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# A profile of non-performing Irish SME loans

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## Abstract

11.1 per cent of Irish SME balances at three major Irish retail banks were non-performing in December 2018. I use loan-level data to examine the characteristics of these balances, investigate why the ratio remains so high, and identify the drivers of recent progress in its reduction. I show that the overall figure of 11.1 per cent masks a lot of important detail. 3.9 per cent of Irish SME balances are non-performing under supervisory definitions, but are not in arrears. 4.5 per cent of balances have been in arrears for more than two years and some loans have been in arrears for up to ten years. The NPL ratio of 11.1 per cent in December 2018 is down substantially from 17.5 per cent in June 2018. Loan cures are an important explanation for this decrease – 18.8 per cent of non-performing balances became performing between June and December 2018. The majority of these balances relate to loans that were not in arrears. 19.9 per cent of non-performing balances exited the portfolio over the same period, with the vast majority of these balances being in arrears. Aggregate supervisory data suggest that the Irish SME NPL ratio continued to fall in the first half of 2019.

## 1 Introduction

The recent Irish financial crisis and the deep recession that followed were associated with a large increase in non-performing loan (NPL) balances at Irish banks. By December 2013, 32 per cent of loan balances at the five main Irish retail banks were non-performing.<sup>1</sup> The picture looked even worse for small business lending. In a sample of three major banks, over 40 per cent of Irish SME loan balances were non-performing in December 2013.<sup>2</sup>

Since 2014, the five main Irish retail banks have made significant progress in reducing their aggregate NPL ratio to 8.5 per cent in December 2018. While this is substantially lower than the crisis peak, it remains one of the highest ratios in Europe. Thus, NPL resolution in Ireland remains a work in progress.

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<sup>1</sup>See Donnery et al. (2018).

<sup>2</sup>See the 2014H1 SME Market Report published by Central Bank of Ireland.

In this note, I use loan-level data to examine the progress of three major banks in resolving the NPLs of Irish SMEs. This lending segment is understudied in work on NPL resolution in Ireland, though its NPL ratio has remained stubbornly high and stands in contrast to buoyant conditions in the Irish economy. I demonstrate that there is considerable nuance associated with the headline Irish SME NPL ratio, provide insight into why this ratio remains relatively high, and why it is falling. I also examine the characteristics of the remaining Irish SME NPLs and provide novel findings on loan arrears and forbearance.

11.1 per cent of Irish SME balances were non-performing in December 2018. However, I show that this figure masks a lot of important detail. 3.9 per cent of balances are non-performing under supervisory definitions, but are not in arrears. In Section 2, I discuss this category of NPL balances further. 2.8 per cent of balances are non-performing and have been in arrears for up to two years and 4.4 per cent of balances have been in arrears for over two years. Some loans have been in arrears for up to ten years.

Accommodation & Food, Agriculture, Forestry & Fishing, and Wholesale & Retail borrowers account for 58 per cent of outstanding balances and 65 per cent of NPL balances. Construction and Real Estate borrowers have the highest NPL and long-term arrears ratios, though these sectors make up a relatively small share of total lending. NPL ratios vary from 8.9 to 16.8 per cent across borrower regions. 62 per cent of NPL balances are forborne or have previously been forborne.

I demonstrate that current NPL ratios relate only loosely to macroeconomic indicators at the level of counties and sectors. This suggests that NPL ratios are not a reliable guide to current economic conditions in a given segment of the economy. The trend in a region's NPL ratio over time will reflect local economic conditions to a degree, but also the effect of court proceedings, company liquidations, loan sales, restructuring activity, and new lending. NPL ratios are best suited for analysing the health of bank portfolios, not sector or regional economic conditions.

The overall NPL ratio of 11.1 per cent at December 2018 is down substantially from 17.5 per cent in June 2018. I show that there are two main explanations for this decrease. First, 18.8 per cent of NPL balances transitioned to performing status during this period. The vast majority of these balances relate to loans with no arrears in June 2018. Second, 19.9 per cent of NPL balances exited the loan portfolio through avenues such as enforcement action and loan sales. The vast majority of these balances were in arrears in June 2018. Furthermore, the transition rate of balances from performing to non-performing status was low during this period relative to recent historical levels.

FINREP supervisory data show a further decrease in SME NPL ratios from December 2018 to June 2019. These data are only available at the level of bank portfolios, so it is not possible to calculate an Irish SME NPL ratio that is exactly comparable with the loan-level figures stated above. In particular, aggregate SME figures from FINREP do not distinguish between borrower countries and include a large amount of real estate investment and development lending. With that said, the FINREP SME NPL ratio for the three banks I study fell from 9.9 per cent in December 2018 to 7.2 per cent in June 2019.

This note complements a number of recent papers that investigate the practice and progress of NPL resolution in Ireland. Donnery et al. (2018) discuss the policy context in which the Irish retail banks reduced their NPL ratios from a peak of 32 per cent in 2013 to approximately 14 per cent in 2017. McCann (2018) establishes a number of facts about mortgage NPL resolution, while McCann and McGeever (2018) contrast the relative importance of loan cures in resolving residential mortgage and commercial real estate NPLs. O'Malley (2018) provides a profile of residential mortgage loans with long-term arrears.

## 2 Data

I use loan-level data from AIB, Bank of Ireland, and Ulster Bank. These three institutions provide 90 per cent of new Irish bank lending to Irish SMEs.<sup>3</sup> The data include information on each loan's outstanding balance, performance status, days past due, borrower county, and borrower sector. I exclude loans to borrowers in NACE sectors K, O, P, R, S, T, and U as they include financial services companies, public administration bodies, schools, sports clubs, and other voluntary associations.<sup>4</sup> I also exclude loans labelled commercial real estate investment or development. The sum of the remaining balances is €13,870m.

The data include a classification of each loan as performing or non-performing under the Implementing Technical Standards NPL definition of the European Banking Authority.<sup>5</sup> This is the established NPL definition used by supervisors across Europe. A loan is non-performing under this definition if it is more than 90 days in arrears or, importantly, if it is deemed unlikely that the borrower will be able to fully repay the loan without the realisation of collateral. A loan can thus be non-performing even if it is not in arrears. For an NPL to cure, the borrower must return below 90 days past due and satisfy the lender that they are likely to continue making their repayments over the remaining lifetime of the loan.

Table 1: Outstanding balances by date and performance status

Date	Total (€m)	Perf. (€m)	NPL (€m)	% NPL	% NPL <sub>0</sub>	% NPL <sub>1-720</sub>	% NPL <sub>&gt;720</sub>
Jun. 2018	14,576	12,027	2,548	17.48	6.81	4.64	6.03
Dec. 2018	13,870	12,324	1,546	11.14	3.89	2.79	4.47

Table 1 shows outstanding Irish SME balances at June and December 2018 by performance status. €1,564m of balances – 11.14 per cent of the total – are non-performing in December 2018. 3.89 per cent of balances are non-performing, but are not in arrears. A further 2.79 per cent of balances are non-performing and in arrears of less than two years. Finally, 4.47 per cent of balances have been in arrears for more than two years. The December 2018 NPL ratio is substantially lower than the 17.48 per cent figure for June 2018. I examine this decline further in Section 5.

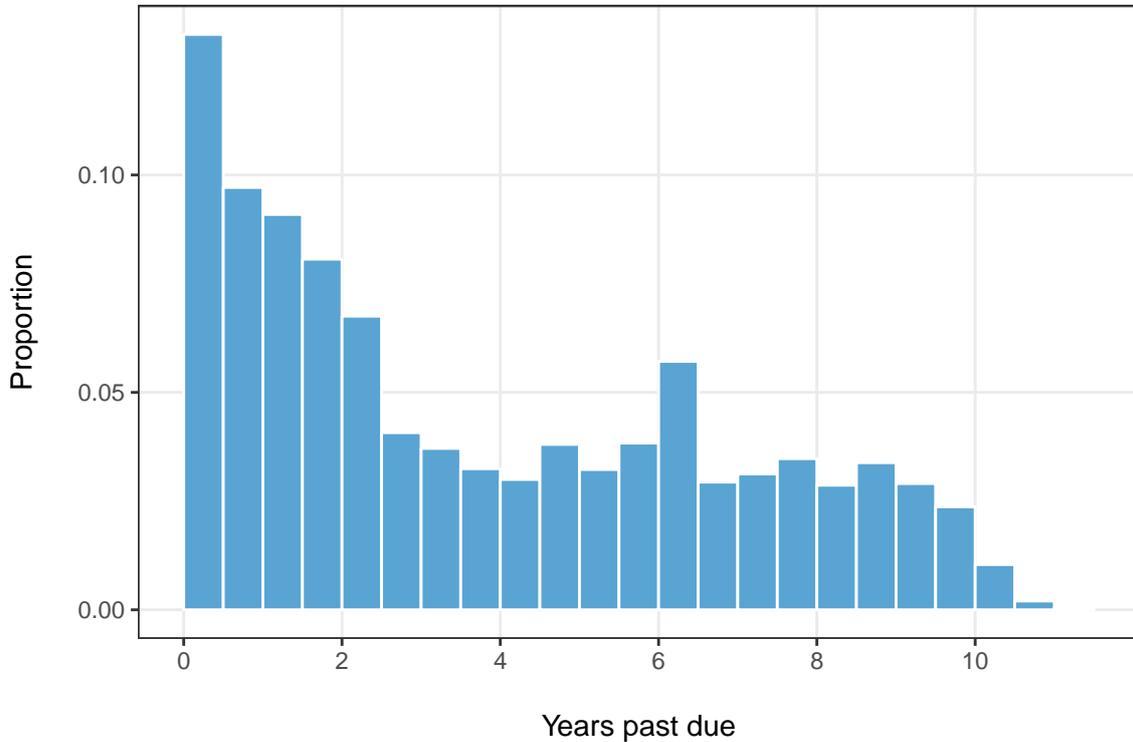
<sup>3</sup>See the 2019 SME Market Report published by the Central Bank of Ireland.

<sup>4</sup>[https://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST\\_NOM\\_DTL&StrNom=NACE\\_REV2](https://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=NACE_REV2)

<sup>5</sup><https://eba.europa.eu/documents/10180/449824/EBA-ITS-2013-03+Final+draft+ITS+on+Forbearance+and+Non-performing+exposures.pdf>

Figure 1 is a histogram of years past due for non-performing balances in arrears at December 2018. The most extreme cases are loans which have been in arrears for up to ten years. A large minority of balances are greater than zero years past due, but less than two years past due. The distribution is close to uniform between two and ten years past due.

Figure 1: The years past due distribution of NPL balances in arrears



### 3 NPL balances by borrower and loan characteristics

In this section, I examine the performance attributes of outstanding balances by borrower sector, borrower region, and forbearance status.

#### 3.1 Borrower sector

Table 2 shows the performance attributes of outstanding balances at December 2018 by borrower sector. The three largest sectors by outstanding balance are Agriculture, Forestry & Fishing, Wholesale & Retail, and Accommodation & Food. These sectors make up 57.6 per cent of outstanding balances and thus strongly influence the overall portfolio NPL ratio. Other sectors with sizeable exposures include Manufacturing and Human Health.

NPL ratios vary from under 3 per cent to over 19 per cent across sectors. The proportion of balances that are non-performing and greater than two years past due similarly varies from almost 0 per cent to over 9 per cent. Wholesale & Retail and Accommodation & Food have NPL ratios of 13.08 and 16.35 per cent, respectively, while Agriculture, Forestry & Fishing has a ratio of 9.36 per cent. These three sectors make up 64.5 per cent

of NPL balances.  $NPL_{>720}$  ratios for these sectors range from 3.89 per cent for Agriculture, Forestry & Fishing to 6.71 per cent for Accommodation & Food.

Table 2: Performance attributes at December 2018 by sector and dpd category

Sector	Total (€m)	NPL (€m)	% NPL	% $NPL_0$	% $NPL_{1-720}$	% $NPL_{>720}$
A – Agri., Forestry & Fishing	3,122	292	9.36	2.68	2.80	3.89
B – Mining & Quarrying	153	26	16.88	10.57	2.26	4.05
C – Manufacturing	1,492	113	7.58	2.98	2.35	2.25
D+E – Elect., Gas, Steam & A/C; Water, Sewerage & Waste	134	6	2.59	1.00	1.50	0.09
F – Construction	311	57	18.40	5.13	3.83	9.44
G – Wholesale & Retail	2,792	365	13.08	4.83	3.13	5.12
H – Trans. & Storage	556	29	5.29	1.64	2.11	1.53
I – Accom. & Food	2,081	340	16.35	6.25	3.39	6.71
J – Information & Comm.	124	8	6.84	4.20	1.62	1.02
L – Real Estate	216	42	19.27	6.20	3.91	9.16
M – Prof., Tech., & Scientific	528	76	14.32	5.31	3.37	5.64
N – Admin. & Support	680	103	15.12	5.34	3.56	6.21
Q – Human Health	1,106	61	5.54	1.60	1.24	2.70
Not specified	576	29	5.08	0.63	2.03	2.42
Total	13,870	1,546	11.14	3.89	2.79	4.47

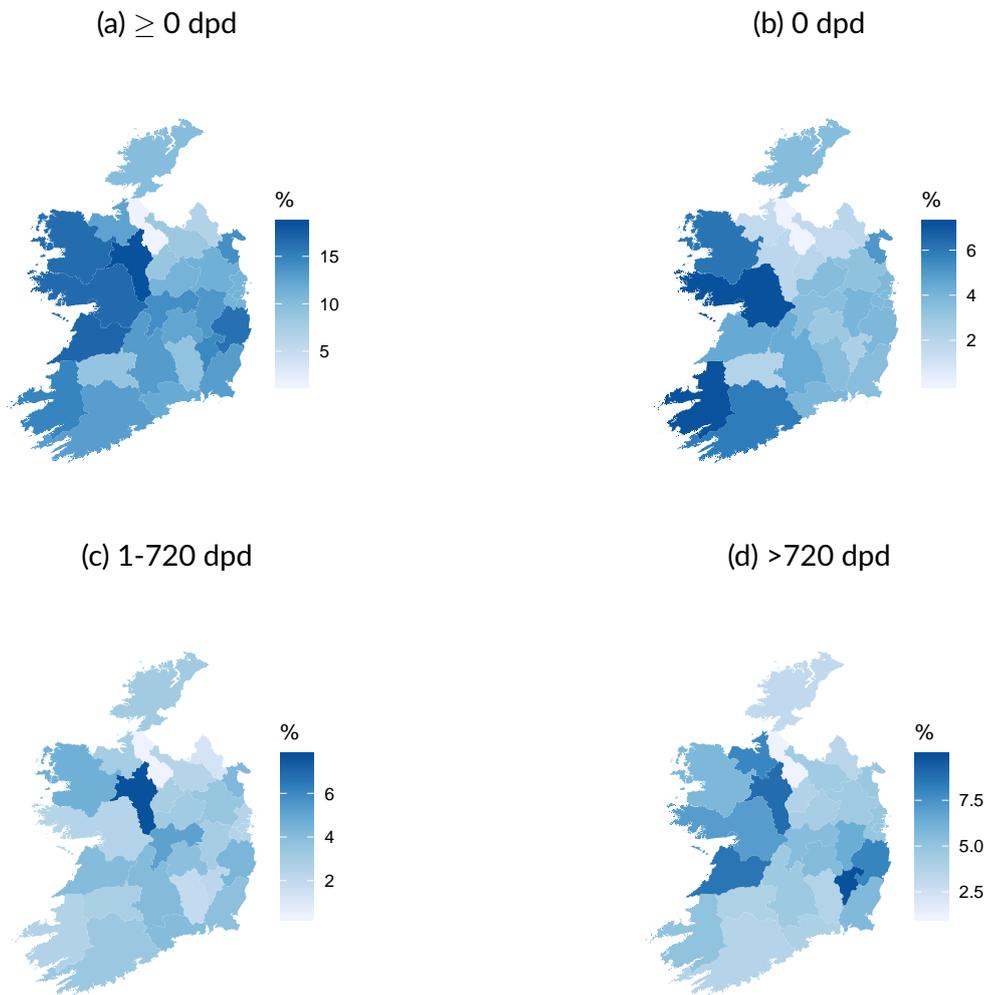
Construction and Real Estate have both the highest NPL and  $NPL_{>720}$  ratios. 18.4 per cent of Construction balances are non-performing and 9.44 per cent are more than two years in arrears. 19.27 per cent of Real Estate balances are non-performing and 9.16 per cent are in arrears of more than two years. While these figures are quite high, it is important to bear in mind that the two sectors make up only a small share of outstanding balances. Mining & Quarrying, Administrative & Support Services, and Professional, Technical & Scientific Services also have relatively high NPL ratios of 14 to 17 per cent. Transportation & Storage, Human Health, and Information & Communication borrowers have NPL ratios of between 5 and 7 per cent.

The two sectors with the lowest NPL ratios are also the two sectors with the lowest outstanding balance totals. Thus, I report performance attributes jointly for Water, Sewerage & Waste and Electricity, Gas, Steam & A/C Supply. The NPL ratio for these two sectors is 2.59 per cent and almost all associated balances are less than two years in arrears.

### 3.2 Borrower region

Figure 2 presents maps of county-level NPL ratios by days past due category. Panel (a) illustrates several points. First, there is a large spread in NPL ratios across counties. Second, counties in geographic proximity to one another can have substantial differences in NPL ratios. Third, almost all counties have an NPL ratio of 8 per cent or higher. Fourth, borrowers in the West have relatively high NPL ratios.

Figure 2: NPL ratio at December 2018 by county and dpd category



Panel (b) shows that a relatively high proportion of balances in the South-West and West are non-performing, but not in arrears. Panel (c) demonstrates that between 2 and 4 per cent of balances in most counties are non-performing and in arrears of up to two years. Panel (d) shows that almost all counties have  $NPL_{>720}$  ratios of over 3 per cent and some counties have  $NPL_{>720}$  ratios over 8 per cent. It is important to understand that these ratios do a good job of describing the contents of bank loan portfolios, but are a poor guide to local economic conditions. I discuss why this is the case in Section 4.

### 3.3 Forbearance status

Table 3 reports the breakdown of NPL balances by forbearance status and days past due category. €888m of NPL balances are forborne in December 2018. These cases include restructured arrangements such as term extensions, interest rate reductions, interest only payments, payment moratoriums, and arrears capitalisations. 37.2 per cent of these balances are not in arrears, 25.2 per cent are in arrears for up to two years, and 37.6 per cent are in arrears of over two years.

Table 3: NPL balances at December 2018 by forbearance status and dpd category

Forborne	NPL (€m)	% of which		
		0 dpd	1-720 dpd	>720 dpd
Yes	888	37.2	25.2	37.6
No, but previously forborne	68	45.2	32.4	22.3
Never forborne	590	30.1	23.9	46.0
Total	1,546	34.9	25.0	40.1

€590m of NPL balances in December 2018 are not forborne and have not been forborne previously. 46 per cent of these balances are more than two years in arrears. €68m of NPL balances are not forborne in December 2018, but were previously forborne. 45.2 per cent of these balances are not in arrears and 22.3 per cent are in arrears of greater than two years. These arrears figures compare favourably with the other two forbearance status categories, especially the never forborne category.

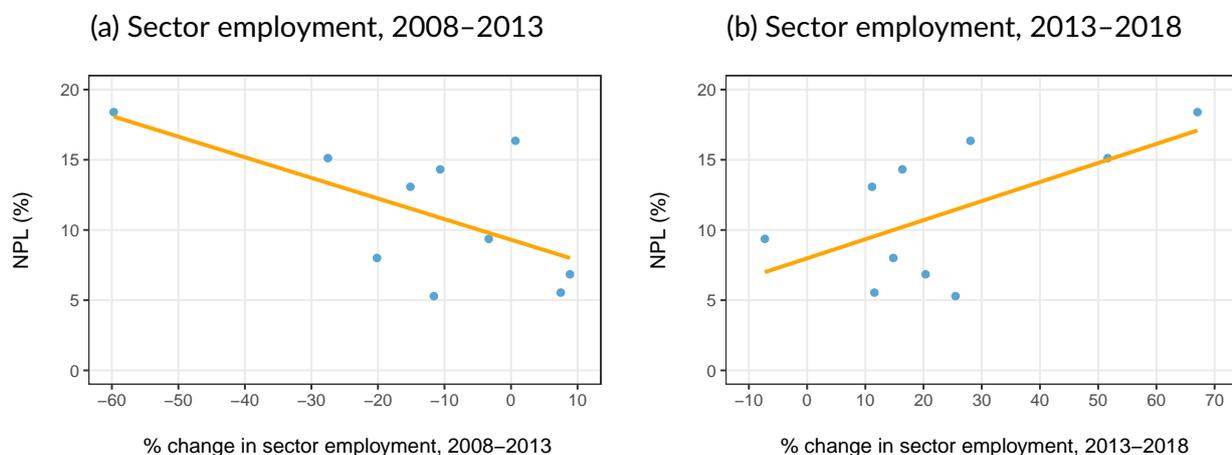
## 4 How do NPL ratios relate to macroeconomic indicators?

In this section, I examine the relationship between NPL ratios at December 2018 and macroeconomic indicators at the level of sectors and regions. I show that current NPL ratios are only loosely related to developments in economic conditions in particular regions or sectors and I discuss the likely reasons for this.

### 4.1 Borrower sector

Figure 3 shows the relationship between December 2018 NPL ratios by sector and employment growth in the crisis and recovery periods. I source sectoral employment data from the CSO. These data are aggregated in some instances. For example, the CSO provide a single employment time series for NACE sectors B, C, D, and E. I re-calculate NPL ratios for these sector groups where necessary.

Figure 3: NPL ratio at December 2018 and employment growth by sector

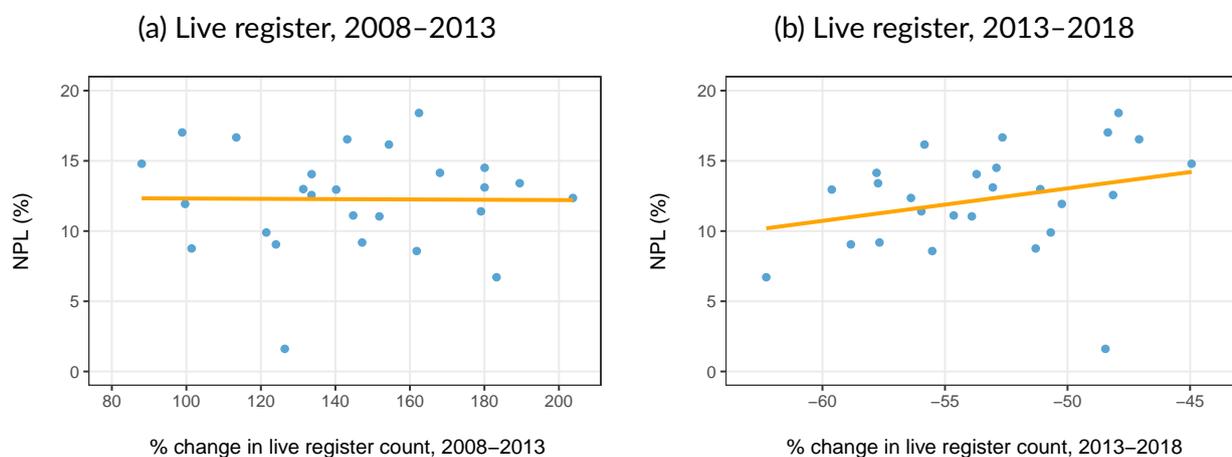


Panel (a) looks at employment growth between 2008 and 2013. The relationship appears negative, but there is clearly a lot of dispersion around the fitted line. Sectors that experienced employment falls of between 10 and 20 per cent have NPL ratios of between 5 and 15 per cent. Construction is the outlier with a 60 per cent employment fall and 18.4 per cent NPL ratio. Panel (b) plots employment growth from 2013 to 2018 against current NPL ratios by sector. The relationship is positive, though this is due principally to the exceptionally high employment growth of Construction and Administrative & Support Services. There is again a lot of dispersion around the fitted line. Sectors with employment growth of 10 to 30 per cent have NPL ratios of between 5 and 17 per cent.

## 4.2 Borrower region

Figure 4 provides scatterplots of December 2018 NPL ratios and the change in live register count by borrower county. I source live register data from the CSO. Panel (a) shows NPL ratios at December 2018 against the percentage change in the live register count by county from 2008 to 2013. The relationship is flat. Counties where the live register count doubled between 2008 and 2013 have equivalent NPL ratios in December 2018 to counties where the live register count tripled. Panel (b) repeats the analysis for the period 2013-2018. There is a mild positive relationship whereby counties with larger percentage declines in live register count over the period have lower current NPL ratios.

Figure 4: NPL ratio at December 2018 and live register change by borrower county



## 4.3 Discussion

The analysis in this section makes clear that current NPL ratios are not a reliable guide for understanding economic conditions at the level of counties and sectors. A number of factors may explain the weakness of this relationship. First, banks may have sold loans or engaged in enforcement action with the effect of systematically reducing NPL ratios in certain borrower categories. Second, differentials in new lending growth across counties or sectors will – all else equal – reduce NPL ratios more in some borrower categories than others. Third, borrowers that experienced severe distress in the crisis may have already

gone through a company dissolution process and exited bank loan books. In this way, the current stock of loans may suffer from a survivorship bias. While it is difficult to assess the relative importance of these factors, it is highly likely that together they are important determinants of current NPL ratios.

## 5 Why is the NPL ratio falling?

In this section, I examine why the Irish SME NPL ratio fell from 17.48 per cent in June 2018 to 11.14 per cent in December 2018. Table 4 shows transition rates of June 2018 balances to December 2018 performance status. Performing balances largely remained performing in this period and the proportion of balances which became non-performing was relatively low. 90 per cent of balances which were performing in June were performing in December. 0.8 per cent of performing balances became non-performing. 9.2 per cent of June performing balances are not observed in December. This last group relates primarily to term loans maturing and overdrafts which are no longer active.

Table 4: Transition rates of June 2018 balances to December 2018 status

(a) by NPL status				(b) by NPL status and dpd count							
		December 2018					December 2018				
		Perf.	NPL	Exit			Perf.	NPL <sub>0</sub>	NPL <sub>1-720</sub>	NPL <sub>&gt;720</sub>	Exit
Perf.		90.0	0.8	9.2	Perf.		90.0	0.4	0.4	0.0	9.2
NPL		18.8	61.3	19.9	NPL <sub>0</sub>		45.9	41.4	4.7	0.0	7.8
					NPL <sub>1-720</sub>		3.0	9.2	42.6	16.6	28.8
					NPL <sub>&gt;720</sub>		0.7	1.6	4.4	66.9	26.5

Cures – balances transitioning from non-performing to performing status – are a major contributor to the decline in the NPL ratio. 45.9 per cent of NPL<sub>0</sub> balances in June transition to performing status by December. 9.2 per cent of NPL<sub>1-720</sub> balances and 1.6 per cent of NPL<sub>>720</sub> balances transition to NPL<sub>0</sub> status. 4.4 per cent of NPL<sub>>720</sub> balances transition to NPL<sub>1-720</sub> status. NPL balances in arrears mostly stay in the same dpd category, transition to a higher dpd category, or exit the portfolio.

### 5.1 Which loans cured?

In this section, I look at loan balances that transitioned from non-performing to performing status between June and December 2018. I refer to these cases as “cures”. €480m of June 2018 non-performing balances – 18.84 per cent of the total – became performing by the end of the year.

Table 5 reports the amount of cures in euro amounts and as a percentage of non-performing balances by borrower characteristics. Panel (a) shows cure rates of over 20 per cent for a number of sectors. Agriculture, Forestry & Fishing and Wholesale & Retail have rates of just over 20 per cent, while Accommodation & Food has a cure rate of 29 per cent. €374m – 78 per cent – of the total amount of cures relate to these three sectors.

Table 5: Cures in €m and as a % of June 2018 NPL balances

(a) by sector				(b) by region					
Sector	NPL		Cure		Region	NPL		Cure	
	€m	€m	€m	%		€m	€m	€m	%
A – Agri., Forestry & Fishing	386	80	20.73		Border	148	26	17.52	
C – Manufacturing	149	24	16.26		Dublin	611	88	14.36	
F – Construction	75	6	8.13		Mid-East	304	45	14.75	
G – Wholesale & Retail	551	114	20.63		Midlands	274	25	20.03	
H – Trans. & Storage	51	21	41.09		Mid-West	123	64	23.40	
I – Accom. & Food	621	180	29.02		South-East	281	65	22.97	
M – Prof., Tech., & Scientific	107	15	14.04		South-West	494	132	26.82	
N – Admin. & Support	124	14	10.89		West	268	35	12.97	
Q – Human Health	97	13	13.73		Not specified	44	1	2.25	
Other	231	10	4.15		Total	2,548	480	18.84	
Not specified	238	3	1.42						
Total	2,548	480	18.84						

(c) by forbearance status

Forborne	NPL		Cure	
	€m	€m	€m	%
Yes	1,603	294	18.33	
No, but previously forborne	101	49	48.43	
Never forborne	844	137	16.27	
Total	2,548	480	18.84	

Manufacturing, Professional, Scientific & Technical, Administrative & Support Services, and Human Health have cure rates varying from 10.89 to 16.26 per cent and together contribute €66m in cured balances. I suppress results for certain sectors due to the low nominal level of balances involved.

Panel (b) shows cure rates and balances by borrower region. Borrowers in the West have the lowest cure rate at 12.97 per cent. Borrowers in Dublin and the Mid-East have cure rates of 14.36 and 14.75 per cent, respectively. The Mid-West, South-East, and South-West all have cure rates of approximately 23 per cent or higher. The South-West – consisting of Cork and Kerry – has a cure rate of 26.8 per cent amounting to €132m.

Panel (c) looks at cure rates and balances by forbearance status. €294m – 61.3 per cent of all cured balances – were forborne in June 2018. The cure rate associated with forborne balances is 18.33 per cent. However, there is likely to be substantial variation in cure rates in this category across forbearance types. For instance, payment moratoriums may have lower cure rates and fundamental restructures may have higher cure rates.

€137m – 28.5 per cent of cured balances – had never been forborne as of June 2018. The cure rate associated with this group is 16.27 per cent. This shows that self-cures played a non-trivial role in reducing Irish SME NPLs over this period. The highest cure rate – 48.43 per cent – belongs to NPL balances that were not forborne in June 2018, but had previ-

ously been forborne. This is consistent with this category of borrowers improving their repayment capacity such that they no longer required forbearance and could ultimately be reclassified as performing.

## 5.2 Which loans became non-performing?

Lastly, I examine the characteristics of loans that transitioned from performing to non-performing status between June and December 2018. The balances of these loans sum to €93m – 0.77 per cent of June 2018 performing balances.

Table 6 shows the breakdown of flows of performing balances to non-performing status by loan and borrower characteristics. Panel (a) shows transition flows by borrower sector. The three largest sectors – Agriculture, Forestry & Fishing, Wholesale & Retail, and Accommodation & Food – all have transition rates of approximately 0.9 per cent. Construction and Administrative & Support Services have the highest transitions rates to NPL status at 1.32 and 1.33 per cent, respectively. I again suppress results for certain sectors due to the low nominal level of balances involved.

Panel (b) shows the NPL transition breakdown by borrower region. Borrowers in the Mid-West have the highest NPL transition rates at 1.13 per cent. Borrowers in the Midlands have the lowest transition rate of any region.

Table 6: Defaults in €m and as a % of June 2018 performing balances

Sector	(a) by sector		Region	(b) by region	
	NPL			NPL	
	€m	%		€m	%
A – Agri., Forestry & Fishing	25	0.88	Border	5	0.56
C – Manufacturing	7	0.53	Dublin	29	1.08
F – Construction	3	1.32	Mid-East	11	0.88
G – Wholesale & Retail	21	0.91	Midlands	3	0.43
H – Trans. & Storage	4	0.66	Mid-West	13	1.13
I – Accom. & Food	14	0.89	South-East	9	0.78
M – Prof., Tech., & Scientific	4	0.95	South-West	14	0.70
N – Admin. & Support	7	1.33	West	9	0.99
Q – Human Health	5	0.55	Not specified	0	0.03
Other	2	0.42	Total	93	0.77
Not specified	2	0.20			
Total	93	0.77			

## 6 Conclusion

11.1 per cent of Irish SME balances at three major Irish retail banks were non-performing in December 2018. I show that this figure masks a lot of important detail. 3.9 per cent of balances are non-performing under supervisory definitions, but not in arrears. 4.5 per cent of balances have been in arrears for over two years and some loans have been in arrears for up to ten years. I examine the characteristics of remaining Irish SME NPLs further and demonstrate that current NPL ratios are not a reliable guide to economic conditions in a particular county or sector.

I show that the Irish SME NPL ratio fell from 17.5 per cent in June 2018 to 11.1 per cent in December 2018. Loan cures explain a large part of this decline. New flows into NPL status were also low during this period relative to recent historical standards. Aggregate supervisory data suggest that the Irish SME NPL ratio fell further in the first half of 2019.

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