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The Years When Banking Was Boring: is Krugman Wrong? Banks' Business Models in the Italian Golden Age: 1951-1969

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“[In the ‘50s and the ‘60s] banking became boring” (Krugman, 2009). *“The way to keep banking safe is to keep it boring”* (Krugman, 2010). *“Part of the problem is that boring banking would mean poorer bankers”* (Krugman, 2009). Low instability, low returns. Those are archetypal traits of the second post-war period across many developed countries (Monnet, 2018): did it all come down to a boring financial system?

Relying on balance sheet data from the *Archivio Storico del Credito in Italia (ASCI)* (Natoli et al., 2016), we tackle this question developing a systematic study of the business model, defined as the assets-and-liabilities management (ALM), of 414 Italian banks between 1951-1969. The sample tracks all major categories of credit institutions and covers more than 95% of the total assets of the banking population in ASCI.

This approach follows a vivid thread in both academic literature on financial stability and among regulators that, recognizing an endemic heterogeneity in the banking activity---that goes far beyond the textbook interpretation of gathering of savings and exercise of credit---shows that the balance sheet compositions of the institutes is significantly related with the idiosyncratic conditions, namely risk and returns, as well as with systemic factors, such as the regulatory framework, monetary policy, or the market structure (e.g. Ayadi et al., 2018; Farné and Vouldis, 2021; Nucera et al., 2018; Roengpitya et al., 2017; Savona, 2024). In other words, *not all banks are created equal*.

In the analysis, we propose a comprehensive framework that leverages machine learning algorithms and techniques (K-Medoids clustering, Random Forest classification and SHAP regression), tamed by a tandem-dialogue with the coeval historical evidence proposed in the *Relazioni Annuali* of Bank of Italy and additional secondary sources (e.g. Albareto and

Trapanese, 1999; Barbiellini Amidei and Impenna, 1999; Fazio, 1999; Fratianni and Spinelli, 2001; Gelsomino, 1999).

The analysis of business models unfolds through the following steps, each one has notable byproducts that makes it of interest for both historians and economists. (1) We let the business models of Italian banks to be *endogenously* defined, partitioning the data along balance sheets characteristics making use of the unsupervised machine learning clustering algorithm *K-Medoids* (Savona, 2024). We find that the banks of the Golden age follow three distinct business models, representative of distinctive assets allocations, without significant differences on the composition of liabilities: a securities-oriented business model, with on average 26% of the assets allocated in securities, of which more than 19% linked with ICS (Istituti di Credito Speciale); a retail-oriented business model, with on average 56% of the assets allocated in retail loans; a bank-oriented (wholesale) business model, with a diversified asset allocation, of which 16% is represented by bank loans. (2) We allow banks to be dynamically reallocated between the business models, to track systemic shifts in the banking activity in the analyzed period. We detect a steady increase in the weight of the securities-oriented business model starting from 1956, with an average of 2% of banks switching each year. This process became particularly strong between 1964 and 1966, with 25% of the banking population moving to high securities, for a total of 43% of the population. This surge of securitization is complemented by a significant contraction of the retail-focused activity that, from 1966, accounted for less than 20% of the total population. (3) We show notable asymmetries in the process of securitization across different categories of institutes: 1965 marks a structural break for ordinary credit banks (SOC), public institutions (IDP, BIN), and cooperative banks (BP). The effect is particularly strong among the latter. For saving banks (CRO, MDP), the securitization process follows a sustained dynamic starting from 1956, with close to 100% of the sample belonging to this business model by 1965. (4) We explore the catalysts of the switch in the post-1964 period analyzing three possible transmission channels: (i) a structural change in the opportunity cost of holding securities, that made it a superior risk-corrected asset allocation; (ii) a local improvement for the switching banks, that made them better off; (iii) exogenous factors, tracing back to regulatory changes and historical trends.

Our findings lead to a rejection of hypothesis (i), showing that the securities-oriented business model is consistently under-performing the competitors on the profitability side (measured as the Return on assets), without providing a significant reduction in risk (measure as the Z-score).

On the contrary, modeling the probability of switching on 4827 bank-year observations, leads to suggestive results (hypothesis ii.): banks switching to a securities-oriented business model show weaker fundamental condition (minor capitalization, liquidity, ROA, asset size, higher non-performing loans). Controlling for bank's characteristics we find that the probability of switching is higher for saving banks with an HQ not located in the North. Lastly, we find that the most important predictors of switching are exogenous and linked to the macroeconomic context, in particular the term-structure of interest rates and the GDP growth rate. These results are obtained with the machine learning algorithm Random Forest that allows for a robust estimation, endogenously correcting for multicollinearity, overfitting, and accounting for non-linear relationship between the outcome variable and the controls.

Complementing these findings with the historical evidence rounds up the results (hypothesis iii.). The structural break in the regulatory framework and in the objective of the monetary policy represent significant exogenous shocks that motivated the securitization process started in 1964. Following the crisis of 1963-64, a growing importance of subsidized credit around the ICS, the increasing supply of public securities, the effort of Bank of Italy to stabilize the quotation of those securities to artificially sustain their demand are the most prominent catalysts of the reported shift in business models, consistently with the traditional evidence of the rising double intermediation (Gelsomino, 1999; Galanti et al., 2011). These exogenous forces significantly altered the credit sector, changing the opportunity cost of retail loans. Banks increasingly substituted the loan granting activity with the channeling of depositors' funds to the ICS and eventually the State. *"It must be acknowledged that a continuously expanding supply of public securities, when coupled with price stability, will inevitably distort the banking system's structure [...] gradually replacing core banking operations"* (Carli, 1966). The accumulation of securities in the banking sector laid the ground for the future problem of the diabolic loop, when the soundness of the credit sector became inherently intertwined with the quotations of public securities, greatly reducing the independence of Bank of Italy at the eve of the fiscal dominance of the '70s.

Thus, employing micro-level data and a novel methodology reliant on cutting-edge machine learning techniques, this work offers a new perspective on the banking sector of the Golden age. Through the lenses of business model theories, we propose a new quantitative perspective on the magnitude and the causes of the significant structural break in credit sector at the aftermath of the crisis of 1963-64. Our results are fully consistent with traditional historical narratives and allows for mutually sustained quantitative and qualitative conclusions.

From the collected evidence can we conclude that Krugman is wrong, that Italy represents an outlier in the second post-war period, in which banks are not limited to the gathering of deposits and granting of loans? As it is often the case with complex problems, the virtue stands in the middle. Krugman definition is indeed unfitting to the Italian context, but this is only because bank gradually gave up on traditional intermediation for an even more “boring” alternative: lending to the public sector. 1964-1966: the years when banking *became* boring.

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