

JSE
INTEREST RATE DERIVATIVES
MONTHLY VIEW

(including YTD statistics)

August 2023

Compiled by the IRC team

CONTENTS

CONTENTS.....	2
HIGHLIGHTS	3
CURRENT TRENDS IN BOND FUTURES ACTIVITY	4
MONTHLY SNAPSHOT	5
YEAR-TO-DATE STATISTICS.....	7
IRD CONTRACTS TRADED	7
IRD VALUE TRADED	7
IRD TRADED NOMINAL EXPOSURE*	7
IRD OPEN INTEREST	7
VALUE TRADED PRODUCT SPLIT	8
CLOSE OUT VOLUME OVER TWO-MONTH PERIOD	8
BOND FUTURES.....	9
BOND FUTURES: CONTRACTS TRADED	9
BOND FUTURES: VALUE TRADED.....	11
BOND FUTURES: OPEN INTEREST	12
SINGLE BOND FUTURES ACTIVITY.....	13
SINGLE BOND FUTURES: CONTRACTS TRADED PER INSTRUMENT	13
SINGLE BOND FUTURES: OPEN INTEREST PER INSTRUMENT	14
OPTIONS ON BOND FUTURES	15
OPTIONS: TOTAL CONTRACTS TRADED	15
OPTIONS: ACTIVITY PER INSTRUMENT	16
BOND INDEX FUTURES.....	17

Disclaimer: JSE Limited (“JSE”) does not, whether expressly, tacitly or implicitly, represent, warrant or in any way guarantee the accuracy, reliability, completeness or currency of any data and information in relation to the information contained in, displayed on, linked to or distributed through this document. All data and information as set out in this document is provided for information purposes and is not intended to, nor does it, reflect or constitute investment or other professional advice and no responsibility or liability of any kind or nature, howsoever arising (including in negligence), will be accepted by the JSE, its officers, employees and agents for any errors contained in, or for any loss arising from use of, or reliance on the data or information in this document. No part of this document may be copied, reproduced, amended, used or transmitted in any way without the prior written consent of the JSE.

HIGHLIGHTS

Month to Prev Year Comparison					
	Bond Fut.	Bond Opt.	Index Fut.	Swap/JibarF	TOTAL
2022.08	1,319,225	121,321	62	-	1,440,608
2023.08	733,732	31,291	201	-	765,224
% Move	-44%	-74%	224%		-47%

Post the August close out, activity was very subdued, with total contracts traded in August at 765k. The year-to-date (YTD) stats are as follows:

- The total IRD contracts traded ytd is 10.7m, an increase of 1.8% over same period last year. The IRD Open interest at 1.4m contracts, is down 3.6% compared to the last year.
- Bond futures at 10.3m contracts ytd is up 2.6% with Open interest at 1.3m contracts, down 0.6%
- Activity in Inflation-linked bond index futures is up 25% YTD albeit off a low base and represents a larger activity than that traded on the ALBI. The overall Bond Index Future value traded¹ at R77bn, is DOWN 2.7% compared to last year. Open Interest is 15% down compared to same period.

The 2022 full-year stats revisited (previous year) (Details in the December 2022 newsletter)

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%

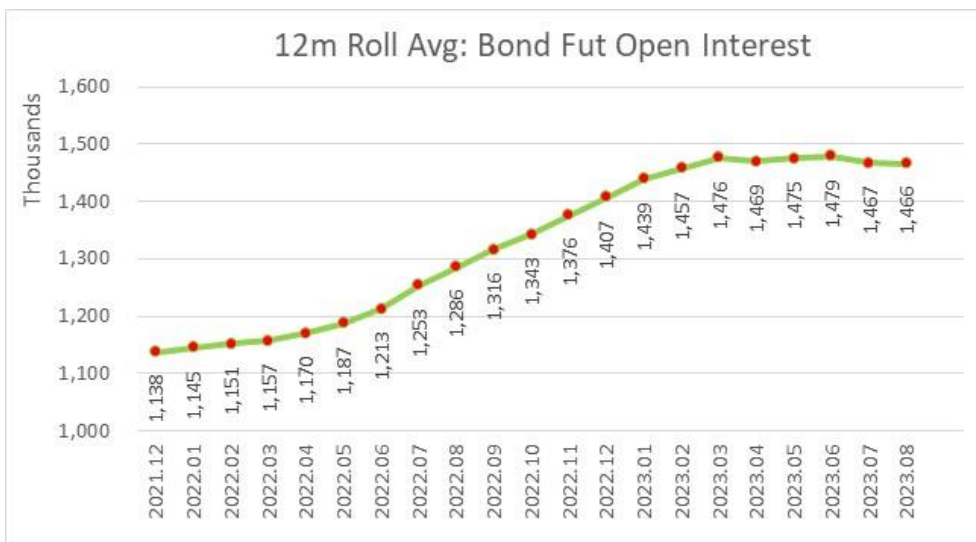
IRD OPEN INTEREST CONTRACTS							
Period	Bond Fut	Bond Opt	Govi Fut	Index Fut	JIBAR Fut	SWAP Fut	Total
2021	1,069,111	126,584	987	721	215	-	1,197,618
2022	1,441,149	131,744	848	798	415	-	1,574,954
Growth	34.8%	4.1%	-14.1%	10.7%	93.0%	-	31.5%

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

CURRENT TRENDS IN BOND FUTURES ACTIVITY

Bond Futures tend to be traded as term instruments which results in large volumes trading around expiry dates and lower volumes in other periods. The trend is seen as a Rolling Average.

Bond Futures Trends: Contracts Traded and Open Interest



Volumes in Bond futures (based on 12m rolling avg contracts traded) have been on a decline since Jun23 after an upward trend since Jun22. However, Open Interest in 2023 maintaining a flat level over past 3 months after a long upward trend since 2021.

MONTHLY SNAPSHOT

CONTRACTS TRADED

Monthly Snapshot Contracts Traded								
	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
2023.01	2,506,348	32,900	19,235	1,825	1,601	-	-	2,561,909
2023.02	767,485	34,206	26,980	113	190	-	-	828,974
2023.03	692,216	-	-	6	10	-	-	692,232
2023.04	1,814,305	16,080	500	1,805	1,540	830	-	1,835,060
2023.05	590,911	83,272	76,774	98	308	-	-	751,363
2023.06	703,927	16,263	17,000	8	210	-	-	737,408
2023.07	2,517,442	11,236	17,992	2,325	1,343	-	-	2,550,338
2023.08	733,732	18,434	12,857	31	170	-	-	765,224



OPEN INTEREST

Monthly Snapshot Open Interest								
	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
2023.01	1,838,132	93,530	82,849	937	923	415	-	2,016,786
2023.02	1,306,934	58,044	66,733	834	755	415	-	1,433,715
2023.03	1,335,393	58,044	66,733	840	753	415	-	1,462,178
2023.04	1,566,458	64,044	66,233	932	1,028	-	-	1,698,695
2023.05	1,271,056	88,096	65,851	838	756	-	-	1,426,597
2023.06	1,338,828	103,096	81,851	832	603	-	-	1,525,210
2023.07	1,657,511	112,523	99,109	838	790	-	-	1,870,771
2023.08	1,324,456	60,001	57,373	823	622	-	-	1,443,275



YEAR-TO-DATE STATISTICS

IRD CONTRACTS TRADED

Listed IRD CONTRACTS TRADED							
YTD - Contracts	Bond Fut	Bond Opt	Govi Fut	Index Fut	JIBAR Fut	SWAP Fut	Total
YTD 2022	10,060,975	462,808	6,800	5,145	422	-	10,536,150
YTD 2023	10,326,366	383,729	6,211	5,372	830	-	10,722,508
Growth	2.6%	-17.1%	-8.7%	4.4%			1.8%

IRD VALUE TRADED

IRD VALUE TRADED YTD (Rm)							
Period	Bond Fut	Bond Opt	Govi Fut	Index Fut	JIBAR Fut	SWAP Fut	Total
YTD 2022	895,985	806	55,833	23,454	10	-	976,088
YTD 2023	898,275	548	54,633	22,533	19	-	976,008
Growth	0.3%	-32.0%	-2.1%	-3.9%	93.8%		-0.01%

IRD TRADED NOMINAL EXPOSURE*

LISTED IRD UNDERLYING NOMINAL EXPOSURE Rbin							
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	
YTD 2022	1,006.1	46.3	55.8	23.5	0.0	-	1,131.7
YTD 2023	1,032.6	38.4	54.6	22.5	0.083	-	1,148.3
Growth	2.6%	-17.1%	-2.1%	-3.9%			1.5%
% Split	89.9%	3.3%	4.8%	2.0%	0.0%	0.0%	100.0%

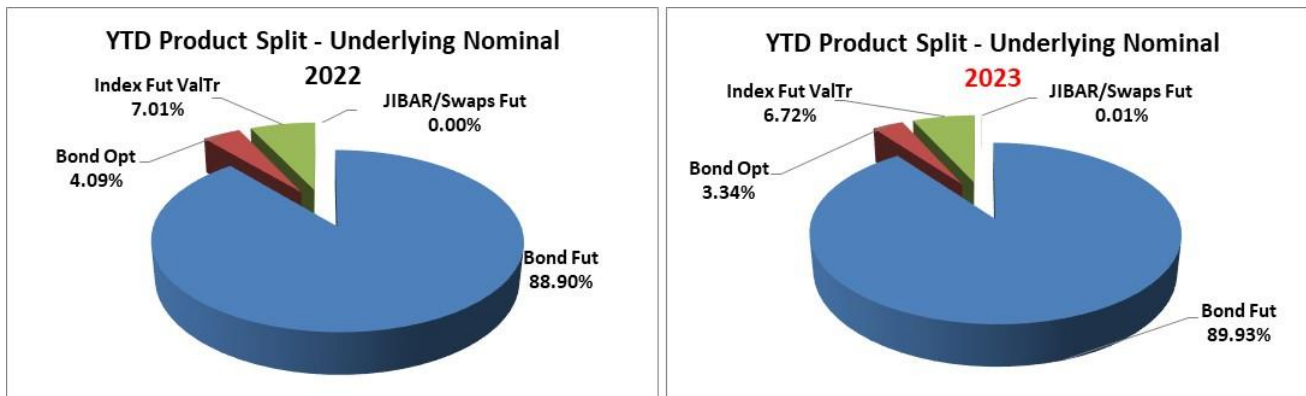
*Effective nominal exposure (and value traded for indices) is used as comparable metric for activity across markets. Underlying nominals traded are represented by the contract size multiplied by the contracts traded, except for the Govi and Index futures which are represented by the actual value traded.

IRD OPEN INTEREST

IRD OPEN INTEREST CONTRACTS							
Period	Bond Fut	Bond Opt	Govi Fut	Index Fut	JIBAR Fut	SWAP Fut	Total
2022	1,332,947	162,002	870	839	415	-	1,497,073
2023	1,324,456	117,374	823	622	-	-	1,443,275
Growth	-0.6%	-27.5%	-5.4%	-25.9%	-100.0%		-3.6%

VALUE TRADED PRODUCT SPLIT

The **GOVI and Index Futures** represent **6.7%** of all IRD value traded YTD (down from 7.0% previous year) but **only** a small percentage (<1%) of all contracts traded due to the high nominal underlying per contract.



CLOSE OUT VOLUME OVER TWO-MONTH PERIOD

Roll activity typically starts in the month prior to close-out. Thus, close-out activity is represented by consolidating **volumes for the close-out month and the prior month as a 2-month period**. The Aug23 closeout 2 month period was 21% lower than the same period last year, however some roll activity is starting to take place in the earlier month (Jun) and thus not included in the numbers.

ALL IRD CONTRACTS (in 2-mth periods) (millions of contracts)									
Close-Out (2-mth)	2017	2018	2019	2020	2021	2022	2023	% Chg 22/21	% Chg 23/22
Close-Out 1 (Feb)	2.455	3.292	2.609	3.097	2.883	2.936	3.391	1.8%	15.5%
Close-Out 2 (May)	2.491	2.973	2.518	3.219	3.082	2.888	2.586	-6.3%	-10.5%
Close-Out 3 (Aug)	3.051	2.532	3.009	3.040	2.769	4.199	3.316	51.7%	-21.0%
Close-Out 4 (Nov)	3.320	2.749	2.787	3.082	3.287	3.440	-	4.7%	

Note that roll and close out activity seems to have shifted from 1 month prior to expiry, to 2 months prior to expiry; this means that volumes should be compared over a 3 month period.

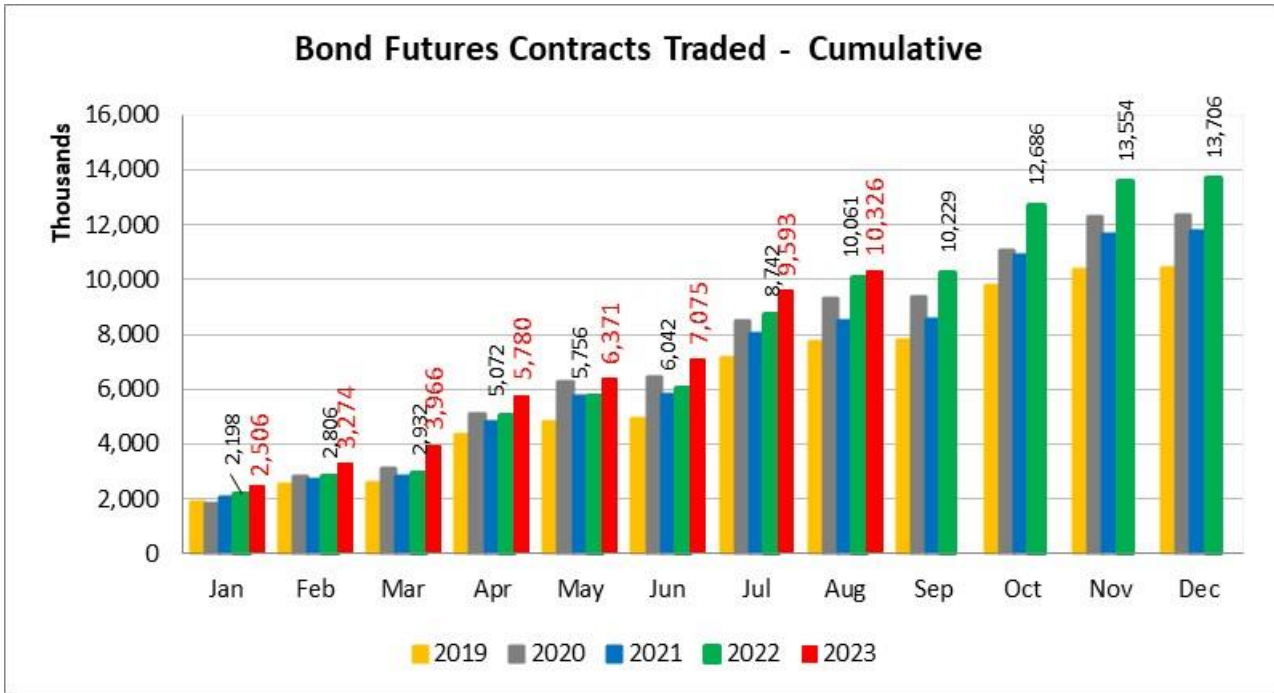
BOND FUTURES

BOND FUTURES: CONTRACTS TRADED

The Bond Futures contracts traded in July were 44% lower than last year. Note that roll and close out activity seems to have shifted from 1 month prior to expiry to 2 months prior to expiry; this means that volumes should be compared over a 3 month period. Overall, the activity YTD is up 2.6%.

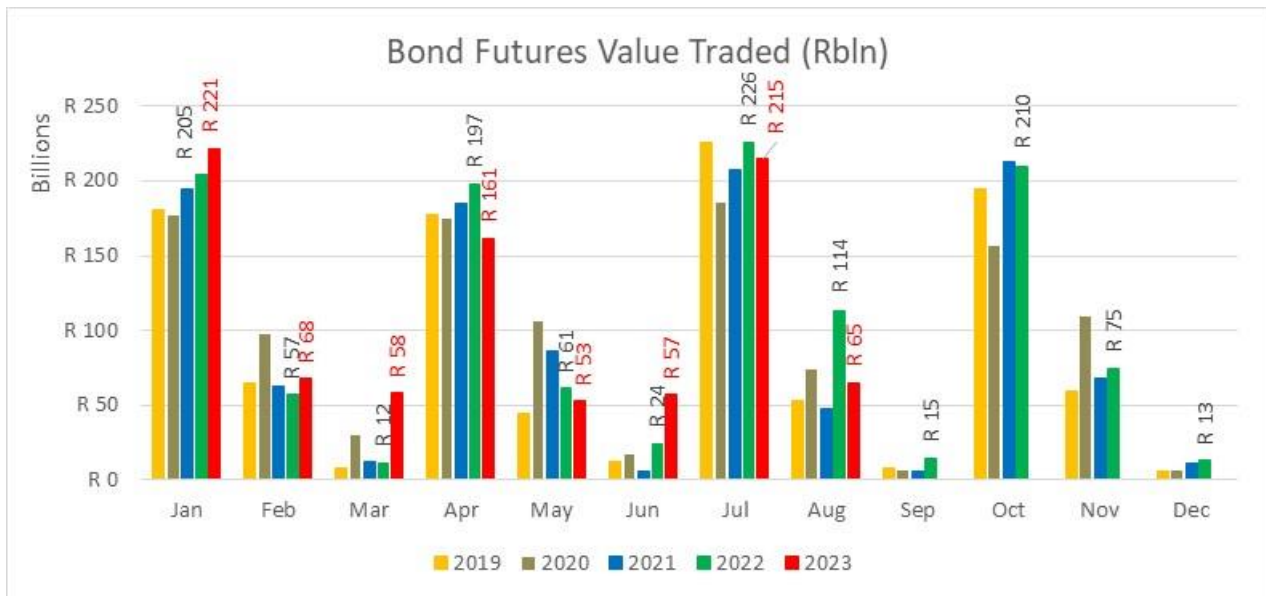


Bond Futures Contracts Traded										
Date	2016	2017	2018	2019	2020	2021	2022	2023	Chg 22/21	Chg 23/22
Jan	826,485	1,963,456	2,512,043	1,872,040	1,808,945	2,064,147	2,198,294	2,506,348	6.5%	14.0%
Feb	883,377	493,725	622,760	654,730	994,022	647,370	607,540	767,485	-6.2%	26.3%
Mar	79,520	148,066	184,080	71,194	337,360	127,022	126,385	692,216	-0.5%	447.7%
Apr	1,490,182	1,168,792	2,071,717	1,778,197	1,984,879	1,995,098	2,139,536	1,814,305	7.2%	-15.2%
May	854,135	1,322,123	868,973	434,577	1,152,932	920,233	683,749	590,911	-25.7%	-13.6%
Jun	134,452	177,529	241,609	121,845	187,670	50,847	286,875	703,927	464.2%	145.4%
Jul	1,542,365	1,475,383	1,770,507	2,232,039	2,022,009	2,210,468	2,699,371	2,517,442	22.1%	-6.7%
Aug	691,788	1,497,690	706,275	550,331	820,119	497,888	1,319,225	733,732	165.0%	-44.4%
Sep	207,021	235,816	53,904	85,331	59,877	61,417	168,100		173.7%	
Oct	1,903,245	1,947,995	1,987,598	1,970,014	1,707,398	2,316,337	2,457,306		6.1%	
Nov	477,584	1,304,500	599,247	610,292	1,210,516	734,640	867,642		18.1%	
Dec	77,224	180,041	69,157	57,887	64,811	123,724	151,727		22.6%	
TOTAL	9,167,378	11,915,116	11,687,870	10,438,477	12,350,538	11,749,191	13,705,750	10,326,366	16.7%	2.6%
%Chg		30.0%	-1.9%	-10.7%	18.3%	-4.9%	16.7%			



BOND FUTURES: VALUE TRADED

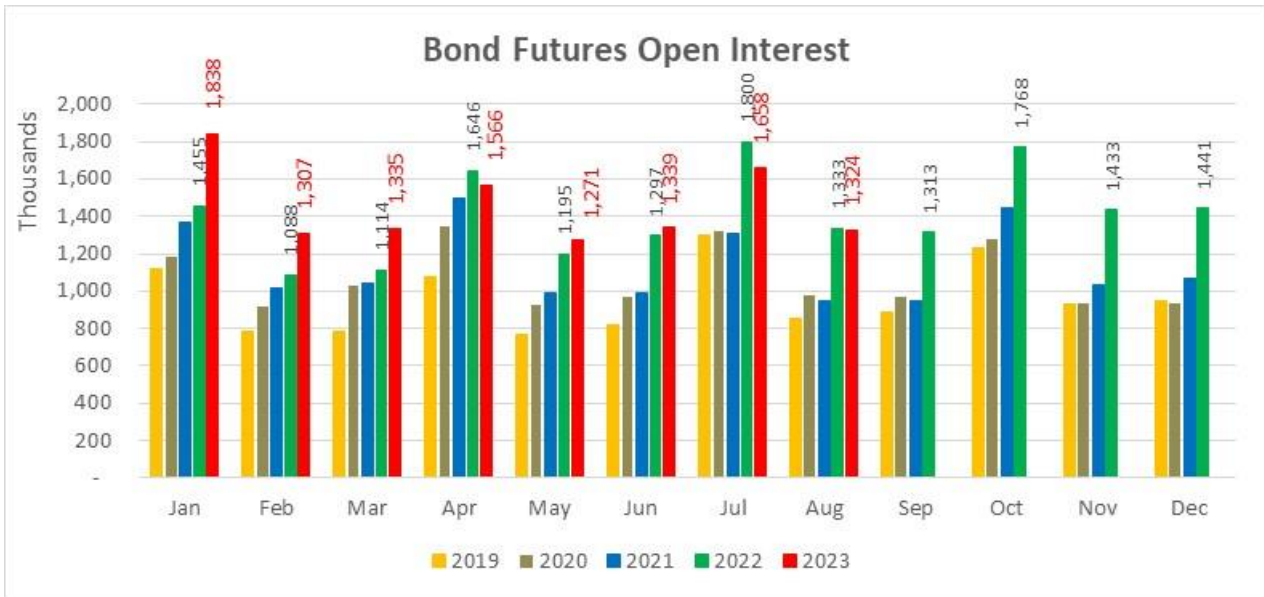
The bond futures value traded year-to-date is flat (+0.3%) compared to same period last year.



Bond Futures Value Traded Rm										
Date	2016	2017	2018	2019	2020	2021	2022	2023	Chg 22/21	Chg 23/22
Jan	R 93,017	R 207,419	R 253,621	R 180,384	R 176,702	R 194,789	R 204,686	R 221,224	5.1%	8.1%
Feb	R 83,446	R 54,107	R 63,521	R 65,075	R 97,898	R 62,982	R 57,288	R 67,617	-9.0%	18.0%
Mar	R 8,122	R 15,689	R 18,820	R 7,378	R 29,570	R 12,063	R 11,528	R 58,227	-4.4%	405.1%
Apr	R 159,522	R 128,361	R 212,944	R 177,545	R 174,397	R 184,453	R 197,483	R 161,332	7.1%	-18.3%
May	R 87,612	R 131,736	R 91,403	R 44,429	R 106,329	R 85,790	R 61,213	R 52,945	-28.6%	-13.5%
Jun	R 13,129	R 19,049	R 22,502	R 11,983	R 17,525	R 5,349	R 24,236	R 57,148	353.1%	135.8%
Jul	R 166,159	R 151,742	R 170,320	R 225,830	R 185,667	R 207,191	R 225,996	R 214,783	9.1%	-5.0%
Aug	R 75,809	R 152,914	R 68,472	R 53,410	R 73,391	R 47,531	R 113,556	R 64,999	138.9%	-42.8%
Sep	R 20,266	R 24,072	R 5,123	R 8,239	R 5,882	R 6,139	R 14,741		140.1%	
Oct	R 210,332	R 191,314	R 185,855	R 194,759	R 156,245	R 212,448	R 210,025		-1.1%	
Nov	R 55,648	R 126,095	R 54,306	R 59,502	R 109,123	R 67,490	R 74,688		10.7%	
Dec	R 7,458	R 17,391	R 6,458	R 5,516	R 6,269	R 11,623	R 12,765		9.8%	
TOTAL	980,519	1,219,888	1,153,345	1,034,049	1,138,999	1,097,847	1,208,205	898,275	10.1%	0.3%
%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 1.3m contracts, down 0.6% over equivalent period last year.



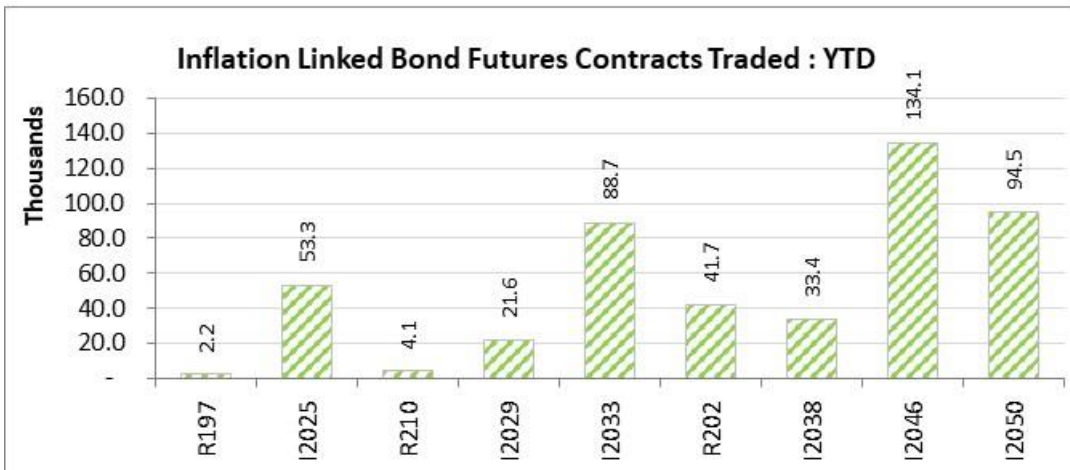
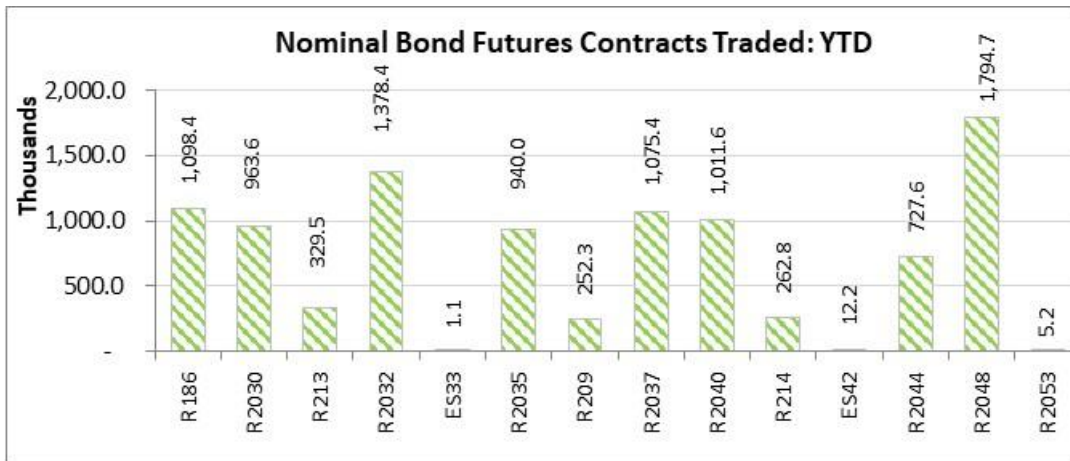
Bond Futures Open Interest										
Date	2016	2017	2018	2019	2020	2021	2022	2023	Chg 22/21	Chg 23/22
Jan	713,913	1,137,425	1,372,543	1,118,795	1,183,158	1,368,771	1,454,861	1,838,132	6.3%	26.3%
Feb	633,062	770,321	1,037,493	784,852	921,269	1,012,584	1,088,101	1,306,934	7.5%	20.1%
Mar	650,335	801,800	1,052,470	787,390	1,027,896	1,043,823	1,114,292	1,335,393	6.8%	19.8%
Apr	890,406	1,037,427	1,126,181	1,073,638	1,349,483	1,493,709	1,645,940	1,566,458	10.2%	-4.8%
May	752,370	794,207	777,714	769,139	923,863	989,485	1,195,046	1,271,056	20.8%	6.4%
Jun	753,049	868,162	870,652	817,539	971,675	986,432	1,297,146	1,338,828	31.5%	3.2%
Jul	996,943	1,139,985	1,222,141	1,302,006	1,321,763	1,311,466	1,800,421	1,657,511	37.3%	-7.9%
Aug	655,211	977,327	798,912	849,438	973,254	946,280	1,332,947	1,324,456	40.9%	-0.6%
Sep	657,642	981,713	809,221	883,920	969,022	948,396	1,313,187		38.5%	
Oct	999,507	1,383,649	1,201,141	1,231,132	1,273,672	1,445,779	1,767,793		22.3%	
Nov	793,813	1,020,399	826,316	927,675	931,839	1,036,547	1,432,909		38.2%	
Dec	798,552	1,016,463	827,458	944,806	936,762	1,069,111	1,441,149		34.8%	
%Chg		27.3%	-18.6%	14.2%	-0.9%	14.1%	34.8%			-0.6%
Max OI	999,507	1,383,649	1,372,543	1,302,006	1,349,483	1,493,709	1,800,421	1,838,132		

SINGLE BOND FUTURES ACTIVITY

SINGLE BOND FUTURES: CONTRACTS TRADED PER INSTRUMENT

The most actively traded bond futures traded YTD are the R2048 and R2032 futures.

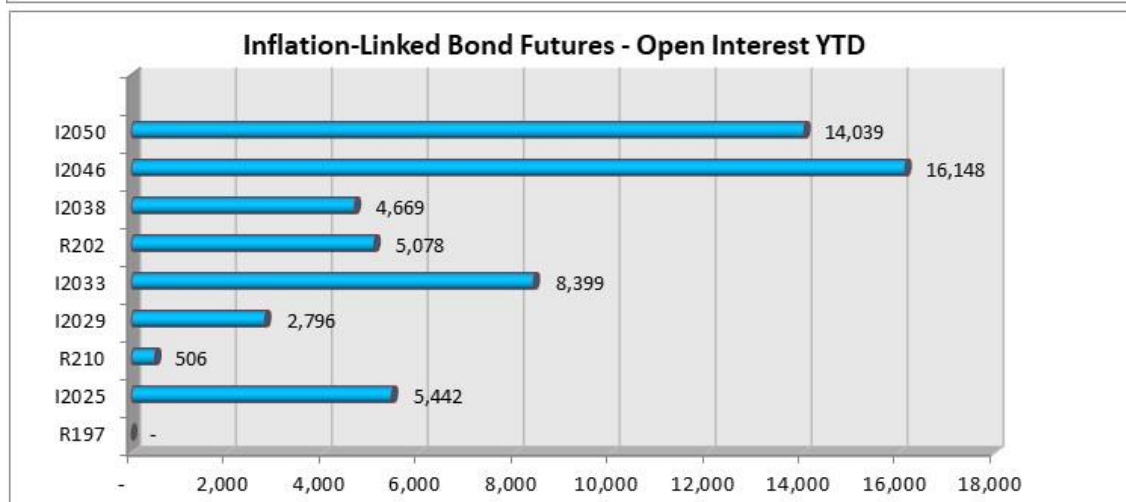
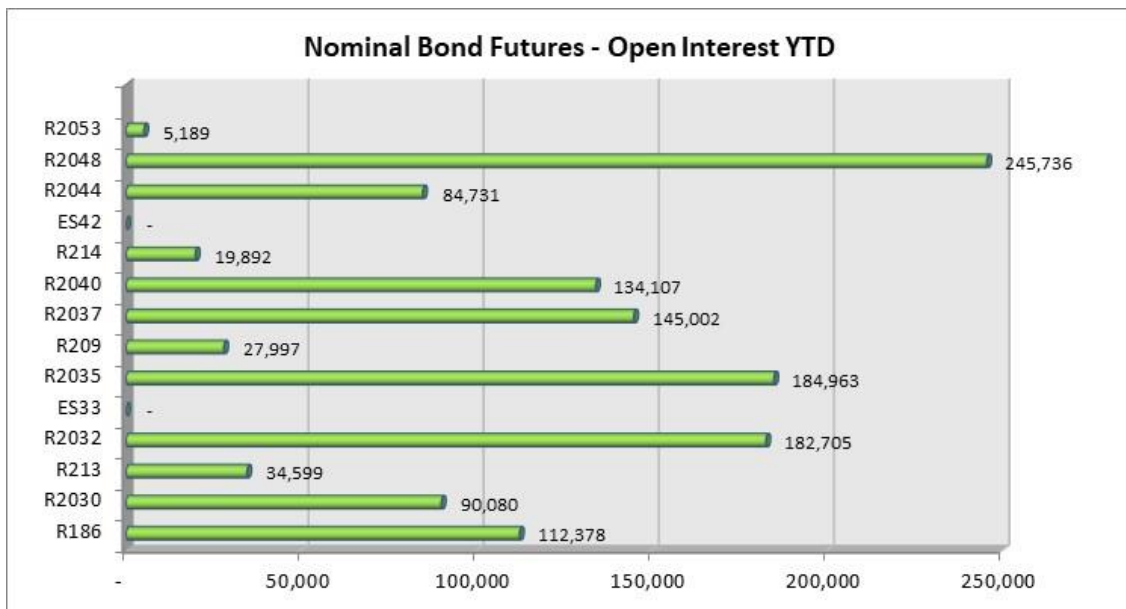
Total Contracts Traded ytd			
	Nominal Bond	Inflation-Linkers	Total
Contracts	9,852,677	473,689	10,326,366
Nominal Value Rm	985,268	47,369	1,032,637
% Split	95.4%	4.6%	100.0%



SINGLE BOND FUTURES: OPEN INTEREST PER INSTRUMENT

The total bond futures open interest YTD was R132bln underlying notional. The largest open position is in the R2048 at R24bln nominal, followed by the R2032 and R2035 at 18.2bln and 18.4bln respectively.

Open Interest Table: YTD			
	Nominal Bond	Inflation-Linkers	Total
Contracts	1,267,379	57,077	1,324,456
Nominal Value Rm	126,738	5,708	132,446
% Split	95.7%	4.3%	100.0%



OPTIONS ON BOND FUTURES

OPTIONS: TOTAL CONTRACTS TRADED

Total contracts traded ytd are down 17% over the same period last year.



Options on Bond Futures Contracts Traded										
Date	2016	2017	2018	2019	2020	2021	2022	2023	Chg 22/21	Chg 23/22
Jan	-	14,483	60,405	19,110	77,201	38,681	46,400	52,135	20.0%	12.4%
Feb	17,536	11,415	54,977	59,033	210,210	46,540	79,967	61,186	71.8%	-23.5%
Mar	8,812	25,538	28,832	95,276	36,940	37,707	39,461	-	4.7%	-100.0%
Apr	22,435	5,400	5,558	143,016	17,731	40,805	39,569	16,580	-3.0%	-58.1%
May	29,048	8,862	20,150	157,005	56,719	121,920	21,560	160,046	-82.3%	642.3%
Jun	5,775	23,320	34,432	26,470	53,416	37,576	59,483	33,263	58.3%	-44.1%
Jul	18,285	8,019	28,655	88,896	30,101	16,850	55,047	29,228	226.7%	-46.9%
Aug	54,921	63,882	17,260	131,864	61,600	39,951	121,321	31,291	203.7%	-74.2%
Sep	36,208	22,555	19,612	7,489	25,183	41,050	36,746	-	-10.5%	-
Oct	12,419	26,394	78,210	58,639	61,600	92,483	24,522	-	-73.5%	-
Nov	50	34,036	63,736	140,504	96,308	88,761	86,324	-	-2.7%	-
Dec	50	63,418	16,886	34,609	76,656	2,100	45,220	-	2053.3%	-
TOTAL	205,539	307,322	428,713	961,911	803,665	604,424	655,620	383,729	8.5%	-17.1%
%Chg		49.5%	39.5%	124.4%	-16.5%	-24.8%	8.5%			

OPTIONS: ACTIVITY PER INSTRUMENT

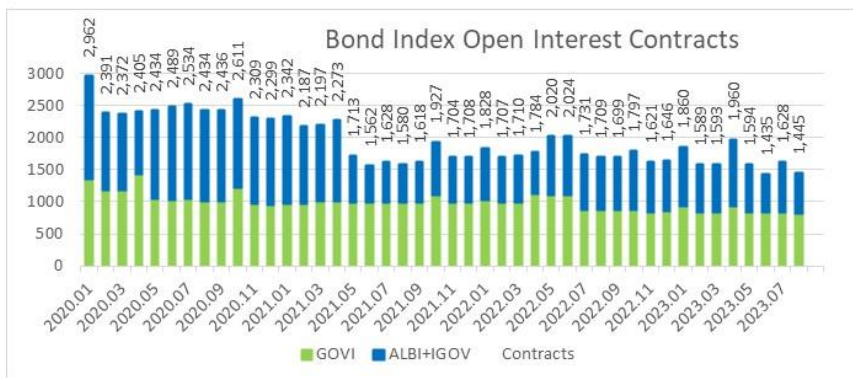
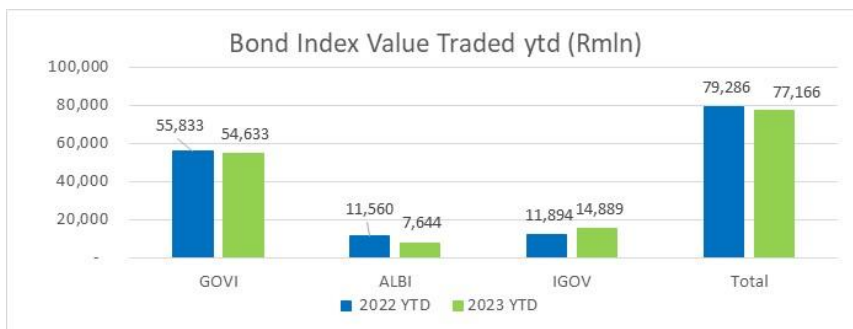
Detailed option activity not available

BOND INDEX FUTURES

A quiet August month saw R755bln value traded in Govi and Index futures, but similar to previous year. Activity in Inflation-linked bond index futures is up 25% YTD albeit off a low base and represents a larger activity than that traded on the ALBI. The overall Bond Index Future value traded² at R77bln, is DOWN 2.7% compared to last year. Open Interest is 15% down compared to same period.

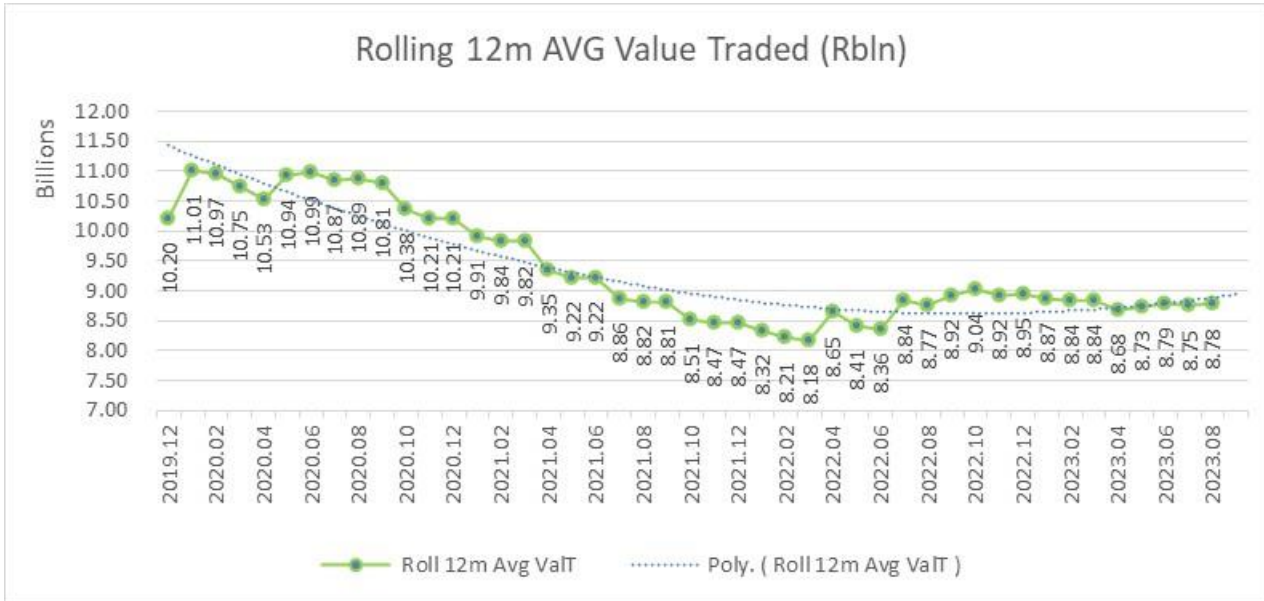
Value Traded Rm				
	GOVI	ALBI	IGOV	Total
2022 YTD	55,833	11,560	11,894	79,286
2023 YTD	54,633	7,644	14,889	77,166
% Change	-2.1%	-33.9%	25.2%	-2.7%

Open Interest Contracts			
	GOVI	ALBI+IGOV	Total
2022 YTD	870	839	1,709
2023 YTD	823	622	1,445
% Change	-5.4%	-25.9%	-15.4%



² Bond index activity is represented by value traded rather than contracts. The contracts have a large nominal exposure contract equivalent to (100k * Index level).

VALUE TRADED Rm					
	GOVI	ALBI	IGOV	Val Traded	Roll 12m Av
2019.01	5,683	11,086	2,674	19,442	
2019.02	497	4,005	327	4,828	
2019.03	2,086	1,092	118	3,296	
2019.04	5,676	16,580	4,658	26,914	
2019.05	538	115	50	702	
2019.06	74	138	-	211	
2019.07	11,167	11,628	4,418	27,214	
2019.08	797	482	271	1,550	
2019.09	339	21	878	1,238	
2019.10	18,183	5,601	7,265	31,049	
2019.11	2,362	2,695	884	5,941	
2019.12	55	14	-	69	10,205
2020.01	17,443	5,266	6,425	29,134	11,012
2020.02	1,283	2,316	663	4,262	10,965
2020.03	73	624	74	771	10,755
2020.04	13,806	4,444	5,987	24,237	10,532
2020.05	2,966	805	1,845	5,616	10,941
2020.06	300	50	461	812	10,991
2020.07	14,676	4,597	6,436	25,710	10,866
2020.08	349	915	552	1,816	10,888
2020.09	43	238	39	320	10,811
2020.10	14,608	5,155	6,094	25,857	10,379
2020.11	1,824	1,228	868	3,920	10,210
2020.12	67	30	8	105	10,213
2021.01	14,739	4,375	6,347	25,461	9,907
2021.02	778	1,715	1,003	3,496	9,843
2021.03	216	181	100	498	9,821
2021.04	11,671	3,020	3,841	18,532	9,345
2021.05	667	2,130	1,351	4,149	9,223
2021.06	134	274	372	780	9,220
2021.07	15,780	2,933	2,711	21,424	8,863
2021.08	239	1,073	18	1,330	8,822
2021.09	88	-	92	181	8,811
2021.10	16,282	2,948	3,056	22,286	8,513
2021.11	1,703	1,510	193	3,406	8,470
2021.12	49	-	-	49	8,466
2022.01	17,537	3,262	2,972	23,771	8,325
2022.02	399	1,753	3	2,155	8,213
2022.03	25	17	9	51	8,176
2022.04	18,758	2,199	3,207	24,164	8,645
2022.05	83	324	937	1,343	8,412
2022.06	48	99	3	151	8,359
2022.07	18,825	3,675	4,710	27,210	8,841
2022.08	158	232	51	441	8,767
2022.09	447	1,058	499	2,005	8,919
2022.10	17,243	1,946	4,507	23,695	9,037
2022.11	314	982	762	2,058	8,924
2022.12	125	69	203	397	8,953
2023.01	16,021	2,287	4,440	22,749	8,868
2023.02	990	295	501	1,787	8,837
2023.03	53	18	26	96	8,841
2023.04	15,968	1,796	4,429	22,194	8,677
2023.05	849	284	904	2,037	8,735
2023.06	69	78	650	797	8,789
2023.07	20,498	2,868	3,386	26,752	8,751
2023.08	185	18	553	755	8,777



End of report.