Financial Stability Notes

External Balance Sheet Risks in Ireland, Part II

Vahagn Galstyan and Valerie Herzberg

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June 9, 2020

Abstract

The COVID-19 pandemic poses financial stability challenges with potential implications for the funding of economies. In the context of external borrowing, the empirical literature has shown that the level and evolution of net external debt liabilities can signal future crisis. Due to Ireland's role as a financial centre, however, traditional data cannot be used at face value for such purposes. In Galstyan and Herzberg (2018) we focused on the external position of the banking sector only. However, a more encompassing approach is warranted given the shift of liabilities from the banking sector to the government sector in the aftermath of the crisis. Extending our previous work, we provide an estimate of net external debt liabilities for domestically-relevant entities in Ireland and propose a modified threshold indicator for monitoring external vulnerabilities. We find that on the eve of the global pandemic Ireland's external balance sheet vulnerabilities were relatively limited.

1   Introduction

The Covid-19 pandemic represents a large external shock to the global as well as the Irish economy with substantial implications to financial stability. History shows that financial crises are recurrent events. They have become more frequent in the post Bretton Woods period, affecting not just emerging market economies but also advanced economies. These crisis can also be highly damaging to economic welfare. For instance, Claessens et al (2014) estimate the cumulative cost of banking crises on average to be 23 per cent of GDP during the first four years. In Ireland, the financial crisis of 2008 had large socioeconomic repercussions, and resulted in an IMF- EU financial assistance program.

To mitigate the occurrence or severity of crisis, central banks have been given mandates to safeguard financial stability. In some cases, such as in Ireland, central banks have been endowed with specific macroprudential powers in order to limit leverage and risk taking in the economy. Mandates for financial stability require continued financial surveillance and monitoring of risks and vulnerabilities in the economy. Early warning indicators play an important role in the monitoring toolbox of central banks.

Following the Global Financial Crisis, the European Union adopted the Macroeconomic Imbalances Procedure (MIP) (European Commission 2016). Its aim is to detect the build-up of imbalances in member states and in the Union as a whole and to correct in time these imbalances to avoid financial instability. The starting point of the annual MIP process is a scoreboard with 14 leading indicators. The net international investment position, the current account balance and gross external debt feature in the scoreboard.

As elaborated in Galstyan (2019), aggregate measures used in the MIP scoreboard can be misleading and inappropriate for Ireland.[1] Irish statistics that feed into external vulnerability indicators are affected to a significant degree by activities that are orthogonal to Irish economic conditions. Hence, given the central role of external borrowing by Irish banks in the last financial crisis, Galstyan and Herzberg (2018) proposed an early warning indicator based on the balance sheet of the main domestic retail banks. They suggest that a closer monitoring of the external balance-sheet risk is warranted when the net external debt liabilities of domestic banks exceed 17 per cent of modified gross national income (Figure 1).[2]

Figure 1: **Net Foreign Debt of Domestic Banks**
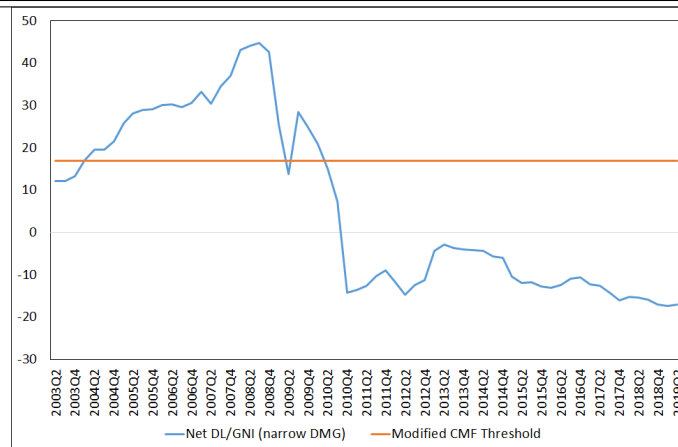
Notes: Net foreign debt liabilities (DL) for the narrow set of domestic banks as a percentage of modified gross national income (GNI*). Modified CMF threshold captures the modified threshold of Catão and Milesi-Ferretti (2014). For details, see Galstyan and Herzberg (2018).

A partial focus on banks only might, however, be misleading and too sanguine about emerging external risks. Accordingly, building on the methodology and results employed in Galstyan (2019) and Galstyan and Herzberg (2018), we propose a more comprehensive measure of net external debt liabilities for Ireland. For completeness, we also rescale the threshold estimated by Catão and Milesi-Ferretti (2014) in order to better capture various nuances of our constructs. Our findings suggest that the new measure of net external debt liabilities as of 2019Q2 was below this modified threshold.[3]

The rest of this note is composed of three sections. In Section 2 we explain our estimations, while in Section 3 we discuss the results. Finally, Section 4 concludes.

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[1]See also Fitzgerald (2018).

[2]We will refer to the modified gross national income as GNI*.

[3]The period under consideration was dictated by data availability at the time of writing.

2 Methodology

2.1 Estimating the Net Foreign Debt Position

Broadly, net external debt of the Irish domestically-oriented economy is composed of net external debt of the consolidated government sector (central bank and general government), domestically-oriented banks, insurance firms and pension funds, investment funds and non-financial corporations and households.[4] Accordingly, we construct an aggregate measure of domestically-relevant net external debt for Ireland from sectoral data that, in most cases, are publicly available. We do so by stripping out from the sectoral external positions the components related to actors domiciled in Ireland, but not contributing to or interacting directly with domestic activity. For example, there are many credit institutions that, while resident in Ireland, in general do not provide credit or take deposits from Irish residents. While these institutions are included in the compilation of official statistics, we remove them from our calculations. Then, we add together the statistics for each domestically-oriented sector to arrive at our aggregate estimate.[5]

Turning to the details, to derive an estimate for net external debt, we make a number of different adjustments. First, detailed data for respectively domestically-oriented non-financial corporations and households are not publicly available. Fortunately, these two sectors jointly account on average for only about 6 percent of total foreign debt assets (liabilities) in other economies (Figure 2). Furthermore, we assume that Irish households hold foreign assets primarily through Irish pension funds. Hence, omission of these sectors is unlikely to materially affect the results.

Figure 2: **Shares in External Positions**
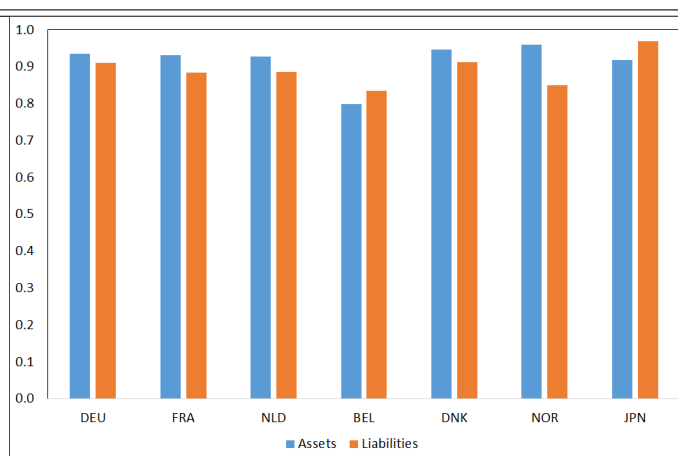
Notes: Share of foreign debt assets (liabilities) of banks, other financial corporations, general government and central bank in total foreign debt assets (liabilities). Authors' calculations based on data from the IMF's BOP dataset.

Calculations for the government and domestic credit institutions are straightforward. For the former, the data are publicly available and do not require adjustments as the activities of

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[4]In what follows we refer to the aggregate of general government and central bank as the government sector.
[5]For further discussions and examples see Galstyan (2019).

the government sector are all domestically orientated. For domestically-oriented banks we take the same approach as in Galstyan and Herzberg (2018): we aggregate external positions of the Bank of Ireland, AIB, KBC, Permanent TSB and Ulster Bank.

For pension funds and insurance companies jointly, the Central Statistics Office provides some information on the residency of their total assets and liabilities. For pension funds, we assume that all liabilities are domestic and that the locational split of debt assets is proportionate to the total; i.e. as 83 percent of pension funds' total assets are outside Ireland, we presume the same proportion for debt assets.[6]

The computations for the insurance sector are more challenging. For this purpose, the calculations draw on the methodology of Galstyan (2019), using internal micro data from the Central Bank of Ireland. In particular, if both foreign assets over total assets and foreign liabilities over total liabilities of a given entity exceed 85 percent threshold, we consider the entity to be foreign oriented and we exclude it from the sample. Based on the 85 percent threshold, 28 percent of foreign debt assets and 8 percent of foreign debt liabilities are accounted for by domestically-oriented firms.[7]

Finally, for investment funds, we concentrate on the segment that finances the domestic real estate sector, as this has been established as the main link between the investment fund sector and the Irish economy (Coates et al 2019). Real estate investment funds (REIFs) were the largest holder of professionally managed Irish real estate at the end of 2018, having accumulated €17.7 billion of property assets.

2.2   Modifying the Threshold

For a threshold estimate, we rely on the work of Catão and Milesi-Ferretti (2014). The authors combine a multivariate probit model with a receiver operating characteristic (ROC) curve as a model selection tool and study external crises using data on 70 countries, emerging market economies and advanced economies between 1970 to 2011. The authors find that crisis risk increases sharply as net foreign liabilities exceed 50 per cent of GDP, in particular when the composition of these liabilities is tilted towards debt. Based on the ROC curve, they find a threshold estimate of 35 per cent for net external debt over GDP for the whole economy.[8]

As mentioned in the previous subsection, non-financial corporations and household sectors jointly account on average for 6 percent of total foreign debt assets (liabilities) in other economies. This omission is unlikely to have substantial effect on the estimated net external debt position. Nevertheless, we adjust the threshold of 35 per cent to represent these 94 per cent of the external debt universe, resulting in a modified threshold estimate of between 28 percent and 32 percent of GNI*.

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[6]The 83 percent is based on the estimate for insurance corporations.

[7]For the derivation we assume again that the domestic and external debt assets and liabilities are proportional to the split for the aggregate data. Published data for 2014-16 show on average 83 percent of assets of insurance firms and 62 percent of liabilities are foreign. As to the choice of the threshhold, the results for the insurance sector is robust to different levels (e.g. 70 percent).

[8]We will refer to this cut-off point as the CMF threshold.

3 Results

Figure 3 provides a snapshot of estimated sectoral net foreign debt liabilities as well as of total net foreign debt liabilities for 2014Q1 and 2019Q2. Total net foreign debt liabilities declined considerably from about €121 billion in 2014Q2 to about €43 billion in 2019Q2. This decline was primarily driven by a decline in foreign debt liabilities, with foreign debt assets registering a minor increase.[9] As to the composition, bar real estate investment funds, all sectors experienced a reduction in net foreign liabilities with the banking sector and the government accounting for the sharpest declines.

Meanwhile, the main contributor to the overall net debt liability position in 2019 remained the government sector. In contrast, banks, insurance corporations and pension funds held a higher stock of foreign assets than foreign liabilities, and so their net external debt liability position was negative. Finally, real estate investment funds, which were heavily invested in the Irish commercial real estate sector, were primarily financed by foreign equity liabilities. Accordingly, their net debt liability position, while positive, was small compared to the rest of the sectors.

Figure 3: **Net Foreign Debt by Sector**
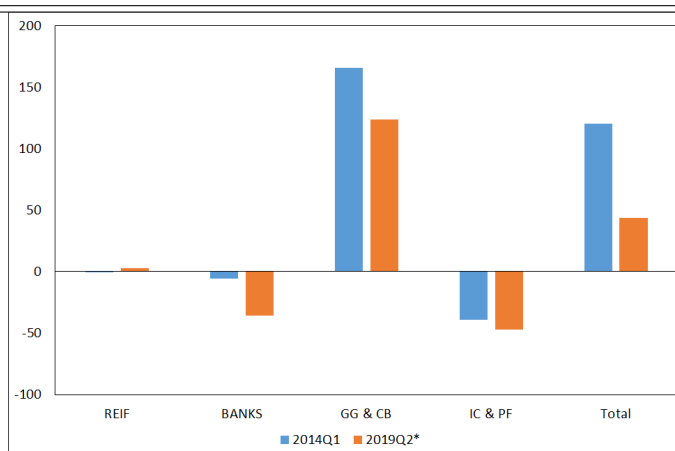
Notes: Net foreign debt liabilities in billions of euro. REIF stands for real estate investment funds, GG & CB stands for general government and central bank, IC & PF stands for insurance corporations and pension funds. Data for 2019Q2 are extrapolated.

Figure 4 below shows the evolution of the estimated net external debt position as a share of GNI* together with the modified CMF threshold. The figure suggests not only an improving picture, but also a benign one: with net external debt as a percent of GNI* at 23 percent, the economy appears to be below the modified CMF threshold of 28-32 percent. While deleveraging has indeed taken place since 2014 (earliest available data for all sectors), up until 2017, the Irish net external debt liability position was still well above the threshold, mainly due to the external position of the government.

While our previous analysis (Galstyan and Herzberg 2018) that had focused solely on the banking sector did not flag such concern as banks had been deleveraging for a number of years, the results in this note highlight the importance of an aggregate view on net external liabilities.

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[9]See Appendix A.

This approach is particularly relevant given the shift of liabilities from the banking sector to the government sector in the aftermath of the crisis.

Figure 4: **Net Foreign Debt and Threshold Indicator**
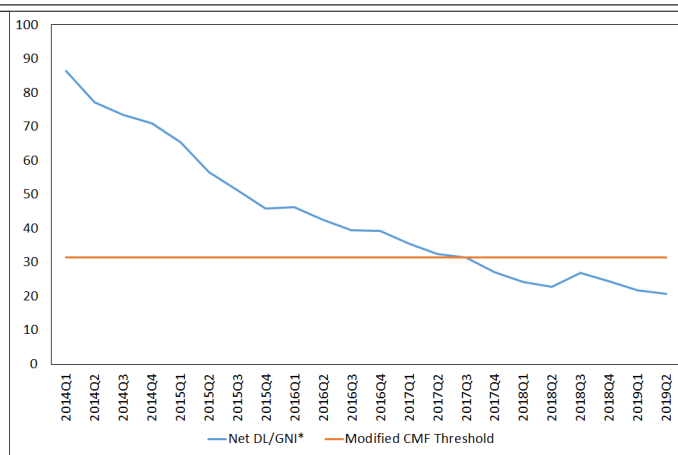
Notes: Estimated net foreign debt liabilities (DL) as a percentage of modified gross national income (GNI*). Modified CMF threshold captures the modified threshold of Catão and Milesi-Ferretti (2014). Data for 2019Q2 are extrapolated.

Thus, the picture on the eve of the pandemic was overall sanguine when considering the level of the early warning indicator relative to the threshold. However, Ireland as a small open economy faces particularly volatile growth conditions. Covid-19 represents an exceptional global shock and a disorderly exit of the UK from the transition arrangement at the end of 2020 could be an additional adverse event. Unsurprisingly, these shocks could also raise the ratio of net foreign debt liabilities to GNI*.

Conefrey, Hickey and Walsh (2019) suggest that a disorderly Brexit could reduce the level of output in the Irish economy by around 4 percent in the short run and by 6 per cent after 10 years. As a result, without offsetting fiscal measures, by 2025 the government debt-to-income ratio could increase by around 17 percentage points, with nominal debt approximately €22 billion higher than the baseline. This would be on top of the severe GDP contraction and increase in sovereign indebtedness due to the Covid-19 pandemic. If all the additional government debt was externally sourced (and other sectors unaffected), our measure of net external debt liabilities for the economy as a whole could jump pass the threshold. However, as long as the underlying trend for the Irish net external debt liabilities to GNI* ratio is not increasing in the long run, on its own, the likely crossing of the threshold does not signal concern.

4   Conclusions

The Covid-19 pandemic highlights how vulnerable Ireland as a small open economy is to external shocks. Early warning indicators are useful tools that signal to policy-makers the need for greater monitoring and potential interventions in order to mitigate risks. The net external debt position is one such indicator. In the case of Ireland, however, data on net external debt taken at face value should not be relied upon given the presence of entities resident in Ireland but pursuing activities orthogonal to domestic conditions. Similarly, this note suggests that a partial

focus on banks instead of the aggregate economy might be misleading about emerging external risks. Hence, we provide an estimate of Irish-relevant net external debt position, and compare this estimated level and its evolution to a threshold that has been identified in the literature as signalling an increased risk of future crisis. We conclude that in 2019Q2, the Irish economy was not only below such threshold but also has been on a positive trajectory for some time. This suggests that Ireland entered the Covid-19 pandemic with a relatively healthy external balance sheet.

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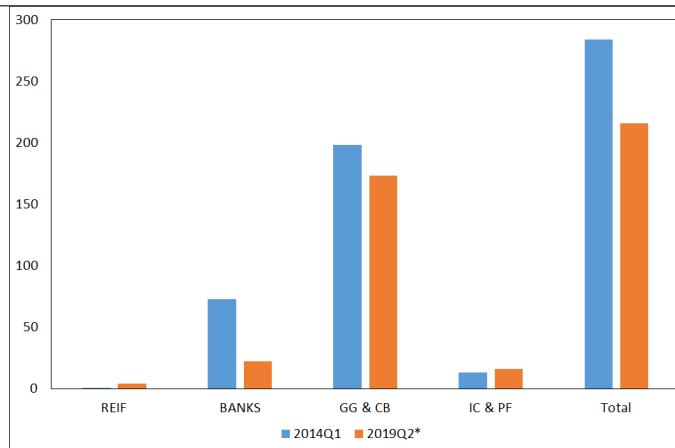
Appendix A

Figure 5: **Foreign Debt Assets by Sector**
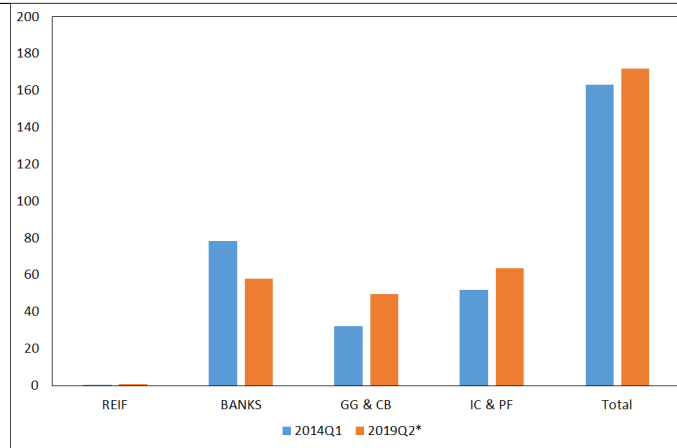
Notes: Foreign debt assets in billions of euro. REIF stands for real estate investment funds, GG & CB stands for general government and central bank, IC & PF stands for insurance corporations and pension funds. Data for 2019Q2 are extrapolated.

Figure 6: **Foreign Debt Liabilities by Sector**

Notes: Foreign debt liabilities in billions of euro. REIF stands for real estate investment funds, GG & CB stands for general government and central bank, IC & PF stands for insurance corporations and pension funds. Data for 2019Q2 are extrapolated.