

Biotechnology – Psychedelics

MSSTF - OTCQB

June 28, 2021

Closing Price 6/25/21	\$0.37
CSE: MSET	C\$0.47
Rating:	Buy
12-Month Target Price:	\$1.00
52-Week Range:	\$0.30 - \$2.00
Market Cap (M):	31.4
Shares O/S (M):	83.8
Float:	91.8%
Avg. Daily Volume (000):	24.6
Debt (M):	\$0.6
Dividend:	\$0.00
Dividend Yield:	0.0%
Risk Profile:	Speculative
Fiscal Year End:	June

Total Expenses ('000)

	2021E	2022E	2023E
1Q	C\$3,354A	C\$2,510	C\$3,422
2Q	C\$1,538A	C\$2,619	C\$3,570
3Q	C\$1,763A	C\$2,838	C\$3,868
4Q	C\$1,945	C\$2,947	C\$4,017
FY	C\$8,600	C\$10,914	C\$14,876



Mindset Pharma is listed on the Canadian Securities Exchange (CSE) under the symbol "MSET" and OTCMKTS under the symbol "MSSTF". The stock does not trade on a US National Exchange. Financial data is reported in Canadian dollars (C\$) and is represented as such in our models. Market data including the stock price and target price are translated into US dollars (USD).

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Mindset Pharma Inc.

Buy

Building a Pipeline of Next-Gen Psychedelics with IP Protection – Initiating with a Buy Rating and \$1 PT

Summary

- **Mindset Pharma is building out next-generation psychedelics with four families of compounds including psilocybin and DMT/5-MeO-DMT analogues, and a platform technology for improving psychedelic drugs (a "fifth family").**
- **Family 1 compounds are the closest to psilocybin, and therefore are likely to have the shortest path to market. The first drug candidate, MSP-1014, has been identified and is moving into IND-enabling studies.**
- **Families 2-4 are more purpose-designed. Family 2 and Family 4 compounds are likely considerably shorter acting compared to psilocybin, making them more scalable for a macrodose setting. Family 3 is the opposite, longer acting for microdosing, which is more analogous to traditional pharmaceuticals.**
- **Mindset also has its own proprietary chemical synthesis method for psilocybin and its own compounds, and has a contract development and manufacturing organization (CDMO) to produce 1kg of psilocybin by YE21.**
- **Conclusion. Mindset is differentiated in psychedelics with a fully novel compound strategy, addressing the IP concerns central to the space. MSP-1014 likely has a relatively short path through development, and next-gen purpose designed compounds have the potential to be best-in-class in the longer term.**

Details

MSP-1014, the first of many next-gen psychedelic compounds. MSP-1014 is the first compound from Mindset to be selected for IND-enabling studies. The compound comes from Family 1, meaning it is similar to psilocybin in terms of effects and duration, and potentially could use aspects of a 505(b)2 pathway to shorten development. Where MSP-1014 is differentiated is in its potency and manufacturing. The compound is a psilocybin analogue that contains a conjugated amplification moiety (CAM) to enhance 5-HT_{2A}-specific effects while reducing non-specific effects. With stronger activation, a lower dose could be required to achieve comparable effects, potentially improving safety and reducing side effects such as elevated blood pressure and increased heart rate. MSP-1014 is also easier and cheaper to manufacture than psilocybin by avoiding the need for phosphorylation, the most difficult chemical synthesis step.

Four families of next-gen psychedelics. Mindset is developing four patent-pending families of compounds: Family 1 (psilocybin analogues), Family 2 (shorter-acting psilocybin analogues), Family 3 (longer-acting psilocybin analogues), and Family 4 (DMT and 5-MeO-DMT analogues). Families 2 and 4 are designed to be shorter acting vs. psilocybin (which lasts 6+ hours). Shorter duration is among the most important qualities for next-gen psychedelics for macrodosing, since 1-2 therapists and a room in a treatment center are required for the full duration. By reducing duration, psychedelic assisted psychotherapy becomes more easily scalable. This profile is ideal for psychiatric indications like depression, anxiety, or substance abuse. Family 3, on the other hand, is designed for reduced potency and longer duration. This profile is ideal for microdosing, where the dose is sub-perceptual (more like a traditional therapeutic) and longer activity becomes a benefit. These drugs are likely to target chronic dosing for indications like ADHD or Alzheimer's disease.

Valuation. We model commercialization of MSP-1014 in FY28 in the US and EU5 for treatment-resistant depression (TRD) with a 90% risk adjustment. A platform value is assigned to the pipeline. A 30% discount is then applied to the free cash flow, discounted EPS, and sum-of-the-parts models, which are equally weighted to derive a 12-month price target of \$1.00 USD.

CORPORATE PROFILE



Mindset Pharma Inc
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Investment Risk: Mindset's products are not approved, and the company currently does not generate revenue.

Regulatory Risk: Mindset's products may not be successful in clinical trials and may not meet the requirements for regulatory approval(s).

Commercial Risk: Mindset's products are not approved and commercialized, and if/when they become commercially available, they may not achieve significant market share. In addition, the company lacks commercial infrastructure to support commercialization.

Financial Risk: Mindset is not profitable and may need to raise additional capital to support operations.

Dilution Risk: Capital raises to fund operations may dilute investors.

Ownership:
 Institutional: 2.0%
 Insiders: 8.2%

**Balance Sheet Summary
 (as of 3/31/21):**

Cash: C\$3.2M
 Debt: C\$0.6M

Analysts Covering the Stock
 (other than Maxim): 0

Company Background. Mindset Pharma Inc. (OTC: MSSTF, CSE: MSET) is a drug discovery and development company focused on creating optimized and patentable next-generation psychedelic medicines to treat neurological and psychiatric disorders with unmet needs. Mindset was established in order to develop next generation pharmaceutical assets that leverage the breakthrough therapeutic potential of psychedelic drugs. Mindset is developing several novel families of next generation psychedelic compounds, as well as an innovative process to chemically synthesize psilocybin and its own proprietary compounds. Mindset's new drugs are broadly grouped into four "families".

The first family can further be divided into prodrugs and deuterated analogs of psilocybin with a profile that positions this first family of compounds as superior patentable psilocybin-like molecules with superior activity compared to psilocybin, which suggests compounds in this family may demonstrate dose-related safety and pharmacodynamic advantages compared to psilocybin.

The second family consists of restricted side-chain analogs of psilocybin. Certain compounds also show oral bioavailability and are brain penetrant with in-vivo pharmacokinetic evidence of shorter duration than psilocybin in rodents. This profile positions this second family of compounds for next generation in clinic candidates to support psychedelic-assisted psychotherapy applications and protocols.

The third family continues to demonstrate unique and promising in-vitro profiles. In particular, certain compounds from the third family show a similar binding profile to the human 5HT-2A receptor comparable to that of psilocin's, but with smaller effect size and a much longer duration of action based on human liver microsome stability data. This profile uniquely positions the third family of compounds for potential microdosing applications, including specialized populations and indications such as pediatric attention deficit hyperactivity disorder and Alzheimer's disease.

The fourth and final family includes analogs of DMT and 5-MeO-DMT. These compounds demonstrate similar binding profile to the human 5HT-2A receptor comparable to that of the reference compounds, but with larger effect size and a shorter duration of action compared to psilocin. Moreover, these compounds show activity at both 5HT-1A and 5HT-2C receptors, which have been implicated both in anti-depressant and substance abuse. This profile uniquely positions the fourth family of compounds for potential macro-dosing applications that are differentiated from compounds in Family 2 based on receptor activity signatures.

Senior Management:

James Lanthier, Chief Executive Officer – Mr. Lanthier is a seasoned technology executive with strong expertise in corporate finance, public markets, and M&A. Most recently, Mr. Lanthier was a co-founder and CEO of Future Fertility, an innovative early-stage developer of AI applications for human infertility. As a C-Suite executive, Mr. Lanthier has assisted in the growth and successful exit of numerous technology-enabled businesses through the public markets, including Mood Media, the world's largest in-store media provider, and Fun Technologies, a pioneer in online casual games.

Alvin Ramos, Chief Financial Officer – Mr. Ramos holds a degree in commerce and a member of the Chartered Professional Accountants of Ontario. Mr. Ramos has over 15 years of business experience, having supported a broad range of industries, including mining, technology, and banking. Mr. Ramos serves as CFO of several junior mining companies.

Joseph Araujo, Chief Scientific Officer – Mr. Araujo is a behavioral pharmacologist with extensive experience in facilitating the discovery and development of novel CNS drugs. He has co-founded, held executive level positions, and consulted for Life Science companies including CanCog Technologies, Vivocore, Karyopharm Therapeutics, NPM Pharma, Ketogen, and Epione Animal Health. He did his graduate training in pharmacology at the University of Toronto and has done extensive research examining psychoactive drugs.

Jason Atkinson, Corporate Development – Mr. Atkinson is a finance professional with experience in private equity, venture capital, investment banking, and corporate finance. He has played a key role in raising capital and providing advisory services to private and publicly listed entities across multiple industries. He holds an MBA from the DeGroote School of Business and is a CFA Charterholder.

INVESTMENT SUMMARY

Bull Case. The psychedelic medicine space has rapidly gained traction in recent years as a resurgence of clinical research has emerged across neuropsychiatric disease. While compounds like psilocybin, DMT, and LSD may have a long history in the clinic, it should not be taken for granted that these classical compounds would be the best when applied in practice. Mindset is developing a pipeline of next generation compounds with different clinical profiles to better meet the needs of specific indications, rather than a one-size-fits-all approach. The company has developed more than 70 compounds with a ~75% hit rate for 5-HT_{2A} activity, validating the company's screening platform. Mindset has four families: Family 1 (psilocybin analogues), Family 2 (shorter acting psilocybin analogues), Family 3 (longer acting psilocybin analogues for microdosing), and Family 4 (DMT/5-MEO-DMT analogues), as well as a broad platform that can be applied to improve additional psychedelic compounds. The company has selected its first clinical candidate from Family 1, MSP-1014, which is moving into IND enabling studies and GMP manufacturing. MSP-1014 has demonstrated increased potency compared to psilocybin, and could result in a lower dose, improving safety, particularly in certain high-risk individuals (psilocybin has demonstrated blood pressure, and heart rate), and also may have improved consistency of metabolism. Additional compounds from other families are expected to move into IND enabling studies in the near future. The compound also is easier to synthesize, avoiding the most challenging chemical synthesis step for psilocybin. Mindset plans to announce additional clinical candidates in the near future. In particular, Families 2-4 represent particularly attractive opportunities for next gen psychedelics. Duration of therapy represents a key challenge to the scalability of psychedelics and Mindset has a number of novel compounds (Family 2 and 4) with potentially superior activity to psilocybin, but with shorter durations, and Family 3 includes novel compounds purpose built for microdosing. Importantly, Mindset's novel compound strategy avoids the IP concerns surrounding traditional psychedelics. Bulls view Mindset as pioneering the next generation of psychedelics. As additional compounds approach the clinic and the broader psychedelic space continues to gain traction, Bulls see upside to the current ~\$30M market cap.

Bear Case. The psychedelic space is already high risk. Despite a significant body of data, many of the larger, well designed studies are still ongoing and Bears view the space with greater caution, awaiting more definitive proof of concept. For a company like Mindset, there is added risk, as their novel compounds remain untested in humans and have a longer path to market. Their lead asset, MSP-1014, is thought to be potentially superior in terms of activity but has a similar PK profile to psilocybin. While this reduces the development risk, it also reduces the potential upside since the improvements are largely incremental (ease of manufacturing and improved safety, which is likely to be an incremental benefit except in certain patients with issues like high blood pressure or heart disease). This means the company is likely to face greater competition from other psilocybin-based compounds or next generation psychedelics with shorter durations that are preferable for treatment centers. While the company does have its own next gen pipeline, assets are even earlier stage and lead compounds have not yet been selected.

Our Take. The psychedelic space has demonstrated compelling data across mental health disorders in a growing body of clinical studies and anecdotal reports from drugs like LSD, DMT, MDMA, and Psilocybin. While these drugs have proven efficacious, their PK profiles leave a lot to be desired. Psilocybin, for example can last 6+ hours, which presents challenges for patients (who have to spend a whole day on treatment), therapists (essentially can only treat one patient per shift), and treatment centers, creating a bottleneck to treating patients at scale. There are also IP issues, since all of these drugs are public domain, composition of matter patents don't apply, forcing companies to rely on method of use or formulation. Mindset has the potential to address both of these challenges with their four families of novel compounds. The first one is the simplest, essentially incrementally improving psilocybin on potency, safety, consistency, and ease of manufacturing. A compound from this family, MSP-1014, has been selected and is moving into GMP batches and IND-enabling studies. Since it's a psilocybin analogue with similar properties, the path to approval is likely shorter and is a nearer term opportunity for Mindset. However, over the longer term, Families 2-4 have the potential to be best-in-class next generation psychedelics with improved PK properties. Essentially designing a drug to fit the application, rather than figuring out how to fit in with an existing drug. For Families 2 and 4, this means shorter acting drugs, either higher potency reduced duration psilocybin analogues, or DMT/5-MeO-DMT analogues. Short acting is one of the most desirable properties for psychedelic-assisted psychotherapy and represents a target for many in the space. As for Family 3, the goal is actually longer acting and lower potency for microdosing, since it's a chronic therapy designed for at home use, longer acting is likely preferable. In our view, Mindset has a validated development program which has achieved a 75% hit rate for 5-HT_{2A} activity and has produced 70+ compounds. Furthermore, with a large number of compounds discovered, Mindset also has an opportunity to generate non-dilutive funding by out-licensing some of the compounds they choose not to bring to the clinic to other players in the space who do not have their own next-gen psychedelics. The company's NCE strategy has the potential to address two of the most significant hurdles in the space, IP and duration of therapy. The company has approximately a years' worth of capital and as additional lead compounds are identified and approach the clinic, we anticipate an increase in valuation from the current ~\$30M market cap.

Finances. Mindset reported F3Q21 (Mar) with a net loss of (C\$1.7M) and a cash balance of C\$3.2M. The company subsequently raised C\$8.6M in April in a financing for 11.4M units (including over-allotment) at C\$0.75 consisting of one share of common stock and one warrant exercisable at C\$1.10. Factoring the financing, we estimate the company has ~C\$9M-C\$10M in cash. We estimate burn rate to be ~C\$1.5M-C\$2M, though this may increase as programs advance towards the clinic, we expected the which company has runway into mid-2022. The company does not generate revenue and will likely need multiple equity financings over time to support operations, which we factor into our model.

Exhibit 1. Upcoming Catalysts (calendar year).

Product	Indication	Event	Timeline	Impact
MSP-1014	TBD	Report IND-enabling study results	2H21	++
n/a	n/a	Select additional compounds to advance to clinic	2H21	+
Corporate	n/a	Update on patent applications	2H21	++
TBD	TBD	Announce second clinical candidate	2H21	++
Psilocybin	n/a	Complete 1kg GMP manufacturing batch through CMO	2H21	++
MSP-1014	TBD	Initiate Phase 1	2022	++

Stock Significance Scale: + of moderate importance; ++ higher level; +++ very important

Source: Company reports and Maxim Forecasts

Exhibit 2. Pipeline.

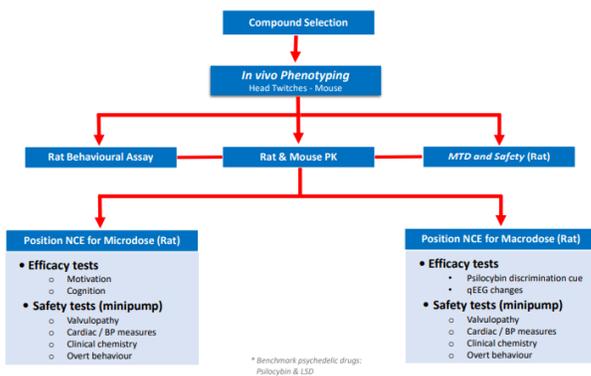
Product	Indication	Development	Pre-IND	Phase I	Phase II	Phase III	Marketed
MSP-1014	TBD	[Progress bar]					
Family 1 (Psilocybin-analogues)	Multiple - Macrodose	[Progress bar]					
Family 2 (Short acting Psilocybin-analogues)	Multiple - Macrodose	[Progress bar]					
Family 3 (Long acting Psilocybin-analogues)	Multiple - Microdose	[Progress bar]					
Family 4 (DMT-analogues)	Multiple - Macrodose	[Progress bar]					

Source: Company Reports and Maxim

NCE Strategy for Next Gen Psychedelics

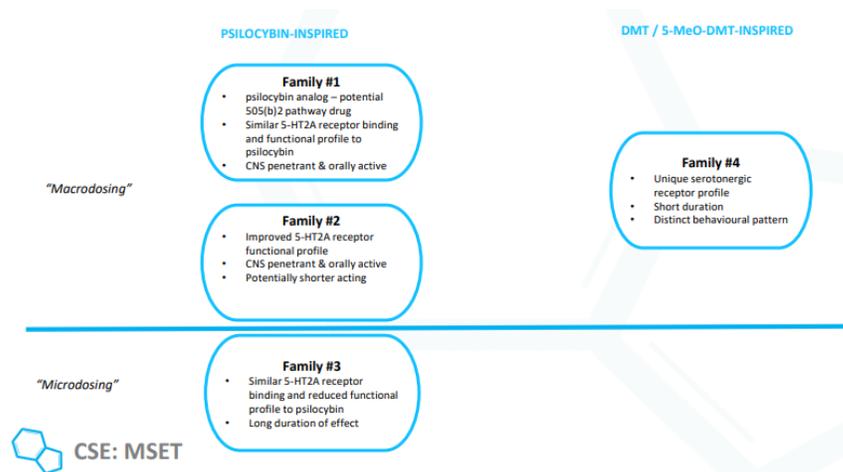
Novel chemical entities. Mindset’s strategy is differentiated in the psychedelic space. Rather than developing existing psychedelics, the company is developing novel compounds that have similar receptor binding activity (and likely similar biological activity) but differing absorption and PK properties. While the research on traditional psychedelics dates back to the 50s and 60s, these are just the first compounds we have identified, not necessarily the best ones possible. Through a complex process of discovery, screening, and categorization, Mindset has built out a library of patentable analogues that have the potential to be superior to the original template and can be selected for application specific properties, as opposed to a one-size-fits-all solution. Mindset has produced 70+ compounds with a ~75% success rate for 5-HT_{2A} activity.

Exhibit 3. Compound selection process. Mindset’s process for compound development and selection first starts with the designing of patentable psilocybin/psilocin-based (or DMT-based) compounds based on scientific literature surrounding serotonin and psychedelic therapeutics. The company then files patent applications for the process chemistry and chemical scaffolds and moves into 5-HT_{2A} agonism screening. After that the process moves into in-vivo phenotyping (head twitch, wet dog shakes, muscle contractions, etc.) and in vitro testing/binding assays including selectivity assays, in vitro ADME (absorption, distribution, metabolism, and excretion) and safety. The company also runs in vivo PK studies, behavioral analyses, and safety analyses. After these are complete, the company can move into IND-enabling studies under one of their four families of compounds.



Source: Mindset Corporate Presentation

Exhibit 4. Families of compounds. Mindset has developed four families of compounds, three surrounding psilocybin, and one surrounding DMT/5-MeO-DMT. Family 1 includes compounds that have a similar profile to psilocybin, while Family 2 includes shorter acting psilocybin analogues and Family 3 contains longer acting psilocybin-like drugs. Family 4 includes DMT/5-MeO-DMT-like drugs. Due to their PK profiles, Families 1, 2, and 4 are positioned for macrodosing. Macro-dose treatments typically involve single or few high dose sessions with a psychedelic mystical experience that is linked to the success. These have found success in treating depression, anxiety, substance abuse disorders, etc. and require in clinic supervision, often combined with psychotherapy. Optimal drug profiles for this setting have high potency and are shorter acting. Family 3 is designed for microdosing, which involves a sub-perceptual dose that could be taken daily or multiple times weekly. Generally, microdosing has been reported to enhance mental clarity, creativity, and energy and has potential for indications such as anxiety and ADHD. Clinical evidence is more limited, but since it is a chronic dosing regimen, safety and longer acting are more optimal for microdosing drugs. The company also has its underlying platform technology to improve a wide range of psychedelic compounds, which can be thought of as a “5th family.”

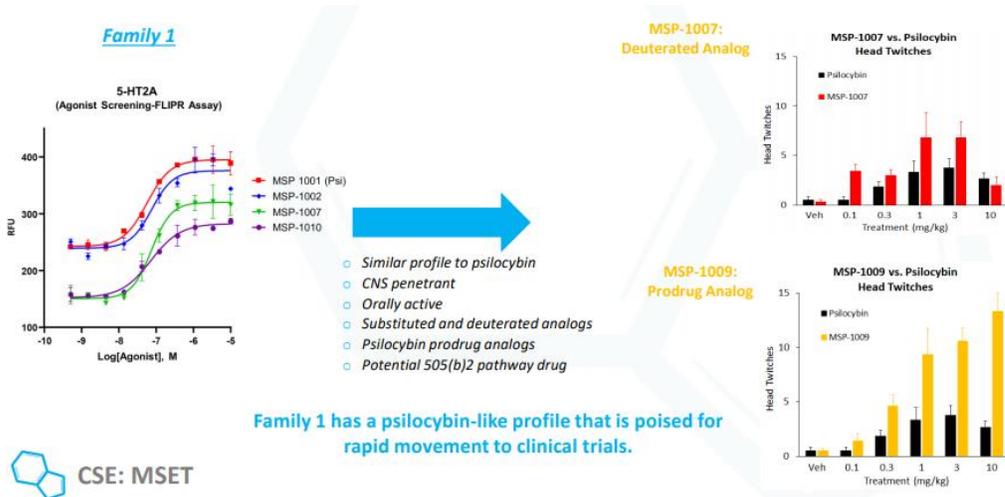


Source: Mindset Corporate Presentation

Family 1 – Improved psilocybin analogues. The first family of compounds being developed by Mindset consists of psilocybin analogues that have a similar profile to psilocybin but have improved properties. This includes safety, as presence of metabolites in psilocybin can result in safety concerns in certain individuals (increased blood pressure and heart rate), consistency, there are likely fast and slow metabolizers of psilocybin that can make dosing a greater challenge, and drug-drug interactions, since polypharmacy is common in neuropsychiatry. This family of compounds can be further divided into prodrugs and deuterated analogues. Current drug candidates are positioned as superior patentable psilocybin-like compounds that may demonstrate dose-related safety and pharmacodynamic advantages compared to psilocybin.

MSP-1014. Mindset has elected its first compound to move into the clinic, MSP-1014, which is a psilocybin analogue that contains a conjugated amplification moiety (CAM). This CAM enhances the 5-HT_{2A} specific effects while reducing non-specific effects. This has resulted in superior in vivo activity and safety profiles in mice compared to psilocybin at a range of doses, and 5-HT_{2A} subtype activation in rats. With stronger activation, a lower dose could be required to achieve comparable effects, potentially improving safety and reducing side effects. Also, this compound is easier to manufacture vs psilocybin by avoiding the need for phosphorylation, the most difficult chemical synthesis step. The next step is to move forward into current good manufacturing practice (cGMP) compliant manufacturing, and investigational new drug (IND)-enabling studies.

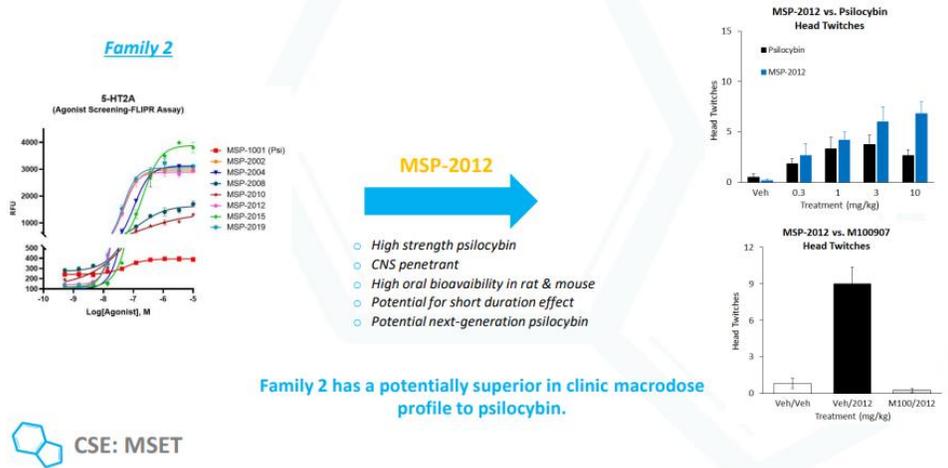
Exhibit 5. Family 1 Profile. The first family can be divided into prodrugs and deuterated analogs of psilocybin. Prodrugs evaluated have demonstrate rapid metabolism into active metabolites with verified efficacy both in vitro and in vivo, but also with superior effects on behaviors associated with 5-HT_{2A} agonism compared to psilocybin in vivo. For the deuterated analogs, in vivo data indicate similar or greater efficacy to psilocybin with oral bioavailability and central nervous system penetration. These Family 1 drugs may be able to take advantage of aspects of the 505(b)2 pathway given their similarities to psilocybin.



Source: Mindset Corporate Presentation

Family 2 – Shorter acting psilocybin analogues. The second family of compounds consists of psilocybin analogues which have a restricted side chain and are designed for greater potency compared to psilocybin and psilocin. Initial PK data has demonstrated that some of these compounds have a shorter duration than traditional psilocybin. This is one of the ideal target characteristics for next gen psychedelics, considering psilocybin has a duration of 6+ hours. Shorter acting compounds have greater scalability, requiring a smaller time commitment from the patient and therapist (reduced therapy costs) and allow treatment centers to have a greater throughput.

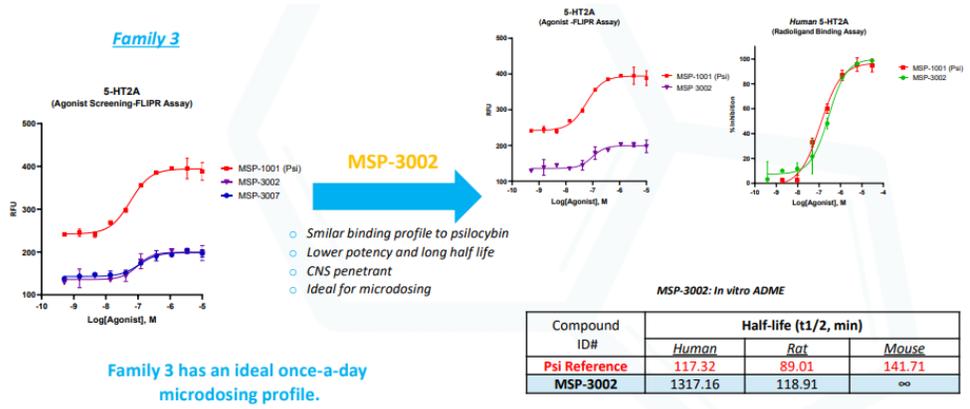
Exhibit 6. Family 2 Profile. Family 2 consists of restricted side-chain analogs of psilocybin. These compounds have demonstrated increased potency compared to psilocin and psilocybin in both in vitro and in vivo studies and certain compounds also show oral bioavailability and CNS penetration. Importantly in vivo PK data demonstrates evidence of shorter duration than psilocybin in rodents. This profile is ideal for next generation candidates for psychedelic-assisted psychotherapy applications.



Source: Mindset Corporate Presentation

Family 3 – Longer acting psilocybin analogues. The third family of compounds is essentially the opposite of Family 2. These compounds have longer durations and a smaller effect size compared to psilocybin. These compounds are better positioned for microdosing applications, which are not likely to require therapist oversight and the patient to remain in a treatment center, since the doses are sub-perceptual. Additionally, many of the microdosing applications are targeting chronic administration, similar to more traditional pharmaceuticals for indications like ADHD, where a patient will take daily stimulants. In these settings, a longer duration can allow for less frequent dosing and an overall improved product profile.

Exhibit 7. Family 3 Profile. Family 3 compounds are designed to have similar receptor binding profiles compared to psilocybin but have a smaller effect size and longer duration. This has been demonstrated in preclinical human liver microsome stability studies. This family of compounds is well positioned for microdose applications and indications such as ADHD and Alzheimer’s disease.

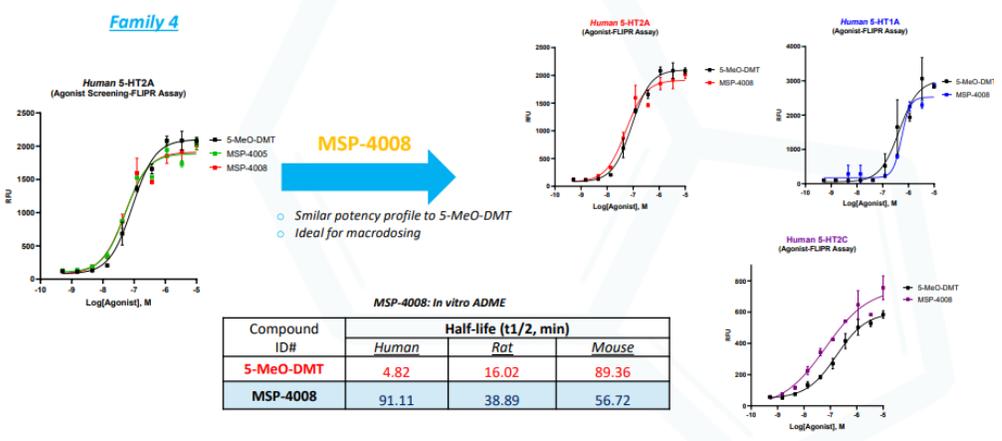


Source: Mindset Corporate Presentation

Family 4 – DMT and 5-MeO-DMT Analogues. The fourth family of compounds includes analogues of DMT and 5-MeO-DMT. DMT has a shorter duration of action but targets a similar receptor pathway to psilocybin and LSD and has demonstrated positive results in early clinical studies in neuropsychiatric indications. The company has synthesized a number of compounds and has conducted ADME studies on several, with compounds demonstrating relatively short durations of action compared to other classical psychedelics. Mindset is optimizing Family 4 compounds for reduced toxicity and improved pharmacokinetic and pharmacodynamic characteristics. Given the shorter duration of action, these drugs could be well positioned for use in-clinic for psychedelic-assisted psychotherapy.

Exhibit 8. Family 4 profile. Family 4 compounds are analogues of DMT & 5-MeO-DMT, which are shorter acting, 5-HT_{2A} targeting compounds. The compounds being developed by Mindset demonstrate a binding profile to the human 5HT-2A receptor comparable to that of the reference compounds, but with larger effect size and a shorter duration of action compared to psilocybin (as would be expected from a DMT-based compound). These compounds also show activity at both 5HT-1A and 5HT-2C receptors, which have been implicated both in anti-depressant and substance abuse. This profile uniquely positions the fourth family of compounds for potential macrodosing applications that are differentiated from compounds in Family 2 based on receptor activity signatures.

FAMILY #4: HIGHLY POTENT NEXT GENERATION 5-MeO-DMT POSITIONED FOR IN CLINIC MACRODOSING



Source: Mindset Corporate Presentation

Manufacturing. In addition to its pipeline compounds, Mindset also has a patent-pending chemical synthesis process for Psilocybin which can produce GMP-grade Psilocybin, but at a significant discount to market price. Mindset’s synthesis process has several improvements including milder reaction conditions, fewer synthesis steps, and more easily obtained commercially available reagents and raw materials, which contribute to lower costs. The process is also suitable for multi-kg production scale and has a lower environmental impact vs. other processes. Mindset has engaged a leading CDMO to synthesize 1 KG of GMP Psilocybin using their process by YE21.

MODELING ASSUMPTIONS

1. We model commercialization of MSP-1014 in treatment resistant depression in the US and EU5 in FY28.
2. We assume the prevalence of major depressive disorder is 6.7% in the US and EU and that 60% of people with MDD seek treatment and of these 30% (~3M) have TRD.
3. We assume pricing of \$25K in the US and \$20K in the EU. This is a discount to nasal ketamine therapy (Spravato) which has pricing of \$4700 - \$6800 in the first month and then \$2500 - \$3500 for maintenance. All in, Spravato can cost \$33K - \$49K per year. We assume pricing increases at 5% per year.
4. The program at Mindset is very early stage as the company is still working through pre-clinical studies. Initial clinical development is not expected until sometime in 2022. In addition, while other groups are more advanced from a clinical perspective, the landscape in psychedelic-based drug development could evolve and change prior to Mindset’s candidate(s) moving into human development. As such, we apply a 90% risk adjustment to our therapeutic model.
5. Through the company is likely to explore additional indications for MSP-1014 and/or other drug candidate from its other families of compounds, we do not factor in additional indications at this time.

Exhibit 9. MSP-1014 in treatment resistant depression market model (US).

MSP-1014, Treatment-resistant depression (US)	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
US population	336,633,000	339,999,330	343,399,323	346,833,317	350,301,650	353,804,666	357,342,713	360,916,140	364,525,301	368,170,554	371,852,260	375,570,783
US Adult population 18+ (74.3%)	250,118,319	252,619,502	255,145,697	257,697,154	260,274,126	262,876,867	265,505,636	268,160,692	270,842,299	273,550,722	276,286,229	279,049,091
Major Depressive Disorder (MDD) (Adult 6.7%)	16,757,927	16,925,507	17,094,762	17,265,709	17,438,366	17,612,750	17,788,878	17,966,766	18,146,434	18,327,898	18,511,177	18,696,289
MDD diagnosed, seeking treatment (60%)	10,054,756	10,155,304	10,256,857	10,359,426	10,463,020	10,567,650	10,673,327	10,780,060	10,887,860	10,996,739	11,106,706	11,217,773
Treatment-resistant depression (2+ failed therapies) (30%)	3,016,427	3,046,591	3,077,057	3,107,828	3,138,906	3,170,295	3,201,998	3,234,018	3,266,358	3,299,022	3,332,012	3,365,332
Market Penetration								0.20%	0.50%	1.00%	1.50%	1.75%
Total Patients Treated								6,468	16,332	32,990	49,980	58,893
Cost of Treatment								25,000	26,250	27,563	28,941	30,388
Increase in Cost								5%	5%	5%	5%	5%
Total revenue ('000)								\$ 161,701	\$ 428,710	\$ 909,293	\$ 1,446,458	\$ 1,789,630
Risk adjustment								90%	90%	90%	90%	90%
Total Revenue ('000)								\$ 16,170	\$ 42,871	\$ 90,929	\$ 144,646	\$ 178,963

Source: Maxim Estimates

Exhibit 10. MSP-1014 in treatment resistant depression market model (EU5).

MSP-1014, Treatment-resistant depression (EU5)	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
EU5 population	335,970,189	342,689,593	349,543,385	356,534,252	363,664,937	370,938,236	378,357,001	385,924,141	393,642,624	401,515,476	409,545,786	417,736,701
EU Adult population 18+ (74.3%)	249,625,850	254,618,367	259,710,735	264,904,949	270,203,048	275,607,109	281,119,252	286,741,637	292,476,469	298,325,999	304,292,519	310,378,369
Major Depressive Disorder (MDD) (Adult 6.7%)	16,724,932	17,059,431	17,400,619	17,748,632	18,103,604	18,465,676	18,834,990	19,211,690	19,595,923	19,987,842	20,387,599	20,795,351
MDD diagnosed, seeking treatment (60%)	10,034,959	10,235,658	10,440,372	10,649,179	10,862,163	11,079,406	11,300,994	11,527,014	11,757,554	11,992,705	12,232,559	12,477,210
Treatment-resistant depression (2+ failed therapies) (30%)	3,010,488	3,070,698	3,132,111	3,194,754	3,258,649	3,323,822	3,390,298	3,458,104	3,527,266	3,597,812	3,669,768	3,743,163
Market Penetration								0.15%	0.40%	0.80%	1.25%	1.50%
Total Patients Treated								5,187	14,109	28,782	45,872	56,147
Cost of Treatment								20,000	21,000	22,050	23,153	24,310
Increase in Cost								5%	5%	5%	5%	5%
Total revenue ('000)								\$ 103,743	\$ 296,290	\$ 634,654	\$ 1,062,054	\$ 1,364,951
Risk adjustment								90%	90%	90%	90%	90%
Total Revenue ('000)								\$ 10,374	\$ 29,629	\$ 63,465	\$ 106,205	\$ 136,495

Source: Maxim Estimates

VALUATION

We model commercialization of MSP-1014 in FY28 in the US and EU5 for treatment-resistant depression (TRD) with a 90% risk adjustment based on the stage of development. A platform value is assigned to the pipeline. A 30% discount is applied to the Free Cash Flow, Discounted EPS, and Sum-of-the-Parts Models, which are equally weighted to derive a 12-month price target of \$1.00 USD.

Exhibit 11. Free Cash Flow Model.

Average	1.0 USD
Price Target	1
Year	2022

DCF Valuation Using FCF (min):

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
units ('000)	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
EBIT	(8,785)	(10,914)	(14,876)	(20,521)	(25,960)	(36,356)	(42,594)	(10,330)	41,988	135,675	236,566	308,490
Tax Rate	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	5%
EBIT (1-t)	(8,785)	(10,914)	(14,876)	(20,521)	(25,960)	(36,356)	(42,594)	(10,330)	41,988	135,675	231,835	293,065
CapEx	-	-	-	-	-	-	-	-	-	-	-	-
Depreciation	11	-	-	-	-	-	-	-	-	-	-	-
Change in NWC	-	-	-	-	-	-	-	-	-	-	-	-
FCF	(8,774)	(10,914)	(14,876)	(20,521)	(25,960)	(36,356)	(42,594)	(10,330)	41,988	135,675	231,835	293,065
PV of FCF	(11,407)	(10,914)	(11,443)	(12,143)	(11,816)	(12,729)	(11,472)	(2,140)	6,691	16,632	21,862	21,258
Discount Rate	30%											
Long Term Growth Rate	1%											
Terminal Cash Flow	1,020,676											
Terminal Value YE2031	74,038											
NPV	67,825											
NPV-Debt												
Shares out ('000)	121,447	2031E										
NPV Per Share	1											

Source: Maxim estimates

Exhibit 12. Discounted-EPS Model.

Current Year	2022
Year of EPS	2032
Earnings Multiple	10
Discount Factor	30%
Selected Year EPS	2.41
NPV	2

Source: Maxim estimates

		Discount Rate and Earnings Multiple Varies, Year is Constant						
		1.75	5%	10%	15%	20%	25%	30%
Earnings Multiple	0	0	0	0	0	0	0	0
	5	7.41	4.65	2.98	1.95	1.30	0.88	
	10	14.81	9.30	5.96	3.90	2.59	1.75	
	15	22.22	13.96	8.95	5.85	3.89	2.63	
	20	29.63	18.61	11.93	7.79	5.18	3.50	
	25	37.04	23.26	14.91	9.74	6.48	4.38	
	30	44.44	27.91	17.89	11.69	7.77	5.25	
	35	51.85	32.56	20.88	13.64	9.07	6.13	

Exhibit 13. Sum-of-the-Parts Model.

	LT Gr	Discount Rate	Yrs to Mkt	% Success	Peak Sales (MM's)	Term Value
MSP-1014, Treatment-resistant depres	1%	30%	6	50%	\$179	\$617
NPV						\$0.4
MSP-1014, Treatment-resistant depres	1%	30%	6	50%	\$136	\$471
NPV						\$0.3
Next-Gen Psychedelic Pipeline	1%	30%	7	50%	\$500	\$1,724
NPV						\$0.8
Net Margin						70%
MM Shrs OS (2031E)						121
Total						\$1

Source: Maxim estimates

Mindset Pharma Inc.: Income Statement (\$000)					Jun-21	Jun-22	Jun-23	Jun-24	Jun-25	Jun-26	Jun-27	Jun-28	Jun-29	Jun-30	Jun-31	Jun-32
YE June 31	1Q21A	2Q21A	3Q21A	4Q21E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
Revenue:																
MSP-1014, Treatment-resistant depression (US)	-	-	-	-	-	-	-	-	-	-	-	16,170	42,871	90,929	144,646	178,963
MSP-1014, Treatment-resistant depression (EU5)	-	-	-	-	-	-	-	-	-	-	-	10,374	29,629	63,465	106,205	136,495
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Next-gen psychedelic compounds (platform value)	-	-	-	-	-	-	-	-	-	-	-	20,000	40,000	60,000	80,000	100,000
Net revenue	-	-	-	-	-	-	-	-	-	-	-	46,544	112,500	214,395	330,851	415,458
Collaborative revenue:																
Revenues	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Income	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Collaborative Revenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue	-	-	-	-	-	-	-	-	-	-	-	46,544	112,500	214,395	330,851	415,458
Gross Margins:																
Cost of Goods Sold	-	-	-	-	-	-	-	-	-	-	-	9,309	16,875	21,439	33,085	41,546
%Gross Margin												80%	85%	90%	90%	90%
Gross Profit	-	-	-	-	-	-	-	-	-	-	-	37,236	95,625	192,955	297,766	373,912
Operating Expenses:																
Research and Development		311	618	741	1,671	5,931	8,897	13,345	17,349	26,024	31,228	32,790	34,429	36,151	37,958	39,856
%R&D																
Selling, General and Administrative	201	454	989	1,186	2,830	4,983	5,980	7,175	8,610	10,333	11,366	14,776	19,208	21,129	23,242	25,566
Consulting Fees	151	441	860													
Professional Fees	45	13	94													
G&A	5	0	35													
%SG&A																
Stock based compensation	10	361	14	17	401											
Listing expense		412	143		554											
Reverse takeover transaction costs	3,144				3,144											
Total Expenses	3,354	1,538	1,763	1,945	8,600	10,914	14,876	20,521	25,960	36,356	42,594	56,874	70,512	78,719	94,285	106,968
Operating Income (Loss)	(3,354)	(1,538)	(1,763)	(1,945)	(8,600)	(10,914)	(14,876)	(20,521)	(25,960)	(36,356)	(42,594)	(10,330)	41,988	135,675	236,566	308,490
Interest and other income	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Change in fair value of convertibles		(280)	95		(185)											
Total Other Income	-	(280)	95	-	(185)	-	-	-	-	-	-	-	-	-	-	-
Pretax Income	(3,354)	(1,818)	(1,668)	(1,945)	(8,785)	(10,914)	(14,876)	(20,521)	(25,960)	(36,356)	(42,594)	(10,330)	41,988	135,675	236,566	308,490
Taxes on income	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,731	15,424
Tax Rate															2%	5%
GAAP Net Income (Loss)	(3,354)	(1,818)	(1,668)	(1,945)	(8,785)	(10,914)	(14,876)	(20,521)	(25,960)	(36,356)	(42,594)	(10,330)	41,988	135,675	231,835	293,065
Foreign currency translation loss																
Total comprehensive loss	(3,354)	(1,818)	(1,668)	(1,945)	(8,785)	(10,914)	(14,876)	(20,521)	(25,960)	(36,356)	(42,594)	(10,330)	41,988	135,675	231,835	293,065
GAAP-EPS	(0.12)	(0.03)	(0.02)	(0.02)	(0.15)	(0.13)	(0.16)	(0.21)	(0.24)	(0.32)	(0.36)	(0.09)	0.35	1.13	1.92	2.41
GAAP-EPS (Dil)	(0.12)	(0.03)	(0.02)	(0.02)	(0.15)	(0.13)	(0.16)	(0.21)	(0.24)	(0.32)	(0.36)	(0.09)	0.35	1.13	1.92	2.41
Wgt'd Avg Shrs (Bas) - '000s	27,400	54,165	67,322	78,793	56,920	84,994	91,349	99,727	107,634	114,575	119,044	119,521	119,999	120,480	120,963	121,447
Wgt'd Avg Shrs (Dil) - '000s	27,400	54,165	67,322	78,793	56,920	84,994	91,349	99,727	107,634	114,575	119,044	119,521	119,999	120,480	120,963	121,447

Source: Company reports and Maxim

DISCLOSURES

Mindset Pharma Inc. Rating History as of 06/25/2021

powered by: BlueMatrix



Maxim Group LLC Ratings Distribution		As of: 06/27/21	
		% of Coverage Universe with Rating	% of Rating for which Firm Provided Banking Services in the Last 12 months
Buy	Fundamental metrics and/or identifiable catalysts exist such that we expect the stock to outperform its relevant index over the next 12 months.	85%	56%
Hold	Fundamental metrics are currently at, or approaching, industry averages. Therefore, we expect this stock to neither outperform nor underperform its relevant index over the next 12 months.	15%	45%
Sell	Fundamental metrics and/or identifiable catalysts exist such that we expect the stock to underperform its relevant index over the next 12 months.	0%	0%

**See valuation section for company specific relevant indices*

I, Jason McCarthy, Ph.D., attest that the views expressed in this research report accurately reflect my personal views about the subject security and issuer. Furthermore, no part of my compensation was, is, or will be directly or indirectly related to the specific recommendation or views expressed in this research report.

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The research analyst(s) primarily responsible for the preparation of this research report have received compensation based upon various factors, including the firm's total revenues, a portion of which is generated by investment banking activities.

Maxim Group makes a market in Mindset Pharma Inc.

Maxim Group expects to receive or intends to seek compensation for investment banking services from Mindset Pharma Inc. in the next 3 months.

MSSTF: For Mindset Pharma Inc., we use the BTK (ARCA Biotechnology Index) as the relevant index.

Valuation Methods

MSSTF: We model commercialization of MSP-1014 in FY27 in the US and EU5 for treatment-resistant depression (TRD) with a 90% risk adjustment based on the stage of development. A platform value is assigned to the pipeline. A 30% discount is then applied to the free cash flow, discounted EPS, and sum-of-the-parts models, which are equally weighted to derive a 12-month price target.

Price Target and Investment Risks

MSSTF: Aside from general market and other economic risks, risks particular to our price target and rating for Mindset Pharma Inc. include: (1) the regulatory and clinical risk associated with product development; (2) the ability to access capital and the very high likelihood that company will need to raise additional capital, the terms of which may not be favorable based on the outcome of clinical data and other factors, and if the company is unable to raise capital, this may hinder the company's ability to continue operations; (3) the rate and degree of progress of product development; (4) the rate of regulatory approval and timelines to potential commercialization of products; (5) the level of success achieved in clinical trials; (6) the requirements for marketing authorization from regulatory bodies in the United States and other countries; (7) the liquidity and market volatility of the company's equity securities; (8) regulatory and manufacturing requirements and uncertainties; (9) product and technology developments by competitors, potentially with more resources and commercial infrastructure; (10) inability, if product(s) is approved to gain adequate market share; (11) ability of the company to achieve a US exchange listing; (12) impact of comprehensive tax reform in the US and Ex-US tax policy; (13) geopolitical risk for ex-US manufacturing facilities; (14) delays related to COVID-19 could impact the company's ability operate and conduct clinical trials; (15) foreign currency exchange rate fluctuation; (16) failure of third-parties to meet contractual obligations, potentially impacting drug development. (17) Drug scheduling and other regulatory/legal issues with psychedelic-based therapeutics; (18) Challenges around intellectual property associated with psychedelic-based therapeutics, which could result in not obtaining IP protections, exclusivity and other impacts that could materially impact the potential value of these drugs and treatment areas. Legal challenges could also result in lengthy and costly litigation; (19) The risks associated with novel compounds may exceed those in more well studied classical psychedelic compounds; (20) The stock trades on the OTCMKT and Canadian National Securities Exchange, and is not listed on a US National Exchange.

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Risk ratings take into account both fundamental criteria and price volatility.

Speculative – Fundamental Criteria: This is a risk rating assigned to early-stage companies with minimal to no revenues, lack of earnings, balance sheet concerns, and/or a short operating history. Accordingly, fundamental risk is expected to be significantly above the industry. **Price Volatility:** Because of the inherent fundamental criteria of the companies falling within this risk category, the price volatility is expected to be significant with the possibility that the investment could eventually be worthless. Speculative stocks may not be suitable for a significant class of individual investors.

High – Fundamental Criteria: This is a risk rating assigned to companies having below-average revenue and earnings visibility, negative cash flow, and low market cap or public float. Accordingly, fundamental risk is expected to be above the industry. **Price Volatility:** The price volatility of companies falling within this category is expected to be above the industry. High-risk stocks may not be suitable for a significant class of individual investors.

Medium – Fundamental Criteria: This is a risk rating assigned to companies that may have average revenue and earnings visibility, positive cash flow, and is fairly liquid. Accordingly, both price volatility and fundamental risk are expected to approximate the industry average.

Low – Fundamental Criteria: This is a risk rating assigned to companies that may have above-average revenue and earnings visibility, positive cash flow, and is fairly liquid. Accordingly, both price volatility and fundamental risk are expected to be below the industry.

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