



Ⓢ KRISTAL

# Kristal.AI VCC- Peregrine Fund

October 2024

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# Executive Summary



## Overview Of the Fund

- Aim to generate High risk adjusted returns with market neutral strategies with an exclusive focus on US exchanges, involving listed futures and primarily index options



## What Do We Offer to Investors?

- Incorporation in Singapore as Variable Capital Company (VCC) sub-fund
- Restricted scheme under the Sixth Schedule to the Securities and Futures (Offers of Investments) (Collective Investment Schemes) Regulations of Singapore



## Underlying Investment Strategy

- Market Neutral Index , primarily, (S&P500 & Russel 2000) Option strategies
- Rule based with discretionary overlay
- Provides investors exposure to listed derivatives as an asset class for diversification



## Fund Managers

- Pranay Pankaj (Portfolio Manager with Kristal Advisors (SG) Pte. Ltd.)



## Minimum Ticket Size



- 50,000 USD as initial investment for USD denominated shares
- 50,000 SGD as initial investment for SGD denominated shares

- Exclusive acceptance of capital from "Accredited Investors"
- Operating as open-ended fund and No fees on exit or additional investment

# Fund objectives



## Liquidity

- All trading instruments are highly liquid in nature
- Exposure will be always restricted to index (S&P500 & Russel 2000) derivatives almost 100% of time



## Drawdown

- Trading strategy designed to minimize the time to recover from Drawdown



## Correlation with S&P

- Uncorrelated with the underlying index (S&P500 & Russel 2000)



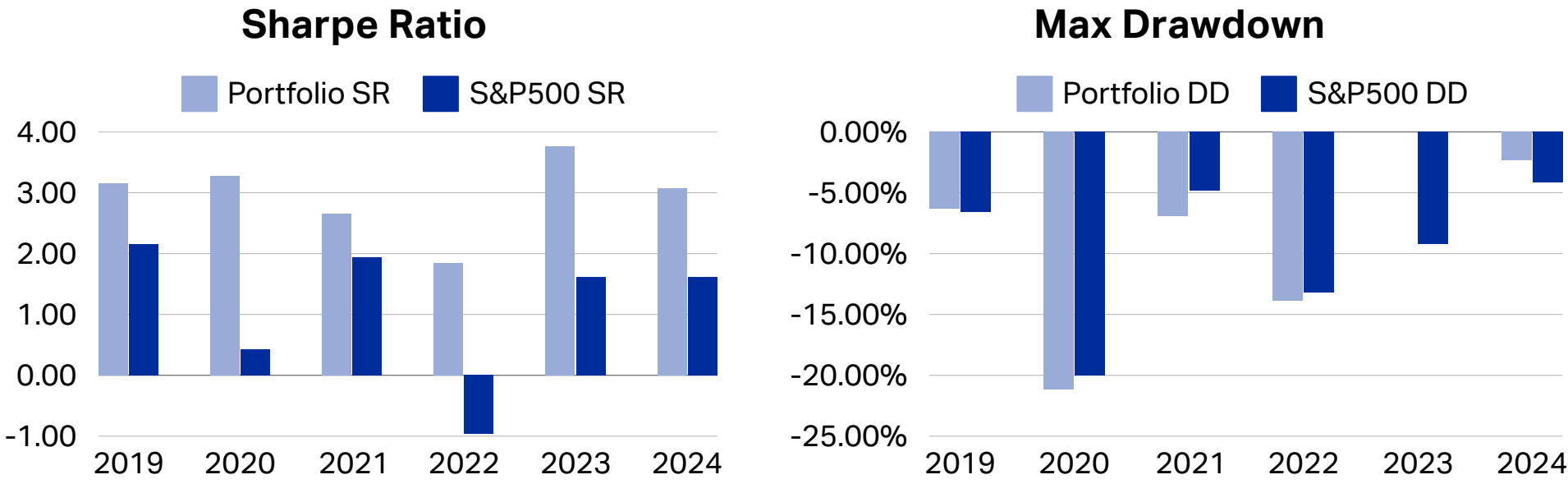
## Diversification Enabler

- Excellent alternative for diversification effect in an individual portfolio having other asset classes

# Month on Month Consistency, With Higher Risk Adjusted Return & Comparable Drawdown

Year	Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annualised %	Drawdown
2019	Portfolio	15.04%	9.94%	-0.29%	9.78%	-6.32%	4.39%	3.99%	3.02%	9.90%	6.80%	-0.20%	4.59%	77.7%	-6.32%
	S&P 500	7.87%	2.97%	1.79%	3.93%	-6.58%	6.89%	1.31%	-1.81%	1.72%	2.04%	3.40%	2.86%	28.9%	-6.58%
2020	Portfolio	-3.53%	-18.32%	46.19%	17.47%	-1.28%	5.33%	9.41%	-0.62%	10.11%	4.78%	6.42%	12.92%	112.1%	-21.21%
	S&P 500	-0.16%	-8.41%	-12.51%	13.40%	3.79%	1.59%	5.61%	7.22%	-3.89%	-2.77%	10.75%	3.71%	16.3%	-20.00%
2021	Portfolio	7.89%	4.35%	5.41%	-0.60%	-0.85%	3.45%	-6.94%	8.25%	8.44%	6.80%	-1.03%	9.98%	53.6%	-6.94%
	S&P 500	-1.11%	2.61%	4.24%	5.24%	0.55%	2.22%	2.27%	2.90%	-4.76%	6.91%	-0.83%	4.64%	27.2%	-4.76%
2022	Portfolio	-9.38%	2.60%	10.66%	-13.86%	11.76%	4.76%	2.73%	14.62%	5.98%	2.17%	8.83%	6.70%	53.6%	-13.86%
	S&P 500	-7.19%	-1.75%	4.05%	-8.80%	0.01%	-8.39%	9.11%	-4.24%	-9.34%	7.99%	5.38%	-5.90%	-19.6%	-13.18%
2023	Portfolio	2.09%	2.38%	3.46%	2.18%	2.65%	1.88%	4.15%	2.12%	1.73%	3.30%	3.35%	1.57%	37.4%	0.00%
	S&P 500	6.18%	-3.62%	4.00%	1.46%	0.25%	6.47%	3.11%	-1.77%	-4.87%	-2.20%	8.92%	4.42%	24.2%	-9.20%
2024	Portfolio	-2.32%	2.76%	4.45%	-1.39%	1.59%	-1.09%	0.61%	0.89%	7.02%	4.56%			23.9%	-2.30%
	S&P 500	1.59%	5.17%	3.10%	-4.16%	4.80%	3.47%	1.13%	-0.99%	2.02%	2.28%			24.0%	-4.16%

Risk Measures (USD)	Portfolio	S&P500 ( Benchmark)
Returns (ITD)	1323.89%	127.60%
CAGR	58.84%	15.13%
Annualised volatility	22.35%	19.87%
Risk Free Rate	2.60%	2.60%
Sharpe Ratio	2.52	0.63
Sortino Ratio	2.34	0.75
Max Drawdown	-21.20%	-20.00%
Worst Month	-18.30%	-12.50%
Best Month	46.20%	13.40%



\*Portfolio was invested through proprietary funds till Apr 17, 2023  
\*All figures are based on Gross Returns(wo adjusting for fees) in USD  
\*Sharpe Ratio based on gross returns and daily volatility(on annualized basis)  
\*\*Months in highlighted cells (May 2023 and Aug 2024) not traded for full month

# Generating High Performance Under All Market Conditions..

- Extremely high returns recorded in any of the rolling periods
- Extremely low correlation with S&P500 (0.087) shows that strategy can generate returns irrespective of market direction
- The risk adjusted return around 4 times compared to passive strategy with not much difference in Volatility
- Extremely high probability (95%) of positive returns in any of rolling period of 3 months

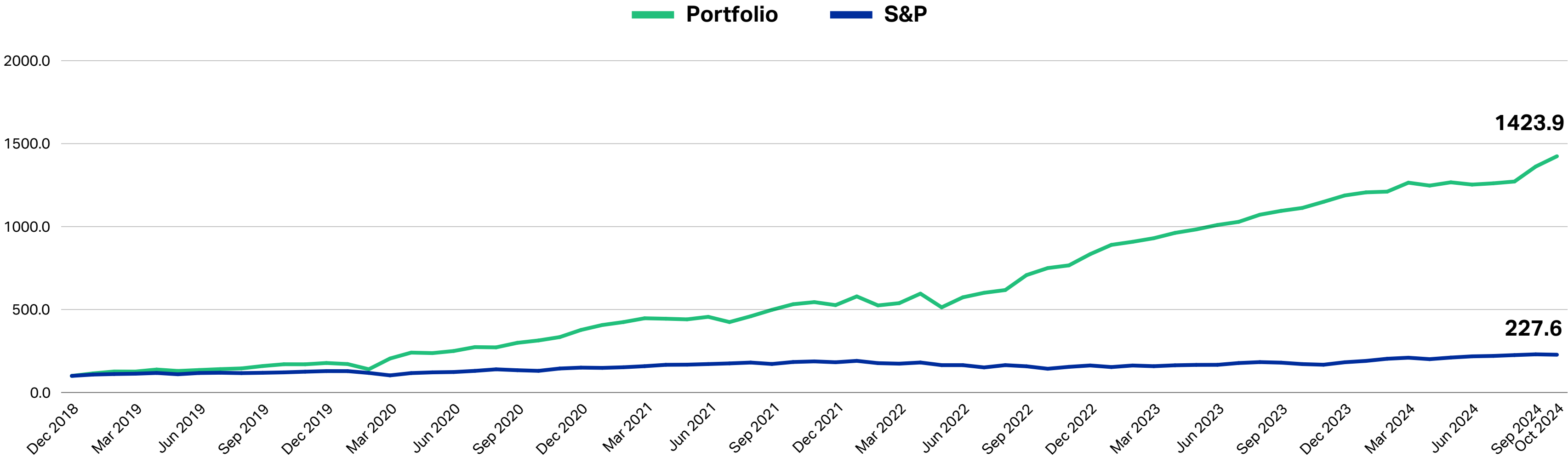
Performance Measure (Since Jan-19)	Portfolio	S&P500 Price Index
Annualized Return	58.84%	15.13%
1M Avg. Rate of Return	4.14%	1.30%
Rolling 3M Avg. Rate of Return	12.15%	3.67%
Rolling 12M Avg. Rate of Return	60.26%	14.14%
Winning Months (%)	77.10%	67.20%
Avg. Winning Month Returns	6.63%	4.20%
Avg. Losing Month Returns	-4.25%	-4.61%
Max. Drawdown	-21.20%	-20.00%
Avg. Monthly Alpha over S&P500	2.83%	-
Correlation with S&P500	0.087	1
Annualized Volatility	22.35%	19.87%
Sharpe Ratio (Rf = 2.6%)	2.52	0.63

\*All figures are based on Gross Returns in USD

\*\*Sharpe Ratio based on gross returns and daily volatility(on annualized basis)

# High Compounder With Fast Recovery from Drawdown..

- \$100 invested became around 1424 dollar ( gross return, without adjusting for fees) at the end of almost 6 years translating to 1324% gain
- Any drawdown in the entire portfolio history of 6 years got recovered within 3 months of time
- Not a single full financial year of loss for the entire time-period



\*Portfolio was invested through proprietary funds till Apr 17, 2023  
\*All figures are based on Gross Returns in USD

# How do we achieve High Performance ?

Metrics	Description
Market Neutral	<ul style="list-style-type: none"> <li>• The portfolio is a combination of market neutral strategies using option strategies on Index (S&amp;P500 &amp; Russel 2000)</li> <li>• At the portfolio level, Delta Neutrality is maintained on discreet time interval basis</li> <li>• Continuous adjustment of positions is done at discrete intervals of time to maintain Delta Neutrality based on momentum of underlying movement</li> <li>• Use of Index Futures with the objective to neutralize the Delta</li> </ul>
Directional Bias	<ul style="list-style-type: none"> <li>• If the index movement is decisively indicating directional bias based on fundamental indicators or technical indicators, Delta of the portfolio is tilted towards market direction not exceeding 30 Delta</li> </ul>
Volatility Play	<ul style="list-style-type: none"> <li>• Most of the time the portfolio is short on Gamma, with a mix of maturities of the options with maturity not exceeding last business day of the month</li> <li>• Volatility Risk Premium is a source of Alpha in addition to timing the volatility via exposing the portfolio to different maturities of options</li> <li>• Time decay adds to the Alpha generated from volatility risk premium</li> <li>• Exceptions to go long on volatility is based on level of volatility and other technical indicators</li> </ul>
Option strategy	<ul style="list-style-type: none"> <li>• Strangles/Straddles/Iron Condors</li> <li>• Vertical Spreads/Calendar Spreads</li> </ul>

# ..High Returns Comes With Prudent Risk Management

Risk	Mitigation
Tail Risk	<ul style="list-style-type: none"> <li>• Positions are adjusted on real time basis depending on underlying movements</li> <li>• Trigger for maintaining Delta Neutrality is monitored on continuous time basis</li> <li>• Stop loss trigger when daily loss exceeds a percent loss limit</li> </ul>
Volatility Spikes	<ul style="list-style-type: none"> <li>• Size of Positions are adjusted based on the nature of volatility and other technical indicators</li> </ul>
Leverage	<ul style="list-style-type: none"> <li>• Around 50% of the capital is idle and used only as dry powder to maintain delta neutrality</li> <li>• Max leverage does not exceed beyond 3.5 times wrt to computed Notional value</li> </ul>
Gap down Risk	<ul style="list-style-type: none"> <li>• Mostly 100% of the exposure is on (S&amp;P500 &amp; Russel 2000) Index options, which is open almost 24 hours for trading</li> <li>• S&amp;P500 &amp; Russel 2000 has circuit breaker at a level of 7%, 13% &amp; 20%</li> <li>• Weekend exposure is hedged on downside beyond 2 standard deviations</li> </ul>
Liquidity Risk	<ul style="list-style-type: none"> <li>• (S&amp;P500 &amp; Russel 2000) Index options are most liquid &amp; deep and does not have significant impact cost</li> </ul>
Concentration Risk	<ul style="list-style-type: none"> <li>• (S&amp;P500 &amp; Russel 2000) Index is the most diversified index</li> <li>• Option maturities scattered across different tenors and different strikes</li> <li>• The maximum tenor of the option maturity is last business day of the calendar month</li> </ul>



# Meet the Team



**Pranay Pankaj**  
Fund Manager



With an extensive background spanning over a decade as a Financial Engineer, Pranay has collaborated with major banks across Asia, providing expertise in pricing, structuring, and risk management of derivative products. His proficiency extends to trading listed derivatives, where he excels in generating exceptionally high-risk adjusted returns.

Since January 2022, Pranay has successfully operated his proprietary fund based in Singapore. In Aug 2024, he has joined Kristal as a Fund Manager to continue to run this strategy as a sub-fund of Kristal.AI VCC fund and scale this for large & institutional investors. Prior to this venture, he held pivotal roles as a Financial Engineer at Murex, Singapore, where he specialized in advising clients on validating financial products and pricing models related to Equity Derivatives, Fixed Income, and FX Cash products.

With over a decade of experience in trading futures and options, Pranay possesses a deep understanding of market cycles. He has a proven track record of investment success, having achieved remarkable annualized returns of approximately 60% in the US market since 2019 and around 30% in Indian Equities for nearly a decade in listed derivatives.

Pranay's academic credentials include an Engineering degree from IIT Kharagpur, followed by a full-time degree in Financial Engineering from IFMR. Furthermore, he has attained the CFA Level 2 certification and holds the FRM certification, underscoring his commitment to professional development and expertise in the field.

## In-house Experts



**Jaya Shruthi Reddy**  
General Counsel and Head  
of Compliance (Asia)



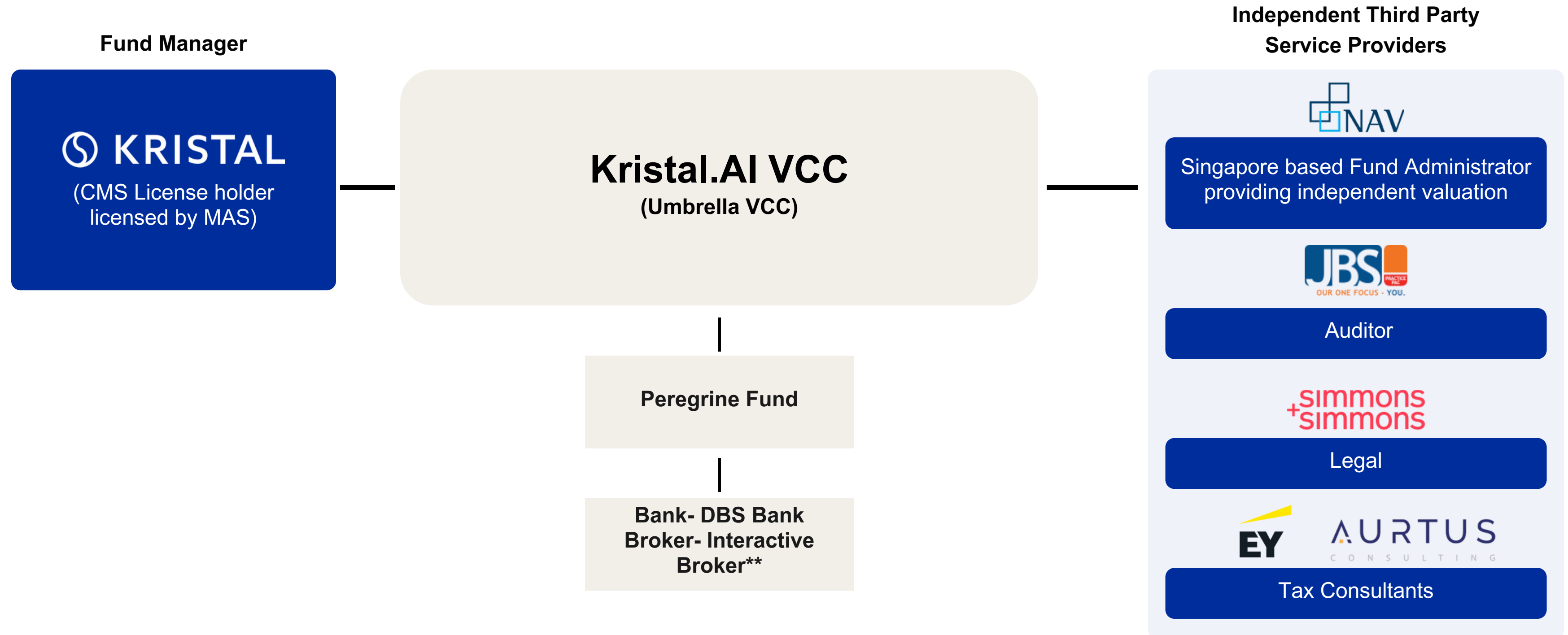
**Shruti Shroff**  
Lead,  
Middle Office & Risk

# Fund Terms

Share class	Class A - USD and Class B - SG
Fund Management fee	2.00% per annum
Performance fee	20% p.a.*
High Water Mark	Yes
Subscriptio Frequency	Monthly
Minimum Subscription	Class A Share - USD 50,000, Class B Share - SGD 50,000
Redemption frequency	Monthly

\*of the appreciation in the NAV of the Series

# Fund Structure & Service Providers



\* Assets and Liabilities of each Sub-Fund legally ring-fenced from other Sub-Funds.

\*\* Each Sub-Fund shall have its own separate bank and broker accounts to ensure assets and liabilities are not commingled.

**Delivering Your Right to Invest with  
the Right Investments**



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