LEADERSHIP DISPATCHES

CHILE’S EXTRAORDINARY COMEBACK FROM DISASTER

MICHAEL USEEM, HOWARD KUNREUTHER, AND ERWANN MICHEL-KERJAN
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PROLOGUE:
A QUIET SUMMER EVENING

What we saw was just incredible!
—President-elect Sebastián Piñera

It had been another sunny day. Millions were enjoying their summer vacation at the beach with family, hiking in the mountains with friends, visiting museum exhibitions, having fun at theme parks with the kids, or maybe just relaxing at home. It was Friday night, and those not already on holiday were happily at the start of a seemingly carefree weekend.

LITTLE DID THEY KNOW

With temperatures in the 70s, the terraces of restaurants were packed; fresh food would be cooked and local wine served. Casual strollers enjoyed live music near every corner. We could be in a lively quarter of New York, Los Angeles, Paris, or nearly anywhere in the world on the start of an end-of-summer weekend that everybody was savoring and somehow wishing would never end.

Little did these vacationers and weekenders know that what was about to happen would change their lives forever. It would bring a severe test of the nation’s resilience, challenging the effectiveness of the country’s institutions and the determination of its national leaders, the president above all.

Deep below the earth’s surface, some twenty miles down, two large tectonic plates had been slowly converging for more than a century, and the gathering strain had finally become virtually untenable for the planet. It had reached a breaking point.

By 3:30 a.m. on that Saturday most restaurants and streets had emptied except for a few late-night revelers. The massive tectonic plates below fi-
nally snapped at 3:34 a.m., violently rocking the earth’s surface for nearly two minutes. The released energy was so great, NASA later estimated, that the event moved the entire country eight inches to the west and even tilted the earth’s axis by three inches. A quiet summer night had come to a shocking end.

**LIVING ON THE RING OF FIRE**

It could seem a nightmare or the script of a Hollywood blockbuster. But for millions it was all too real. This book is about what came next, how an entire country woke up at the end of the summer to face one of the most devastating natural events most would ever experience. The story we are about to tell, however, is an affirmative one. The country came back quickly and fully, and the courage and determination of its people and their leaders in that recovery have been, by many measures, exceptional. It thus offers a rare account for anyone facing big risks on how best to embrace resilience and bounce back.

The earthquake on February 27, 2010, devastated Chile. The country is located on the western side of South America, bordering the Pacific Ocean and Argentina. Twice the mass of California, Chile extends 2,600 miles from tip to toe—twice the distance from New York to Miami—though it averages just 110 miles east to west. Its great vertical extension comes with a near perfect but very unwelcome alignment along the world’s “ring of fire.” Rimming the Pacific Ocean, this great semicircle is the most earthquake-active line in the world, running up the spine of Chile through the western United States, across Alaska, and then down through Japan. In other words, what happened in Chile could one day occur in the United States, Japan, or almost anywhere else on the ring.

To many readers, Chile still remains best known for having suffered almost two decades of General Augusto Pinochet’s dictatorship in the 1970s and 1980s after the violent coup of 1973. Yet Chile is a very different country today from what its past might suggest. Democracy was restored in 1990, and the country had become one of the fastest growing economies in Latin America. It boasted a market-based economy with a broad and gen-
erous social safety net. In striking contrast to the United States and many other Western economies, it ran a surplus rather than being deeply in debt. And of special importance for dealing with a national crisis, while Chilean presidents can serve multiple four-year terms, they cannot serve two consecutive terms. As such they can focus their time and energy on the tasks at hand without having to worry about the consequences for their re-election, though of course it may also unduly shorten their task horizons to what can be achieved in the four years that they have.

The February 27, 2010, seismic event, now widely referenced in Chile as F27, was not just another earthquake. It released five hundred times more energy than the earthquake in Haiti six weeks before. F27 was a monster event, the sixth greatest earthquake ever recorded on earth.

Although the Chilean earthquake did not retain international news attention for long, it devastated schools, hospitals, roads, homes, and businesses across a huge swath of the country’s midsection, paralyzing the country for weeks. The economic damage proved massive: recovery would cost 18 percent of the country’s gross domestic product (GDP), nearly a fifth of what the entire country produces in a year. That would be the equivalent to $2.7 trillion in economic loss in the United States, or more than twenty times greater than that inflicted by Hurricane Katrina in 2005, America’s most costly disaster to date. One can only wonder how an event twenty times more devastating than Katrina would have been managed by leaders in the U.S. or other major economies. One still winces at the memory of how poorly the recovery from Katrina was managed in New Orleans despite days of advance warning.¹

There is a final but central element to the story, and that is the peculiar timing of the event. The F27 earthquake came just days before a change in national government, with Sebastián Piñera soon to take the presidential sash from president Michelle Bachelet. The president-elect was awakened that night like so many others in Chile: “All the communications were gone,” he said, “but I understood immediately that it has been a very huge earthquake.”

Late that same night, the incoming president met with his cabinet-to-be at campaign headquarters to map out a path to recovery. “We immediately
realized that we had a huge task,” recalled the future interior minister. Since the election of January 17, the president and his ministers-to-be had been focusing on plans to revive the economy. Now, just twelve days before inauguration, they faced a new, gigantic, and unanticipated calamity.

For most countries around the world, it could take years, if not decades, to recover from such massive devastation. But six weeks later, all of Chile’s schoolchildren had returned to classes. By the end of the year, Chile’s economy was back on track, delivering a strong 6 percent annual growth rate at a time when the world economy was still reeling from the 2008–9 financial crisis.

**A TWO-PART RECIPE FOR AN IMPROBABLE COMEBACK**

The early years of the twenty-first century have come with an unprecedented series of crises and catastrophes. They have triggered a growing interest among all of us—whether citizens, business leaders, or government officials—in finding better ways to prepare for catastrophic risks and discovering ways to bounce back when those rare but high-impact hazards become a terrible reality.

Because Chile’s management of the historic F27 disaster and its leadership of the recovery years are not widely appreciated outside the country, we have compiled this account. Chile’s experience offers a compelling and tangible tutorial on the leadership actions required of those facing big risks anywhere.

We want to know how Chile prepared and responded. What were the key drivers of its unlikely comeback? Who took charge, and how did they lead? How did past experience factor into their actions? Our focus is on Chile’s national resilience, and we ask how the country’s leaders—in government, business, and civil society—made their recovery decisions and then implemented them.

The country mobilized to help the injured and bury the dead. It then turned to repairing hospitals, reopening schools, and rebuilding homes. But Chile did not stop with the immediate rebuilding. Its national lead-
ership, spearheaded by a doggedly determined president, insisted that the country think longer term, that its comeback could go well beyond what the country had in place prior to the earthquake.

Moreover, Chile’s comeback was in keeping with the country’s deeply rooted institutional values, which have placed exceptional emphasis on the effectiveness and fairness of the state, at least since the end of the military dictatorship from 1973 to 1990. Indeed, Chile’s national leadership would not have had nearly the impact it had after the earthquake without the country’s institutional backbone, the values that placed longer-term objectives and collective fairness ahead of short-run concerns and parochial interests. We find that a two-part recipe proved vital for the comeback, a mutually reinforcing combination of able national leadership and strong institutional practices. Each depended upon the other. At the core of both prongs were strategic and deliberative thinking that transcended the tactical and intuitive thinking that can dominate much of our everyday conduct.

In what follows, we will learn about a new administration that took charge just days after the 8.8 magnitude quake, committed to rebuilding a better country without busting the national budget. We will witness an administration that capitalized on a preexisting set of institutional practices and partnered with private and nonprofit enterprises to achieve a turnaround that everyone wanted, even if short-term sacrifices were required. Chile’s recovery is a story of how political leaders worked with civil society and market forces both to assist those in need and to restore national growth. It is an account of how one country with a checkered past has now come to be considered one of the most stable and capable in Latin America. Many developing countries might have stalled or gone into reverse after a calamity of this scale. Chile shifted into high gear.

The three of us were invited by the nation’s president, Sebastián Piñera, to take a close look at Chile’s recovery. His government consequently opened its doors and records to our research team. The president, his cabinet ministers, and others gave freely of their time to numerous discussions and follow-ups. We traveled with the president to the earthquake zone and gathered data from a host of sources in Chile and internationally. We were
also guided and informed by our ongoing work with the World Economic Forum's annual *Global Risks Report* and its Council on Catastrophic Risks.2

In focusing on the leadership decisions that defined Chile's response to the F27 earthquake, we sought to understand what worked well and what fell short, with an emphasis on the former. We have found, from working on risk management and leadership development with a variety of companies and countries, that positive actions can be much more effectively instructive than missteps or shortcomings. Our agenda is focused on extracting enduring lessons for leaders and managers elsewhere. We do not intend to convey an overly optimistic account—or an overly pessimistic account for that matter—of what the president and his administration did. Rather, we seek to transmit from their experiences lessons for others to apply in preparing for crises and reacting to them.

Having worked with a number of government officials and business leaders in the United States and other countries, we believe that Chile’s lessons are broadly applicable to a wide range of organizations and national settings. In recovering from the massive earthquake and tsunami in Japan in March 2011, from Hurricane Sandy hitting the Northeast of the United States in October 2012, or from Typhoon Haiyan’s devastation of the central Philippines in November 2013, for example, we believe that the leaders in those countries could have usefully turned for instructive guidance to Chile’s leadership experience in the wake of F27.

And this is not just a story about dealing with natural calamities. Large-scale catastrophes and extreme events of many kinds have been on the rise in recent years—from technological meltdowns and environmental disasters to financial crises, disease pandemics, international terrorism, and cyber threats. It is thus an auspicious moment to seek ideas and guidance from leaders who have already faced and rebounded from a catastrophic event. If their experiences can be appreciated and the transferable principles extricated, leaders in other countries will be in a much better position to prepare, confront, and overcome their own unthinkable calamities in the future.
INSURANCE PAYOUTS FOR RECOVERY

Ninety-five percent of Chile’s insured losses were paid from outside the
country, providing a strong influx of international capital.
— Chilean Superintendent of Securities and Insurance

The president’s strategy for recovery was partly made feasible by another
feature of the economy over which he and his cabinet had little control.
Chile had an exceptionally high degree of private insurance coverage. A
significant portion of the recovery would thus be financed by the private
sector, radically limiting the direct burden on the state.

We see here again the dual interplay of national leadership and private
institutions. Government decisions within a broad discretionary frame-
work proved critical, and so too did the pre-existing tradition of private
insurance. Each depended on the other for creating both short-term and
long-term pathways ahead.

A FAST-GROWING INSURANCE INFRASTRUCTURE

As a risk-transfer mechanism, insurance allows individuals and organi-
zations to pay a small premium on a regular basis in exchange for financial
protection against the major losses from a low-probability event such as
an earthquake. The feasibility of insurance depends on two fundamental
features: risk pooling and large numbers. Insurers cover major losses of a
few policyholders by combining the small premiums from a large group of
customers facing independent risks. Insurance faces a problem, however,
when providing coverage against disasters, since thousands of customers
can be simultaneously stung by the same event and their risks become in-
terdependent. To guard against such correlated setbacks, insurers often re-
sell packages of their insurance policies to international re-insurers who then 
take on this residual risk.

International reinsurers help protect national insurers in much the same 
way that insures help their individual customers. International reins-
surers charge a premium to indemnify a domestic insurance firm against 
catastrophic losses that the local insurer would otherwise have to cover. 
Reinsurers in turn are also concerned about their own concentration of 
correlated risks, and they too predictably limit their exposure to specific 
catastrophe-prone regions. Large reinsurers that operate worldwide can di-
versify their geographic risks far more readily across the globe than those 
that operate locally.

Chile’s preparedness against earthquake damage in early 2010 is evident 
in the country’s insurance penetration. Insurance penetration is defined as 
a country’s total insurance premiums divided by its GDP. In 2006, Chile’s 
penetration stood at 3.57 percent. While this was substantially below the 
average of 9 percent among OECD countries at that time, it stood well 
above those of Mexico and other countries similar to Chile in their level of 
economic development.

During the several years prior to the F27 earthquake, insurance penen-
tration had been rapidly expanding in Chile. Inflation-corrected premiums 
increased by 22 percent in 2006–9, as displayed in Table 8.1, three times 
more rapidly than the country’s GDP growth. We also note that Chile’s in-
surance penetration predictably accelerated in the immediate aftermath of 
F27, growing by 18 percent in 2010 alone.

Table 8.1. Growth of Insurance Penetration in Chile, 2004–12 (Indexed: 2003=100)

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual Change</th>
<th>Cumulative Index</th>
<th>Year</th>
<th>Annual Change</th>
<th>Cumulative Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>0%</td>
<td>100.0</td>
<td>2008</td>
<td>8.8%</td>
<td>141.0</td>
</tr>
<tr>
<td>2004</td>
<td>8.2%</td>
<td>108.2</td>
<td>2009</td>
<td>–1.7%</td>
<td>138.6</td>
</tr>
<tr>
<td>2005</td>
<td>–0.7%</td>
<td>107.4</td>
<td>2010</td>
<td>18.2%</td>
<td>163.8</td>
</tr>
<tr>
<td>2006</td>
<td>6.1%</td>
<td>114.0</td>
<td>2011</td>
<td>14.4%</td>
<td>187.4</td>
</tr>
<tr>
<td>2007</td>
<td>13.7%</td>
<td>129.6</td>
<td>2012</td>
<td>6.2%</td>
<td>199.1</td>
</tr>
</tbody>
</table>

Source: Data from Asociación de Aseguradores de Chile.
Fig. 8.1. Comparative Growth of the Insurance Market and GDP in Chile, 2003–12 (Indexed: 2003 = 100). Data from Asociación de Aseguradores de Chile.

Fig. 8.2. Insurance Density and Penetration in Brazil, Mexico, and Chile, 2012 (Density = $ premiums per capita/100; Penetration = Premiums as % of GDP). Data from Swiss Re, 2013; Sigma, 2013.
Chile’s insurance preparedness was also evident in the country’s insurance density, defined as premiums per capita. Displayed in Figure 8.1, we see that this measure of the insurance market had been increasing more rapidly than the economy during the years from 2003 to the time of the earthquake. With both density and GDP indexed at 100 in 2003, the GDP index had risen to 129 by 2010 but insurance had climbed to 139. And during the two years after the earthquake, the GDP had grown to 152 while insurance had soared to 199. In 2006 insurance per capita had stood at $350, but by 2012 it had climbed to nearly $600. The number of insurers operating in the country also grew, from 53 in 2003—with 23 property-casualty insurers and 30 life insurers—to 60 in 2012—with 28 property-casualty and 32 life insurance companies.

By 2012, Chile had emerged as the top-ranked Latin American country in both insurance density and penetration, as displayed in Figure 8.2.

**INSURING EARTHQUAKES**

Our analysis of the world’s twenty most costly insured catastrophes over the period 1970–2013 introduced in Chapter 4 reveals that F27 ranked fourth among earthquake-driven disasters, after the 2011 Japanese earthquake, the 1994 Californian earthquake, and the 2011 New Zealand earthquake.

California does not require that residents in seismic areas of the state purchase earthquake insurance, and banks do not require it as a condition for a mortgage. As a result, it is estimated that only 12 percent of Californians exposed to earthquake risk actually have insurance today. Since 1996, this insurance has been primarily provided by a state agency, the California Earthquake Authority, rather than private insurers.

Chile’s practices by contrast have been far more aggressive. Residential mortgage holders—about a quarter of all of Chile’s 4 million homes—are strongly advised to purchase earthquake insurance, and as a result, 96 percent of the mortgaged residential properties in Chile were insured to some extent against earthquakes in 2010. Among homeowners without a mort-
gage, however, the take-up rate for fire insurance in 2010 was estimated to be 17 percent, and only 3 percent held coverage against fire and earthquake damage.¹

Looking specifically at those who suffered losses from F27, the Ministry of Housing reported that the earthquake had damaged more than 370,000 houses with a large fraction concentrated among the country’s least affluent, where insurance is less prevalent. Still, 147,500 homeowners (with and without a mortgage) or their banks filed a claim, and 125,000 received payment from their insurers. The other 22,500 claims were not fulfilled, however, because the estimated loss fell below the deductible limit, typically 1 percent of the insured value, or $1,000. Some 86 percent of the F27 claims came from residential coverage, representing almost 20 percent of the total insured homes in the most affected areas.

According to one independent assessment at the end of 2010, insurance companies had provided $2.78 billion to homeowners or their banks for their earthquake or tsunami coverage. Since the government had provided $2.5 billion in housing reconstruction subsidies, the private sector had in effect covered more than half of the $5.28 billion required altogether for housing reconstruction. It is estimated that another $1.75 billion in losses were simply absorbed by the homeowners themselves.²

Private earthquake insurance was fortunately more widespread among business firms. Of small business owners, 30 percent held a policy, and of large companies, 75 percent did so. It is estimated that private insurers paid out a total of nearly $5.25 billion to business enterprises. Among industrial firms, about half the payouts came from business-interruption policies that cover forgone income when production facilities are damaged.³

The pace of disaster recovery depends much upon the rate of claims settlement. Insurers responded relatively quickly in Chile, in part because the government required that insurance claims be filed within two months of the earthquake. The Chilean Insurance Association reported that within twelve months, 80 percent of commercial claims and 95 percent of personal claims had been settled. Despite the huge flood of claims, more than 93 percent of residential insurance claims totaling over $1 billion had been paid within eight months, and 69 percent of commercial and industrial
claims, nearly $2 billion, had been closed as well. Virtually all claims were settled by the end of 2011.4

Aon, a large insurance broker with a significant presence in Chile, applauded a requirement that hastened the company’s ability to settle. “This proved to be a very positive step for the insurance industry,” Aon wrote in an assessment one year after F27, “particularly in contrast to the very drawn out claim settlement process” after the 1994 Northridge earthquake in California.5

It is estimated that insurers ultimately covered 27 percent of Chile’s total loss. This is far lower than in New Zealand, as seen in Table 8.2, where insurers covered 80 percent of the overall cost of the 2011 earthquake. Some 90 percent of its homeowners were covered by earthquake insurance through the government-run Earthquake Commission. But Chile’s 27 percent insurance payout compared well with other recent earthquakes. For California’s Northridge event, the private payout was some 24 to 27 percent of losses, and after the Tōhoku event in Japan, private insurers contributed 17 percent. And even lower payout ratios had prevailed after earthquakes in Mexico, Italy, Turkey, and Haiti.
Given the unprecedented scale of the losses in Chile, it would not have been surprising if some insurers declared bankruptcy and others opted to end earthquake coverage. The accumulated premiums from earthquake insurance in Chile over the prior thirty years totaled just $3.4 billion, less than half of the $8 billion that the insurance companies paid out after F27.

Yet no insurers went bankrupt—unusual in the aftermath of a large-scale disaster—and most continued providing coverage after the disaster. Much of the insurers’ resilience can be traced to their extensive reliance on reinsurance whereby 95 percent or more of the insured losses in Chile were reinsured, compared with 40 percent in the case of U.S. disaster insurance. The Chilean Superintendent of Securities and Insurance also estimated that purely local insurers ultimately covered less than 3 percent of the F27 claims. F27 was really an international event for the insurance industry.6

The relatively quick and complete closure of insurance claims could also be traced to the absence of any insolvency among the insurers. That in turn was partly a product of Superintendent of Securities and Insurance’s authority to suspend firms that had not held sufficient reserves to meet their financial obligations. The superintendent had also required that the country’s insurance firms contract only with solvent international reinsurers. In 2011, every reinsurer with a contract in the Chilean market had a relatively high rating of A- or better, even though the regulation required only that insurers contract with reinsurance companies having a risk rating of at least BBB.7

Still other institutional practices facilitated the F27 claims process. Chile had implemented a procedure in 1989 in accordance with the best-practice criterion of the OECD for administering insurance claims rapidly and fairly. Insured parties are encouraged to express their views on contractual and numerical aspects of the indemnification amount, and that resulted in a relatively low level of insurance litigation: less than 1.4 percent of the F27 claims ended up in the courts.8

Given the massive payouts, it came as no surprise that earthquake reinsurance rates for Chile jumped sharply in the event’s wake. The country does not regulate prices, and from the price level in January 2010 (two months before the catastrophe) to a year later, premium rates soared by 50
percent. Two insurers, BCI Seguros Generales and Mapfre Seguros Generales, for instance, more than doubled their premiums between December 2009, just before the earthquake, and December 2011.

The behavior of the insurance market after the quake followed a combination of System-1 and -2 behavior, with both immediate intuitive reactions and long-term deliberative thinking. The availability bias (a focus on an event that recently happened) increased public demand for earthquake insurance following the disaster, and insurers increased their rates significantly, mainly driven by reinsurance prices that increased 50 percent even though there was no scientific evidence of any increase in the actual risk of seismic events in the near future. If anything, one would anticipate a lower likelihood of a major earthquake in the immediate future following the F27, since the fault line had released so much of the built-up stress that had caused the event. Insurers may have raised their premiums simply because they anticipated that the earthquake’s recency would increase customer willingness to pay, and reinsures because of a greater cost of capital. Despite the price hikes, domestic demand rose strongly as well, increasing by 30 percent within two years of the event.9

CONCLUSION

Private insurance played a vital role in providing many victims of the catastrophe with the means for recovery. Fundamental to Chile’s comeback alongside the public financing was the private financing by domestic insurers backed by international reinsurers. Their high market penetration and rapid payout provided a swift influx of capital to pay for recovery.

Prior to the Talca earthquake of 1928, Chile had no insurance coverage for damage from earthquakes and accompanying tsunamis and fires. Following that and subsequent seismic events, the private sector began issuing coverage for earthquake-related damage to residential and commercial structures, and over the years such coverage has spread widely. By the time of the F27 event, the penetration of earthquake insurance was on a par with that of Japan and higher than in California today.10

Despite sharp price hikes for private insurance after F27 because of the
predictable market reaction, domestic demand for insurance actually increased during the months following the event. Both insurers and reinsurers remained in the market, and by 2013 tremor insurance in Chile had become twice as widespread as in California, America’s earthquake epicenter. The earthquake not only tested the country’s political leadership, but it also strengthened the private institutions that worked alongside the nation’s leaders on the recovery.

**Private Insurance Leadership Checklist**

1. Expand national insurance penetration and density to protect against catastrophic risks and ensure a rapid economic recovery.

2. Foster international reinsurance for domestic insurers, and facilitate rapid payout by both insurers and reinsurers in the wake of a disaster so that individuals and businesses can get back on their feet more quickly, lessening the need for government assistance.