

# *Predatory Formations Dressed in Wall Street Suits and Algorithmic Math*

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*This article examines how assemblages of complex types of knowledge and technologies—including algorithmic mathematics, law and accounting, and high-level logistics—have generated complex predatory formations. The complexity of these formations tends to camouflage their predatory character. Further, such formations are systemic in nature. They are not produced by an elementary seizure of power. Predatory formations are often beyond the reach of ordinary policy responses, in good part because they tend to assemble elements of separate domains into novel configurations. The focus here is on one of the more powerful and complex predatory formations, (high) finance. And the effort is to explain how even the most sophisticated financial instruments require certain elementary and brutal steps, resulting in highly degraded socio-economic outcomes. The sub-prime mortgage developed in the early 2000s differentiates itself from the original 1970s concept in that its aim was not to enable access to housing. Its aim was and is to use the actual physical good (the house) to develop an asset-backed security for the financial system itself.*

ONE OF the major challenges in struggles for a more just society is the rise of complex predatory formations. In using this type of formulation, my effort is to emphasise some distinctions often lost even in the critical scholarship about today's political economy, in both global and national approaches. Here I provide a brief description of what I mean by such types of formations, which I have developed in great detail elsewhere (2008: chs 4 and 5, 2014 chs 1 and 3). A first point is that the complexity of these formations easily camouflages their predatory character: there is often no self-evident brutality as we might see it in a sweatshop. On the contrary, the key components include elements from some of the most admirable forms of complex knowledge and technologies we have generated: elements, and only that, from advanced versions of law and accounting, from specific technical

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capacities, from algorithmic mathematics, from high-level logistics and so on. These formations include powerful elites and owners of capital, but also these are partial factors in their functioning; one way of understanding this partial character is that even if we eliminated such owners and managers, we would not ipso facto eliminate these predatory formations. Major capital owners and major managers matter in the current shaping of economies, but by themselves they could not have achieved the extreme concentration of wealth and unaccountable power they now have across the world. This mix of elements and its guiding logics has led to escalated systemic capacities for massive capture at the top, environmental destruction on a scale we have not seen before, and a significant rise in the expulsion of people from reasonable life options even in rich countries.

An important feature of these predatory formations is that they are systemic. They are not elementary power grabs. They are constituted through the incorporation of elements from key domains and capabilities of our current leading economies and societies; as already mentioned, they include pieces of diverse core forms of knowledge and organisational alignments. We might contrast this systemic aspect with the image of an invader who comes, grabs and leaves with the loot rather than using what was grabbed to build something new in situ. Further, their existence also signals that simply getting rid of the rich is not enough to neutralise these formations. These formations are mostly beyond the reach of the usual policy responses, especially given the tendency in policy-making towards constructing silos for each policy domain. In sharp contrast, the emergent formations that concern me here cut across such domains and basically reassemble pieces of each domain into novel formations. Contesting or eliminating such complex mixed assemblages of core elements would require the will to disassemble them or destroy them, though there is always the possibility of auto-destruction since they tend to abuse their own power.<sup>1</sup>

Here I will focus on a few key elements of one of the major predatory formations of our times that is also among the most complex ones: (high) finance. The usual way of understanding finance is through a particular set of high-end components: some of the most advanced uses of digital technologies, the mathematics of physics rather than the more elementary math of standard economics, practitioners which include some of the best minds and so on.<sup>2</sup> This is correct as far as it goes, but it is, I argue, an incomplete representation of the domain. The notion I develop in this article, to wit, that we can link finance with extreme degradation, as has been done, for instance, with corporations that outsource manual work (e.g., Aneesh, 2009; Beneria & Feldman, 1992; U.S. Department of State, 2015; World Bank, 2015), is not part of the general scholarship about finance nor is finance usually linked to degraded manual labour. In this, finance is also a contrast with many advanced economic sectors where we can make such links easily, notably the degraded and unhealthy moments in the production of advanced electronic components.

To incorporate physical degradation in the case of the financial sector requires expanding the understanding of finance so we can get at a far more inclusive assemblage of elements than is usual in studies of finance. Further, this expanded assemblage can include some very elementary components rarely associated with

finance. Constructing such an expanded domain for finance makes visible that even extremely complex and sophisticated financial instruments can actually include some very elementary and brutal steps in their production process and highly degraded socio-economic outcomes. My effort here is, then, to capture a more encompassing operational field for finance: an assemblage of algorithmic math and advanced technologies that finds the grist for its mill by incorporating very modest elements at the other extreme of the knowledge and technical vector.

There are other such much admired and respected domains typically represented by complex forms of knowledge, which can also be shown to function in a far more expansive operational space than is usual, a space that can include extreme degradation—that is, that includes elements typically left out of the description, understanding and content of that domain. I argue that we need to re-position such domains in ways that allow us to capture the full operational space through which they are constituted. The tendency is to go in the opposite direction: separate the most complex moment of knowledge and sophistication from other moments that often contain elementary physical degradation.

We need to recover the full geographies of our leading contemporary economic sectors. Elsewhere (2014), I have examined a range of advanced sectors through the framing of such expanded operational fields. Seen from the other end—the degraded moment—we can see a similarly unilateral focus in much research on such practices as outsourcing.

The question I examine in this article actually plays out in diverse domains. One such formation includes the familiar practice we call outsourcing. There is a vast body of research and information on outsourcing and its exploitative and brutal features. I add to this focus on the actual tasks and workers the larger formations within which these function. The execution of that outsourcing includes brilliant engineering, logistics, lawyering, accounting and negotiations with host governments to push for weakening some of their laws and environmental standards. Further, one of the key logics, mostly unrecognised because the focus is on the brutality of outsourcing, is that stock markets register a firm's willingness to outsource as a positive indicator that can, hence, raise stock values (Sassen, 2014, ch 1) because it shows that the firm is willing to cut whatever costs it can in order to raise profits. In short, the argument I develop here for financial instruments also holds for other types of advanced economic sectors. Another example is the world of the cargo ship-making industry. Building these huge ships involves extraordinary engineering, advanced materials science, specialised knowledge about oceanic streams and physics. But when the ships become obsolete, they are often taken to countries with much low-wage labour, notably India, and dismantled by hand—an extremely exploited workforce, with no proper protections essential to this work (protections from cuts, toxic materials, etc.) and with no regard to the poisonous environment. In short, an extraordinary product of complex forms of knowledge contains within it a zone of extreme degradation of workers and the environment.<sup>3</sup>

In what follows, I focus on one specific case in finance. It captures the extent to which finance is actually bi-modal. We cannot fully understand finance if we keep

representing it only through its most advanced components. The case I discuss here contains two extremes: an admirably complex instrument applied to a simple  $x$  in a brutal way in order to secure a positive outcome for finance. This is a different assemblage of elements from the more familiar ones we see, for example, in studies of outsourced work in low-wage countries, a focus that dominates the larger subject.

### **From Consumption to Extraction**

Over the last 30 years, finance has inserted itself in more and more domains of traditional banking. It has taken over functions from traditional banking that should have stayed there. Beyond banking, it has gained control over the logics organising many large corporations via its critical role as an intermediary economic sector—for instance, facilitating the merger of two large corporations, providing financing and specialised advice to firms that want to expand their global network of affiliates. Increasingly, it is also one of the best sectors for negotiating on behalf of client firms for better conditions by a host government. In short, besides the core financial function, the leading financial firms in any country today have economic and political roles. Finance has become a critical vector especially in the economies of developed countries.

It is this expanded operational space that leads me to argue that we need a sharp differentiation between finance and traditional banking. One way of conceiving of this difference can be simply put as follows. Traditional banking sells something it has (money) for a price (interest). Finance sells something it does *not* have, and therein lies both its complexity and brilliance, as well as its danger to other sectors: to do what it does, finance needs to develop instruments that allow it to invade other sectors in order to extract value from them, or, more concretely, to extract the grist for its mill. At its most brutal and innovative, I argue that finance is an extractive sector: once it has extracted what there is to extract, it moves on, leaving behind destruction. Yes, in this it is similar to mining, albeit dressed in much finer clothes. In contrast to finance, traditional banking gains when its borrowers grow, do well and keep borrowing. At its best, traditional banking enables others, while finance, at its best, destroys others to enable itself.<sup>4</sup>

Extraction, this extreme aspect of finance, is present in a broad spectrum of its sub-sectors. It is a process that has gone through many phases. Elsewhere (1991, 2008, 2014), I have examined in great detail how finance evolved from the 1980s to the current period. At the beginning, in the 1980s, one dominant phase was the proliferation of mergers and acquisitions of major traditional corporations. The highly specialised services, most notably finance, were the key intermediaries. What stood out in that period were the massive profits of the intermediaries and the frequent losses of the two firms that finance (and other intermediary sectors) helped merge. It became clear that the intermediaries were extractive sectors that could not lose even if the firm resulting from the merger went bankrupt. Since then, finance has gone through several phases of quite extraordinary innovations and

inventions. It wound up accumulating hitherto unheard of values, ranging from US\$630 trillion right before the 2008 crisis to well over US\$1 quadrillion today.<sup>5</sup>

Here I want to focus in some detail on a specific type of financial operation, one marked by the deployment of its complex instruments to execute a brutally elementary extraction: the so-called sub-prime mortgage innovation sold to about 15 million mostly modest-income households in the USA, of which 14 million wound up losing their homes according to the US Federal Reserve Bank.<sup>6</sup> At the other end, many high-level investors secured high profits by buying and promptly selling the instruments representing those mortgages—which, strictly speaking, contained only bits of each of the houses represented. Those who kept the mortgages on their roles, usually more traditional firms, had significant losses and many went bankrupt. This particular instrument has now spread to Europe where, overall, millions of households have now also lost their homes in countries as diverse as Hungary and Germany. The sub-prime mortgage is often described as the source of the 2008 crisis. This is only true as an ironic component of the crisis: the sub-prime mortgage crisis produced a crisis of confidence among financial firms and major investors. Its value was too small (maximum US\$800 billion dollars) to generate a crisis in a sector whose overall value stood at US\$630 trillion. It was the credit-default crisis of 2008, valued at US\$62 trillion that created the 2008 financial crisis.

The sub-prime mortgage crisis is a case that makes visible several key features easily rendered invisible in operations where the sites for extraction are powerful firms, investors or governments. Altogether, the elements in play are a very specific type of socio-technical assemblage. My aim is to bring to the fore the institutional spaces of finance through the notion of an operational field, rather than focus only on firms and markets. The argument is that global finance has de-bordered the narrowly defined notion of financial firms and markets, and financial institutions generally. It is not so much about institutions as about a larger assemblage of institutional, technical and geographic components (Sassen, 2008a: chs 4, 5, 7, pp. 348–365; see also Aneesh, 2006, 2009 on such a type of analysis for other sectors). These components include, among others, a broad range of financial and non-financial institutions, different types of jurisdictions, technical infrastructures and public and private domains. Housing, the focus here, fits into the case of private domains, a vast domain where housing is a very minimal component, especially given the modest property values in play. These features bring to the fore the aggressive pursuit of profits by finance, no matter how modest the assets, and, further, the extent to which finance is, as per my analysis, an extractive sector that leaves behind devastation.

### **Modest Housing Feeds a Leveraged Instrument**

The 1980s saw the financial industry produce multiple innovations that allowed the securitising of all sorts of debt (for a discussion of the issues and the pertinent bibliography, see Sassen, 1991, ch 4). These innovations also addressed small debts, notably individual consumer debt, through the bundling of millions of such small debts, from auto loans to credit card debt. At that time, mortgages were mostly

owned by highly regulated institutions and benefited from government protections. The deregulations that began in the 1980s and multiplied after that became the critical step to enable a vast expansion in what could be securitised. In the case of mortgages, securitisation meant they had to be pulled out of their long-time protective encasements (Aalbers, 2008; Gotham, 2006; Miles, 2007; Newman, 2009).

In the 2000s, housing became the instrument for yet another of the many innovations produced by the financial sector (Aalbers, 2009, 2012).<sup>7</sup> This innovation lengthened the distance between the financial instrument and the underlying asset (housing) to an extreme that is usually associated with high-risk innovative finance. This is not the first time the financial sector has used housing for such an instrument. The first residential mortgage-backed securities were produced in the late 1970s. The original intention was quite reasonable: to generate an additional source for funding the mortgages of modest-income households, besides the traditional one of bank deposits.

What I focus on here is different and has little connection to that older instrument. The sub-prime mortgage developed in the early 2000s was a particular kind of distortion of that original 1970s concept in that its aim was not to enable access to housing. Its aim was and is to use the actual physical good (the house) to develop an *asset-backed security*. Conceptually, I situate the current disastrous outcome for these households—millions losing their homes—as one component in the design of the instrument rather than as an accident or unforeseen effect. The instrument's purpose for the financial sector had nothing to do with the provision of housing. Housing was used to meet the demand from the high-level investment sector for an actual asset in the securities they were buying: they did not want yet another derivative based on an interest rate in turn based on another derivative, and so on, in an endless chain of elusive probabilities.

The conceptual setting for this proposition comes from an older book (Sassen, 2008a, chs 1, 8 and 9) where I develop a theory of change that has as one core dynamic the fact that condition *x* or capability *y* can shift organising logics and, thereby, actually change valence even if it may look the same. Thus, in the case of the focus in this article, I posit that specific capabilities, that is, sub-prime mortgages, were shifted to a different organising logic from that of the older 1970s type mortgages, and that this specific shift led to the elimination of supports for mortgage holders because the new logic of the financial sector did not reside in the provision of housing but in the expansion of securities markets. Thus, the expanding market for asset-backed securities—that is, the organising logic—marked the house as a material asset that could be made into an asset-backed security (and, further, spliced into multiple bits to expand the number of such securities), mixed up with high-grade debt (to ensure a good rating) and deployed immediately, that is, sold to investors. This operation could be executed, at the limit, in a few days or weeks, after which the asset-backed security passed on to a new owner who could operate under a similar logic. Billions were made in this way all based on very modest assets. As in a game of musical chairs, those who got hit by the crisis were those who still owned those securities.<sup>8</sup>

Elsewhere (2014: chs 1 and 3), I argue that the organising logic of this post-Keynesian period is now making legible its shape: at the centre of this logic is not the ‘valuing’ of people as consumers, but the extraction of value through a proliferation of complex instruments. The particular case of the sub-prime mortgage crisis can be conceptualised as one instance of systemic expulsion through the extension of an advanced mode of capitalist relations of production, in this case, specifically the financialising of non-financial domains; this financialising includes largely major economic sectors such as commodities, for example, oil and metals, and corporate real estate. Out of these well-established markets emerged the possibility of extending this particular type of financial instrument to modest-income households. Further, the latter market can go worldwide given low levels of home ownership in many countries (e.g., Sassen, 2008b, 2011, chs 2, 5 and 8) and the fact that even if households fail to pay the mortgage, financial profiteers will have made their sales of asset-backed securities.<sup>9</sup> In short, this is an assemblage of elements that has benefitted from brilliant minds in order to execute a very elementary extraction.

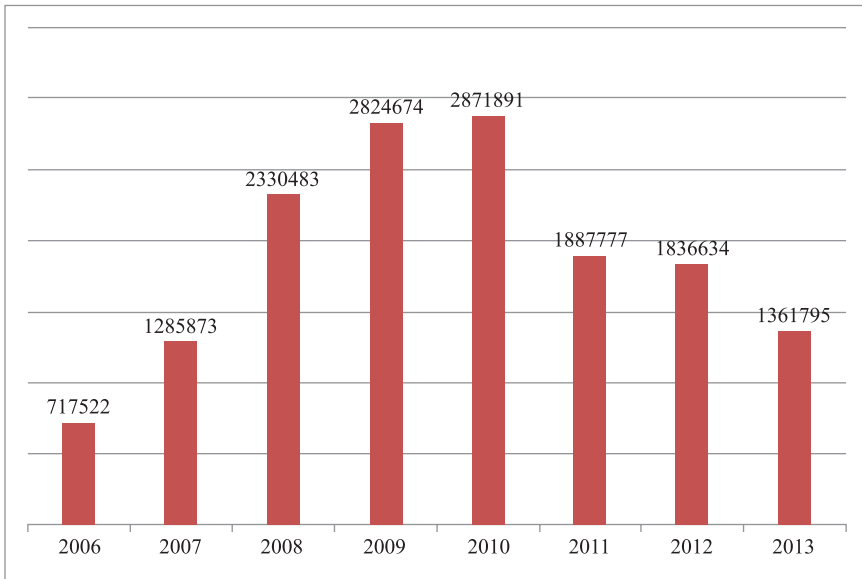
On the occasion of his departure from Federal Reserve, Bernanke, the retiring head, described many positives. But at one point he emphasised two conditions he described as intractable and the source of much malaise. One of these two was the fact of 14 million households losing their homes. The other was the proliferation of ‘dark pools’—private trading networks owned and run by major banks over which central banks have little power and about which they know very little (Sassen, 2014, pp. 142–145). I mention this to set a larger stage for what might be incorrectly seen, and has been so seen, as a private problem of a few million modest-income households.

### **When Modest Neighbourhoods Become a Strategic Space for Global Finance**

Modest neighbourhoods became a strategic space in this process, pushing the role of urban space as a source of profit well beyond the gentrification dynamic. The asymmetry between the worlds of investors (only some will be affected) and homeowners (once they default, they can lose the house and whatever they have already paid on it regardless of what investor happens to own the instrument at the time) creates a massive distortion in the housing market and the housing finance market.<sup>10</sup> Most investors can escape the negative consequences of home mortgage default because they buy these mortgages in order to sell them; there were many winners among investors for several years and only a few losers before the crisis broke in August 2007. But homeowners unable to meet their mortgage obligations cannot escape default. The fact that investors could have a positive view of sub-prime mortgages (poor-quality instruments) was bad for potential homeowners. We see here yet another sharp asymmetry in the position of the diverse players ‘enacting’ an innovation.

The following graphs show the numbers involved in what became a catastrophic event, reaching its high point in 2005 and 2006. The figures in Figure 1 are for foreclosures, which is basically a notice. They are based on data from the Fed, which

FIGURE 1  
Number of US Properties with Foreclosure Filings (2006–2013)



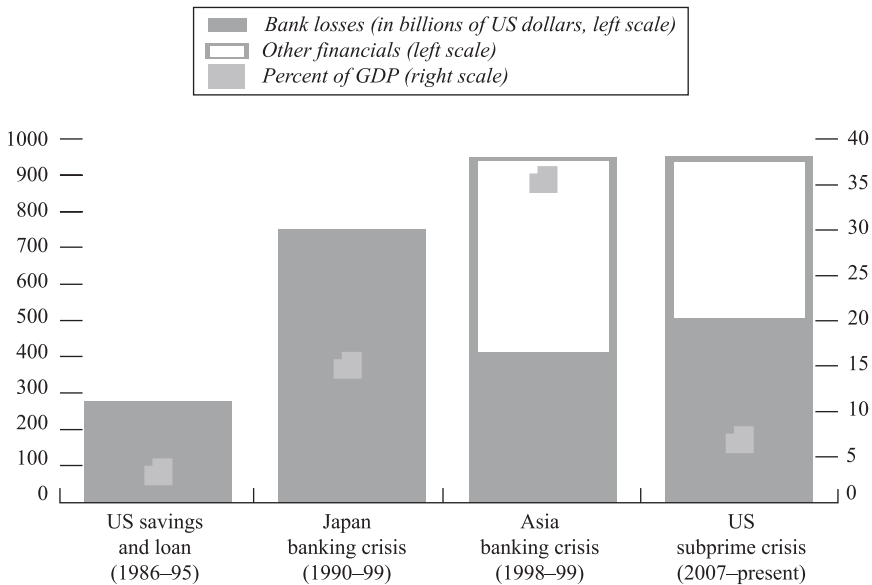
**Source:** Consolidated data from the Federal Reserve Bank, organised by RealtyTrac (2008, 2009, 2010, 2012, 2013, 2014, 2016).

shows that most of these became a loss of the house mostly ending in evictions. As already mentioned, in his final public overview of the state of it all, Bernanke said that over 14 million households had lost their homes. Figure 2 shows that this sub-prime mortgage crisis accounted for a significant debt compared to a series of other types of debt each of which contributed to a crisis. We should clarify that debt is a different measure than the ‘value of finance as measured by outstanding derivatives’ which, as indicated earlier in this text, by 2007 stood at US\$630 trillion. Against this context, the losses of US\$800 billion on the sub-prime mortgage crisis are minimal from the perspective of finance. Nonetheless, it added to the growing discomfort in the financial system about dubious quality of debt, and helped accelerate, and even tip finance into crisis, with the US\$62 trillion credit-default crisis. Clearly, these more recent crises operate at orders of magnitude that represent a massive scale-up in the numbers.

Extending mortgages to modest-income households, in itself a worthy objective, became a dangerous innovation. Since creditworthiness is not the issue with these mortgages, but numbers sold is, the likelihood that a borrower would eventually be unable to pay the mortgage was high. As with home equity loans, lenders often pushed these mortgages onto households, without full disclosure of the risks and changes in interest rates involved, and without taking account of the capacity of a household to meet the monthly mortgage payments.



**FIGURE 2**  
**Comparison of Financial Crises**



**Source:** World Bank and IMF staff estimates (IMF, 2008). Note that ‘present’ here is 2008. Retrieved February 2016, from <http://www.imf.org/external/pubs/ft/gfsr/2008/01/PDF/chap1.pdf>. Reproduced by permission of the International Monetary Fund.

Under these conditions, sub-prime and similar kinds of mortgages for modest-income households became a mechanism for extracting something from those households, a sort of primitive accumulation (Sassen, 2011). At its most brutal, the object of this extraction was a contract (the mortgage agreement) that represented an asset. And all that was needed, given financial engineering, was for the household to sign that contract—nothing more and nothing less. As already explained, the key aim was securing the contract, not the actual payment of the mortgage; the intermediaries securing the contracts each needed to get 500 such contracts signed per week to make it all work.

The available evidence does suggest that race and locality are among the variables at work in this process. Newman (2009) provides an important datum in this regard: a significant share of those who got sub-prime mortgages could have qualified for regular mortgages, a fact that eventually led to lawsuits, but the financial sector had by then succeeded in its narrow utilitarian objective.

Tables 1–3 capture the 2000–2007 period and the moment when the abuse of the concept of the sub-prime mortgage has exploded, and the sellers are aggressively seeking and getting those signatures in 2006 and 2007. Table 1 shows the extreme difference between Manhattan (one of the richest counties in the whole country despite having significant pockets of poverty) and other New York City counties.

**TABLE 1**  
**New York City, Rate of Sub-prime Lending by Borough, 2002–2006 (in per cent)**

	2002	2003	2004	2005	2006
Bronx	14.2	19.7	28.2	34.4	27.4
Brooklyn	9.2	13.9	18.4	26.1	23.6
Manhattan	1.3	1.8	0.6	1.1	0.8
Queens	7.7	12.6	17.8	28.2	24.4
Staten Island	7.2	11.1	13.9	19.9	17.1
NYC Total	7.0	10.8	14.9	22.9	19.8

**Source:** Furman Center for Real Estate & Urban Policy, 2007a, State of New York City's housing and neighbourhoods (<http://furmancenter.org/research/sonychan/2007-report/>, accessed 8 February 2016).

**TABLE 2**  
**Ten New York City Community Districts with the Highest Rates of Sub-prime Lending, 2006**

<i>Sub-borough Area</i>	<i>Percentage of Home Purchase Loans Issued by Sub-prime Lender</i>
University Heights/Fordham (Bronx)	47.2
Jamaica (Queens)	46.0
East Flatbush (Brooklyn)	44.0
Brownsville (Brooklyn)	43.8
Williamsbridge/Baychester (Bronx)	41.6
East New York/Starrett City (Brooklyn)	39.5
Bushwick (Brooklyn)	38.6
Morrisania/Belmont (Bronx)	37.2
Queens Village (Queens)	34.6
Bedford Stuyvesant (Brooklyn)	34.2

**Source:** Furman Center for Real Estate & Urban Policy, 2007a, State of New York City's housing and neighbourhoods (<http://furmancenter.org/research/sonychan/2007-report/>, accessed 8 February 2016).

**TABLE 3**  
**Rate of Sub-prime Lending by Race in New York City, 2002–2006 (in per cent)**

	2002	2003	2004	2005	2006
White	4.6	6.2	7.2	11.2	9.1
Black	13.4	20.5	35.2	47.1	40.7
Hispanic	11.9	18.1	27.6	39.3	28.6
Asian	4.2	6.2	9.4	18.3	13.6

**Source:** Furman Center for Real Estate & Urban Policy, 2007a, State of New York City's housing and neighbourhoods (<http://furmancenter.org/research/sonychan/2007-report/>, accessed 8 February 2016).

Thus, in 2006, less than 1 per cent of mortgages sold to Manhattan homebuyers were sub-prime compared to 27.4 per cent in the Bronx. This table also shows the sharp rate of growth over the years of sub-prime mortgages in all boroughs except Manhattan. Table 2 provides a more detailed map of neighbourhoods within boroughs. Table 3 shows that whites were the least likely to get sub-prime mortgages and that African Americans had a disproportionately high incidence of such mortgages as a share of all the mortgages bought by each of the four groups listed. One pragmatic interpretation is that minoritised households were far less likely to own a house already, so they became those easiest to persuade to sign. Whites, who have a far higher average income than all the other groups in New York City, were far less likely to have sub-prime mortgages than all other groups. Thus, of all mortgages bought by Whites in 2006, 9.1 per cent were sub-prime, compared with 13.6 per cent for Asians, 28.6 per cent for Hispanics and 40.7 per cent for Blacks. This table also shows the much lower growth rate in sub-prime lending from 2002 to 2006 among Whites compared with the other groups. In the most acute period, 2003–2006, it doubled from 4.6 per cent to 9.1 per cent for Whites, but basically tripled for Asians and Hispanics, and quadrupled for Blacks.

The costs extended to whole metropolitan areas. The loss of property tax income for municipal governments varied across different types of cities and metro areas. One study of ten metro areas with the largest losses of real gross municipal product (GMP) for 2007 due to the mortgage crisis estimates their total economic loss at over US\$45 billion (Global Insight, 2007). New York City losses were estimated at US\$10 billion, Los Angeles at US\$8.3 billion and Dallas, Washington and Chicago each at about US\$4 billion.

## Conclusion

### **The Innards of an Insidious Instrument of Enormous Complexity**

This insidious instrument is part of a longer history of specific types of innovations. The outcome of these complex creations and manipulations was disastrous for over 14 million households in the United States.

Two features of the innovation at issue here—the so-called sub-prime mortgage—make these sub-prime mortgages radically different from traditional mortgages. One is the extent to which these mortgages function as a financial item that can be bought and promptly sold. In a fast-moving market of buying and selling, ownership of the instrument may last for just 2 hours. Thus, when an investor has sold the instrument, what happens to the house itself becomes irrelevant to that investor; indeed, the lenders and sellers of sub-prime mortgages who went bankrupt in the 2007 sub-prime mortgage crisis were those who had not sold mortgages they had issued and, perhaps, were going to sell soon. Those who did sell them to other investors made significant profits. Further, these mortgages were mostly divided into hundreds of slices, which were then mixed up with high-grade debt and distributed across diverse investment packages; they could then be

sold as asset-backed securities, no matter how thin and how dubious that slice of a mortgage representing an actual material asset—which might not even have been a whole house but just a thin slice of the house. Often, there is no single component in such a package that actually represents the whole house. In sharp contrast to the business side, the owner loses the house if unable to meet the mortgage payments for a few months no matter who owns the instrument—the original seller or some other intermediary. There is always some investor or ‘servicer’ who owns it and hence can make claims, no matter how many times the mortgage has changed hands in the financial world. When the crisis hit, some of these holders lost all the value they had put into acquiring the mortgages or for developing them.

The second difference from traditional mortgages is the fact that the source of profit for the investor is not the payment of the mortgage itself plus interests. It is, rather, the desirability of having an actual asset (in this case, a bit of a house) backing the security in a period of extreme speculation when asset-backed securities had become rare in the high-finance circuit. And the aim of the innovation is to delink investor profits from the creditworthiness of the sub-prime mortgage borrower—the investor could benefit even if the mortgaged household went bankrupt, as long as that investor in turn had sold it. The critical condition to make it work for the high-finance investment circuit is securing a large number of sub-prime mortgage contracts to reach the volumes needed, and then sell those mortgages to other investors. Again, it was only those investors who hung on to the mortgages who suffered losses.

These two features suggest that the estimated 2 billion modest-income households that exist worldwide are a potential global market for what has become a dangerous instrument not aimed at helping such households but rather at filling a demand in the high-finance circuit (Sassen, 2008b, 2014). This population sector can become a major target because the source of profit is not the payment of the mortgage itself but the sale of a highly liquid financial package with a bit of material asset—a little piece of the little house! What counts is not the creditworthiness of the ‘little’ borrower but crossing a threshold in terms of numbers of mortgage contracts sold to, and often pushed onto, households. It is one of the most radically brutal uses of modest-income households I have seen in the financial sector.

## NOTES

1. A fuller development of this methodology and conceptualisation can be found in Sassen (2008a, chs 1 and 9, 2014).
2. There is a rapidly growing scholarship on financial institutions and markets that has made critical contributions to our understanding of high finance. Representatives of diverse approaches are, for example, MacKenzie, Muniesa and Siu (2007), Knorr Cetina and Preda (2013), Eichengreen (2010), Zaloom (2006), Fisher and Downey (2006), Krippner (2011) and the special issue of the journal *Globalizations* (2010).
3. There is an extensive scholarship that has over the decades documented this type of tension between countries with high technical capacities that use degraded labour in poorer countries and in that process also destroy the natural wealth of poor countries (Galeano, 1997; *Globalizations*, 2010; Jubilee Debt Campaign UK, 2013; Mignolo, 2007; Quijano, 2000; Sassen, 2008b).

4. It can be argued, and I have done so (2014, ch 3), that, in principle, if an economy or a government could materialise that fictitious uber-value of finance into an actual operational field—clean-up of toxic dumps, building of good social housing, restoring infrastructure—it would be great. But the profits would be too small to persuade finance of the desirability of such general benefit projects.
5. These figures correspond to what is the standard measure for finance: the value of outstanding derivatives. For a full evolution of this history of innovations and inventions in the financial sector since the 1980s, see Sassen (1991, ch 4; 2014, ch 3).
6. There is by now a considerable critical scholarship on this subject, for example, Gotham (2006), Immergluck (2011), Langley (2006), Schwartz (2009) and Shiller (2008). None of this scholarship frames it the way I am framing it here: showing us something about the full operational space of finance, notably its capacity to include extremes at each, the high end and the low end.
7. There is a theorised analysis of some of the foundational intersections of urban space and profit that provides a more generic set of narratives, far less focused on the specifics of instruments, as I do here (see, e.g., Corbridge, Martin & Thrift, 1994; Newman, 2009; SAIS Review, 2009; Sassen, 1982, 1991, 2013).
8. There is a very informative and critical scholarship focused on mortgages, including the sub-prime type, including with an international perspective (see, e.g., Aalbers, 2009, 2012; Gotham, 2006; Hammel, Moos, Kabahizi & Wyly, 2009; Langley, 2006; Miles, 2007).
9. One feature that unwittingly undermined this aim, and which became catastrophic for investors once some of these mortgages failed, was that it became impossible to isolate the mortgage slice because it was mixed with so many diverse types of debt. And this in turn was due to the fact that this mixing with high-value debt aimed at hiding the low value of the slice of ‘asset’.
10. I find it important to remind us all that the governments and corporations of the Global North have long deployed equivalent tactics in the Global South, albeit in very different domains and through very different instruments. But debt was always one of those, even if it was a simpler type of debt that made itself quite visible (e.g., IMF, 2008, 2015; Jubilee Debt Campaign UK, 2013; Sassen, 1982, 1991, 2014, ch 1; UNCTAD, 2015; UNDP, 2014; United Nations Statistics Division, 2015).

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