This case study accompanies Chapter 8 of International Corporate Finance.

They thought they were selling insurance, when in fact they were betting the company’s soul in a high-stakes game of Russian roulette.

U.S. Congressman Christopher H. Shays

At its apogee in 2007, American International Group (AIG) had 74 million customers, employed 116,000 people worldwide, and generated $110 billion in revenue with an asset base of US$1 trillion. Approximately half of its revenue came from general insurance—primarily property and casualty—with the other half generated by life insurance, financial services, aircraft leasing, and asset management. AIG traced its roots to Shanghai (China), where Cornelius Vander Starr established a small insurance agency in 1919 under the name of American Asiatic Underwriters. Not long after, as he started to represent U.S. insurance companies in China, Starr opened an office in New York called American International Underwriters to directly underwrite U.S.-owned risks in Asia. The firm grew by leaps and bounds, first in Asia and later in Latin America and Europe, but it struggled in the United States until Starr hired Maurice “Hank” Greenberg in 1962. Over the next four decades Greenberg masterminded AIG’s phenomenal growth into one of the global giants of the insurance industry.

AIG AND THE RISE OF AIG FINANCIAL PRODUCTS UNIT

The demise of AIG was probably seeded in the creation in 1987 of its Financial Products Unit dedicated to capitalizing on growing opportunities in the financial services sector; it was particularly focused on the trading and structuring of complex financial products such as interest rate and currency swaps. Most importantly, AIG Financial Products Unit’s good fortunes owed as much to its financial engineering savoir-faire as to its ability to free-ride on its holding parent’s AAA credit rating. Specifically, the unit became a major dealer in the over-the-counter derivatives market, with a notional portfolio reaching US$2.7 trillion. Indeed, because of the AAA rating of its parent, the unit had become a preferred counterparty for trading financial derivatives.

For the first 10 years of its existence, the Financial Products Unit prospered selling financial products such as plain-vanilla interest rate swaps, until it was approached
by JPMorgan in 1998 with a proposal to credit-enhance (write insurance against default) collateralized debt obligations (CDOs). This new form of insurance on debt took on a life of its own as newly minted credit default swaps (CDSs): In exchange for a stream of premium-like payments from the debt holder, the Financial Products Unit would promise to reimburse the investor the principal value of the bond in case of default.

AIG, with its AAA credit rating, rapidly became a much sought after provider of such protection. Over the next decade it built a portfolio of credit default swaps that had reached $500 billion in notional value by 2007. AIG lent its strong credit rating to lesser-rated securities that, as a result, would now enjoy the AAA rating of the insurance carrier. AIG received a fee for providing the protection from default to investors. Although similar in concept to bond insurance, CDSs were not subject to the same regulation as insurance products are: Most notably, when an insurance company sells a policy, it is required to set aside reserves that cannot be touched until a payout is necessary to settle a loss, whereas the sale of a CDS contract would not even require AIG to post collateral—at least as long as it maintained its AAA rating.

**CREDIT DEFAULT SWAPS VERSUS BOND INSURANCE**

Credit default swaps were a new and more flexible form of bond insurance. They are over-the-counter contracts whereby the buyer (insured) agrees to pay the seller (insurer) periodic fees (insurance premiums) in exchange for receiving protection against default (event) of a loan or bond (loss). The event triggering the payment of the loss is usually the debtor’s default, but it can also be a credit rating downgrade or the restructuring of the debtor that adversely alters a loan’s seniority or maturity. CDSs are not easy to price; in principle, the fair value of a CDS premium is set such that the present value of a bond, risk-adjusted by the probability of a credit event for the reference entity (issuer of the bond), is equal to the risk-adjusted present value of premiums payment over the life of the CDS.

Unlike a bond insurance policy, whereby the buyer purchases protection on a loan/bond he or she owns, the buyer of a credit default swap may not have any material relationship with the debtor (so-called naked CDSs). Purchase of a credit default swap is therefore motivated not only by hedging but also by arbitrage and speculative reasons. In contrast, bond insurance is provided by regulated insurance carriers to entities that own the bond being insured. Bond insurance is clearly of a hedging nature, unlike CDSs, which allow anyone to place a bet on the risk of a firm’s bond default. Banks or any unregulated entities writing CDSs are not required to set aside loss reserves (but are nonetheless subject to regulatory capital) and may hedge themselves by selling CDSs to third parties. Counterparty risk for anyone purchasing a CDS is a real issue that can be mitigated by the posting of margin, which should be updated on a periodic basis—but not on a daily basis as in the case of exchange-traded financial products.

Buyers of CDSs are not required to own the underlying bond being insured (naked position) and often purchase them for speculative reasons. The notional amount of outstanding CDSs is considerably larger than the actual amount of underlying bonds on which the swaps are written. For example, at the time of its default
Lehman Brothers owned $125 billion in bonds, but the notional amount of the CDSs written on those bonds approached $500 billion.

SECURITIZATION AND CREDIT DEFAULT SWAPS

Between the subprime crisis of 2008 and the demise of the insurance colossus AIG stands the securitization revolution, which made consumer finance more accessible to American households. At its simplest, securitization transforms old-fashioned and illiquid automobile loans, home mortgages, and credit card receivables into liquid, tradable fixed income securities, which institutional investors such as pension funds can readily purchase.

Most importantly, the technology of securitization hinges on credit enhancement of the newly issued securities, also known as mortgage-backed securities (because they are collateralized by the cash flows of the original borrower’s mortgage). Credit enhancement is about providing some form of partial or full insurance against the risk of default and concretized either through traditional bond insurance and more recently through credit default swaps. As a result, the credit-enhanced securities are better rated and can therefore be issued at a lesser yield. Of course, credit enhancement makes sense only as long as its cost (often as low as 35 to 50 basis points) is less than the resulting reduction in interest rates paid out by the issuer of the mortgage-backed securities.

At first, the AIG Financial Products Unit was reluctant to write CDSs, in part because the unit’s continued success in its first decade of existence had been built on careful hedging to avoid risk whenever possible and had certainly avoided speculative bets of any sort. However, Gary Gorton—a finance professor on the faculty of the Wharton School at the University of Pennsylvania—had developed simulation models with real estate data going back to 1946 that showed that CDSs could be sold with a 99.85 percent chance of never having to pay out, which ultimately convinced AIG to enter the business. By the end of 2004, the unit had built a portfolio of CDSs with a notional value of US$290 billion, which, unlike most of the unit’s other activities, was largely unhedged because—according to the words of AIG’s global head of credit trading—“the likelihood of ever having to make a payment had to be greater than remote, even in recessionary market scenarios.”

THE DEMISE OF AIG

In 2005 AIG’s writing of CDSs continued at the same pace but the nature of debt being insured turned increasingly toward consumer debt. A significantly increasing percentage of consumer debt was subprime mortgages, which did not carry any guarantee from either Fannie Mae or Freddie Mac. Concerns were surfacing about the share of subprime mortgages in the overall portfolio of mortgage-backed

securities that AIG protected by writing CDSs. In the spring of 2005, AIG lost its AAA credit rating pursuant to the discovery of earnings manipulation. The rating downgrade required AIG to post collateral for its CDS portfolio. Later that year, in the fall of 2005, housing prices showed a modest decline—AIG’s descent into the subprime abyss had started.

The AIG Financial Products Unit’s revenue (from insurance premiums) peaked in 2005 at $3.26 billion, with operating income accounting for 17.5 percent of the firm’s total operating income. Unlike its many siblings in the extended AIG family, AIG Financial Products did not believe in proper reserving and capitalizing of the insurance products it was selling. As the president of AIG Financial Products so eloquently remarked:

The models suggested that the risk (about credit default swaps) was so remote that the fees were almost free money. . . . Just put it on your books and enjoy the money.²

Because of its faulty business model, AIG Financial Products misled itself, its parent, and its investors, reporting a profit margin of 83 percent in 2005, and unsurprisingly it lavished on its employees outlandish salaries and bonuses:

Mr. Cassano and his colleagues minted tidy fortunes during these high-cotton years. Since 2001, compensation at the small unit ranged from $423 million to $616 million each year, according to corporate filings. That meant that on average each person in the unit made more than $1 million a year.

In fact, compensation expenses took a large percentage of the unit’s revenue. In lean years it was 33 percent; in fatter ones 46 percent. Overall, AIG Financial Products paid its employees $3.56 billion during the last seven years.³

Had credit default swaps written by AIG been fairly priced? Had AIG properly reserved for potential losses? Had AIG been misled by its CDS valuation models that consistently showed a minuscule risk of default?

QUESTIONS FOR DISCUSSION

1. What are credit default swaps, and do they differ from bond insurance?
2. What was the role played by AIG in the market for securitized home mortgages—so-called mortgage-backed securities?

3. How did AIG use credit default swaps to credit-enhance mortgage-backed securities?

4. How did AIG’s extensive involvement in the credit default swap business compare with AIG’s traditional insurance activities such as property and casualty or life insurance?

5. How should AIG price CDSs? Is such pricing similar to pricing other insurance products?

6. How could AIG have avoided its infamous debacle? Who was to blame?