

JSE
INTEREST RATE DERIVATIVES
MONTHLY VIEW

Jun 2022

Compiled by the IRC team

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HIGHLIGHTS

- *The Interest Rate derivative activity in Jun is normally low in terms of overall annual activity, given that this month is directly after the close-out month. However, the Jun activity is substantially higher than the equivalent period last year.*
- *The **Total IRD contracts** is UP 1.9% ytd and IRD Open Interest is up 25.4% at 1.4m contracts*
- *The **Bond futures** contracts traded UP 4.0% ytd and Open Interest is up 31.5% (1.3m contracts).*
- ***This trend of flat to slightly higher volumes ytd and much higher open interest** could be due to some roll activity being shifted from near-term contracts out to the medium and longer-term contracts. This can be ascribed to the market pre-empting higher carry costs in an increasing interest rate environment and thus rolling further out along the curve. In May and Jun 2021, the open interest in the middle and longer-dated contracts represented about 9% of total Open Interest, while in May and Jun 2022, it represented about 15% of the open interest.*
- *Due to the seasonal nature of bond futures and IRD activity, longer term trends can be examined by viewing the **Rolling 3-month average** activity. In particular, the increase in open interest is **indicative of the increasing use of bond futures to manage risk beyond the typical 3-month term.***
- ***Bond options** is **DOWN 11%** ytd with open interest of R12.9bln underlying notional (129k contracts)*
- *The **Govi and Bond Index Futures** value traded is down 2.4% ytd with the rolling 12m Average value traded at R8.4bln, at similar levels since Nov-21*

USING ROLLING AVERAGES TO HIGHLIGHT TRENDS

A common characteristic in the JSE’s listed Interest Rate Derivatives market is the seasonality of activity. The Bond Futures and the Bond Index Futures positions tend to be traded as term instruments to the expiry date of the contract and then either rolled into longer expiries or closed out. This activity is seen as a seasonal trend made up of large volumes in and around expiry and substantially lower volumes in other periods and results in a “see-saw” activity in the monthly volume charts.

In the previous newsletter, we introduced graphs of Rolling 3-month Average activity for volume and open interest. This averaging has a smoothing effect on the trend.

Bond Futures Trends



The 3-month Rolling Average contracts traded shows activity pick up from Apr-22 to Jun-22, after a period of decline in early 2022. The Open Interest is different in that the 3-month rolling average has been on a consistent increase since Sep-21.

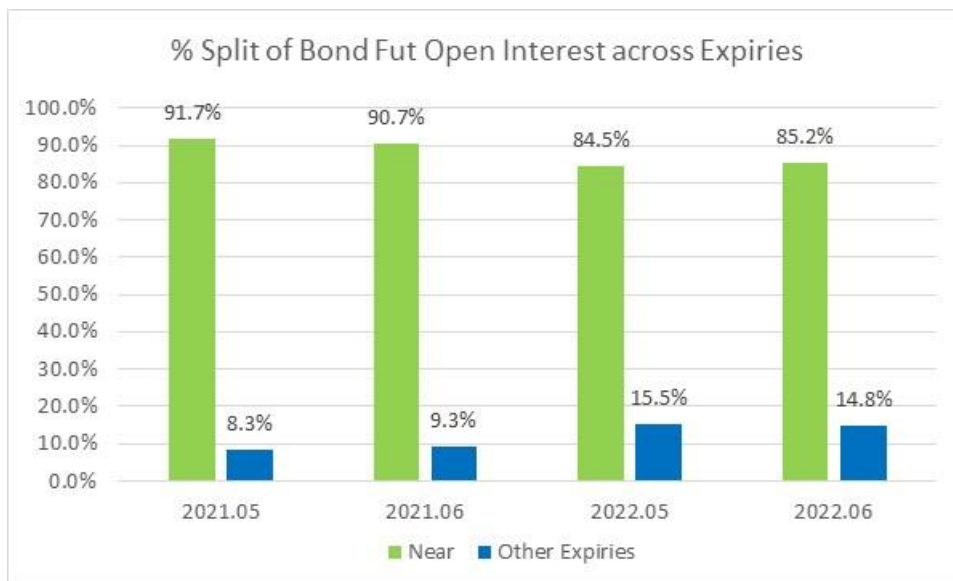
These trends are indicative of the increasing use of bond futures to manage risk beyond the typical 3-month term into longer dated expiries. This is discussed in the next section showing the % split of open interest across different expiries.

THE SPLIT OF BOND FUTURES OPEN INTEREST SPLIT ACROSS EXPIRIES

The trend of flat to slightly higher volumes with concurrent increasing open interest could be attributed to some roll activity being shifted from near-term contracts out to the longer dated expiries and thus not being closed out.

The Open Interest at the end of May and Jun 2021, and May and Jun 2022 is shown in the graph. This shows the percentage of open contracts in the Near contracts declined from above 90% in 2021 to about 85% in 2022

This specific roll activity could be a result of market participants pre-empting higher carry costs in an increasing interest rate environment and rolling positions into longer dated expiries.



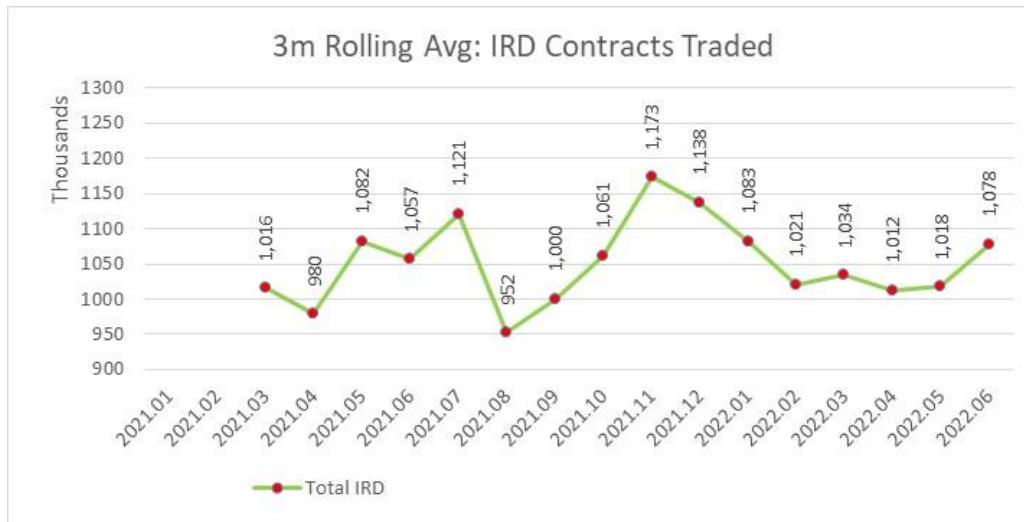
Furthermore, the Open Interest at end of Jun 2022 across all expiries was 30% higher than that at the same period last year

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
TOTALS '22	6,042,379	127,358	159,082	4,463	3,176	322	-	6,336,780

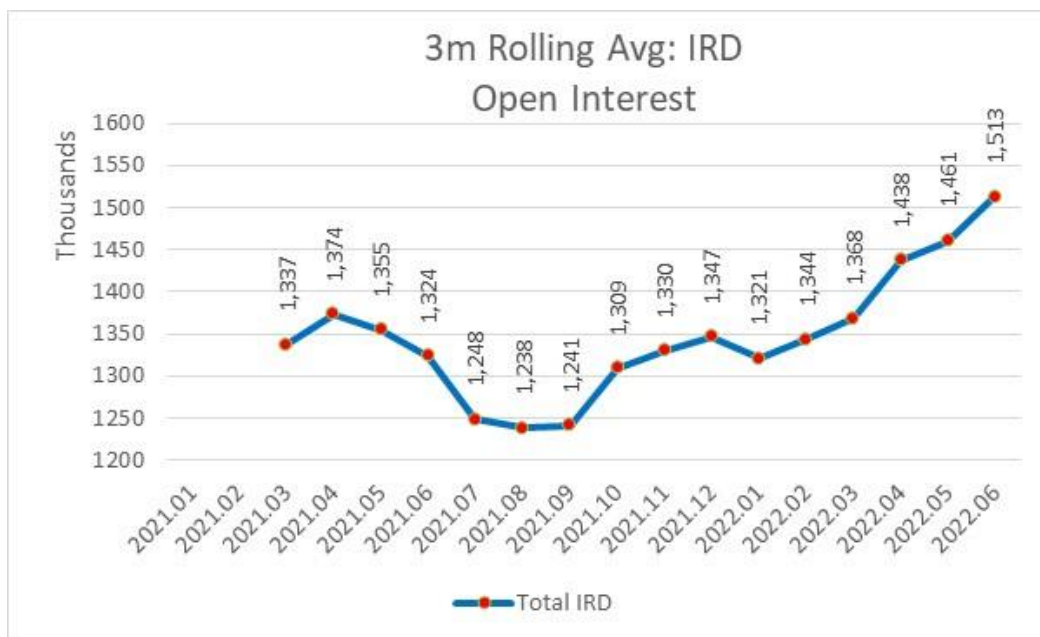




The 3m rolling average of contract volumes can be used to identify medium term trends. After an initial period of flat activity from Feb 2022, the 3m rolling average moved upwards in Jun 2022.

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



The 3m rolling average of open interest can be used to identify medium term trends. The 3m rolling average has been moving upwards since Sep 2021 and continues to move higher. This is a result of more contracts being rolled into longer-dated months and not being closed out at expiry, thus increasing the open positions in the market.

INTEREST RATE DERIVATIVE CONTRACTS

IRD CONTRACTS TRADED

The number of IRD contracts traded ytd is UP 1.9% over same period previous year, with bond futures UP 4.1%.

Listed IRD CONTRACTS TRADED							
YTD - Contracts	Bond Fut	Bond Opt	Govi Fut	Index Fut	JIBAR Fut	SWAP Fut	Total
2021	5,804,717	323,229	3,692	6,164	80,871	-	6,218,673
2022	6,042,379	286,440	4,463	3,176	322	-	6,336,780
Growth	4.1%	-11.4%	20.9%	-48.5%	-99.6%	0.0%	1.9%

IRD VALUE TRADED

IRD VALUE TRADED YTD (Rm)							
Period	Bond Fut	Bond Opt	Govi Fut	Index Fut	JIBAR Fut	SWAP Fut	Total
2021	545,425	620	28,206	24,709	1,932	-	600,892
2022	556,434	473	36,850	14,785	8	-	608,549
Growth	2.0%	-23.8%	30.6%	-40.2%	-99.6%	0.0%	1.3%

IRD TRADED NOMINAL EXPOSURE*

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

LISTED IRD UNDERLYING NOMINAL EXPOSURE Rbln							
YTD - Nominal	Bond Fut	Bond Opt	Govi Fut ValTrad	Index Fut ValTrad	JIBAR Fut	SWAP Fut	Total
Contract size	100k	100k	1	1	100k	100k	
2021	580.5	32.3	28.2	24.7	8.1	-	673.8
2022	604.2	28.6	36.9	14.8	0.032	-	684.5
Growth	4.1%	-11.4%	30.6%	-40.2%	-99.6%	0.0%	1.6%
% Split	88.3%	4.2%	5.4%	2.2%	0.0%	0.0%	100.0%

*All the 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.

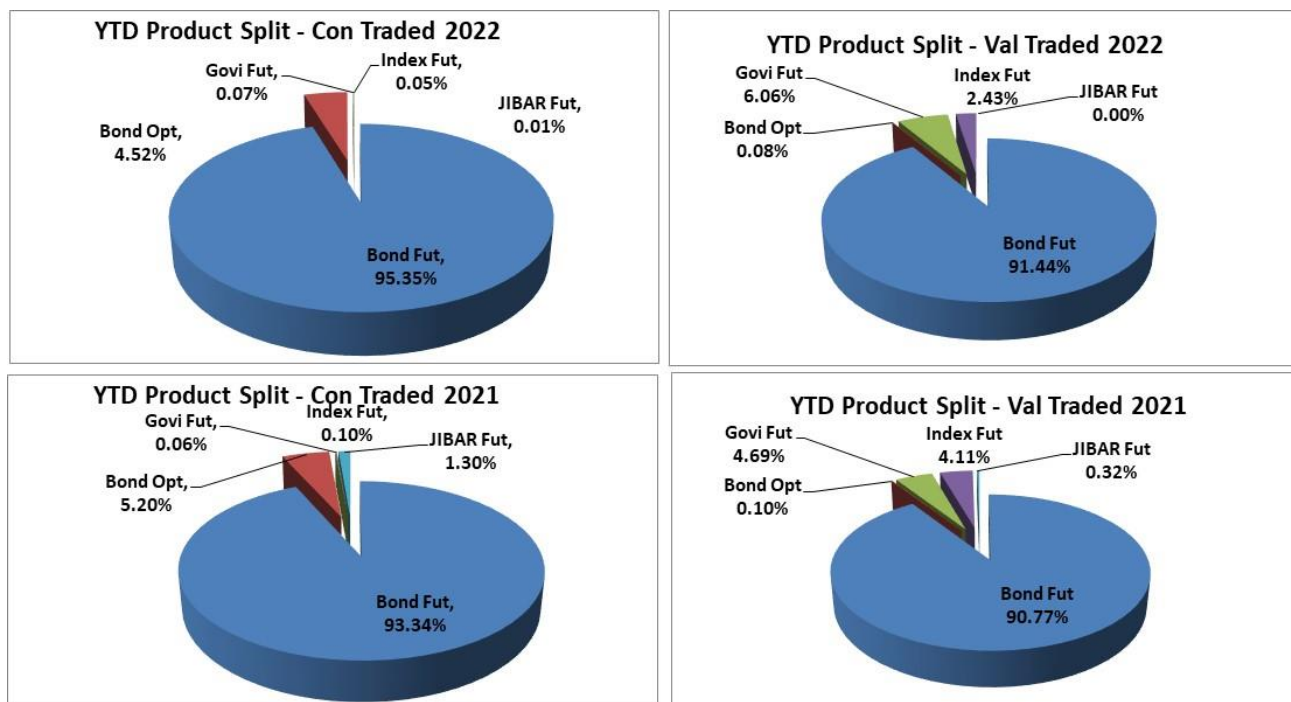
IRD OPEN INTEREST

The Open Interest up 25% compared to same period last year while bond futures up 32%.

IRD OPEN INTEREST CONTRACTS YTD							
Period	Bond Fut	Bond Opt	Govi Fut	Index Fut	JIBAR Fut	SWAP Fut	Total
2021	986,432	120,456	981	581	30,471	51	1,138,972
2022	1,297,146	129,002	1,111	913	315	-	1,428,487
Growth	31.5%	7.1%	13.3%	57.1%	-99.0%	-100.0%	25.4%

IRD PRODUCT SPLIT IN CONTRACTS AND VALUE TRADED

With a high nominal underlying per contract, **GOVI** and **Index Futures** represent a small percentage (<1%) of all contracts traded but 8.5% of value traded YTD. The Bond Futures represents the largest product split.



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

Roll activity normally 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) (in 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		-8.9%	
Close-Out 4 (Nov)	2.399	3.320	2.749	2.787	3.082	3.287		6.7%	

The **May 2022 (2-mth) close-out period (2 months)**, saw 2.88m contracts traded, 6.3% DOWN over the same close-out period last year. The activity for the August 2022 expiry is expected to pick up in from mid July.

BOND FUTURES

BOND FUTURES: CONTRACTS TRADED

The Futures contracts traded in Jun were up over 4.8x on same period last year with 287k contracts traded (equivalent of R28.7bln notional). On a YTD basis, this is a 4% growth over same period last year.



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		9.3%	
Aug	691,788	1,497,690	706,275	550,331	820,119	497,888		-39.3%	
Sep	207,021	235,816	53,904	85,331	59,877	61,417		2.6%	
Oct	1,903,245	1,947,995	1,987,598	1,970,014	1,707,398	2,316,337		35.7%	
Nov	477,584	1,304,500	599,247	610,292	1,210,516	734,640		-39.3%	
Dec	77,224	180,041	69,157	57,887	64,811	123,724		90.9%	
TOTAL	9,167,378	11,915,116	11,687,870	10,438,477	12,350,538	11,749,191	6,042,379	-4.9%	4.09%
%Chg		30.0%	-1.9%	-10.7%	18.3%	-4.9%			

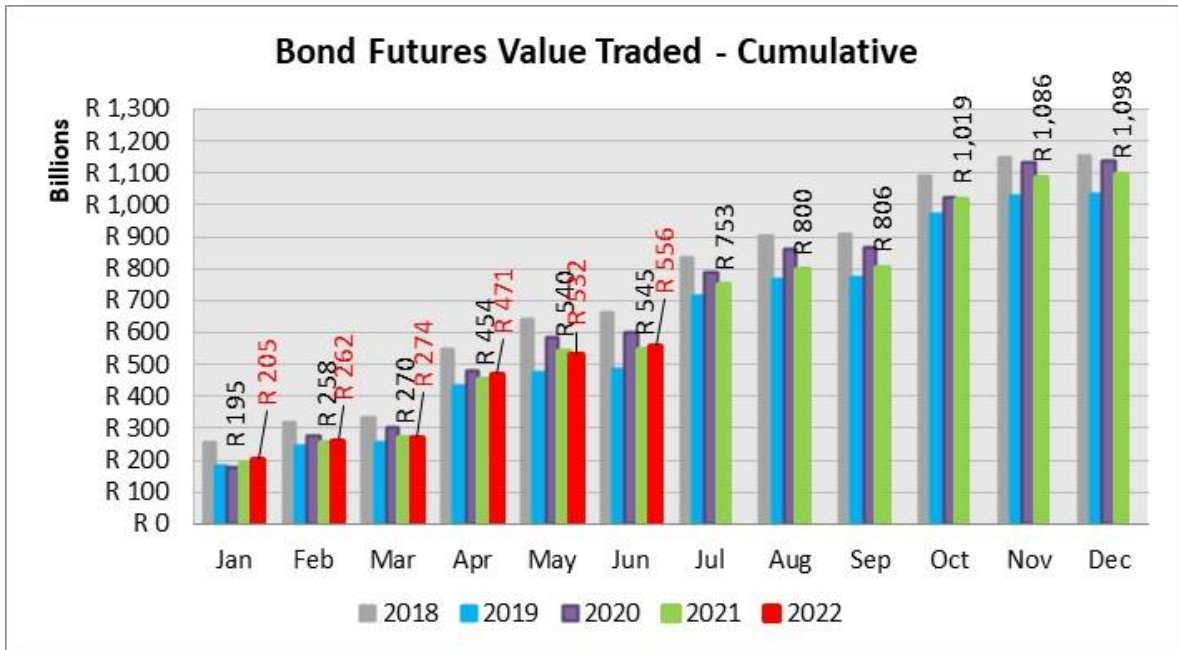


Since the derivative activity is very seasonal and varies greatly around the expiration date of contracts, the difference between activity in one month and another month can vary greatly. The 3m rolling average provides an easy way to observe medium to longer trends.

This view shows that the bond futures activity showed strong growth from mid-2021 but reached a peak at 2021 year-end and declined in early 2022. Since Apr-22, there has been an upward trend.

BOND FUTURES: VALUE TRADED

The value traded year-to-date is 2% UP compared to same period in 2021.



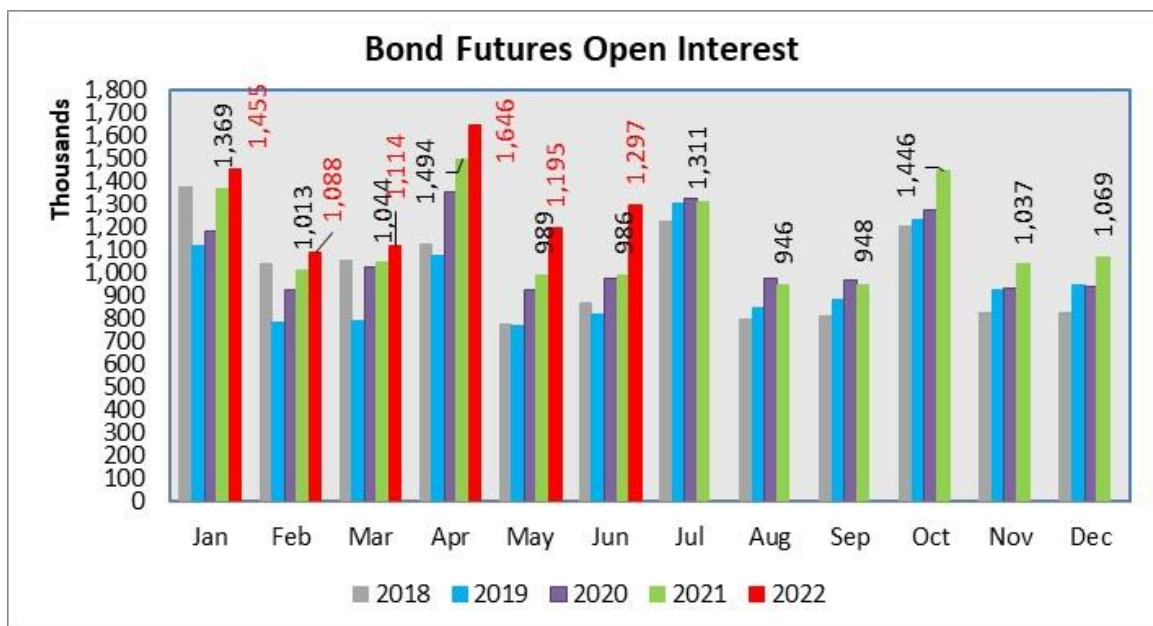
Bond Futures Value Traded Rm									
Date	2016	2017	2018	2019	2020	2021	2022	Chg 21/20	Chg 22/21
Jan	R 93,017	R 207,419	R 253,621	R 180,384	R 176,702	R 194,789	R 204,686	10.2%	5.1%
Feb	R 83,446	R 54,107	R 63,521	R 65,075	R 97,898	R 62,982	R 57,288	-35.7%	-9.0%
Mar	R 8,122	R 15,689	R 18,820	R 7,378	R 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		11.6%	
Aug	R 75,809	R 152,914	R 68,472	R 53,410	R 73,391	R 47,531		-35.2%	
Sep	R 20,266	R 24,072	R 5,123	R 8,239	R 5,882	R 6,139		4.4%	
Oct	R 210,332	R 191,314	R 185,855	R 194,759	R 156,245	R 212,448		36.0%	
Nov	R 55,648	R 126,095	R 54,306	R 59,502	R 109,123	R 67,490		-38.2%	
Dec	R 7,458	R 17,391	R 6,458	R 5,516	R 6,269	R 11,623		85.4%	
TOTAL	980,519	1,219,888	1,153,345	1,034,049	1,138,999	1,097,847	556,434	-3.6%	2.0%
%Chg		24.4%	-5.5%	-10.3%	10.1%	-3.6%			

BOND FUTURES: OPEN INTEREST

Bond Futures Open interest at month end was 1.297m contracts, up 31.7% over last year.

Open interest continues to remain well above last year's levels for the same periods, even though the contracts traded YTD are similar. This could be attributed to some roll activity being shifted from near-term contracts out to the medium-term contracts. This could be a function of higher carry costs from an increasing interest rate environment. In May and Jun 2021, the open interest in the Middle and longer-dated contracts represented about 9% of total Open Interest, while it represented about 15% of the open interest in May and Jun 2022

Bond Futures Open Int % Split		
	Near	Other Expiries
2021.05	91.7%	8.3%
2021.06	90.7%	9.3%
2022.05	84.5%	15.5%
2022.06	85.2%	14.8%

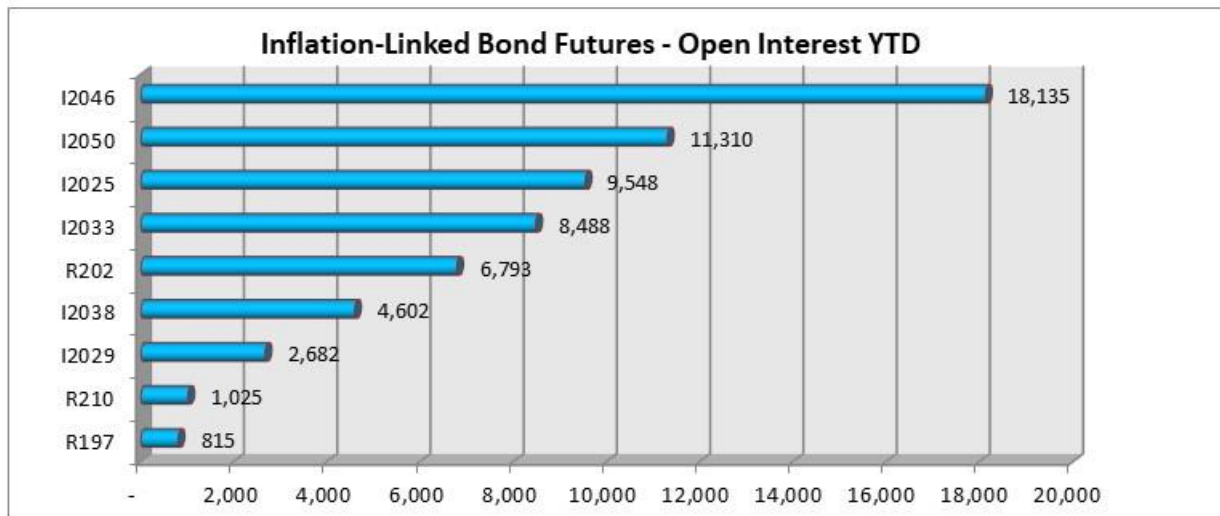
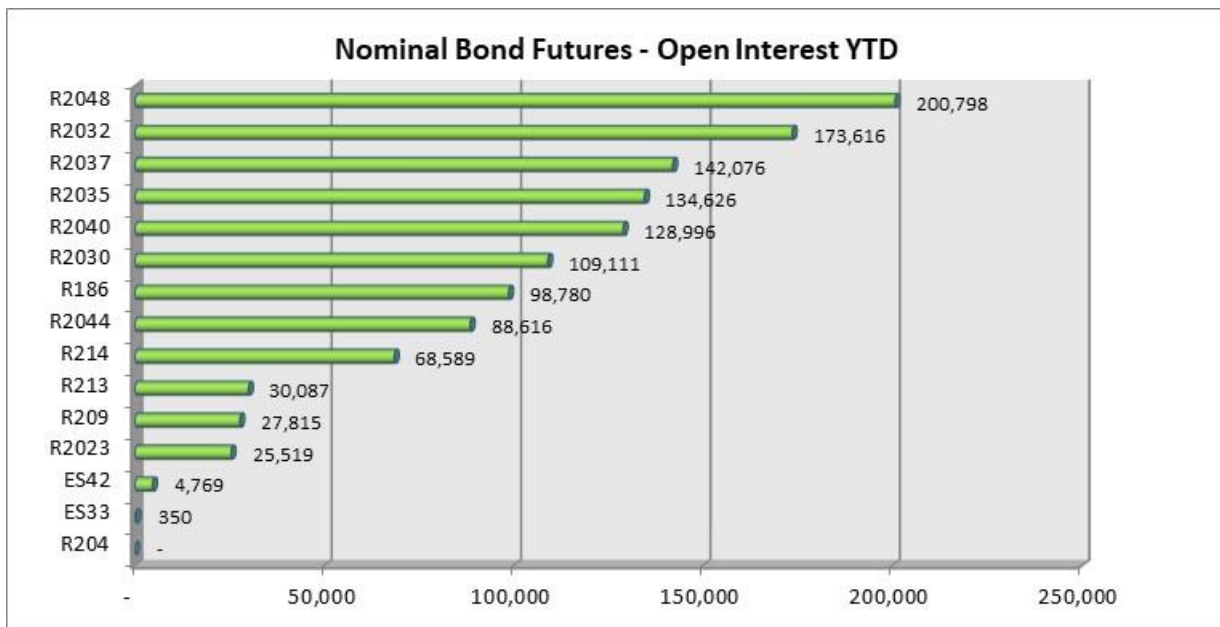


Bond Futures Open Interest									
Date	2016	2017	2018	2019	2020	2021	2022	Chg 21/20	Chg 22/21
Jan	713,913	1,137,425	1,372,543	1,118,795	1,183,158	1,368,771	1,454,861	15.7%	6.3%
Feb	633,062	770,321	1,037,493	784,852	921,269	1,012,584	1,088,101	9.9%	7.5%
Mar	650,335	801,800	1,052,470	787,390	1,027,896	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		-0.8%	
Aug	655,211	977,327	798,912	849,438	973,254	946,280		-2.8%	
Sep	657,642	981,713	809,221	883,920	969,022	948,396		-2.1%	
Oct	999,507	1,383,649	1,201,141	1,231,132	1,273,672	1,445,779		13.5%	
Nov	793,813	1,020,399	826,316	927,675	931,839	1,036,547		11.2%	
Dec	798,552	1,016,463	827,458	944,806	936,762	1,069,111		14.1%	
%Chg		27.3%	-18.6%	14.2%	-0.9%	14.1%			31.5%

BOND FUTURES: OPEN INTEREST PER INSTRUMENT

The largest open positions in the R2032 and R2048 ranging from ~R17 bln to R20 bln nominal (173k-200k open contracts). Largest linker open interest is the I2046 at R1.8bln nominal underlying

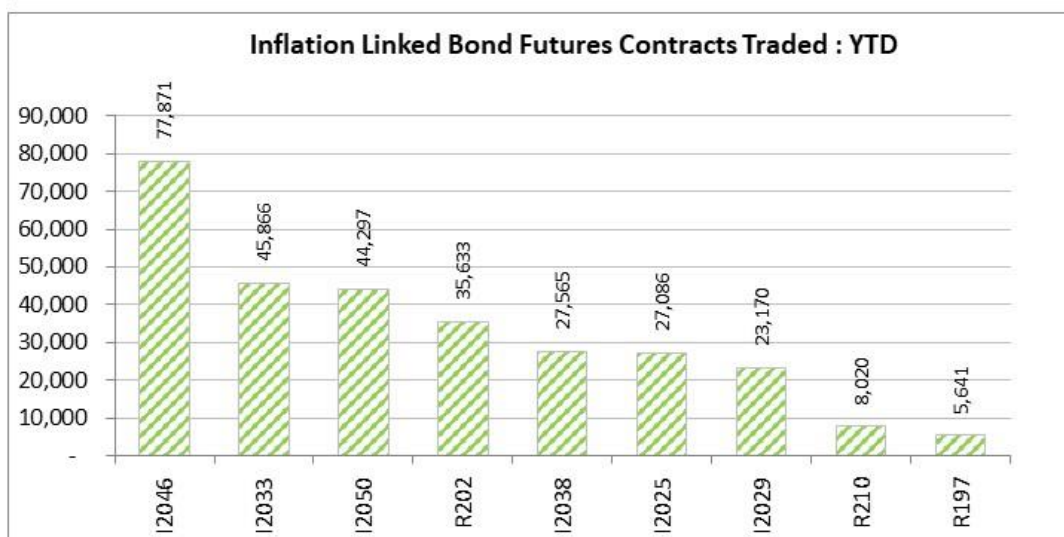
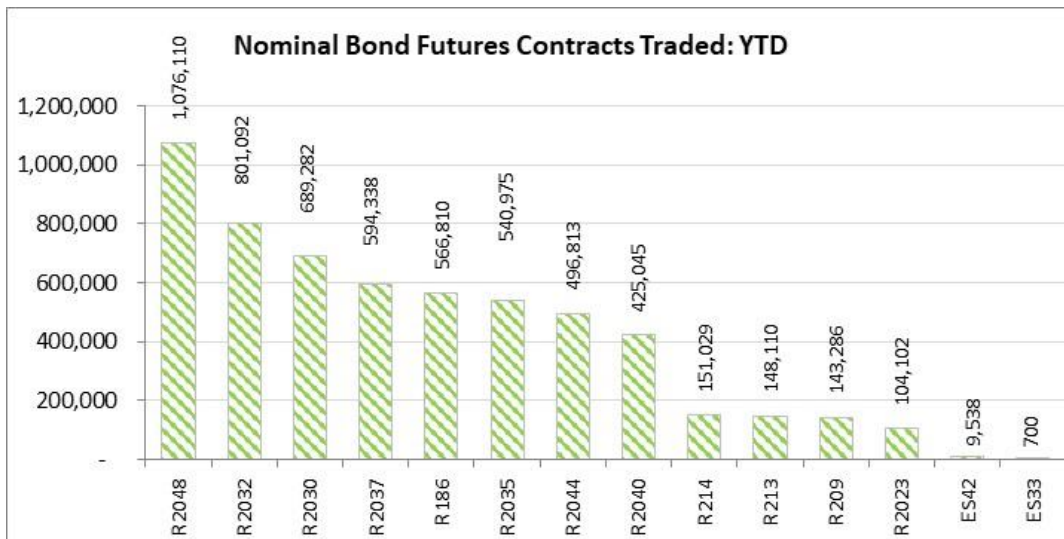
Open Interest Table: YTD			
	Nominal Bond	Inflation-Linkers	Total
Contracts	1,233,748	63,398	1,297,146
Nominal Value Rm	123,375	6,340	129,715
% Split	95.1%	4.9%	100.0%



SINGLE BOND FUTURE CONTRACTS

The most actively traded bond future ytd is the R2048 with a total of R107bIn notional underlying. The graph shows a further 7 bonds trading above R40bIn notional

Total Contracts Traded ytd			
	Nominal Bond	Inflation-Linkers	Total
Contracts	5,747,230	295,149	6,042,379
Nominal Value Rm	574,723	29,515	604,238
% Split	95.1%	4.9%	100.0%



OPTIONS ON BOND FUTURES

OPTIONS ON BOND FUTURES: CONTRACTS TRADED YTD

Despite option volumes in Jun up 58% compared to last year, the YTD activity in Bond Options is 11.5% DOWN over the same period last year.

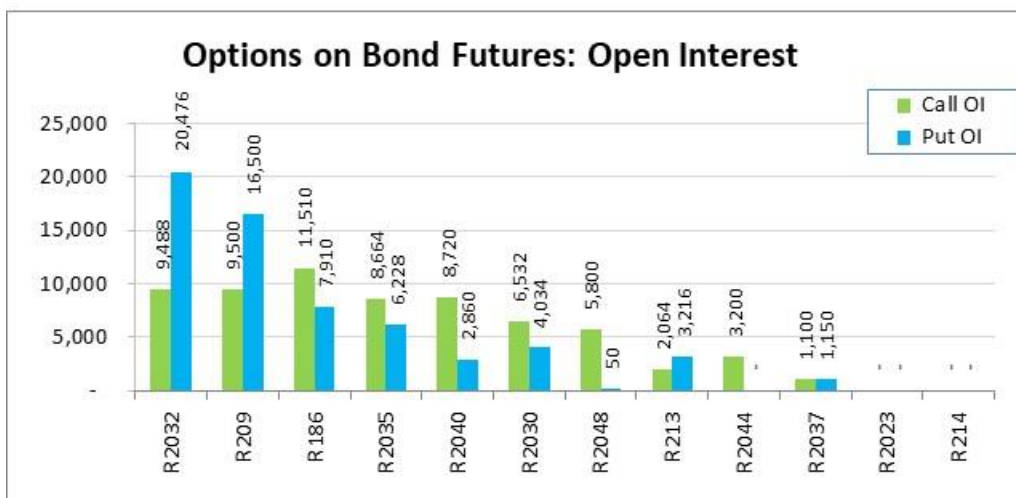
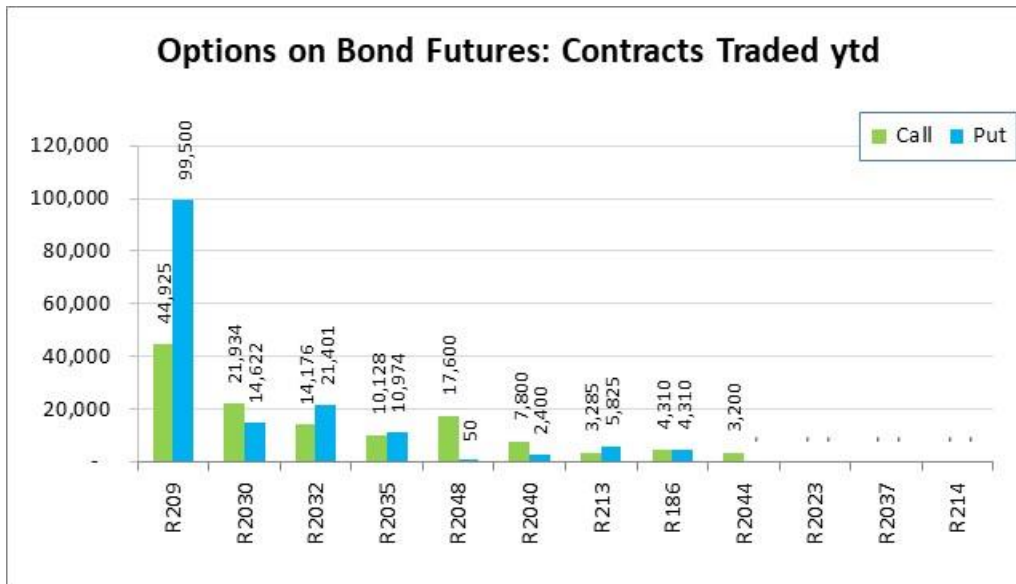


Options on Bond Futures Contracts Traded									
Date	2016	2017	2018	2019	2020	2021	2022	Chg 21/20	Chg 22/21
Jan	-	14,483	60,405	19,110	77,201	38,681	46,400	-49.9%	20.0%
Feb	17,536	11,415	54,977	59,033	210,210	46,540	79,967	-77.9%	71.8%
Mar	8,812	25,538	28,832	95,276	36,940	37,707	39,461	2.1%	4.7%
Apr	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	-	-44.0%	-
Aug	54,921	63,882	17,260	131,864	61,600	39,951	-	-35.1%	-
Sep	36,208	22,555	19,612	7,489	25,183	41,050	-	63.0%	-
Oct	12,419	26,394	78,210	58,639	61,600	92,483	-	50.1%	-
Nov	50	34,036	63,736	140,504	96,308	88,761	-	-7.8%	-
Dec	50	63,418	16,886	34,609	76,656	2,100	-	-97.3%	-
TOTAL	205,539	307,322	428,713	961,911	803,665	604,424	286,440	-24.8%	-11.4%
%Chg		49.5%	39.5%	124.4%	-16.5%	-24.8%			

OPTIONS ON BOND FUTURES: CONTRACTS TRADED AND OPEN INTEREST

The options activity in 2022 is spread over 9 different bonds. Overall open interest is spread over 10 bonds, with even split between put and call open interest. The largest open interest is in the R2032 put and R209 put options

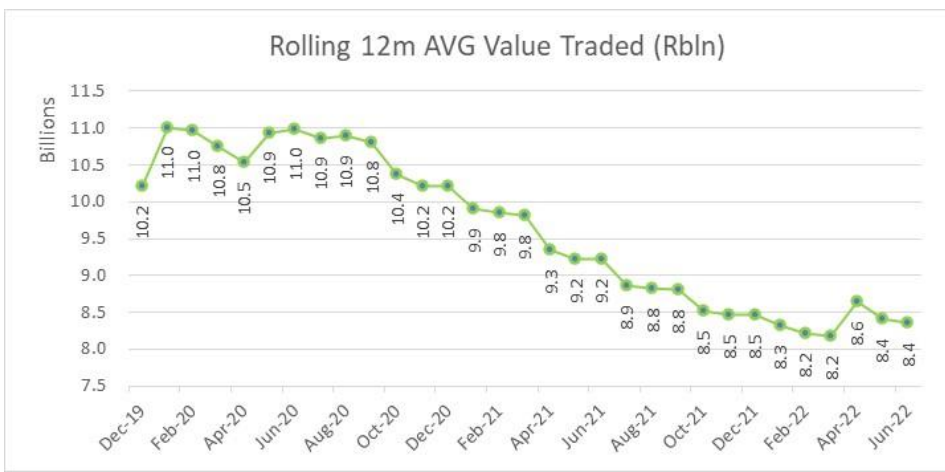
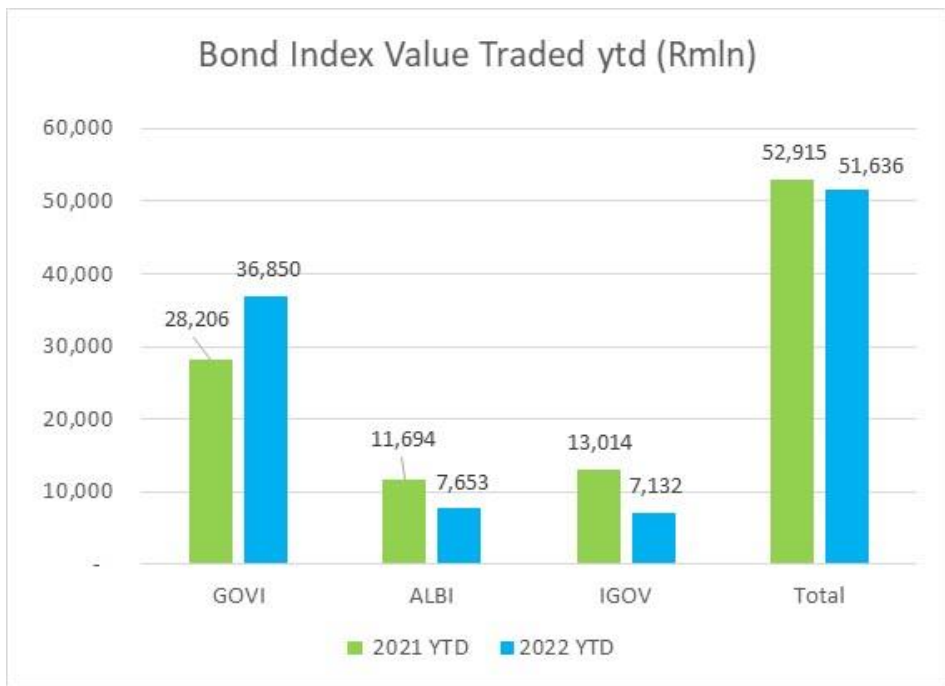
Options on Bond Futures				
	Contracts ytd		Open Interest	
Calls	127,358	44.5%	66,578	51.6%
Puts	159,082	55.5%	62,424	48.4%
Total	286,440	100.0%	129,002	100.0%



BOND INDEX FUTURES

Bond index activity is best determined using value traded as contracts have a nominal exposure equivalent to (100k * Index level). The current year-to-date value traded is 2.4% DOWN over previous period. The activity trend seen in the rolling 12m AVG value traded graph shows current average of R8.35bln and has been holding at similar levels since Nov-21.

VALUE TRADED Rm				
	GOVI	ALBI	IGOV	Total
2021 YTD	28,206	11,694	13,014	52,915
2022 YTD	36,850	7,653	7,132	51,636
% Change	30.6%	-34.6%	-45.2%	-2.4%



VALUE TRADED Rm					
	GOVI	ALBI	IGOV	Val Traded	Roll 12m Avg ValT
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

End of report.