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# **COVID-19 and Deposit Insurer Fund Sizes**

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# DEPOSIT INSURER FUND SIZE IMPLICATIONS OF COVID-19

## Executive Summary

Using IADI Annual Survey data, we find some evidence that deposit insurers in jurisdictions with particularly high deposit inflow during the pandemic tend to see their relative fund size<sup>1</sup> decrease i.e. their absolute fund size grew at a slower pace than deposits. As this refers to annual data, lags in premium collection are unlikely to explain this in full and accommodative premium policies may contribute to this observation.

At a quarterly level, and using weighted average relative fund sizes, we find that – globally – fund sizes relative to covered deposits have expanded throughout the pandemic, interrupted by a small decrease during 2021Q1 only. Given the overall growth of deposits during the pandemic, this is noteworthy. Over the 12-month period 2020Q2-2021Q2, we find an accumulated relative fund size increase of 2.6%. Europe and Asia witness high growth of about 10%, whereas the Americas see fund size decrease by 2%.

Interpretation of quarterly data suggests that relative fund sizes in advanced economies have grown proportionately slower than in emerging economies. Whether this can be attributed to a larger and more sudden inflow in covered deposits in these economies (as annual data suggests) and/or to accommodative policies, remains to be investigated.

Looking at future trends in deposits, 40% of survey respondents expect covered deposits to grow at approximately the same rate same as in the last five years. Of the 60% expecting an adjustment in growth into 2022, roughly half expected growth to exceed average historical levels.

## 1 Introduction

This paper is the third in a series of research works focussed on the impact of COVID-19 on deposit insurance. Previous publications examined the initial high-level impacts of the pandemic on global deposit insurance systems<sup>2</sup> and quarterly growth rates of covered deposits throughout the pandemic.<sup>3</sup> The latter paper found strong evidence for net additional inflows of deposits during the midst of the pandemic in many jurisdictions.

Building on this finding, the paper focusses on the impact of the COVID-19 pandemic on deposit insurers' fund sizes. In doing so, this paper distinguishes between absolute fund sizes and relative fund sizes as a percentage of covered deposits. The latter is relevant as over 80% of deposit insurers globally have a fund size target, typically expressed as a share of the stock of total, eligible or covered deposits within a given jurisdiction.<sup>4</sup> Pandemic related changes in the stock and inflow of deposits may impact on both absolute and relative fund sizes, influenced by delays in premium-collection and accommodative measures directed at deposit insurers that were taking during the pandemic to support financial stability.

Fund sizes are central to any well-calibrated deposit insurance system.<sup>5</sup> Such finance offers the primary source of liquidity for deposit insurers (DI) to utilise in supporting depositors during periods of heightened bank stress, be it through a liquidation-payout scenario or through bank resolution.<sup>6</sup> DI funds are typically levied on an ex-ante basis via

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<sup>1</sup> Throughout, the authors define *absolute fund size* as the stock/value of funds available to a deposit insurer for reimbursement and/or resolution activities at a given point in time; and *relative fund size* as the absolute fund size expressed as a share of covered, eligible or total deposits.

<sup>2</sup> Defina (2021)

<sup>3</sup> Van Roosebeke & Defina (2022b)

<sup>4</sup> Sourced from the 2021 IADI Annual Survey. Respondents nominated total eligible and covered deposits in approximately equal proportions.

<sup>5</sup> IADI (2018) used a survey, case studies, a workshop, and literature reviews to gather data and information on current approaches and practices in determining and administering a fund target.

<sup>6</sup> IADI (2015) offers enhanced guidance on ex-ante funding for deposit insurers noting that “Deposit insurers should implement ex ante funding mechanisms to have available the financial capacity to carry out their mandates effectively. Clarity in the funding objectives is essential for deposit insurers to determine the appropriate funding approach and strategies to meet their legal obligations, taking into consideration their role in the financial safety-net.”

premia imposed on member institutions, increasingly through differential premium systems<sup>7</sup>, with premiums proportionate to the relative risk on the DI balance sheet associated with that institution's activities (and associated default probability).

The advent of COVID-19 has imposed considerable strain on economic activity and led to natural flow-on effects within the banking sector. The sharp downturn in the global economy has had an undeniable impact on the balance sheets of banks, with strong impacts on cross-border claims.<sup>8</sup> Deposit taking institutions have also been impacted, with large inflows of deposits observed across many regions, albeit to differing degrees.<sup>9</sup> Throughout, various underlying dynamics and transmission channels are highlighted and discussed.

The results of this paper are based on a survey of IADI Members conducted in September 2021. Submissions were received from deposit insurers in 40 jurisdictions, all of which are IADI Members.<sup>10</sup> The survey was commissioned with the intention of quantifying trends in deposit insurance throughout the pandemic period, largely determined as commencing 2020Q1. Information for the three years proceeding is also collected to enable intervention analysis, with a focus on whether changes in key metrics could be correlated with the pandemic's evolution over time.

The remainder of this paper is organised as follows: Section 2 and 3 analyse, on a theoretical level, the main pandemic related dynamics between deposit insurers' fund sizes and deposits and other factors respectively. Section 4 discusses, on an empirical level, how relative fund sizes have evolved in both an annual and quarterly perspective. Section 5 offers insights in deposit insurers' expectations regarding future developments. Section 6 concludes.

## 2 Deposits and fund sizes: Channels of influence

For the majority of deposit insurers, deposits drive fund size.<sup>11</sup> COVID-19 related deposit trends may thus impact on deposit insurers and their funds through a series of channels. The following presents a theoretical description of some of the major channels of influence related the COVID-19 pandemic. The impact of these channels on fund sizes is multifaceted: we distinguish between channels having upward (in 2.1) and downward effects (in 2.2) on the size of the DI fund.

### 2.1 Upward effects

There are two predominant channels of influence that may lead to an increase in deposits and the absolute size of the deposit insurance fund.

#### 2.1.1 Household consumption channel

Households were impacted fundamentally by the pandemic. Many contracted the virus (and/or resided in an affected household) which inhibited their capacity to function, and most relevant, consume goods and services in any otherwise typical manner. Others were constrained via the implementation of both domestic and international restrictions on

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<sup>7</sup> For further details see Van Roosebeke & Defina (2022a), page 9.

<sup>8</sup> According to the BIS international banking statistics and global liquidity indicators at end-September 2021, banks' cross-border claims decreased by USD 290 billion in 2021Q2 after a USD 620 billion increase in 2021Q1.

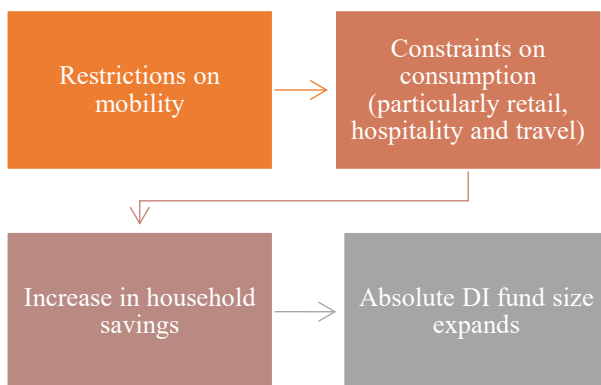
<sup>9</sup> Van Roosebeke & Defina (2022b)

<sup>10</sup> Submissions were received from the Albanian Deposit Insurance Agency, Albania; Fundo de Garantia de Depósitos, Angola; Agency of Deposit Compensation, Belarus; Bulgarian Deposit Insurance Fund, Bulgaria; Canada Deposit Insurance Corporation, Canada; Autorité des marchés financiers, Canada (Québec); Central Deposit Insurance Corporation, Chinese Taipei; Fondo de Garantías de Instituciones Financieras, Colombia; State Agency for Deposit Insurance and Bank Resolution, Croatia; Deposit Insurance Fund, Czech Republic; Corporación del Seguro de Depósitos, Ecuador; Instituto de Garantía de Depósitos, El Salvador; Hellenic Deposit and Investment Guarantee Fund, Greece; Hong Kong Deposit Protection Board, Hong Kong SAR; National Deposit Insurance Fund of Hungary, Hungary; Interbank Deposit Protection Fund / Fondo Interbancario di Tutela dei Depositi, Italy; Jamaica Deposit Insurance Corporation, Jamaica; Deposit Insurance Corporation of Japan, Japan; Jordan Deposit Insurance Corporation, Jordan; Kazakhstan Deposit Insurance Fund, Kazakhstan; Kenya Deposit Insurance Corporation, Kenya; Korea Deposit Insurance Corporation, Korea; Deposit Protection Agency of the Kyrgyz Republic, Kyrgyz Republic; Instituto para la Protección al Ahorro Bancario, Mexico; Deposit Insurance Corporation of Mongolia, Mongolia; Deposit Protection Fund, Montenegro; Norwegian Banks' Guarantee Fund, Norway; Palestine Deposit Insurance Corporation, Palestine; Fund Deposit Insurance, Paraguay; Philippine Deposit Insurance Corporation, Philippines; Deposit Insurance Agency, Russian Federation; Saudi Arabian Monetary Authority, Saudi Arabia; Fondo de Garantía de Depósitos de Entidades de Crédito, Spain; Deposit Protection Agency, Thailand; Deposit Insurance Corporation, Trinidad and Tobago; Fonds de Garantie des Dépôts Bancaires, Tunisia; Savings Deposit Insurance Fund, Turkey; Federal Deposit Insurance Corporation, United States; Deposit Insurance of Vietnam, Vietnam; Deposit Protection Corporation, Zimbabwe.

<sup>11</sup> See footnote 4

movement intended to address public health concerns. These limited certain types of consumption – particularly retail, hospitality and travel.

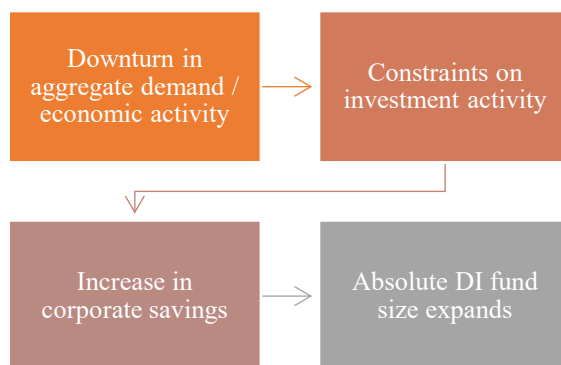
Even though these limitations have accelerated the shift towards a more digital world and triggered changes in online shopping behaviour<sup>12</sup>, it is likely that they have led to less consumption and more savings by households. Increased savings in the form of bank deposits lead to – typically delayed – increases in the absolute DI fund size as the target fund of deposit insurers is predominantly based on a share of deposits (total, eligible or covered). Absent a decision to change this share, the relative fund size can be expected to remain unchanged – though it may temporarily fall, giving delays in premium collection.



### 2.1.2 Business channel

### investment

Corporate investment activity has been affected by the pandemic-driven reduction in aggregate economic activity. Although the overall impact of the pandemic on business investment may vary significantly across regions and sectors, there is a significant risk of declines in investments. As an example, investment in structures fell 21% throughout the pandemic (until January 2022).<sup>13</sup> Corporates may have channelled foregone investments into bank deposit savings, which may positively impact on absolute deposit insurer fund sizes, subject to delays in premium collection. For relative fund sizes, the same logic as in the household consumption channel applies.



## 2.2 Downward effects

In the pandemic, three effects may lead to a decrease of deposits and the absolute size of the deposit insurance fund.

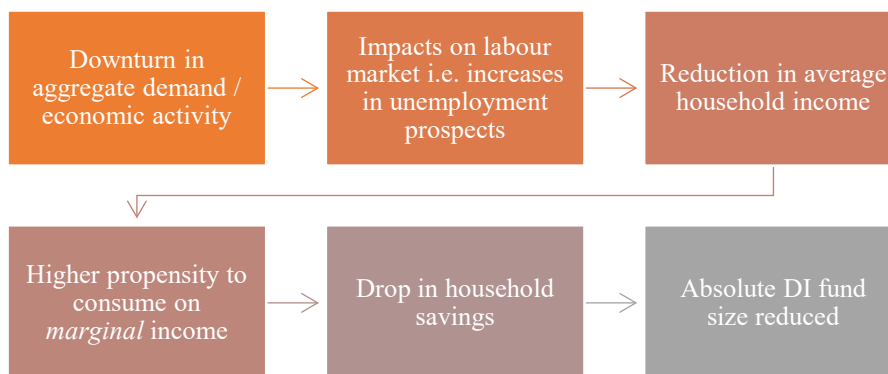
### 2.2.1 Household labour channel

The pandemic has negatively affected the labour market, leading to increases in unemployment and unemployment prospects. Corresponding reductions in household income may lead to reduced savings and bank deposits as spending for essential goods and services is relatively inelastic. As a result, bank deposits may be reduced, and the absolute DI

<sup>12</sup> UNCTAD (2020)

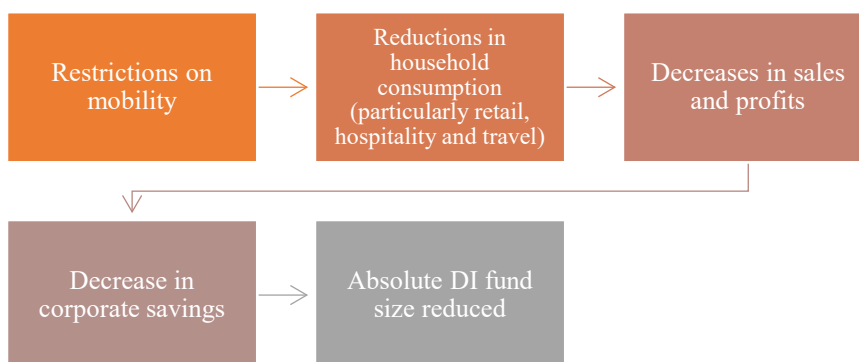
<sup>13</sup> Bachman (2022)

fund size may decrease. Conditional upon a prompt return of funds to member banks, relative DI funds remain unchanged.



### 2.2.2 Business turnover channel

COVID-related drops in consumption directly impact business turnover and subsequently constraints further growth prospects. Subsequent falls in business profitability will reduce corporate savings. For relative fund sizes, the same logic as in the household labour channel applies.



## 3 Other factors influencing fund sizes

Both absolute and relative deposit insurers' fund sizes are influenced by factors others than mere deposits. In the following, we identify the most relevant of these factors and interpret their relevance to the sample at hand.

- Delay in premium collection:** Whereas deposit in- and outflows happen on a continuous basis, deposit insurers collect premiums from member banks at regular intervals only. Of deposit insurers in the sample, 55% collect premiums on a quarterly or more frequent basis, whereas 44% collect at a (semi) annual rate. In the latter group especially, given time delays, rises (declines) in deposit growth may translate into falling (rising) relative fund sizes between premium collection dates.
- Accommodative changes in premium policy:** In the early stages of the pandemic, jurisdictions around the globe put in place a number of support measures aiming at reinforcing financial stability within the deposit-taking sector. Some of these measures have been directedly targeted at or taken by deposit insurers such as temporary reductions in premiums or delays in premium collection such as not to overburden members and cause procyclical effects. As of January 2021, 47% of surveyed deposit insurers have indicated such measures to be in place.<sup>14</sup> No data as to the persistent relevance of such premium policy is readily available, but if present, the impact on relative deposit insurer funds is assumed negative in times of rising deposit growth.

<sup>14</sup> Defina (2021)

- **Relevance of eligible deposits:** Building upon the preceding Survey Brief, this paper investigates relative fund sizes as percentage of covered deposits. However, 58% of deposit insurers in the sample base premium calculations on eligible deposits and 38% on covered deposits.<sup>15</sup> Thus, analysing fund sizes as a share of covered deposits may be misleading if growth rates for covered and eligible deposits differ significantly. However, we find little proof for that. Over the whole sample of participating deposit insurers, annual correlation coefficients between covered and eligible deposit growth have been reasonably high in the past four years.<sup>16</sup>
- **Significant payout or resolution cases:** Deposit insurers with significant payout or resolution cases may have to use a significant share of available funds, thus negatively impacting on the absolute and relative size of the fund. Nine of the 40 deposit insurers (23%) participating in the survey have experienced such cases in 2020 or 2021. This factor thus seems of limited relevance in explaining sample-wide changes in fund sizes. However, as no data is readily available as to the dimension of costs to deposit insurers, additional research may be necessary to exclude such impact.
- **Recoveries:** Deposit insurers may earn recoveries on assets following payout or resolution action. Such income would positively impact on fund sizes. Lacking data, the extent of recoveries on deposit insurers' fund sizes during the time period under investigation, cannot be accurately estimated. As a best estimate, the limited relevance of payout and resolution cases in the past two years guides our expectation for recoveries to be of limited relevance in explaining fund size changes. However, there is considerable uncertainty associated with this assertion. For instance, recoveries can incorporate long time horizons whereby corresponding income generated may have originated from resolution activities occurring many years earlier.
- **Investment income:** Returns on investment increase deposit insurers' fund sizes. However, given the relatively conservative investment strategies and/or policies of deposit insurers (mainly sovereign bonds) and the enduring low yield environment in these asset classes, we don't expect such investment income to significantly impact on fund sizes.<sup>17</sup>
- **Risk profile changes:** Deposit insurers with a differential premium system may adapt individual premiums if the risk profile of a given member bank changes. However, such increases in premiums for higher risk banks may be compensated by lower premiums for other banks. Given that 75% of deposit insurers in the sample use a target fund size approach, the impact of potential risk profile changes on overall fund sizes is expected to be modest.

In addition to deposit trends, we thus cautiously expect delays in premium collection and accommodative changes in premium policy to be the most relevant overall factors driving fund size changes in pandemic changes. Nevertheless, all the aforementioned offers only a theoretical framework. The relative impact of these channels and the impact on fund sizes is an empirical question.

Recent empirical evidence points to a net additional inflow of deposits during the midst of the pandemic (2000Q1-2021Q2). Van Roosebeke and Defina (2022b) offer evidence for a 1.5 ppt increase in quarterly growth in bank deposits during the pandemic. For the sample investigated, this suggests that the net effects arising from household and business channels lead to an additional increase in deposits.

However, the way this affects fund size is ambiguous. First, additional deposit growth during the pandemic may not apply to all jurisdictions. Second, accommodative DI policies may dampen or counter the effects of rising deposits or absolute and relative fund sizes. The overall net effect on DI fund sizes remains to be estimated and thus, it is unclear whether and in how far the effects of

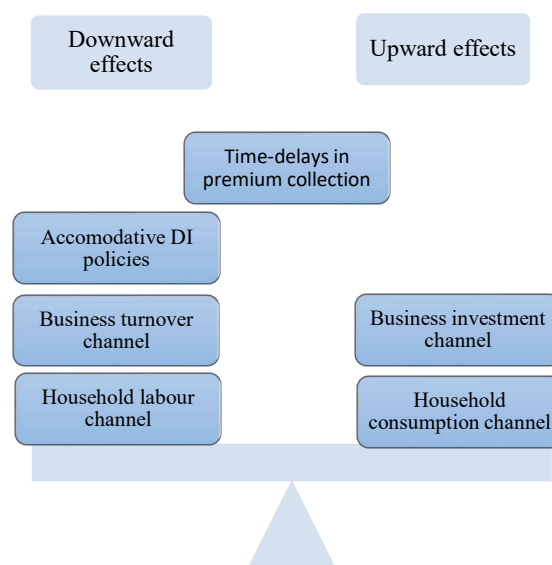


Figure 1: Channels influencing the DI Fund Size

<sup>15</sup> Data for participating deposit insurers, taken from the IADI Annual Survey (2021)

<sup>16</sup> Correlation coefficients based on IADI Annual Survey data: 0.7 (2021 and 2020); 0.8 (2019) and 0.7 (2018).

<sup>17</sup> Investment incomes will also be influenced by monetary policy decision making.

these policies can outweigh the aforementioned upward effects on DI fund sizes. Third, premium collection may lead to time-delays in fund size movements.

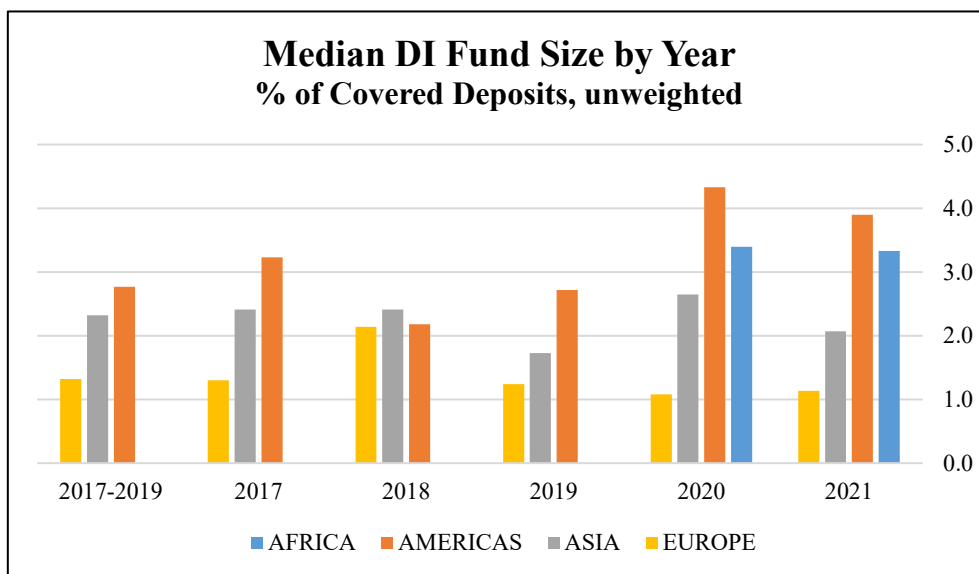
IADI Annual Survey data offers a rough estimate of this net impact. In 2021 and on a year-to-year basis, absolute fund sizes across the IADI membership have increased by 4.7%. In 2020, fund sizes increased by 11.3%.<sup>18</sup> As the explanatory power of these absolute numbers is very limited if not put in perspective with the degree of deposit increases, in the following, we will focus on relative fund sizes.

## 4 Changes in relative fund sizes during the pandemic

In the following, we express relative DI fund sizes as the ratio of total fund size to aggregated covered deposits. Movements in these ratios over time can, by definition, be explained by absolute changes in the DI fund size or in covered deposits. Looking at annual and quarterly data, we investigate whether the COVID-related overall increase in deposit growth has impacted on relative fund sizes.

### 4.1 Relative fund sizes in yearly observations

The IADI Annual Survey collects data on relative DI fund sizes, often based on fully audited annual figures (see figure below with median numbers)<sup>19</sup>. Given that this data is collected on an annual basis only, it does not allow for a detailed analysis against the quarterly evolution of the pandemic. Nevertheless, these numbers offer a benchmark for what constitutes a DI fund size typical within the IADI membership. Reasons for changes in numbers year-on-year can be due to changes in survey sample composition, major recent reimbursements, broader macroeconomic conditions, and/or jurisdiction-specific changes in policy<sup>20</sup> and macroeconomic considerations. Amongst others, differences in DI mandates and banking sector fundamentals may explain much of the differences in fund sizes across jurisdictions and regions.



For the sample investigated and in the pandemic years 2020 and 2021, data on unweighted median relative fund sizes points to a significant increase in fund sizes in the Americas – as compared to the overall median of observation from 2017-2019. Against the same benchmark, in Europe, fund sizes have decreased in the past two years. In Asia, they have increased in 2020 and decreased in 2021.

<sup>18</sup> As fund sizes have been converted into US Dollar, exchange rate fluctuations may in part explain these changes. The sample has been limited to only include respondents reporting fund size data over the past three years.

<sup>19</sup> Years correspond to respective iteration of the IADI Annual Survey. For instance, ‘2021’ denotes the survey conducted in 2021 with a reference period of the calendar year-ending 2020. Africa figures are omitted for some years due to insufficient responses being available.

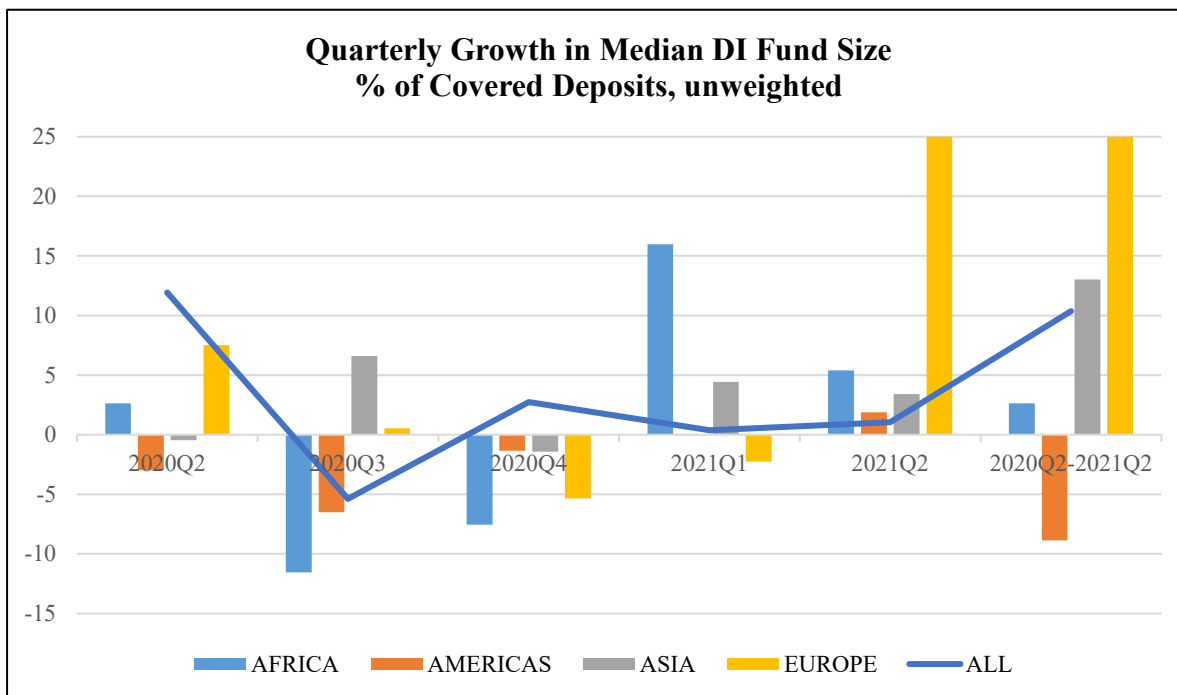
<sup>20</sup> As an example for such policy decision, directive 2014/49/EU of the European Parliament on deposit guarantee schemes (Article 10 ‘Financing of DGSs’) states that “Member States shall ensure that, by 3 July 2024, the available financial means of a DGS shall at least reach a target level of 0.8% of the amount of the covered deposits of its members”. This imposes a formal fund size requirement for deposit guarantee schemes operating in the European Union.



The connection between changes in the covered deposits and the subsequent effect on DI fund sizes is well-established through IADI Annual Survey data. 23 out of 85 (31%) of deposit insurers saw their covered deposits grow throughout 2020-21 by at least five percentage points higher than throughout 2017-19. Of these, 96% observed their relative fund size drop throughout the same period. This offers some evidence that DIs with particularly high deposit inflow during the pandemic tend to see their relative fund size decrease, even in annual observations, which account for some delays in premium collection.<sup>21</sup>

## 4.2 Relative fund sizes in quarterly observations

Using quarterly data gathered through the 2021 survey on deposit trends in the pandemic may allow for more detailed insights. The following shows changes in the unweighted median quarterly relative fund sizes per region during pandemic quarters as well as the cumulated growth over all quarters.



Changes in these DI fund sizes throughout the pandemic<sup>22</sup> vary considerably both across and within regions. Africa shows considerable volatility, with double-digit changes both downwards (2020Q3) and upwards (2021Q1). Europe shows one major, double-digit increase in fund sizes (2021Q2), with this being particularly high (26%), and a significant downward adjustment in 2020Q4 only (-5%). Asia and the Americas exhibit lower degrees of volatility and do not exhibit double-digit changes.

Over all regions, we find a significant increase in median relative fund sizes at the first quarter of the pandemic. Decreases and increases in the following quarters level out. Thus, the early-pandemic 2020Q2 increase drives the cumulated median fund size increase of 10% between 2020Q2 and 2021Q2. Within this time frame, Europe (26%) and Asia (13%) demonstrate high accumulative fund size increases, whereas the Americas show a 9% decrease and Africa's high quarterly volatility levels out leading to minor changes only. Looking at average (and not median) growth rates numbers, does not substantially change this picture. The overall trend line is confirmed with a cumulated average fund size growth of 5%. Unweighted average growth remained positive throughout the pandemic.<sup>23</sup>

<sup>21</sup> Further details of formal statistical testing are available in the Appendix.

<sup>22</sup> The figures and chart present median fund size with equal weight given to each survey participant for each given region.

<sup>23</sup> The most important discrepancies between median and average observations are in Asia (outliers causing higher average growth in 2020Q2) and Europe (higher average growth in 2020Q3 and lower average growth in 2021Q2). The Appendix entails details on the case of unweighted average quarterly growth data.

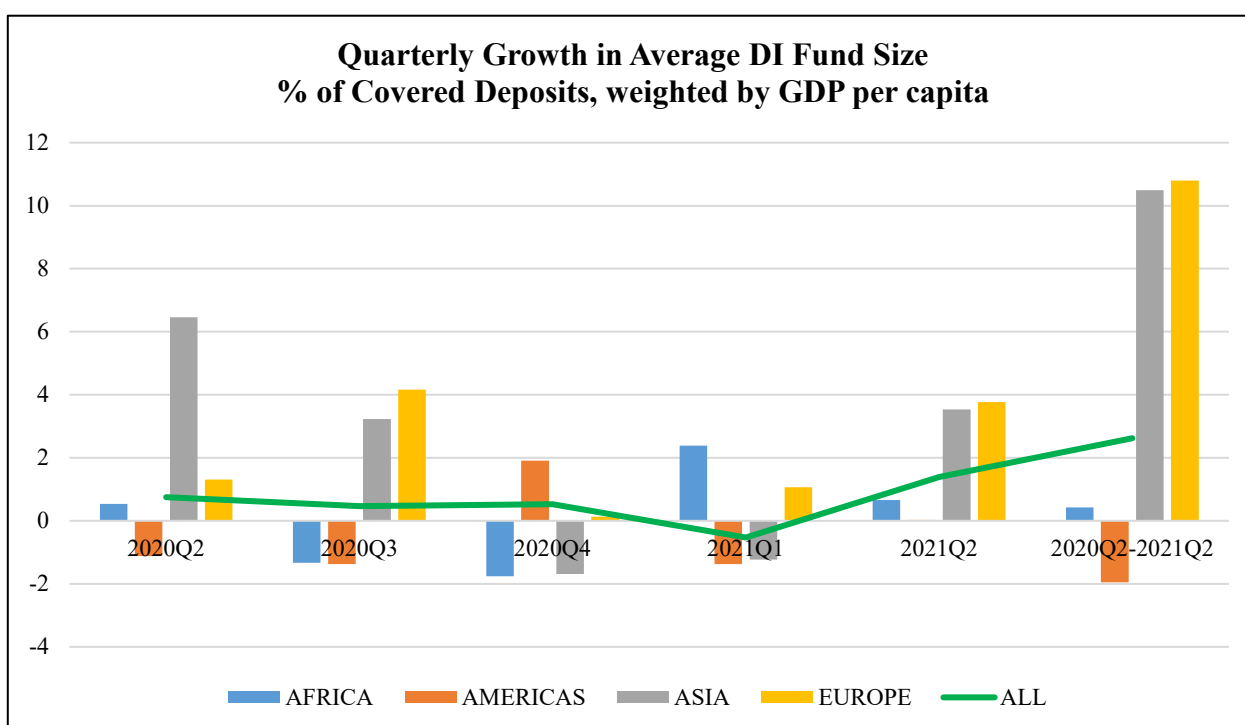


However, a number of caveats are to be mentioned. First, as sample sizes in this aggregation are relatively small, measures are more volatile than many other metrics presented in this paper. Second, we lack historical data to put quarterly growth in relative fund sizes into perspective. Third, differences in the frequency of premium collection across jurisdictions – including within regions – make us very cautious in drawing conclusions.

An alternative approach is to weight each jurisdiction by some measure of size to form a proxy for their relative influence on global financial flows. GDP per capita<sup>24</sup> was chosen as an appropriate weight in this instance. Once applied, weighted averages were constructed<sup>25</sup> which indicate whether notable changes in fund size were occurring, with a particular focus on changes presenting in more advanced economies, given the weight applied.

Overall, change was considerably softer after incorporating the aforementioned weights and shifting from a median to average view. Previous observations in Africa, the Americas and Europe are by and large affirmed, be it on much lower absolute levels. The dynamics of changes in Asian relative fund sizes is also reaffirmed, although the size of changes is not reduced accordingly.

Whereas the same caveats as mentioned previously apply, at the global level (and weighted), average relative DI fund sizes expanded throughout the pandemic period, interrupted by a small decrease during 2021Q1 only. Driven by a strong increase of fund sizes in 2021Q2, over the 12-month period 2020Q2-2021Q2, we find an accumulated fund size increase of 2.6%. Europe and Asia witness high growth of about 10%, whereas the Americas see fund size decrease by 2%.



The reductions in regional growth compared to the previously appraised unweighted statistics suggest that DI fund sizes in advanced economies have grown proportionately slower than emerging economies. Whether this can be attributed to a larger and more sudden inflow in covered deposits in the economies, remains to be investigated.

In order to explore the causal relationship between changes in covered deposits and subsequent impacts on fund size, survey respondents are split into two categories based on whether quarterly growth in covered deposits exceeded 5%<sup>26</sup> at least once (throughout the survey period). Eleven respondents have experienced at least one quarter of growth in covered deposits exceeding 5% – Colombia; Ecuador; Jamaica; Kenya; Mongolia; Norway; Russian Federation; Spain;

<sup>24</sup> Specifically, the chosen measure of size was GDP per capita, expressed in constant prices and 2015 USD, based on the midyear population. These figures were sourced from the World Bank: <https://data.worldbank.org/indicator/NY.GDP.PCAP.KD>. It's also important to flag that GDP per capita adjusts for population size, and hence represents a concept closer to "average wealth per citizen" rather than total combined wealth of a jurisdiction.

<sup>25</sup> Note that the total will not equate to the sum of regional components due to the application of differential (and non-standardised) weights.

<sup>26</sup> This figure is to some extent arbitrary but does mark a well above average growth in covered deposits in all jurisdictions.

United States; Vietnam; Zimbabwe. Growth in relative DI fund size, weighted by GDP per capita, is then calculated for each growth quarter.

Results suggest that in four of the five quarters (where data is available), those jurisdictions with larger growth in covered deposits tend to exhibit lower growth in DI fund size. This offers some evidence to suggest that changes in the DI fund size observed throughout the COVID-19 can, at least in part, be attributed to increases in stock of covered deposits.

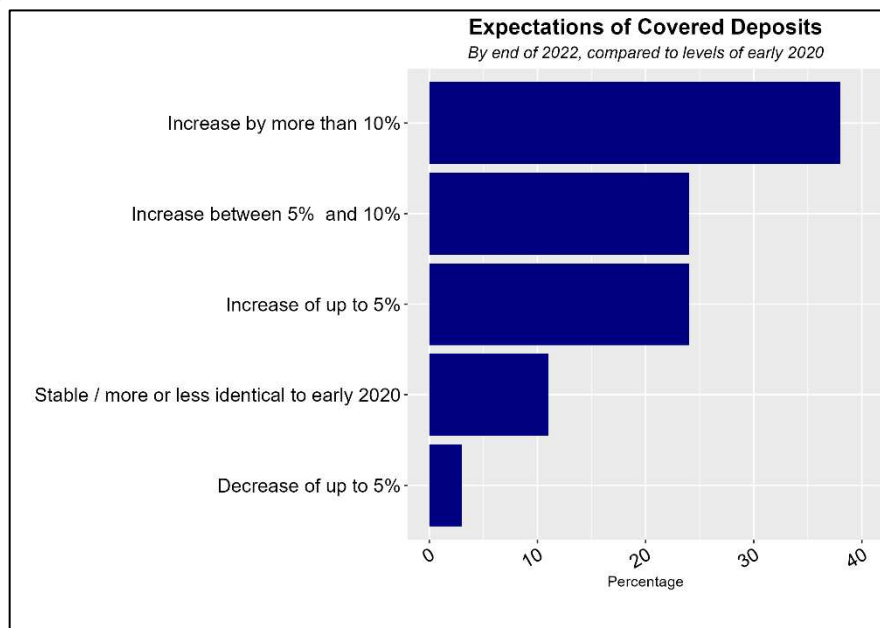
TABLE ONE: Weighted Average Fund Size Growth					
Covered deposits growth	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2
Yes (>5%)	0.6	-2.8	1.6	-2.5	0.8
No (<5%)	0.8	1.6	0.2	0.1	1.6
ALL	0.7	0.4	0.5	-0.5	1.4

In general, interpretation of quarterly data on relative DI fund sizes and their growth should be conducted with care. One issue complicating the analysis refers to the time lag between higher deposit inflows and higher subsequent deposit insurance premiums. This time lag is explained by the frequency with which deposit insurers collect premiums. Data from the 2021 IADI Annual Survey indicates that 10%, 35%, 15% and 40% of deposit insurers collect premiums from member institutions monthly, quarterly, semi-annually and annually respectively. This imposes serious limitations on connections to be drawn between the pandemic and relative DI fund sizes. The survey conducted only asks for quarterly figures (as up to 90% of DI do not have monthly figures available), and in many instances (approximately 55% of survey participants), any changes that might be attributable to the pandemic will not be visible in quarterly numbers.

## 5 Outlook

### 5.1 Expectations of covered deposits

Many survey respondents were willing to offer some insight as to their expectations of covered deposits moving forward. Nearly 40% of deposit insurers expected increases of more than 10% by the end of 2022 (compared to stock levels of early 2020). Conversely, less than 15% of respondents felt no change (or negative growth) would manifest over the same period. There are of course a multitude of reasons that may underpin such an assessment including perceived business cycle considerations, the expected duration of (domestic) fiscal response, and degree to which accommodating conditions may drive banking sector profitability (e.g. monetary policy, trade policy).



When deposit insurer expectations are compared against historical growth in covered deposits within their jurisdictions, there is mixed alignment. 40% of survey respondents expect covered deposits to grow at approximately the rate same as in the last five years.<sup>27</sup> Of the 60% expecting an adjustment in growth into 2022, roughly half expected growth to exceed average historical levels, and the remainder, the converse. Such views have implications on the DI fund size, as they will need to grow at similar rates to ensure target ratios are maintained at the current level.

<sup>27</sup> When compared with covered deposits data from the IADI Annual Survey.

## 5.2 Deliberations regarding adaptations in DI fund size

As previously highlighted<sup>28</sup>, the pandemic has disrupted deposit-taking (notably the level of covered deposits) in a substantial manner. Policymakers have been faced with the prospect of exploring changes in DI fund size requirements as a potentially rational response. Only three survey respondents (7%) indicated that changes in deposit stocks have led to deliberations regarding fund size adaptation<sup>29</sup> – Fondo de Garantías de Instituciones Financieras (Colombia); Philippine Deposit Insurance Corporation (Philippines); and the Federal Deposit Insurance Corporation (United States).

Many jurisdictions observed increases in the absolute size of their fund throughout various stages of the pandemic. Most remain committed to their existing fund size targets, but continue to monitor essential fund ratios and the economic situation more broadly to enable a proportionate response, if deemed appropriate.

### Federal Deposit Insurance Corporation survey response:

During the COVID-19 pandemic, the FDIC Deposit Insurance Fund (DIF) balance continued to grow at a steady pace, and as of June 30, 2021 stood at a record \$120.5 billion. However, due to a confluence of factors related to the COVID-19 pandemic and governments' response to it, the banking industry has experienced an unprecedented surge in covered deposits. Solely as a result of this dramatic increase in covered deposits, the reserve ratio decreased from 1.41 percent in fourth quarter 2019 to a low of 1.25 at the end of first quarter 2021, and current stands at 1.27 percent as of the end of the second quarter 2021.

The Federal Deposit Insurance Act requires the FDIC to establish a restoration plan any time the reserve ratio falls below 1.35 percent. The restoration plan must provide that the DIF will meet or exceed 1.35 percent within eight years. Details of the restoration plan can be found here: <https://www.fdic.gov/news/board-matters/2020/2020-09-15-notice-dis-a-fr.pdf>

## 5.3 Risks concerning sudden outflows in deposits

Survey respondents indicated overwhelmingly that, given current deposit volumes, they did not envisage a substantial increase in risks related to a sudden outflow of deposits.<sup>30</sup> Detailed responses reflected a general view of certainty over the capacity of deposit insurers to deliver on their respective mandates, even in the context of (hypothetically) significant changes in the deposit stock i.e. availability of suitable liquidity in the event of a reimbursement exercise or prospective contribution to resolution activities.

## 6 Concluding remarks

Starting from the finding of overall elevated growth in deposits during the pandemic, this Survey Brief investigates annual and – for the first time – quarterly changes in deposit insurer fund sizes. Overall, from mid-2020 to mid-2021, relative fund sizes have increased. We find some evidence both in annual and quarterly data that high deposit inflows correlate with lower growth in deposit fund sizes.

Future work may focus on further explaining the underlying drivers of changes described in this paper. Of particular interest are regional trends. These are challenging to explain given that supranational dynamics need to be reconciled against jurisdiction-specific considerations. Suitably investigating the latter would require additional consultation.

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<sup>28</sup> Van Roosebeke & Defina (2022b)

<sup>29</sup> Precise survey question wording:

*In your organisation, have changes to deposit stocks during the COVID-pandemic led to deliberations regarding adaptations in fund size? In the comment box, kindly provide us with information on details in legislation, statutes and the like regarding a regular periodical review of the fund size.*

<sup>30</sup> Precise survey question wording:

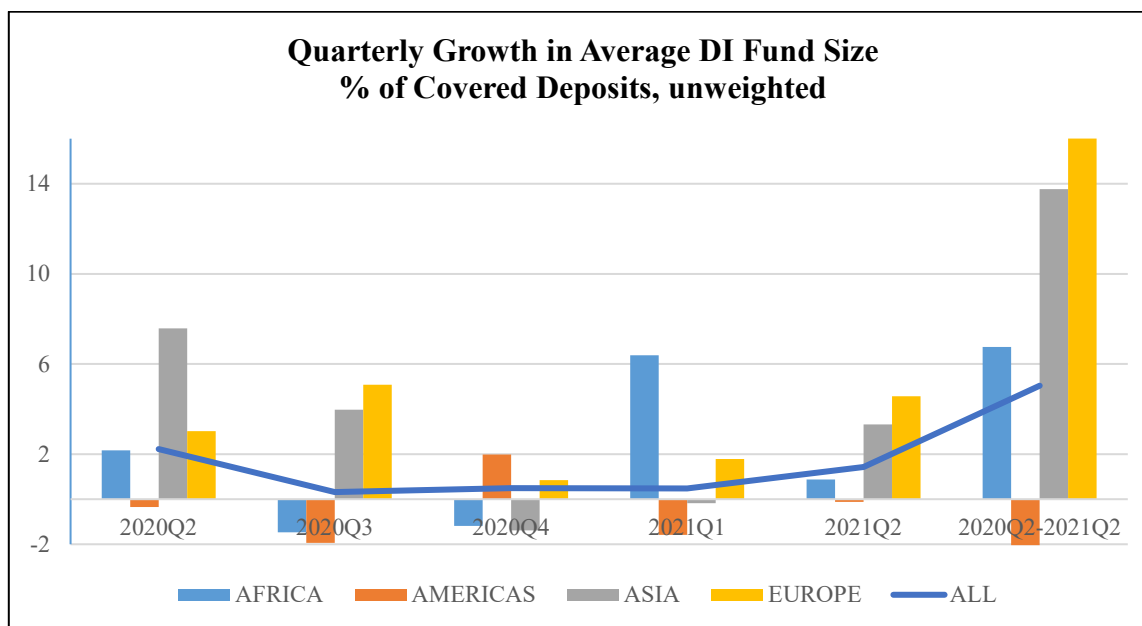
*Given current deposit volumes, does your organisation see a substantial increase in risks related to a sudden outflow of deposits?*

## 7 References

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## 8 Appendix

### Average unweighted quarterly growth in fund sizes



### Association between covered deposits and fund size

Sufficient data is available for sixty deposit insurers throughout the period of 2017-2021 concerning covered deposits and relative fund size (expressed as a share of covered deposits). A Chi Squared Test of Association can then determine whether a statistically significant correlation exists between the two variables of interest. Firstly, a null and alternative hypothesis is established.

$H_0$ : Covered deposits and fund size are not associated (independent)

$H_A$ : Covered deposits and fund size are associated (correlated)

Two metrics are used to construct the relevant table of counts:

- *Covered deposits metric*: Difference between average growth in 2020-21 and 2017-19 in covered deposits
- *Fund size metric*: Difference between average growth in 2020-21 and 2017-19 in relative fund size

Observed		Fund size metric		Total
		> 0%	< 0%	
Covered deposits metric	>5%	1	17	18
	<5%	23	19	42
Total		24	36	60

Expected counts under the null hypothesis that be calculated using marginal and total cell counts.

Expected		Fund size metric		Total
		>0%	<0%	
Covered deposits metric	>5%	7.2	10.8	18
	<5%	16.8	25.2	42
Total		24	36	60

The test statistic is then the sum of relative squared differences between observed and expected cell counts.

$$\chi^2_{test} = \sum \frac{(O_i - E_i)^2}{E_i} = \frac{(1 - 7.2)^2}{7.2} + \frac{(17 - 10.8)^2}{10.8} + \frac{(23 - 16.8)^2}{16.8} + \frac{(19 - 25.2)^2}{25.2} = 12.7$$

Under the null hypothesis, this test statistic is distributed as a Chi Squared with one degree of freedom. This is clearly significant.

It can therefore be concluded that there is sufficient evidence to reject the null hypothesis, and that these variables are not independent i.e. that the covered deposits metric and fund size metric are correlated.