FOLLOW UP ON EUROPEAN COLLATERAL SCARCITY

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BNP PARIBAS

The bank for a changing world

AGENDA

SUMMARY

- Following extremely tense first three quarters of 2022, most of the indicators showing collateral scarcity in Europe, notably for German debt, have strongly eased over Q4 2022 and Q1 2023
  - German Repo levels have retraced to quasi pre-crisis levels
  - Levels of German debt yield spreads vs swaps have strongly retraced but not yet completely normalised

- These improvements are the result of *joint* actions from:
  - German Finance Agency (GFA) to ease the repo market tensions
  - ECB normalising monetary policy. In particular, reducing excess liquidity and paving the way for QT
  - German government to increase fiscal spending therefore raising strongly expectations of higher supply of German debt

- Nevertheless, market could still be proven fragile, notably would the current anticipations of QT be challenged, as the level of floating of German debt remains very low

I - REMINDER OF LAST YEAR SITUATION

- General scarcity of collateral
  - Due to specific pandemic-related conditions like PEPP and TLTRO

- Opportunities for leveraged trades
  - Excess leverage in the system
  - Short basis (short bonds vs futures) – QE intermediation
  - Rich asset swap
  - Fast money short positioning into end of PEPP and APP

- Potential issues from Official Institutions (OI) / governments reserves management as rates go up

- Floating estimated to below 30% for Germany
- Squeezed repo
  - Level
  - Number of bonds highly special
  - Bond futures basis levels and volatility
- Squeezed asset swap (ASW) and dislocated asset swap curve on Off the runs
- Bund futures reduced liquidity and ASW volatility

➢ Increased cost of hedging for end users

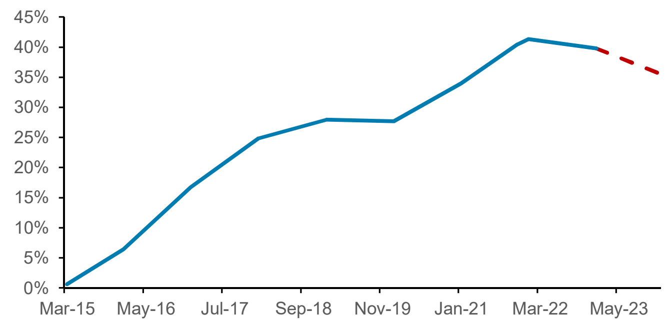
II – A COMBINATION OF MEASURES BY ALL ACTORS

- The situation required exceptional answers from all actors in order to
  - Increase the supply of German collateral in Repo
  - Stop the decrease of the floating of German and other core gov. bonds
  - Increase the future supply of German bonds

- All issues were addressed to a certain extent
  - German DMO and ECB increased the available collateral for bilateral repo with dealers
  - ECB addressed the 2 main factors behind bonds scarcity
    - QE and TLTRO
  - German government changed the dynamics of the German debt by engaging into Green and Defense related spending

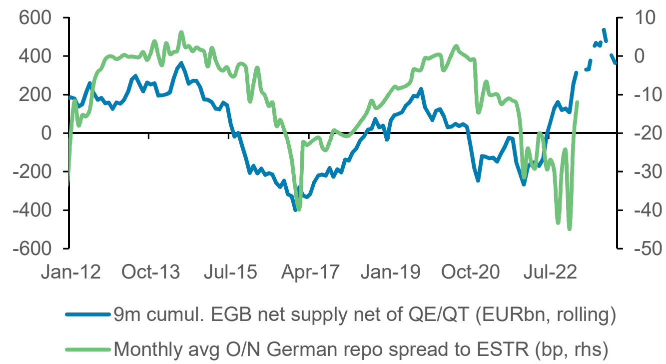
The Bund Free Floating issue

Eurosystem holds around 40% of public sector debt we estimate



Includes German agencies and regions. We assume QT starts in March at a EUR15bn/m pace and then from July onwards we expect an end to reinvestments. Estimate is indicative with the dashed red line showing our projection to end-2023. Sources: ECB, BNP Paribas

With the return of collateral, repo rates have started to cheapen



Sources: RepoFundsRates, National Treasuries, ECB, BNP Paribas

Record high net supply net of QT forecasted for this year, more than triple last year*

	Act.	Est.	Est.	Est.	Est.	Est.	Est.	Est.	Est.	Est.	Est.	Est.	
2023 Net supply net of QT	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**2023**
Austria	6	0	7	-2	7	3	-5	2	7	-5	3	0	**24**
Belgium	7	5	3	5	5	-6	4	2	5	-4	0	1	**27**
Finland	4	0	1	-3	4	1	0	3	-2	1	1	0	**10**
France	27	24	2	15	-8	27	16	7	22	-10	14	6	**142**
Germany	28	8	17	-5	8	10	25	17	12	16	25	-5	**156**
Greece	-1	0	0	2	1	0	2	0	0	1	0	0	**5**
Ireland	4	0	-5	0	1	0	0	0	1	0	0	0	**1**
Italy	16	33	1	20	-6	23	14	-17	16	1	7	-1	**106**
Netherlands	-6	7	6	3	5	6	-10	0	6	3	5	0	**25**
Portugal	3	2	2	5	2	1	0	0	2	-5	0	0	**13**
Spain	4	21	16	-6	13	21	-2	7	16	-2	6	5	**97**
Total 2023	91	100	49	34	32	85	43	22	84	-4	63	6	**607**
Total 2022	*46*	*28*	*14*	*-45*	*16*	*68*	*17*	*31*	*-14*	*5*	*36*	*-6*	*197*

We assume QT starts from March with the ECB reducing reinvestments by 50%, consistent with the EUR15bn/m pace announced by the ECB. We only consider EGBs. From July we assume a complete end to reinvestments. Sources: National Treasuries, ECB, BNP Paribas

German Finance Agency, Bundesbank – Mitigations

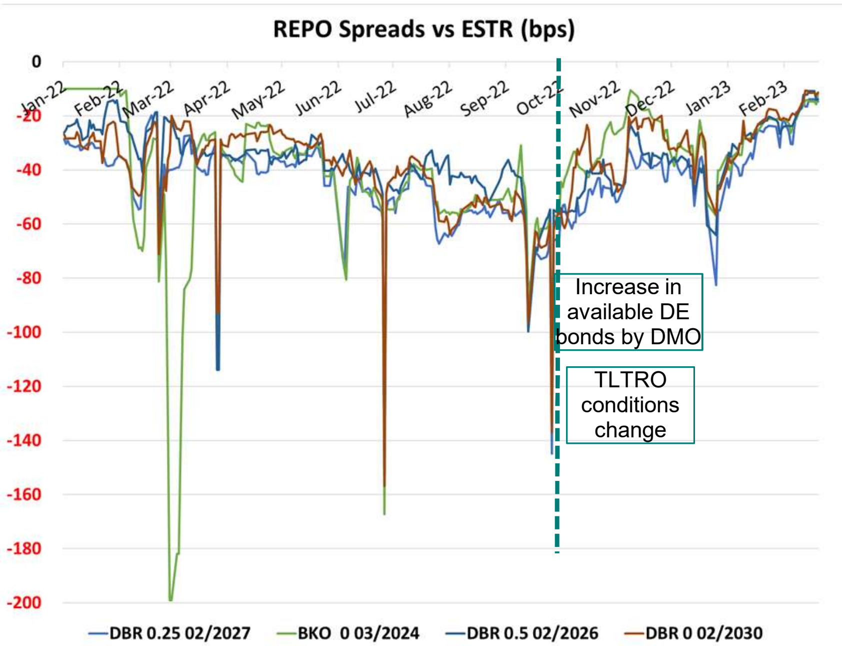
- Beginning of 2022 German finance agency announced it would address any potential collateral squeeze and support smooth functioning of repo markets
- Buba discussed increasing counterparty limits to alleviate the degree of specialness
- ECB actioned the following
  - ECB increasing amount borrowed vs cash from €75bn to €150bn
  - ECB (via Deutsche security lending) also increasing counterparty limits

- Feb 3rd 2022: Specific mitigation for Mar 24 Schatz, German finance agency to increase holdings of Mar 24 Schatz by €2.5 billion to €8.5 billion, with volume to be used exclusively for short-term repo and securities lending transactions
- Oct 19th 2022: 54 bn increase of Germany finance agency own holdings for repo: 3bn for 18bonds (Interdealer Brokertec 100bn per day)
  - This measure, published soon before TLTRO recalibration, strongly helped the market

ECB decisions / announcements since March 2022

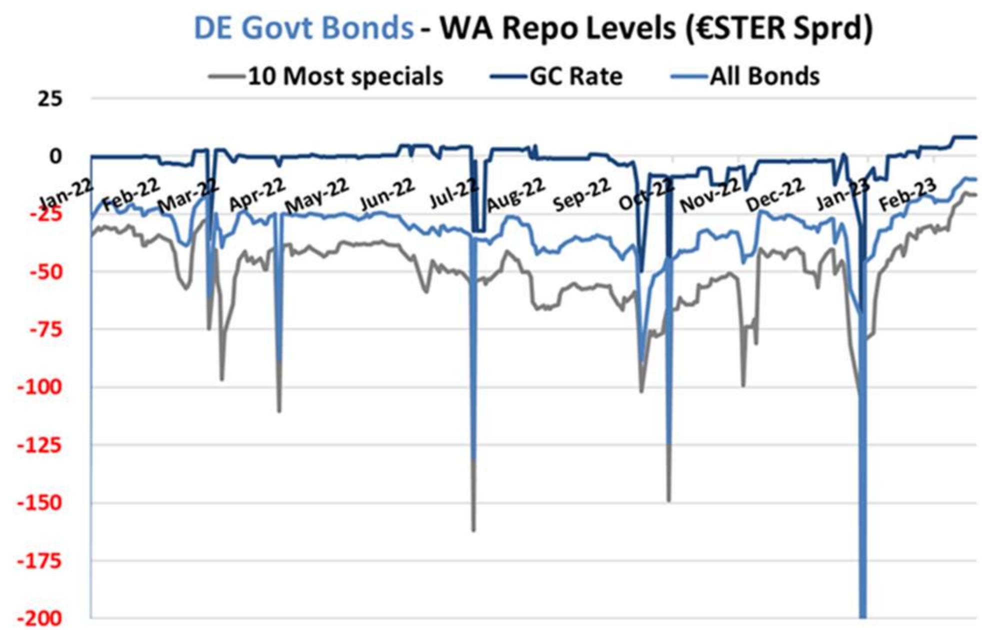
- March 10th 2022:
  - APP size to be reduced from 40bn in April to 20 Bn in June and then will be data dependant
  - PEPP to stop net asset buying from end of March
- March 24th 2022: timeline to gradual phase out of the temporary pandemic collateral easing measures
- June 15th 2022: APP net asset purchases to end starting July 1st 2022
- July 18th 2022: creation of the TPI (Transmission Protection Instrument)
- Sep 8th 2022
  - Ceiling for remuneration of government deposits to be Min (DFR, €STR). ECB temporarily removes 0% interest rate ceiling
  - P Lane mentioned an holistic approach for Non European OI deposits in his speech at MMCG (Sep 15th)
- Oct 27th 2022
  - TLTRO III recalibration: interest rate of TLTRO to be indexed ECB key rates from November 23rd 2022 removing the incentive to keep TLTRO for many banks, 3 repayment dates added for TLTRO repayment
  - Signal start of discussion on QT
- Dec 15th 2022: QT announced with APP re-investment to reduce from end of February 2023 by an average 15bn/mth until end of Q2 2023
  - Dec repayment of TLTRO
- Feb 7th 2023: European Government deposits ceiling at €STR -20bp from April 30th. Level of ESTER-20bp to evolve with QT?

III - AN IMPROVED SITUATION: German Specials



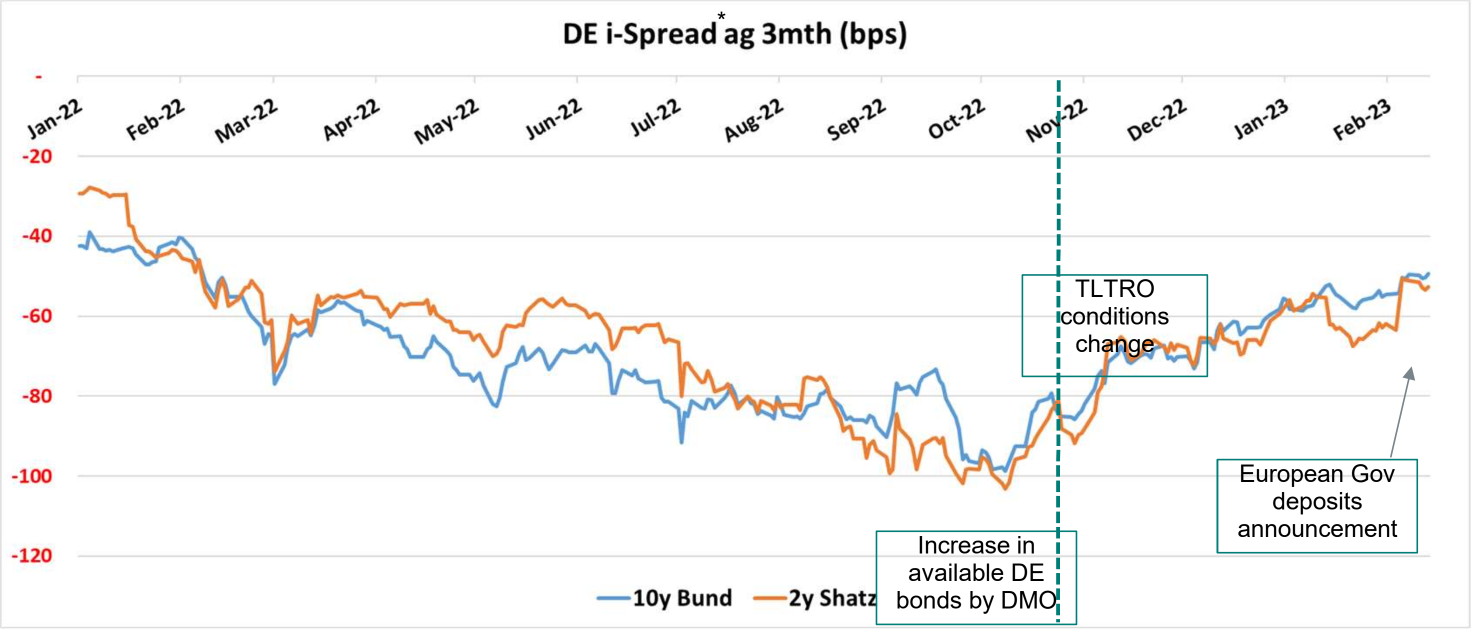
*BKO went to -500bp

Source: BNPP, Brokertec



- Improvement in Repo conditions after a peak stress at Sep quarter end
- German Finance agency decision anticipated (?) or validating the post end of Q3 levels
- Turn of the year repo level realised ~ -2%, much improved from <-5% expected level in October
- Back to “normal”/ pre-squeeze levels at end of January

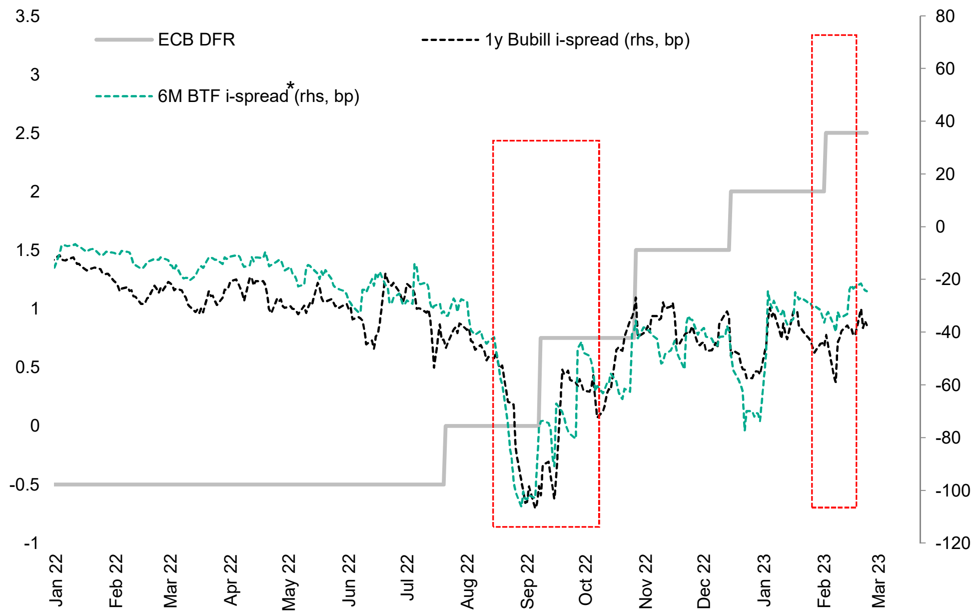
III - AN IMPROVED SITUATION: German spreads against swap



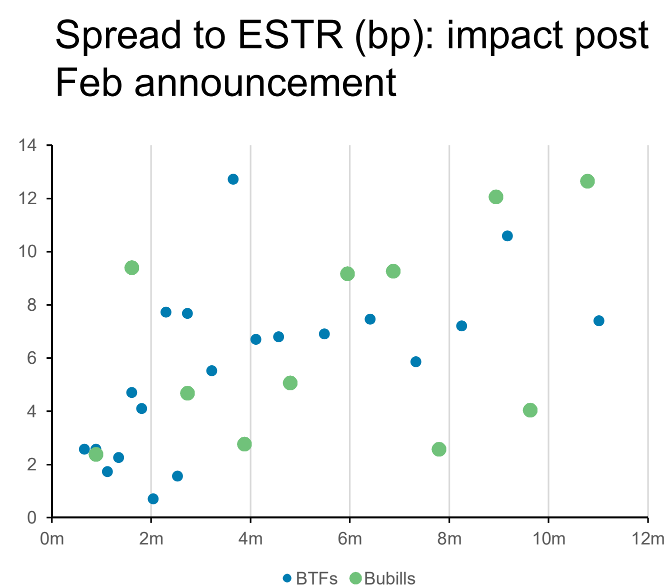
- ** yield-yield spread between the forward CTD bond and the matching maturity forward swap*

- Real improvement of both Repo and bonds pricing against swaps started after Sep. quarter end, slightly before TLTRO change and 54bn German DMO own holdings increase
- Improved sentiment on risky assets also allowed a reduction positions from leveraged accounts
- TLTRO repayment, end of QE and more particularly QT start announcement in December helped even more
- Going through year end helped materialise the improved sentiment
- Expected increase in German spending , and corresponding Q1 2023 supply also strongly contributed
- Still going into Jan. ECB fast money played a widening of the Asset swap anticipating no action of ECB on Gov. deposits

IV - IMPACT OF ECB ANNOUNCEMENT ON GOV. DEPOSITS ON EUROPEAN T-BILLS



*I spread = yield-yield spread bill vs matching maturity ESTR swap



- Evolution of the 6mth French and German bills swap spread since Jan 2022
- Spread moves for France and Germany bills on the day of the announcement

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