

# Financial development gone wrong? A new perspective on the crisis of Italian commercial banks in the interwar period

Marco Molteni, Pembroke College (Oxford)  
Marco.molteni@pmb.ox.ac.uk  
Supervisor: Dr Brian A'Hearn

Recent research shows that credit expansions – measured by credit-to-GDP ratio – are the best predictors of subsequent banking crises, and leverage is identified as the problem (Reinhart and Rogoff, 2009; Schularick and Taylor, 2012; Borio, 2014). ‘Curbing the credit cycle’ has explicitly become a policy option (Aikman et al., 2015; Dell’Ariccia et al., 2016). However, looking at credit-to-GDP ratios can be misleading because this measure can hide two different and distinct phenomena: a process of financial development fostering growth or a leveraged bubble leading to instability. Credit-to-GDP ratio is employed by two strands of the literature that have long developed in parallel (Wachtel, 2018). Interwar Italy is taken as an example to show how a naïve look at the dynamic of credit-to-GDP ratio can be misleading if not integrated with additional indicators of financial development, and more granular evidence from micro-data. Plus, Italy established banking supervision under the Bank of Italy and the Ministry of Finance in 1926/27. Thus, this research can study bank distress using previously classified supervision archival documents.

Between WWI and the Great Depression, Italy experienced a sustained growth of its credit-to-GDP ratio, jumping from 16.6% in 1918 to 38.7% in 1928 (de Bonis and Silvestrini, 2014). It was even larger than the credit expansion in the USA, a country considered to have experienced a credit boom in the 1920s<sup>1</sup> (Eichengreen and Mitchener 2004; Postel-Vinay 2019). My research questions are: to which extent the banking crisis Italy experienced in the 1930s stemmed from the credit expansion of the 1920s? Was it a ‘bad’ credit boom? What were the origins of distress? To answer, I employ a mix of quantitative and qualitative research methods.

## Credit expansions: good or bad?

It is essential to clarify what is a ‘bad’ credit boom. In the literature that finds credit booms as good predictors of financial instability, credit-to-GDP ratio deviations from its long-run growth trend are used as proxies for credit booms. However, there is no consensus on what constitutes a credit boom, and credit booms are usually defined empirically through algorithms (Dell’Ariccia et al. 2016, Gorton and Ordonez, 2020). Nonetheless, several papers have highlighted which factors are associated with credit booms culminating in a crisis – i.e. bad booms. Gorton and Ordonez (2020) find that most credit booms start after productivity shocks, but that in ‘bad booms’ credit keeps expanding even after initial productivity growth fades. Jorda et al. (2015) find that credit booms are detrimental when they lead to leveraged asset price bubbles, this being particularly true for housing bubbles fuelled by mortgage credit (Jorda et al. 2016). Furthermore, Jorda et al. (2017) stress the importance of understanding whether the credit expansion happens at the extensive or intensive margins. Although there is not much research on this issue, it is a crucial one as this may have consequences in terms of financial stability.

While macro-financial literature interprets the credit-to-GDP ratio as a leverage measure, micro-financial economics defines leverage as assets-to-capital ratio. To the best of my knowledge, we still lack an established theory on how macro-leverage (credit-to-GDP) and micro-leverage (capital-to-assets) are related<sup>2</sup>. The dynamics of micro and macro leverage are related to whether the credit expansion happens at the extensive or intensive margins. If credit-to-GDP expands at the intensive margin, this can happen only if the leverage of firms and/or banks increases. Macro leverage (credit-to-GDP) will grow proportionally more than micro leverage (capital-to-assets) only if new credit is

---

<sup>1</sup> US credit-to-GDP ratio was 33.4% in 1918 and reached 48% in 1928 (Jorda et al. 2017)

<sup>2</sup> Mendoza and Terrones (2008) find that both banks and firms increase their leverage during credit booms in 1995-2005.

backed by new capital. Additional capital can be obtained through capital injections to existing firms/banks or by new firms/banks with fresh capital (i.e. the economy expands and develops). Therefore, this suggests that if macro and micro leverage are positively correlated, the credit expansion happens at the intensive margin. If macro leverage increases but micro leverage holds, credit expansion happens at the extensive margin.

At the same time, Credit-to-GDP ratio is widely used in another economic literature strand: the one concerning financial development and the finance-growth nexus. Here, the ratio is used as proxy for financial development and its increase is considered beneficial (King and Levine, 1993; Levine, 2005). Recent contributions (Loayza et al. 2018) stress the importance of extending the scope of financial development beyond just financial deepening (the dimension proxied by Credit-to-GDP ratio). International institutions such as the World Bank (Čihák et al., 2013) and the IMF (Sahay et al., 2015) urge to include financial development dimensions that include financial access<sup>3</sup>.

Table 1 shows several indicators that help understanding better the nature of the 1920s credit expansion. This expansion lacked many of the features that are found associated with ‘bad’ booms. Productivity growth was strong in the early 1920s, and after the hiccup of 1926-27, it was still substantial in 1928-29. The stock market index peaked in 1924, but then entered a declining trend in the late 1920s: there was no bubble before the 1930s. Real estate prices are not available before 1927, but the mortgage-to-GDP ratio hints that a leveraged housing bubble was not an issue. While macro-leverage (credit-to-GDP) increased throughout the 1920s, micro-leverage (capital-ratio) of joint-stock banks and firms remained flat, suggesting that the credit expansion happened at the extensive margin<sup>4</sup>. Measures of financial access are widely consistent with this hypothesis, as deposits per capita and accounts at saving banks are on the rise. Similarly, bank offices per capita almost doubled between 1920 and 1926. New banks entered the market, and concentration of joint-stock banks (measured by Herfindal index on total assets) decreased sharply. Overall, the evidence presented here indicates that the expansion of Italian credit-to-GDP ratio in the 1920s is the product of sustained financial development, rather than a credit boom with the ‘bad’ connotations highlighted by existing literature. The expansion can be explained by Figure 1, showing that Italy went through a crucial economic modernisation in the 1920s, with the VA of industry overtaking agriculture for the first time in 1929.

---

<sup>3</sup> Suggested measures of financial access are: Current accounts per thousand adults, Bank branches per 100,000 people, Percentage of people with a bank account, Percentage of firms with credit lines, and Percentage of small firms with credit lines.

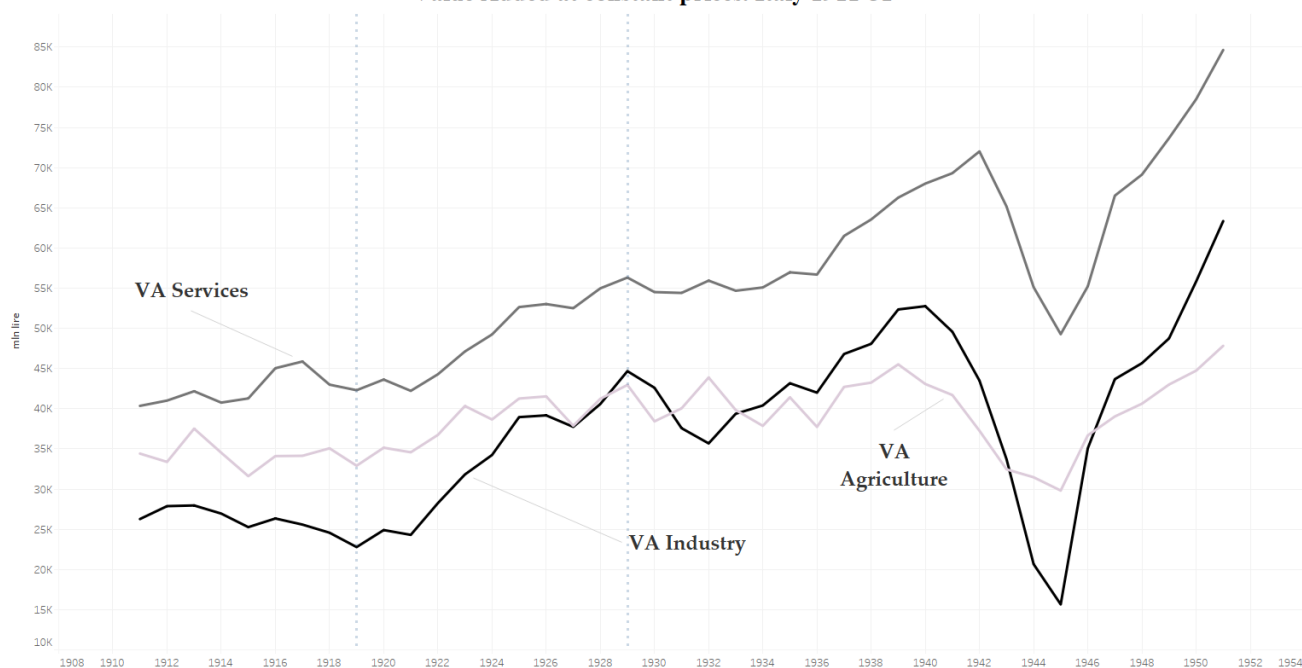
<sup>4</sup> To fully confirm this hypothesis, we would need evidence that household leverage did not increase. Unfortunately, good data does not exist. However, the fact that mortgage credit did not increase suggest that household debt could not increase dramatically, as housing is the most important item of household leverage.

Table 1

Credit-to-GDP ratio in the interwar period in a broader context (1918-1939)											
Year	Credit-to-GDP	TFP growth	Stock index (1928=100)	Mortgage-to-GDP	Capital ratio j.s.b.	Capital ratio firms	Bank offices per thousands capita	Bank accounts at saving banks	Real deposits per capita	Deposits per capita	HHI, j.s.b.
1918	16.8%		96.9	1.20%	13.3%	43.4%			190.4	502.9	0.196
1919	24.2%	-3.38%	87.6	1.24%	9.9%	45.8%		2,932,477	283.2	759.3	0.185
1920	25.0%	4.57%	70.2	0.95%	10.6%	41.4%	0.105	3,205,602	269.8	950.7	0.169
1921	26.8%	-1.79%	56.2	1.06%	10.2%	43.3%		3,227,765	264.5	1102.3	0.150
1922	26.1%	6.83%	64.0	1.14%	11.3%	42.6%		3,372,480	264.3	1095.1	0.126
1923	25.2%	9.19%	76.0	1.23%	11.9%	45.3%		3,503,372	287.6	1184.7	0.144
1924	30.6%	2.11%	115.9	1.36%	9.0%	46.1%		3,680,370	309.6	1320.0	0.109
1925	27.7%	7.67%	108.9	1.44%	9.7%	46.3%		4,169,365	291.7	1397.2	0.101
1926	29.6%	-1.79%	74.0	1.53%		46.2%	0.225	4,324,244	289.3	1495.0	
1927	35.8%	-4.52%	87.2	1.87%	10.8%	47.3%	0.230	4,429,506	343.4	1622.1	0.106
1928	38.7%	5.72%	100.0	1.99%	10.3%	48.0%	0.221	4,658,152	382.6	1675.2	0.096
1929	38.3%	3.83%	87.2	2.17%	12.0%	47.3%		4,841,224	372.5	1656.8	0.103
1930	43.2%	-6.54%	68.6	2.58%	12.5%	48.2%	0.201	5,037,858	385.4	1659.8	0.135
1931	45.2%	-3.69%	45.7	2.95%	14.3%	47.7%		5,190,772	401.6	1562.5	0.144
1932	48.1%	-0.33%	42.6	3.18%	15.0%	47.9%	0.164	5,336,327	409.0	1549.8	0.155
1933	54.8%	-1.35%	54.3	3.18%	15.0%	48.6%	0.161	5,447,004	420.1	1497.5	0.157
1934	53.4%	-0.58%	59.3	3.11%	14.8%	48.8%	0.154		426.2	1440.9	0.150
1935	46.0%	2.90%	63.2	2.77%	14.8%	46.9%	0.146		373.8	1281.8	0.156
1936	47.5%	-6.11%	79.5	2.77%	14.2%	46.9%			403.7	1488.7	0.153
1937	40.0%	8.54%	86.8	5.81%		45.7%			317.5	1281.8	
1938	37.8%	-3.08%	76.0	8.65%		45.5%			308.7	1341.7	
1939	38.0%		105.0	8.80%		44.0%			309.8	1406.4	
1940			114.3	7.71%							
Sources:	JST (2017)	Giordano and Zollino (2020)	JST (2017)	JST (2017)	Natoli et al. (2016)	Imita.db, <a href="http://imitadb.unisi.it">http://imitadb.unisi.it</a>	Biscaini-Cotula, Ciocca (1979)	<i>Rapporto al 3° Congresso Internazionale del Risparmio</i> (1935), Paris 20-25 August	JST (2017) and Jordà et al. (2021)	JST (2017) and Jordà et al. (2021)	Natoli et al. (2016)

Figure 1

Value Added at constant prices. Italy 1911-51



Source: Baffigi (2013)

### The coeval point of view

The expansion of the Italian banking system in the 1920s did not go unnoticed by coeval observers, but their judgement was negative. Extensive bibliographical research on historical publications highlights flaws<sup>5</sup>. Arias (1923) maintained that the collapse of Banca Italiana di Sconto in 1921 shifted public confidence from large to smaller banks. According to most observers, many banks were ill-fated, as their business model was viable only in the context of a booming economy where lending opportunities abounded and mild inflation made collecting deposits cheap (Volpi and Stringher 1927; Cabiati 1929; Banca d'Italia 1928; COMIT 1932; di Castelnuovo 1933). Many actors entered the banking business without a sound expertise in banking (Einaudi 1930; Moro 1932). To gain market share before competitors, banks rushed to open extensive networks of branches (Segre 1926; Volpi and Stringher 1927; Tridente 1936). A detailed statistical account by Mazzantini (1928) found that this expansion had not always been well-pondered, as some tiny communi had multiple banks, whereas some large ones remained unbanked. Many observers lamented that due to this expansion expenses had swollen, which had pushed banks to engage in more profitable but riskier activities (Mazzantini 1928; Tridente 1936). Even *The Economist* (1933) wrote that 'high taxation and heavy general expenses justified, in the eyes of optimistic directors, the speculative policy which was the cause of many frozen assets'. It was claimed that banks were engaging in 'cut-throat competition', with repercussions on the system's stability (Mazzantini 1928; Tridente 1936). The Economic Commission (Commissione Economica, 1946) reporting to the *Assemblea Costituente*<sup>6</sup> in 1946, maintained that the authorisation system established in 1926 to halt free branching was a response to 'the experience of the dreadful consequences of the free expansion of banking facilities that took place between 1919 and 1926'.

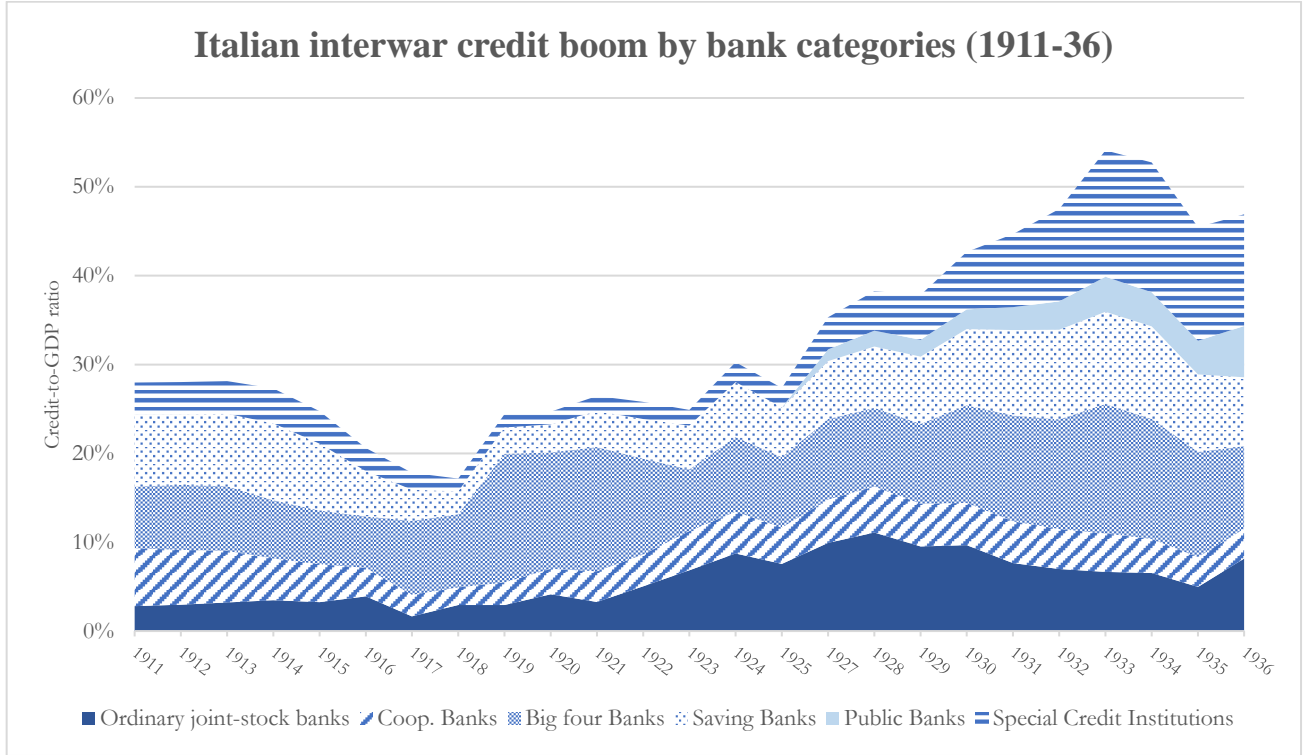
<sup>5</sup> All contributions considered are from policymakers, banking and/or economics professors, and professional reports. To ensure the representativeness of my research, I also surveyed all contributions on the topic published in *Giornale degli Economisti* and *Riforma Sociale*, two prominent academic journals and *Rivista Bancaria*, the official journal of the Italian Banking Association.

<sup>6</sup> The elected assembly that prepared the Constitution of the Republic of Italy after WWII.

## Empirical Strategy

In this section, I study whether quantitative evidence from microdata support the bad credit boom hypothesis and/or the judgement of coeval observers. Was distress the result of disproportionate lending growth and leverage, i.e. a ‘bad’ credit boom pattern? Or was distress a consequence of overcapacity built in the 1920s, i.e. a more prosaic business crisis as advanced by contemporary experts? As figure 3 shows, ordinary joint-stock banks contributed the most to the credit expansion. Their share jumped from 3% in 1918 to 9.6% in 1928<sup>7</sup>. I analyse these banks.

Figure 2



Source: De Bonis and Silvestrini. 2014, Natoli et al. 2016

To test these hypotheses formally, I estimate a logit model to predict the probability of distress in 1929-1936 using a cross-section of bank balance-sheets in December 1928 (Equation 1). Balance sheets are from Natoli et al. (2016). The variable distress is constructed using classified material from banking supervisors’ archives: it includes both outright and hidden failures<sup>8</sup>. Additional variables of interest are constructed using historical printed and archival sources<sup>9</sup>.

$$P(Y|F, C) = H(\beta + \gamma'F_i + \delta'C_i) \quad [1]$$

$$\text{Where } H(u = \beta + \gamma'F_i + \delta'C_i) = \frac{e^u}{1 + e^u} \quad [2]$$

<sup>7</sup> Cooperative joint-stock banks and saving banks also grew considerably, but unlike ordinary joint-stock banks, their weight in 1928 was still behind pre-WWI level.

<sup>8</sup> Distress is defined as ‘a condition in which a bank is not being able to pay back what is due to creditors and investors without a resolution intervention by a third party’. Distress is thus defined *ex-post*, and is a dichotomous, “0-1” variable. It includes bankruptcies, liquidations, distressed mergers, resolutions and bail-outs. This variable was reconstructed from archival sources for the whole population of Italian commercial banks.

<sup>9</sup> A description of all primary and secondary sources employed is available in Molteni (2021).

Y is the dependent variable of my regressions, a dummy taking the value of 1 if bank i experienced distress between January 1929 and December 1936. F is the explanatory variable of interest I test each time. C is a vector of bank-level characteristics in December 1928 employed as controls.

Firstly, I test whether capitalisation (the inverse of leverage) and lending growth are good predictors of distress. Lending growth is not only insignificant but also has little explanatory power<sup>10</sup>. Capitalisation is also not significant, suggesting that high leverage was not the issue.

Secondly, I test whether banks that opened new branches were more likely to experience distress. The variable ‘branch growth’ is large, with a positive sign and strongly significant, confirming the claim that banks that attacked aggressively the market were more likely to experience distress<sup>11</sup>. To further explore this issue, I test the variable ‘assets per branch’<sup>12</sup>, which is large significant and with a negative sign. It confirms that banks expanding their branch network without enlarging their business accordingly were more likely to experience distress: a result that reconciles well with the qualitative evidence presented above.

Thirdly, I test whether expenses are good predictors of distress, and I do so using also balance sheets for 1924 and 1925 – i.e. years before banking regulation and supervision were introduced. ‘Expenses’ is significant and with a positive sign, confirming the hypothesis advanced by the qualitative research<sup>13</sup>.

Fourthly, I want to explore the issue of competition – Table 5. Although ‘Branch growth’ can be a proxy for aggressive competitive behaviour, it does not tell us much about another essential competition dimension: market structure. I use the branch network reconstructed from Gozzini (1929) to calculate the Herfindal Index on branch concentration for each Italian province, and I construct the indicator  $\overline{H^\alpha}$  ‘Competition 1’ where:

$N_{Pi}^\alpha$  : number of branches of bank  $\alpha$  in prov. Pi

$N_{Pi}$  : sum of all branches in prov. Pi

$MS_{Pi}^\alpha$  : market share of bank  $\alpha$  in prov. Pi

$H_{Pi}$  : Herfindal index of prov. Pi

$\overline{H^\alpha}$  : mean of Herfindal Index for bank  $\alpha$  weighted by  $N_{Pi}^\alpha$

$$N_{Pi} = \sum_{\alpha} N_{Pi}^{\alpha}$$

$$MS_{Pi}^{\alpha} = \frac{N_{Pi}^{\alpha}}{N_{Pi}}$$

$$H_{Pi} = \sum_{\alpha} (MS_{Pi}^{\alpha})^2$$

$$\overline{H^\alpha} = \frac{\sum_{Pi} H_{Pi} N_{Pi}^{\alpha}}{\sum_{Pi} N_{Pi}^{\alpha}}$$

Far from being perfect, this index should capture the average exposure to the provincial competition of each branch of one bank, weighted by the number of branches this bank has in each province. It implicitly assumes that all provinces are the same. To relax this assumption, I also construct the indicator ‘Competition2’ using total provincial deposits in 1929, and I weight the provincial Herfindal index by total deposits in the province<sup>14</sup>. Both competition indicators are significant using a logit model, but only ‘Competition2’ remains significant using OLS or Cox survival regression models. The sign is always negative, a result consistent with the qualitative narrative presented.

Finally, several robustness checks are performed. Results are robust to the exclusion of observations with high values in Person residuals, deviance residuals, and leverage. Using OLS, Probit,

<sup>10</sup> Lending growth is measured as ‘ $\Delta$ Credit z’ [(Credit 1928 – Credit z)/Credit z, where z = 1920-1927]

<sup>11</sup> ‘Branch growth’:  $\ln(n^\circ \text{ branches per bank in 1928} - n^\circ \text{ branches per bank after WWI})$

<sup>12</sup> ‘Assets per branch’ : total assets / n° branches in 1928

<sup>13</sup> ‘Expenses’: total expenses / total assets

<sup>14</sup> December 1929 is the closest year for which data is available.

or Cox Regression models instead of Logit does not change the overall validity of my findings. Results are confirmed even using two different and more conservative specifications of ‘Distress’. Including several additional control variables and estimating the model excluding the four largest banks and/or banks headquartered in large cities does not affect the results.

## Conclusions

Quantitative macro and micro evidence, corroborated by informed observers’ qualitative evidence, allows us to interpret the rise and fall of credit-to-GDP ratio Italy experienced in the 1920s as a hastily financial development where the chicken came home to roost when the international crisis hit. *Prima facie*, this phenomenon appears like something usually referred to as a ‘bad’ credit boom. Nevertheless, it lacked most of the features that previous research finds associated with one. By contrast, it was rather an important process of financial development. Current research on financial crises focuses on the devastating effects of spectacular phenomena such as ‘credit booms’ and ‘sudden stops’, but this research shows that in certain cases more prosaic ‘business crises’ can be quite devastating too. In 1928, there were almost 9,500 bank offices and 7,600 were of commercial banks: more than 5,100 ended up in distress by the end of 1933 and would have failed without resolution policy actions<sup>15</sup>.

Two caveats emerge from this research. Firstly, trends in aggregate credit statistics that appear similar can hide quite different phenomena. One wants to make sure to fully grasp the underlying dynamics before jumping to conclusions which can be policy-relevant. Secondly, the case of interwar Italy shows that the banking systems of emerging economies, such as Italy in the 1920s, can be particularly vulnerable during certain phases of their development. Even without leverage, credit-fuelled bubbles, and external current account instability, prosaic business crises in the banking industry can have a detrimental and even systemic impact on financial stability.

---

<sup>15</sup> However, most of this distress was kept secret and resolved by Italian public authorities behind the scenes.

## References

- Aikman, D., Haldane, A. G., Nelson, B. D. (2015). 'Curbing the credit cycle'. *Economic Journal*, 125:585, pp.1072–1109
- Arias, G. (1923), 'Istituto Internazionale per i finanziamenti esteri in Italia', *Echi e commenti*, 27
- Baffigi, A. (2013). Italian National Accounts , 1861 – 2011. In G. Toniolo (Ed.), *The Oxford Handbook of the Italian Economy Since Unification*, Oxford University Press.
- Banca d'Italia (1928). *Annual Report of the Governor of Banca d'Italia*.
- Biscaini Cotula, A. M., & Ciocca, P. (1979). 'Le strutture finanziarie: aspetti quantitativi di lungo periodo (1870-1970)'. In F. Vicarelli (Ed.), *Capitale industriale e capitale finanziario: il caso italiano*. il Mulino.
- Borio, C. (2014). 'The financial cycle and macroeconomics: What have we learnt?'. *Journal of Banking and Finance*, 45:1, pp.182–198
- Cabiati, A. (1929). Riflessioni monetarie sulle relazioni annuali pel 1928 dei nostri istituti di credito, *Giornale Degli Economisti e Rivista di Statistica*, 70(5), 255–280.
- Čihák, M., Demirgüç-Kunt, A., Feyen, E., Levine, R. (2013). 'Financial Development in 205 Economies, 1960 to 2010'. *Journal of Financial Perspectives*, 1:2, pp-17-36
- COMIT, (1932). *Cenni statistici sul movimento economico dell'Italia, Raccolta di notizie statistiche*. Banca Commerciale Italiana.
- Commissione Economica, Ministero per la Costituente. (1946). *Rapporto della Commissione Economica Presentato all'Assemblea Costituente: Credito e assicurazione vol.1*. Istituto poligrafico dello Stato.
- De Bonis, R., Silvestrini, A. (2014). 'The Italian financial cycle: 1861-2011'. *Cliometrica*, 8:3, pp.301–334.
- Dell'Ariccia, G., Igan, D., Laeven, L., Tong, H. (2016). 'Credit booms and macrofinancial stability'. *Economic Policy*, 31:86, pp.299–357.
- di Castelnuovo, A. (1933). Impostazione. In A. di Castelnuovo & N. Mezzetti (Eds.), *La specializzazione del credito : referendum (consensi e dissensi)*. I Problemi dell'Ora.
- Eichengreen, B., Mitchener, K. J. (2004). 'The Great Depression as a credit boom gone wrong'. *Research in Economic History*, Vol. 22, pp.183–237
- Einaudi, L. (1930). Ci sono troppe banche in Italia? *Rivista Bancaria*, 817–825.
- Jordà, Ò., Schularick, M., Taylor, A. M (2015). 'Betting the House'. *Journal of International Economics*. 96:S1, pp. S2–S18
- Jordà, Ò., Schularick, M., Taylor, A. M. (2016). 'The Great Mortgaging: Housing Finance, Crises and Business Cycles'. *Economic Policy*, 31:85, pp.107–152
- Jordà, Ò., Schularick, M., Taylor, A. M. (2017). 'Macrofinancial history and the new business cycle facts'. *NBER Macroeconomics Annual 2016*, 31:1, pp.213–263
- Jordà Ò., Richter B., Schularick M., Taylor A.M. (2021), 'Bank Capital Redux: Solvency, Liquidity, and Crisis', *The Review of Economic Studies*, 88:1, pp.260–286,
- King, R. G., Levine, R. (1993). 'Finance and Growth: Schumpeter Might Be Right'. *The Quarterly Journal of Economics*, 108:3, pp.717–737
- Giordano, C. and Zollino, F. (2020), 'Long-run factor accumulation and productivity trends in Italy'. *Journal of Economic Surveys*. <https://doi.org/10.1111/joes.12361>



- Gorton, G., Ordóñez, G. (2020). ‘Good booms, bad booms’. *Journal of the European Economic Association*, 18:2, pp.618–665.
- Gozzini, U. (1929). *Dizionario delle banche, banchieri e casse di risparmio d’Italia (ed. 1929-30)*. Stabilimento tipografico del commercio.
- Levine, R. (2005). ‘Finance and Growth: Theory and Evidence’. In Aghion P., Durlauf S. (eds) *Handbook of Economic Growth*, pp. 865–934.
- Loayza, N., Ouazad, A., Rancière, R. (2018). ‘Financial development, growth, and crisis: Is there a trade-off?’ In Levine R., Beck T. (eds) *Handbook of Finance and Development*, pp. 289–311
- Mazzantini, M. (1928). Alcune indagini statistiche sull’organizzazione bancaria italiana, *Giornale Degli Economisti e Rivista di Statistica*, 69(9), 772–792.
- Mendoza, E. G., Terrones, M. (2008). ‘An Anatomy of Credit Booms: Evidence From Macro Aggregates and Micro Data’, *IMF Working Papers*, 8:226
- Molteni M. (2021), ‘Measuring bank failures in interwar Italy: sources and methods for a comparative account’, *Rivista di Storia Economica*, Forthcoming
- Moro, G. (1932). *Patologia Bancaria: gli insegnamenti della crisi. Concezioni e creazioni fasciste*. La Stampa Commerciale.
- Natoli, S., Piselli, P., Triglia, I., & Vercelli, F. (2016). L’archivio storico del credito in Italia. *Quaderni di Storia Economica - Banca d’Italia*, 36.
- Postel-Vinay, N. (2019). ‘Was the U.S. Great Depression a Credit Boom Gone Wrong?’. INET’s Private Debt Initiative Conference, June 20-21, 2019, Available at SSRN: <https://ssrn.com/abstract=3413697> or <http://dx.doi.org/10.2139/ssrn.3413697>
- Reinhart, C. M., Rogoff, K. S. (2009). *This time is different: Eight centuries of financial folly*. Princeton University Press
- Sahay, R., Cihak, M., N’Diaye, P. M., Barajas, A., Ayala Pena, D. B., Bi, R., Gao, Y., Kyobe, A., Nguyen, L., Saborowski, C., Svirydzhenka, K., Yousefi, S. R., (2015). ‘Rethinking Financial Deepening; Stability and Growth in Emerging Markets’. *IMF Staff Discussion Notes*, 15:08.
- Schularick, M., Taylor, A. M. (2012). ‘Credit booms gone bust: Monetary policy, leverage cycles, and financial crises, 1870-2008’. *American Economic Review*, 102:2, pp.1029–1061
- Segre, M. (1926). *Le banche nell’ultimo decennio*. La Stampa Commerciale.
- The Economist. (1933). Italian banking conditions, 13th May 1933 [Banking supplement]. *The Economist*, 13–14.
- Tridente, N. (1936). *La concentrazione bancaria dalla guerra europea ai giorni nostri*. Dott. Luigi Macrì Editore.
- Volpi, G., Stringher, B. (1927). *The financial reconstruction of Italy* (M. Pennachio, Ed.). Italian Historical Society
- Wachtel, P. (2018). ‘Credit Deepening: Precursor to Growth or Crisis?’. *Comparative Economic Studies*, 60:1, pp.34–43