As the Federal Reserve ends its quantitative-easing program, the calls for the European Central Bank to embark on its own full-scale government-bond-buying program to invigorate the eurozone’s economy grow louder.

Many economists concur with former Fed Chairman Ben Bernanke’s judgment that, in the U.S., QE worked in practice but not in theory. In Japan, the world’s most aggressive QE program seems to have worked in neither theory nor practice, leading the Bank of Japan to decide last week that perhaps it wasn’t aggressive enough. Would a eurozone easing program prove any more successful?

Italy is the crucial test. The eurozone’s third-largest economy is suffering from a toxic combination of sluggish growth and government debt of 135% of gross domestic product. It grew by less than 1% a year on average in the years prior to the crisis and now looks likely to slide back into a third recession in six years. Credit conditions continue to deteriorate. If QE can’t rescue Italy, then it can’t rescue the eurozone.

Yet it is hard to see what QE can do for Italy. To understand why, consider the Italian banking system. This is the main channel through which any monetary stimulus must work, given that Italy is one of the most bank-dependent economies in the eurozone. Bank lending is equivalent to 53% of GDP in Italy, higher than in France or Germany. Bank loans represent 40% of total financial liabilities (equity as well as
debt), compared with 15% in the U.S. and 23% in France, according to the Bank of Italy.

Unfortunately, the ECB’s recent comprehensive assessment of the eurozone’s largest banks confirmed what the market suspected: The Italian banking system is the weakest in the eurozone.

The ECB concluded that Italian banks had understated their bad-debt charges by €12 billion ($15.02 billion). Nine out of the 15 Italian banks examined by the ECB had a capital shortfall at the end of December 2013, and four still have a combined shortfall of €3.1 billion today.

This conclusion was a particular embarrassment for the Bank of Italy. The central bank had insisted that it was a highly conservative supervisor that didn’t need external experts to tell it how to do its job. In fact, what the stress tests showed was that Italy’s banking system was, at least until recently, badly under-capitalized and therefore constrained in its ability to supply credit to the economy.

Have the ECB stress tests now solved Italy’s bank-capital problem?

It is hard to say, since the ECB only tested the 15 largest banks out of 680 Italian banks in total. What is more, the same obstacles that held back capital-raising at the larger banks pose even greater challenges for Italy’s smaller banks.
One problem is the Italian banking system’s very low returns on equity, a reflection of extensive branch networks, large portfolios of low-margin legacy loans, the highest corporate-tax rates in Europe and the legal impediments to cutting costs.

Another problem is governance. Italian banks are typically controlled by foundations—charitable organizations dominated by local political interests that haven’t been afraid to use their boardroom clout to pursue their own agendas, including block demands that they stump up cash.

Under the pressure of the crisis, this is starting to change, at least among the listed banks. The foundation that used to control Monte dei Paschi di Siena SpA, Italy’s third-largest bank, has reduced its shareholding to 2.5% from 30% this year—although it has held onto the right to nominate the chairman.

But a law limiting shareholders in Italy’s numerous “populari” local savings banks to one vote regardless of their stake continues to act as an impediment to capital raising.

In contrast, Spain swept away similar rules for its savings banks, paving the way for much-needed consolidation.

Until Italy embraces similar reforms, a poorly capitalized, barely profitable banking system will struggle to supply the economy with credit, regardless of how much money the ECB pumps into the system.

But bank capital is just one part of the problem. Pressure on banks to shrink their balance sheets is also coming from the funding side.

At the start of the crisis, Italian banks relied on wholesale markets for €850 billion of funding; after six years of effort, they have only managed to cut this to €550 billion, much of this financed by the ECB.

No bank wants to rely on the central bank to fund its core activities, no matter how cheap the facilities. The ECB’s new asset-backed securities-buying program may remove some assets from balance sheets, but the only long-term solution to the funding problem is to rid the banking system of its €320 billion mountain of bad debts, an eye-watering 16% of outstanding loans.

But this requires two things, neither of which currently exists in Italy.

The first is a robust insolvency regime that allows the debts of viable companies to be quickly restructured so that they can start investing and growing again, while allowing failed companies to be wound down.
Banks say it takes on average seven years to enforce contracts through the courts, reducing the incentive for troubled borrowers to keep servicing their debts.

The second requirement is a supply of equity finance, both to inject fresh capital into viable but overindebted businesses and to buy restructured assets off bank balance sheets. Yet many Italian companies are wary of raising equity from outside investors, and many investors are wary of exposure to Italy.

Private equity is equivalent to just 0.2% of GDP in Italy, half the level in France and a fifth of that in the U.K., according to the Bank of Italy.

Indeed, this is Italy’s real problem. Its economy is dominated by small, highly leveraged family-owned businesses, many of which are too indebted to support more borrowing.

What it really lacks isn’t so much bank capital as corporate capital. But this isn’t a problem that QE can solve. It requires a cultural revolution.

Write to Simon Nixon at simon.nixon@wsj.com