

JSE
INTEREST RATE DERIVATIVES
MONTHLY VIEW
(Including 2022 full year stats)

December 2022

Compiled by the IRC team

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HIGHLIGHTS

Post the November close-out, the IRD monthly volume declined over December as positions were rolled into the following year's expiries.

The salient features of the Interest Rate Derivatives activity for 2022 were as follows:

- The total **IRD contract volumes** reached a new record of 14.4m contracts in 2022 as compared to 12.6m contracts in previous year, an increase of 13.8%. The **IRD Open interest** ended the year at 1.57m contracts, up 31.5% from the same time previous year
- The activity was dominated by **bond futures volumes** with a record 13.7m contracts traded, up 16.7%; **Bond Futures open interest** ended the year at 1.4m contracts, up 34.8%
- The **Bond Options** volumes were up 8.5% but lower than the levels reached in 2019 and 2020. **Options Open Interest** up 4.8% at year-end compared to previous year
- The **Govi and Bond Index Futures value traded** was at R107bln, up 5.8% over previous year. **Index Futures Open Interest** ended the year 3.6% lower than the same point previous year

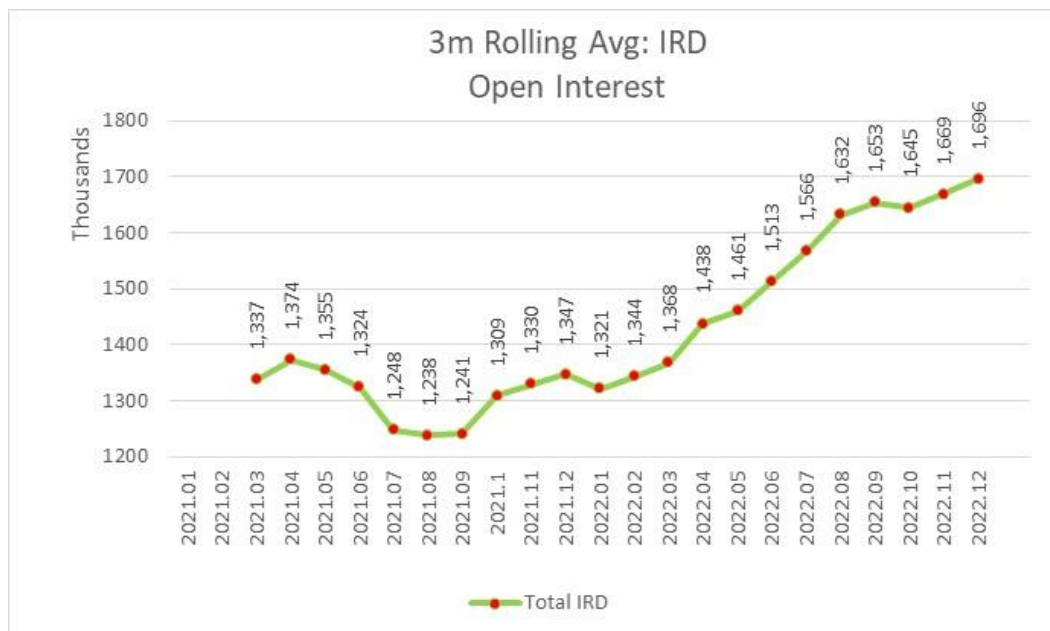
Listed IRD CONTRACTS TRADED							
YTD - Contracts	Bond Fut	Bond Opt	Govi Fut	Index Fut	JIBAR Fut	SWAP Fut	Total
2021	11,749,191	604,424	8,004	9,271	261,815	51	12,632,756
2022	13,705,750	655,620	9,017	7,492	1,456	-	14,379,335
Growth	16.7%	8.5%	12.7%	-19.2%	-99.4%	0.0%	13.8%

IRD OPEN INTEREST CONTRACTS							
Period	Bond Fut	Bond Opt	Govi Fut	Index Fut	JIBAR Fut	SWAP Fut	Total
2021	1,069,111	126,584	987	721	215	-	1,197,618
2022	1,441,149	131,744	848	798	415	-	1,574,954
Growth	34.8%	4.1%	-14.1%	10.7%	93.0%	-	31.5%

CURRENT TRENDS IN BOND FUTURES ACTIVITY

Bond Futures tend to be traded as term instruments which results in large volumes trading into and around expiry dates and lower volumes in other periods. This manifests as a “see-saw” activity in the monthly volumes. To observe trends, we observe the Rolling 3m Average activity.

Bond Futures Trends: Contracts Traded and Open Interest



Bond futures trends (based on 3m rolling avg contracts traded) currently flattening out following a strong mid-year increase. Open Interest remains on an upward trend since Sep-21.

MONTHLY SNAPSHOT: CONTRACTS & OPEN INTEREST

CONTRACTS TRADED

Monthly Snapshot Contracts Traded 2021/22								
	Bond Fut	Calls	Puts	Govi Fut	Index Fut	Jibar Fut	Swap Fut	Total
2021.01	2,064,147	21,004	17,677	1,941	2,888	40,001	-	2,147,658
2021.02	647,370	24,856	21,684	101	582	40,470	-	735,063
2021.03	127,022	21,895	15,812	29	60	400	-	165,218
2021.04	1,995,098	13,289	27,516	1,517	1,720	-	-	2,039,140
2021.05	920,233	13,899	108,021	87	753	-	-	1,042,993
2021.06	50,847	12,776	24,800	17	161	-	-	88,601
2021.07	2,210,468	7,750	9,100	1,996	1,298	-	-	2,230,612
2021.08	497,888	14,332	25,619	30	138	69	-	538,076
2021.09	61,417	18,400	22,650	11	31	130,000	-	232,509
2021.10	2,316,337	34,747	57,736	2,056	1,386	800	-	2,413,062
2021.11	734,640	25,520	63,241	213	254	50,075	-	873,943
2021.12	123,724	2,100	-	6	-	-	51	125,881
2022.01	2,198,294	8,260	38,140	2,132	1,356	-	-	2,248,182
2022.02	607,540	39,077	40,890	48	208	-	-	687,763
2022.03	126,385	29,435	10,026	3	5	222	-	166,076
2022.04	2,139,536	10,546	29,023	2,264	1,262	-	-	2,182,631
2022.05	683,749	13,140	8,420	10	332	100	-	705,751
2022.06	286,875	26,900	32,583	6	13	-	-	346,377
2022.07	2,699,371	36,982	18,065	2,318	1,926	100	-	2,758,762
2022.08	1,319,225	59,807	61,514	19	43	-	-	1,440,608
2022.09	168,100	21,851	14,895	54	281	-	-	205,181
2022.10	2,457,306	5,500	19,022	2,110	1,639	-	-	2,485,577
2022.11	867,642	55,433	30,891	38	354	415	-	954,773
2022.12	151,727	45,220	-	15	73	619	-	197,654



OPEN INTEREST

Monthly Snapshot Open Interest 2021/22								
	Bond Fut	Calls	Puts	Govi Fut	Index Fut	Jibar Fut	Swap Fut	Total
2021.01	1,368,771	54,416	117,177	977	1,365	50,001	51	1,592,758
2021.02	1,012,584	45,247	96,085	975	1,212	30,471	51	1,186,625
2021.03	1,043,823	52,181	103,536	1,001	1,196	30,471	51	1,232,259
2021.04	1,493,709	61,680	114,125	1,003	1,270	30,471	51	1,702,309
2021.05	989,485	31,963	76,593	987	726	30,471	51	1,130,276
2021.06	986,432	38,363	82,093	981	581	30,471	51	1,138,972
2021.07	1,311,466	41,313	91,193	997	631	30,471	51	1,476,122
2021.08	946,280	36,714	85,050	986	594	30,540	51	1,100,215
2021.09	948,396	48,514	98,050	993	625	50,540	51	1,147,169
2021.10	1,445,779	64,705	117,651	1,098	829	50,140	51	1,680,253
2021.11	1,036,547	56,870	67,614	983	721	215	51	1,163,001
2021.12	1,069,111	58,970	67,614	987	721	215	-	1,197,618
2022.01	1,454,861	66,850	78,374	1,023	805	215	-	1,602,128
2022.02	1,088,101	66,830	74,984	989	718	215	-	1,231,837
2022.03	1,114,292	76,765	78,019	990	720	215	-	1,271,001
2022.04	1,645,940	76,742	85,496	1,115	669	215	-	1,810,177
2022.05	1,195,046	50,178	53,524	1,111	909	315	-	1,301,083
2022.06	1,297,146	66,578	62,424	1,111	913	315	-	1,428,487
2022.07	1,800,421	94,508	72,185	875	856	415	-	1,969,260
2022.08	1,332,947	84,705	77,297	870	839	415	-	1,497,073
2022.09	1,313,187	93,252	84,742	874	825	415	-	1,493,295
2022.10	1,767,793	89,752	83,742	866	931	415	-	1,943,499
2022.11	1,432,909	70,250	65,114	835	786	415	-	1,570,309
2022.12	1,441,149	66,630	65,114	848	798	415	-	1,574,954



INTEREST RATE DERIVATIVE CONTRACTS (FULL YEAR STATS)

IRD CONTRACTS TRADED

The IRD contracts traded ytd is UP 13.8% and bond futures UP 16.7%. over same period last year

Listed IRD CONTRACTS TRADED							
YTD - Contracts	Bond Fut	Bond Opt	Govi Fut	Index Fut	JIBAR Fut	SWAP Fut	Total
2021	11,749,191	604,424	8,004	9,271	261,815	51	12,632,756
2022	13,705,750	655,620	9,017	7,492	1,456	-	14,379,335
Growth	16.7%	8.5%	12.7%	-19.2%	-99.4%	0.0%	13.8%

IRD VALUE TRADED

IRD VALUE TRADED YTD (Rm)							
Period	Bond Fut	Bond Opt	Govi Fut	Index Fut	JIBAR Fut	SWAP Fut	Total
2021	1,097,847	993	62,348	39,242	6,287	5	1,206,721
2022	1,208,205	1,111	73,962	33,479	34	-	1,316,791
Growth	10.1%	12.0%	18.6%	-14.7%	-99.5%	0.0%	9.1%

IRD TRADED NOMINAL EXPOSURE*

Effective nominal exposure (and value traded for indices) provides a comparable metric to examine activity across markets.

LISTED IRD UNDERLYING NOMINAL EXPOSURE Rbln							
YTD - Nominal	Bond Fut	Bond Opt	Govi Fut ValTr	Index Fut ValTr	JIBAR Fut	SWAP Fut	Total
Contract size	100k	100k	1	1	100k	100k	
2021	1,174.9	60.4	62.3	39.2	26.2	0.0	1,363.1
2022	1,370.6	65.6	74.0	33.5	0.146	-	1,543.7
Growth	16.7%	8.5%	18.6%	-14.7%	-99.4%	0.0%	13.2%
% Split	88.8%	4.2%	4.8%	2.2%	0.0%	0.0%	100.0%

*Underlying nominals traded (in R billions) are represented by the contract size multiplied by the contracts traded, except for the Govi and Index futures which are represented by the value traded.

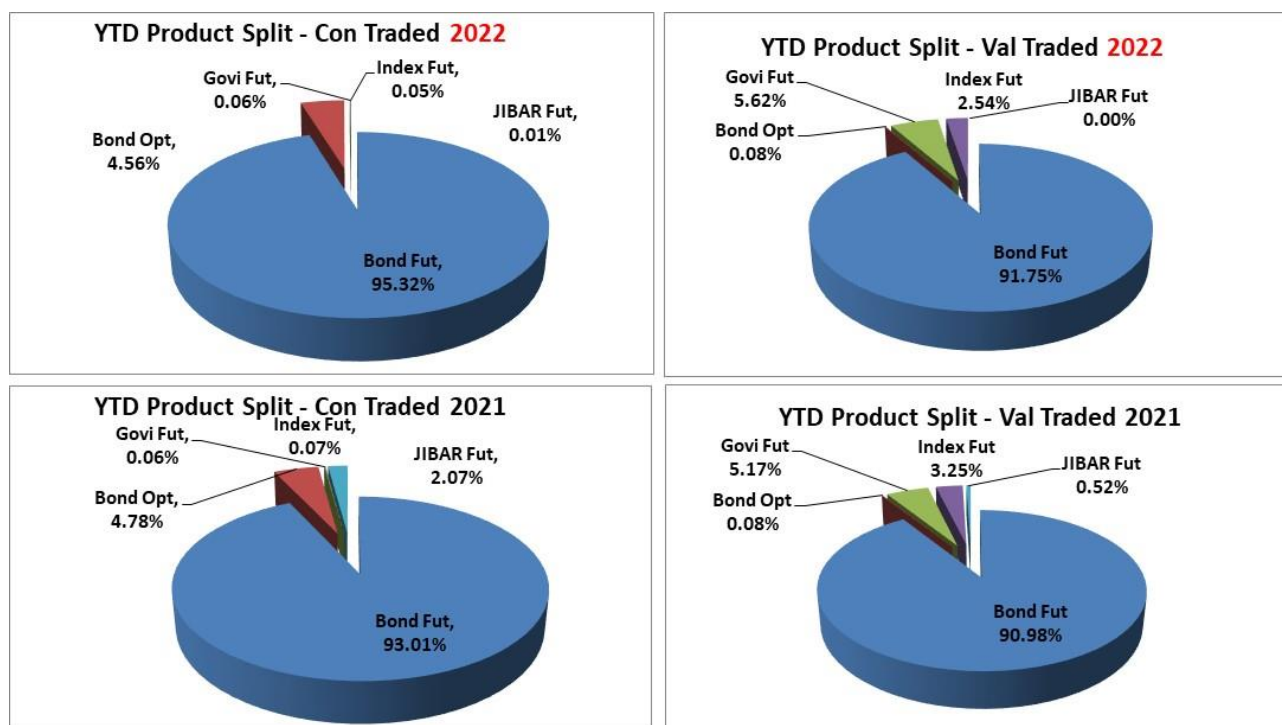
IRD OPEN INTEREST

The Open Interest is up 32% with bond futures up 35% compared to same period last year

IRD OPEN INTEREST CONTRACTS							
Period	Bond Fut	Bond Opt	Govi Fut	Index Fut	JIBAR Fut	SWAP Fut	Total
2021	1,069,111	126,584	987	721	215	-	1,197,618
2022	1,441,149	131,744	848	798	415	-	1,574,954
Growth	34.8%	4.1%	-14.1%	10.7%	93.0%	-	31.5%

IRD PRODUCT SPLIT IN CONTRACTS AND VALUE TRADED

The **GOVI** and **Index Futures** represent 8.2% of all IRD value traded YTD but only a small percentage (<1%) of all contracts traded with a high nominal underlying per contract.



TWO-MONTH CLOSE OUT PERIOD VOLUME (ALL IRD CONTRACTS)

Roll activity typically starts in the month prior to close-out. Thus, close-out activity is represented here by consolidating **volumes for the close-out month and the prior month as a 2-month period**.

ALL IRD CONTRACTS (in 2-mth periods) (millions of contracts)									
Close-Out (2-mth)	2016	2017	2018	2019	2020	2021	2022	% Chg 2021/20	% Chg 2022/21
Close-Out 1 (Feb)	1.733	2.455	3.292	2.609	3.097	2.883	2.936	-6.9%	1.8%
Close-Out 2 (May)	2.401	2.491	2.973	2.518	3.219	3.082	2.888	-4.2%	-6.3%
Close-Out 3 (Aug)	2.313	3.051	2.532	3.009	3.040	2.769	4.199	-8.9%	51.7%
Close-Out 4 (Nov)	2.399	3.320	2.749	2.787	3.082	3.287	3.440	6.7%	4.7%

The November 2022 (2-mth) close-out period saw 3.4m contracts trading, up 5% over last year's equivalent period, and the **highest November close-out (2-month) period volume**. The roll overs will start again in mid-January 2023 for the February close-out

BOND FUTURES

BOND FUTURES: CONTRACTS TRADED

The Futures contracts traded in December were up over 22% on same period last year. On a YTD basis, this is a 16.7% growth over same period last year. **The full year (YTD) volume of 13.7mln bond futures exceeds the volume traded for the 2020 record year (12.3mln) and represents a record volume**

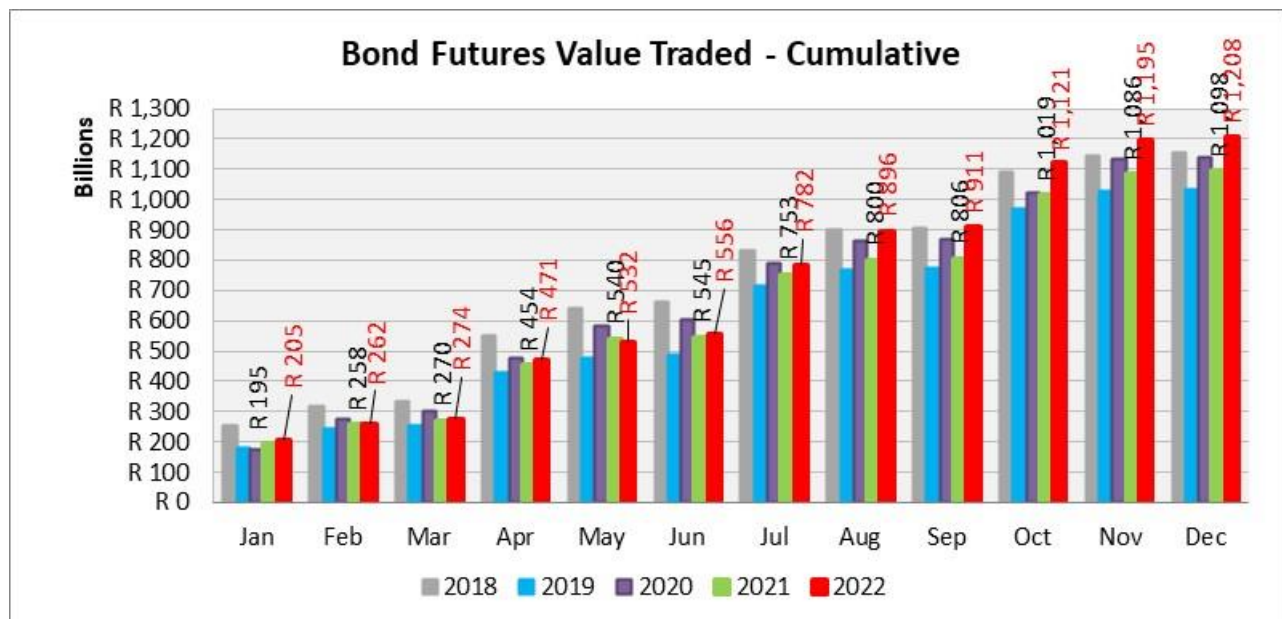


Bond Futures Contracts Traded									
Date	2016	2017	2018	2019	2020	2021	2022	Chg 21/20	Chg 22/21
Jan	826,485	1,963,456	2,512,043	1,872,040	1,808,945	2,064,147	2,198,294	14.1%	6.5%
Feb	883,377	493,725	622,760	654,730	994,022	647,370	607,540	-34.9%	-6.2%
Mar	79,520	148,066	184,080	71,194	337,360	127,022	126,385	-62.3%	-0.5%
Apr	1,490,182	1,168,792	2,071,717	1,778,197	1,984,879	1,995,098	2,139,536	0.5%	7.2%
May	854,135	1,322,123	868,973	434,577	1,152,932	920,233	683,749	-20.2%	-25.7%
Jun	134,452	177,529	241,609	121,845	187,670	50,847	286,875	-72.9%	464.2%
Jul	1,542,365	1,475,383	1,770,507	2,232,039	2,022,009	2,210,468	2,699,371	9.3%	22.1%
Aug	691,788	1,497,690	706,275	550,331	820,119	497,888	1,319,225	-39.3%	165.0%
Sep	207,021	235,816	53,904	85,331	59,877	61,417	168,100	2.6%	173.7%
Oct	1,903,245	1,947,995	1,987,598	1,970,014	1,707,398	2,316,337	2,457,306	35.7%	6.1%
Nov	477,584	1,304,500	599,247	610,292	1,210,516	734,640	867,642	-39.3%	18.1%
Dec	77,224	180,041	69,157	57,887	64,811	123,724	151,727	90.9%	22.6%
TOTAL	9,167,378	11,915,116	11,687,870	10,438,477	12,350,538	11,749,191	13,705,750	-4.9%	16.7%
%Chg		30.0%	-1.9%	-10.7%	18.3%	-4.9%			



BOND FUTURES: VALUE TRADED

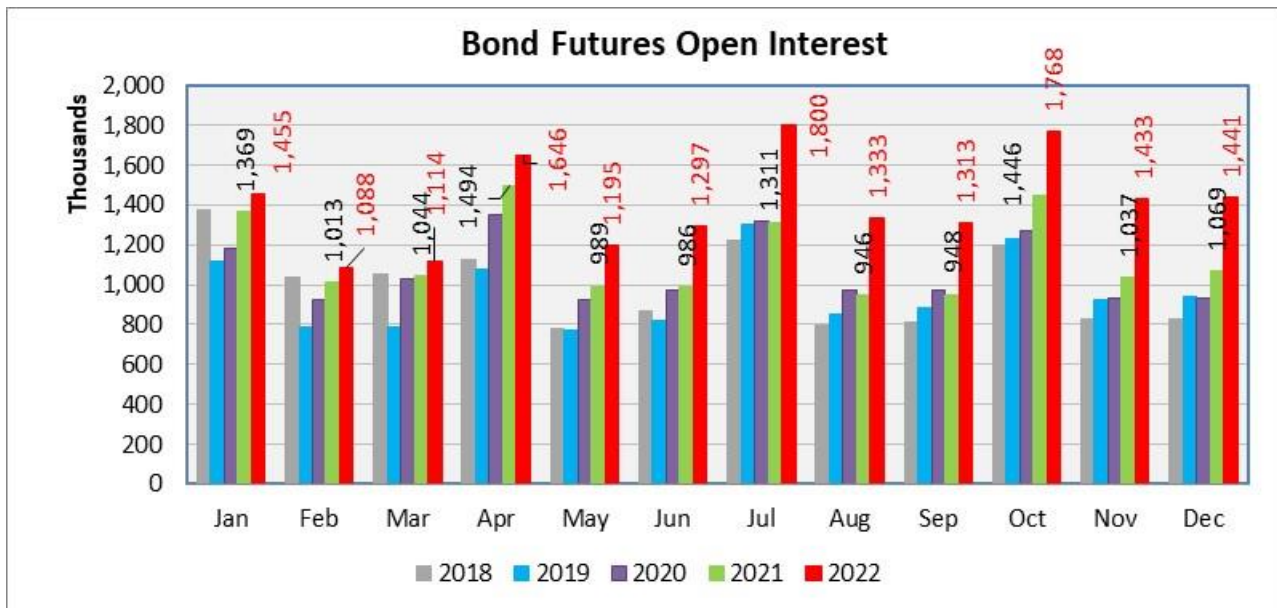
The value traded year-to-date is 10.1% UP compared to same period last year.



Bond Futures Value Traded Rm									
Date	2016	2017	2018	2019	2020	2021	2022	Chg 21/20	Chg 22/21
Jan	R 93,017	R 207,419	R 253,621	R 180,384	R 176,702	R 194,789	R 204,686	10.2%	5.1%
Feb	R 83,446	R 54,107	R 63,521	R 65,075	R 97,898	R 62,982	R 57,288	-35.7%	-9.0%
Mar	R 8,122	R 15,689	R 18,820	R 7,378	R 29,570	R 12,063	R 11,528	-59.2%	-4.4%
Apr	R 159,522	R 128,361	R 212,944	R 177,545	R 174,397	R 184,453	R 197,483	5.8%	7.1%
May	R 87,612	R 131,736	R 91,403	R 44,429	R 106,329	R 85,790	R 61,213	-19.3%	-28.6%
Jun	R 13,129	R 19,049	R 22,502	R 11,983	R 17,525	R 5,349	R 24,236	-69.5%	353.1%
Jul	R 166,159	R 151,742	R 170,320	R 225,830	R 185,667	R 207,191	R 225,996	11.6%	9.1%
Aug	R 75,809	R 152,914	R 68,472	R 53,410	R 73,391	R 47,531	R 113,556	-35.2%	138.9%
Sep	R 20,266	R 24,072	R 5,123	R 8,239	R 5,882	R 6,139	R 14,741	4.4%	140.1%
Oct	R 210,332	R 191,314	R 185,855	R 194,759	R 156,245	R 212,448	R 210,025	36.0%	-1.1%
Nov	R 55,648	R 126,095	R 54,306	R 59,502	R 109,123	R 67,490	R 74,688	-38.2%	10.7%
Dec	R 7,458	R 17,391	R 6,458	R 5,516	R 6,269	R 11,623	R 12,765	85.4%	9.8%
TOTAL	980,519	1,219,888	1,153,345	1,034,049	1,138,999	1,097,847	1,208,205	-3.6%	10.1%
%Chg		24.4%	-5.5%	-10.3%	10.1%	-3.6%	10.1%		

BOND FUTURES: OPEN INTEREST

Bond Futures Open interest at month end was 1.44m contracts, up 35% over last year. The Open interest at year end represents a record for the end of December period.

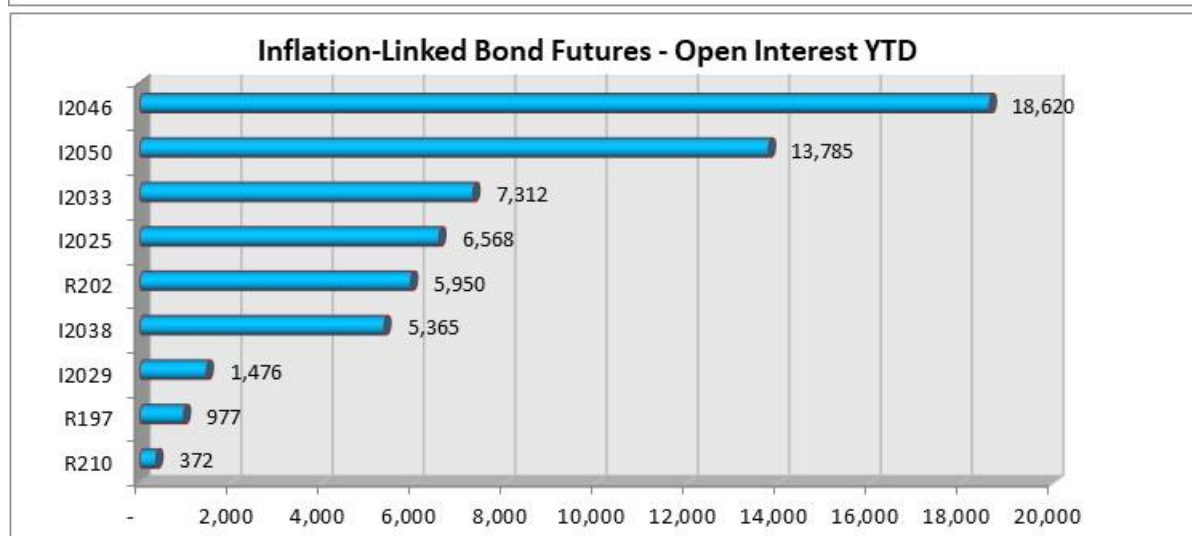
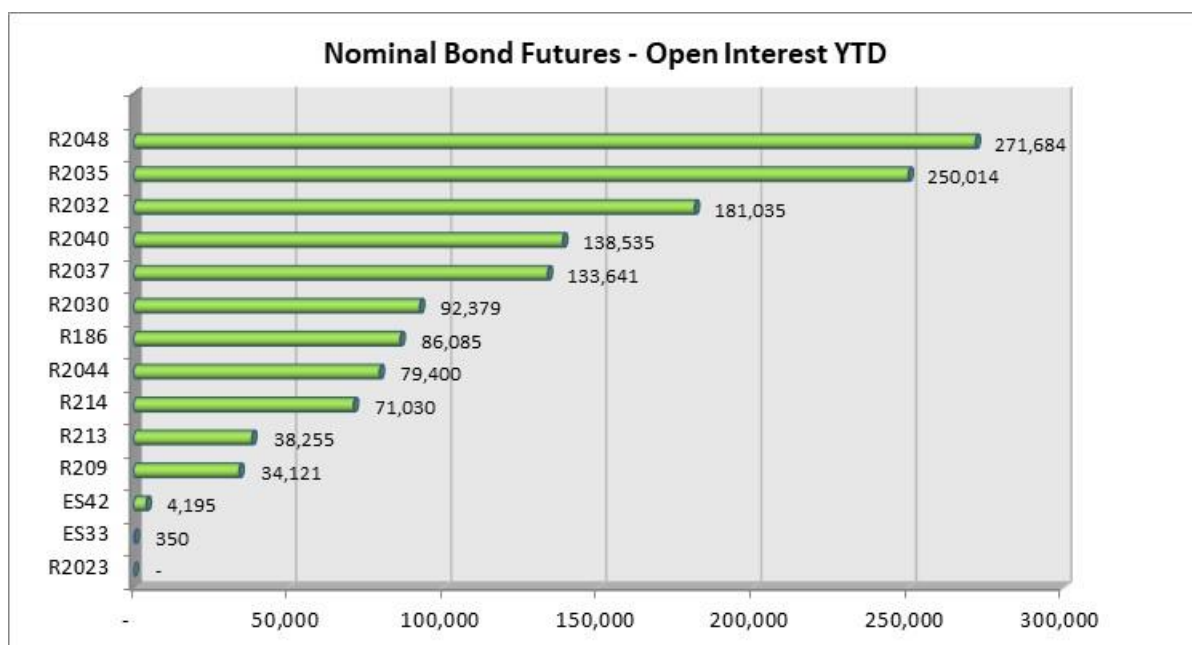


Bond Futures Open Interest									
Date	2016	2017	2018	2019	2020	2021	2022	Chg 21/20	Chg 22/21
Jan	713,913	1,137,425	1,372,543	1,118,795	1,183,158	1,368,771	1,454,861	15.7%	6.3%
Feb	633,062	770,321	1,037,493	784,852	921,269	1,012,584	1,088,101	9.9%	7.5%
Mar	650,335	801,800	1,052,470	787,390	1,027,896	1,043,823	1,114,292	1.5%	6.8%
Apr	890,406	1,037,427	1,126,181	1,073,638	1,349,483	1,493,709	1,645,940	10.7%	10.2%
May	752,370	794,207	777,714	769,139	923,863	989,485	1,195,046	7.1%	20.8%
Jun	753,049	868,162	870,652	817,539	971,675	986,432	1,297,146	1.5%	31.5%
Jul	996,943	1,139,985	1,222,141	1,302,006	1,321,763	1,311,466	1,800,421	-0.8%	37.3%
Aug	655,211	977,327	798,912	849,438	973,254	946,280	1,332,947	-2.8%	40.9%
Sep	657,642	981,713	809,221	883,920	969,022	948,396	1,313,187	-2.1%	38.5%
Oct	999,507	1,383,649	1,201,141	1,231,132	1,273,672	1,445,779	1,767,793	13.5%	22.3%
Nov	793,813	1,020,399	826,316	927,675	931,839	1,036,547	1,432,909	11.2%	38.2%
Dec	798,552	1,016,463	827,458	944,806	936,762	1,069,111	1,441,149	14.1%	34.8%
%Chg		27.3%	-18.6%	14.2%	-0.9%	14.1%	34.8%		34.8%
Max OI	999,507	1,383,649	1,372,543	1,302,006	1,349,483	1,493,709	1,800,421		

BOND FUTURES: OPEN INTEREST PER INSTRUMENT

The total options open interest is R144bln nominal, with largest open positions in the R2048 at R27bln nominal (~271k contracts) and R2035 at 25bln nominal. Largest linker open interest is the I2046 at R1.8bln nominal underlying

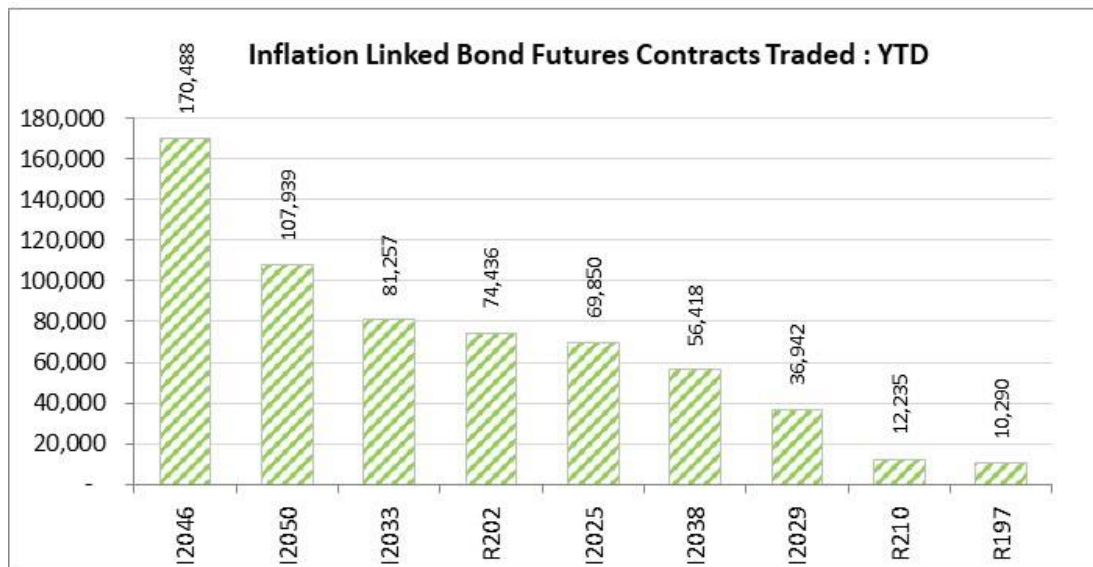
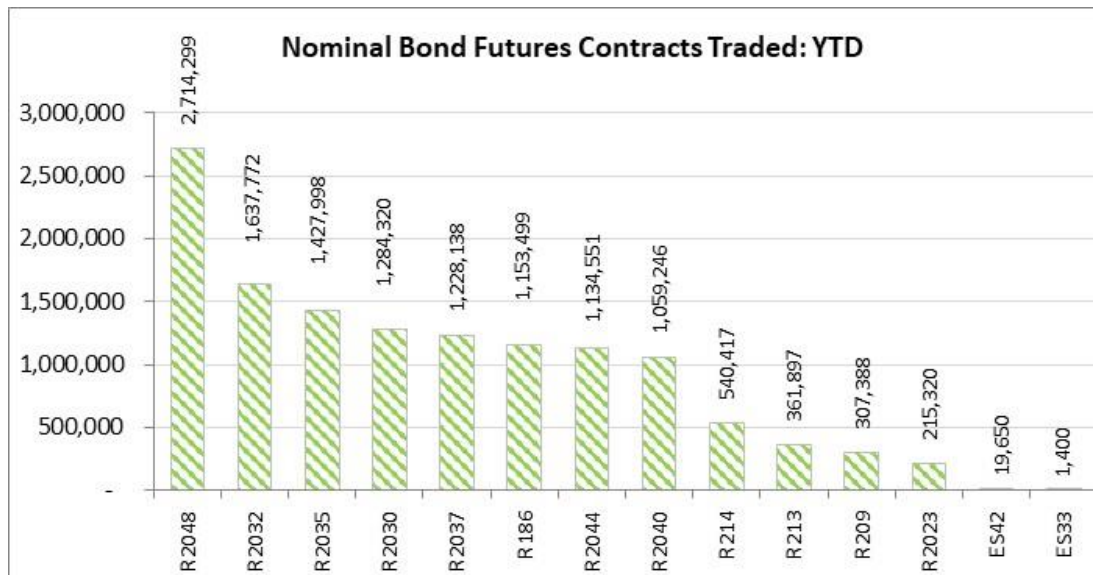
Open Interest Table: YTD			
	Nominal Bond	Inflation-Linkers	Total
Contracts	1,380,724	60,425	1,441,149
Nominal Value Rm	138,072	6,043	144,115
% Split	95.8%	4.2%	100.0%



SINGLE BOND FUTURE CONTRACTS

The most actively traded bond future YTD is the R2048 with a total of R271bln notional underlying. The graph shows a further 7 bonds trading above R100bln notional.

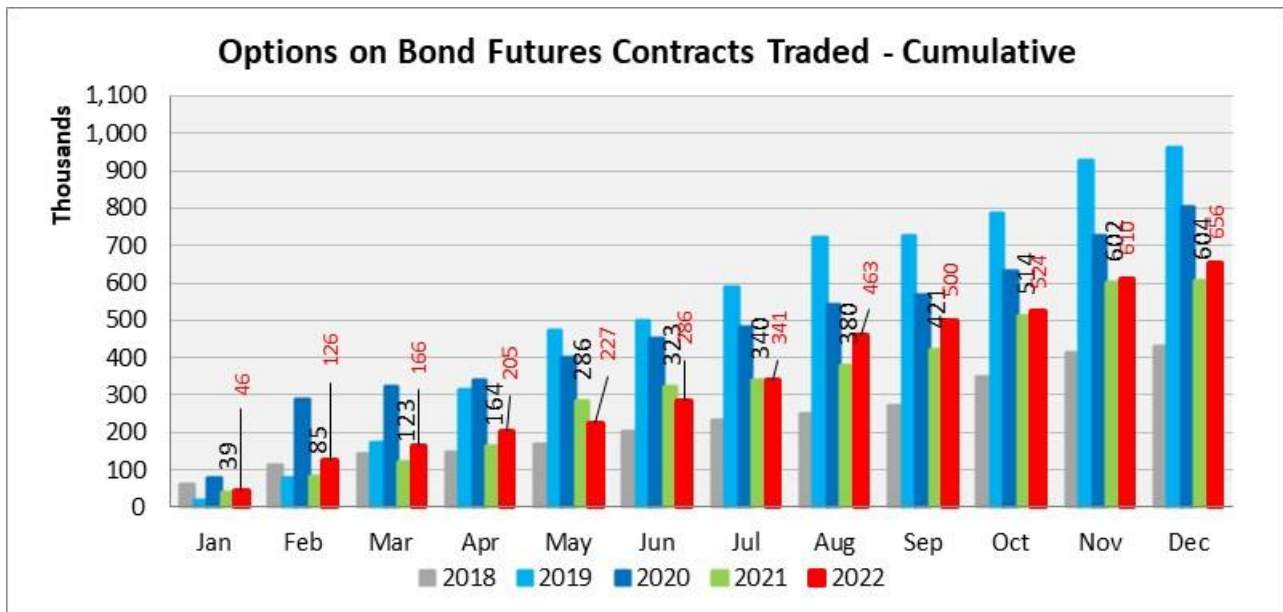
Total Contracts Traded ytd			
	Nominal Bond	Inflation-Linkers	Total
Contracts	13,085,895	619,855	13,705,750
Nominal Value Rm	1,308,590	61,986	1,370,575
% Split	95.5%	4.5%	100.0%



OPTIONS ON BOND FUTURES

OPTIONS ON BOND FUTURES: CONTRACTS TRADED YTD

The Bond Options contracts traded ytd is up 8.5% over the same period last year, but below the volumes in 2019.

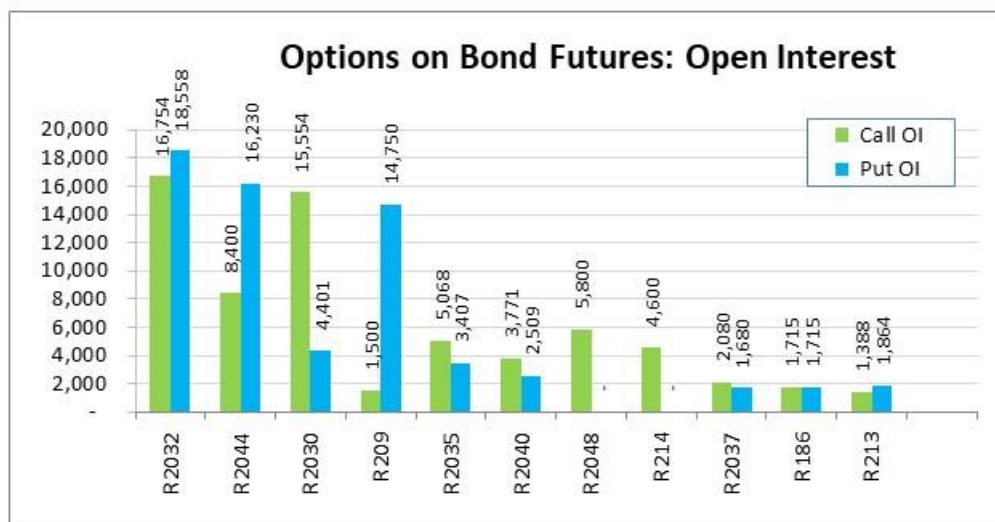
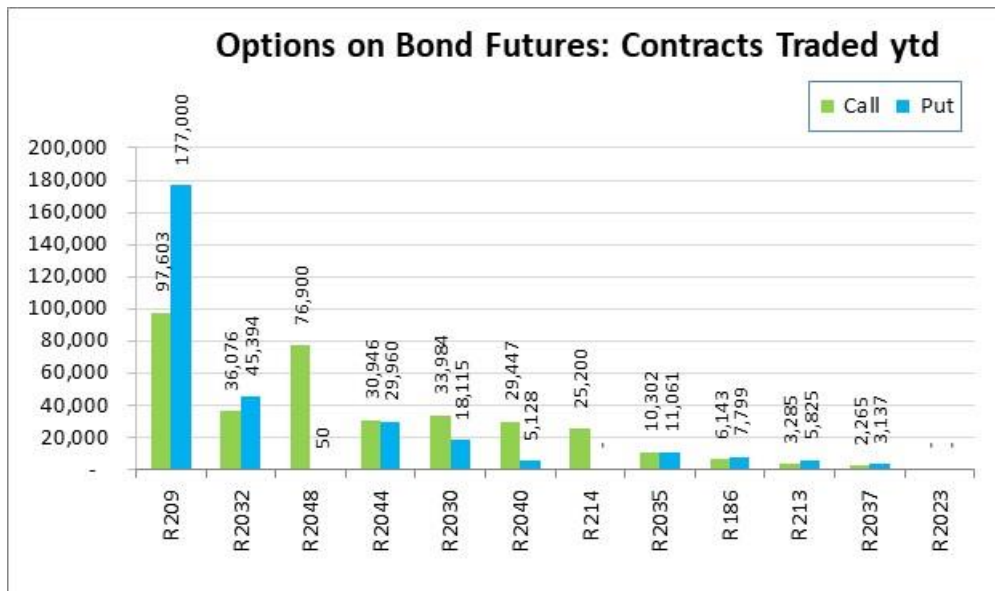


Options on Bond Futures Contracts Traded									
Date	2016	2017	2018	2019	2020	2021	2022	Chg 21/20	Chg 22/21
Jan	-	14,483	60,405	19,110	77,201	38,681	46,400	-49.9%	20.0%
Feb	17,536	11,415	54,977	59,033	210,210	46,540	79,967	-77.9%	71.8%
Mar	8,812	25,538	28,832	95,276	36,940	37,707	39,461	2.1%	4.7%
Apr	22,435	5,400	5,558	143,016	17,731	40,805	39,569	130.1%	-3.0%
May	29,048	8,862	20,150	157,005	56,719	121,920	21,560	115.0%	-82.3%
Jun	5,775	23,320	34,432	26,470	53,416	37,576	59,483	-29.7%	58.3%
Jul	18,285	8,019	28,655	88,896	30,101	16,850	55,047	-44.0%	226.7%
Aug	54,921	63,882	17,260	131,864	61,600	39,951	121,321	-35.1%	203.7%
Sep	36,208	22,555	19,612	7,489	25,183	41,050	36,746	63.0%	-10.5%
Oct	12,419	26,394	78,210	58,639	61,600	92,483	24,522	50.1%	-73.5%
Nov	50	34,036	63,736	140,504	96,308	88,761	86,324	-7.8%	-2.7%
Dec	50	63,418	16,886	34,609	76,656	2,100	45,220	-97.3%	2053.3%
TOTAL	205,539	307,322	428,713	961,911	803,665	604,424	655,620	-24.8%	8.5%
%Chg		49.5%	39.5%	124.4%	-16.5%	-24.8%	8.5%		

OPTIONS ON BOND FUTURES: CONTRACTS TRADED AND OPEN INTEREST

The largest volume and open interest was traded in the R209 options with further high open interest in the R2030, R2032 and R2044

Options on Bond Futures				
	Contracts ytd		Open Interest	
Calls	352,151	53.7%	66,630	50.6%
Puts	303,469	46.3%	65,114	49.4%
Total	655,620	100.0%	131,744	100.0%



BOND INDEX FUTURES

The Bond Index Future value traded¹ at R107bIn, is UP 5.8% over previous period with Open Interest 3.6% lower than the same period last year

Value Traded Rm				
	GOVI	ALBI	IGOV	Total
2021 YTD	62,348	20,158	19,084	101,590
2022 YTD	73,962	15,615	17,864	107,441
% Change	18.6%	-22.5%	-6.4%	5.8%
Open Interest Contracts				
	GOVI	ALBI+IGOV		Total
2021 YTD	987	721		1,708
2022 YTD	848	798		1,646
% Change	-14.1%	10.7%		-3.6%



¹ Bond index activity represented by value traded rather than contracts which have a large nominal exposure contract equivalent to (100k * Index level)

VALUE TRADED Rm					
	GOVI	ALBI	IGOV	Val Traded	Roll 12m Avg
Jan-19	5,683	11,086	2,674	19,442	
Feb-19	497	4,005	327	4,828	
Mar-19	2,086	1,092	118	3,296	
Apr-19	5,676	16,580	4,658	26,914	
May-19	538	115	50	702	
Jun-19	74	138	-	211	
Jul-19	11,167	11,628	4,418	27,214	
Aug-19	797	482	271	1,550	
Sep-19	339	21	878	1,238	
Oct-19	18,183	5,601	7,265	31,049	
Nov-19	2,362	2,695	884	5,941	
Dec-19	55	14	-	69	10,205
Jan-20	17,443	5,266	6,425	29,134	11,012
Feb-20	1,283	2,316	663	4,262	10,965
Mar-20	73	624	74	771	10,755
Apr-20	13,806	4,444	5,987	24,237	10,532
May-20	2,966	805	1,845	5,616	10,941
Jun-20	300	50	461	812	10,991
Jul-20	14,676	4,597	6,436	25,710	10,866
Aug-20	349	915	552	1,816	10,888
Sep-20	43	238	39	320	10,811
Oct-20	14,608	5,155	6,094	25,857	10,379
Nov-20	1,824	1,228	868	3,920	10,210
Dec-20	67	30	8	105	10,213
Jan-21	14,739	4,375	6,347	25,461	9,907
Feb-21	778	1,715	1,003	3,496	9,843
Mar-21	216	181	100	498	9,821
Apr-21	11,671	3,020	3,841	18,532	9,345
May-21	667	2,130	1,351	4,149	9,223
Jun-21	134	274	372	780	9,220
Jul-21	15,780	2,933	2,711	21,424	8,863
Aug-21	239	1,073	18	1,330	8,822
Sep-21	88	-	92	181	8,811
Oct-21	16,282	2,948	3,056	22,286	8,513
Nov-21	1,703	1,510	193	3,406	8,470
Dec-21	49	-	-	49	8,466
Jan-22	17,537	3,262	2,972	23,771	8,325
Feb-22	399	1,753	3	2,155	8,213
Mar-22	25	17	9	51	8,176
Apr-22	18,758	2,199	3,207	24,164	8,645
May-22	83	324	937	1,343	8,412
Jun-22	48	99	3	151	8,359
Jul-22	18,825	3,675	4,710	27,210	8,841
Aug-22	158	232	51	441	8,767
Sep-22	447	1,058	499	2,005	8,919
Oct-22	17,243	1,946	4,507	23,695	9,037
Nov-22	314	982	762	2,058	8,924
Dec-22	125	69	203	397	8,953

End of report.