "influence on global policy-making and political dialogue." The second, not unconnected, variable is the fact that the study found Istanbul in the top fifteen cities on the human capital variable—defined as a city that "acts as a magnet for diverse groups of people and talent" (see Exhibit 5.9). Among the other cities in the top group were New York, London, Chicago, Hong Kong, Tokyo, and Sydney. In the case of Istanbul, the key factor feeding its high rank is the numerous international schools, which functions as an indicator for characteristics of the parents of these children.

It is worth noting that of the five factors measured, the most important one feeding the top-ranking cities is the presence of a foreign-born population: this is the single largest factor by far, feeding New York's top rank on the human capital variable, and one of the two largest factors in Hong Kong's fourth-place ranking. Istanbul is well positioned to gain ground here: even though it is still a city with a very small foreign-born population, it is clear that it has benefited from an enormous variety of origins among its immigrants. I see both of these

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EXHIBIT 5.8 ■ Cities With Global Policy Influence

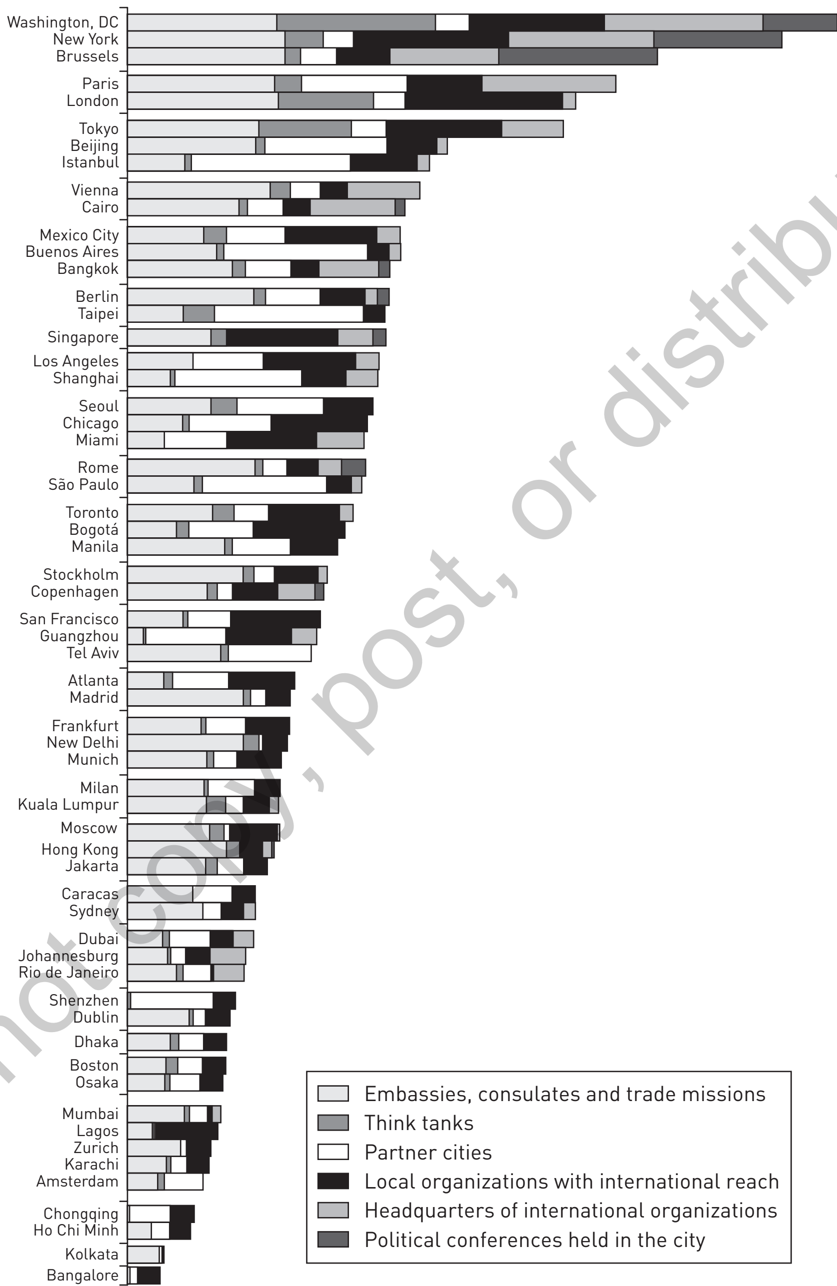

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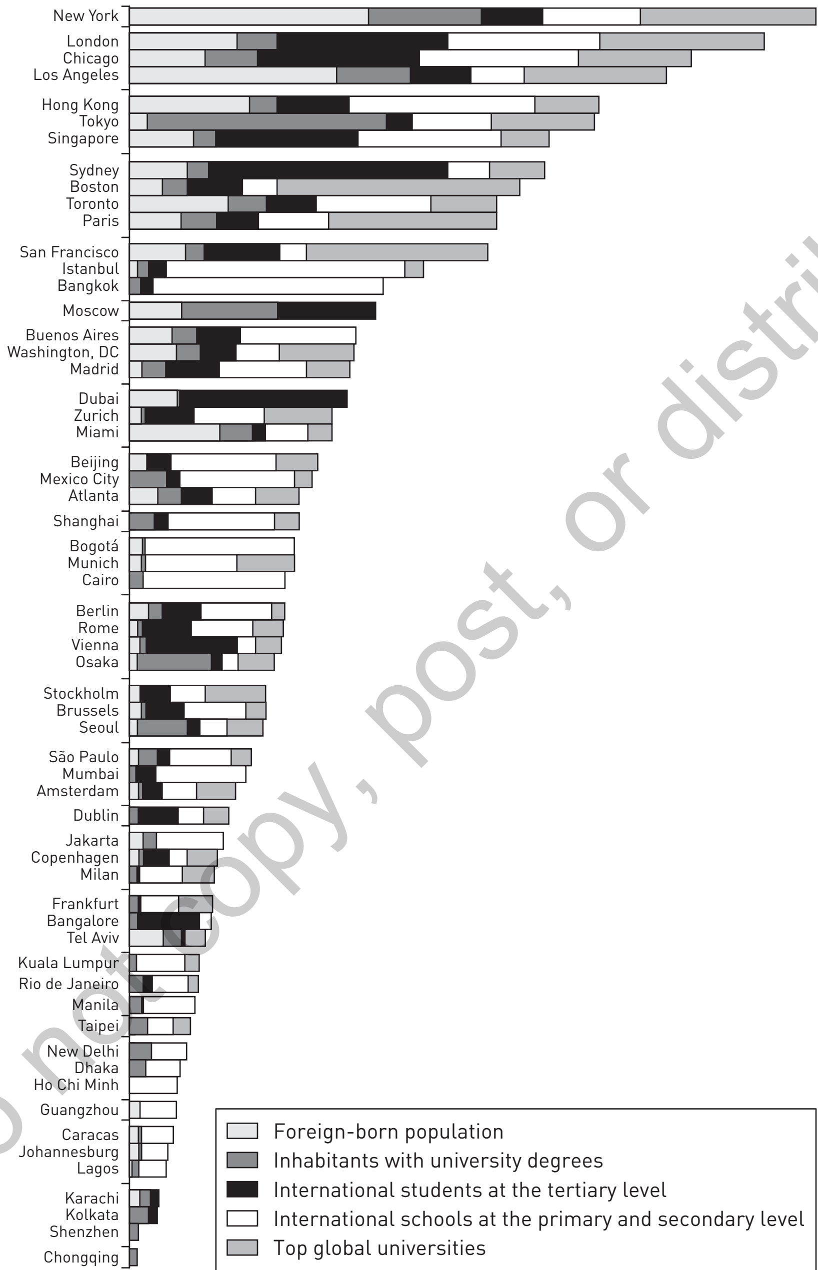
EXHIBIT 5.9 ■ Cities With Human Capital



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prominent positions, in policy engagement and human capital, as having to do with Istanbul's strategic role at the intersection of diverse economic and geopolitical geographies. In an increasingly networked world, this role and the capabilities involved have taken on growing importance.

A.T. Kearney's Global Cities study (2017) has continued to track Istanbul and the development and growth of similar cities within the global sphere. Since 2010, Istanbul has risen nineteen places in the Global City Index. Originally coming in at forty-fourth place, Istanbul now falls within A.T. Kearny's top thirty cities, ranking twenty-fifth (see Exhibit 5.9). Although this growth is important and notable, the report also indexes global cities' outlooks—that is, their potential and promise as influential cities within the world's mass urban network. From 2016 to 2017, Istanbul fell eight places in outlook: originally coming in at eightieth, it now ranks at eighty-eighth. This decline in ranking is compounded by the fact that despite Istanbul's rising success, the city remained at its twenty-fifth ranking on the Global City Index between 2016 and 2017 (see Exhibit 5.10). The slowing down, if not pause or retrogression, of Istanbul's success, growth, and potential as a global city can perhaps be analyzed with reference to the sociopolitical strife currently ongoing in Turkey. Between the refugee crisis and the country's political instability, these conflicts might be compromising Istanbul's overall influence, sway, and standing within the global urban arena. The 2017 study indicates that much of Istanbul's success is still thanks to its strength in human capital. However, according to A.T. Kearney, Istanbul is no longer a world leader in political engagement. Rather, Istanbul's information exchange and business activity, in addition to its human capital, set it apart as an influential urban center (see Exhibit 5.10). This suggests that the city's stagnation and decline in the rankings can perhaps be understood to be a result of Turkey's recent political instability.

Cities have long been at the intersection of cross-border circuits—flows of capital, labor, goods, raw materials, merchants, travelers. Asia and Africa have seen some of the oldest and vastest of these flows, and Europe some of the densest. Cities are strategic spaces for the economies and cultures that arise from these flows, for making the capabilities needed to handle and govern these intersections, and for the housing of power—economic, political, and cultural. These circuits are multidirectional and crisscross the world, feeding into intercity geographies. The formation of intercity geographies is today contributing a critical infrastructure for a new global political economy, new cultural spaces, and new types of politics. Some of these intercity geographies are thick and highly visible—the flows of professionals, tourists, artists, and migrants among specific groups of cities. Others are thin, they are hollow and less able to take shocks like thick cities. Thin cities are planned and specialized and barely visible. They are highly specialized financial trading networks that connect particular cities, depending on the type of instrument involved, or the global commodity chains for diverse products that run from exporting hubs to importing hubs.

The vast expansion of the geographies of these flows in the current period has further brought out the importance of cities at these intersections. For some cities, such as Istanbul, this is an old history; for others, such as Miami, it is a new

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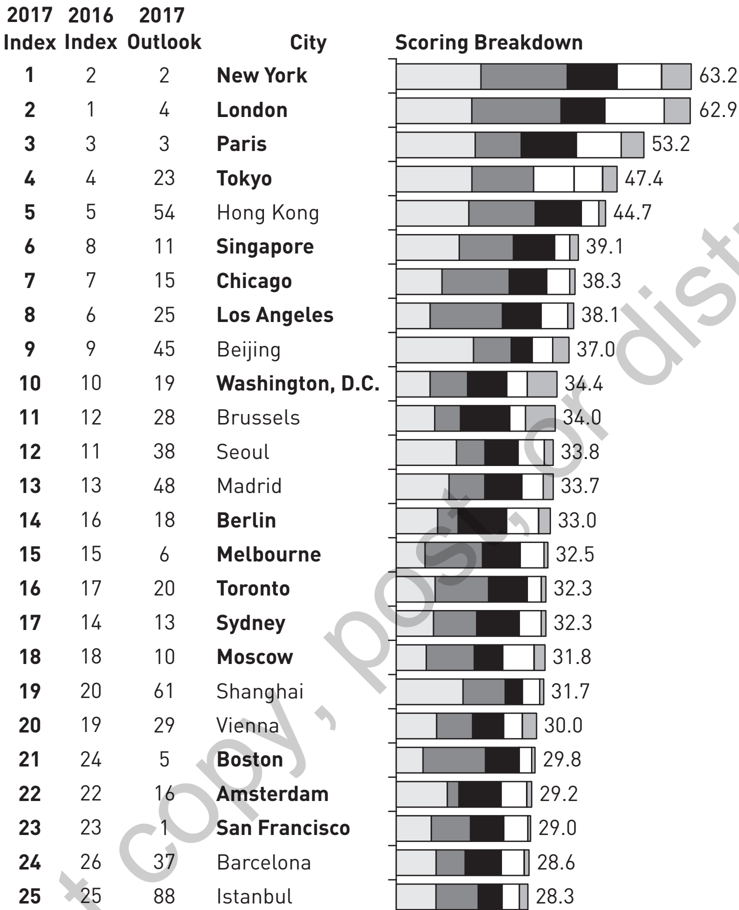
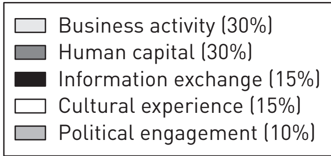
EXHIBIT 5.10 ■ A.T. Kearny Global City Index Ranking



Global Cities Index and Outlook Rank

2017 Index	2016 Index	2017 Outlook	City	Scoring Breakdown
1	2	2	**New York**	63.2
2	1	4	**London**	62.9
3	3	3	**Paris**	53.2
4	4	23	**Tokyo**	47.4
5	5	54	Hong Kong	44.7
6	8	11	**Singapore**	39.1
7	7	15	**Chicago**	38.3
8	6	25	**Los Angeles**	38.1
9	9	45	Beijing	37.0
10	10	19	**Washington, D.C.**	34.4
11	12	28	Brussels	34.0
12	11	38	Seoul	33.8
13	13	48	Madrid	33.7
14	16	18	**Berlin**	33.0
15	15	6	**Melbourne**	32.5
16	17	20	**Toronto**	32.3
17	14	13	**Sydney**	32.3
18	18	10	**Moscow**	31.8
19	20	61	Shanghai	31.7
20	19	29	Vienna	30.0
21	24	5	**Boston**	29.8
22	22	16	**Amsterdam**	29.2
23	23	1	**San Francisco**	29.0
24	26	37	Barcelona	28.6
25	25	88	Istanbul	28.3



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Note: City names listed in bold are those that rank in the top 25 for both Index and Outlook for 2017.

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one. The ascendance of Asia on the world economic and geopolitical map has brought added strategic importance to some of these cities, among which Istanbul holds the most prominence.

GLOBALIZATION AND CONCENTRATION: THE CASE OF LEADING FINANCIAL CENTERS

The major economies in the developed world display a similar pattern of sharp concentration of financial activity and related producer services in one center: Paris in France, Milan in Italy, Zurich in Switzerland, Frankfurt in Germany, Toronto in Canada, Tokyo in Japan, Amsterdam in the Netherlands, and, as just shown, Sydney in Australia. The evidence also shows that the concentration of financial activity in such leading centers has actually generally increased starting in the late 1980s. Thus, Basel, formerly a very important financial center in Switzerland, began to be overshadowed by Zurich during the late twentieth century (Keil and Ronneberger 1992); and Montreal, certainly the other major center in Canada, was overtaken by Toronto toward the end of the 1980s (Levine 1990). Similarly, Osaka was once a powerful rival to Tokyo in Japan's financial markets before the late 1980s, and by 2013, the Osaka Stock Exchange merged with the Tokyo Stock Exchange to form the Japan Exchange Group located in Tokyo (Sassen [1991] 2001: chaps. 6, 7). London and New York's financial markets have similarly come to overshadow other major centers in their respective countries.

This growing concentration in top centers did not necessarily mean that a country's secondary centers declined. Mostly, they also grew. So this is, to a large extent, a dynamic whereby overall growth produces growing concentration at the top—the leading centers grow faster than the rest, or, at the least, even high-growth secondary centers cannot close the gap. This phenomenon is a disturbing and counterintuitive trend for a sector operating largely in electronic networks and dealing with a digitized product. One might have expected dispersal rather than concentration given the capacities of computer-centered networks and the high costs of operating in central cities.

Is this tendency toward concentration within each country a new development for financial centers? A broader historical view points to some interesting patterns. Since its earliest beginnings, financial work was spatially concentrated (Arrighi 1994). Financiers often operated in the context of empires, such as the British or Dutch empires, or quasi-empires, such as the United States with its superior economic and military power in the mid-twentieth century. Some of the first financial centers in Europe were medieval Italian cities; a good case is Florence, a city whose currency, the florin, was one of the most stable in the continent. But by the seventeenth century, a single financial center became dominant:

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Amsterdam, whose introduction of central banking and the stock market most likely reflected its vast international merchant and trading operations. These novel financial systems also served as testament to the city's role as an unrivaled international center for trading and exchange. One hundred years later, London emerged as the world's major international financial center, as well as Europe's dominant market for government debt. Reflecting the reach and power of the British Empire, London remained the financial capital of the world until well into the twentieth century. By 1914, New York dominated Philadelphia and Boston as the main U.S. banking center. Emerging on the world stage, New York had become London's main financial rival. London, however, was also the strategic cog in the international financial system, a role that New York was not quite ready to assume. But after World War II, the devastation wreaked upon Britain and other European countries, combined with the immense U.S. economic might, made way for New York's solidified role as the world's financial center.

Nonetheless, the context for this trend toward a leading financial center had begun to change as early as World War I. Against the earlier pattern of empires, the formation of nation-states made possible a multiplicity of financial centers, typically the national capital in each country. Furthermore, the ascendance of mass manufacturing contributed to vast, typically regionally based fortunes and the formation of secondary financial centers in those regions: Chicago and Osaka are two examples. The Keynesian policies aimed at promoting a country's development of regional convergence became increasingly common across the world. By the 1960s, these various trends had contributed to a variety of phenomena: the proliferation of financial centers inside countries' (e.g., Italy had eleven financial centers and Germany had seven), highly regulated banking systems, and strict national protections. The dominance of mass manufacturing in much of the twentieth century meant that finance and banking were largely shaped by the needs of manufacturing economies and mass consumption. New York's role as the leading international financial center was part of a larger national U.S. government strategy seeking global dominance along patterns that were quite different from those that emerged in the 1980s (Sassen 2008a: chap. 4).

The developments that took off in the 1980s represented a sharp departure from this pattern of fairly closed and protected national financial systems centered on mass production and mass consumption. An explosion in financial innovations raised the speculative character of finance and began to replace highly regulated national commercial banking as a source of capital. This phenomenon, combined with the opening of national economies to foreign investors, ultimately strengthened tendencies toward concentration in a limited number of financial centers. Although this fact is reminiscent of older imperial patterns, the actual conditions and processes involved are different. In the 1980s, there was massive growth in the absolute levels of financial activity worldwide. But this growth became more sharply concentrated in a limited number of countries and cities. Cross-border bank activity, which encompasses lending, borrowing, and investing, has grown exponentially since the 1980s. During this early financial era,

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international bank activity grew from US$242 billion in 1980 to US$584 billion in 1990. This growth can be seen in Exhibit 5.11, which outlines cross-border bank activity. Financial flows were predominantly between such major financial centers as London, New York, Tokyo, Paris, and Amsterdam, but grew to include other centers such as Hong Kong and Singapore. In the 1990s, cross-border banking activity took a hit from several financial crises. Both 1992's Black Wednesday, which affected countries in the European Exchange Rate Mechanism, and the 1997 Asian financial crisis negatively affected lending, borrowing, and investing between countries. Cross-border practices faced more shocks in the new millennium, with the terrorist attacks of September 11, 2001, and the start of the Iraq War in 2003. Although international finance recovered from these jolts, its resilience was tested after the 2008 financial crisis. Cross-border bank activity plummeted to negative US$2.02 trillion by the fourth quarter of 2008. Since then, recovery has been a hard road for international finance. The struggle to stabilize international bank activity was further exacerbated by 2010's crippling European sovereign debt crisis. Before a full comeback could be made, the uncertainty caused by the Brexit decision and the election of Donald Trump once again compromised the international system's ability to recover. Exhibit 5.11 demonstrates these falls explicitly. For example, the events of 2016 play out in the four quarters of cross-border activity. In the first and second quarters of 2016, valued at US$430 billion and US$462 billion respectively, international banking was on the rise. However, after the June 23 U.K. vote to leave the European Union, activity fell to negative US$107 billion in the third quarter of 2016. Financial flows fell again after the November 8 election of Donald Trump, reaching negative US$279 billion. Cross-border bank activity traces the ebb and flow of the world economy.

These financial activities demonstrate the fluctuating nature of the international system, and they tell a tale of the cities involved. Much of this lending activity was executed in the leading financial center of each of these countries or in specialized markets, such as Chicago, which dominated the world's trading in futures. By the late 1990s, five cities—New York, London, Tokyo, Paris, and Frankfurt—accounted for a disproportionate share of all financial activity. However, since then, Paris and Frankfurt have fallen in their ranks and have been replaced by Singapore and Hong Kong. Tokyo has also fallen in ranks, though not as sharply. Strong patterns of concentration were also evident in stock market capitalization and in foreign-exchange markets (Exhibit 5.12); these also show the ongoing concentration in a limited number of financial centers.

Notice again that this unchanged level of concentration happened in the context of enormous absolute increases, deregulation, and globalization of the industry worldwide, which means that a growing number of countries had become integrated into the world markets. Furthermore, it happened at a time when financial services are more mobile than ever before: globalization, deregulation (an essential ingredient for globalization), and securitization have been the keys to this mobility—in the context of massive advances in telecommunications and

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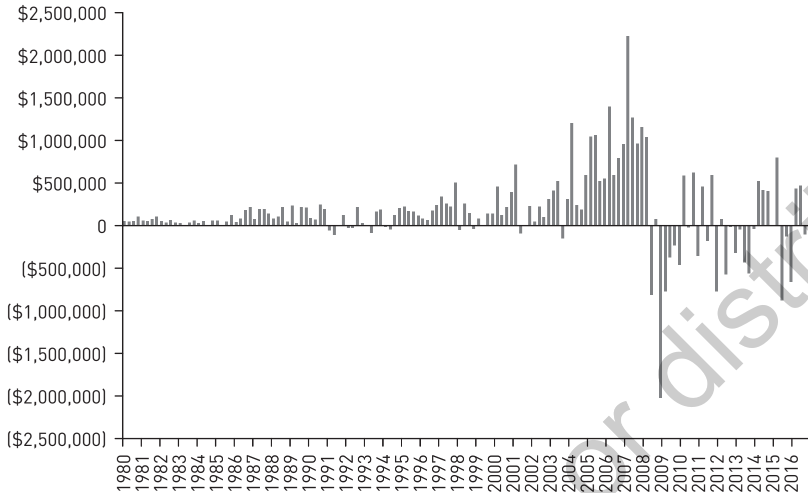
EXHIBIT 5.11 ■ Cross-Border Bank Activity in Millions of US$, 1980–2016



Source: Compiled from data in Bank for International Settlements (2017).

Note: Years represented in quarters starting with 1980 Q1 and ending with 2016 Q4.

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electronic networks.[8] One result has been growing competition among centers for hypermobile financial activity. But there has been an overemphasis on competition in both general and specialized accounts of this subject. As I argued in Chapter 3, there is also a functional division of labor among various major financial centers. The shape of this global industry is more akin to a division of functions across multiple countries.

The hypermobility of financial capital puts added emphasis on the importance of technology. It is now possible to move money from one part of the world to another and make deals without ever leaving the computer terminal. Thanks to electronics, there are disembodied marketplaces—what we can think of as the cyberspace of international finance. National Association of Securities Dealers Automated Quotations (NASDAQ) and some of the standardized foreign-exchange markets are examples of disembodied markets, unlike the older-style stock market with its trading floor.

Yet the trend toward concentration continues, albeit in an expanding network of leading centers: the absolute dominance of New York, London, and Tokyo once evident during the 1980s and into the 1990s has shifted in the current age (Sassen [1991] 2001). Further, the formation of a single European market and financial system has generated a European financial system that centralizes

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EXHIBIT 5.12 ■ Reported Foreign Exchange Turnover for Selected Countries, Selected Years 1992–2016 (Percent Share)

	1992	1995	1998	2001	2004	2007	2010	2016
United Kingdom	27.0	29.5	32.5	31.8	32.0	34.6	36.7	36.9
United States	15.5	15.5	17.9	16.0	19.1	17.4	17.9	19.5
Japan	11.2	10.2	6.9	9.0	8.0	5.8	6.2	6.1
Singapore	6.9	6.7	7.1	6.1	5.1	5.6	5.3	7.9
Germany	5.1	4.8	4.8	5.4	4.6	2.4	2.2	1.8
Hong Kong	5.6	5.7	4.0	4.0	4.1	4.2	4.7	6.7
Australia	2.7	2.5	2.4	3.2	4.1	4.1	3.8	1.9
France	3.1	3.7	3.7	2.9	2.6	3.0	3.0	2.8
Canada	2.0	1.9	1.9	2.6	2.3	1.5	1.2	1.3
Netherlands	1.9	1.7	2.1	1.8	2.0	0.6	0.4	1.3
Denmark	2.5	2.0	1.4	1.4	1.6	2.1	2.4	1.5
Sweden	2.0	1.3	0.8	1.5	1.2	1.0	0.9	0.6

Source: Bank for International Settlements (2005a, 2007, 2016).

Note: Turnover of spot, outright forward, and foreign exchange swaps. Adjusted for local double counting ("net-gross").

financial functions and capital in a limited number of major centers. These centers are partly assuming the major financial functions carried out in what were once the leading financial centers of each European country. What is more, the emergence of these concentrated, major centers also spurred the launch of new forms of collaboration among Europe's financial hotspots, often mixing leading and minor financial centers. Indeed, the consolidation of alliances, notably the one between Paris, Amsterdam, Brussels, and Lisbon (Euronext), has developed as a trend.

These tendencies toward concentration seem to be built into the nature of the financial system. Centers at the top are characterized by a multiplicity of financial institutions and markets, with significant shares of world activity in various specialized financial markets. They usually have numerous banks and financial institutions that account for a significant share of international lending, foreign

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exchange trading, and fund management. These centers also have large or significant markets in tradable securities—whether bonds, stocks, or their derivatives. Among the large financial centers, some are dominated by international business and others by domestic business. For example, since the formation of the European Union, London has proven extremely international. With its enormous presence of foreign firms from all over the world, its strong, pre-Brexit era Eurodollar, and its far-reaching and varied foreign-exchange markets, the city has for years dominated as the world's top financial center. Meanwhile New York and Tokyo, with their ties to vast national economies, inevitably boast a very large number of domestic borrowers, lenders, and investors. Although New York does cater to a strong domestic economy, the World Trade Center, the UN Headquarters, and the nearby "Gold Coast" of Jersey City—among others—serve as testament to its international capacity and infrastructure. As a result, New York consistently ranks second of top financial centers in the world, just behind London. Interesting for analysis, however, is the patterns in which other cities rise and fall in these rankings, especially when keeping in mind the overarching trends of the globalization of financial activities and networks we have noted (see Exhibit 5.13).

In the Global Financial Center Index Rankings, London and New York remain unchallenged in their roles as global financial center hegemons while Hong Kong and Singapore have battled throughout the years to claim and maintain a spot in the top three. Tokyo, however, over the years has drastically fallen, risen, and has since kept its place, though it has never been able to beat out Hong Kong or Singapore for the coveted third spot. This phenomenon is telling in many regards, namely with reference to the ways in which these cities are effectively realizing their global financial potential. During the past ten years, for example, Tokyo has undertaken concerted efforts to turn outward in its financial practices. However, Japan's historically isolationist and nationalistic tendencies might have compromised Tokyo's capacity for actualized global finance (Shirai 2017). Recognizing this hindrance, Prime Minister Shinzo Abe launched the Abenomics program in December 2012, instituting various measures in hopes of spurring foreign economic engagement, including gradually lowering the effective corporate tax rate and instituting different programs and reforming public pension reserve assets to increase investment in both domestic and foreign equity.

What is more, the International Olympic Committee has elected Tokyo to host the 2020 Olympic games, providing the city with a crucial opportunity to capitalize on mass global attention. In response, the Tokyo Metropolitan Government has organized a special task force to draft detailed proposals about how to better develop a business-friendly environment for foreigners (Shirai 2017). Nonetheless, several factors complicate Tokyo's goal toward becoming a dominant global center. Japan's external financial investments do not expand much beyond Europe and the United States, and as a result, Tokyo is neglecting the opportunity to invest in emerging Asian markets—a move that could actualize the city's potential as a regional financial hegemon. Furthermore, the foreign investments Japan does carry out remain highly risk averse, destined mainly

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EXHIBIT 5.13 ■ Global Financial Center Index Rankings

Global Financial Centers Index Rankings						
Rank	2007	2009	2011	2013	2015	2017
1	London	London	London	London	London	London
2	New York	New York	New York	New York	New York	New York
3	Hong Kong	Singapore	Hong Kong	Hong Kong	Hong Kong	Singapore
4	Singapore	Hong Kong	Singapore	Singapore	Singapore	Hong Kong
5	Zurich	Zurich	Shanghai/Tokyo	Zurich	Tokyo	Tokyo
6	Frankfurt	Geneva		Tokyo	Zurich	San Francisco
7	Sydney	Chicago	Chicago	Geneva	Seoul	Chicago
8	Chicago	Frankfurt	Zurich	Boston	San Francisco	Sydney
9	Tokyo	Boston	Geneva	Seoul	Chicago	Boston
10	Geneva	Dublin	Sydney/Toronto	Frankfurt	Boston	Toronto
11	Paris	Toronto		Chicago	Toronto	Zurich
12	Toronto	Guernsey	Boston	Toronto	Washington, D.C.	Shanghai
13	San Francisco	Jersey	San Francisco	San Francisco	Geneva	Montreal
14	Boston	Luxembourg	Frankfurt	Washington, D.C.	Riyadh	Osaka
15	Edinburgh	Tokyo	Shenzhen	Vancouver	Vancouver	Beijing

Source: Compiled from data in Z/Yen.

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toward stable, high-rated debt securities. This risk aversion is evident in the economic practices of Japanese corporations, as well as in the practices of Japanese citizens, as households maintain 50% of their financial assets in the form of cash and deposits. Corporate profits are also more often than not kept in commercial banks. As a result, there are conservative levels of risk money, which are funds needed to finance the diverse range of foreign investments that would help define Tokyo as a dominant financial center.

In contrast, it is easy to understand why Singapore and Hong Kong continuously emerge as the world's top third and fourth global financial centers. As we have explored in this chapter, Singapore has prioritized globalized practices and initiatives since its development. Meanwhile Hong Kong, with its history as a hub of both Chinese and European activity, in its very essence boasts the international and globalized infrastructure needed to support strong global financial activity. In analyzing Tokyo's emerging economic policies of the past decade, the city has clearly recognized the necessity of developing these sorts of global practices and infrastructure if it hopes to truly rise as a financial power house.

Regarding the two unwavering financial centers, London and New York, the globalization of the finance industry has raised the level of complexity of transactions, while deregulation has promoted the invention of many new and increasingly speculative instruments. These changes have contributed to the power of these leading centers, insofar as they are the most equipped to produce authoritative innovations and to handle the levels of complexity in today's financial system. In this sense, these city's institutionalized and globalized infrastructures function, in part, to protect them from shocks that newly emerging financial centers might not be able to weather as easily.

However, given both the recent election of Donald Trump and the British vote to leave the European Union, we are now witnessing trends toward conservative, nationalistic, and isolationist leadership in the very countries home to the top ranking global financial cities. Reflecting on Tokyo's struggle in rising as a global financial hegemon and the possible explanations we have explored, one must give pause to the potential consequences of the U.S. and U.K. economic and political developments. Only time will tell if these administrations and their political measures, directly resisting the tides of globalization, will affect the rankings of these financial centers.

In the next section, I examine these issues in greater detail with a particular focus on the networks that connect these centers and the impact of digitization on place.

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WHY DO FINANCIAL CENTERS STILL EXIST IN THE GLOBAL DIGITAL ERA?

The global financial system has reached levels of complexity that require the existence of a cross-border network of financial centers. This complexity is partly fed

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by the increasingly complicated financial services required by global firms. But financial centers are also fed by an internal dynamic to finance: the development of more and more speculative financial instruments that seem to feed on each other, reaching either extreme accumulations of financial capital or catastrophic plunges (see Chapter 8). This network of financial centers differs sharply from earlier versions of the international financial system. In a world of largely closed, national financial systems, each country duplicated most of the necessary functions for its economy; collaborations among different national financial markets were often no more than the execution of the same set of operations in both countries involved, as in clearing and settlement. With few exceptions, such as the offshore markets and some of the large banks, the international system consisted of a string of closed domestic systems and the limited, mostly routinized interactions between them (see Sassen 2008a: chap. 5; [1991] 2001: chap. 4).

The global integration of markets and deregulations that took off in the 1980s led to the elimination of various redundant systems, ironically making collaboration a far more complex matter. These processes no longer relied on the mere duplication of basic banking procedures in each country involved in a given transaction. Instead, what has emerged as an embedded financial system consistent throughout all countries is now also linking these states together in a larger global financial system. This phenomenon has had the perhaps unexpected effect of raising the importance of leading financial centers; they are also the centers that created many of the standards and rules that had to be adopted by all participating countries. Rather than a global system consisting of each country's center for global operations duplicating all key functions and specialized markets, there is now a more globally distributed system. In addition to the basic functions that all global financial centers must have, the twenty or so global leading centers within this system also boast distinct specializations. Each of today's leading financial centers (see Exhibits 4.1–4.4) possesses distinctive strengths—well captured in the discussion of Hong Kong and Shanghai in this chapter. With their enormous concentrations of resources and talent, London and New York continue to be powerhouses in the global network, featuring the most strategic and complex operations for the system as a whole. However, they increasingly depend on the larger network of the roughly twenty leading financial centers. The two cities are the leading exporters of financial services and are typically part of any major international public offering, such as the privatization of British Telecom and France Telecom.

This dominance, on the one hand, does not preclude the fact that one of the ways in which the global financial system grows is by incorporating more and more *national* economies, a process that happens through the development of a state-of-the-art financial center in each country—one that often evolves into a second- or third-tier global city. On the other hand, in the case of the European Union, the formation of a single-currency Eurozone is spelling the end of an era in which each country had a full-fledged financial center. A steep hierarchy is very likely, with Frankfurt and Paris at the top of the Eurozone and a crisscross of alliances centered in either of these major centers or among centers not included in those partnerships.

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The major financial centers of a growing number of countries worldwide are increasingly fulfilling gateway functions for the in-and-out circulation of national and foreign capital. Each of these centers is the nexus between that country's wealth and the global market and the link between foreign investors and a country's investment opportunities. The result is that the sources of and destinations for investment are growing. Gateway functions are their main mechanism for integration into the global financial market rather than, say, the production of innovations to package the capital flowing in and out; the production of innovations tends to remain concentrated in the leading twenty or so centers because these have the specialized talents and the clout to persuade investors to buy innovative instruments. Further, the complex operations in most second- and third-tier financial centers tend to be executed by foreign global investment, accounting, and legal services firms through affiliates, branches, or direct imports of those services.

These gateways for the global market are also gateways for the dynamics of financial crises: capital can flow out as easily and quickly as it flows in. And what was once thought of as *national* capital can now as easily join the exodus. For example, during Mexico's international financial crisis of December 1994, we now know that the first capitals to flee the Mexican markets were national, not foreign. In the financial crisis of 1997 to 1998, much of the capital flight out of Brazil of an estimated US$1 billion a day by early September 1998 was Brazilian, not foreign. More recently, the global financial crisis of 2008 to 2009 erupted with the U.S.-based credit-default swap crisis and its global repercussions (see Chapter 8).

Because the globally integrated financial system is not just about competition among financial centers or among countries, specialized collaborative efforts are increasing across borders. This also has the effect of further strengthening the networked features of this system. The financial system would not really gain from the downfall of Tokyo or Hong Kong or, for that matter, Buenos Aires. The ongoing growth of London, New York, Paris, and Frankfurt is, in part, a function of a global network of financial centers. These same features that make it strong and powerful are also the conduits for spreading the effects of a crisis.

Finally, although electronic networks are growing in number and in scope, they are unlikely to eliminate the need for financial centers (Sassen 2008a: chap. 5 and 7; 2009). Rather, these electronic networks are intensifying the networks connecting such centers in strategic or functional alliances among exchanges in different cities. These alliances may well evolve into the equivalent of the cross-border mergers and acquisitions of firms. Electronic trading is also contributing to a radically new pattern whereby one market—for example, Frankfurt's Deutsche Eurex—can operate on screens in many other markets around the world, or one brokerage firm, notably Cantor Fitzgerald, could (since September 1998) have its prices of Treasury futures listed on screens used by traders all around the United States. Further, electronic trading will not eliminate the need

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for financial centers because these combine multiple resources and talents necessary for executing complex operations and servicing global firms and markets. Finally, financial centers cannot be reduced to their exchanges. They are part of a far more complex architecture in the financial system, and they constitute far more complex structures within that architecture than the exchanges.

IN THE DIGITAL ERA: MORE CONCENTRATION THAN DISPERSAL

As established, the current state of global finance reflects an expanding industry actualized in a growing number of leading centers, cities that are home to international financial centers from most countries in the world. Although this evolution has linked the world through a network of financial hegemons, what stands out in this context is the disproportionate power of the twenty or so leading centers. One measure of this power is the disproportionate concentration of financial capital in a limited number of financial centers. This mix of a growth in the numbers of centers along with the consolidation of a few centers is also evident within countries. In the United States, for example, New York has the largest concentration of the leading investment banks with only one other major international financial center, Chicago. Boston is a strong financial center but has lost share to New York, as has Philadelphia. Several of the other financial centers have also lost share. We already examined how Sydney and Toronto took over functions and market share from what were once the major commercial centers in their respective countries. So have São Paulo and Mumbai, which gained share and functions from, respectively, Rio de Janeiro in Brazil and New Delhi and Calcutta in India. These are all enormous countries, and one might have thought that they could sustain multiple major financial centers. In France, Paris today holds larger shares of most financial sectors than it did in the 1970s; once-important stock markets such as Lyon have become "provincial," even though today's Lyon is the hub of a thriving economic region. Milan privatized its exchange in September 1997 and electronically merged Italy's ten regional markets. Frankfurt now lays claim to a larger share of the financial market in Germany than it did in the early 1980s, as does Zurich in Switzerland. Further, these processes of growing concentration moved fast. For example, by 1997, Frankfurt's market capitalization was five times greater than all other regional markets in Germany combined, whereas in 1992, it was only twice as large. This story holds true for many countries and it continues. What stands out is that this pattern toward the consolidation of one or two leading financial centers in a country is a function of rapid growth in the sector, not necessarily of decay in the losing cities.

Note that there are both consolidation in fewer major centers across and within countries, *and* as countries deregulate their economies, we are witnessing a sharp growth in the number of centers that become part of the global network.

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São Paulo and Mumbai, for example, joined the global financial network after Brazil and India partly deregulated their financial systems in the early 1990s. This mode of incorporation into the global network is often at the cost of losing functions that they had when they were largely national centers; today, foreign financial, accounting, and legal services firms have entered their markets to handle the new cross-border operations. Incorporation of a country's financial center into the global network typically happens without a gain in the share of the global market that they can command even though their volume and value of operations will tend to grow sharply in absolute terms. In a globalized market, the owners or beneficiaries of the absolute growth in stock market value may well be foreign investors.

All these trends bring up, once again, the question of why this rapid growth in the network of financial centers, overall volumes, and electronic networks has resulted in, or failed to reduce, the high concentration of market shares in the leading financial centers of the world. Both globalization and electronic trading are about expansion and dispersal beyond what had been the confined realm of national economies and floor trading. Indeed, given globalization and electronic trading, one might well ask why financial centers matter at all.

Agglomeration in the Digital Era

The continuing weight of major centers and the existence of an expanding network of financial centers is, in a way, counterintuitive. The rapid development of electronic exchanges and the growing digitization of much financial activity suggest that location should not matter. Actually, geographic dispersal would seem to be a good option given the high cost of operating in major financial centers and that digitization would seem to eliminate most reasons to have a geographic base. Further, the geographic mobility of financial experts and financial services firms has continued to increase and has resulted in a variety of new industries catering to the needs of the transnational professional and managerial classes, thereby enabling even more mobility.

There has been geographic decentralization of certain types of financial activities, aimed at securing business in the growing number of countries becoming integrated into the global economy. But this is merely a geographic decentralization of a firm's operations, with central headquarters keeping control and appropriation of profits. Many of the leading investment banks now have operations in more countries than they did in the early 1980s. The same can be said for the top accounting and legal services and other specialized corporate services, as well as some markets. For example, in the 1980s, all basic wholesale foreign-exchange operations were in London. Today, these operations are distributed between London and several other centers (even though the number of these centers is far smaller than the number of countries whose currency is being traded).

At least three reasons explain the trend toward consolidation in a few centers rather than massive dispersal. I developed this analysis in *The Global City* (Sassen

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[1991] 2001), initially focusing on New York, London, and Tokyo in the 1980s, and since then on the larger network of financial centers. The reasons explaining the primacy of leading centers have become even clearer and sharper over the last few years, partly because of the rise in speculative finance and because electronic markets have contributed to a new type of risk. This new type of risk might be called *market-risk*, whereby the use of derivatives to facilitate the so-called export of risk by a firm produces a boomerang effect for the companies in question as electronic markets absorb the aggregate risk exported by all firms in such markets (Sassen 2008a: chap. 7). The 2008 financial crisis is an example of this. New financial instruments such as credit default swaps (CDS) and new forms of collateralized debt obligations (CDOs) increased systemic risk, a subject I return to in Chapter 8.

1. *Social Connectivity.* As I have already discussed in Chapter 1, new telecommunications technologies—although they do indeed facilitate geographic dispersal of financial activities without losing system integration—also had the effect of strengthening the importance of central coordination and control functions for financial firms and even markets. This is particularly so given the trend toward making financial exchanges into (publicly listed) corporations and, hence, the development of central management functions—something that does sound strange for an exchange but in fact is part of how these systems function. Operating a widely dispersed network of branches and affiliates, and doing so in multiple markets, has severely complicated central functions for any firm. And now we can add financial exchanges to these processes, perhaps further complicating matters given the speed of transactions enabled by electronic networks. The execution of these central functions requires access to top talent and those of the innovative milieu. These specialized workers can be found in technology, accounting, legal services, economic forecasting, and many different, and often new, specialized corporate services. Financial centers boast massive concentrations of state-of-the-art resources that allow them to maximize the benefits of telecommunications and, in the case of leading centers, to organize and govern the new conditions for operating globally. Even electronic markets such as NASDAQ and E*Trade rely on traders and banks with a physical location, with at least some in a major financial center.

One fact that has become increasingly evident is that to maximize the benefits of the new information technologies, you need the infrastructure and a complex mix of other resources. Most of the value that these technologies can produce for advanced service firms lies in the externalities; this means material and human resources—state-of-the-art office buildings, top talent, and the capacity for social networking that maximize the benefits of connectivity. Any town can have fiber-optic cables. But do they have the rest?

A second fact emerging with greater clarity concerns the meaning of *information*. Information manifests in two forms in this internationalized world of transactions. One is the datum: At what level did Wall Street close? Did Argentina

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complete the public sector sale of its water utility? Has Japan declared such-and-such bank insolvent? However, a far more difficult type of information also exists, akin to a mix of interpretation, evaluation, and judgment. This information entails negotiating a series of data and a series of interpretations of other data in hopes of producing a higher-order datum. Access to the first kind of information is now global and immediate, thanks to the digital revolution. You can be a broker in the Colorado Rockies and have access to this type of information. But the second type of information requires a complicated mixture of elements, namely, the social infrastructure for global connectivity. This infrastructure gives major financial centers a leading edge.

One can, in principle, reproduce the technical infrastructure anywhere. Singapore, for example, has technical connectivity matching Hong Kong's. But does it have Hong Kong's social connectivity? When the more complex forms of information needed to execute major international deals cannot be retrieved from existing databases, no matter what a firm can pay, then that firm needs a social information loop, and especially the associated interpretations and inferences that come with bouncing information among talented, informed people. The importance of this input has given a whole new weight to credit-rating agencies, for example. Part of the rating has to do with interpreting and inferring the quality of a firm's or government's resources. Credit-rating firms are in the business of producing *authoritative* interpretations and presenting them as information available to all (Sinclair 2004). But firms, especially global firms in finance, need more than what credit-ratings firms sell. They need to build this advanced type of interpretation into their daily work process—a task that calls for talent and an information-rich milieu (Sassen 2008a: chap. 7). Financial centers generally, and leading ones especially, often constitute such milieu.

As consequence of globalization, firms operating in multiple countries and markets are facing growing complexity and uncertainty, ultimately requiring enormous fine-tunings of central operations. As a result, risk management, for example, has become increasingly important in this current age. We now know that many, if not most, major trading losses during the decade of the 1990s involved human error or fraud. The quality of risk management depends more heavily on the top people in a firm than simply on technical conditions, such as electronic surveillance. Consolidating risk-management operations in one location, usually a central site for the firm, is now seen as generally more effective. This is the case of several major banks: Chase and Morgan Stanley in the United States, Deutsche Bank and Credit Suisse in Europe.

In short, financial centers provide the social connectivity that allows a firm or market to maximize the benefits of its technological connectivity, while handling the added pressures that speed brings to financial firms.

2. *Need for Enormous Resources.* Global players in the financial industry require enormous resources, a trend that is leading, first, to rapid mergers and acquisitions of firms and, second, to strategic alliances between financial exchanges in

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different countries. Both of these phenomena are manifesting on a scale and in combinations few had foreseen a decade ago. Examples from the late 1990s, when these trends took off, are the mergers of Citibank with Travelers Group (which few had predicted just two years earlier), Salomon Brothers with Smith Barney, Bankers Trust with Alex Brown, and so on. This wave of mergers was so sharp that, subsequently, when powerful firms such as Deutsche Bank and Dresdner Bank each decided to purchase a U.S. security firm, they complained of a lack of suitable candidates. One common opinion among analysts emerging in the early 2000s is that midsize firms will find it difficult to survive in the global market given global megafirms such as Morgan Stanley and Goldman Sachs. Indeed, the late 2000s saw a whole new wave of mergers and acquisitions as the crisis erupted. Increasingly common are mergers among accounting firms, law firms, insurance brokers—in brief, firms that need to provide a global service. Analysts foresee a system dominated by a few global investment banks, about twenty-five large fund managers, and an increasingly consolidated set of specialized service firms. A similar trend is expected in the global telecommunications industry, which will have to consolidate to offer a state-of-the-art, globe-spanning service to its global clients, among which are the financial firms; indeed, the early 2000s saw the demise of several large telecommunications firms and their partial absorption by some of the remaining firms.

Another kind of merger is the consolidation of electronic networks that connect a very select number of exchanges. Europe's more than thirty stock exchanges have been seeking to shape various alliances. Until recently, Euronext was Europe's largest stock exchange merger, an alliance between the Paris, Amsterdam, Lisbon, and Brussels bourses. Then came the merger of Euronext with the New York Stock Exchange (NYSE), and in 2011, the Deutsche Börse Group acquired 60% of NYSEEuronext. The London Stock Exchange has been the object of hostile takeover attempts since 2005. In the 1990s, the Tallinn Stock Exchange in Estonia and its Helsinki counterpart created an alliance, and a range of looser networks connecting exchanges were launched. For instance, NASDAQ, the second-largest U.S. stock market after the New York Stock Exchange, set up NASDAQ Japan, NASDAQ Canada, and several other such alliances. This gave investors in Japan and Canada direct access to the market in the United States. The Toronto Stock Exchange joined an alliance with the New York Stock Exchange (NYSE) to create a separate global trading platform. The NYSE is a founding member of a global trading alliance, Global Equity Market (GEM), which includes ten exchanges, among them Tokyo and Euronext. This enormous organizational innovation contributed to a sharp rise in the total value of the world's financial stock (equity market capitalization and outstanding bonds and loans), which reached what was then an all time high US$212 trillion at the end of 2010 (McKinsey 2011). By 2015, this number reached $294 trillion (Witkowksi 2015). (See generally Exhibits 5.14 5.15, and A.5.1 to A.5.4.)

Does the fact of fewer global players affect the spread of such operations? Not necessarily, because the firms or exchanges can keep operations and alliances across the

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EXHIBIT 5.14 ■ Largest Exchanges by Value of Share Trading in 2016 and 2015

Rank	Exchange	2016	2015	% Change
1	New York Stock Exchange	17,317	17,477	−0.9%
2	BATS Global Markets	13,682	14,217	−3.8%
3	Shenzhen Stock Exchange	11,605	19,611	−40.8%
4	NASDAQ–USA	11,070	12,515	−11.5%
5	Shanghai Stock Exchange	7,492	21,342	−64.9%
6	Japan Exchange Group Inc.	5,618	5,540	1.4%
7	BATS Chi-x Europe	2,641	3,158	−16.4%
8	London Stock Exchange	2,285	2,651	−13.8%
9	Euronext	1,766	2,076	−14.9%
10	Korea Exchange	1,672	1,929	−13.3%

Source: Compiled from data in World Federation of Exchanges (2017).

Note: Rank as of 2016. Values show in billions of U.S. dollars.

EXHIBIT 5.15 ■ Top Five Performing Broad Market Indexes, 2015

Rank	Exchange Name and Index Name	% Change 2015/2014
	Americas	
1	Bolsa de Comercio de Buenos Aires *Composite*	15.7%
2	NASDAQ–USA *Composite*	5.7%
3	Bolsa Mexicana de Valores *IPC CompMx*	0.6%
4	Bolsa de Comercio de Santiago *IGPA*	−3.8%
5	Bermuda Stock Exchange *BSX Index*	−3.9%

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Rank	Exchange Name and Index Name	% Change 2015/2014
Asia/Pacific		
1	Shenzhen Stock Exchange *SZSE Composite Index*	63.2%
2	NZX Limited *S&P NZX ALL*	13.6%
3	Japan Exchange Group *Topix*	9.9%
4	Shanghai Stock Exchange *SSE Composite Index*	9.4%
5	Hochiminh Stock Exchange *VN Index*	6.1%
Europe/Africa/Middle East		
1	Malta Stock Exchange *MSE Share Index*	33.0%
2	Irish Stock Exchange *ISEQ Overall*	30.0%
3	Moscow Exchange *Moscow Exchange Broad Market Index*	26.0%
4	Euronext–Lisbon *PSI General*	18.6%
5	Euronext–Brussels *BAS*	11.5%

Source: World Federation of Exchanges (WFE) Annual Statistics Guide/World Federation of Exchanges (2017) members.

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world. But it will strengthen the hierarchy in the global network. The value of institutionally managed assets stood at US$15 trillion by early 1999, rising to US$56.4 trillion in 2010 (Boston Consulting Group 2011). According to Boston Consulting Group, between 2008 and 2014, the value of institutionally managed assets grew at an annual rate of 5%, and between 2013 and 2014 alone, it grew 8%. However, between 2014 and 2015, growth remained more or less flat, rising to US$70.5 trillion in 2014 and US$71.4 trillion in 2015 (Boston Consulting Group 2016). Although the growth has seemingly stalled recently, it is important to note what have nonetheless been significant increases in the overall value of institutionally managed assets.

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The worldwide distribution of equities under institutional management shows considerable spread among numerous cities that have become integrated in the global equity market because of the deregulation of their economies and the whole notion of emerging markets as an attractive investment destination over the last few years. Thomson Financials (1999), for example, has estimated that at the end of 1998 (the last year for which Thomson Financials produced this information), twenty-five cities accounted for 83% of the world's equities under institutional management. (At the time, these twenty-five cities also accounted for roughly 48% of the total market capitalization of the world, which stood at US$22 trillion at the end of 1998.) However, this global market is characterized by a disproportionate concentration in the top six or seven cities. London, New York, and Tokyo together accounted for a third of the world's total equities under institutional management at the end of 1998.

These developments make clear a second important trend that in many ways characterizes the current global era. These various centers do not just compete with each other: there is collaboration and division of labor. In the international system of the postwar decades, each country's financial center, in principle, covered the universe of necessary functions to service its national companies and markets. The world of finance was, of course, much simpler than it is today. In the initial stages of deregulation in the 1980s, there was a strong tendency to see the relations between the major centers as one of straight competition, especially among the leading centers—New York, London, and Tokyo. But in my research at the time, I had already found a division of labor among these three centers, along with competition in certain areas. What we are seeing now is yet a third pattern: strategic alliances between firms across borders and between markets. There is competition, strategic collaboration, and hierarchy. But this can also generate massive failures and abuses when top management fails. This was the case in the highly publicized Enron case a decade ago and, more recently, in the Bernie Madoff fraud.

In brief, the need for enormous resources to handle increasingly global operations and the growth of complex central functions produce both tendencies toward concentration among the top centers of finance along with an expanding number of financial centers.

3. Denationalization of the Corporate Elite. Finally, national attachments and identities are becoming weaker for these global players and their customers. Thus, the major U.S. and European investment banks have set up specialized offices in London to handle various aspects of their global businesses. Deregulation and privatization have further weakened the need for *national* financial centers. The nationality question simply plays differently in these sectors than it did as recently as the early 1980s. Global financial products are accessible in national markets, and national investors can operate in global markets. It is interesting to see that investment banks used to split up their analyst teams by country to cover a national market; now they are more likely to do it by specialized sector.

In *Losing Control?* (Sassen 1996; see also 2008a: chap. 5), I described this process as the incipient denationalizing of certain institutional arenas, a necessary condition for economic globalization as we know it today. The sophistication of

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the global economy lies in the fact that its organizational side (as opposed to the consumer side) needs to involve only strategic institutional areas—most national systems can be left basically unaltered. China is a good example. It adopted international accounting rules in 1993 because this was an advantage for a country with an accounting system that differed sharply from the prevalent Anglo-American standards generally being used in international transactions. But China did not have to go through a fundamental reorganization of its whole economy to do this: it only used those standards when transacting with foreign firms. Japanese firms operating overseas adopted such standards long before Japan's government considered requiring them. In this regard, the organizational side of globalization is quite different from the global mass-consumer markets in which success necessitates altering national tastes at a mass level.

This process of denationalization in the realm of the economy has an instrumental and practical connotation, often with negative consequences for the national economy and national firms. For example, I argue that denationalization of key economic sectors in South Korea and Thailand was facilitated by the 1997 through 1998 Asian financial crisis because it enabled foreign firms to buy large numbers of companies and property in these countries where national elites had originally been in full control. But this process also led to a vast number of failures of medium-sized national firms, as well as multiple foreign-entity takeovers of healthy national firms that had been serving largely national customers. In some ways, the Asian financial crisis partially functioned as a mechanism to denationalize control over key sectors of the South Korean and Thai economies; even as they allowed the massive entry of foreign investment, leading national firms had never fully relinquished control. This is another instance of growing concentration of control over capital through the geographic dispersal of a firm's operations. This is, in many ways, a highly problematic feature of today's global economy.

Major international business centers produce what can be thought of as a new subculture. In a witty insight, *The Economist* (1997), in its coverage of the January 1997 World Economic Forum meeting held in Davos, titled one of its stories "From Chatham House Man to Davos Man," alluding to respectively, the "national" and the "global" version of international relations). The resistance to mergers and acquisitions (especially hostile takeovers) in Europe during the 1980s and 1990s and to foreign ownership and control in East Asia, points to national business cultures that are somewhat incompatible with the new global economic culture. I find that global cities and financial centers contribute to denationalizing the corporate elite. Whether this is good or bad is a separate issue, but it is, I believe, one of the conditions for setting in place the systems and subcultures necessary for a global economic system.

CONCLUSION: THE SPACE ECONOMY OF CENTRALITY

What are the spatial consequences of this new economic core of activities? What is the urban form that accommodates them?

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Three distinct patterns are emerging in major cities, their surrounding regions, and, increasingly, in the rest of the world. First, beginning in the 1980s, there was an increase in the number of firms in the centers of major cities, mostly explained by growth in leading sectors and ancillary industries. This type of economic growth in city centers also took place in some of the most dynamic cities in rapidly growing Global South countries, such as Seoul, Bangkok, Taipei, Mumbai, São Paulo, Mexico City, and Buenos Aires. Second, along with this central city growth came the formation of dense nodes of commercial development and business activity in a broader urban region. Except in the export-oriented growth poles (discussed earlier) and in cities such as Johannesburg, which are undergoing major social transformation in their centers; this pattern is less evident in developing countries. These nodes assumed different forms: suburban office complexes, edge cities, exopoles, and urban agglomerations in peripheral areas. *Edge cities* and *exopoles* are significant concentrations of offices and business activities alongside residential areas in peripheral areas that are completely connected to central locations via state-of-the-art electronic means. Until recently, these urban forms were only rarely evident in developing countries, where vast urban sprawl with a seemingly endless metropolitanization of the region around cities has been the norm. But by 2010, it had become clear that they are now present across the world (Ciccolella and Mignaqui 2002; Ren 2011). In developed countries, the revitalized urban center and the new regional nodes together constitute the spatial base for cities at the top of transnational hierarchies. The third pattern is the growing intensity in the *localness*, or marginality, of areas and sectors that operate outside that world market-oriented subsystem, and this includes an increase in poverty and disadvantage. A significant exception to this trend toward a peripheral localness is the emergence of what I call global slums—major slums in global cities that are positioning themselves as actors on a global stage (Sassen 2011b). The general dynamic that emerges from these three patterns operates in cities with very diverse economic, political, social, and cultural arrangements. By now, a vast scholarship exists on these trends and spatial arrangements that took off in the 1980s and continued through the early 2000s (see, among others, Cobos 1984; Gans 1984; Hausserman and Siebel 1987; Henderson and Castells 1987; Cheshire and Hay 1989; Benko and Dunford 1991; Scott 2001; Krause and Petro 2003; Abrahamson 2004; Gugler 2004; Rutherford 2004; Amen, Archer, and Bosman 2006; Sassen 2008b).

A few questions spring to mind. One question is whether the type of spatial organization characterized by dense strategic nodes spread over the broader region might constitute a new form of organizing the territory of the center. This would contrast with the more conventional view that sees it as an instance of suburbanization or geographic dispersal. I argue that insofar as these various nodes are articulated through digital and other advanced communication systems, they represent the new geographic correlate of the most advanced type of center. The places that fall outside this new grid of digital highways are peripheralized. We might ask whether this is more of a phenomenon of the modern day than of

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earlier periods, when suburban and noncentral areas were integrated into the center because they were primarily geared *to* the center. If anything, today the pattern is for nodes in an urban region to develop transversal relations rather than only a radial format with the major city at the center.

Another question is whether this new terrain of centrality is differentiated. Basically, is the old central city, which is still the largest and densest of all the nodes, the most strategic and powerful node? Does it have a sort of gravitational power over the region that makes the new grid of nodes and digital highways cohere as a complex spatial agglomeration? From a larger transnational perspective, these are vastly expanded central regions. This reconstitution of the center is different from the agglomerations still prevalent in most cities that fall outside the global city dynamic and the accumulation regime it entails. The reconstitution of the center at a larger metropolitan scale points to a reorganization of space/time dimensions in the urban economy (Sassen [1991] 2001: chap. 5).

Such a rescaling can enable the traditional perimeter of the city, a kind of periphery, to develop its full industrial and structural growth potential. For example, commercial and office space development has led to a reconcentration of economic activity, materializing in a variety of nodes in the urban periphery (Kotkin 2005). This geographic shift has much to do with the locational decisions of transnational and national firms that reconstitute the urban peripheries as the growth centers of the most dynamic industries. This process is not the same as the largely residential suburbanization or metropolitanization.

Differences in the pattern of global city formation exist in parts of the United States compared with parts of Western Europe (e.g., Fainstein 1993; Hitz et al. 1995; Graham and Marvin 1996; Allen, Massey, and Pryke 1999; Marcuse and Van Kempen 2000; Abrahamson 2004; Rutherford 2004; Kazepov 2005; Derudder et al. 2010). In the United States, major cities such as New York and Chicago have large centers that have been rebuilt many times, given the brutal neglect suffered by much urban infrastructure and the imposed obsolescence so characteristic of U.S. cities. This neglect and accelerated obsolescence produce vast spaces for rebuilding the center—a rebuilding determined by the requirements of the prevalent regime of urban accumulation or by the urban economy's dominant pattern of spatial organization.

In Europe, urban centers are far more protected, rarely containing significant stretches of abandoned space; the expansion of workplaces and the need for "intelligent" buildings necessarily will have to take place partly outside of the old centers. One of the most extreme cases is the complex of La Defense, the massive, state-of-the-art office complex developed right outside Paris to avoid harming the built environment inside the city. This is an explicit instance of government policy and planning aimed at addressing the growing demand for central office space of prime quality. Yet another variant of this expansion of the center onto hitherto peripheral land can be seen in London's Docklands. This vast underutilized harbor area in London became the site of an expensive, state-of-the-art development project to accommodate the rapidly growing demand for office space, especially

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in the financial sector. The financial and real estate crisis of the early 1990s resulted in the collapse of the project. But by 1993, reorganization under a new consortium and a rapid demand by worldwide buyers brought full occupancy of the complex (Fainstein 2001). Similar projects for recentralizing peripheral areas were launched in several major cities in Europe, North America, and Japan during the late 1980s. What was seen in the 1980s as a derelict marginal area, Times Square in New York City, had become a prime office, commercial, and entertainment area by the late 1990s (Fainstein and Judd 1999). As with the Docklands and Times Square redevelopments, many efforts did not succeed until the mid- or late 1990s, years after the crisis of 1990 and 1991. What was once the suburban fringe and urban perimeter evident in many of today's global and other cities has now been reconstituted as some variant of central city space itself.

Toward Novel Spatial Formats: Global Cities and Megaregions

The preceding sections signal the emergence of novel spatial formats caused by major shifts in the scales, spaces, and contents of economic activity. Among the more prominent of these are global cities and megaregions, both of which are contributing to a whole series of old and new global intercity geographies. Such shifts, in turn, call for changes in our interpretations and policy frameworks to adjust to these novel spatial formats and to maximize their benefits and distributive potential. By now, considerable scholarship exists on megaregions (e.g., RPA 2007; Xu and Yeh 2010).

My concern here is different from the prevailing discussions, which tend to focus on geographies and on governance issues. Megaregions and global cities are different formats, but elsewhere (Sassen 2007) I have argued that analytically, we can identify similar dynamics at work in each. Two such dynamics stand out. One is scaling and its consequences—in this case, megaregional scaling and global scaling. The other dynamic is the interaction between geographic dispersal and new kinds of agglomeration economies, which in this case are operating, respectively, within a megaregion and in global cities. Specifying a common analytic ground for these two very diverse spatial formats should enable us to develop a sharper approach to empirical research and, possibly, policy. These diverse spatial formats also should help in assessing the extent to which policy decisions can encourage greater economic integration between a country's more globalized city (or cities) and its other areas currently performing subordinate functions within the national territorial hierarchy. In other words, taking a megaregional scale might help in connecting the "winners" and the "laggards." I have already discussed global cities in this chapter, so in what follows, I examine these questions through the lens of the megaregion.

The fact that the megaregion is a scale that includes both globalizing and provincial cities, as well as high- and low-development areas, presents us with an opportunity: connecting winning areas and lagging areas within a country's

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megaregions. One consequence of such connecting is that laggards can become part of a policy effort that now only focuses on winners, as is typical with the "targeting" of resources to enable the formation of world-class cities and silicon valleys. More precisely, laggards can be enabled to become dynamically interconnected with winners within a megaregion in ways that replicate current practices at the global scale. Notably, outsourcing can be refigured in novel ways at a smaller scale, thanks to the fact that low-cost areas are located within a megaregion.[9] The hope would be that rather than pursuing the usual economic policies focused on the most advanced sectors, this would make a strong case for concentrating on the poorer regions, not as charity but as a recognition that they are also part of the advanced sectors; after all, when major firms outsource jobs to low-cost areas across the world, they are outsourcing some of *their* tasks. Many advanced economic sectors combine sufficiently diverse tasks, resulting in what are both preferences for lower-cost areas for some of these tasks and for dense high-cost areas for others.

To mention just one of several examples, this type of framing would bring value to poorer areas within the most developed countries because it offers the opportunity to use household activities that are currently outsourced to low-wage countries. One key aim should be to avoid a race to the bottom in workplace and wage standards as happens when these activities are sent offshore, which might be easier to ensure when both headquarters and low-wage activities are located in the same country. A second aim should be to provide alternative or complementary development paths to what is today's prevalent path, that is, the policy preference for high-end economic activities, such as biotech parks and luxury office parks.

Parallel to the undertaking of incorporating laggards into policy frames, which has historically only targeted mostly successful areas, is the effort to understand how cities in the middle range of urban hierarchies fit in today's global intercity geographies. In the case of the United States, for instance, many of these mid-range cities are also part of megaregions. The analytic bridge between megaregions and intercity geographies is that the operational chains of a growing number of firms today are part of both of these spatial formats (see Sassen 2008b; Derudder et al. 2010). This opens up a whole new research agenda concerning economic globalization and place, in addition to the existing scholarship on global cities. One component of this research is whether a megaregion can accommodate a larger range of the operations constituting a firm's value chain—from high-agglomeration sites to dispersal sites. Practically speaking, this points to the possibility of bringing into, if not back to, a megaregion the services and goods-producing jobs and operations that have been sent offshore because of lower wages and fewer regulations abroad. Can these jobs and operations be reinserted in the low-growth, low-cost areas of a megaregion? What type of planning would it take, and can it be done in ways that optimize the benefits for all involved, not only firms, but also workers and localities? This would expand the project of optimizing growth beyond office parks and science parks, the preferred options today, moving across far more diverse economic sectors. It would use the lever of the megaregional scale to provide diverse spaces catering to different types

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of activities, ranging from those subject to both high- and low-agglomeration economies. And, finally, the megaregional scale would help in optimizing the growth effect arising from the interactions of some of these diverse economies. This growth effect would be optimized by re-regionalizing some of the low-cost operations of firms today spread across the country and the world.

This way of thinking about the megaregional scale raises the importance of planning and coordination to secure optimal outcomes for all parties involved, including the challenge of securing the benefits firms pursue when they disperse their operations to low-wage areas. This would work for some types of economic sectors and firms, but not all. A variety of activities that have been outsourced to other countries have not been successful and have ultimately been repatriated—they range from airline sales agents to particular types of design work in industries as diverse as garments and high tech. But many of these outsourced activities are faring well as far as the firms are concerned. Research and specific policies would be needed to establish the what, how, and where of the advantages for the pertinent firms in accessing low-wage workers within the United States. This includes understanding how location of these low-cost components in the megaregion where a given firm is headquartered could compensate for higher costs. It may require megaregional investment in developing low-cost areas for such jobs—a kind of rural enterprise zone.

A potentially positive macrolevel effect can be found in the repatriation of some of these jobs. As long as a race to the bottom can be avoided and a certain level of consumption capacity can be secured, repatriation poses a promising option for firms. Companies can achieve this goal by ensuring reasonable wages and certain kinds of indirect subsidies in the low-income areas of a region. Repatriation can also bring about a specific positive outcome for a megaregion's less developed areas insofar as lower-wage households will have more income. Lower-wage households tend to spend a larger share of their funds in their place of residence because they lack the investment capital of the upper-income strata, which is more likely to allocate most of its funds to overseas investments. Finally, this is also only one element in the larger challenge of securing more equitable outcomes (for an analysis of options see, e.g., Henderson 2005). It is important to ask about the distributive effects of the current configuration, as well as the potentially optimized outcomes we have explored here. Sufficient evidence suggests that the extreme maldistribution of economic growth benefits is undesirable in the long run.

These ways of specifying the meaning of a megaregion (or a region) take us beyond uses of the term as a sort of conceptual "packaging" to a more dynamic concept of the megaregion. Besides urbanization advantages, a megaregion is of a sufficiently large scale to optimize the benefits of diverse and interacting low- and high-income areas. What the megaregion offers in this context is a wider variety of locations than simply a city or a metro area—it offers locations featuring high-agglomeration economies, as well as locations whose strength lies in dispersal. This would mean a direct growth effect between a megaregion's high- and low-agglomeration sites: the more the former grow, the more the latter will also grow.

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Then it becomes desirable for a megaregion to maximize the copresence of these two types of locations. It also means freeing the lower-income area from its policy designation as a hopeless economic laggard.

In practical terms, megaregions face what are clearly massive challenges in achieving this type of copresence. For example, a potential challenge could lie in maximizing the extent to which a megaregion can contain both the agglomeration and dispersal segments of a firm's chain of operations. For one, this is a counterintuitive proposition. It is not easy to see why a megaregion's highly dynamic economic spaces (the central areas of its global cities and silicon valleys), anchored by the headquarters of global and national firms, might actually be partly fed and strengthened by developing the "dispersal locations" of those same firms. Thinking of developing such dispersal locations as one way of taking advantage of negative externalities might make it more acceptable to the skeptics—you might as well go for activities that benefit from geographically dispersed arrangements once you hit excess congestion disadvantages. But one option at this point is of course such items as golf courses and ex-urban oversized luxury housing. This argument could be countered because megaregions tend to contain much land that is not optimal for such uses but that could nonetheless prove optimal for developing dispersal locations. Further, and critical to some of my substantive concerns for disadvantaged areas, these areas could benefit from such development—as long as a race to the bottom can be avoided. Finally, we also must consider the question whether this connecting of winners and laggards within a country's megaregions can perhaps be extended even further. By strengthening the connections between winners and laggards within the overarching global political economy, can this new approach to scaled, urban industry apply to cross-border, intercity networks as well?

Notes

1. For two extraordinary and different types of accounts, see Braudel (1984) and King (1990).
2. Examples of these networks are Dubai's participation in the London Stock Exchange and other exchanges. Qatar Holding, the investment arm of Qatar Investment Authority, and NYSE Euronext established the Qatar Exchange. To this we should add the Gulf States' sovereign wealth funds, with Abu Dhabi's fund being the second largest in the world (Sovereign Wealth Fund Institute 2017). The assets of the top ten Gulf States' sovereign funds (including Abu Dhabi, Kuwait, and Qatar) are estimated to be US$2.9 trillion, half of which are placed in international securities (Ali 2017).
3. Islamic finance will generate whole new sets of global circuits for Gulf cities. Although Malaysia has been the hub of Islamic finance, Dubai gained much ground over the last few years, and Abu Dhabi's Islamic Bank has been developing Sharia wealth management opportunities in Asia.

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4. For instance, Abu Dhabi's Masdar City has invested in what might be the world's largest wind farm to be located in the Thames Estuary.
5. I would say the same about Dubai's use of the term for some—not all—of its "free zones" because these are about more than facilitating the operations of foreign actors as is the typical format worldwide.
6. See *The Global City* ([1991] 2001).
7. An aspect that is often misunderstood is that the making of the space that is the global city includes key decisions, regulations, and authorizations of particular components of national governments, notably ministries of finance, central banks, and departments of commerce. The work of these government agencies is strategic for the development of the global city (see Sassen 2008a: chap. 5). This is different from free-trade zones, where the effort is to keep the state out. Thus, my analysis suggests that these new developments in the Gulf region are going to entail involvement by particular, specialized branches of their governments.
8. Securitization is the replacement of traditional bank finance with tradable debt; for example, a mortgage is bundled up along with thousands of others into a package that can be traded on specialized markets. This is one of the major innovations in the financial industry in the 1980s. Securitization made it possible to sell all kinds of (supposedly worthy) debt, thereby adding to the overall volume of transactions in the industry.
9. This is a topic I explore more in depth in my book *Territory, Authority, Rights: From Medieval to Global Assemblages* (2008a). Critiquing Wallerstein's World Systems Theory, for "a middle-range analysis grounded in local structures and practices, out of which the mechanics of the world-system emerge. While Wallerstein's analysis can account for the form of a restructured world economy, its matching to an historically prior contradiction invites charges of a teleological analysis. I hope to recover some of the contingency and openness of the process of restructuring, grounded in the work of states and state actors to restart accumulation. World-systems remain capitalist not only because of the abstract necessities of a world economy, but also because of particular decisions by powerful political actors (Jessop 1999)." A more elusive dynamic was also at work of national unity centered on royal wealth, and eventually the wealth of merchants, banks, and manufacturers, as a public good. These two phases in the formation of a world scale play a role in the reconstruction of the national territorial state. "The concern is with analytical and theoretical questions rather than historiography per se; and, again, critical to the analysis is that capabilities can be shifted toward objectives other than the original ones for which they were developed. Such shifts require a foundational reorientation in existing systems. Here that shift is national construction through the development of imperial economic geographies, and the formation of two new historic subjects as legal personae that are agents in the making of the shift. They are a new class of legitimate owners of means of production where once the sovereign and the nobility had exclusive ownership, and a new class of workers legally constructed as disadvantaged, particularly though not exclusively in relation to their employees" (p. 76).

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CHAPTER 5

Appendix

EXHIBIT A.5.1 ■ Largest Exchanges by Investment Flows, 2015–2016

Rank	Exchange	2016	2015	% Change in US$
1	Luxembourg Stock Exchange	1,182.8	985.2	20%
2	London Stock Exchange	500.2	597.0	−16%
3	Korea Exchange	453.1	539.8	−16%
4	National Stock Exchange of India Limited	322.9	248.9	30%
5	Singapore Exchange	175.4	118.1	49%
6	Hong Kong Exchanges and Clearing	99.8	96.8	3%
7	Taipei Exchange	77.5	63.4	22%
8	Japan Exchange Group Inc.	87.9	55.8	58%
9	Bolsa de Comercio de Buenos Aires	61.3	49.6	24%
10	Moscow Exchange	77.8	42.5	83%

Source: Compiled from data in the World Federation of Exchanges (2017).

Note: Rank as of 2016. Value shown in billions of U.S. dollars excludes NYSE because of lack of data availability.

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EXHIBIT A.5.2 ■ Largest Exchanges by Total Value of Bonds Traded in 2016 in US$

Rank	Exchange	US$ billions 2015	US$ billions 2016	% Change in USD
1	Tel Aviv Stock Exchange	8,854.4	9382.9	6.0%
2	Korea Exchange	7,923.0	8177.4	3.2%
3	Nairobi Securities Exchange	4,186.0	6055.0	44.6%
4	London Stock Exchange	4,929.0	4,602.8	–6.6%
5	Hochiminh Stock Exchange	587.0	3,455.0	488.6%
6	Shanghai Stock Exchange	9,047.0	2,648.2	–70.7%
7	Bolsa Mexicana de Valores	2,393.0	1,457.0	–39.1%
8	Moscow Exchange	619.8	1,091.4	76.1%
9	Bolsa de Comercio de Buenos Aires	1,133.9	1,088.2	–4.0%
10	Shenzhen Stock Exchange	1,255.2	973.2	–22.5%

Source: Compiled from data in the World Federation of Exchanges (2017).

Note: Rank as of 2016.

EXHIBIT A.5.3 ■ Largest Growth by Total Value of Bond Trading in 2016 in Percentage Change in US$

Rank	Exchange	% Change 2015/2016
1	Hochiminh Stock Exchange	488.6%
2	BM&F Bovespa (São Paulo, Brazil)	353.1%
3	Ukrainian Exchange	222.6%
4	BRVM (West Africa SE)	163.3%
5	Port Moresby Stock Exchange	88.9%
6	Moscow Exchange	76.1%
7	Nigerian Stock Exchange	71.4%
8	Bucharest Stock Exchange	68.2%
9	Belarusian Currency and Stock Exchange	63.3%
10	National Stock Exchange of India Limited	46.4%

Source: Compiled from data in the World Federation of Exchanges (2017).

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EXHIBIT A.5.4 ■ Derivatives by Types of Market

Top Five Exchanges by Value of Securitized Derivatives Traded in US$ in 2016

Rank	Exchange	US$ billions 2016	US$ billions 2015	% Change
1	Hong Kong Exchanges and Clearing	528,041.8	818,015.9	–35.4%
2	Deutsche Börse AG	40,979.6	50,127.2	–18.2%
3	Tel Aviv Stock Exchange	34,664.4	49,856	–30.5%
4	LSE Group	26,018.8	37,865.5	–31.3%
5	The Stock Exchange of Thailand	18,612.7	9,661.9	92.6%

Top Five Exchanges by Single Stock Option in Number of Contracts Traded in 2016

Rank	Exchange	Number of Contracts Traded		% Change
		2016	2015	
1	BM&F Bovespa (São Paulo, Brazil)	692,006,941	662,520,467	4.5%
2	NASDAQ–USA	512,237,363	584,042,786	–12.3%
3	NYSE	368,820,227	416,449,716	–11.4%
4	Chicago Board Options Exchange	364,374,899	392,984,619	–7.3%
5	International Securities Exchange	269,673,556	312,556,350	–13.7%

Top Five Exchanges by Single Stock Futures in Number of Contracts Traded in 2016

Rank	Exchange	Number of Contracts Traded		% Change
		2016	2015	
1	Moscow Exchange	254,711,570	306,782,671	–17.0%
2	National Stock Exchange of India	172,712,809	257,370,023	–32.9%
3	Korea Exchange	172,120,372	163,931,217	5.0%
4	EUREX	101,005,147	122,859,539	–17.8%
5	Thailand Futures Exchange	33,826,624	19,708,113	71.6%

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Top Five Exchanges by Stock Index Options in Number of Contracts Traded in 2016

Rank	Exchange	Number of Contracts Traded		% Change
		2016	2015	
1	National Stock Exchange of India	1,034,997,570	1,893,555,261	−45.3%
2	Chicago Board Options Exchange	433,316,741	408,278,277	6.1%
3	EUREX	388,839,391	401,387,669	−3.1%
4	Korea Exchange	337,701,337	483,597,487	−30.2%
5	TAIFEX	167,732,568	192,190,964	−12.7%

Top Five Exchanges by Stock Index Futures in Number of Contracts Traded in 2016

Rank	Exchange	Number of Contracts Traded		% Change
		2016	2015	
1	Chicago Mercantile Exchange (CME) Group	609,691,636	564,922,595	7.9%
2	EUREX	498,173,245	429,805,326	15.9%
3	Japan Exchange Group	294,100,363	312,436,348	−5.9%
4	Moscow Exchange	236,104,126	195,077,549	21.0%
5	BM&F Bovespa (São Paulo, Brazil)	170,157,338	106,949,142	59.1%

Source: Compiled from data in the World Federation of Exchanges (2017).

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