



# **DARK POOLS AND HIGH FREQUENCY TRADING – WHERE DOES YOUR ORDER GO AND WHY? + NEW PRODUCT DEVELOPMENTS**

**Presenter : John Fildes**

**AUGUST 2016**

# CHI-X KEY FACTS

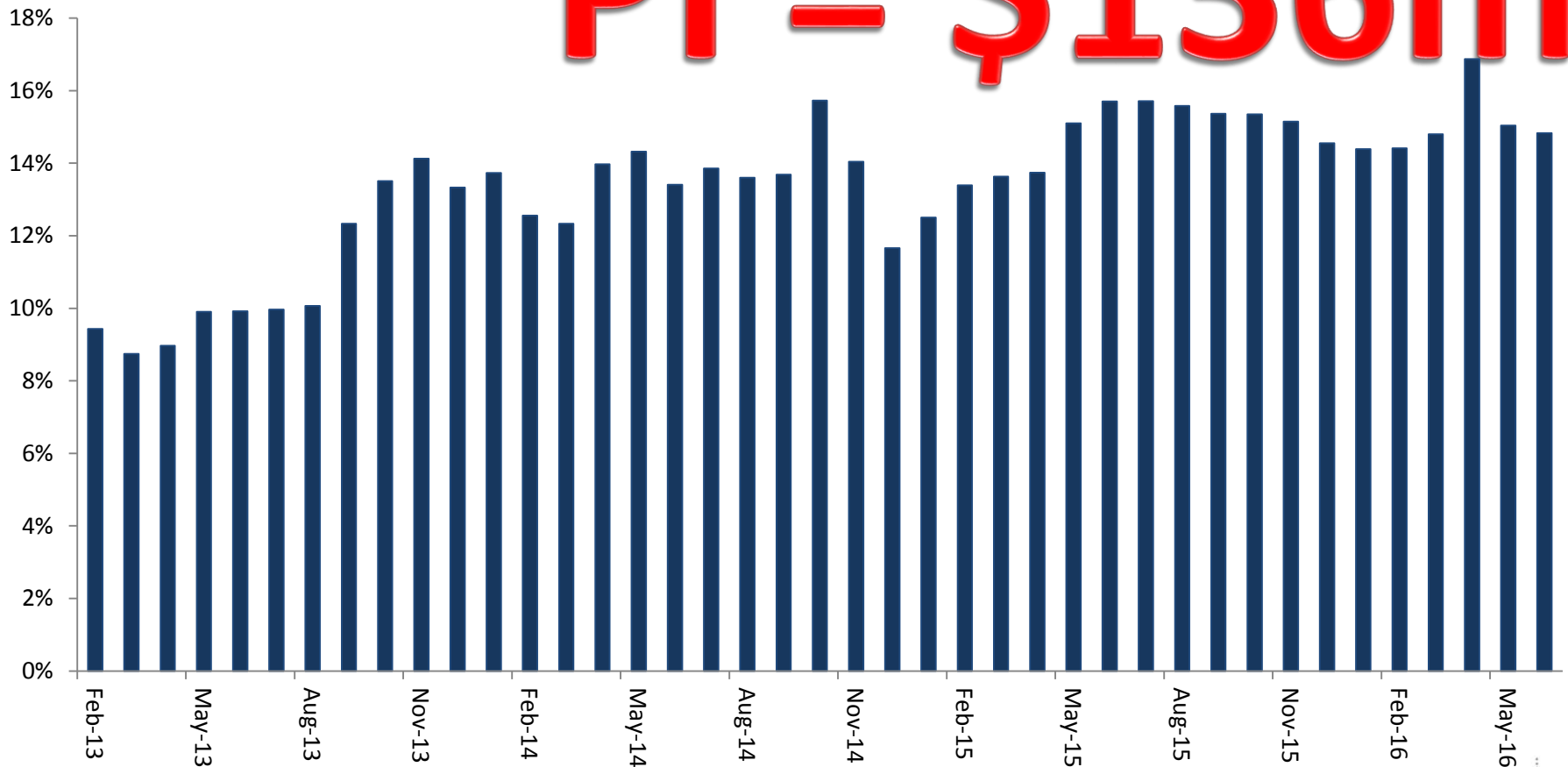
- ✗ Chi-X Australia went live in Oct 2011
- ✗ Offers Chi-X quoted products as well as ASX listed equities and ETFs
- ✗ 42 Participants (Large Insto, Retail, Mid Tier and Market Makers)
- ✗ Trading Hours – 10am to 16.20pm
- ✗ No Opening or Closing Auctions
- ✗ All products open at 10am – no pre market or staggered open
- ✗ Chi-X is a day only market
- ✗ Shorter queues and faster fill rates
- ✗ Only integrated (lit + dark) order book – increased price improvement opportunity
- ✗ Fast efficient technology – No trading throttles

# PRICE IMPROVEMENT

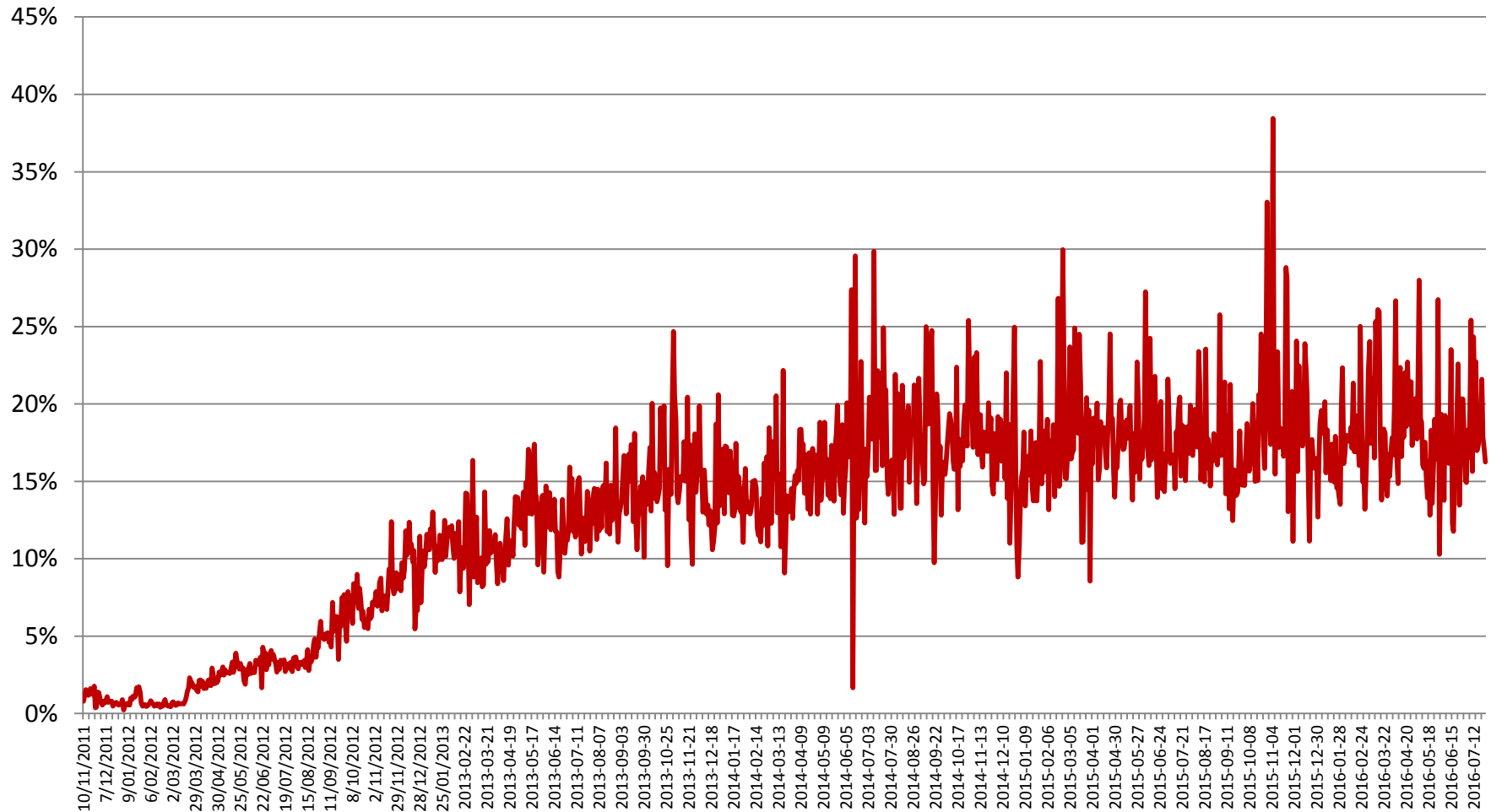
Chi-X launched in 2011

Chi-X Ct Market Share

**PI = \$136m**

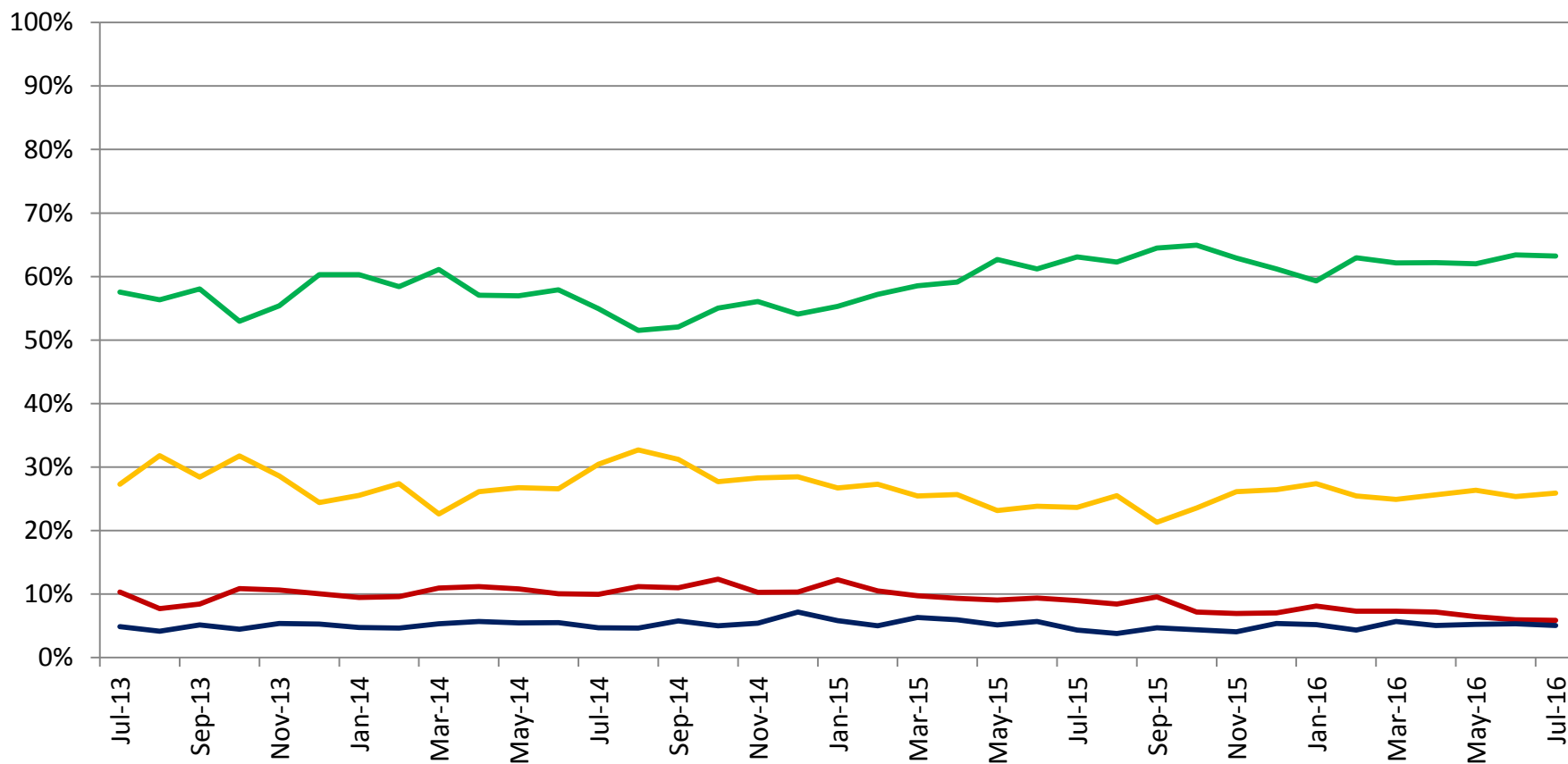


# CHI-X AUSTRALIA TOTAL MARKET SHARE

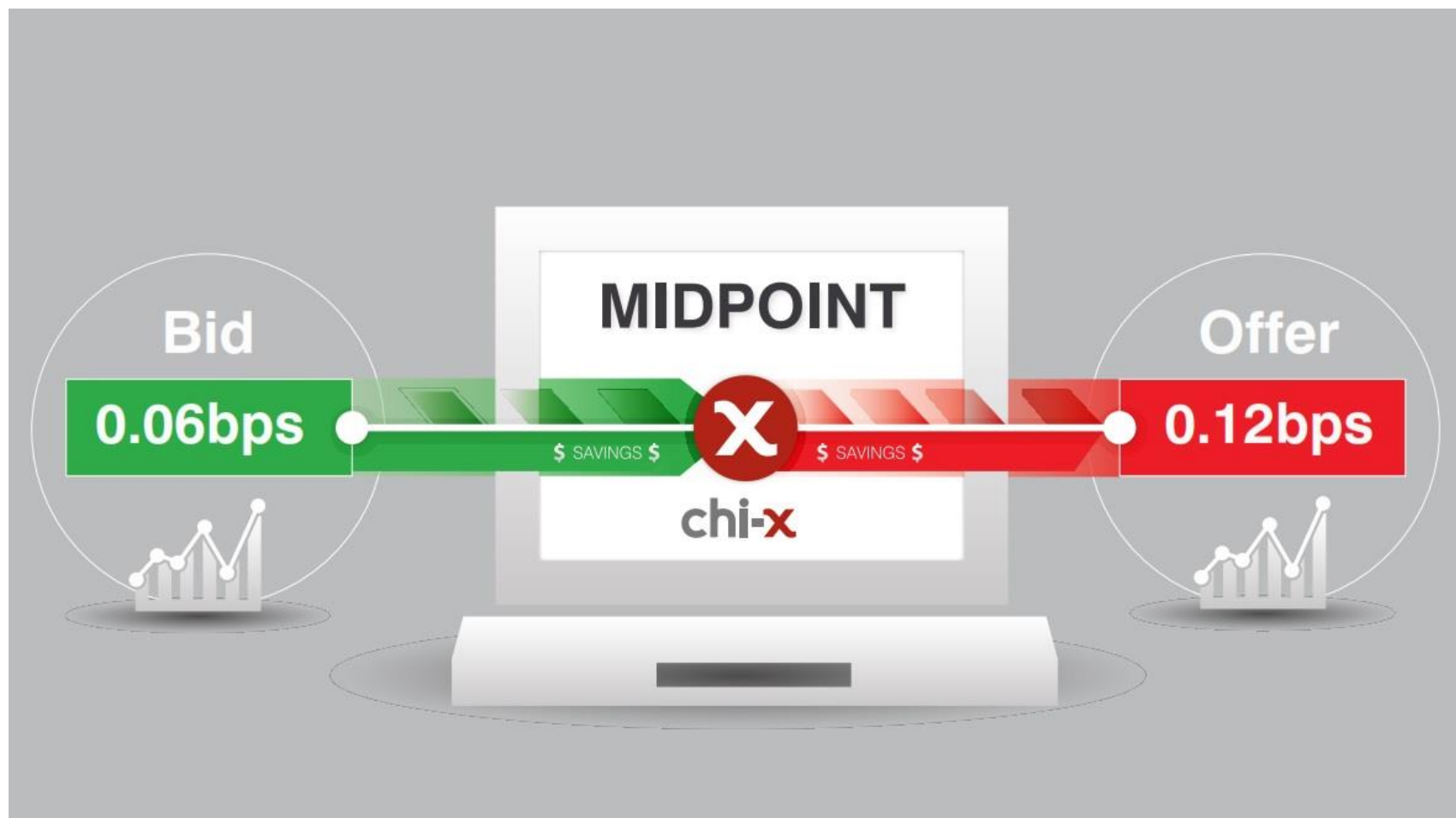


# PARTICIPANT AGGRESSIVE FLOW BREAKDOWN

Market Maker   Retail   Mid Tier   Large Institutional

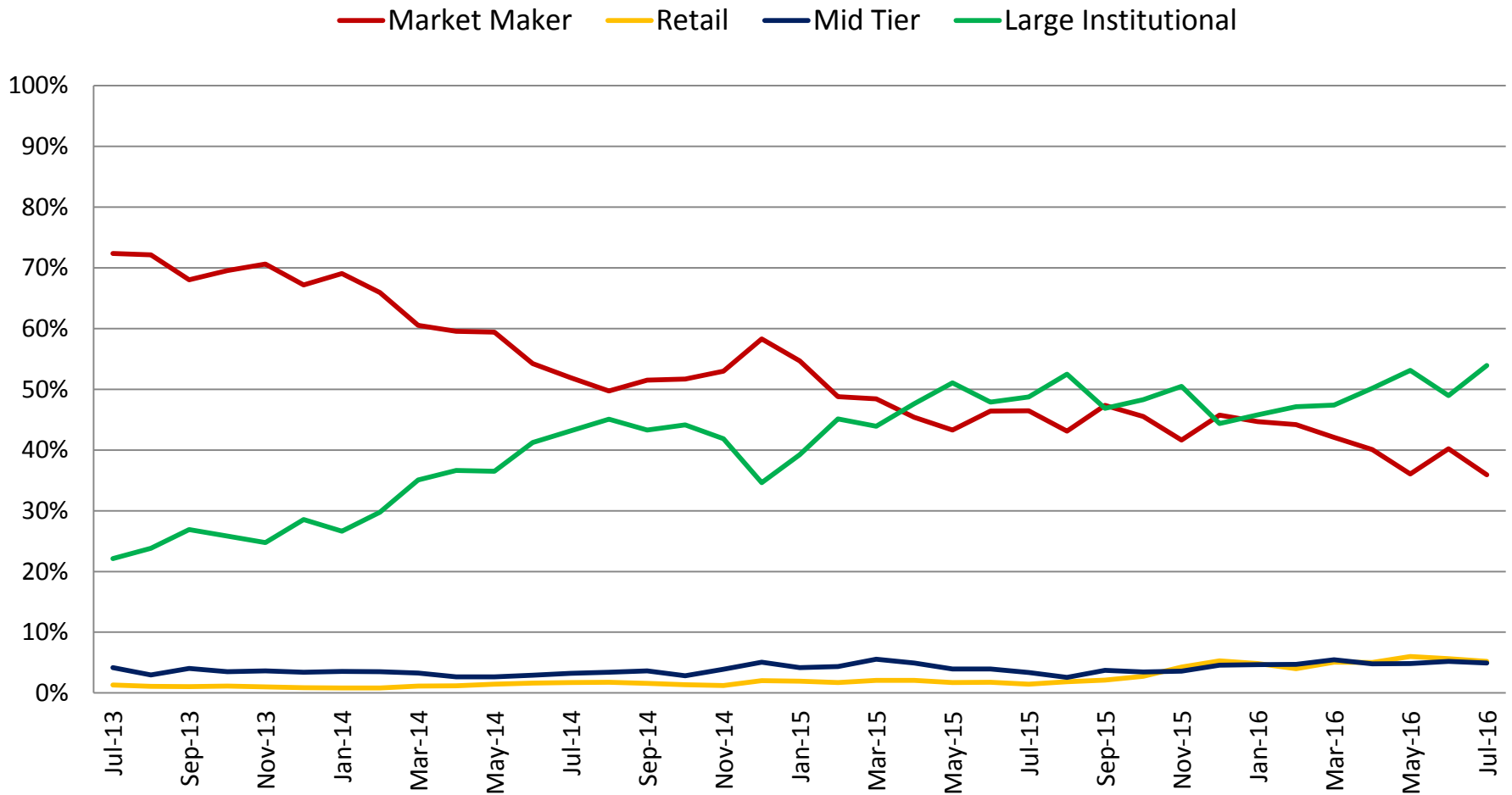


# MIDPOINT



**\$115MM**

# PARTICIPANT PASSIVE FLOW BREAKDOWN



# RETAIL PARTICIPATION ON CHI-X

## % of Participant Continuous Traded Value Traded on Chi-X vs ASX

Participant	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16
OpenMarkets	21.48%	16.20%	20.69%	23.95%	23.86%	25.50%	28.08%
State One Stock	27.20%	23.09%	25.30%	26.42%	25.68%	22.56%	25.03%
Ausiex	22.50%	21.63%	23.38%	24.62%	22.98%	22.73%	23.90%
Pershing	20.93%	19.77%	25.02%	21.74%	21.38%	18.42%	21.18%
Share Invest Ltd	22.77%	20.64%	20.39%	22.74%	19.91%	19.54%	20.85%
CommSec	19.75%	17.68%	19.47%	21.19%	18.99%	16.96%	18.01%
Wealthhub Sec	13.84%	12.24%	12.12%	13.85%	10.65%	12.60%	11.62%

## % of Participant Hidden Liquidity Value Traded on Chi-X vs ASX

Participant	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16
Ausiex	40.70%	35.84%	38.70%	40.10%	37.29%	36.29%	41.88%
Ord Minnett	29.84%	30.33%	35.61%	37.87%	36.17%	30.92%	27.55%
Pershing	22.74%	24.87%	28.87%	24.09%	24.10%	26.59%	25.36%
Morgans	13.88%	14.48%	13.91%	12.66%	14.06%	11.07%	15.40%
Open Markets	15.18%	10.28%	12.52%	12.48%	9.48%	9.36%	11.33%
CommSec	14.71%	6.79%	8.90%	9.91%	10.11%	8.11%	8.99%
Share Invest Ltd	12.35%	10.81%	11.09%	11.02%	10.21%	8.99%	8.82%



# CHI-X TOP20 STOCKS BY MARKET SHARE AND VALUE TRADED YEAR TO DATE

**Top 20 Stocks by Market Share\* YTD 2016**

Security Name	Chi-X Market Share
88 ENERGY FPO [88E]	44%
XPED LIMTD FPO [XPE]	40%
IOTGROUP FPO [IOT]	39%
GALAXY RES FPO [GXY]	36%
RESAPP FPO [RAP]	35%
PILBARAMIN FPO [PLS]	32%
SLATER & G FPO [SGH]	29%
A2 MILK FPO NZ [A2M]	28%
SEVENWEST FPO [SWM]	28%
BEADELL FPO [BDR]	27%
EVOLUTION FPO [EVN]	27%
BWP TRUST ORD UNITS [BWP]	26%
SPARK INFR FORUS [SKI]	26%
BEACH FPO [BPT]	26%
DUET FORUS [DUE]	25%
AUSNET FPO [AST]	24%
ARDENT LEI STAPLED [AAD]	24%
SARACEN FPO [SAR]	24%
RESOLUTE FPO [RSG]	24%
ORORA FPO [ORA]	24%

**Top 20 Stocks by Value Traded YTD 2016**

Security Name	Value Traded	Chi-X Market Share
BHP BLT FPO [BHP]	\$ 3,604,538,086.85	16%
ANZ BANK FPO [ANZ]	\$ 3,505,322,818.52	16%
WESTPAC FPO [WBC]	\$ 3,357,538,126.67	17%
NAT. BANK FPO [NAB]	\$ 3,356,632,057.79	18%
TELSTRA FPO [TLS]	\$ 3,090,900,066.04	23%
CWLTH BANK FPO [CBA]	\$ 2,085,875,267.12	9%
FORTESCUE FPO [FMG]	\$ 1,315,890,445.73	19%
TRANSURBAN STAPLED [TCL]	\$ 1,094,006,524.29	20%
SANTOS FPO [STO]	\$ 1,061,147,845.21	21%
SCENTRE STAPLED [SCG]	\$ 1,041,619,180.94	22%
WOOLWORTHS FPO [WOW]	\$ 994,874,040.52	13%
WESTFIELD DC STAPLED [WFD]	\$ 981,158,347.47	20%
WESFARMER FPO [WES]	\$ 971,383,609.29	10%
AMP FPO [AMP]	\$ 959,006,003.38	21%
RIO TINTO FPO [RIO]	\$ 951,028,254.97	8%
QANTAS FPO [QAN]	\$ 946,960,747.37	22%
ORIGIN ENE FPO [ORG]	\$ 915,744,956.62	19%
QBE INSUR. FPO [QBE]	\$ 866,980,290.16	15%
NEWCREST FPO [NCM]	\$ 857,611,246.68	9%
AMCOR FPO [AMC]	\$ 856,741,928.48	16%

\*Stocks year to date value traded needed to be >\$100mm for market share to be eligible.

# CHI-X TOP 20 STOCKS BY VALUE TRADED YEAR TO DATE FOR CT AND HIDDEN

**Top 20 Stocks by CT Value Traded YTD 2016**

Security Name	Value Traded	Chi-X Market Share
BHP BLT FPO [BHP]	\$ 3,604,538,086.85	16%
ANZ BANK FPO [ANZ]	\$ 3,505,322,818.52	16%
WESTPAC FPO [WBC]	\$ 3,357,538,126.67	17%
NAT. BANK FPO [NAB]	\$ 3,356,632,057.79	18%
TELSTRA FPO [TLS]	\$ 3,090,900,066.04	23%
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AMCOR FPO [AMC]	\$ 856,741,928.48	16%

**Top 20 Stocks by Hidden Value Traded YTD 2016**

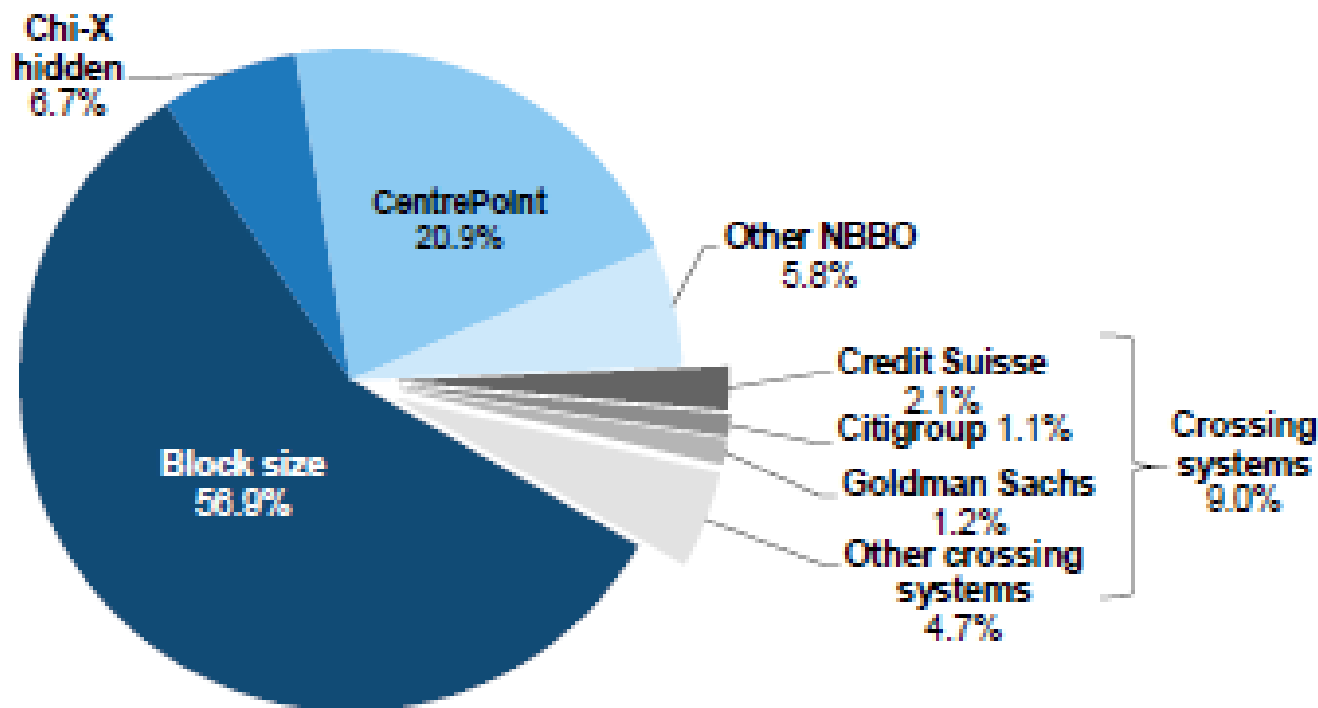
Security Name	Value Traded	Chi-X Market Share
TELSTRA FPO [TLS]	\$ 497,460,433.31	15%
BHP BLT FPO [BHP]	\$ 452,612,254.58	22%
ANZ BANK FPO [ANZ]	\$ 450,556,292.14	25%
CWLTH BANK FPO [CBA]	\$ 444,533,513.52	20%
WESTPAC FPO [WBC]	\$ 423,286,949.70	27%
NAT. BANK FPO [NAB]	\$ 333,992,776.04	26%
CSL FPO [CSL]	\$ 224,960,849.42	22%
SCENTRE STAPLED [SCG]	\$ 221,523,693.38	19%
RIO TINTO FPO [RIO]	\$ 210,196,081.17	16%
WESFARMER FPO [WES]	\$ 207,353,733.42	21%
NEWCREST FPO [NCM]	\$ 205,795,021.57	21%
WESTFIELD DC STAPLED [WFD]	\$ 198,938,377.05	24%
MACQ GROUP FPO [MQG]	\$ 196,262,972.55	17%
FORTESCUE FPO [FMG]	\$ 194,106,674.64	17%
TRANSURBAN STAPLED [TCL]	\$ 178,367,878.50	24%
WOOLWORTHS FPO [WOW]	\$ 165,512,486.13	22%
AMP FPO [AMP]	\$ 165,080,504.77	21%
QBE INSUR. FPO [QBE]	\$ 160,932,659.38	25%
AMCOR FPO [AMC]	\$ 153,455,399.24	26%
BRAMB LTD FPO [BXX]	\$ 151,439,155.34	27%

# ASIC REPORT 452 - HFT

- ✗ HFT in Australia  $\approx$  27% of equity market turnover (in line with Canada, EU and Japan)
- ✗ Average holding period of 52 minutes
- ✗ Few “small and fleeting” orders <1%
- ✗ Predatory trading not excessive. (Latency Arbitrage PnL <\$1,100 per day)
- ✗ 2015 – Gross trading revenue of HFT \$110-180 million, or 0.7 to 1.1 basis points (vs average bid-offer spreads of 13 basis points)
- ✗ HFT are 50% of resting orders around best price, contributing to filling gaps in short-term supply and demand. “HFT can provide a benefit to wider market users”

# ASIC REPORT 452 – DARK LIQUIDITY

Figure 17: Share of dark liquidity turnover (March quarter 2015)

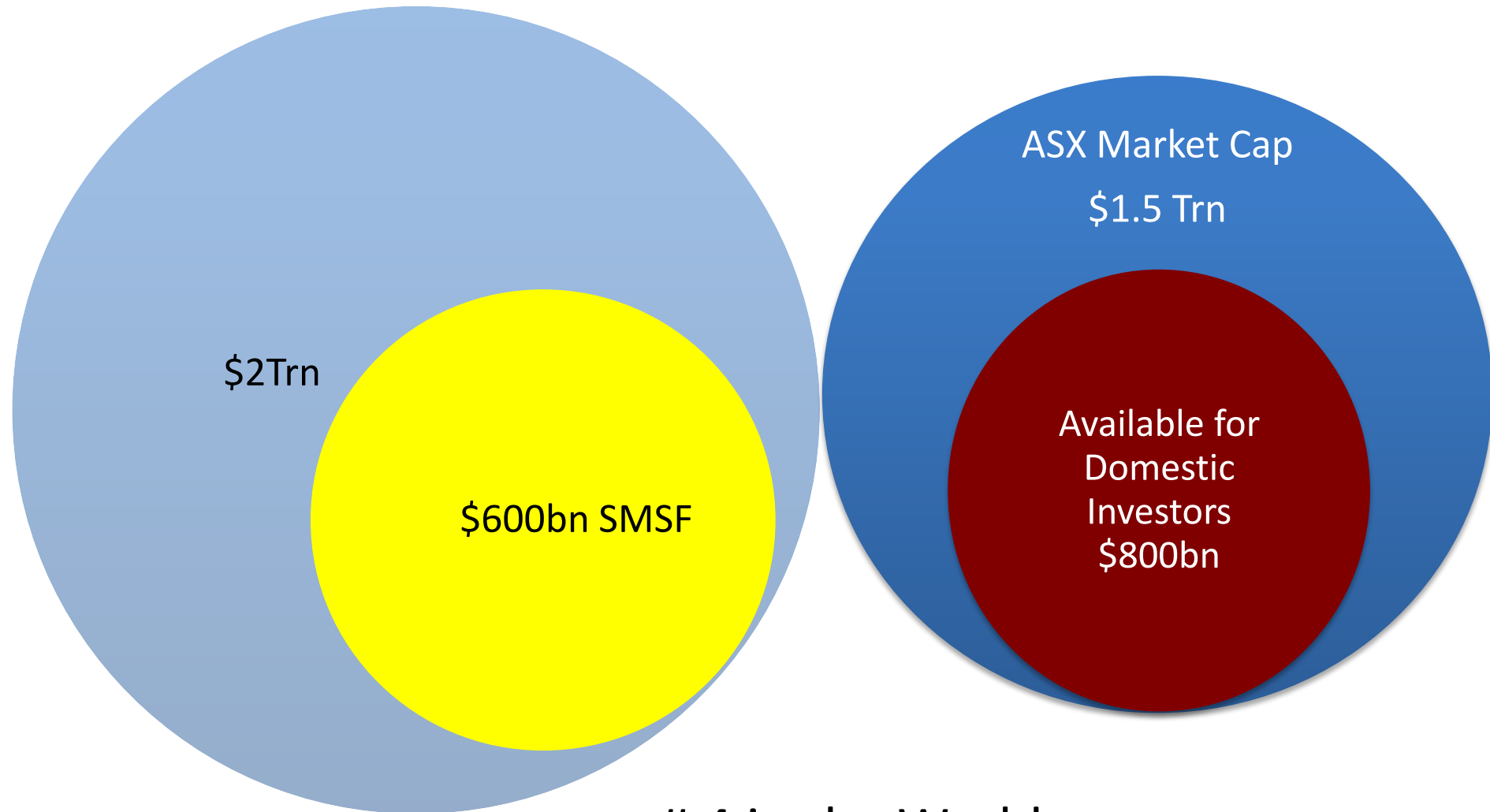


- ✗ Shift to Dark being using for original purpose – Blocks
- ✗ Decline is use of crossing systems, growth in use of exchange dark venues



# chi-x<sup>®</sup> AUSTRALIA Investment Products

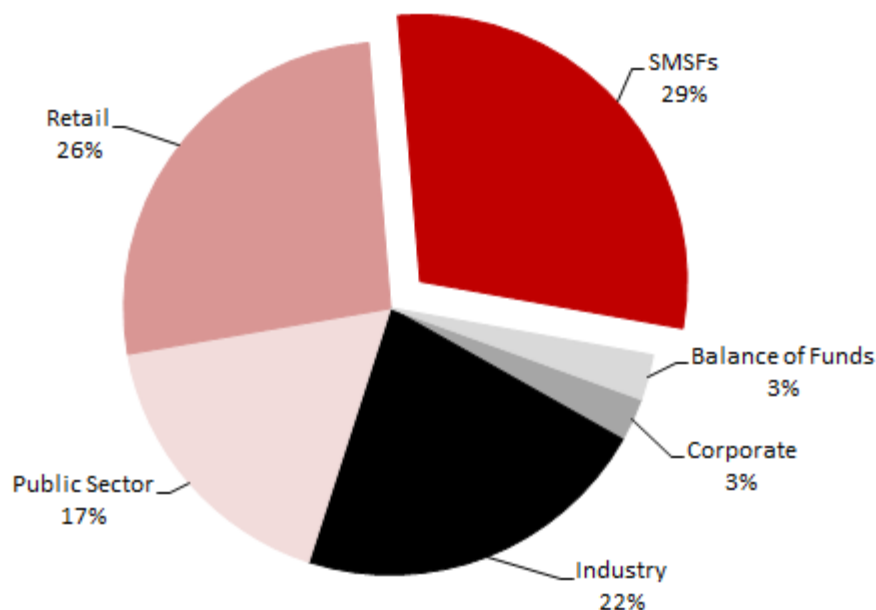
# SUPERANNUATION IN AUSTRALIA



# 4 in the World

# AUSTRALIAN SUPER LANDSCAPE

- ✗ From the Towers Watson Global Pension Assets Study (2013) Australia is the 4<sup>th</sup> largest retirement savings pool in the world
- ✗ Overview of Super Assets Under Management (AUM)



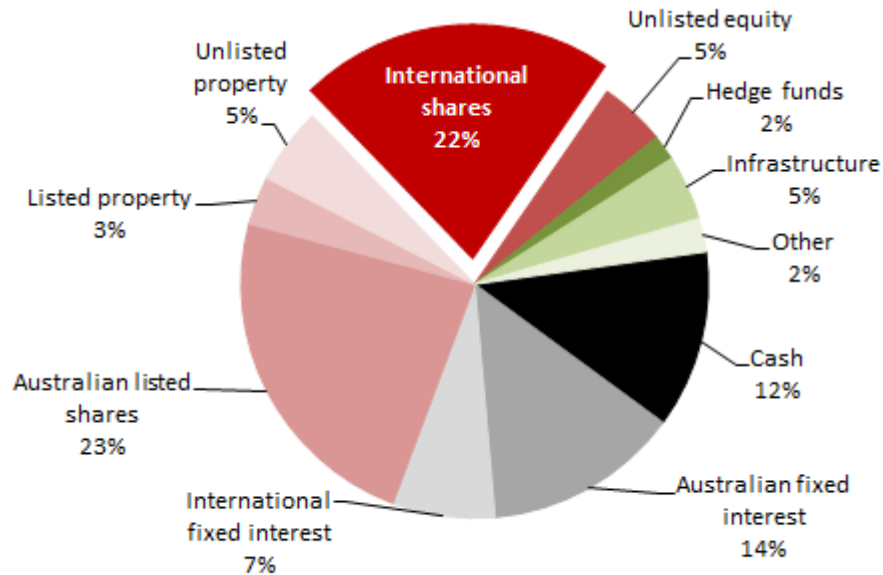
Source: APRA Statistics Dec-2015

Type of Fund	AUM (AUD bn)	No. Funds	No. Accounts
Corporate	54	36	0.3 mm
Industry	446	43	11.3 mm
Public Sector	354	38	3.5 mm
Retail	541	148	13.8 mm
SMSFs	597	568,943	1.1 mm
Balance of Funds	56		
Total	2,048	569,208	30.0 mm

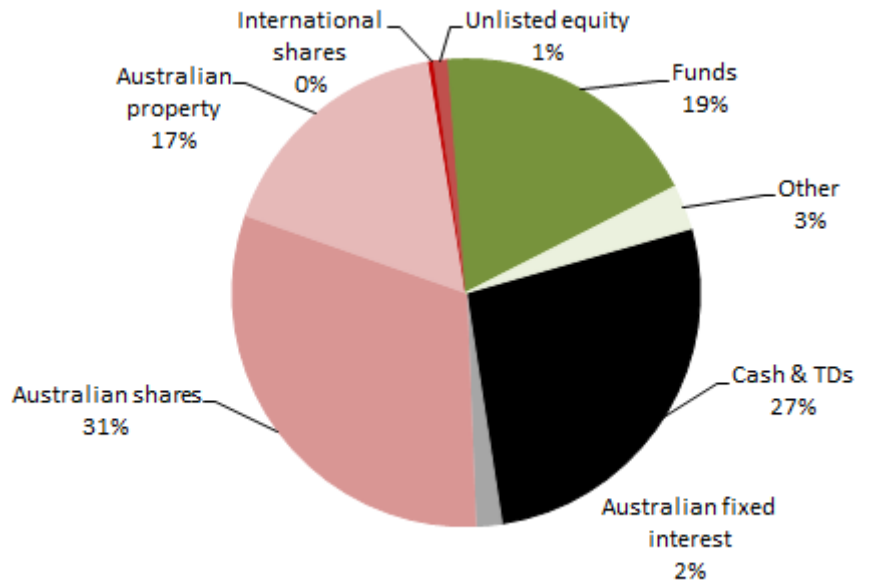
Source: APRA Statistics Dec-2015 and APRA annual statistics

# SUPER ASSET ALLOCATION

Funds with > 4 members



Source: APRA Statistics Dec-2015



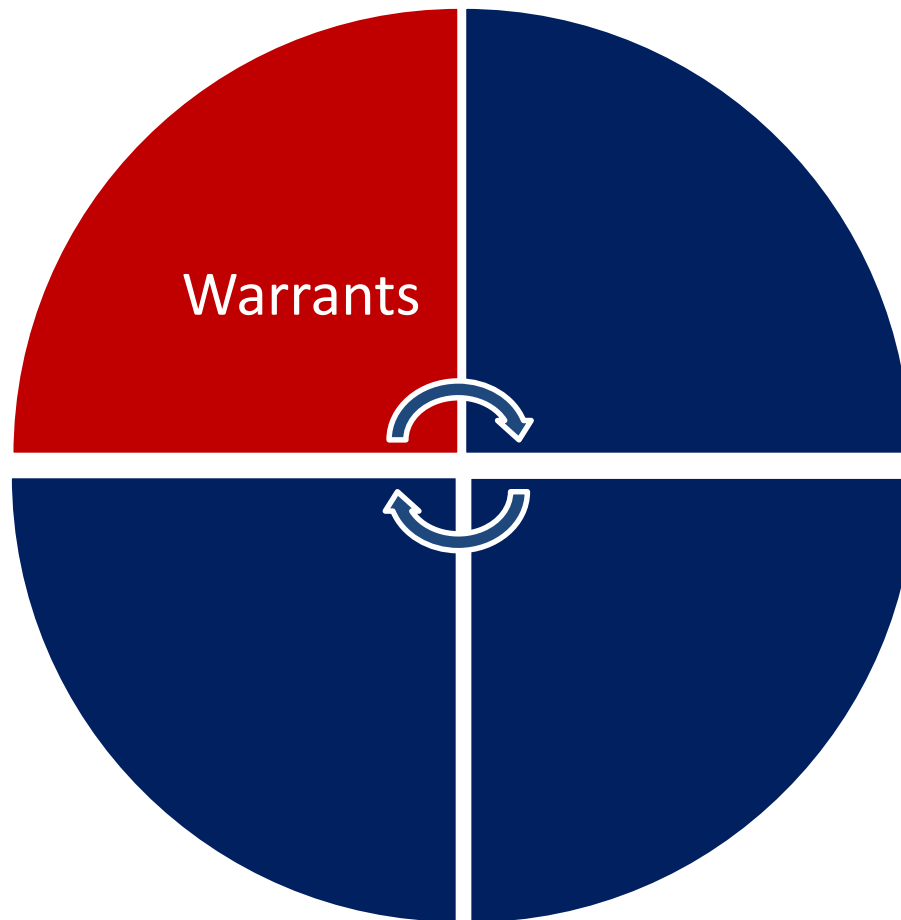
Source: Australian Taxation Office (ATO) SMSF Statistics Dec-2015

✗ SMSFs (and retail investors in general) need more diversification



- 
1. DIVERSIFICATION PROBLEM
  2. UNPRODUCTIVE INVESTMENTS

# CHI-X INVESTMENT PRODUCTS



- X** Derivatives  
Market Operator  
License
- X** ASX Clear access
- X** Platform rebuild

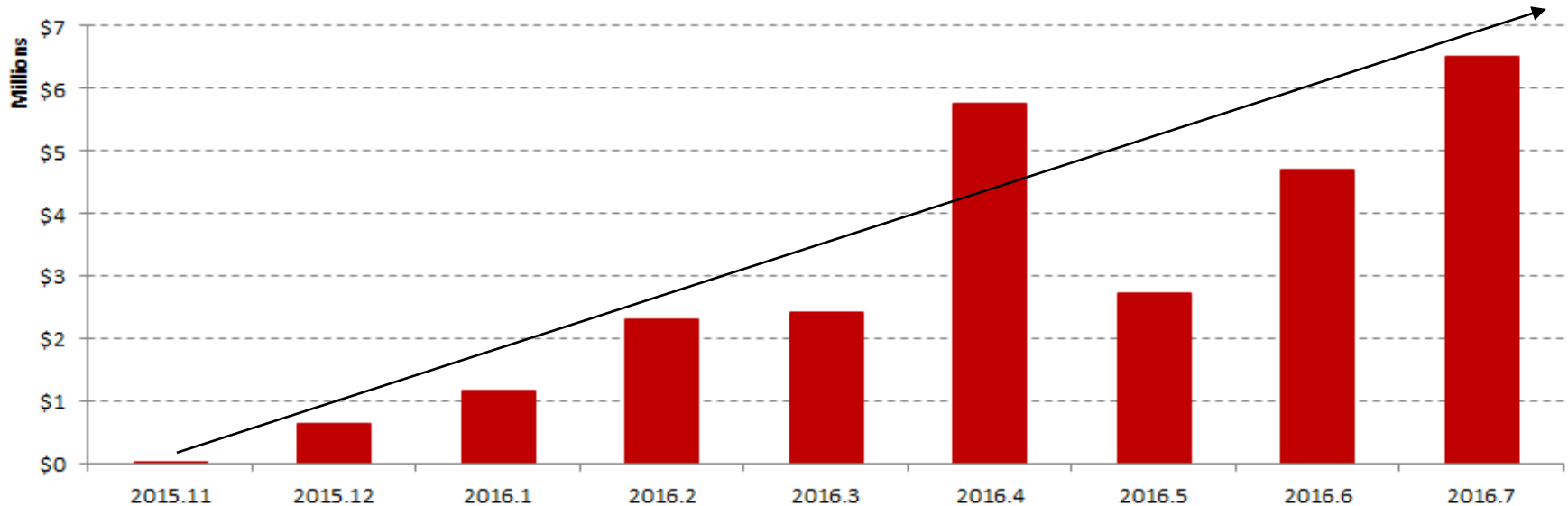
# WARRANTS

**X** Warrants are the start of the Chi-X Investment Products initiative

**X** Chi-X entering the Warrant market brings:

- ☐ Reduction in Issuance costs
- ☐ Quicker time to market
- ☐ Partner to grow the market

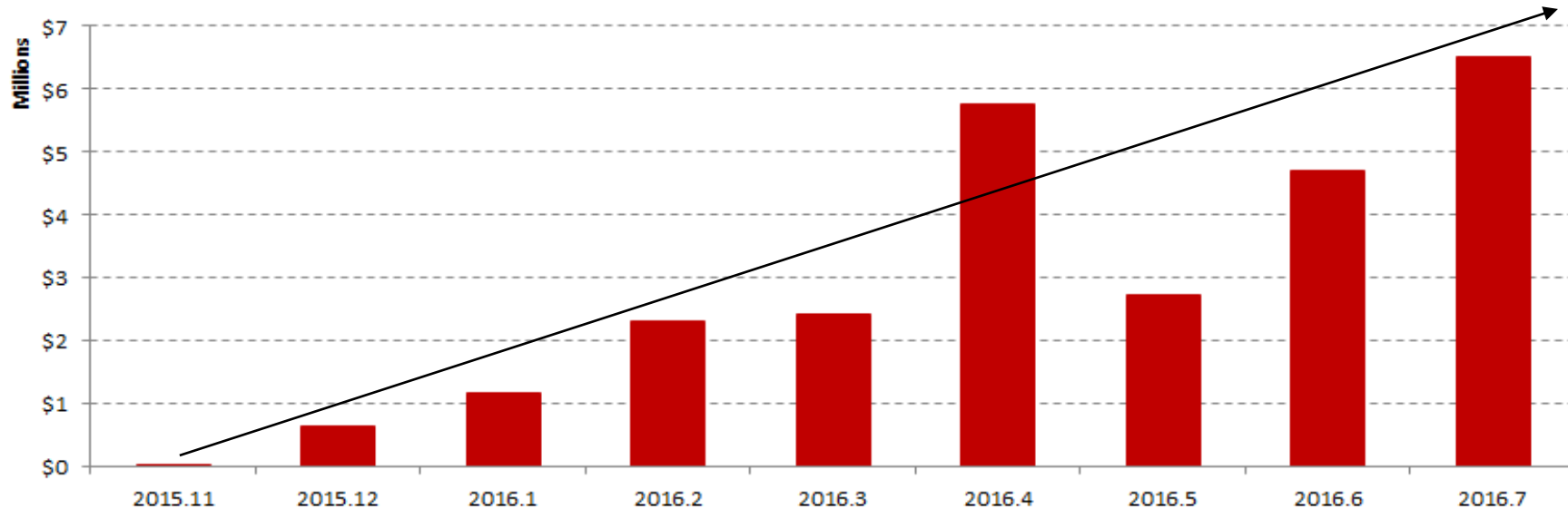
Chi-X Warrant Market Turnover



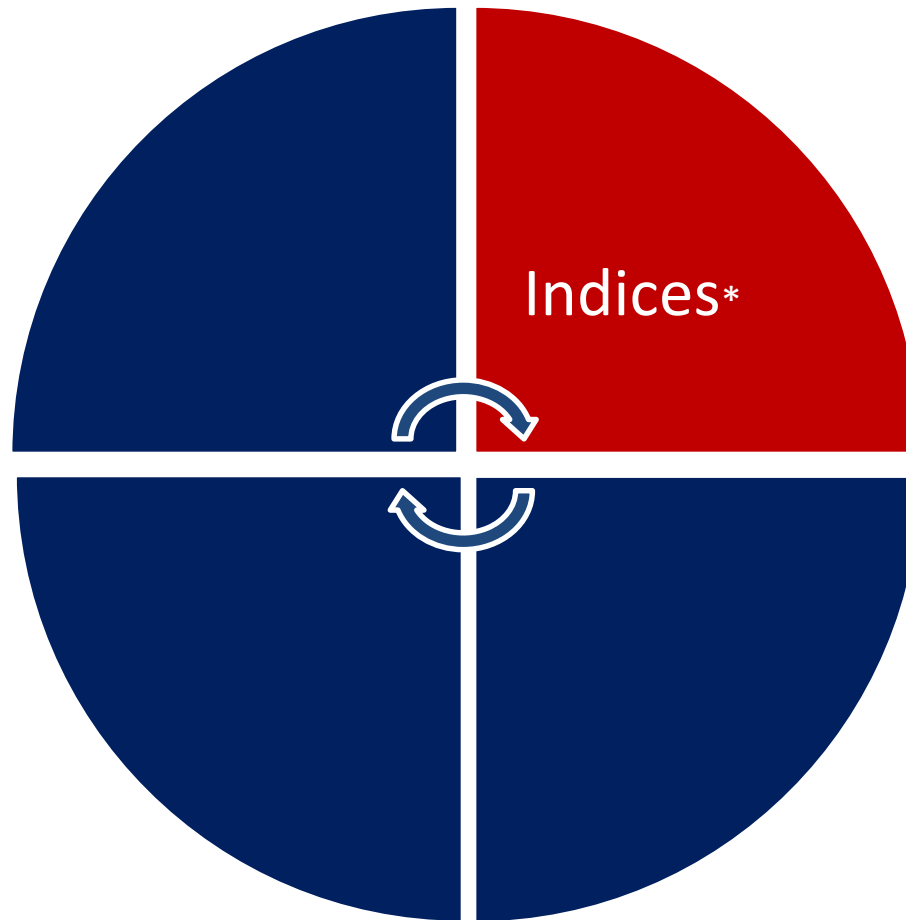
# WARRANTS

- X** Warrants issued by Citi, exclusive to Chi-X:
- ☐ 250 Single Stock MINIs, 36 Single Stock GSL MINIs
  - ☐ 9 Index MINIs, 10 Index GSL MINIs
  - ☐ 24 International Index MINIs
  - ☐ 10 FX MINIs
  - ☒ 50 Instalment MINIs (from this week)

**Chi-X Warrant Market Turnover**



# CHI-X INVESTMENT PRODUCTS

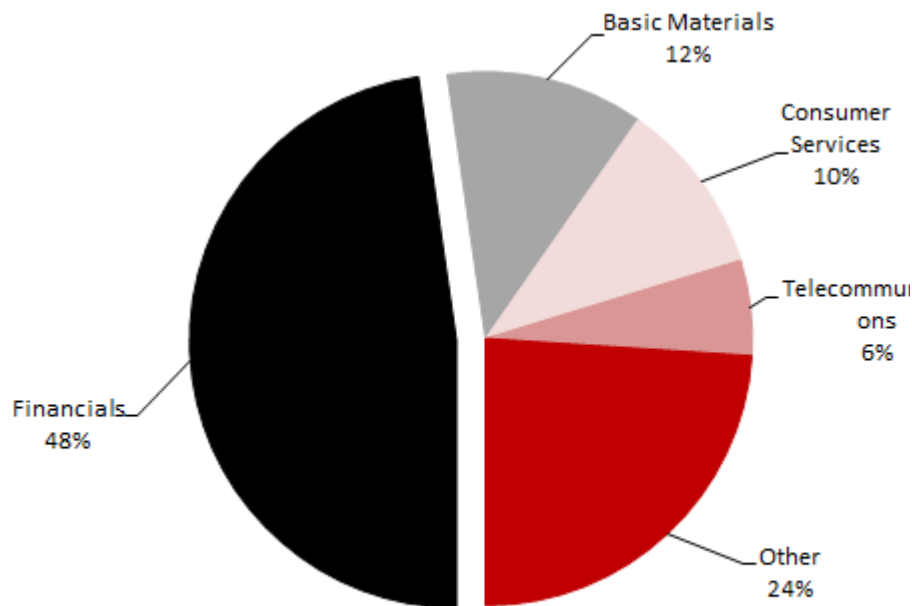


\*Subject to regulatory approval.

# INDICES

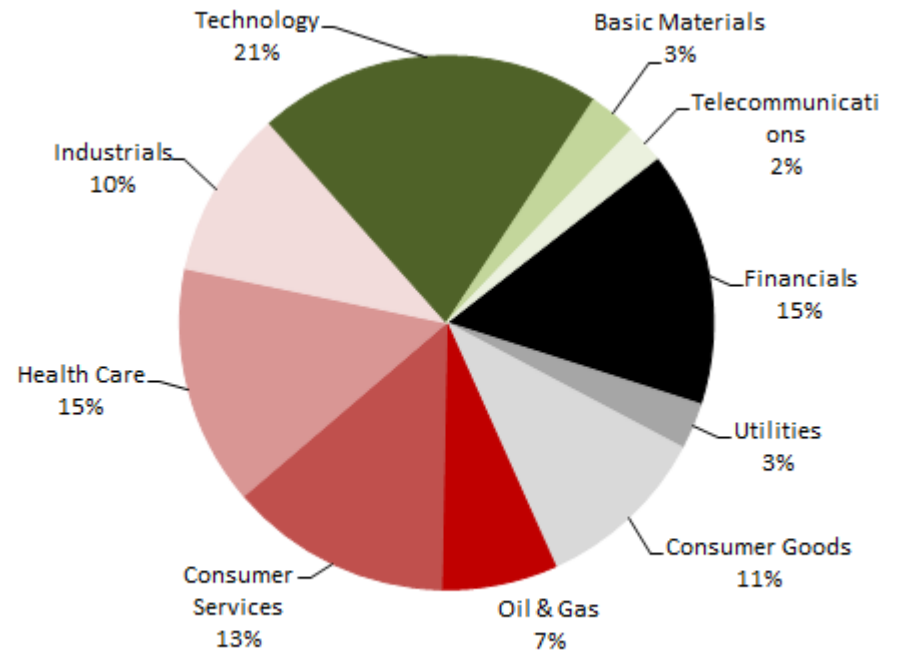
- ✗ Chi-X is researching the creation of a family of new indices suitable for Fund product development
- ✗ Chi-X plans to start with two domestic Australian equity market indices
  - ❑ New diversified index designed for retail investors
  - ❑ New Australian equity benchmark index that is highly liquid and easy to trade

Top 200 Australian stocks



Source: Iress

Top 500 US stocks

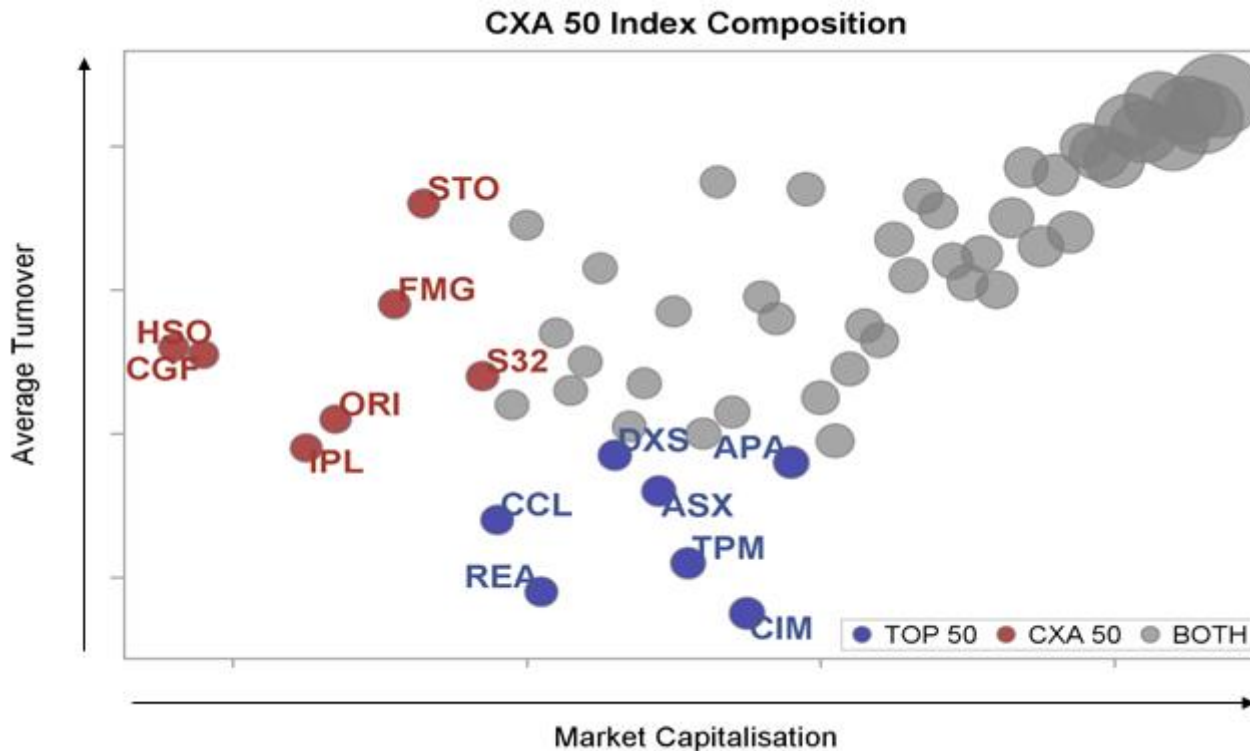


Source: Iress

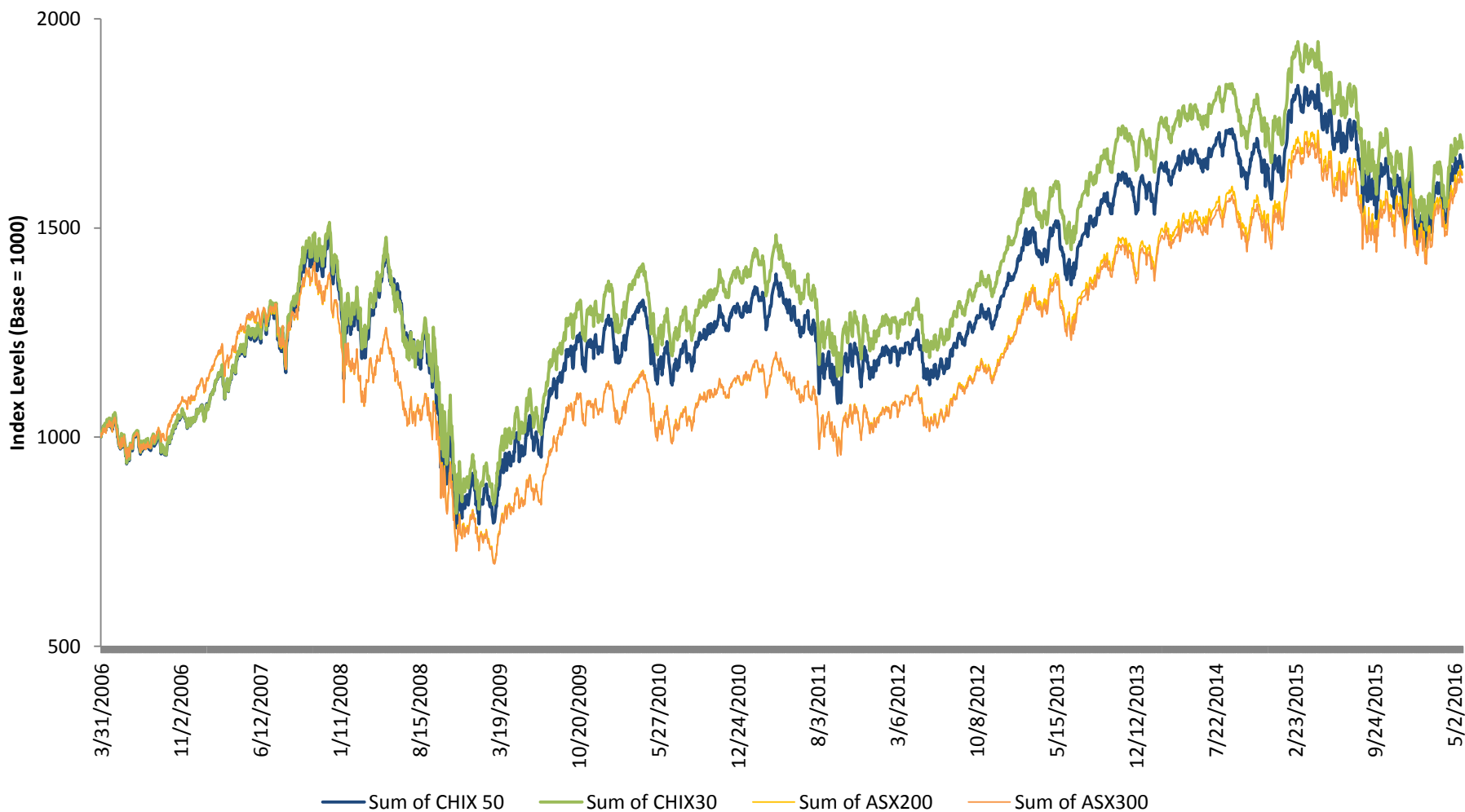
# INDICES

**X** Chi-X 50 'Liquid' Index is designed to be a new benchmark for the Australian equity market:

- ☐ Representative of the broad Australian stock market
- ☐ Highly liquid and easier to trade than existing benchmarks
- ☐ Easier and cheaper product creation, starting with an ETF
- ☐ Simple to understand, transparent and easy to replicate methodology

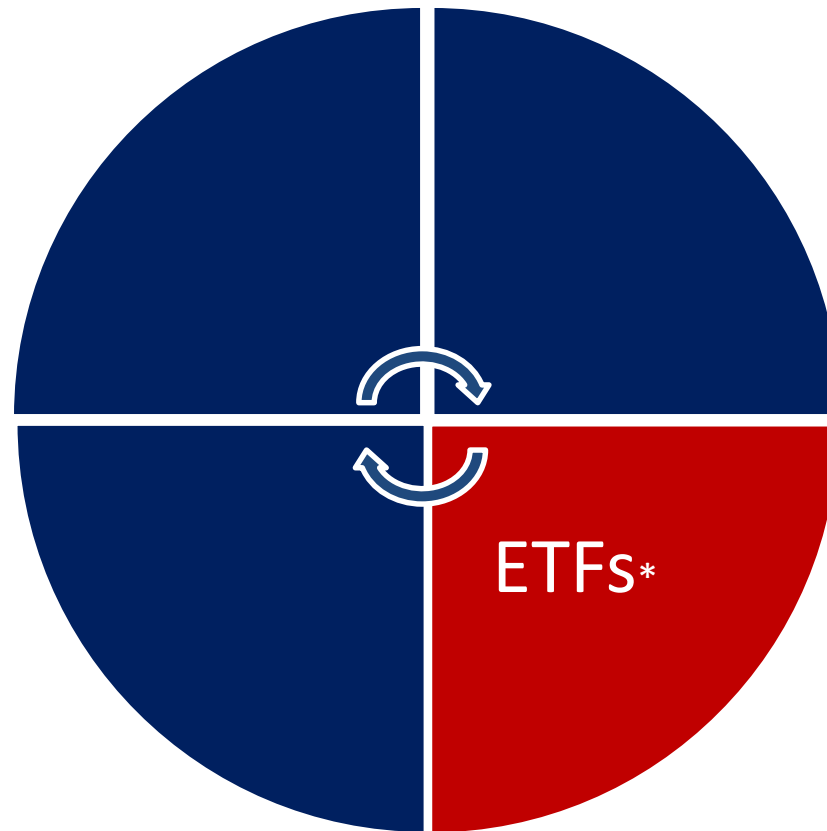


# INDICES – CHI-X 50 and 30 vs S&P ASX 200 and 300





# CHI-X INVESTMENT PRODUCTS



\*Subject to regulatory approval

# EXCHANGE TRADED FUNDS

Australia



Canada



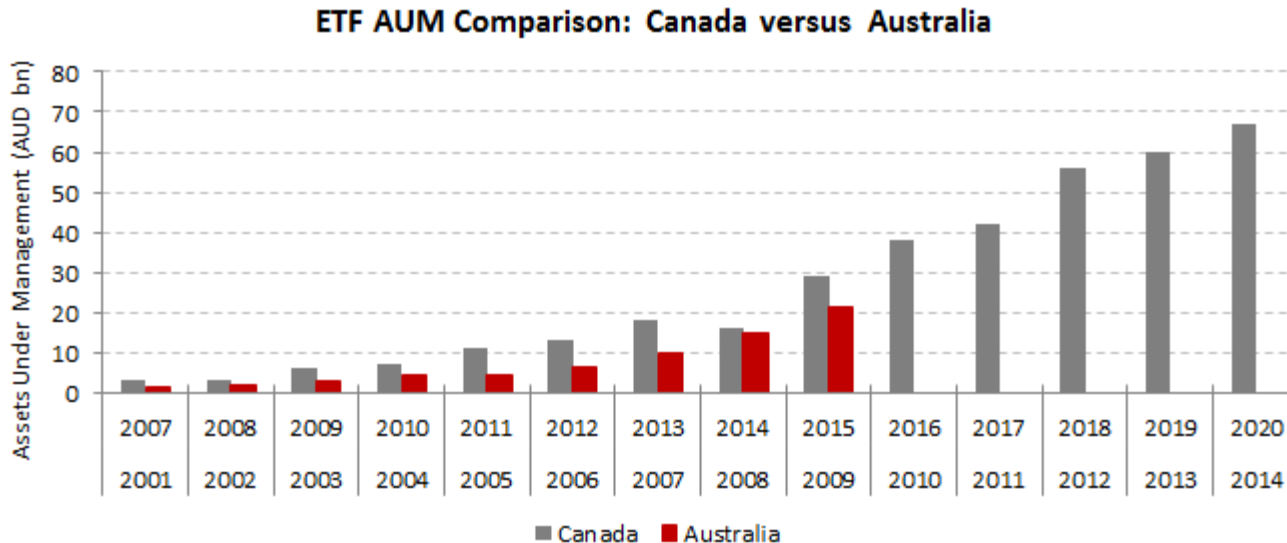
## ✗ Stock Market comparison:

- ☐ Bank oligopolies
- ☐ Significant Mining / Resources / Basic Materials sectors
- ☐ Market Cap      AUD 1,622 bn      vs.      CAD 2,299 bn    ( 1.4x )
- ☐ Daily Turnover    AUD 5.584 bn      vs.      CAD 8.861 bn    ( 1.6x )

## ✗ ETF Market comparison:

- ☐ Canadian market is more mature
- ☐ AUM                      AUD 22.0 bn                      vs.                      CAD 95.0 bn    ( 4.3x )
- ☐ Turnover (%)              < 2%                      vs.                      > 30%        ( > 15.0x )

# EXCHANGE TRADED FUNDS



Source: Chi-X Australia and Chi-X Canada

**X** Broker attribution on Chi-X from 6-Jun-2016

**X** First Chi-X quoted ETF under development:

- ☐ Based on the Chi-X 50 Index
- ☐ Aiming for an MER < 10 bps pa

# EXCHANGE TRADED FUNDS

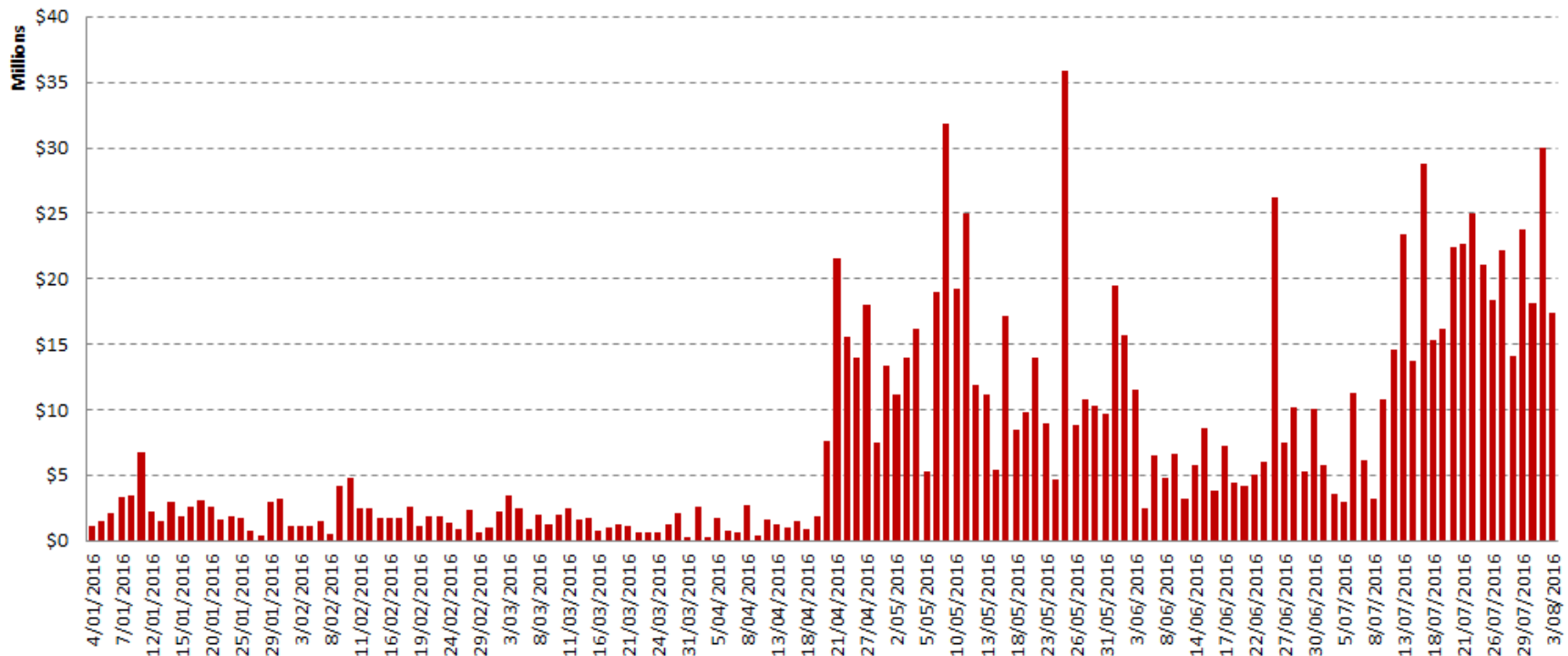
**X** Now: ASX quoted ETFs traded on Chi-X:

- ☐ Broker attribution from 6-Jun-2016
- ☐ Liquidity in ~25 ETFs, soon to increase

**X** Future: ETFs exclusive to Chi-X:

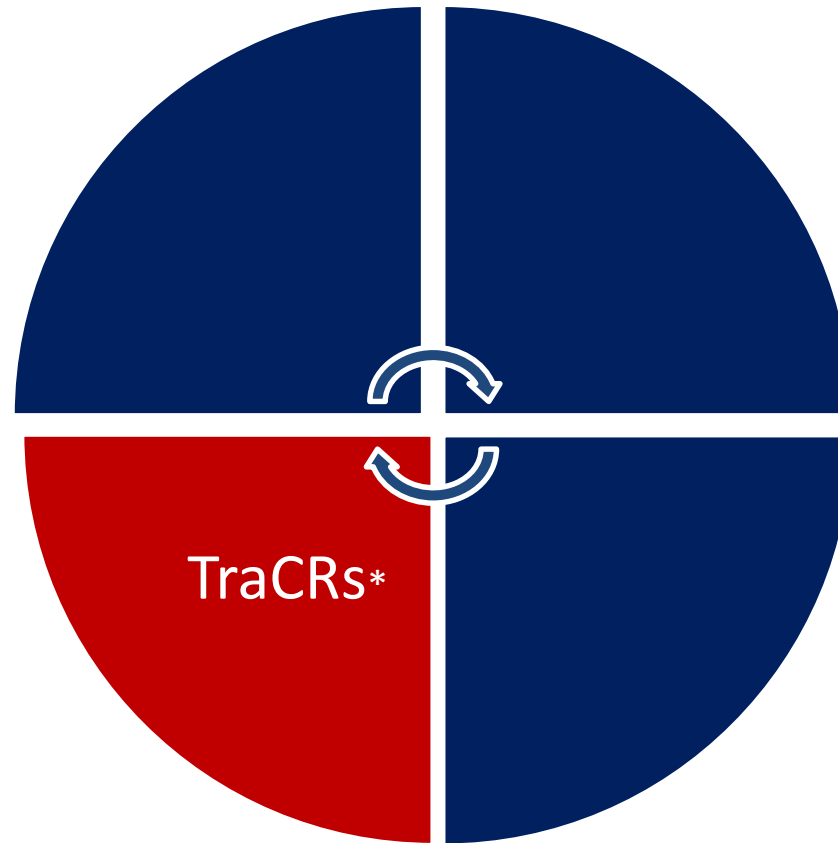
- ☐ 2+ new ETFs planned for Q4 2016
- ☐ ETFs based on Chi-X Indices

ETF Market Turnover on Chi-X



- X** INSTO EQUITISATION
- X** COST EFFECTIVE VS FUTURES
- X** NO ROLL COST
- X** CARRIES DIV

# CHI-X INVESTMENT PRODUCTS



\*Subject to regulatory approval

# TRACRS

## X Transferable Custody Receipts (TraCRs)

- TraCRs provide equivalent benefits to ownership of US stocks
- Actual US stock is held in custody for the Australian investor by US Depository bank
- Expect to launch in Q4, 2016.

**U.S. Share**



**U.S.  
Custodian**

**Australian  
TraCR Issuer**

**TraCR units**



## BENEFITS

- ✗ US Household names
- ✗ Traded on an Australian Stock Exchange, Chi-X
- ✗ AU\$ trading (Market Maker quotes, iNAV)
- ✗ AUS trading hours
- ✗ Custodied in Chess
- ✗ AU\$ dividends
- ✗ Institutional as well as Retail
- ✗ No US DEATH TAXES



# TRACR ISSUANCE PLAN

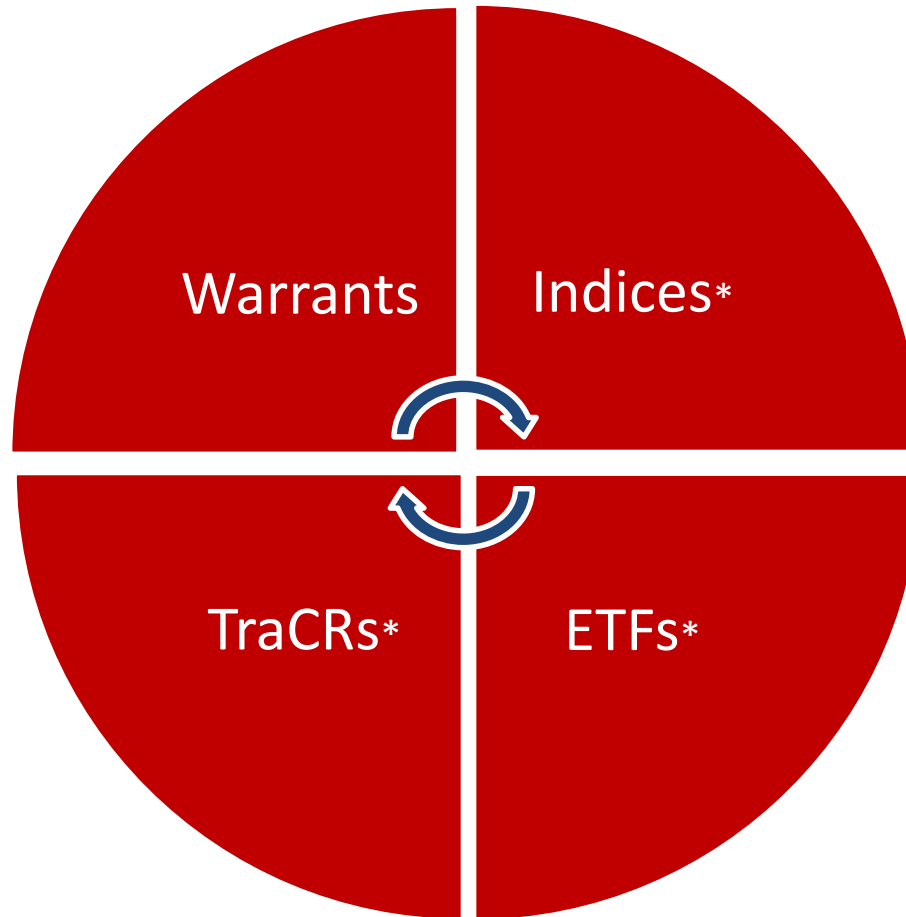
- ✗ TraCR launch in late Sep-2016:
  - ❑ Start with Apple to test issuer, broker, information vendor, clearing & settlement infrastructure over full trade cycle
  - ❑ Expand to include US companies well-known to retail investors
  - ❑ Up to 100 TraCRs within the first six (6) months
  
- ✗ Expand underlying stocks to companies traded in Europe & Asia from start of 2018 after industry consultation in 2H 2017



- ✗ Newsfeed (Thomson Reuters)
- ✗ Website links
- ✗ EDGAR data
- ✗ Research

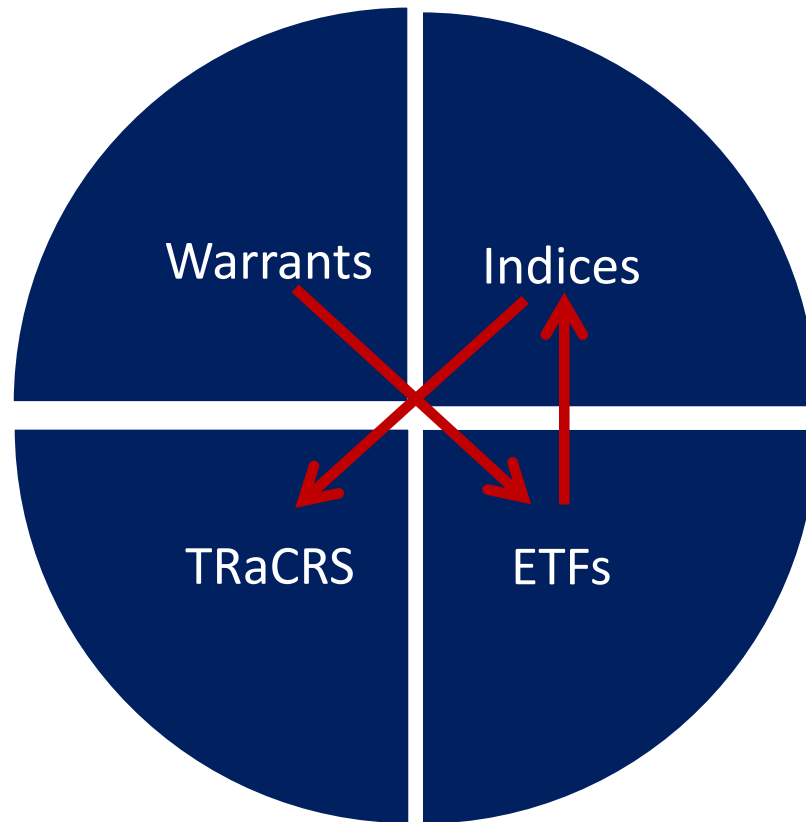
**TraCRs**  
LETTING YOU  
INVEST  
IN ATCLASSIAN

# CHI-X INVESTMENT PRODUCTS



\*Subject to regulatory approval.

# INVESTMENTS PRODUCT PLATFORM



# CHI-X 80 INDEX

- ❌ Chi-X 50
- ❌ TraCRs from Technology, Healthcare and other sectors lacking in Australia
- ❌ ETF
- ❌ Diversified investment opportunity at low cost
- ❌ Chi-X 188 or 38?
- ❌ 200 or 50 LESS CBA, WBC, TLS, NAB, ANZ, BHP, WES, WOW, RIO, WPL, SUN, AMP

# CHI-X PHONE APP



**X** Available NOW in the App Store  
(Apple only so far)

**X** FREE real-time data:

**X** Open

**X** High

**X** Low

**X** Value

**X** Volume

 Retail Focus

 Innovation

 Saving YOU Money

 Making YOU Money



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