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A Bank That Takes Parmesan as Collateral: The Cheese Stands a Loan

by Carmen Nobel

Nikolaos Trichakis discusses the subject of a new Harvard Business School case study: the Italian regional bank Credito Emiliano, which accepts young Parmigiano-Reggiano as collateral, and then ages it in climate-controlled vaults.

Since 1953, the regional bank Credito Emiliano has accepted curious collateral for small-business loans: giant wheels of Parmigiano-Reggiano cheese.

Known locally as Credem, the bank is the subject of a new Harvard Business School case study, "[Credem: Banking on Cheese](#)." The case explains how the bank essentially replaces an expensive part of the operations process for dairy farmers in the Emilia Romagna region of Northern Italy. Besides holding the cheese as insurance, Credem stores and ages the wheels in climate-controlled vaults for the duration of the loan. The farmers save on operating costs. And in turn, the bank gains some expertise about a risky industry.

"THIS WAS A PRIME EXAMPLE OF HOW TO TAILOR A FINANCING INFRASTRUCTURE TO THE LOCAL ENVIRONMENT"

"In my research I look at how operations affect financing and vice versa, and this was a prime example of how to tailor a financing infrastructure to the operating characteristics of a supply chain," says Nikolaos Trichakis, an assistant professor in the Technology and Operations Management unit at HBS, who co-authored the case with Gerry Tsoukalas, an assistant professor at the University of Pennsylvania's Wharton School, and Emer Moloney, a research associate at HBS.

The case describes the traditional production process for Parmigiano-Reggiano, commonly known in dairy circles as "The King of Cheeses." The supply chain begins with some 3,500 family-owned farms. Every day, the farmers bring fresh milk to single-product producers, most of which are limited liability cooperatives of farmers, and most of whom outsource the maturation process to warehouse operators. Before it hits store shelves, cheese is matured for 18, 24, 30, or 36 months.



Credem accepts young wheels of Parmesan Reggiano as collateral, and then ages the cheese in climate-controlled bank vaults.

Photo credit: Emer Moloney

The more it ages, the more delicious and valuable it becomes—like cash in an interest-bearing account. Eighteen-month cheese gives pasta zing. Thirty-six-month cheese makes angels sing.

"The producers face very long lead times," Trichakis says. "They basically have working capital tied to inventory for two years. They could shorten the maturation to cut down on costs, but then the cheese that we eat would not be as tasty."

Due to the slow time to market, it's essential that farmers have access to credit lines. However, it's understandable why lenders might hesitate to grant loans to the cheese producers.

Trichakis explains that farms are essentially small- and medium-sized enterprises, helmed by farmers who are averse to the idea of consolidation, even for stability's sake. "They remain fragmented due to Italian tradition," he says. "Most of these families have been producing cheese for centuries and take pride in what they do, resisting becoming part of larger corporations."

And there are other market risks. Prices for Parmigiano-Reggiano tend to fluctuate wildly, along with market demand. A one-percent difference in demand can equal up to a 10-percent change in price, according to the HBS case. Economic downturns hit the industry especially hard, as the expensive cheese is somewhat of a luxury item.

Meanwhile, a lot can go wrong with the cheese as it matures: It can sweat, it can form bubbles, or, worst of all, it can swell so much that it cracks. Every flaw lowers the value of the cheese, regardless of the going market rate. Too many cracks will render a cheese wheel useless.

"So, it's clear that you need a finance infrastructure that is tailored to this kind of environment," Trichakis says. "So the question is, can you do it? And the answer is yes."

The Cheese Stands A Loan

Credem accepts young cheese as collateral, valuing it at the current market price of mature cheese. The case explains that the typical loan-to-value ratio is 70 to 80 percent, which cushions the bank against market price fluctuations and product degradation.

A Credem subsidiary, Magazziini Generali delle Tagliate, keeps the pungent collateral in two bank-owned warehouses that offer storage capacity for 440,000 80-pound wheels of cheese. MGT's warehouses sport state-of-the-art climate controls and a staff of trained inspectors. (The case notes that MGT also offers a profitable warehousing service for non-collateral cheese aging.) During the maturation process, only one percent of the cheese suffers degradation necessitating a value downgrade, compared with an industry average of 10 percent, according to the case. And because the cheese is aging under the bank's own roof, the bank is constantly aware of what the product is worth. If producers default on their loans, the bank sells their collateral upon maturation.

"From the bank's perspective, it becomes almost risk free," Trichakis says. "They have the collateral in their possession the whole time it is aging. So the moment they see some issues—like bubbles, for instance—they can say, 'Oh, that collateral isn't worth as much as we thought.' And they can immediately call up the producers and say, 'Listen, you're under water here.'"

Lest students think the collateral model is totally risk-free, the authors of the case included an extreme cautionary tale—the so-called Salad Oil Swindle of 1963, in which crooked trader Tino de Angeles used his soybean oil inventory as collateral for huge loans from several Wall Street banks. Inspectors regularly conducted inventory checks, but the tanks contained mostly water, with just enough oil floating on top to fool them.

"There are potential pitfalls in inventory financing," Trichakis says.

While the Credem case study focuses on the cheese-as-collateral model, Trichakis notes that this comprises only one percent of the bank's overall business. But in terms of goodwill, the model is worth a lot more than that.

"It allows Credem to be perceived as a bank that cares about the community, cares for the region, and cares for the producers," he says. "Lending is something that people don't really like in Italy. They think of usury, going back to Shylock in *The Merchant of Venice*. Many people still perceive lenders and banks that way. So for a bank to be able to set up this infrastructure, and to showcase their value to the community, it's significant."

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