

# MiFIR 2021 Corporate Bond Trade Data Analysis and Risk Offset Impact Quantification

April 2022



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**April 2022**

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## Executive summary

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1. Finbourne compiled actual corporate bond post-trade data from major APAs, MTFs and OTFs from 1 March 2021-31 December 2021. This represents over €1tn of volume, more than 1.2 mm trades and over 5,500 different bonds/ISINs.
2. The main goal of this analysis is to provide data on the length of time expected to take for the average trade size in each bucket, to be unwound from a risk perspective (i.e. to be “traded out”).
3. This metric can then be used to demonstrate where increased transparency would impact market liquidity for average trade size in each bucket.
4. The data shows that for small trades (those less than €500,000), the average trade can be “traded out” in a few hours, which would support near-real time transparency (i.e. within 15 minutes). These represent 67% of trades.
5. For trades larger than €1m, which represents the majority of the volume, it takes on average six business days to ‘trade out’, with trades over 5mm taking on average 19 business days to trade out, and 72 business days for trades over €20mm. These figures vary when adjusted for different issue sizes, as well as credit quality.
6. For these reasons, AFME opposes the proposed hardwiring of the price and volume deferral calibration into Level One legislation, where the MiFIR Review proposal currently limits price deferral to a maximum of end of day, and volume deferral to a maximum of 2 weeks.
7. AFME urges policy makers and the co-legislators to allow for a defined number of price and volume deferral periods, ranging from 15 minutes to end of the day, 1, 2 and 4 weeks, 3 months and indefinite.
8. As supported by the Finbourne data, the trade out periods for a significant number of transactions extend beyond the maximum deferrals proposed in the MiFIR review by the EU Commission for price and volume.
9. ESMA should therefore be mandated to calibrate which asset classes and transaction sizes should be placed into the different deferral categories, from both a price and volume standpoint. ESMA should conduct this detailed quantitative analysis using accurate and complete trade by trade data, for which the projected Consolidated Tape should be an important source. ESMA currently does not have this data.
10. Categories and thresholds should be flexible and able to progress over time towards increased or decreased transparency, where the evidence supports this.
11. The current MiFIR liquidity regime should remain in place until this detailed quantitative analysis is undertaken as part of Level Two legislation. Also, it is suggested that ESMA conduct analysis on whether the price and volume deferrals should be aligned or subject to different deferral periods.
12. In summary, a well-calibrated deferral regime would help grow the EU fixed income market by introducing near real-time public dissemination for a significant number of trades progressively and carefully by measuring the impact on market liquidity, and calibrating deferrals carefully for large transactions and illiquid bonds.

**“A well-calibrated deferral regime would help grow the EU fixed income market by introducing near real-time public dissemination for certain trades progressively and carefully”**



## Introduction

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AFME is supportive of an expanded yet accurately calibrated MiFIR post-trade transparency regime. To assist the policy discussion on the calibration of such a regime, AFME has been working with Finbourne to provide data to support decision making. Using actual 2021 European fixed income trade data from c 5,500 of the most frequently traded ISINs compiled by Finbourne with support from AFME members, this report provides a number of key pieces of new data and some important conclusions. A summary of the data set is in Table One. In particular, this report demonstrates that a significant majority of trades, for those less than €500,000, can be made near real-time transparent but also that a material portion of trades will require deferral periods significantly longer than those proposed by the Commission.

The rationale for these conclusions is based on reviewing data for both small and large trade sizes, and other factors. The smaller the trade size and the more liquid the instrument, the less risk is associated with market liquidity. As such small trades in liquid bonds do not hamper liquidity provision and can be made near real-time transparent within 15 minutes, or also EOD, for both price and volume. However the larger a trade, or the more illiquid a bond, the greater the need for price and volume deferrals. Sufficient deferral lengths are needed to allow enough time to trade out of, or hedge a position in either a large trade or trade in an illiquid bond which will in turn protect liquidity provision.

Therefore, detailed analysis is required based on complete and accurate data to determine the required extent of each type of deferral to preserve liquidity provision. The methodology used to develop the conclusions in this report is simple. Finbourne divides the average size of all trades above a given threshold by the average daily volume (ADV) traded in that ISIN to arrive at the number of days that would be required on average by a liquidity provider to trade out of a position (“trade out days”), assuming they have access to 100% of the average daily volume (ADV). **The industry also notes that it has not previously seen any official-sector-produced study which has provided the level of granularity contained in this report**, which demonstrates the potentially significant implications of inadequate deferral calibration. A detailed description of the data set is included in the Annex.

Below is a summary of the data utilised, as well as detailed tables and charts. This data highlights the majority of transactions which will likely require little or no deferral, as well as the material portion of trades which will require carefully calibrated deferrals.

Key findings include:

1. In terms of design, the deferral regime should have a conceptual link between trade size categories and deferral periods i.e. for a regime with a higher trade size category, the deferral period should be longer. In terms of ESMA calibration, for this stage in the analysis AFME identifies for each category (e.g. IG vs HY, issue size greater than or less than €1bn) of instruments, coupled with each trade size category, the appropriate deferral period is the indicated number of **business** days in Table Two below. ESMA can evaluate whether price and volume deferrals for each category should be different lengths after further detailed analysis.
  - a. The analysis demonstrates that **a small trade bucket would give a high degree of transparency to a very large percentage of transactions**. For example, Table Three below indicates that 67% of the overall number of trades are in the “small trades” (below 500K) category, where price and volume can support being reported in near real time (i.e. within 15 minutes). This increases transparency by almost 8.5 fold compared to the current 8% of transactions being reported within 15 minutes. However, this 67% of trades reflects 13% of market volume. The smaller the trade size and the more liquid the instrument, the less risk is associated with dissemination of price and volume information for liquidity providers, as is demonstrated by the “trade out” analysis below being less than one day for liquidity providers for trades less than €500,000.
  - b. We believe that this is the right construct for a transparency regime since the number of data points of traded prices is what helps investors with price formation.



## Introduction

2. **Bonds with issue sizes larger than €1bn trade approximately twice as often/are twice as liquid** as those bonds with issuance size smaller than €1 bn. From Table One bonds with issue size larger than €1bn represent ~12% of ISINs but 23% of volume, i. e. these bonds have twice as much volume as compared to their number of ISINs.
3. **Liquidity is concentrated in a relatively small number of ISINs**, as evidenced by the **median ADV being significantly lower than the mean**, with **liquidity varying significantly from ISIN to ISIN**. Due to the skewed nature of this distribution, the median is more representative than the mean so in the tables below we use median ADV rather than mean ADV.
  - a. **Large size transactions reflect a relatively small percentage of the total number of transactions (Table Three shows that trades over €500K represent 33% of total trades)**. The data set demonstrates that the **larger the transaction, the longer it takes to 'trade out'** and clear the market. For the corporate bond data-set as a whole, for trades larger than €1m, it takes on average six business days to 'trade out' of positions, and trades over €5m take, on average 19 days to trade out, and much longer for even larger trade sizes.
  - b. Whereas for trades larger than €1m in bonds with issue sizes over €1bn, it only takes 3 business days on average to trade out.
4. In summary, a **well-calibrated deferral regime** would help grow the EU fixed income market by introducing near real-time public dissemination for certain trades **progressively and carefully** by measuring the impact on market liquidity and bid-offer spreads. This means by monitoring the general market liquidity and bid-offer spreads as the sum of the liquidity provided by (i) the current liquidity providers, by (ii) the increased participation of current investors and by (iii) the additional participation of new investors, at wholesale and potentially retail. **Investors who will benefit most from increased transparency are smaller**, less sophisticated investors whose trading activity will be concentrated in smaller sized trades. At the same time, **longer deferrals for the small number of large transactions should limit the risk of liquidity reduction in the market for institutional investors**. For this reason, AFME recommends a **radical incrementalism** for the deferrals regime.



## AFME analysis - corporate bond scope

In order to assess the impact of deferrals, AFME wanted to look in more detail at the **more liquid** or **active corporate** (rather than government) bond landscape to try to identify, using actual 1 March 2021-31 December 2021 MiFID transparency post-trade data, which types of trades should be subject to near real-time (i.e. within 15 minutes) or EOD price and volume transparency, and which types of trades should be subject to longer deferrals, since real-time transparency would likely impair market liquidity (i.e. cause “undue risk”). To that end, AFME asked Finbourne to compile actual European fixed income post-trade transparency data from their data base, which includes many but not all European market transactions compiled from APAs, MTFs and OTFs from 1 March 2021-31 December 2021 inclusive. This Finbourne database, which includes c 80,000 fixed income ISINs of all types, was then further filtered to a set of c 5,500 of the most traded corporate bonds (the “filter data set” or “corporate bond reference list”) which, in the view of AFME bond trader members, trade at least occasionally in Europe. This is the scope of this research report. A detailed description of the Finbourne data set is in the Appendix. Please note that the data set excludes transactions with most central banks since these are exempt from post-trade transparency obligations. Many central bank transactions tend to be very large, so the Finbourne as well as filtered data sets will tend to under report actual large trade activity.

Data presented in Table 1 below is data for the entire filtered bond data set of c5,500 ISINs. All figures are presented in EURO (€).

Table 1: **Overview of AFME Quantitative Data Set – Number of Trades, Volume and ISINs**

Description	# Transactions	% Total	Total Volume (€bn)	% Total	# ISINs	% Total
Corporate bond data set	1,230,723	100%	1,050	100%	5,534	100%
of which Investment Grade ('IG')	923,969	<b>75.1%</b>	828	<b>78.8%</b>	4,288	<b>77.5%</b>
of which High Yield ('HY')	306,754	<b>24.9%</b>	222	<b>21.2%</b>	1,246	<b>22.5%</b>
Bond outstanding Issuance <b>over</b> €1bn	235,604	<b>19.1%</b>	232	<b>23.4%</b>	648	<b>11.7%</b>
of which Investment Grade ('IG')	192,520	<b>15.6%</b>	202	<b>20.5%</b>	570	<b>10.3%</b>
of which High Yield ('HY')	43,084	<b>3.5%</b>	30	<b>2.9%</b>	78	<b>1.4%</b>
<i>Bonds outstanding Issuance <b>under</b> €1bn</i>	995,119	<b>80.8%</b>	818	<b>76.6%</b>	4,886	<b>88.3%</b>
of which Investment Grade ('IG')	731,449	<b>59.4%</b>	626	<b>58.3%</b>	3,718	<b>67.2%</b>
of which High Yield ('HY')	263,670	<b>21.4%</b>	192	<b>18.3%</b>	1,168	21.1%

The above analysis looks both at bonds with amounts outstanding (i.e. “issue size”) over and under €1bn. The results show that bonds with issue sizes greater than €1bn trade approximately **twice as often/are more liquid** than those bonds smaller than €1 bn i.e. **11.7%** of ISINs but **23.4%** of volume.





## Findings

## Findings

AFME asked Finbourne to analyse the Average Daily Volume ('ADV') of each ISIN - this data highlights the significant variation in ADV by ISIN and is also an important component of the calculation of how long it would take a liquidity provider for trades in each ISIN to 'trade out' of risk positions in a normal market (**based on *business, not calendar days***).

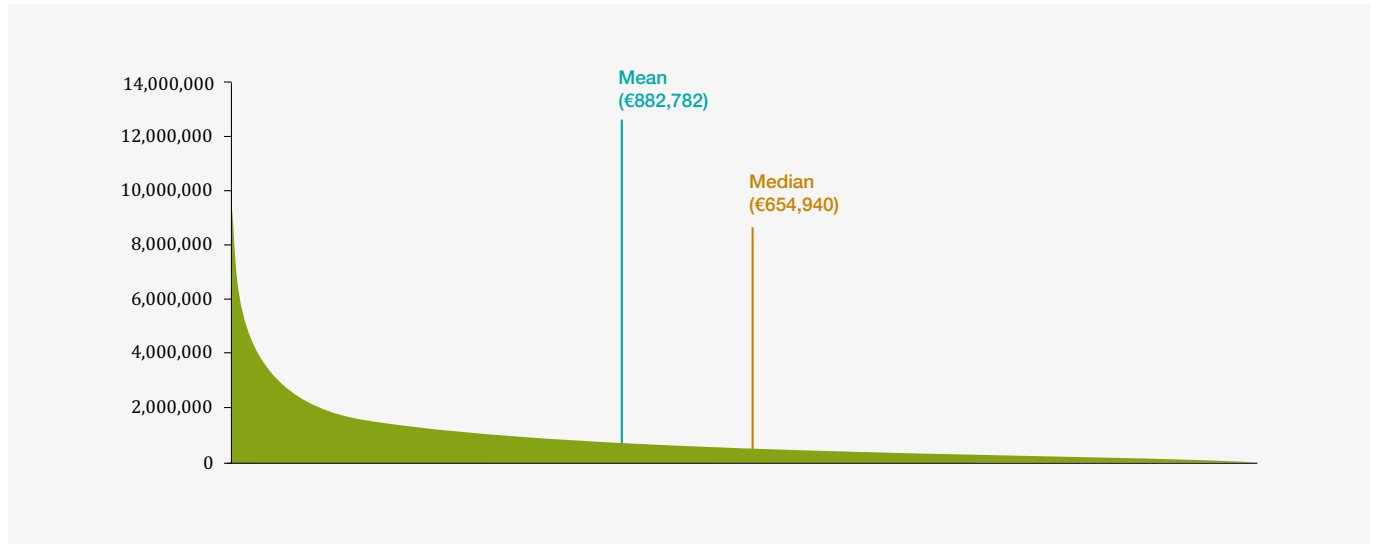


Figure 1: **ADV (€) per ISIN for the AFME data set (mean and median)**

- The graph shows that liquidity is concentrated in a relatively small number of ISINs.
- This concentration is evidenced by the median being significantly lower than the mean.
- Liquidity as indicated by ADV varies significantly from ISIN to ISIN.
- Due to the skewed nature of this distribution, the median is more representative than the mean so the tables below refer to median ADV rather than mean ADV.

For this exercise, for each ISIN, Finbourne divided the largest trade size for each ISIN by the ADV for the relevant (1 March 2021 to 31 December 2021) timeframe to calculate the length of time required in business days to 'trade out' of the risk position.

There are clear findings which should be considered when adjusting the deferrals regime:

- The larger the trade size, the longer it takes to 'trade out' and clear the market,
- Large size transactions reflect a relatively small percentage of the total number of transactions, and
- Small size transactions can therefore be made transparent much more rapidly.





Table 2: Effect of Various Thresholds on Bond 'Trade Out' Time (business days)

Description	ADV (€) per ISIN (median)	Average of trades over					
		€1m		€5m		€20m	
		Average trade size (€)	# days	Average trade size (€)	# days	Average trade size (€)	# days
Corporate bond data set	654,940	4.2m	6	12.4m	19	47.3m	72
<i>of which IG</i>	657,268	4.5m	7	12.6m	19	46.8m	71
<i>of which HY</i>	654,201	3.3m	5	11.5m	18	50.9m	78
Over €1bn	1,481,865	4.6m	3	12.0m	8	38.3m	26
Under €1bn	600,015	4.1m	7	12.6m	21	50.7m	84

The above chart highlights many key points:

- For the entire data set, trades larger than €1m take on average six business days to 'trade out' of positions
- For the corporate bond data-set as a whole, trades over €5m take, on average 19 business days/c 4 weeks to trade out, and much longer for even larger trades
- Whereas for those bonds with issue sizes over €1bn, for trades larger than 1m, it only takes 3 business days on average to trade out.
- The deferral regime should have a conceptual link between trade size categories and deferral periods i.e. for a regime with a higher trade size dissemination, the deferral period should be longer
- In summary, for each category of instrument, coupled with each trade size category, the appropriate deferral period for price and size is the indicated number of business days.



## Findings

Table 3: Transaction Volume by Trade Size Category

Description	Average trade size (€)	'trade out' days (median)	# transactions	% total transactions	Volume (€bn)	% total volume
<i>all trades &lt;500K</i>	163,119	<b>0.2</b>	827,207	<b>67.2%</b>	134.9	<b>12.8%</b>
all trades <1m	243,740	<b>0.4</b>	996,878	<b>81.0%</b>	243.0	<b>23.1%</b>

From the table above we can make the following observations

- 67% of all transactions (as compared to currently having near real time transparency of only 8%) have trade sizes less than €500K, representing 13% of volume.
- The trade out times of 0.2 and 0.4 of a day represent c 2 hours and 4 hours.
- These trade-out time are significantly longer than the 15 minutes proposed for small sized trades public dissemination
- The later in the day a trade is executed the less time there is to offset before EOD dissemination
- The difference in trade-out time between trades less than €1M (0.4 of a day) and those trades less than €500K (0.2 of a day) is material, with the larger trade size category requiring a 50% longer trade-out time than the smaller trade size category.

The potential risk and impact of near real-time transparency is a reduction of liquidity offering and an increase of bid-offer spreads.

These transactions represent a much smaller percentage of market volume than of the number of trades. This is the right construct for a transparency regime since it is the number of data points of traded prices which helps investors with price formation. As a result, the investors who will benefit most from increased transparency are smaller, less sophisticated investors whose trading activity will be concentrated in smaller sized trades. At the same time, longer deferrals for the small number of large transactions should limit the risk of liquidity reduction in the market for institutional investors

**AFME and Finbourne are currently working to extend this data analysis to provide further insight and a follow up report is planned.**



## Appendix - Finbourne aggregate transaction data

### Overview of the aggregate public data set

In early 2021, Finbourne commenced analysis, using publicly available, post-trade transaction data from a number of trading venues and APAs ("Data Groups"). Finbourne's analysis comprises MiFID transparency records covering all asset classes (equities, ETFs, bonds and derivatives) **but** with a particular emphasis on the **largest fixed income** trading venues and APAs.

Below is a description of the overall aggregate data set that was used as the initial basis for AFME's more detailed analysis. Notably, the time period for this Finbourne data is 1 March – 31 December 2021., These **64 million** transactions records form part of the preliminary workings that Finbourne is conducting in order to prepare for the creation of a **post-trade CT**. The data is publicly available and is provided in a variety of formats, on a delayed basis<sup>1</sup>. Finbourne utilized the data on an "as-is" basis i.e. using the data as received from the various data providers.

### Transaction data source details

The data sources that Finbourne accessed were, as identified in the ESMA Annual Statistical Report 2020<sup>2</sup>, the largest venues for the equities, ETF, Bond and derivatives markets. Finbourne also included other sources, both to deliver a substantial and objective sample and for comparison purposes:

Type	Jurisdiction	Data Group #1	Data Group #2	Data Group #3	Data Group #4	Data Group #5	Data Group #6
<b>APA</b> (of 25)	EU	✓	✓	✓		✓	✓
	UK	✓	✓	✓			✓
<b>MTF</b> (of 24)	EU			✓			✓
	UK						✓
<b>OTF</b> (of 16)	EU			✓			✓
	UK			✓	✓		✓

For analysis purposes, Finbourne also linked the transaction records to the EU's **Financial Instruments Reference Data System** ('FIRDS') database, which covers the publication, collection and processing of additional issuer data, to support the MiFIR transparency regime.

<sup>1</sup> The data has been prepared by FINBOURNE Technology Limited ("FINBOURNE" or "Finbourne") at the request of AFME on an 'as is' basis. FINBOURNE does not make any representation or warranty (express or implied) as to the accuracy or completeness of the information provided and it shall have no liability in relation to the content or its use. The information, materials and opinions contained herein are not intended to constitute legal or other professional advice and should not be relied on, nor treated as a substitute for specific advice relevant to particular circumstances.

<sup>2</sup> EU Securities Market, ESMA Annual Statistical Report (18 November 2020) ESMA-50-165-1355



## Appendix - Finbourne aggregate transaction data

The high-level **overview** of the Finbourne analysis is as follows:

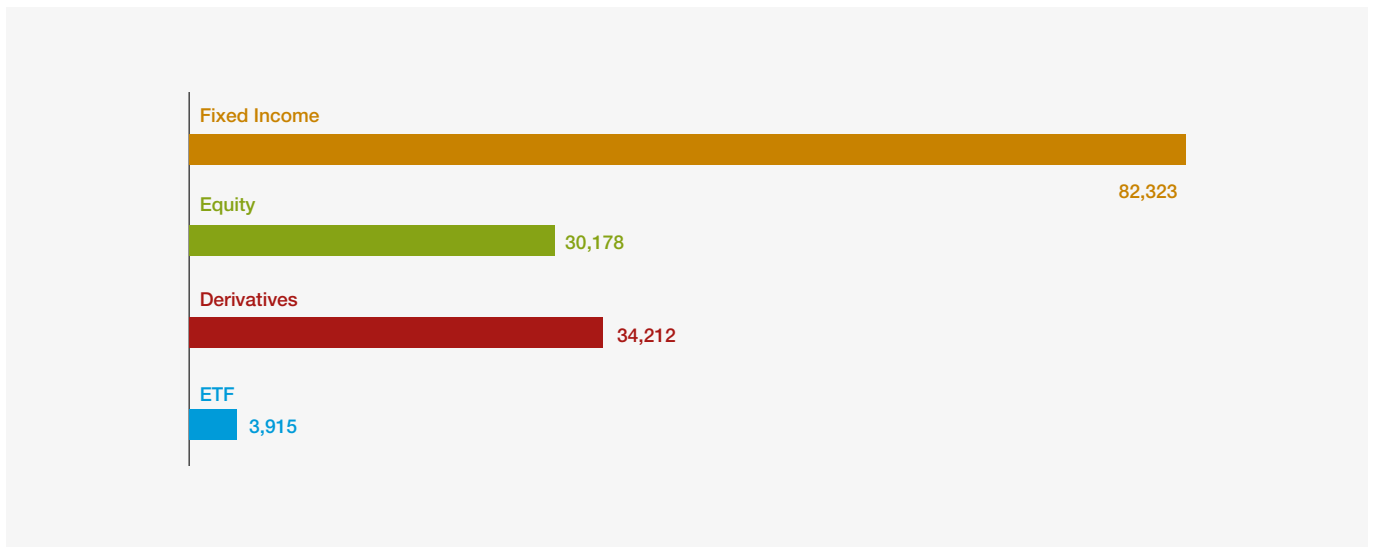


Figure 2: **ISINs by asset class**



## Fixed Income data set

Finbourne focused on **bond** transactions for the purpose of this analysis:

Table 4: **Overall context**

Description	# transactions	% total	# ISINs	% total
all <b>Fixed Income</b> transactions	5,110,525	-	82,323	-
all FI transactions <b>net of AMND, DUPL and CANC</b>	4,466,814	<b>87.4%</b>	81,191	<b>98.7%</b>
all FI transactions <b>net of flags</b>	1,601,927	<b>31.3%</b>	38,046	46.2%

Table 5: **Breakdown by sub-asset class**

Description	# transactions	% total	# ISINs	% total
Asset Backed Security	84,541	1.9%	2,031	2.5%
Bond	2,964,996	66.4%	28,445	<b>35.0%</b>
Bond with warrant	470	-	7	-
Convertible Bond	43,661	1.0%	668	0.8%
Depository Receipt	466	-	8	-
Medium Term Note	1,047,878	23.5%	13,858	17.1%
Miscellaneous	2,274	0.3%	369	0.5%
Money Market Instrument	9,796	0.1%	1,091	2.3%
Mortgage-Backed Security	13,200	0.2%	932	1.1%
Municipal Bond	25,264	0.6%	957	1.2%
Structured Product ( <i>with Capital Protection</i> )	49,446	1.1%	1,099	1.4%
Structured Product ( <i>without Capital Protection</i> )	224,822	5.0%	30,916	<b>38.1%</b>
<b>Total</b>	<b>4,466,818</b>		<b>81,191</b>	

Table 6: **'Liquidity' buckets using ESMA definitions (by total volume of transactions)**

stage	threshold number	# ISINs	# transactions	% total
Stage 1 ( <i>15 trades per day</i> )	3,225	102	1,007,329	22.6%
Stage 2 ( <i>10 trades per day</i> )	2,150	177	1,201,226	26.9%
Stage 3 ( <i>7 trades per day</i> )	1,505	296	1,415,053	31.7%
Stage 4 ( <i>2 trades per day</i> )	430	1,407	2,194,031	49.1%
average # trades per day	<b>55</b>			
at or above average		12,369	3,893,714	87.2%
below average		68,822	573,100	12.8%
<b>Total</b>			<b>4,466,844</b>	

- the majority of bonds (some **85% of ISINs**) trade below the average threshold for Stage 4
- less than **2%** of the ISINs (mainly **government** bonds) represent some **49%** of trading volume



## Contacts

## Contacts

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