

Journal of Financial Crises

Volume 2 | Issue 3

2020

Bank Debt Guarantee Programs

Christian M. McNamara
Yale School of Management

Greg Feldberg
Yale School of Management

David Tam
Yale School of Management

Andrew Metrick
Yale University

Follow this and additional works at: <https://elischolar.library.yale.edu/journal-of-financial-crises>



Part of the [Economic History Commons](#), [Economic Policy Commons](#), [Finance Commons](#), [Growth and Development Commons](#), [Macroeconomics Commons](#), and the [Public Administration Commons](#)

Recommended Citation

McNamara, Christian M.; Feldberg, Greg; Tam, David; and Metrick, Andrew (2020) "Bank Debt Guarantee Programs," *Journal of Financial Crises*: Vol. 2 : Iss. 3, 71-100.

Available at: <https://elischolar.library.yale.edu/journal-of-financial-crises/vol2/iss3/26>

This Survey is brought to you for free and open access by the Journal of Financial Crises and EliScholar – A Digital Platform for Scholarly Publishing at Yale. For more information, please contact journalfinancialcrises@yale.edu.

Bank Debt Guarantee Programs^{1,2}

*Christian M. McNamara*³

*Greg Feldberg*⁴

*David Tam*⁵

*Andrew Metrick*⁶

Yale Program on Financial Stability Survey
January 11, 2019; revised October 10, 2020

Abstract

One of the hallmarks of the global financial crisis of 2007-09 was the rapid evaporation of the non-deposit, wholesale funding many financial institutions had become increasingly reliant upon in the years leading up to the crisis. In the aftermath of the Lehman Brothers bankruptcy, governments became increasingly concerned about even fundamentally sound institutions' ability to access necessary funding. In response, beginning in October 2008, authorities across the globe began introducing guarantee programs enabling institutions to issue debt that would be backed by a guarantee from the government in exchange for a guarantee fee. While the specific details of these programs varied (sometimes widely in ways that allow for interesting comparisons), some version of this basic idea was implemented by over twenty countries. The programs saw significant use in the aggregate but were not uniformly utilized. They are generally seen as having achieved their objectives but may also in certain circumstances have had unintended consequences such as market distortions based on flawed fee structures and the crowding out of non-guaranteed debt.

Keywords: credit guarantee, bond guarantee, debt guarantee, short-term debt, medium-term debt, wholesale funding

¹ This case study is part of the Yale Program on Financial Stability (YPFS) selection of New Bagehot Project modules considering the responses to the global financial crisis that pertain to bank debt guarantee programs.

Cases are available from the Journal of Financial Crises at <https://elischolar.library.yale.edu/journal-of-financial-crises/>.

² An earlier version of this document was titled *Credit Guarantee Programs*.

³ Christian M. McNamara – Director, New Bagehot Project and Senior Editor, YPFS, Yale School of Management.

⁴ Greg Feldberg – Research Scholar and Director of Research, YPFS, Yale School of Management.

⁵ David Tam – Research Associate, YPFS, Yale School of Management.

⁶ Andrew Metrick – Janet L. Yellen Professor of Finance and Management and YPFS Program Director, Yale School of Management.

Introductory note: In analyzing the programs that are the focus of this survey, a color-coded system is used to highlight particularly noteworthy design features. This system is as follows:

Color	Meaning
BLUE – INTERESTING	A design feature that is interesting and that policymakers may want to consider. Typically, this determination is based on the observation that the design feature involves a unique way of addressing a challenge common to this type of program. Less commonly, there will be empirical evidence or a widely held consensus that the design feature was effective in this context, in which case we will describe that evidence or consensus.
YELLOW – CAUTION INDICATED	A design feature that policymakers should exercise caution in considering. Typically, this determination is based on the observation that the designers of the feature later made significant changes to the feature with the intention of improving the functioning of the program. Less commonly, there will be empirical evidence or a widely held consensus that the design feature was ineffective in this context, in which case we will describe that evidence or consensus.

I. Overview

One of the hallmarks of the global financial crisis of 2007-09 (GFC) was the rapid evaporation of the non-deposit, wholesale funding many financial institutions had become increasingly reliant upon in the years leading up to the crisis. Particularly after the bankruptcy of Lehman Brothers on September 15, 2008, the issuance levels associated with such funding sources collapsed while spreads increased dramatically. (See, e.g., Grande et al. 2011.) Amidst this deterioration in financial market conditions, governments became concerned about even fundamentally sound institutions' ability to access necessary funding.

In response, beginning in October 2008, authorities across the globe began introducing bank debt guarantee programs. Sometimes referred to as credit guarantee schemes or government guarantees for bank bonds, these programs enabled institutions to issue debt that would be backed by a guarantee from the government in exchange for a guarantee fee. While the specific details of these programs varied (sometimes widely) by country (as will be discussed in Key Design Decisions below), some version of this basic idea was implemented by over twenty countries in the months following the Lehman bankruptcy.

This survey is limited to the examination of broad-based programs for new issuances and therefore excludes (a) blanket guarantee programs that covered existing debt (such as the Credit Institutions Financial Support Scheme (CIFS) announced by Ireland in September 2008) and (b) targeted or ad hoc guarantees that were part of rescue packages for individual institutions (such as the guarantee enacted on behalf of Dexia by Belgium, Luxembourg, and France in October 2008). While these guarantees are not the subject of this survey, in many cases their performance helped inform the design of the broad-based guarantee programs evaluated here.

Table 1 below shows a list of the guarantee programs studied for purposes of this survey.⁷

Table 1: List of Guarantee Programs Studied

Country	Date Announced	Date Operational	Country	Date Announced	Date Operational
United Kingdom - CGS	10/08/2008	10/13/2008	Finland	10/22/2008	02/12/2009
France	10/12/2008	10/17/2008	Canada	10/23/2008	02/25/2009
Portugal	10/12/2008	10/29/2008	Austria - OeCAG	10/27/2008	10/27/2008
Australia	10/12/2008	11/28/2008	Austria - IBSG	10/27/2008	10/27/2008
Netherlands	10/13/2008	10/23/2008	New Zealand	11/01/2008	11/01/2008
Germany	10/13/2008	10/27/2008	Greece	11/07/2008	11/19/2008
Spain	10/13/2008	11/21/2008	Poland	11/30/2008	03/13/2009
Italy	10/13/2008	12/04/2008	Hungary	12/22/2008	02/06/2009
United States	10/14/2008	10/14/2008	UK - ABS	01/19/2009	04/22/2009
Belgium	10/15/2008	10/15/2008	Denmark*	02/02/2009	02/04/2009
South Korea	10/19/2008	10/20/2008	Ireland*	11/20/2009	12/09/2009
Sweden	10/20/2008	10/29/2008			

* Denmark introduced an earlier blanket guarantee called the Original Guarantee Scheme that is not covered in this survey. Ireland introduced an earlier blanket guarantee called the CIFS on September 30, 2008, that is not covered in this survey.

Source: Author analysis.

As the announcement dates in Table 1 suggest, there were significant international efforts made to align state-level responses. The impetus for this began with Ireland's announcement of CIFS on September 30, 2008. This put pressure on UK banks in particular, and the United Kingdom responded with the announcement of its Credit Guarantee Scheme on October 8th. This caused the European Union (EU) to recognize the need for action and coordination, and the European Commission (EC) used its preexisting powers to address potential anticompetitive effects of state-level government action to promote much broader goals—responding to the immediate financial stability issues created by the crisis, promoting a consistent response across countries, and imposing restructuring obligations on systemically important institutions that needed aid.

Two significant pieces of EC guidance shaped the way Member states designed their programs (as will be discussed in Key Design Decisions below). In a series of documents released in October 2008, European governments established principles that guarantee programs had to adhere to in order to comply with State aid rules. These included principles governing eligible institutions, eligible debt, program duration, guarantee fees and other requirements for participation (European Commission 2008, Euro Summit 2008, ECB 2008).⁸ Later guidance issued in April 2010 outlined further specifications for countries

⁷ Programs were also announced in Cyprus, Estonia, Latvia, Lithuania, Slovakia, and Slovenia. These programs are currently not included in this study but may be added in future versions.

⁸ Euro area heads of state held their first Euro Summit on October 12, 2008, at which they agreed on principles for addressing the financial crisis (Euro Summit 2008). Those principles were further elaborated

intending to maintain programs beyond June 30, 2010, once markets had stabilized somewhat and there was a resulting desire to tighten terms to encourage banks to seek private, nonguaranteed funding (European Commission 2010). These specifications concerned increased guarantee fees and a requirement that banks reliant on government guarantees submit viability plans for the EC's review. As will be discussed more below, the EC's guidelines were not only largely followed by European countries adopting programs, but also influenced program design in countries outside the EU.

In general, the countries introducing guarantee programs did so with the stated purpose of ensuring that their financial institutions had continued access to short- and medium-term funding. Often there was also a stated desire by a country to avoid its institutions being put at a competitive disadvantage. In some instances, this competitive consideration even appears to have been the primary motivation. Canada, for example, in announcing the Canadian Lenders Assurance Facility (CLAF) on October 23, 2008, described its purpose as “ensur[ing] that financial institutions in this country are not put at a competitive disadvantage when raising funds in wholesale markets given similar actions recently announced by other countries.”

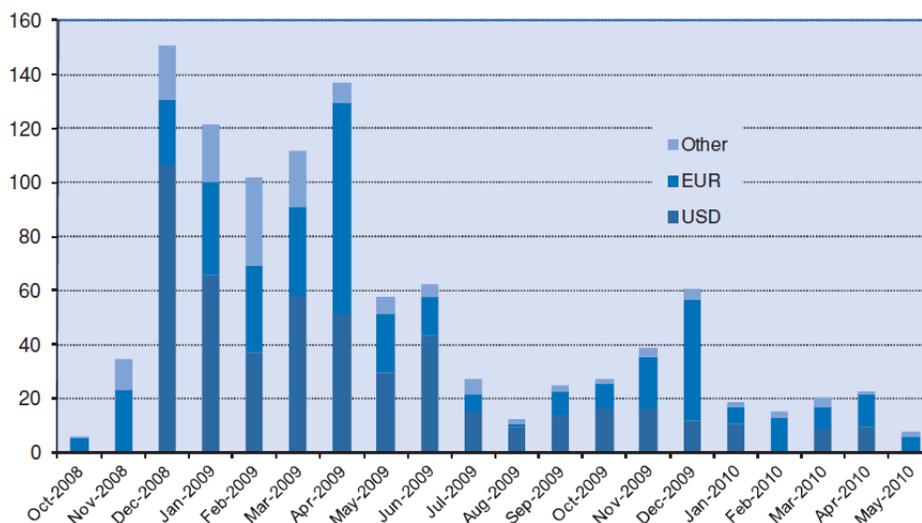
Given the global breakdown in banks' access to funding and the widespread adoption of guarantee programs during the GFC, the decision of certain jurisdictions not to adopt programs also merits consideration. A main factor appears to have been the dominance of domestic banking systems by foreign banks that received support from their home countries. The Czech Republic, for example, determined that a program wasn't necessary given that (a) its banks were subsidiaries of foreign banks, (b) those subsidiaries were funded mostly with domestic deposits, and (c) regulations restricted the foreign banks from transferring liquidity to their foreign parents.⁹

The guarantee programs introduced during the GFC saw significant use in the aggregate, but were not uniformly utilized. Between October 2008 and May 2010 (by which time guaranteed issuances had slowed and many programs were no longer active), nearly 1,400 guaranteed bonds representing more than €1 trillion were issued by approximately 200 banks in 17 countries (Levy and Schich 2010). Guaranteed bond issuance began slowly in October and November of 2008, as programs became operational and most usage was limited to Europe. By December 2008, bond issuance pursuant to the United States Debt Guarantee Program began and dramatically increased monthly usage figures. (Panetta et al. 2009). As indicated in Figure 1 below, usage remained heavy in early 2009 before falling sharply in May of that year and remaining much lower from that point onward.

by the European Central Bank on October 20 (ECB 2008) and by the European Commission on October 25 (EC 2008) in describing how it would implement state aid rules to address measures taken by national governments during the crisis.

⁹ Financial Stability Report 2008/2009, Czech National Bank.

Figure 1: Monthly Issuance of Guaranteed Bonds Globally



Notes: In Euro equivalent billions.

Source: Estimates by OECD Secretariat and Banca d'Italia based on Bloomberg.

Source: Levy and Schich 2010.

These figures include only bonds and thus understate the total amount of guaranteed debt issued in the United States, which (as discussed in Key Design Decisions below) included a wider scope of debt in its program (particularly initially) than many others. Although guaranteed bond issuance in the United States did not begin until December 2008, issuance of other guaranteed debt including three-month debt, interbank lending, and commercial paper began right away and exceeded European bond issuances in October and November.

The composition of issuers making use of guarantee programs varied over time. The average credit rating of banks issuing guaranteed debt in the second half of 2009 (by which point market conditions had begun to improve) was significantly lower than the average credit rating of banks issuing guaranteed debt from October 2008 to April 2009 (Levy and Schich 2010).

Table 2 below lists the amount of guaranteed issuances under each program. The United States, Germany, and the United Kingdom saw the highest usage in absolute terms, but trailed countries such as Ireland and Greece in terms of usage as a percentage of GDP.

Table 2: Program Usage

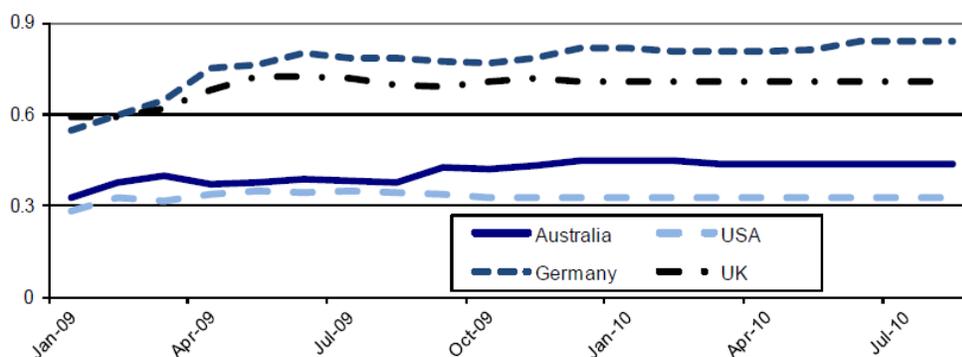
Country	Usage	% of GDP	Country	Usage	% of GDP
United States	~€475B	4.2%	Austria - OeCAG	~€24B	8.2%
Germany	€174B	6.8%	Portugal	€22B	12.3%
UK - CGS	~€170B	8.5%	New Zealand	~€5B	5.4%
Ireland	€153B	81.5%	South Korea	~€1B	0.2%
Australia	~€85B	13.2%	Belgium	None	0%
France	€77B	3.9%	Canada	None	0%
Spain	€70B	6.3%	Finland	None	0%
Greece	€65B	26.9%	Hungary	None	0%
Netherlands	€54B	8.3%	Italy	None	0%
Sweden	~€36B	10.4%	Poland	None	0%
Denmark	~€26B	10.8%	UK - ABS	None	0%
Austria - IBSG	~€25B	8.5%			

Amounts reflect the guaranteed debt issued during the course of the programs' existence. Figures expressed as approximations were converted to euros from other currencies based on exchange rates as of October 2008.

Source: Author analysis.

Another difference is the extent to which program usage was widespread across many financial institutions versus concentrated among a few significant issuers. Figure 2 below compares the share of total guaranteed issuance accounted for by the two largest borrowers in each country. As Figure 2 illustrates, guaranteed issuance in Germany and the United Kingdom was far more concentrated than in the United States and Australia.

Figure 2: Share of Issuance by Two Largest Borrowers



Sources: Dealogic.

Notes: Share of cumulated issuance between October 2008 and the month considered.

Source: Grande et al. 2011.

As indicated in Table 2, programs in several countries were not used at all. Several potential factors may have contributed to this lack of activity:

- The fact that a country adopted its program for competitive purposes rather than based on a perceived need for the guarantees among financial institutions (as was the case, for example, in Canada)
- The amount of the participation fees charged to issuers of guaranteed bonds potentially being too high relative to the benefit that the guarantee provided (as will be discussed more below and may have been the case in countries including Italy, Hungary, and Poland)
- The conditions for participation potentially having been too restrictive/stigmatizing (as will be discussed more below and may have been the case in countries including Belgium)
- The fact that other programs in existence at the same time offered better terms (as may have been the case with the United Kingdom's Asset-Back Securities Guarantee Scheme)

A final consideration with respect to usage is the extent to which institutions that did make use of guarantees also participated in other government interventions. Panetta et al. (2009) analyzed a sample of 85 financial institutions receiving government assistance. Around half of the sample (44 institutions) had received capital injections while three-quarters (64 institutions) had issued guaranteed debt. Half of the 44 institutions receiving capital injections also issued guaranteed debt. Perhaps most interestingly, banks receiving larger capital injections also seem to have issued more guaranteed debt.

II. Key Design Decisions

Related Programs

Given their adoption in late 2008/early 2009 at the height of the crisis, it is perhaps not surprising that many of the guarantee programs studied were not introduced in isolation but rather formed one component of broader packages. These packages included measures like asset purchase programs, bank recapitalizations, deposit insurance expansions and emergency liquidity facilities.

The existence of related programs influenced eligibility for guarantee programs in certain countries. In the United Kingdom, eight major institutions participating in a related bank recapitalization program became eligible for the Credit Guarantee Scheme automatically—all other banks had to apply for inclusion. New Zealand required institutions participating in its guarantee program to also participate in a related deposit insurance program. In the United States, the government told at least the nine major financial institutions receiving the initial capital injections made available through the Capital Purchase Program (CPP) that

participation in the Debt Guarantee Program and CPP were linked. As noted above, greater participation in related programs such as recapitalization schemes may also be linked with greater issuance of guaranteed debt. The interplay between capital injections and guarantee programs in particular is perhaps not surprising given that there does not appear to be an example of a jurisdiction that successfully addressed a failing banking system through the use of a guarantee alone. Rather, guarantees combined with recapitalization programs seem to have been necessary.

Legal Authority

The legal authority pursuant to which the guarantees adopted during the GFC were put into place varied by country. Certain jurisdictions required additional legislation or executive rulemaking, while other jurisdictions relied on standing authority, as can be seen in Table 3 below. A hybrid category of three countries (Australia, Canada, and Finland) possessed standing authority to establish guarantee programs but required legislative action to establish program size or authorize funding. Programs adopted in EU countries also required the approval of the EC as being compatible with EU restrictions on State aid contained in the Treaty on the Functioning of the European Union (TFEU). To evaluate the guarantee programs that began appearing in October of 2008, the EC refined its approach to state aid in response to the intensifying crisis. The EC relied on a different provision in the TFEU than what was typically utilized under its classical approach, in order to consider actions necessary to remedy a “serious disturbance in the economy of a Member State.” This change “enabled the Commission to act in a coordinated and consistent way... and to take its decisions quicker” (European Commission 2011). The need to structure programs in such a way as to ensure EC approval significantly influenced the design decisions made by EU countries (as will be seen in the discussion of additional Key Design Decisions below).

Table 3: Legal Authority for Guarantee Programs

Standing Authority	New Authority
Netherlands	Australia (funding)
New Zealand	Austria
United Kingdom	Belgium
United States	Canada (funding)
	Denmark
	Finland (program size)
	France
	Germany
	Greece
	Hungary
	Ireland
	Italy
	Poland
	Portugal
	South Korea
	Spain
	Sweden

Source: Author analysis.

Two countries in which additional legislative action was required relied on secondary sources of authority in order to implement their programs immediately while that action was still pending. In Canada, the Minister of Finance announced the CLAF prior to the Canadian Parliament having authorized payments under the guarantee (as would be required by Canadian law for such payments to be made). To allow for such payments in the interim, the legal documentation for the CLAF provided that “alternative purchase commitments” could be used for funding. Under these “alternative purchase commitments,” the Minister of Finance would use his or her authority to buy assets to purchase any guaranteed debt that went into default for a price equal to the amount owed pursuant to the guarantee. The holders of the guaranteed debt would thus receive this purchase price in satisfaction of their claims under the CLAF.

In South Korea, new legislation was needed to establish the State Guarantee of External Debt of Korean Banks. The Korea Development Bank and Korea Eximbank assumed responsibility for providing guarantees until this new legislation passed. Following the adoption of the authorizing legislation, responsibility for any guarantees provided by these entities would be transferred to the Minister of Finance.

Program Size

The programs studied adopted a variety of approaches to the question of how much guaranteed debt could be issued pursuant thereto. As illustrated in Table 4 below, a number of programs had no specified cap (and thus theoretically could involve unlimited issuances, although, as discussed in Limitations on Participation below, there were often caps on the amounts that could be issued by individual institutions). Other countries adopted specific sizes based on such factors as expected usage (e.g., the United Kingdom) or the amount of debt maturing during a given timeframe (e.g., South Korea).

Table 4: Maximum Program Size

Country	Program Size	% of GDP	Country	Program Size	% of GDP
United States	None specified	N/A	Sweden	~€150B	43.5%
Australia	None specified	N/A	Greece	€93B	38.4%
Canada	None specified	N/A	Denmark	~€80B	33.1%
New Zealand	None specified	N/A	South Korea	~€77B	12.3%
Italy	None specified	N/A	Austria - IBSG	€75B	25.5%
Belgium	None specified	N/A	UK - ABS	~€64B	3.2%
Ireland	Confidential*	N/A	Poland	~€56B	15.5%
Germany	€400B	15.6%	Finland	€50B	25.8%
UK - CGS	~€318B	15.9%	Portugal	€35B	19.6%
France	€265B	13.3%	Hungary	~€5.5B	5.5%
Netherlands	€200B	30.9%	Austria - OeCAG	€5B	1.7%
Spain	€164B	14.7%			

Amounts reflect the largest program size established during the course of the programs' existence, not necessarily the amount announced upon introduction. Figures expressed as approximations were converted to euros from other currencies based on exchange rates as of

*October 2008. * Ireland's EC state aid decision references a maximum issuance amount, but the figure is redacted as confidential.*

Source: Author analysis.

The maximum size of some programs fluctuated over time, whether up because of increased need or down because of reduced need and/or a desire to reduce potential exposure. The following changes from announced program size occurred:

- Portugal increased its program from an initial €20B to €35B
- Spain increased its program from an initial €100B to €164B
- Finland reduced its program from an initial €50B to €17B
- Poland increase its program from an initial ~€14B to ~€56B
- Austria reduced its IBSG program from an initial €75B to €50B
- Greece increased its program from an initial €15B to €93B

Eligible Institutions

A key question in designing guarantee programs is who will be eligible to participate in them. Each of the programs studied defined categories of institutions that were eligible to participate. Banks were always eligible as seen in Table 5 below. Less often eligible were insurance companies and other nonbank financial institutions (most commonly mortgage companies in countries other than the United States). Countries generally imposed a requirement that institutions be solvent to be eligible. ECB guidelines issued on October 20, 2008, called for guarantees to target “liquidity constrained solvent banks.” Subsequent EC guidance on October 25, 2008, relaxed this approach, explicitly contemplating that guarantees could be used to “keep [an] insolvent institution afloat” as long as steps were subsequently taken to restructure or liquidate the institution. Nevertheless, solvency seems to have been a consistent requirement for eligible institutions.

Many programs imposed additional eligibility requirements having to do with such factors as capital (i.e., specific required levels beyond general solvency requirement), credit rating, prior issuance, volume of lending, liquidity, market share/size of domestic operations, and systemic importance. In almost all countries, subsidiaries of foreign banks were eligible to participate on the same terms as domestic banks. **Australia and New Zealand were unique in also allowing foreign branches to participate, albeit on heavily restricted terms.** The justification cited by authorities for differential treatment of foreign branches versus foreign subsidiaries was typically that the former, not being incorporated and independently capitalized in the relevant jurisdictions, were not subject to the same degree of oversight and control as the latter.

The United States adopted a unique opt-out structure pursuant to which eligible institutions were automatically enrolled in the program unless they made a non-reversible decision to

opt-out by a specified date. The FDIC intended the opt-out structure and the non-reversible nature of the decision to opt-out to promote broad participation even among healthy institutions. Such a healthy institution might be reluctant to opt-out not knowing whether conditions would worsen in the future, necessitating later use of the guarantee program.

The exception to the above opt-out framework in the United States was certain nonbank financial institutions (NBFIs) that were required to apply to the FDIC for eligibility, which would be granted in the FDIC's sole discretion based on factors including the size and financial strength of the organization. The FDIC, whose historical mandate and experience revolved around the protection of insured depository institutions, had initially sought to limit the program to such institutions. The Treasury and Federal Reserve argued for the inclusion of a broad range of nonbank financial institutions. Ultimately, those eligible for the Debt Guarantee Program included insured depository institutions and bank and financial holding companies. The inclusion of holding companies stemmed from the observation that the senior unsecured debt covered by the DGP was typically issued at the holding company level in most holding company structures, with the holding companies then providing liquidity to their depository institution subsidiaries.

The range of NBFIs eligible for participation in the Debt Guarantee Program was more expansive than the range in other countries (which was often limited to mortgage companies), and NBFIs General Electric Capital Corporation ended up being among the Debt Guarantee Program's most active issuers. NBFIs that issued guaranteed debt outside the U.S. included LeasePlan Corp. N.V., a fleet management company held mainly by Volkswagen Group, in the Netherlands; and Volvofinans Bank AB, in Sweden. In the United Kingdom, specialized lenders were excluded from the Asset-Backed Securities Guarantee Scheme despite their importance to that market, likely contributing to a lack of use. In Germany, special purpose vehicles (SPVs) were eligible to issue guaranteed debt in order to enable financial institutions to transfer troubled assets to such SPVs in exchange for government guaranteed debt.

Table 5: Eligible Institutions

Country	Institutions	Eligibility Requirements	Country	Institutions	Eligibility Requirements
Australia	B, FOR		Italy	B, FOR	CAP
Austria	B, I	CAP	New Zealand	B, NBF, FOR	CAP, CR, MARK
Belgium	B, I, NBF, FOR		Netherlands	B, NBF, FOR	LIQ
Canada	B, FOR		Poland	B, FOR	CAP, LIQ
Denmark	B, FOR	CAP	Portugal	B, FOR	CAP (later)
Finland	B, NBF, FOR	CAP	South Korea	B	
France	B, NBF, FOR	CAP	Spain	B, FOR	CAP, MARK, ISS
Germany	B, NBF, I, FOR	CAP	Sweden	B, NBF, FOR	CAP, LEND
Greece	B, FOR		United Kingdom	B, FOR	CAP, MARK
Hungary	B, FOR	CAP (initially), SI	United States	B, NBF, FOR	
Ireland	B, FOR	SI			

B = banks, I = insurance companies, NBFI = other nonbank financial institutions, FOR = foreign subsidiaries; Institutions coded as eligible only if explicitly identified as such in program documents and/or appearing in usage results for program.

CAP = capital requirements (beyond “solvency”), CR = credit rating requirements, ISS = prior issuance requirements, LEND = lending requirements, LIQ = liquidity requirements, MARK = market share/size of domestic operations requirements, SI = systemic importance requirements.

Source: Author analysis.

There is some evidence that initial eligibility requirements may have been seen by potential participants as too stringent in certain countries, given their subsequent relaxation. In Hungary, an initial requirement that participants have regulatory capital in an amount that limited participation to Hungary’s largest banks was later removed. Sweden changed its initial capital requirement from 6% Tier 1 and 9% combined Tier 1 and Tier 2 to be 8% combined Tier 1 and Tier 2 only. In Ireland, on the other hand, eligibility became more restricted over time as certain foreign subsidiaries of Irish banks were ultimately removed from the Irish program given their pre-existing coverage in host jurisdictions.

Eligible Debt

Type

In general, the programs studied guaranteed new, senior, unsecured debt of specified maturities (such maturities discussed below). In describing the types of debt that should be eligible for participation in guarantee programs, the EC’s guidance of October 25, 2008, encapsulates the approach that seems to have been adopted by most jurisdictions: “the selection of the types of debt and liabilities covered must be targeted, to the extent practicable, to the specific source of difficulties and restricted to what can be considered necessary to confront the relevant aspects of the current financial crisis,” with subordinated debt and “indiscriminate coverage of all liabilities” not included because “it would merely tend to safeguard the interests of shareholders and other risk capital investors.”

Two exceptions to this typical policy of focusing on senior unsecured debt merit consideration. First, several (mostly European) countries weighed whether or not to include covered bonds within the scope of their guarantee programs. In Denmark, an Original Guarantee Scheme launched on October 10, 2008, provided blanket coverage of almost all senior unsecured debt, explicitly excluding covered bonds. Sweden and Finland, in later introducing their own guarantee schemes in late October 2008, cited a perceived drying up of the covered bond market as a result of this exclusion in successfully lobbying the EC for approval to include covered bonds in the Swedish and Finnish programs.¹⁰ Denmark itself launched a New Guarantee Scheme in early February 2009 that included covered bonds. New

¹⁰ The EC characterized Finland’s position, for example, as follows: “The Finnish authorities submit that their guarantee needs to include covered bonds because the experience in Denmark, where they were excluded, has shown that in their view this market would dry up without the guarantee” (State Aid N 567/2008 – Finland Guarantee scheme for banks’ funding in Finland, November 13, 2008).

Zealand and Germany also included covered bonds in their programs, and Italy and Portugal eventually added covered bonds over the course of their respective programs as conditions changed.¹¹

In approving the inclusion of covered bonds, the EC generally made note of some or all of the following factors:

- The fact that covered bonds, although already collateralized, could be “shunned” given market failures if not guaranteed
- The importance of covered bonds to the respective financial systems (e.g., “over 80% of Swedish housing loans are packaged in the form of covered bonds”)
- Design features limiting the total issuance of guaranteed covered bonds relative to the overall size of the programs (typically to one-third)

A second potential exception involved the inclusion of interbank deposits. Guidance from the ECB issued on October 20, 2008, called for such deposits to be excluded from guarantee programs, as the ECB had existing programs addressing illiquidity in the interbank market in its role as lender of last resort (Euro Summit 2008). Spain initially contemplated including interbank deposits in its program but ultimately did not do so. Belgium appears to have included interbank deposits despite the ECB’s guidance and a subsequent recommendation from the ECB directly to the Belgian government that these deposits be excluded. Interbank deposits were included in the U.S. program and issued with the guarantee in moderate amounts in the early months of the program and the following spring.

The widespread decision to limit programs to new debt merits consideration, particularly given that certain jurisdictions introduced blanket guarantees covering existing debt before switching to guarantees focused on new debt instead. Denmark’s Original Guarantee Scheme included existing debt before the government replaced it with the New Guarantee Scheme focused on newly issued debt. In Ireland, the blanket guarantee on existing debt established by the CIFS gave way to the Credit Institutions (Eligible Liabilities Guarantee) Scheme’s coverage of newly issued debt. In the United States, proposals to include existing debt were made with the belief that excluding such debt would leave its holders worried about haircuts and defaults.¹² The FDIC objected to this approach, however, on the basis that existing debtholders had already made their decisions to purchase debt with no expectation of a guarantee. It thus limited the Debt Guarantee Program to newly issued debt.

¹¹ In addition to those programs that included covered bonds, the United Kingdom launched a guarantee program specifically for asset-backed securities and programs in Germany and Greece allowed for guaranteed debt to be backed by collateral with a 25-basis-point reduction in the guarantee fee.

¹² Another related approach proposed was to guarantee existing debt but only in the event of default (i.e. preannounce that the creditors of a failing bank would be protected).

Maturities

The guarantee programs introduced during the GFC were concerned primarily with meeting the short- and medium-term financing needs of banks and adopted approaches to eligible maturities that matched this objective. Each of the programs studied had a maximum guarantee duration of between three years and five years (with the five-year maximum being available in some countries only under exceptional circumstances)¹³. One notable difference in approaches was how this maximum guarantee duration was achieved. In most countries only debt with maturities of up to three years (or five years) could be issued with a guarantee. The guarantee would then last until the debt matured. A minority approach adopted only in Canada, New Zealand, South Korea, and the United States placed no maximum maturity on guaranteed debt, but the guarantee would only last for a specified portion of the debt's life. Thus, under such a program a 30-year bond could be issued that would only be guaranteed for its first five years.

On the minimum end, the existence of other government emergency and market liquidity programs to address overnight and very short-term borrowing resulted in the broad adoption of three months or 90 days as the shortest maturity eligible (Canada, Finland, Greece, Hungary, Italy, Netherlands, Poland, Portugal, Spain, and Sweden). This minimum was also consistent with ECB guidance that short-term debt with maturities of less than three months not be included in guarantee programs.

Several other jurisdictions (Australia, Austria, Belgium, Denmark, France, Germany, Ireland, New Zealand, South Korea, and the United Kingdom) had no specified minimum. In the United States, which initially had no minimum, the FDIC later imposed a 31-day minimum maturity because disruptions were less serious in very short-term money markets as a result of other government efforts, and it wanted to concentrate the Debt Guarantee Program on "help[ing] institutions to obtain stable, longer-term sources of funding where liquidity is currently most lacking."¹⁴ Similarly, Finland ultimately increased its minimum maturity from 90 days to 12 months.

Currencies

Over half of the programs studied allowed guaranteed debt to be issued in all currencies. Several other programs included one or more currencies in addition to the jurisdiction's own. This was sometimes accompanied by a fixed surcharge on foreign currency issuances (Canada—20bps for non-Canadian currencies) or at least the discretion to impose additional fees to compensate for foreign exchange risk.

In the United Kingdom, a limited list of eligible currencies (sterling, euros, and U.S. dollars) was later expanded to include Australian dollars, Canadian dollars, Swiss francs, and yen for

¹³ Maximum maturities were typically set at three years when programs first launched, but several jurisdictions including Portugal, the Netherlands, Finland, Spain, and Germany later extended the maximum to five years. Portugal and Italy later extended maximum maturities to seven years for covered bonds.

¹⁴ Temporary Liquidity Guarantee Program; Final Rule 12 CFR Part 370, November 26, 2008.

the explicit purpose of broadening the investor base for British banks. South Korea's State Guarantee of External Debt of Korean Banks was unique in limiting its program to foreign currencies only, given South Korea's concern that it was access to external funding that was most at risk during the GFC.

Participation Limits for Individual Firms

The belief that guarantee programs should enable institutions to meet existing refinancing needs rather than fuel further growth at the expense of non-beneficiary banks, prompted many jurisdictions to place caps on the amount of guaranteed debt that a given institution could issue. As stated in the EC's guidance of October 25, 2008, "[t]he limitation of the amount of the guarantee available...may also be an element safeguarding the proportionality of the scheme." A typical approach was to measure the amount of outstanding debt maturing within a specified, near-term timeframe and then add a bit of a cushion (often 25%) and to use the resulting figure as the cap. The different approaches to participation limits for individual firms can be summarized as follows:

- No cap: Australia, Austria – OeCAG, Belgium, Denmark, Germany, Hungary, Ireland, Poland, Portugal, United Kingdom – ABS Guarantee Scheme
- Cap based on maturing liabilities: Canada (alternatively, Canadian deposits), Finland, Netherlands, New Zealand, South Korea, Sweden (alternatively, public deposits), United States
- Cap based on other measures: Austria - IBSG (criteria unclear), France (balance sheet size), Greece (liquidity, market share, maturities, and lending to small and medium enterprises), Italy (supervisory capital), Spain (domestic market share), United Kingdom – Credit Guarantee Scheme (sterling deposit liabilities)

The cap on guaranteed issuances by individual institutions was particularly important in the United States. Per the terms of the Debt Guarantee Program, institutions could not issue non-guaranteed debt until the cap was reached. The one exception to this prohibition required firms to make a declaration of intention to issue non-guaranteed debt by a specified date and pay a 37.5bps fee on outstanding senior unsecured debt within a specified maturity range. The stated rationale for this restriction was the reduction of adverse selection—the concern that an institution would issue only risky types of debt under the guarantee.

Fees

Each of the programs studied charged participants a fee for the guarantees provided. The major points of differentiation between programs on the subject of fees involved whether or not fees would be based on the credit risk of the individual participants and, if so, how risk would be measured. As shown in Table 6 below, the vast majority of programs charged risk-based fees. The United States, in adopting the minority approach, specifically considered introducing a risk-based fee but opted not to for practical reasons. The FDIC felt that it lacked the time and, in the case of guarantee-eligible participants not normally under the FDIC's jurisdiction, the authorization/expertise to effectively assess differential risk.

Table 6: Fees for Guarantee Programs

Non-Risk Based	Risk-Based	
	CDS Spreads	Credit Ratings
Belgium	Austria	Australia
South Korea	Denmark	Canada
United States	Finland	New Zealand
	France	
	Germany	
	Greece	
	Hungary	
	Ireland	
	Italy	
	Netherlands	
	Poland	
	Portugal	
	Spain	
	Sweden	
	United Kingdom	

Source: Author analysis.

As Table 6 illustrates, a large number of European jurisdictions (but not all European jurisdictions) adopted a risk-based approach to fees that utilized the CDS (credit default swap) spreads of participating institutions. This convergence occurred as a result of the guidance issued by the ECB on October 20, 2008, that recommended that annualized guarantee fees be based on the following principles (ECB 2008):

- Debt with maturities of one year or less should be charged a flat fee equal to 50 basis points “as CDS spreads may not provide an adequate measure of credit risk for such debt”
- Debt with maturities exceeding one year should be charged a fee based on CDS spreads (which “provide a good reference to ensure that governments get a fair compensation and to minimise market distortions”) and an add-on fee equal to 50 basis points (“to recover the operational costs and to help preserve the level playing field”)
- The CDS spreads used should be median five-year CDS spreads (“the most liquid CDS instruments”) for a reference period from January 1, 2007, to August 31, 2008 (to “reduc[e] the impact of extremely high CDS values that emerged especially in [September and October 2008]”)

- Institutions without CDS data should use an equivalent CDS spread based on similarly rated institutions

The specific formula that results from these principles can be expressed as:

$$\text{Annualized Fee} = 50\text{bps} + [\text{for debt with maturity greater than one year}] \text{ median five-year CDS spread from January 1, 2007, to August 31, 2008}$$

The majority of countries listed in Table 6 as adopting CDS-based fees initially followed this base formula.¹⁵ Further EC guidance issued on April 30, 2010, required that programs extended beyond June 30, 2010, increase their fees from the ECB's base formula by at least 20bps to 40bps based on the credit rating of the participating institution to "promote a gradual phasing out of guarantee schemes." EU countries with programs running beyond this date thus ultimately adopted fee increases.

Even with this ECB-driven convergence many jurisdictions adopted unique elements in their approach to fees. Finland adopted a 5bps surcharge for institutions whose Tier 1 capital fell below 7%. Italy levied a 50bps surcharge (imposed after 24 months) on debt with maturities exceeding two years. Multiple jurisdictions (Greece, Finland, and Sweden) reduced the add-on fee from 50bps to 25bps when guaranteeing covered bonds or when collateralized. In the United States, a 10bps surcharge applied to certain nonbank financial institutions. In the United Kingdom, the repurchase of guaranteed debt by issuers was initially prohibited and then later subjected to a surcharge equal to 15% of the fee that would otherwise have been due.

For countries adopting a minority (i.e., non-risk-based or credit-ratings-based) position on fees, there was a greater diversity of approaches. Non-risk-based fees could either be a flat annualized fee (100bps for South Korea and 100bps plus a 70bps setup fee for Belgium) or an annualized fee range based on maturity (50bps to 100bps for the United States initially and later 50bps to 150bps for debt issued beginning April 1, 2009). Similarly, for countries that relied on credit ratings, fees could either involve an annualized range based on those ratings (70bps to 150bps for Australia, 85bps to 250bps initially for New Zealand) or a flat fee with a surcharge for issuers below a certain ratings threshold (160bps plus a 25bps surcharge below A3/A-/A- initially for Canada).

Notwithstanding this diversity of approaches, it is interesting to note the extent to which most programs' fees were similar. Levy and Schich (2010) note that average fees across jurisdictions were mostly near 100bps, with Germany at the low end of this clustering with an average fee of 91bps, and the United Kingdom on the high end with an average fee of 114bps.

¹⁵ The two that diverged were France (with an add-on fee of only 20bps) and the United Kingdom (which used a different reference period from July 2, 2007, to July 1, 2008).

The correct pricing of guarantees can be both complicated and essential to the success of the program. Not surprisingly, therefore, an analysis of the programs studied reveals numerous decisions for designing fees that appear to have been problematic. This can be suggested either by the fact that the decision was later amended (often with an explanation for the amendment that spells out what went wrong), or by the fact that the result of the decision was the opposite of the stated rationale for having made it. The prime example in the latter category, and perhaps the biggest example of a flawed fee design decision, concerns the ECB's attempt to maintain a level playing field by promoting identical fee structures across countries. As discussed in more detail in Evaluation below, the most significant factor in determining how much a government guarantee will reduce spreads and improve borrowing costs for issuers is the creditworthiness of the sovereign making the guarantee. Given that sovereign creditworthiness varied considerably across countries, similarly situated issuers from different jurisdictions ended up paying the same fees for guarantees with dramatically different values. This resulted in a variety of distortions and several programs that remained unused given the low value of their sovereigns' guarantees relative to the fees charged, as further discussed in Evaluations. To address this issue, either the value of the guarantees across countries must be made consistent (e.g., by using a multi-lateral body to provide them) if fee structures remain uniform, or fee structures must stop being uniform (e.g., by having "weak" sovereigns charge less than "strong" sovereigns) if the value of the guarantees provided remains inconsistent. Neither solution is without political difficulty. (See, e.g., Levy and Schich 2010 and Grande et al. 2011.)

During the GFC, there were also several examples of countries that lowered fees that had come to be seen as prohibitively high. In the United States, the FDIC abandoned an initial flat fee of 75bps for a range of 50bps to 100bps (later 150bps given surcharges for debt issued beginning April 1, 2009) based on maturity due to concerns that 75bps was too high for short-term debt. Canada's initial fee of 160bps plus a 25bps surcharge for institutions rated below A3/A-/A- was replaced by a fee of 110bps plus the surcharge to make the CLAF more competitive. New Zealand repeatedly lowered its fees from a range of 85bps to 250bps to a range of 70bps to 200bps to better match market conditions. In 2012, Portugal calculated the fee for three large banks based on the CDS spreads from a sample of other EU banks in light of the belief that Portuguese sovereign spreads were artificially inflating its banks' CDS.

Other Conditions

The additional conditions placed on participants in guarantee programs is another area in which the need for EC approval influenced many countries' design decisions. The October 25, 2008, guidance on guarantee programs issued by the EC called for the inclusion in programs of a set of safeguards "to minimize...distortions and the potential abuse of the preferential situations of beneficiaries brought about by a State guarantee" and "to avoid moral hazard." This guidance did not specify exactly what safeguards a program should include, but required "an adequate combination" of elements including restrictions on advertising based on the guarantee, balance sheet growth, share buybacks, and executive compensation. As indicated in Table 7 below, some of these elements were incorporated into programs adopted in most EU countries.

Table 7: Common Conditions on Participation

Country	Restrictions	Country	Restrictions
Australia	N/A	Italy	GROW
Austria	ADV, COMP, LEND	New Zealand	N/A
Belgium	Broad discretion to impose	Netherlands	ADV, COMP, GROW
Canada	N/A	Poland	ADV
Denmark	ADV, BUY, COMP, DIV, GROW	Portugal	ADV (added later), GROW (initially)
Finland	ADV, COMP	South Korea	N/A
France	ADV, COMP, GROW, LEND	Spain	N/A
Germany	ADV	Sweden	ADV, COMP, GROW (initially)
Greece	ADV, GROW	United Kingdom	ADV, GROW (initially), LEND (added later)
Hungary	ADV, COMP, DIV	United States	N/A
Ireland	Broad discretion to impose		

ADV – advertising, BUY – share buybacks, COMP – executive compensation, DIV – dividends, GROW – growth, LEND – minimum lending requirements.

Source: Author analysis.

A number of jurisdictions also adopted unique requirements for participation as follows:

- Germany – participating institutions had to review their business models, with risky lines of business subject to divestiture or reduction at the direction of the government
- Hungary – participating institutions had to issue a veto share enabling the government to block certain corporate actions like dividend payments, compensation payments, etc.
- United Kingdom (Credit Guarantee Scheme) – participating institutions had to submit a plan for accessing wholesale funding without benefit of a guarantee

The participation requirements associated with guarantee programs were, in general, less stringent than those associated with capital injection and/or asset purchase programs in many countries. In the United Kingdom, for example, a set of conditions including compensation restrictions, lending commitments, and support for mortgage assistant programs imposed on participants in the Bank Recapitalisation Fund did not generally apply to the Credit Guarantee Scheme but could be imposed on a case-by-case basis. Recapitalization programs in the United States and Germany similarly imposed restrictions not included in the guarantee programs in those countries.

Still, there is reason to believe that the adoption of certain conditions may have discouraged participation or at least been seen as having the potential to do so. Multiple jurisdictions ultimately abandoned conditions that they had considered or initially implemented. In the Netherlands, initial open-ended restrictions on compensation were later replaced with specific guidelines. Finland eliminated proposed restrictions on balance-sheet growth and share buybacks prior to adoption. Sweden, likewise, ultimately eliminated restrictions on balance-sheet growth. Meanwhile, Belgium appears to have had broad discretion to impose

conditions of an uncertain nature and saw no usage of its guarantee program, perhaps as a result.

At the same time, several countries retained similar restrictions and still attracted participants to their guarantee programs. Participants in Denmark's program, in particular, appear to have been relatively heavily restricted, yet its opt-in New Guarantee Scheme was nonetheless widely utilized.

Process for Exercising Guarantee

As discussed in greater detail in the Evaluation section below, the timeliness of payment upon exercising the guarantee in the event of default has a significant effect on determining how much a government guarantee will reduce spreads and improve borrowing costs for issuers. The empirical evidence in support of this conclusion is bolstered by examples of countries that shifted from delayed to more immediate payments. In Canada, an initial proposal called for a 30-day waiting period between the demand for payment by guarantee beneficiaries and the actual payment. Canada abandoned this approach in favor of "timely payment" standard. In the United States, the FDIC originally said that it would only make payments pursuant to the DGP upon an issuing institution declaring bankruptcy. This position was later replaced with a policy that payment could be triggered by the first default. There were also countries that took specific steps to ensure timely payment. France required debt payments to be deposited at the Bank of France several days before due to provide early warning of any impending defaults.¹⁶

These approaches appear to have been in the minority, however. As illustrated in Figure 3 below, many jurisdictions had significant waiting periods before failure to pay could result in their guarantees being exercised.

¹⁶ As a practical matter, this arrangement was made much easier by the fact that banks' debt payments were owed to the SFEF clearing SPV rather than to bondholders.

Figure 3: Guarantee Program Grace Periods

Timeliness of payments		
In days		
Grace periods for bonds		
Country	Grace period for interest payment	Grace period for principal payment
Austria	5–30	5–30
Australia	10	10
Germany	30	30
Ireland	14–15	7
Netherlands	14–30	7–30
Portugal	10–14	10–14
Sweden	10–30	10–15
United Kingdom	14–30	7–14

Source: RBS (2009).

Source: Panetta et al. 2009.

The programs studied also contain examples of unique, problematic requirements on default that were preemptively addressed or later abandoned:

- Finland – participating mortgage banks were required to transfer guaranteed mortgages to the state if the guarantee was triggered. This transfer was legally impossible to accomplish and was later repealed.
- Portugal – if a bank defaulted and called on a guarantee, the bank would be required to either pay back the Portuguese state or exchange that obligation for preference shares. Later, the ability of the state to become a shareholder pursuant to the guarantee program was limited.
- Spain – under existing Spanish law, payments could not be made under the guarantee until the defaulting institution demonstrated that it lacked the property to make payment. The Spanish government waived this “beneficium excussionis” in connection with its guarantee program.

Additional points for consideration are the sources from which funds would be drawn in the event that guaranteed debt defaulted and countries were required to make payments pursuant to their programs. As noted above, each of the programs studied charged participants guarantee fees that could be used to meet guarantee obligations. In the event that these fees proved insufficient, most jurisdictions appear to have relied on the government’s general ability to make payments. There were two major exceptions to this general approach.

A small number of countries established pre-funded pools of money to back their guarantee programs. Hungary created an approximately €1.1 billion Refinancing Guarantee Fund in connection with its €20 billion aid package from the IMF and ECB. The Hungarian government intended this €1.1 billion Fund to support up to approximately €5.5 billion in guaranteed issuances. Germany established a new €480 billion fund called SoFFin to issue guarantees, purchase assets, and inject capital, with €400 billion of this total earmarked specifically for guarantees. In Sweden, the government set up a stability fund (discussed below) to finance its efforts in support of the financial system.

A second exception involves countries that sought to have the banking sector fund their guarantee programs even beyond the contribution of participation fees. In the United States, the FDIC sought to make its Debt Guarantee Program completely industry-funded by providing that if program losses exceeded participation fees, the difference would be funded via a special assessment on all FDIC-insured institutions (whether or not they had actually participated in the program). In Sweden, the government seeded the stability fund backing its guarantee program with approximately €1.5 billion (intended to amount to 0.5% of GDP), but levied stability-fund fees on all financial institutions in proportion to their balance sheet sizes to pay back this initial contribution and ultimately build the fund up to 2.5% of GDP. In Denmark, the government ultimately replaced an Original Guarantee Scheme involving a significant role for a banking industry group called PCA in the design, funding, and execution of the program with a New Guarantee Scheme in which the PCA was less central. The New Guarantee Scheme, for example, charged participating institutions a fee directly as compared with the Original Guarantee Scheme's approach of allocating a certain amount of program losses to the PCA that it then allocated to individual institutions.

Program Issuance Window

The guarantee programs adopted during the GFC were intended to be temporary measures to address what was hoped would be relatively short-lived disruptions in wholesale funding markets. Accordingly, at the time of introduction, they typically included initial windows for issuing guaranteed debt that were around six months to one year long. However, policymakers generally recognized “the...unpredictable duration of the fundamental shortcomings in the functioning of financial markets” (to borrow the language of the EC's guidance of October 25, 2008) and allowed for some ability to extend these initial windows. As illustrated in Table 8 below, most programs made use of this ability, even several that had not seen any guaranteed issuances prior to extension. Many of these extensions took place during continued market turbulence in advance of scheduled termination dates in early-to-mid 2009.

Table 8: Issuance Window Expiration Dates

Country	Original	Final	Country	Original	Final
Australia	N/A	3/31/2010	Italy	6/16/2009	12/31/2009
Austria	12/31/2009	12/31/2010	New Zealand	N/A	4/30/2010
Belgium	10/31/2009	10/31/2010	Netherlands	6/30/2009	12/31/2010
Canada	4/30/2009	12/31/2009	Poland	12/31/2009	5/31/2019
Denmark	12/31/2010	12/31/2010	Portugal	12/31/2009	2/28/2019
Finland	4/30/2009	6/30/2010	South Korea	6/30/2009	12/31/2009
France	12/31/2009	12/31/2009	Spain	6/30/2009	12/31/2011
Germany	12/31/2009	12/31/2010	Sweden	4/30/2009	6/30/2011
Greece	5/19/2009	11/30/2020	UK - CGS	4/9/2009	2/28/2010
Hungary	6/30/2009	12/31/2009	UK - ABS	10/22/2009	12/31/2009
Ireland	6/1/2010	3/28/2013	United States	6/30/2009	4/30/2010

Source: Author analysis. Reflects initial termination of issuance window. Does not account for programs later reintroduced in response to new difficulties.

By May 2009, market conditions had begun to become much more favorable, and the issuance windows for many programs were allowed to expire in late 2009 into early 2010. By April 2010, the EC had concluded that “access to funding [was] no longer a systematic and generalized problem” such that programs extended beyond June 30, 2010, should be subjected to additional requirements to address distortions and move remaining guaranteed issuers closer to market conditions. These requirements included the fee increases outlined in the “Fees” section above and a mandatory long-term viability review for banks that remained heavy users of guarantees (European Commission 2010). As shown in Table 8 above, a small number of jurisdictions (particularly some of those hard hit by the European sovereign debt crisis) have continued extending their issuance window expiration dates. Others (Italy, Spain) reintroduced versions of their programs in 2011-2012 in response to the sovereign debt crisis.

Two unique approaches to issuance window expiration dates are worth highlighting:

- Australia intentionally did not announce an issuance window expiration date at the time of the program’s introduction in order to avoid the risk of premature closure and to communicate a commitment to keeping the program running as long as necessary
- The United Kingdom’s Credit Guarantee Scheme allowed for the continued rolling over of some guaranteed debt after the issuance window expiration date (debt equal to up to one-third the program’s total size)

III. Evaluation

Any attempt to evaluate the effectiveness of the guarantee programs adopted during the GFC faces significant challenges. As noted above, countries often introduced these programs as

one component of broader packages of measures, and it can be difficult to disentangle the effects of the guarantees from the effects of other parallel measures. Existing evaluations of GFC guarantee programs have been generally positive, albeit generally written by central bank economists with a stake in the outcome. This survey synthesizes the evidence on guarantee program effectiveness by seeking to answer two primary questions:

1. Were the programs effective at achieving their goals?
2. Did the programs have any unintended consequences?

Achievement of Goals

Grande et al. (2011) identify support for bank funding to avoid a liquidity crisis and support for bank lending to avoid a credit crunch as the twin objectives of the guarantee programs generally. To this can be added the goal of restoring confidence in beneficiary banks more broadly (i.e., not just in their guaranteed debt). This results in three specific sub-questions to be answered in evaluating whether guarantee programs were effective in achieving their goals:

- a. Were participating banks able to borrow?
- b. Was confidence restored in participating banks more broadly?
- c. Did participating banks resume lending?

On the question of bank borrowing, Levy and Schich (2010) argue that “[t]here appears to be widespread agreement that, on the whole, government guarantees have...allow[ed] banks to tap funds on the markets and roll over their maturing debt at a time when traditional sources of funding were drying up.” In a conclusion echoed by other sources, Grande et al. (2011) find that “[t]he available evidence...suggests that debt guarantees did help banks to resume medium-term funding.” Citing analysis from the BIS and IMF, the European Commission (2011) also noted that the announcement of state aid programs including (but not limited to) guarantees and their use had a positive (if somewhat temporary) effect on broader confidence in banks as measured by their CDS spreads. Meanwhile, Grande et al. (2011) found a “broadly positive” relationship between issuance of guaranteed bonds and lending growth by banks, suggesting that participating banks did in fact resume lending.

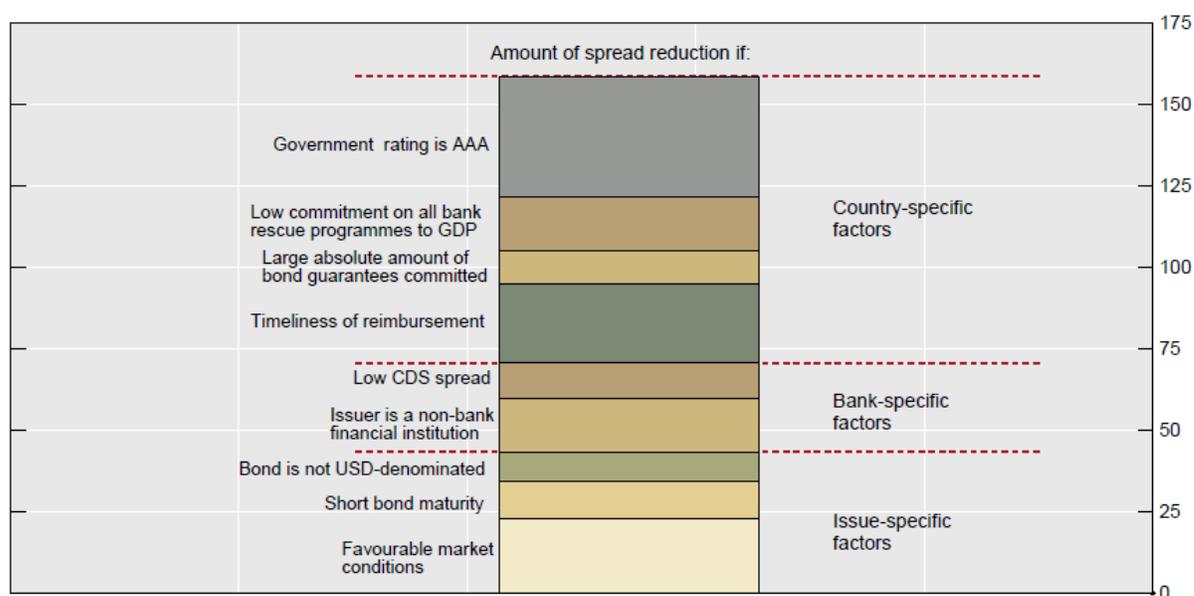
Unintended Consequences

One possible unintended consequence of guarantee programs could be the “crowding out” of non-guaranteed debt by guaranteed debt (i.e., the issuance of guaranteed debt in place of non-guaranteed debt that would otherwise have been issued). Panetta et al. (2009) have studied the extent to which this actually occurred during the GFC. They find that while crowding out does not appear to have been a significant issue in the United States and most of Europe, increased issuance of guaranteed debt in the United Kingdom from January to April 2009 was associated with a decline in non-guaranteed issuance. Crowding out may also have occurred specifically in the covered bond market in countries including Spain and

France (Ibid.). As noted above, other European countries perceived the exclusion of covered bonds from Denmark's Original Guarantee Scheme as having dried up the market for such bonds.

Work by Panetta et al. (2009) and others illustrates why Europe's attempt to create a level playing field by promoting the standardization of fees across countries produced significant market distortions as another unintended consequence. Using a regression analysis on 321 guaranteed issuances, Panetta et al. calculated how much of a hypothetical spread on a guaranteed bond can be attributed to various factors categorized as being either country-specific (e.g., sovereign creditworthiness, size of bank rescue packages as a percentage of GDP, etc.), bank-specific (e.g., bank creditworthiness), or issue-specific (maturity, currency, etc.). As illustrated in Figure 4 below, more than half of the total spread was driven by country-specific factors, with the creditworthiness of the sovereign and the timeliness of reimbursement under the guarantee upon default being the two most significant considerations.

Figure 4: Breakdown of Guaranteed Bond Spread by Contributing Factor



Source: Panetta et al. 2009.

Panetta et al.'s finding with respect to this latter factor confirm the anecdotal evidence seen during the crisis—several countries improved the timeliness of their guarantee payments upon default (as described in Key Design Decisions above), likely in hopes of bolstering program usage.

With respect to the former factor, the finding that sovereign creditworthiness is the single most important consideration in determining the effect of guarantee programs on spreads underlines perhaps the most significant flaw in the design of guarantee programs during the GFC. As discussed in Key Design Decisions above, in the interest of maintaining a level

playing field, the EC and ECB encouraged countries to adopt an identical approach to guarantee program participation fees. However, because sovereign creditworthiness varied significantly across countries, similarly situated issuers in different jurisdictions would find themselves paying the same fee for guarantees worth very different amounts in terms of the reduction in spreads/improvement in borrowing costs that resulted. This produced significant distortions. As described by Levy and Schich (2010) and others, weak banks with strong sovereigns were able to borrow at lower total cost than strong banks with weak sovereigns. This dynamic became even more pronounced beginning in 2010, as sovereign creditworthiness further deteriorated in some countries with the onset of the Eurozone crisis. Thus, for example, A+ rated banks in Portugal would have to pay a much higher interest rate on their guaranteed debt (90-100 basis points above the swap rate) than BBB+ rated banks in Germany (less than 20 basis points above the swap rate) (Panetta et al. 2009).

The low value of the guarantee, given sovereign creditworthiness concerns, may have been a factor in the non-usage of programs in countries such as Italy, Hungary, and Poland. Some countries with sovereign creditworthiness concerns such as Spain and Portugal nonetheless saw significant issuance of guaranteed debt. Even here, however, the identities of those issuing guaranteed debt is telling. In Spain, guaranteed issuance was heavy but restricted to smaller, local institutions for whom no other options appear to have been available. By comparison, Banco Bilbao (one of Spain's largest banks) chose to issue guaranteed debt via its BBB+ Puerto Rican subsidiary rather than its AA-rated Spanish parent because the former was eligible for the United States' guarantee program. Caamaño Alegre and Komilova (2013) noted that Spain's guarantee program was relatively expensive because of the country's low sovereign credit rating. The approach to guarantee program fees adopted in Europe thus failed to meet its stated objective of maintaining a level playing field. That said, as noted above, two potential solutions to this failure would have been politically difficult: (a) making the value of guarantees consistent across countries (e.g., by using a multi-lateral body to provide them) and (b) making fees reflect the value of guarantees by having "weak" sovereigns charge less than "strong" sovereigns.

IV. References

Acharya, V and R Sundaram. 2008. "The other part of the bailout: pricing and evaluating the US and UK loan guarantees," VoxEU.org, 26 October. <https://ypfs.som.yale.edu/library/other-part-bailout-pricing-and-evaluating-us-and-uk-loan-guarantees>.

Black, J. R., S. A. Hoelscher, and D. Stock. 2014. "Benefits of Government Bank Debt Guarantees: Evidence from the Debt Guarantee Program." Manuscript. <https://ypfs.som.yale.edu/library/benefits-government-bank-debt-guarantees-evidence-debt-guarantee-program>.

Caamaño Alegre, José and Mukhbira Komilova. 2013. "El Otorgamiento de Avaales del Estado a las Emisiones de Deuda de las Entidades Financieras: Una Aproximación al Caso Español."

USC – Dereito. Vol. 22(2013): 91-113. <https://ypfs.som.yale.edu/library/el-otorgamiento-de-avales-del-estado-las-emisiones-de-deuda-de-las-entidades-financieras>.

Department of Finance Canada. 2008. “Backgrounder, Canadian Lenders Assurance Facility.” October 23, 2008. <https://ypfs.som.yale.edu/library/backgrounder-canadian-lenders-assurance-facility>.

European Central Bank. 2008. “Recommendations of the Governing Council of the European Central Bank on government guarantees for bank debt,” October 20. <https://ypfs.som.yale.edu/library/recommendations-governing-council-european-central-bank-government-guarantees-bank-debt>.

European Commission. 2008. “Communication from the Commission—The application of State aid rules to measures taken in relation to financial institutions in the context of the current global financial crisis,” *Official Journal of the European Union*, October 25. <https://ypfs.som.yale.edu/library/communication-commission-application-state-aid-rules-measures-taken-relation-financial>.

———. 2010. “The Application Of State Aid Rules To Government Guarantee Schemes Covering Bank Debt To Be Issued After 30 June 2010,” DG Competition Staff Working Document, 18 May. <https://ypfs.som.yale.edu/library/application-state-aid-rules-government-guarantee-schemes-covering-bank-debt-be-issued-0>.

———. 2011. “The effects of temporary State aid rules adopted in the context of the financial and economic crisis,” Commission Staff Working Paper, October. https://ypfsresourcelibrary.blob.core.windows.net/fcic/YPFS/working_paper_en.pdf.

Euro Summit. 2008. “Declaration on a Concerted European Action Plan of the Euro Area Countries,” October 12. <https://ypfs.som.yale.edu/library/declaration-concerted-european-action-plan-euro-area-countries>.

Grande, G. et al., 2011. Public guarantees on bank bonds: Effectiveness and distortions, *OECD Journal*, 47. <https://ypfs.som.yale.edu/library/public-guarantees-bank-bonds-effectiveness-and-distortions>.

Levy, A. and S. Schich. 2010. The design of government guarantees for bank bonds: Lessons from the recent financial crisis, *OECD Journal: Financial Market Trends*, Vol. 2010, No. 1. <https://ypfs.som.yale.edu/library/design-government-guarantees-bank-bonds-lessons-recent-financial-crisis>.

Levy, A. and A. Zaghini. 2010. “The Pricing of Government-Guaranteed Bank Bonds”, Banca d’Italia Working Paper n. 753, March. <https://ypfs.som.yale.edu/library/pricing-government-guaranteed-bank-bonds-0>.

Panetta, F., et al. 2009. “An Assessment of Financial Sector Rescue Programmes,” BIS Paper No. 48, July. <https://ypfs.som.yale.edu/library/assessment-financial-sector-rescue-programmes>.

Schwartz, C. 2010. "The Australian Government Guarantee Scheme," Reserve Bank of Australia Bulletin, March Quarter 2010. <https://ypfs.som.yale.edu/library/australian-government-guarantee-scheme-19-26>.

Copyright 2019, 2020 © Yale University. All rights reserved. To order copies of this material or to receive permission to reprint any or all of this document, please contact the Yale Program for Financial Stability at ypfs@yale.edu.