ICC United Kingdom/GCD 2023

Update to ICC/GCD 2022 Performance Guarantees Paper

Global Credit Data

by banks for banks

ICC United Kingdom

1 Context

This paper[1] assesses the empirical level of Credit Conversion Factors (CCF[2]) for Performance Guarantees as referred to in the PRA RULEBOOK (CRR) INSTRUMENT [2023] Article 111[3].

As part of this update, the numbers have been refreshed with the latest collated data by Global Credit Data (GCD)[4] from its consortium member banks. The total GCD defaulted data set covers cases where the borrower has defaulted (using the Basel definition). The lending footprint, facilities, and borrower types as well as collateral practices of the GCD member banks are merged in the database.

1 This paper updates a joint publication (2022) by the International Chamber of Commerce (ICC) and the Global Credit Data (GCD) Consortium on claims made and paid, of performance guarantees

2 The CCF defined here is the conversion rate of off-balance sheet exposure to on-balance sheet exposure (by way of a payment on a claim) measured after default on issued amounts for those guarantees

3 PRA RULEBOOK (CRR) INSTRUMENT [2023] Article 111 Table A1 (3) C. includes warranties, tender, performance, advance payment, retention guarantees and irrevocable standby-letters of credit not having the character of credit substitutes.

4 The Global Credit Data Consortium (GCD) is a non-profit association owned by 55+ member banks. GCD operates pooled data bases on a "give to get" basis, meaning that members who supply high quality data receive detailed data from all other contributors in return. The robustness of GCD's data collection infrastructure helps place the GCD databases as the global standard for credit risk data pooling. For more info, visit www.globalcreditdata.org or contact secretary@globalcreditdata.org

Contents

2 Conclusions

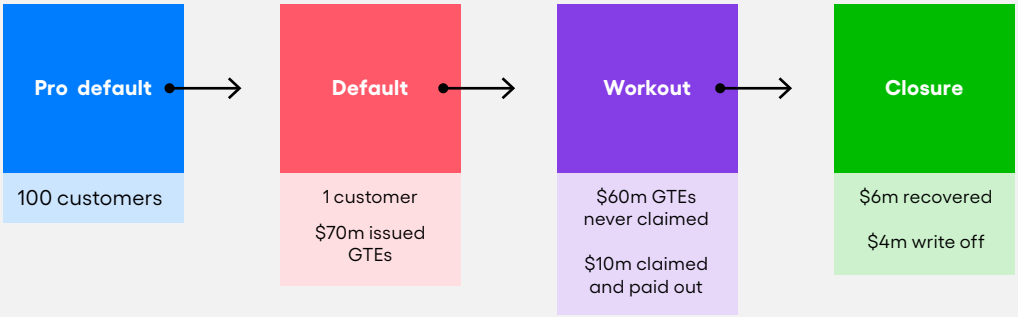
Based on an analysis of the data collected the paper establishes:

- An average credit conversion factor (CCF) of 10% for defaulted customers with a portfolio[5] of performance guarantees outstanding from date of default; this indicates the low conversion rate from off-balance sheet to on-balance sheet exposures for these products which only pay out when there are failures in the underlying contract/agreement even after a customer default has occurred. As the GCD data pool has been collated over a long period and covers a larger cross-section of global banks the data is not only robust but is also a representative data set. This validates the case for applying a 20% CCF (or simply conversion factor (CF) as referred to in the regulations) in determining Exposure-At-Default (EAD), for performance guarantees when calculating Risk Weighted Assets (RWA) for capital purposes.
- Additionally, data had been collected from ICC member banks on claim rates and paid rates for the overall book (containing both performing and defaulted exposures):
- It provides an additional reference point for readers to understand the underlying CCF numbers from an overall portfolio perspective. These numbers reinforce the low claims made and paid rates for the overall portfolios (0.2% for performance and 1.7% for financial). This data has been submitted by 17 ICC Trade Register (TR) member banks (provided in Appendix Item 3).
- Importantly, the case for applying a 20% CCF for performance guarantees based on empirical data is strong (The empirical data collected for financial guarantees also establishes a case for revisiting the 100% CCF for these guarantees).

5 Portfolio consolidated from 16 GCD member banks (list in appendix)

3 Methodology

Delineating and Bucketing of PD, LGD & EAD for Guarantees (GTEs)



- A portfolio of 100 customers pre-default to when one customer defaults is covered under Probability of Default (PD)
  - PD in this scenario would be 1 / 100 = 1%
- One customer default with $70m issued guarantees of which $10m is paid out and this amount is used for Credit Conversion Factor (CCF) estimation which is a part of Exposure at Default (EAD)[6]
  - Nominal CCF in this scenario would be 10 / 70 = 14.3%
  - $60m of unclaimed guarantees is not part of the CCF estimation process
- $10m of cash outflow to $4m of write off is covered under Loss Given Default (LGD)
  - Nominal LGD in this scenario would be 4 / 10 = 40%
  - Note that this LGD is only calculated on the paid-out amount (which is the cash outflow generating the on-balance sheet exposure); $60m of unclaimed guarantees do not generate any cash outflow or on balance sheet exposure

6 EAD will also have a separate conversion factor on the unutilised limit (prior to default), sometimes called the 'Drawdown Factor' which considers outstanding guarantee amount 1 year prior to default and provides the value of further guarantee amounts expected to be issued prior to default

The methodology uses a portfolio of defaulted customers as the starting point for collecting paid amounts on performance guarantees issued by these defaulted customers. The reference data set is then used to estimate empirical CCF, where the **CCF is defined by the following ratio**.

CCF (assessed at each facility, consistent with regulatory guidance on prudential CCF calibration):

$$\frac{\text{Net present value (as on date of default) of monies paid out under claims made for a guarantee type (i.e., Perf, Fin) after the date of default}}{\text{Outstanding exposure (issued amount) of the same guarantee type as on the date of default}}$$

The CCF is calculated for each facility and then averaged.

4 Results

The methodology has been applied to the GCD data pool of defaulted customers with performance guarantees facilities. Table 1 shows performance guarantees products. The average CCF[7] for these products is 10%.

Table 1: Performance guarantees CCF (by facility type)

	Number of defaulted facilities	Facility CCF (average paid/issued)
Bid or performance bond	265	14%
Trade-related payment guarantee	188	18%
Other trade related bonds	1,336	8%
Grand total	1,789	10%

From a business practice perspective, it is important to understand that not all guarantees are claimed for defaulted customers[8]. Further issuing banks often extend claims subject to a mutual agreement between applicant and beneficiary, or do not pay claims if they are discrepant or subject to a legal stay order obtained by the applicant. This often results in a bank not needing to pay out against these guarantees.

Is there an impact of economic downturns (credit cycle) on the CCF for performance guarantees?

By taking a closer look at how CCFs have moved over a 20-year period, it is possible to gain useful insights on the movement of empirical conversion factors inclusive of downturn periods.

Table 2 shows average CCF by 'year of default' as well as by 'year of peak cash outflow' to provide two different lenses.

Year of peak cash outflow is defined as the' Year of default' plus the 'time of peak cash outflow pay-outs'.

The 'time of peak cash outflow pay-outs' is calculated as the centre point of cash out on guarantee cashflows, and it puts a weight of the amount of the cashflow on the timing. It is defined as the cashflow weighted average period between default and cash outflow.

7 The discount rate used is 3-month Euribor. Higher discount rate (as used by most regulators) would lead to lower CCFs

8 In many cases, even if the customer is in declared insolvency, they are still able to fulfil their contractual obligations regarding certain projects, which explains that not all the guarantees with a defaulted customer are claimed. On some occasions, projects may be completed or close to completion which allows firms to avoid claims.

Table 2: Performance guarantee CCF (by year)

Year	By year of default		By year of peak cash outflow	
	Number of defaulted facilities	Average CCF (Paid amount / issued amount)	Number of defaulted facilities	Average CCF (Paid amount / issued amount)
2000	4	63%	3	67%
2001	16	50%	11	40%
2002	27	69%	15	44%
2003	30	31%	27	26%
2004	72	14%	73	16%
2005	59	9%	63	16%
2006	66	9%	68	10%
2007	68	7%	74	10%
2008	169	11%	152	6%
2009	281	17%	250	7%
2010	162	7%	183	15%
2011	309	6%	315	9%
2012	188	5%	199	7%
2013	131	5%	135	7%
2014	115	0%	123	6%
2015	20	9%	25	24%
2016	13	19%	10	4%
2017	36	1%	37	4%
2018	9	0%	12	6%
2019	11	4%	11	4%
2020	3	50%	3	50%
Overall	1789	10%	1789	10%
Overall (excl. greyed out)	**1698**	**8%**	**1719**	**9%**

Data for the period 2000–2003 (greyed out) suffers from a collection bias in the early years of Basel II for some banks it was difficult to collate and deliver all the defaulted cases including cures consistently in tandem with newer defaults. Note, while the data may still be useful from an analytical perspective in the absence of cured cases, they tend to bias the results, as the reported CCF for the 2000–2003 period is higher than it would have been with a full data set. Data post 2018 (greyed out) suffers from a resolution bias (in the most recent years short workout period cases are naturally overrepresented and the view on the CCF is still incomplete).

The period 2015–2019 has relatively (compared to preceding years) lower number of defaults — which is reflective of the benign economic environment at that time.

5 Downturn

The concept of a downturn has long been an integral part of PD (Probability of Default) and LGD (Loss Given Default) models. Consequently, we see more defaults in a downturn period (affecting PD; even though the PD used for capital computation is generally a 'through the cycle' PD) and lower recoveries in a downturn period (affecting LGD). The reasons why we see lower recoveries in a downturn period can be, largely attributed to the following factors:

- Higher workload of the resolution team (as there are higher number of defaults)
- Market forces where the supply of distressed assets exceeds demand which in turn impacts recovery rates negatively
- Longer time to resolution leading to lower net present value of the recoveries

However, to the best of our knowledge, it is difficult to establish any causal link between downturn periods and higher conversion factors for guarantee exposures. The probability (and rationale) behind the claim and pay-out on a guarantee is not fundamentally expected to change during downturn conditions. Guarantees are contingent liabilities backing commercial contracts where it is in the beneficiaries' interest to ensure the contract is completed in a timely manner. Where that is not possible, it is in the interest of all parties concerned to come to a mutually acceptable commercial agreement.

This is also evident in the empirical data where a significant increase in CCFs is not reported for the GFC period (2008–2012) where a higher number of obligor defaults associated with a downturn were recorded.

The average CCF across the 2008–2012 period is still ~10% (higher of the two methods), which is similar to the overall period average.

6 LGD for guarantee pay-outs

Since the paper is making a recommendation to use 20% CCF for performance guarantees, it is important to see if the LGD of such pay-outs are in line with other unsecured exposures.

LGD for these cases is calculated as (1 - recovery rate). Recovery rate is the net present value of all cash flows including external costs divided by the net present value of the cash out on the guarantee. The LGD value for these performance guarantees is 50%[9].

This value is slightly higher than the typical unsecured LGD levels seen in other products and the proposed B3.1 LGD of 40% under the IRB-Foundation approach. As CCF and LGD parameters impact risk-weights linearly, the empirical data can be looked at with a different lens to estimate appropriate CCF values taking into account the higher empirical LGD values of c50%.

Derivation of CCFs using empirical and regulatory LGD

RWA = f (PD, m, other factors like AVC) * LGD * CCF * Exposure

Since f (PD, m, other factors like AVC) and exposure remain the same and our aim is to arrive at the same RWA using supervisory values vis-à-vis empirical values, this would mean

LGD (empirical data) * CCF (empirical data) = LGD (B3.1 proposed) * CCF (back calculated)

i.e., 50% * 10% = 40% * CCF (back calculated)
CCF (back calculated) = 12.5%

In effect using 10% CCF and 50% LGD (both from empirical data), we establish that using 40% LGD (B3.1 recommended LGD) with 12.5% CCF (back calculated), will generate similar RWA numbers.

This makes the case for using 20% CCF for performance guarantees stronger as it shows that even after considering higher empirical LGD values (and normalising them into the B3.1 recommended LGD) when estimating CCFs to be used for regulatory purposes, it remains a conservative estimate with an adequate buffer.

9 Only includes those guarantees where a claim pay-out has led to an on-balance sheet exposure. Discount rate is 3-month Euribor. Calculation capped at [0%,150%]. This LGD value is the higher of the 2 periods shown in the Table 2 i.e., 2000-2020 & 2004-2018

7 Appendix

1. Performance guarantee products explained

Market practice: It is market convention to issue guarantees subject to the provisions of the 'International Chamber of Commerce (ICC) rules Uniform Rules for Demand Guarantees (URDG) 2010, revision, ICC publication 758'. These rules having been endorsed by international organisations, multilateral financial institutions, bank regulators, lawmakers, and professional federations. We broadly categorise these types of guarantees.

Bid bond/tender bond is an undertaking issued on behalf of the applicant that typically supports the applicants bid on a project for a government entity or public/private partnership. The bid often requires a specific form of Guarantee for a bid to be accepted and so amendments may be very difficult to negotiate.

Advance payment guarantee/bond is an undertaking issued on behalf of the applicant to cover receipt of an advance payment for a commercial or trade-related contract and can be claimed if the applicant does not meet its obligations under the terms of the contract.

Performance guarantee/bond is a Guarantee which guarantees a performance-based obligation to deliver some equipment or services on an agreed date. That is, an obligation that is wholly nonfinancial in nature (or in which the **primary** obligation is non-financial in nature). An example would be where the client of a bank has contracted with another party to perform a service and asks its bank to provide a Guarantee which can be called by the other party upon failure of performance.

Retention guarantee/bond is a Guarantee which is closely linked to performance-based obligations on equipment or services during the warranty period. That is, an obligation that is wholly non-financial in nature (or in which the **primary** obligation is non-financial in nature).

Financial guarantee/bond is an undertaking issued on behalf of the applicant that supports a financial obligation of the applicant where no goods are services are exchanged.

Lease or rent guarantee/bond is an undertaking issued to secure the obligations of a renter or lessee under a lease of property.

The first four of these guarantees are performance related, while the last two, characterised as Financial Bonds, can be regarded as a credit substitute alongside loan guarantees and standby letters of credit to support loan facilities. **Performance guarantees** are a special class of contingent liabilities which share the following characteristics:

- Not expected to be drawn (unlike L/Cs)
- Drawing is dependent on a commercial event (e.g., a contract breach)
- Not issued in support of loans and other financial obligations

1.1 Parties involved

- Issuing bank promises to pay on first demand and receives an indemnity from its customer
- Beneficiary/recipient receives the guarantee and may claim or not. They may do this through their own bank.
- Obligor/customer: requests issuance of the guarantee and promises to reimburse the issuing bank if the issuing bank repays the beneficiary under a valid claim presented by the beneficiary.

1.2 Performance guarantees in a default context

Performance guarantees may be claimed by the beneficiary regardless of whether the obligor is in default with their bank or not.

No default: Claim triggered and paid from customer's funds with obligor/customer not in default as per banks internal definition of default, which is also consistent with the regulatory definition of default. Though the customer has sufficient funds, because the claim has been triggered and found to be valid, it must be paid. However, it does not necessarily translate into a loss.

Default: Claim triggered and paid from customer funds with obligor/customer in default as per banks' internal definition of default (or paid from bank funds if the customer does not have sufficient funds). As obligor is classified as defaulted customer and as a claim has been triggered the transaction counts as a defaulted transaction. If customer has sufficient funds no loss may be triggered. However, there is a strong likelihood that the transaction (or part thereof) will incur a loss as the obligor is in default.

Table 3: Table of terms definition

Term	Definition
Issued amount	Total outstanding exposure of a guarantee type (i.e. Perf, Fin) as on the date of default
Paid amount	Total money paid out under claims made for a guarantee type (i.e. Perf, Fin) after the date of default

2. Global Credit Data (GCD): Data and methodology

GCD started collecting historical loss data in 2004, to which member banks have exclusive access. GCD data only covers cases where the borrower has defaulted (using the Basel definition). This database now totals over 302,000 non-retail defaulted loan facilities from around the world. The total GCD defaulted data set is composed of data from the banks who have chosen to be GCD members. These banks' geographical lending footprint, facilities, and borrower types as well as collateral practices are merged in the database. In this report GCD bases the analytics on a filtered data set: using specific products, (performance guarantees and financial guarantees) and combining elements of representativeness and data quality. The three facility types that GCD classes as performance guarantees are trade related payment guarantee, other trade related bonds, and trade finance bid or perf bond.

The different elements and the reasons for filtering are:

- **Exclusion of unresolved facilities.** Loss given default is most accurately calculated on closed (resolved) cases, where the outcome is anything from full repayment to complete loss, or something in between. Although GCD collects unresolved cases, the ultimate LGD cannot be calculated until the default is resolved.
- **Exclusion of facilities defaulted prior 2000.** Although the earliest entry in the GCD database dates back to 1983, for some banks it is difficult to deliver all the data elements required to identify cured cases for older defaults consistently with newer defaults.
- **Exclusion of data from former member banks**. When a member bank resigns from the association and/or from a Data Pool, the most recent defaulted years that it has submitted must be incomplete as it would no longer participate to submit/update its defaults.
- **Exclusion data quality issue.** GCD applies a series of validation rules during the submission process which prevents inconsistent or incomplete data from being accepted automatically. This is the major data quality insurance that protects the data base. The validation rules are updated and amended as required by our members for every submission. That said, some entries were integrated into the database before certain validation rules had been implemented. For this exercise, data points with errors that affect the integrity of the database (e.g., the event date at default must be the same for all facilities of a given borrower) or the correct calculation of LGD (e.g., balancing the cash flow between the transaction and the history table) were excluded.

The structure of the GCD database reflects the full complexity of the legal relationship between a bank lender and a borrower. Usually, a single company borrower might have multiple types of facilities (revolving loans, term loans, performance guarantee facility etc.). The database is designed to deal with the simplest through to the most complex deals and GCD member banks can access the whole deals structure on facility and obligor levels. For this report, figures are aggregated at facility level.

2.1 Representativeness of GCD data sample

GCD performance guarantee data are provided by 16[10] worldwide banks.

Table 4: List of GCD member banks contributing to the sample

GCD member banks submitting performance guarantee data	
ABN AMRO	ING
BNP Paribas	KfW Bankengruppe
Commonwealth Bank of Australia	Natixis
Credit Agricole CIB	Rabobank
Credit Suisse	Scotiabank
Danske Bank	Skandinaviska Enskilda Banken
DNB Bank	SpareBank 1 Gruppen
HSBC Group	Svenska Handelsbanken

3. Claims made and paid on overall portfolio

Table 5: Claims made and paid on overall portfolio

Type of guarantee	Year	Number of gtees issued	Number of gtees claimed or extended	Claim rate	Number of gtees paid out	Claim paid rate	Number of gtees extended (not paid)	Ultimate drawing rate (Number of gtees paid out vs number issued)	Count of lender
Performance	2016	366,010	15,301	4%	827	5%	14,146	0.2%	16
	2017	356,850	14,930	4%	858	6%	13,635	0.2%	16
	2018	426,503	18,224	4%	964	5%	16,700	0.2%	17
	2019	319,817	15,425	5%	631	4%	14,643	0.2%	11
	2020	371,872	12,730	3%	609	5%	11,876	0.2%	11
	Total	1841,052	76,610	4%	3,889	5%	71,000	0.2%	17
Financial	2016	59,597	3,596	6%	839	23%	2,815	1.4%	14
	2017	59,280	3,375	6%	930	28%	2,388	1.6%	14
	2018	59,771	3,608	6%	738	20%	2,406	1.2%	15
	2019	44,330	2,303	5%	717	31%	1,582	1.6%	10
	2020	55,598	3,309	6%	1,510	46%	1,647	2.7%	10
	Total	278,576	16,191	6%	4,734	29%	10,838	1.7%	15

10 The earlier report mentioned that 36 banks had provided overall guarantee data (including performance and financial). For the purposes of performance guarantee alone, 16 banks have provided data.

About the International Chamber of Commerce

The International Chamber of Commerce (ICC) is the institutional representative of more than 45 million companies in over 100 countries. ICC's core mission is to make business work for everyone, every day, everywhere. Through a unique mix of advocacy, solutions and standard setting, we promote international trade, responsible business conduct and a global approach to regulation, in addition to providing market-leading dispute resolution services. Our members include many of the world's leading companies, SMEs, business associations and local chambers of commerce.

www.iccwbo.org @iccwbo

About the Global Credit Data Consortium

Since 2004, the Global Credit Data Consortium (GCD) is owned by 50+ member banks and collects, pools, and distributes back anonymized internal credit risk data from banks' loan books, to support modelling of Probability of Default (PD), Loss Given Default (LGD), and Exposure at Default (EAD) in compliance with prudential regulatory requirement. The PD database covers 18 years of quarterly rating migration, default rates and PDs calibration. The LGD database now totals over 350,000 non-retail defaulted loans from around the world and over 155,000 borrowers covering 11 Basel asset classes. The robustness of GCD's data collection and quality infrastructure helps place GCD's databases as the global standard for credit risk data pooling.

www.globalcreditdata.org @GlobalCredData

ICC United Kingdom is the representative voice for ICC in the UK and provides a mechanism for UK industry to engage effectively in shaping international policy, standards and rules.

We are the leading voice on digital trade ecosystems, act as the ICC representative to the Commonwealth and Co-Chair the Legal Reform Advisory Board at the ICC Digital Standards Initiative.

iccwbo.uk @iccwboUK /ICC United Kingdom info@iccwbo.uk

#WeAreICC

ICC United Kingdom
Registered office: First Floor, 1–3 Staple Inn, London WC1V 7QH
Company number: 10763507 VAT number: 42209200

ICC United Kingdom