Making strong strides in the medicinal cannabis space

Share Price: NZ$0.17

NZX: CBD
Sector: Healthcare
4 September 2023

Cannasouth (NZX: CBD) is a Waikato-based company developing the next-generation of high-quality medicinal cannabis products. It operates through three segments – Cannasouth Bioscience for research and development, Cannasouth Cultivation, a cultivation facility to produce high-quality premium flower, and Eqalis Pharmaceuticals, conducting the manufacture of GMP medicinal cannabis ingredients and finished dosage form.

The Cannasouth-Eqalis merger brings host of benefits

In June 2023, the merger between Cannasouth and Eqalis was completed after having been announced in December 2022. The merger brings synergistic benefits in intellectual property (IP) technology, R&D, innovation, manufacturing, sales, product distribution, licensing, and capabilities to improve patient access to cannabis-based medicine. It has also created a more diversified product portfolio, comprising an online clinic, biomass and GMP and GACP premium cannabis flower, GMP cannabinoid-based ingredients (CBIs), and cannabis medicines.

Substantial opportunity for the premium flower market

Cannasouth has developed a state-of-the-art sealed Controlled Environment Agriculture (CEA) greenhouse facility to access the premium flower market, which is a highly valued treatment option for which significant demand exists globally in the dried form. Its premium product offers Cannasouth a competitive advantage over other producers. In May 2023, Cannasouth received its licence to produce dried cannabis flower to the globally recognised GMP standard. This in turn is likely to open doors for Cannasouth to high-value markets worldwide.

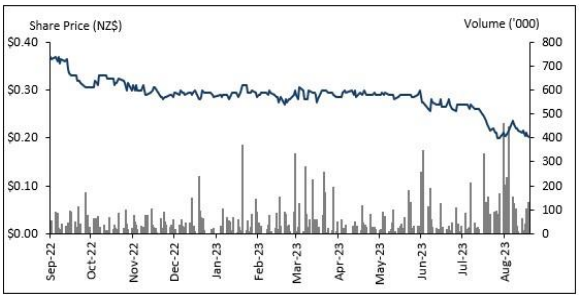
Valuation range of NZ$0.34-0.43 per share

Using a DCF methodology, we have calculated Cannasouth's intrinsic value to be at NZ$0.34 per share in our conservative base case scenario and NZ$0.43 per share in an optimistic outlook. The main catalyst includes on-schedule achievement of commercialisation goals and the operational synergies evolving from the merger of Cannasouth and Eqalis. The potential challenges to our target price range includes heightened competition, disturbances in the supply chain, and uncertainties surrounding regulations. Please refer to page 28 for more details on the key risks associated with our investment rationale.

Market Cap. (NZ$ m)	54.5
# shares outstanding (m)	320.5
# shares fully diluted (m)	332.9
Market Cap Ful. Dil. (NZ$ m)	56.6
Free Float	66.3%
52-week low/high (NZ$)	0.17 / 0.38
Avg. 12M daily volume ('1000)	65.5
Website	www.cannasouth.co.nz

Source: Company, Pitt Street Research

Share price (NZ$) and avg. daily volume (k, r.h.s.)



Source: Refinitiv Eikon, Pitt Street Research

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Introducing Cannasouth

Cannasouth (NZX: CBD) is a vertically integrated biopharmaceutical company that develops high-quality medicinal cannabis products to support health outcomes in patients. It was the first medicinal cannabis company to be listed on the NZX in 2019. Cannasouth has greenhouse, GMP post-harvest production, and laboratory facilities in Waikato, as well as GMP manufacturing, extraction, and indoor research cultivation facilities in the Bay of Plenty.

Cannasouth has a strong product portfolio

Cannasouth's product portfolio includes the development of products designed to improve patients' usability and experience such as ease of dosing and absorption. Its first medicinal cannabis (oil) products were imported white-label products which went through New Zealand's product assessment process with the New Zealand Medicinal Cannabis Agency (MCA). The company caters to strong consumer demand for sustainably produced medicinal cannabis including pharmaceutical quality Active Pharmaceutical Ingredients (APIs) or cannabis-based ingredients (CBIs) comprising flowers, oils, distillates and isolates through to finished dosage forms.

Cannasouth cultivates premium cannabis flower

Cannasouth's state-of-the-art sealed CEA greenhouse facility combines precise controls of indoor growing with energy saving benefits

Cannasouth's prime tangible asset is its state-of-the-art Controlled Environment Agriculture (CEA) sealed greenhouse and processing facility at Waikato. The facility combines the precise controls of indoor growing with the energy saving benefits of sunlight in a greenhouse to produce premium, pharmaceutical-quality, cannabis flower for local and global markets at competitive production costs and with a smaller environmental footprint than competing indoor growing operations. The CEA sealed facility received Good Agricultural and Collection Practice (GACP) certification in August 2022 and GMP certification in May 2023.

Merger between Cannasouth and Eqalis to boost the company's growth prospects

In June 2023, Cannasouth merged with another medicinal cannabis company called Eqalis. The merger enabled Cannasouth to operate end-to-end processes with GMP certification to produce dried cannabis flower and manufacture cannabis-based ingredients and medicinal cannabis products such as oral solutions. The combined Cannasouth and Eqalis business has a broader product portfolio including an online clinic called RestoreMe, cannabis biomass and premium cannabis flower, GMP CBIs, and cannabis medicines. With a commercial scale shipment of high-quality dried cannabis-flower to Australia, Cannasouth also commenced sales in the Australian market in June 2023. The product pipeline for the 'new Cannasouth' includes a new drug delivery technology designed to provide a platform for numerous therapeutic products, offering potential for licence opportunities and royalty revenue streams. We believe the period to June 2024 will feature progressive increases in sales of approved products, and the development and approval of more products.

Evolving regulations in New Zealand to pave the way for expansion in the medicinal cannabis marketplace

A strictly regulated market is likely to enable the access to medicinal cannabis products in a more controlled and safer manner

Cannabis was first made available in New Zealand for therapeutic purposes in 2010, but under strict guidelines. In late 2017, the New Zealand Misuse of Drugs Regulations (1977) were amended, allowing doctors to prescribe CBD without the approval of the Ministry of Health (MoH). The relevant statutory changes to allow THC-containing products were passed by the New Zealand parliament in December 2018[1]. The resulting Medicinal Cannabis Scheme was launched in April 2020, with the industry overseen by the Medicinal Cannabis Agency (MCA). The existence of a strict regulated market paves the way for access to the products in a more controlled and safer manner as compared to access to crude products in the black market. We believe that, despite the initial hiccups, the companies achieving New Zealand's standards are well positioned to enter global markets. This in turn, is also likely to benefit Cannasouth.

Cannasouth has growth prospects in several geographies

New Zealand is a fast-growing market for medicinal cannabis with an increasing number of products and prescribers. It is positioned for rapid growth and is likely to follow a similar trajectory as other faster growing markets such as Australia. More and more patients are transitioning to the legal regulated market to maintain a consistent therapeutic effect. Apart from New Zealand, Australia is another key market for Cannasouth. The regulatory model of Australia (a traditional prescription and pharmacy model) is like that of New Zealand. Both markets have similar cannabis acceptance levels, prescribing pathways, and quality standards. Europe is also another significant market for the company. The European market holds 31% of the global CBD market and is in the early phases of development. Germany is Cannasouth's single largest market in Europe and a key export market. Asia is another key market due to its proximity to New Zealand coupled with the country's robust reputation for quality.

[1] The Misuse of Drugs (Medicinal Cannabis) Amendment Bill.

Ten reasons to look at Cannasouth

1) **Cannasouth is a developer of high-quality medicinal cannabis products** - Cannasouth has a vertically integrated business that has built a sales strategy for the entire product range from cannabis cultivation to finished products for sale in local and global markets.

2) **Cannasouth has a robust product portfolio -** Cannasouth's first medicinal cannabis (oil) products were imported white-label products. Cannasouth is well advanced in the development of second-generation products designed to improve patient experience such as ease of dosing and absorption. The original Cannasouth had a pipeline of disruptive innovations in low-cost gel formulations, next-generation products, and plant genetics. These include cannabinoid medicines, cannabis products in the form of oral solutions and premium dried flower.

The merged Cannasouth- Eqalis company is likely to ensure a diversified portfolio and result in the creation of a larger company with better access to capital

3) **The merger between Cannasouth and Eqalis will result in a host of benefits –** including IP technology, R&D, innovation, manufacturing, sales, product distribution, licensing, and capabilities to improve patient access to cannabis-based medicines. The combination of the low cost of production and value-added technologies through Cannasouth's merger with Eqalis is likely to improve the delivery of active ingredients to the patients. The merger also helps in the creation of a diversified products and services portfolio, delivery of critical mass and economies of scale, acceleration of innovation. Post the merger, the portfolio of the 'New Cannasouth' includes an online clinic called RestoreMe, production of biomass for extraction and Good Manufacturing Practice (GMP) for CBIs and cannabis medicines.

4) **Dried flower is a key focus for Cannasouth –** In May 2023, the company received its licence to produce dried medicinal cannabis flower. Medicinal flower is of two types – one in finished dosage form and the other as bulk starter material. Flower as a finished product is meant for direct consumption via an approved vaporiser or can be consumed as tea. It has higher quality requirements and requires production in dedicated facilities with pharmaceutical-quality, post-harvest processing areas and GMP accreditation. Considering this, Cannasouth has developed a unique facility to access the premium flower market, a highly valued treatment option for which there is significant demand globally in dried form. This premium product offers Cannasouth a unique selling proposition.

5) **Cannasouth's CEA facility has the relevant accreditations –** Cannasouth Cultivation has developed a unique state-of-the-art CEA sealed greenhouse and processing facility to access the premium flower market. The facility is scalable, combines the precise controls of indoor growing with the energy saving benefits of sunlight in a greenhouse to produce premium, pharmaceutical quality cannabis flower for local and global markets with a smaller carbon footprint, at competitive production costs. The CEA facility also secured Good Agricultural and Collection Practice (GACP) certification in August 2022 and GMP certification in May 2023.

6) **Cannasouth is likely to be a beneficiary of the robust regulatory environment in the longer run –** New Zealand's Medicinal Cannabis Scheme (MCS) was launched in April 2020, with the industry overseen by the MCA. The creation of a regulated market paves the way for access to the products in a controlled and safe manner. Although the setting up of a pharmaceutical quality medicinal cannabis business in New

Zealand is a capital intensive and time-consuming process, companies achieving New Zealand's standards are subsequently well positioned to enter global markets.

Vertically integrated business model offers a strong cost and competitive advantage to Cannasouth

7) **Cannasouth enjoys a strong competitive advantage -** The ability to operate a full vertically integrated business model that includes premium flower cultivation, extraction, finished product manufacture, and a prescribing clinic, from within New Zealand opens a cost advantage compared to product imported from Canada and elsewhere.

8) **Access to lucrative export markets –** Cannasouth is targeting the markets of Australia and Europe as key markets for exports. Within Europe, Germany is the single largest market. Cannasouth recently signed a key 3-year agreement with German-based WEECO Pharma for the supply of premium cannabis flower. This access to a lucrative export market would create additional opportunities for Cannasouth and support investments for further development.

9) **Strong management in place -** Cannasouth has an experienced board and management team with diverse experience across a wide range of industries. CEO Mark Lucas has a strong background of hemp cultivation and is an experienced business manager who designs and implements operational business systems throughout Cannasouth. With strong data system DNA, Lucas is a skilled manager who brings a wealth of industry and business knowledge and experience to this role.

10) Valuation – We believe that the stock is undervalued at the current market value. We value the company at NZ$0.34 per share in our base case and NZ$0.43 based on the DCF approach. The key near-term catalysts will be timely attainment of commercialisation milestones, operational efficiencies stemming from synergies from the Cannasouth-Eqalis merger and the opening up of a multi-billion-dollar export growth opportunity.

Cannasouth – a high quality medicinal cannabis products developer

Cannasouth is a medicinal cannabis products developer, based in Waikato. This company, which in 2019 became the first medicinal cannabis company to be listed on the NZX, has cemented itself as a leader in the medicinal cannabis industry in New Zealand. Cannasouth has positioned itself as a sustainable and vertically integrated medicinal cannabis business. It has been built on market intelligence and has validated a sales strategy for medicinal cannabis products and services across the entire value chain from cannabis cultivation to finished products for sale in local and global markets. It has a world class team with over 200 years of GMP and pharmaceutical R&D experience. The company is committed to improving the quality of life of its patients through the use of affordable and next-generation cannabinoid therapeutics.

Cannasouth is focussed on the development of next-generation high quality medicinal cannabis products to improve patient care

Cannasouth's background

The current Cannasouth entity resulted from the merger of two medicinal cannabis pioneers in New Zealand, the original Cannasouth, founded in 2018, and Eqalis, founded in 2019.

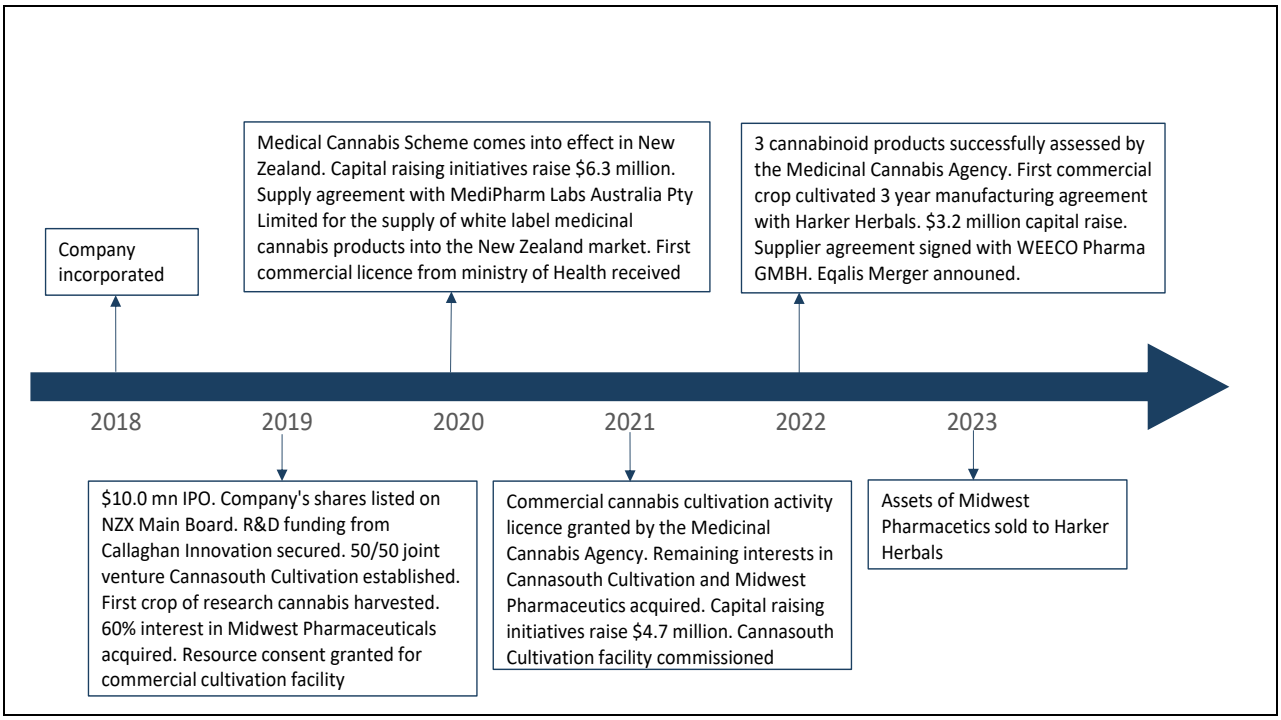
- Cannasouth was founded by Nic Foreman and Mark Lucas, who had been cultivating industrial hemp with the appropriate licences in New Zealand since around 2002. Initially the focus was on securing the relevant research licences at a time when the regulatory framework in New Zealand was still being worked out. Eventually, with the implementation of New Zealand's Medicinal Cannabis Scheme in 2020, Cannasouth was able to launch products on the New Zealand market in late 2022 (Figure 1).
- Eqalis was founded by Greg Misson in 2019. Misson had previously founded and built Open Country Cheese, the first major New Zealand dairy manufacturer outside of Fonterra. Together with three other investors[2], he set out to cultivate and produce medicinal cannabis in the Bay of Plenty region of New Zealand and do so at industrial scale. It gained its commercial licence in August 2020 and GMP certification for its manufacturing facility in November 2022.

The original Cannasouth had robust product offerings

- Cannasouth's first medicinal cannabis (oil) products were imported white-label products which went through New Zealand's product assessment process with the New Zealand Medicinal Cannabis Agency and were verified in May 2022. Cannasouth has a pipeline of disruptive innovations in low-cost gel formulations, next-generation products and plant genetics.

[2] Alan Bougen, the co-founder of Comvita (NZX: CVT), New Zealand's foremost honey producer; Murray McBride a large-scale kiwifruit grower and founder of BayGold, an orchard management firm; and Tony Ponder, a director of Southern Produce and the Chairman of New Zealand's Avocado Growers Association.

Figure 1: Evolution of Cannasouth



Source: Company, Pitt Street Research

Cannabinoid medicines have been a key focus area

Cannasouth offers a range of medicinal cannabis products containing cannabinoids such as CBD and THC

Cannasouth is involved in the production and supply of biopharmaceuticals, specialising in cannabinoid medicines, with area of operations being New Zealand. Cannabinoids are the main active ingredients in the cannabis plant. They are therapeutically useful because they mimic the behaviour of endocannabinoids in the human body. Cannasouth offers a range of medicinal cannabis products containing various cannabinoids, such as THC and CBD in different ratios. THC (or delta-9-Tetrahydrocannabinol) is a key component in cannabis. The THC content in cannabis is used to treat ailments such as neural disorders and muscle and joint pain, nausea and pain associated with chemotherapy. CBD, or cannabidiol indirectly stimulates the body's endocannabinoid system, responsible for regulating many processes, including immune response, communication between cells, appetite and metabolism, and memory.

Cannasouth offers cannabis products in the form of oral solutions

Cannabis products also exist in the form of oil-based oral solutions dosed to the patient through an oral syringe or a dropper. These products can have some limitations in terms of speed of action, bioavailability, chemical stability, taste, ease of use, accuracy of dose and allergies. Cannasouth's research team has investigated alternatives to the current product lines has identified improved technologies for overcoming the limitations and is working towards developing a range of next- generation medicinal cannabis products. We believe that the technologies could potentially be used as a drug delivery platform for other lipophilic drugs beyond just cannabinoids and provide an opportunity to out-license the technology.

Cannasouth has also ventured into the dried flower target segment

Cannasouth is well positioned to take advantage of the developing high growth dried flower market

In May 2023, Cannasouth received its GMP certification to produce dried cannabis flower and is currently progressing flower product applications for the New Zealand market with the MCA. In New Zealand, medicinal cannabis products fall under a classification called Section 29 of the Medicines Act which states that the products are not approved to treat any particular condition. As of December 2022, 27 products were available in New Zealand. These products were verified as meeting the New Zealand Minimum Quality Standard (NZMQS). Medicinal flower is of two types:

A) Flower as a finished dosage form - Flower as a finished product is meant for direct consumption in an approved vaporiser or as tea in New Zealand. The flower as a finished dosage form needs to be of a certain quality and generally requires production in dedicated facilities with post-harvest processing areas and GMP accreditation. The facilities also provide an optimal environment for the cultivation of pharmaceutical quality flower. Due to low post-harvest refinements, the products rely on high quality cultivation, harvesting, drying and packing standards such as GACP and GMP. Cannasouth foresaw this trend and has developed a unique facility to access the premium flower market, a highly valued treatment option that has significant demand in the dried form. Its premium product offers Cannasouth a unique selling proposition. (Figure 2).

B) Bulk starter material - Bulk starter material is the material that is used for further manufacturing of refined products such as oils, sprays and capsules. This flower is used as a raw material for the manufacture of other products such as formulated oils and tinctures. The quality of the products can be defined and controlled during processing. This in turn makes the quality of the starting material less critical. Bulk flower as a starting material can be considered as a bulk commodity and has the lowest prices.

Figure 2: Dried cannabis flower

Source: Company, Pitt Street Research

Operating in three different but synergistic segments

Prior to its merger with Eqalis, Cannasouth operated through three different but complementary segments – Cannasouth Bioscience, Cannasouth Cultivation and Midwest Pharmaceutics. Cannasouth acquired interests in two joint ventures, Cannasouth Cultivation and Midwest Pharmaceutics following an NZ$4.5m capital raise in August 2021. Subsequently, certain

assets of Midwest Pharmaceuticals were divested in February 2023 in preparation for the merger with Eqalis.

Cannasouth Bioscience

Cannasouth is involved in treatment of neuropathic pain which is an unmet need in the world

It is important for companies operating in the medicinal cannabis sector to have a robust IP portfolio to develop, grow and protect the R&D investment as well as move beyond generic products. Targeted research is important to address unmet patient needs and to identify where cannabis could provide enhanced therapeutic outcomes. Against this backdrop, Cannasouth has been conducting extensive research for its products. Cannasouth has a commercially focussed R&D facility based in New Zealand involved in multiple areas of research from chemistry for the identification, extraction, and isolation of bioactive compounds, to biological sciences (preclinical investigations) and new product development (drug delivery technology).

One of the Cannasouth's target areas is neuropathic pain, an area of unmet clinical need. Neuropathic pain is usually described as a burning sensation in the affected areas, which are often overly sensitive to touch. Neuropathic pain has a significant adverse impact on quality of life. It is caused by damage or injury to the nerves that transfer information between the brain and spinal cord from the skin, muscles, and other parts of the body. Findings from a three-year neuropathic pre-clinical study were released into the public domain by Cannasouth in August 2022. The research confirmed that cannabinoids from medicinal cannabis were effective in reducing debilitating neuropathic pain. We believe that the study, conducted to understand the potential of cannabis as an alternative therapeutic for the treatment of neuropathic pain, is the first of its kind in New Zealand. Neuropathic pain affects about 400,000 New Zealanders or 8% of the country's population.

Cannasouth Cultivation is relatively well established

Cannasouth under its earlier JV with Cannasouth Cultivation has invested in a state-of-the-art hybrid greenhouse cultivation facility in Waikato to grow and cultivate premium flower.

Need for cultivation of premium flower in indoor facilities

In most exports markets and in New Zealand, only cultivation operations, especially those designed to meet GACP and GMP standards, can produce flower that can be used as a finished product. These operations are complex and expensive to establish. Thus, only a handful number of cultivation operations globally can meet the standard, and Cannasouth is one of these. A cultivation facility is required to be constructed mainly to target the premium flower market.

Cannasouth's key attraction: Its state-of-the-art cultivation facility

CEA greenhouse combines precise climate controls with energy saving benefits to produce premium, pharmaceutical quality, cannabis flower

The jewel in the crown for Cannasouth is its state-of-the-art (and unique to New Zealand), sealed CEA greenhouse and processing facility. The cultivation facility is located on a 45-hectare Waikato property in New Zealand's agricultural heartland, paving the way for the transition to commercial cultivation operations. The location is ideal for medicinal cannabis cultivation with abundant sun. The company's world-class, next-generation cannabis cultivation and processing facility was fully commissioned in November 2021, and this enabled Cannasouth's entry into

the rapidly growing pharmaceutical cannabis flower market. This facility is a beneficiary of scale and combines the precise controls of indoor growing with the energy saving benefits of sunlight in a greenhouse to produce premium, pharmaceutical quality, cannabis flower for local and global markets, at competitive production costs. The cultivation facility has robust design processes and fully insulated structures, and this facility stands out from what is currently available in the industry.

First commercial crop harvested

The first full-scale commercial crop of premium high-grade medicinal cannabis flower was harvested in Cannasouth's facility in 2022. The harvest process was a huge undertaking where all the flowers in the greenhouse were transferred to Cannasouth's dedicated pharmaceutical quality drying, trimming, and packing area. From this point on, commercial cultivation activities at the site continued throughout the year as premium flower was produced to be supplied to both the local and export markets.

How does the cultivation facility work?

A key feature of Cannasouth's facility has been complexity. The post-harvest and packaging areas feature pharmaceutical clean room design with airlocks and dedicated air handling systems. The growing areas of the facility include energy efficient, LED lighting, custom HVAC and UV air filtration, CO2 enrichment and deep-water culture hydroponics with all systems linked together with a sophisticated building management system ensuring that optimal growing conditions are maintained throughout the year. To reduce the dependence on water supply by municipal utilities, the indoor cultivation facility harvests rainwater. We believe that the design, combined with purpose built GMP post-harvesting processing equipment and pharmaceutical clean rooms, enable Cannasouth to produce premium quality product in finished dosage form.

Key differences between the cultivation facility and other indoor cultivations

Cannasouth's hybrid sealed greenhouse is unique to New Zealand and gives it a significant advantage over competing indoor cultivation operations. The combination of energy- and water-saving technologies enables Cannasouth to reduce its environmental footprint compared to other indoor cultivation operations. As sunlight is the primary light source in greenhouses cultivating flower, energy costs are significantly less than indoor cultivation facilities. The initial capital outlay is like that of an indoor facility but with the added advantage of being scalable without interrupting existing operation (Figure 3).

Figure 3: CEA greenhouse cultivation facility stands out among other facilities

Source: Company, Pitt Street Research

Company can produce premium quality product in finished dosage form owing to its world-class cultivation facilities

Cultivation facility receives GACP and GMP certification

Cannasouth's cultivation and post-harvest facility is one of the few types in New Zealand that has been designed to operate as per two quality standards – GACP and GMP. Cannasouth's cultivation facility is fully operational and has received GACP and GMP certification. While GACP is a critical first step for both exports and local sales of premium cannabis flower (allowing Cannasouth to export the flower in bulk for use in further manufacturing activities including extraction), GMP paves the way for the production of flower as a finished product that can both be exported and sold in markets in New Zealand. GMP is the globally recognised quality control system used in pharmaceutical product manufacturing. With its GMP certification secured in May 2023, Cannasouth has commenced the process of verification of flower products for the New Zealand market.

We believe that the certification of the facilities places Cannasouth in a position to target the most well-regulated high-quality markets globally and leverage opportunities presented by New Zealand's reputation for quality.

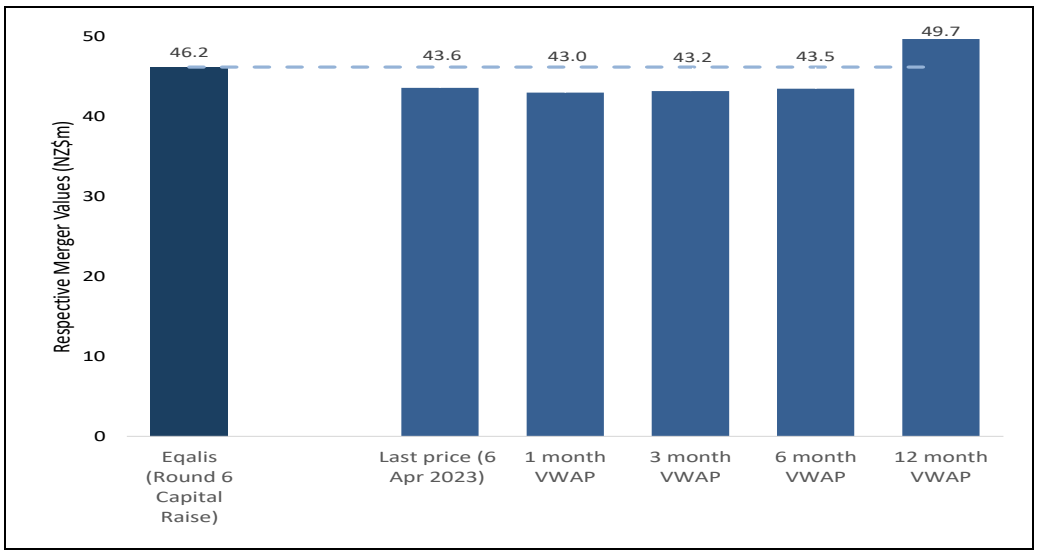
Midwest Pharmaceutics – a leading contract manufacturer for liquid health products

Cannasouth's manufacturing facility in the Hawke's Bay a subsidiary Midwest Pharmaceutics NZ Limited was one of New Zealand's leading contract manufacturers of liquid-based health products. Cannasouth divested certain assets of Midwest Pharmaceutics to its cornerstone customer Harker Herbals for NZ$2.2m plus stock at valuation. The assets excluded cannabinoid related plant and equipment. We believe that the divestment of some of Midwest's liquid filling assets to Harker Herbals is likely to reduce the need for the company to invest further capex into Midwest to have it GMP-ready for cannabinoid medicines.

Merger between Cannasouth and Eqalis unlocks new opportunities

In December 2022, the merger between Cannasouth and Eqalis was announced and it closed in June 2023. The merger valued Eqalis at about NZ$49m (Figure 4).

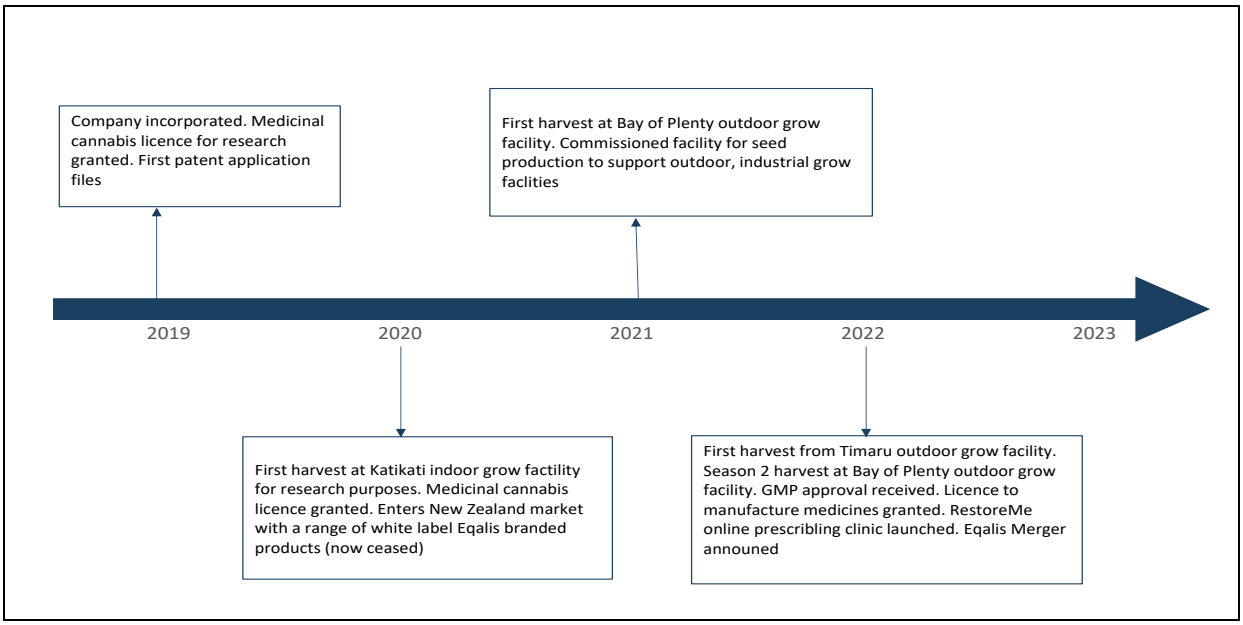
Figure 4: Respective merger values of Cannasouth and Eqalis are broadly equivalent



Source: Company, Pitt Street Research

The result is a business with substantial scale. Eqalis is a pioneer in New Zealand's medicinal cannabis industry and has built an innovative and collaborative culture to disrupt the sector from the ground upwards and solve accessibility and affordability pain points for patients (Figure 5).

Figure 5: Evolution of Eqalis



Source: Company, Pitt Street Research

Eqalis includes products ranging from the RestoreMe online clinic, manufacture of cannabis-based ingredients and oral solution products, two outdoor cultivation sites,

Eqalis possesses multiple key strengths

Eqalis' key assets include a GMP certified facility for the manufacture of cannabis-based ingredients and oral solution products; a valuable IP portfolio protecting an advanced technology pipeline; two outdoor cultivation sites – one in the Bay of Plenty, the other in the South Island; an online clinic called RestoreMe; a digital solution called 'A-script' for increasing the pace of medicinal cannabis prescriptions; and technology called 'Ice-X' that can optimise the harvest process for medicinal cannabis by eliminating the drying process. Eqalis gained its commercial licence in August 2020 and GMP certification in November 2022 for its manufacturing facility. Eqalis' first cannabis-based ingredient was successfully verified by the Medicinal Cannabis Agency in June 2023. This achievement allows for local and export ingredient sales and is key to verifying future medicinal cannabis products. Eqalis anticipates confirmation from the MCA soon regarding the verification of Eqalis' two new oral solution products.

The two outdoor cultivation sites were established by Eqalis in 2021 to develop the new cannabis biomass industrial cultivation techniques, harvest processing and extraction technologies, all of which will result in lower cost for CBI.

With the RestoreMe clinic, which launched in December 2022, patients can gain access to low-cost medicinal cannabis, and professional consultations and diagnoses, through this platform. It involves a three-step process which includes an eligibility survey, a consultation with a doctor who will offer a personalised treatment plan, and door-step delivery of medicines anywhere in New Zealand. RestoreMe allows Eqalis to capture the essential patient access and distribution element of the value chain (Figure 6).

Figure 6: RestoreMe clinic growth metrics

Source: Company, Pitt Street Research

RestoreMe: Why it is an important business for Cannasouth to own

Cannabis medicine is often hard for patients to access. A recent survey from the University of Sydney's Lambert Initiative[3] found that only around a quarter of patients that had been prescribed a cannabis medicine through the current access model in Australia was easy or straightforward. And no wonder. If one were to describe the typical experience of a patient in Australia seeking cannabis medicine, it would run something like this: The patient hears from the media, the Internet or word of mouth that cannabis can potentially be good for their condition. He or she goes to see a GP. And that GP, lacking training regarding cannabis medicine, and concerned about prescribing products that are not registered with the TGA, and unwilling to go through all the paperwork required to get a patient on the Special Access Scheme, says that they cannot help the patient.

Specialist clinics have made the process easier. The solution to the above problem, in Australia and in many other countries, has been specialist cannabis clinics where the doctors are knowledgeable about cannabis medicine, understand the Special Access Scheme, and have good relationships with multiple suppliers of cannabis medicine. Examples in Australia include Emerald Clinics, owned by Emyria (ASX: EMD). Emyria operates a network of specialist medical clinics and uses purpose-built software and technology to gather clinical data from consenting patients. Emerald Clinics has seven sites in Australia and has treated more than 5,000 patients, underpinned by a data system that has already gathered millions of data points[4]. The Australian specialist clinics vary in terms of the patient experience[5], however, in our view, there are enough where the doctor-

[3] Lintzeris, N., Mills, L., Abelev, S.V. et al. *Medical cannabis use in Australia: consumer experiences from the online cannabis as medicine survey 2020* (CAMS-20). Harm Reduct J 19, 88 (2022).
[4] See emeraldclinics.com.au.
[5] There are reports of online clinics that will ask for no medical history and will require only a brief phone call with a nurse and then a doctor. Some even use chatbots to diagnose patients - See *How to Buy Medicinal Cannabis in Australia* by Jack Revell, The Latch, 5 May 2023.

patient interaction is 'GP grade' to sustain further growth in the medicinal cannabis market.

The specialist clinics tend to be good for companies with quality product. Take Cannatrek as a good example of this in Australia. That company runs a referral service called Cannatrek Access where the patient fills in a questionnaire and is put through an initial screening call before being referred to a clinic once it is established that a patient is eligible for cannabis medicine. That clinic is not obliged to prescribe Cannatrek product, but the physician will often do so given the relationship that the doctor has with the company[6].

RestoreMe takes the specialist clinic model to New Zealand. The service, launched in December 2022, involves the patients registering their interest for an initial remote online consultation, costing NZ$45, with a registered GP. If that GP finds that cannabis is a suitable treatment option, the patients are given a low-cost prescription and can then receive their medicinal cannabis through the mail. The telehealth option has been an important part of RestoreMe's early success. It works because of the hesitancy of some would-be patients to visit a clinic where they might be spotted in the waiting room. Cannabis is, after all, an area where there has historically been some stigma attached.

Merger synergies can prove to be a game changer

We believe the Cannasouth-Eqalis merger is a win-win for all stakeholders of both companies from patients to prescribers and investors. The merger is likely to result in the creation of a more resilient business, speed up the advancement of technology to bring medicines faster to the market, superior margins and a larger company that will provide better access to capital. The combination of low cost of production and value-added technologies (because of the merger) is likely to improve the delivery of active ingredients to patients. The merger also helps in the creation of a diversified product and services portfolio, delivery of critical mass, acceleration of innovation and expert leadership and a stronger balance sheet. The merger is likely to enable the combined businesses to have full control over the end-to-end process from plant to product development, to new technologies for cultivation and manufacturing, to marketing and distribution, and, finally, IP creation.

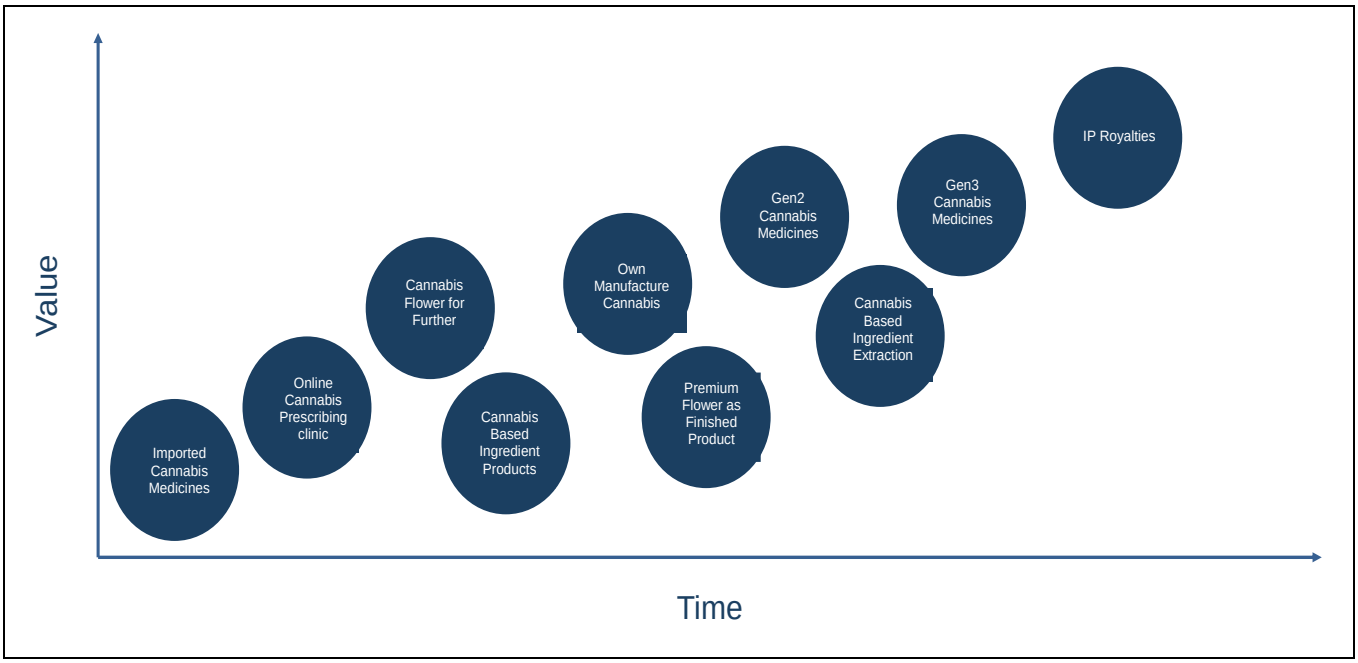
New Cannasouth's product pipeline includes a new drug delivery technology designed to provide a platform for therapeutic products.

The merged Cannasouth-Eqalis business has a broader portfolio

The merger between Cannasouth and Eqalis has created a broader product and services portfolio, including the online clinic RestoreMe. The cannabis medicines produced by the merged entity will range from oil-based tinctures to next-generation pharmaceuticals (Figure 7).

[6] D

Figure 7: Diversified Product and Services portfolio

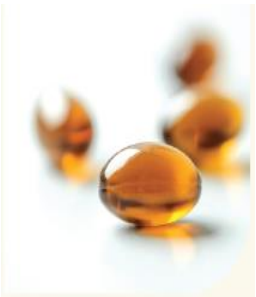


Source: Company, Pitt Street Research

The product development pipeline of the 'New Cannasouth' includes a new drug delivery technology designed to provide a platform for therapeutic products, offering potential for licence opportunities and royalty revenue streams (see Figure 8).

Figure 8: New Cannasouth's upcoming product pipeline

Oral Dose Products: Awaiting verification from the MCA - new treatment options pending approval



Gen2 Drug Delivery technology: Gel technology for enhanced patient experience and optimised bioavailability

Strain specific cultivators: GMP certified dried flower products with distinct cannabinoid and terpene profiles catering to different

Tropical formulations: Under development

Source: Company, Pitt Street Research

In the short-term, the company will focus mainly on the merged entity's existing product pipeline including imported medicinal cannabis products, the RestoreMe online clinic, CBIs and oral solutions and high-quality dried

cannabis flower. In the medium-term, Cannasouth intends to move up the value chain by introducing a suite of next-generation pharmaceuticals including gel and topical formulations and APIs with novel cannabinoids. It also intends to monetise the IP rights created by the R&D team. In the longer run, cannabis could be more and more embedded into mainstream therapeutics providing alternatives to existing therapies and addressing unmet clinical needs. To achieve this, Cannasouth is in discussions with research centres looking at supporting Randomised Controlled Trials (RCTs).

Cannasouth's competitive advantages

Cannasouth benefits from a strong cost advantage as compared to product imported from Canada and elsewhere

The ability to operate a full vertical business model, including premium flower cultivation and biomass extraction, ingredient and finished product manufacture, and the operation of prescribing clinics, all from within New Zealand, opens a potential cost advantage compared to products imported from Canada and elsewhere. From September 2021, the MCA has mandated that any imported product must also meet minimum standards in New Zealand, including the GMP quality standard. Another competitive advantage is contained within Cannasouth's operating model. Having a full vertical business provides Cannasouth with a greater range of options to develop its business, which is important in what is truly a sunrise industry.

Cannasouth has secured multiple licences for various operations

In May 2023, Cannasouth received the Licence to Manufacture Medicines to produce dried cannabis flower

Under the MCS, Cannasouth needs commercial licences to cultivate, extract, import, and purify medicinal cannabis and cannabinoids, and sell medicinal cannabis products. Moreover, every product that Cannasouth intends to introduce to the market must be verified that it meets minimum quality standards by the MCA.

Cannasouth has secured the following licences:

- In August 2019, Cannasouth harvested its first research crop of medicinal cannabis from imported seeds. This harvested crop provided the laboratory research team with high-quality cannabis flowers to further aid their research activities. **The licence to import cannabis seeds** was obtained from the Ministry of Health (MoH) and the Ministry of Primary Industries (MPI).
- In January 2021, Cannasouth Cultivation was granted its **commercial cannabis cultivation activity** licence by the MCA for its controlled environment greenhouse cultivation facility based in the Waikato region.
- In April 2021, Cannasouth Bioscience received approval for **an additional activity under its commercial medicinal cannabis licence** by the MCA for its facilities based in Hamilton. This new supply activity was in addition to existing cultivation and possession for manufacturing activities covered by the licence. The licence enabled Cannasouth to prepare for the distribution of its imported own brand products.
- In May 2023, Cannasouth Cultivation received its **Licence to Manufacture Medicines to produce dried cannabis flower** (in line with the globally recognised GMP standard). We believe that securing of the GMP certification for Cannasouth's commercial scale facility opens doors to high-value markets worldwide. The GMP certification creates a competitive advantage for Cannasouth as it enables the company to

produce medicinal cannabis products in-house without relying on any third party for manufacturing. Currently, it is progressing with flower product applications for the New Zealand market with MCA.

Collaboration with WEECO Pharma to strengthen Cannasouth's growth prospects

In FY22, Cannasouth signed a three-year supplier agreement with German-based WEECO Pharma for the supply of premium cannabis flower. WEECO Pharma, one of the leading medicinal cannabis companies in Europe. Within the German industry, WEECO provides a strong trading network and exports products to seven international destinations. The company also has its own R&D facility in Denmark that works on the development of strains with over 30% THC to meet the specific production needs of individual GACP/GMP companies. The three-year agreement is likely to be valued between NZ$12m and NZ$15m over years two and three. Under the agreement, WEECO has the right of first refusal for each new cultivar developed by Cannasouth. We believe that Cannasouth, in collaboration with WEECO Pharma, will be able to boost returns for its shareholders by leveraging export opportunities.

On path to strong top-line growth

2021 marked the beginning of revenue flows for the company through its subsidiary Midwest Pharmaceutics. Subsequently, Cannasouth's revenue declined from NZ$206k in 2021 to NZ$141k in 2022. The decline in revenue was mainly due to a fall in government grants. However, the decline in total revenue was partially offset by sales from domestic medicinal cannabis products. Losses from continuing operations increased from NZ$2.6m in 2021 to NZ$7.9m in 2022. Planned investments in ramping up the company's operations to establish the company as a key participant in the emerging medicinal cannabis market in New Zealand contributed to the loss. The setting up of compliant operations at its cultivation facility required the company to increase staffing levels and incur operating costs during the commissioning period of the greenhouses. Another reason behind the increase in the loss in 2022 was NZ$3.3m relating to the commencement of commercial cultivation activities.

Revenue is likely to witness an uptrend in the near future

The strategic goals of Cannasouth have been to implement revenue streams of a short term, medium term, and long-term nature. These have been summarised below:

- **Short term -** Includes CBI and oral solution products, imported medicinal cannabis product sales, and premium flower sales
- **Medium term -** Includes the manufacture of new and next-generation medicinal cannabis products as well as the commercialisation and licensing of generated IP
- **Long term -** Includes next-generation cannabinoid therapeutics and clinical trials leading to licensing of approved medicines.

The Cannasouth-Eqalis merger is likely to result in the diversification of revenue streams by leveraging the competitive advantages provided by the respective R&D and innovation teams. This will be much larger than what

The Cannasouth–Eqalis merger is likely to result in diversified revenue streams

could be achieved by each company on its own. The next 12 months to June 2024 will feature progressing increases in sales of approved products, and the development and approval of more product. The merged entity will also focus on revenue generation through each of the company's existing product pipeline. The successful verification of Eqalis' first cannabis-based ingredient by New Zealand's MCA in June 2023 is likely to further unlock new momentum for revenue generation.

Perceptions surrounding medicinal cannabis

Some key differences exist between medicinal and recreational cannabis. Recreational cannabis is marijuana that is used without medical justification. It is generally higher in THC – the psychoactive compound of the cannabis plant – and is usually used to intentionally alter an individual's state of consciousness, inducing a state of happiness or euphoria.

Medicinal cannabis is a range of medicines sourced from the cannabis plant and made up of cannabinoids

Medicinal cannabis is a range of medicines derived from the cannabis plant and made up of cannabinoids, the naturally occurring chemicals found in the plant. In New Zealand, medicinal cannabis is available in a number of pharmaceutical products such as oils and tinctures, which are produced under strict controls with specialist manufacturing equipment. These products must meet the New Zealand Minimum Quality Standards, which are aligned with the highest international pharmaceutical standards, and are rigorously tested for safety. Medicinal cannabis in New Zealand can be prescribed for a patient by a doctor or specialist medical professional and is used to treat various conditions from chronic pain through to epilepsy.

Public awareness and acceptance of medicinal cannabis is rapidly increasing. One common use is to alleviate the side effects of chemotherapy. In March 2020, the New Zealand government legalised the growing, manufacturing and distribution of medicinal cannabis. It is unusual to find a medicine or class of therapeutics which are actually promoted by the public. There are regulations in place now and there are companies that are developing in this space.

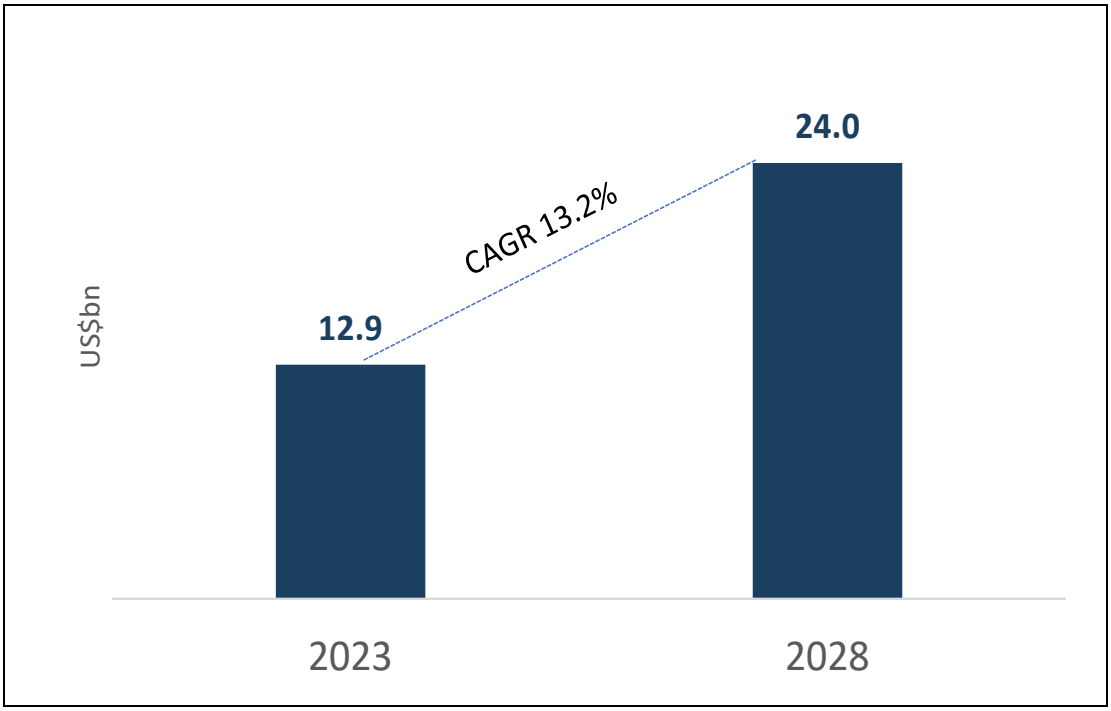
There are over 40,000 research publications from research centres around the world which have investigated the therapeutic potential of medicinal cannabis. Currently most medicinal cannabis products only contain the active ingredients CBD and THC. There are many more active compounds in cannabis plants other than CBD and THC. Identifying these compounds can help in understanding what medicinal cannabis could be used for and may also enable more personalised ways for patients to apply cannabis products. Research on cannabis has revealed its potential to treat various medical conditions, including chronic non-cancer pain, cancer pain, anxiety, epilepsy, insomnia, Multiple Sclerosis, and other inflammatory disorders such as Crohn's disease, asthma, Rheumatoid Arthritis, Alzheimer's and Tourette syndrome – a neurodevelopmental disorder.

Market environment for medicinal cannabis

Globally, the business of medicinal cannabis is taking off. In 2022, the sector was already valued at approximately US$14bn. Currently ~60 countries have legalised access to some form of medicinal cannabis, and this is set to grow exponentially over the next decade. The global CBD market is likely to grow from US$13bn in 2023 at a CAGR of 13% to US$24bn in 2028. Growth in the medicinal cannabis market is likely to be driven by increasing awareness about medical applications such as pain management and legalisation in the medical usage of cannabis across the globe. The rising number of patients

pertaining to chronic diseases globally, an increased inclination towards a healthy lifestyle, and increasing R&D activities for medical cannabis products are also some factors driving market growth. Where the regulations allow, companies are developing a variety of cannabidiol products, including edibles, topicals, and beverages, to meet the demand from consumers. Medical professionals are progressively becoming more at ease with regulating access and prescribing of products, thereby increasing market size (Figure 9).

Figure 9: Global CBD market likely to register strong growth by 2028



Source: Statista, Pitt Street Research

New Zealand as a market for medicinal cannabis

More and more patients are transitioning to the legal regulated market in New Zealand for a consistent therapeutic effect

The New Zealand market is a fast-growing market with increasing number of products and prescribers. It is positioned for rapid growth and is likely to follow a similar trajectory as fast-growing markets such as Australia. Although 266,000 people use medicinal cannabis, only 6% source it from the legal market. The demand for medicinal cannabis is growing, but so is the propensity to use it from illegal sources. A major chunk of the prescriptions is sourced from specialist clinics. Anecdotal evidence from specialist clinics suggests that up to 50% of consultations are patients that have not used medicinal cannabis in the past and are seeking alternate treatment options for their medical conditions. We believe that the new patients are likely to add to the size of the market and are a testament to the potential growth opportunities in New Zealand. However, access to products from the black market by patients is likely to put the health of patients at risk. In view of this, the main aim of Cannasouth is to make the legal route more attractive. We believe that this is likely to unlock significant opportunities for the company as the export demand for premium quality flower remains high. Patients now prefer that the flower market is a prescribed market while

transitioning to the legal regulated market to maintain a consistent therapeutic effect.

A) Patient barriers exist

In almost all regions where access to patients is available, some barriers to patient access exist. These include the following:

- **Price.** This is the most significant barrier for patient access to medicinal cannabis. Due to New Zealand's small market, it is imperative that major producers of cannabis products in New Zealand can access larger export markets with a competitive offering and pricing model. The regulations should not add to the burden already being carried by manufacturers in terms of adding unnecessary time delays, testing costs, and unwarranted barriers to export, all of which can be added to the cost. This can be mitigated to some extent by key export revenues that are likely to enable scale in production, leading to cost reductions for New Zealand patients, and ongoing investments in research and development to achieve enhancements in product formats.
- **Overly restrictive and or evolving regulatory policies** such as a limited number of approved conditions for the treatment of and or the need of approval from specialists.
- **Lack of guidelines** related to product development and the approval process for industry, and prescribing practices for medical practitioners.
- **The stigma** associated with cannabis medicine in some circles.
- **Lack of approved or registered products** due to lack of clinical trials, safety, and efficacy data.

B) Rise of specialist clinics

Owing to the emergence of specialist clinics, prescribers are well versed with the uses of medicinal cannabis

Specialist medicinal cannabis clinics are places where patients are increasingly accessing cannabinoid therapeutics. The key advantage of the clinics is that the prescriber is well versed with the uses of medicinal cannabis, the relevant contra indications, and the selection of appropriate products for the best therapeutic outcomes. In specialist clinics, doctors are trained in prescribing medicines including identifying the conditions, formulations, and dose levels. Currently, there are nine specialist clinics operating in New Zealand. We believe the number of specialist clinics is likely to increase in the near term with the availability of more product options and pricing enhancements. Most of these clinics use a telehealth model which works especially well for medicinal cannabis. The conditions for which these medicines are prescribed are often ongoing and pre-diagnosed, and so do not require a physical consultation. This saves a lot of time and cost for the patient. We think that the online consultation trend is likely to continue and improve patient access.

C) Patient demand for medicinal cannabis products remains high

Despite the current limited number of medical cannabis products, prescriber interest is increasing, and patient demand remains high in New Zealand. Patient numbers and sales are also likely to witness exponential growth in the coming years.

Other key markets for medicinal cannabis

The key markets for medicinal cannabis beyond New Zealand are:

Europe

The European market is the second largest market after North America owing to the rising legalisation of CBD. The European market holds 31% of the global CBD market and is in the early phases of development. Owing to the strong potential demonstrated by the European CBD market, it is likely to catch up with the American market soon. The size of the European CBD market surpassed US$2bn in 2020. The overall European market is likely to be close to US$3bn by 2025. Growth in the market is likely to be driven by technological advancements in CBD drug treatments, growth in chronic disease patient population and legalisation of cultivation of cannabis. The European market can further be segmented into Germany and the UK

Germany is the largest market in Europe and a key export market for Cannasouth

- **Germany -** Germany is Cannasouth's single largest market in Europe. The growth in the German medicinal cannabis market is driven by many factors including coverage of costs by some health insurers along with initiatives undertaken by prescribers for increasing patient access to these products. CBD products that can be used and sold have to originate either from cultivations with certified EU seeds or THC content up to 0.2%.
- **UK –** The UK has reclassified CBD products as novel foods, enabling the sale of supplements and nutraceuticals. Despite having a slow start to the medicinal cannabis scheme, the UK is likely to become a major market by 2025.

Asia

Similar to Europe and the UK, the markets in Asia are subject to strict laws which are prohibiting the use of cannabis in many countries. Most Asian countries boast of a long history of traditional medicine use, often from plant-based sources. We believe that Asia's close proximity to New Zealand coupled with the country's robust reputation for quality creates excellent export opportunities for Cannasouth in the coming years. The APAC CBD market is likely to grow at a CAGR of 26% from US$4bn in 2023 to US$13bn in 2028 due to increasing demand for CBD oil for medical and wellness purposes, rising occurrence of health disorders and growing prevalence of quality treatment services.

Both Australian and New Zealand have similar cannabis acceptance levels, prescribing pathways and quality standards

Australia

In Australia, cannabis flower accounted for 40% of total prescriptions in 2021 and this trend is growing rapidly. With improvement in patient access pathways and product pricing, patients are moving from the black market in large numbers. Official data from the Therapeutics Goods Administration (TGA) reveals that total number of doctors authorised to issue prescriptions for medicinal cannabis increased from 144 in 2019 to 1701 in 2022. Between 2020 and 2022, 295,515 prescriptions were issued for medicinal cannabis compared to just 1011 between 2016 and 2019 (Figure 10 and Figure 11).

The Australian regulatory model is similar to that of New Zealand i.e., it incorporates a traditional prescription and pharmacy model. Both markets have similar cannabis acceptance levels, prescribing pathways and quality standards. However, the standard for imports into Australia was different, thereby creating challenges for local manufacturers. In Australia, there have

been a number of positive developments regarding the medical use of cannabis:

– On 16 December 2020, TGA allowed the down-scheduling of certain CBD preparations from Schedule 4 (prescription medicine) to Schedule 3 (pharmacist only medicine). This decision followed the interim decision announced in November 2020, which allowed over-the-counter sales of CBD products, i.e., without a prescription. Moreover, TGA increased the maximum limit for the daily dose of CBD from 60 mg per day to 150 mg per day (a 2.5x increase).

- On 1 July 2023, all products (including imports) were required to meet GMP quality standards. This marks a key milestone for the Australian market and is likely to witness increased demand for GMP manufactured products.

From July 2023 only GMP-compliant medicinal cannabis can be sold in Australia. Cannasouth is a significant beneficiary of this

The 2023 changes were particularly significant for Cannasouth. Prior to this year not every supplier to the Australian market produced at GMP standards. By locking out non-GMP product, Cannasouth's competitive advantage just went up in serious way. Not only can it sell now, but it can also establish a following before old products re-comply to TGA standards and seek to come back to Australia.

Figure 10: Authorised doctors prescribing medicinal cannabis

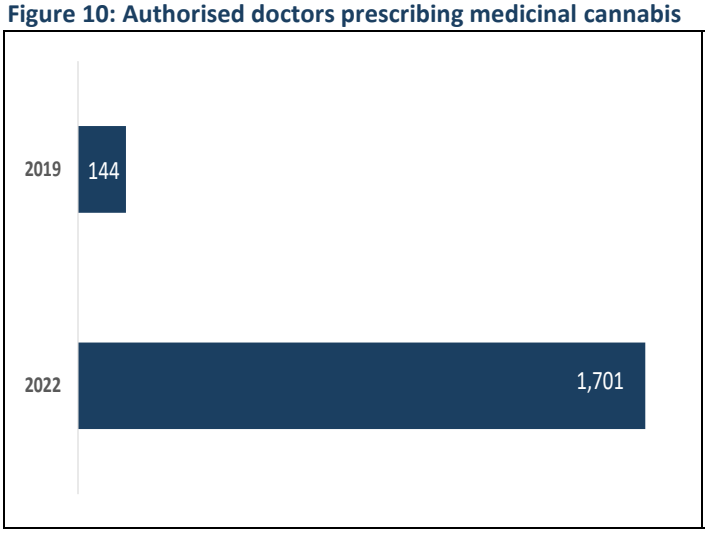
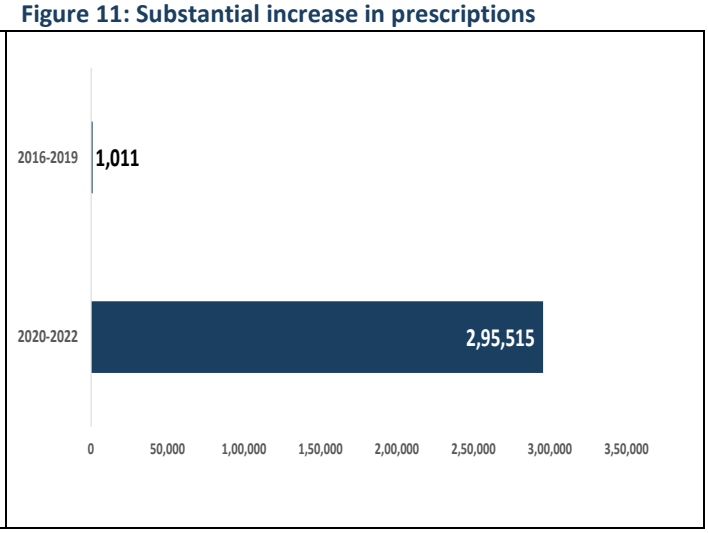


Figure 11: Substantial increase in prescriptions



Source: Company, Pitt Street Research

Evolving regulatory landscape to benefit Cannasouth in the longer run

The current regulatory regime needs improvement as there are certain aspects that are hindering the growth of the New Zealand medicinal cannabis industry and adding costs for manufacturing and exports. The regulatory change process is described below:

A) New Zealand Medicinal Cannabis Scheme

Introduction of the minimum quality standard in New Zealand provided clarity around regulations for the medicinal cannabis industry

Medicinal cannabis achieved legal status following the introduction of New Zealand Medicinal Cannabis Scheme in April 2020. The scheme allows prescribers to prescribe medicinal cannabis and oversees the import and local manufacture of the medicines. All products prescribed under the scheme must meet the New Zealand Minimum Quality Standard (NZMQS).

The regulations in New Zealand are fundamentally aligned with key offshore markets, such as Australia and Germany. Though the regulations are fit-for-purpose and do not require significant changes, opportunities for refinement and alignment with other major overseas regulations exist.

Cannasouth's first three medicinal cannabis products went through the product assessment approval process with New Zealand Medicinal Cannabis Agency in 2022. We believe that the first batch of approved products provide a solid platform for Cannasouth to establish relationships with prescribers and pharmacies. This is likely to pave the way for seamless addition of new products including dried flower and next generation finished product formulations.

Suggested regulatory changes will boost industry competitiveness and patient access in New Zealand

B) December 2022 request by MCA for feedback on regulatory changes

In December 2022, the MCA sought feedback on potential areas for regulatory change. Some of these areas included removing the current requirement of bulk start material of the flower for export to meet NZMQS and exempting verified medicinal cannabis products for export. The other areas for regulatory change included greater flexibility to licence holders to trade in cannabis seeds including exports; and allowing greater flexibility in the identification of low levels of other active compounds in products. Adopting these changes can address many areas of concern for New Zealand based producers, enabling a more competitive industry locally and enhancing patient access. A reduction in manufacturing cost and better access to large export markets could in turn help in achieving cost reductions for patients. In addition to the proposed changes, there is a need to streamline and enhance the processing times for licensing.

We believe that urgent attention to proposed changes by the government is required for industry export competitiveness. Several steps are likely to be involved in the above proposals before the implementation of these regulatory changes comes into effect.

C) Export requirements and the NZMQS

Regulatory assessment fees are expensive and time consuming due to the non-alignment of the NZMQS with importing authorities including the EU. Furthermore, the regulatory status of CBD in New Zealand is significantly different from those of other countries. In New Zealand, all products containing CBD are regulated as medicines. Additionally, the pharmaceutical industry follows the practice of compliance with GACP and GMP quality standards rather than testing for just quality. Cannasouth believes that greater harmonisation with international markets needs to be enabled by the government and quality risk assessments need to be considered as per international regulations.

We believe that the ability to access lucrative export markets could create additional opportunities for companies in New Zealand and support investments for further development. The evolving overseas regulatory landscape could create a large and growing market for CBD products from New Zealand including that of Cannasouth if there is greater alignment with the changes in domestic regulatory regime.

C) July 2023 announcement by MCA of proposed regulatory changes

In July, the Medicinal Cannabis Agency obtained approval for a series of modifications to the Misuse of Drugs (Medicinal Cannabis) Regulations 2019.

Key Highlights Include:

1. **Facilitation of Exports**: Changing the quality requirements for exports will make it easier for New Zealand companies, like Cannasouth's, to

penetrate international markets.
2. **Expansion of Medicinal Cannabis Categories**: Broadening the definitions to cover a more extensive variety of plant forms.
3. **Enhancement in Research Capabilities**: The new amendments will enable non-therapeutic research involving cannabis plant material or products obtained from the Medicinal Cannabis Scheme or the Industrial Hemp Framework.

These primary changes are complemented by various technical enhancements to streamline the Scheme's compliance prerequisites without jeopardising product quality.

Public consultations will be initiated on relevant materials that will be incorporated by reference into the Regulations. Post-consultation, the drafting of amendment regulations will commence, with the objective of enacting them by the end of 2023.

Overall, we believe that Cannasouth is committed to providing patients access to quality medicinal cannabis products. Patient groups and prescribers are pressuring governments to grant access to legal cannabis-based medicines globally. The formation of a regulated market will ensure access to these products in a more controlled and safer manner, as opposed to crude products sold on the black market with no product quality assurance. Several countries, such as New Zealand, Australia, and Germany, have adopted a legal medicinal cannabis market to reduce the cost of medicines provided to patients. Having a strict regulatory pathway is not necessarily negative, though there are discussions around the perceived difficulty as the industry is still nascent and there is an urgency to bring products to market. The establishment of a pharmaceutical quality medicinal cannabis business in New Zealand is a capital intensive and time-consuming process. However, the government is gradually taking steps to ease such processes and regulations, and we believe this should aid companies like Cannasouth in the long run.

Our valuation of Cannasouth

Given that most companies within the specialised medicinal cannabis industry (engaged in research, breeding, cultivation, manufacturing, clinical evaluation, prescribing, supply, drug development, product innovation and sale of cannabis-based medicines) are relatively small both in terms of operations and market capitalisation, it is logical to assess the value of Cannasouth using a fundamental approach that takes into account the sustained effectiveness of its operations over the long term.

As a result, based on a DCF calculation, we value Cannasouth at NZ$0.34 per share under our base case projection, while our more optimistic case (or bull case) places the valuation at NZ$0.43 per share. Our key assumptions are as follows:

- **Commercialisation timelines**. We model initial revenue to commence in late 2023 from New Zealand. In early 2024, we expect Cannasouth to launch commercially in the Australian markets.
- **Revenues.** We have derived Cannasouth's revenue in its key geographical markets using a market share-based approach.

We have assumed CBD to enter Australian cannabis medicinal products market in 2026

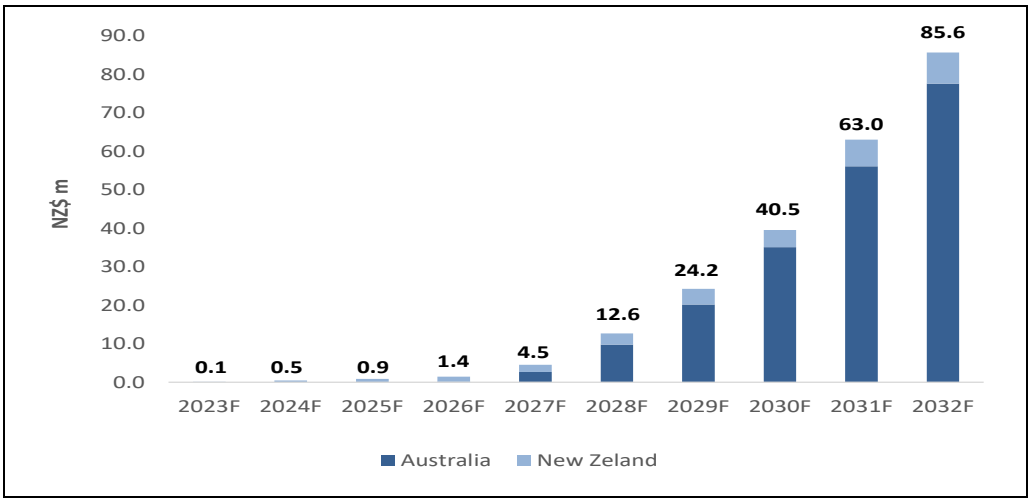
We have incorporated the current estimations of the potential market sizes based on the yearly count of medicinal cannabis patients within the primary regions (Australia: 0.67m by 2030[7]; New Zealand: 23,700 by 2030, as against

[7] Source: https://www.businessdailymedia.com/sme-business-news/27441-australian-biotech-leading-the-way-in-medicinal-cannabis-for-chronic-pain

17,000 in 2020 and growing at 7.5-10% annually[8]). We acknowledge the proportion of people accessing medicinal cannabis is higher but for conservatism's sake, we have only considered patients accessing medicinal cannabis through official schemes.

Also conservatively, we have predicted that Cannasouth will attain a market penetration of 10% in New Zealand and 2.5% in Australia by 2032. This projection is intentionally cautious, acknowledging the intense competition within the sector, as numerous companies who are the same operational stage are also contending for market presence. We estimate that cannabis oil from Cannasouth will cost the patient NZ$2.3k (per annum), increasing at an inflation of 3% annually[9]. All these assumptions imply that Cannasouth revenue will be ~NZ$86m by 2032 (Figure 12).

Figure 12: Top-line outlook, base case, (NZ$m, 2023E–32E)



Source: Pitt Street Research

Costs and margins - We have categorised Cannasouth's cost items into three main heads – COGS (related to production expenses), R&D costs and SG&A costs. We estimate these costs to hover ~60%, 17% and 12% of sales, respectively, over the long term. This results in ~20% EBIT margin for the company by 2032 (base case).

Forecast horizon – We have considered forecast horizon of 11 years (2023 included) as the company is still in the early phase of its growth lifecycle and yet to experience a consistent revenue growth momentum. We have applied terminal growth of 2% beyond 11 years of the forecasted period.

Discount rate - Considering that Cannasouth is a volatile stock, we have assumed a WACC of 11.3%. Given that the company's business is highly regulated, there is uncertainty surrounding future clients and revenue conversion. As a result, cash flows during the anticipated time frame may be volatile.

Corporate tax - We assume a corporate tax rate of 28%. As Cannasouth is anticipated to achieve net-level breakeven only in 2026, the company will start to pay-out taxes then.

Difference in valuation scenarios - There are primarily two differences that we have applied across our valuation scenarios:

[8] Source: https://www.drugfoundation.org.nz/news-media-and-events/more-than-250000-kiwis-still-accessing-medicinal-cannabis-through-black-market/
[9] Based on the New Zealand Drug Foundation's 2022 State of the Nation report which found that CBD oil tends to cost NZ$150-350 per month. We used the lower limit of this range.

- **Market penetration rate:** We have assumed that a merger with Eqalis, coupled with sales from exports and revenue generated from intellectual property-related activities in the near term, will serve as catalysts to enhance revenue expansion. In our conservative projection, we've considered Cannasouth's market share to reach 10% in New Zealand and 2.5% in Australia by 2032. Conversely, in our more optimistic outlook for the same timeframe, we've envisioned market penetration of 12% in New Zealand and 3.5% in Australia.
- **Net profitability:** The increase in costs exhibits differing trends within our two valuation scenarios. In our conservative projection, the gross margin is anticipated to reach 60% by 2032, while in the more favourable scenario, the corresponding figure is projected to be 63%. Over both scenarios, we expect net profitability to be attained by 2026. However, the net margin is expected to diverge by 2032, standing at ~14% in the base case and ~16% in the optimistic scenario.

Figure 13: CBD's DCF calculation

Cannasouth Valuation (NZ$ m)	Base Case	Bull case
Enterprise Value (NZ$ m)	107.8	137.4
Net (debt) cash	4.8	5.8
Minority Interest	-	-
Other Investments	-	-
Equity value (NZ$ m)	**112.6**	**143.2**
Share outstanding (Diluted)	332.9	332.9
Implied price (NZ$ cents)	**0.338**	**0.430**
Current price (NZ$ cents)	0.170	0.170
Upside (%)	98.8%	152.9%

Source: Pitt Street Research

Figure 14: Sensitivity analysis of DCF calculation (base case)

		WACC						
		8.3%	9.3%	10.3%	11.3%	12.3%	13.3%	14.3%
Terminal Rate	1.25%	0.562	0.457	0.377	0.316	0.268	0.230	0.198
	1.50%	0.581	0.470	0.387	0.323	0.273	0.233	0.201
	1.75%	0.600	0.483	0.396	0.330	0.278	0.237	0.204
	2.00%	0.622	0.498	0.407	**0.338**	0.284	0.242	0.208
	2.25%	0.645	0.513	0.417	0.345	0.290	0.246	0.211
	2.5%	0.670	0.530	0.429	0.354	0.296	0.251	0.215
	2.8%	0.697	0.548	0.441	0.363	0.302	0.256	0.218

Source: Pitt Street research

Catalysts for a re-rating of Cannasouth

Cannasouth is currently trading significantly below our valuation range. We believe the following factors can contribute to the re-rating of the stock in the direction of our valuation range:

- **Attaining commercialisation milestones promptly** - Despite already holding GMP certification and having commenced shipments of dried flower to the Australian market, Cannasouth's robust market entry is projected for the years 2025–2026. As the company begins to report

initial sales in this pivotal market, investors are likely to gain heightened confidence in the stock.

- **Synergies from Eqalis merger** - The merger between Cannasouth and Eqalis, incorporating cost-effective production methods and advanced technologies, is poised to enhance the administration of active ingredients to patients and their therapeutic outcomes. As these synergies take effect, operational efficiency will contribute to the company's activities, leading to increased revenue and enhanced profitability.
- **Regulatory relaxation** - Amidst the growing acceptance of hemp and cannabis by regulators and consumers worldwide, there will be a rapid surge in demand for these products in the medium to long term. This trend opens multi-billion-dollar export growth opportunity for Cannasouth.

Key Risks

The main risks that we see while investing in Cannasouth are as follows:

- **Competition:** The cannabis market has become increasingly competitive, which can lead to price pressure and difficulty in differentiating products from competitors.
- **Supply chain disruptions:** The cannabis supply chain is complex, and involves cultivation, processing, and distribution. Interruptions in any part of the supply chain, such as crop failure, quality issues, or transportation problems, could lead to product shortages and financial losses.
- **Intellectual Property concerns:** The cannabis industry is rapidly evolving, and protecting intellectual property, such as unique formulations and product designs, can be challenging. As the industry grows, intellectual property disputes and patent challenges could arise, particularly around innovative cannabidiol formulations and delivery methods.
- **Quality Control and product safety:** Ensuring consistent quality and safety of cannabis products is essential. Contaminants, inaccurate dosages, and impurities can lead to consumer harm and legal liabilities.
- **Stigma and perception:** The stigma with cannabis can lead to misconceptions among consumers. Educating the public and building a positive perception of cannabis products can be a challenge.
- **Regulatory uncertainty:** The legal status of cannabidiol varies widely from one jurisdiction to another. Regulations are still evolving, and businesses operating in this industry need to navigate complex and potentially changing laws. This limits the export capabilities for Cannasouth.
- **Financial challenges:** The cannabis industry often requires significant upfront investments in infrastructure, research, and development. Access to financing can be challenging due to the stigma surrounding cannabis and the uncertainty of returns, which could impact Cannasouth's ability to grow and expand.
- **Licence requirements:** The cannabis industry players require licences at their different stages of business from the respective authorities in different geographies. This delays the process of getting the product ready for sale.

Appendix I – Strong and diverse leadership

Cannasouth has an experienced board and management team with diverse experience across a wide range of industries

Figure 15: Cannasouth's Board members and senior management

Name and Designation	Profile
Tony Ho Independent Non-Executive Chairman	• Tony is non-executive chairman of Bioxyne Limited (ASX: BXN) and Truscreen (NXZ/ASX:TRU) He was previously a director of Yates New Zealand Limited. • Tony has a Bachelor of Commerce degree from The University of New South Wales, Sydney, is a member of Chartered Accountants Australia and New Zealand, a Fellow of Chartered Governance Institute (Company Secretary, a Fellow of the Australian Institute of Company Directors, and a Fellow of the Governance Institute of Australia.
Christine Pears Independent Non-Executive Director	• Christine is currently the Independent Chair of Y North Inc and a Non-executive Director of McKay Limited, Franklin Veterinary Services and NZX listed Marlborough Wine Estates Group Limited. • Previously she held CEO roles within horticulture, laboratory services, and the wine sectors and Chief Financial Officer roles within an NZX listed wine company, a successful property group, and several technology companies. • Christine is a Chartered Accountant with a Bachelor of Commerce from The University of Auckland, and is a Member of the Institute of Directors.
Hilary Webber Independent Non-Executive Director	• Hilary's expertise covers the areas of strategic and business growth, treasury and financial management, as well as innovation and research and development. • Hilary's governance roles include former director of NZ Dairy Group (now Fonterra), AgResearch, Anchor Foods, Mighty River Power (now Mercury) and Westpac Advisory Board. • Formerly a Registered Nurse, Hilary's interest in medicinal cannabis started when she saw the positive impact it had on her husband's terminal cancer.
Mark Scapens Non-Executive Director	• Mark has over 30 years of business experience covering horticulture, retail, wholesale, education and property sectors. • He has launched start-ups, bought businesses, and sold them. Mark's experience includes 20 years in government-funded private education where he operated to high standards of compliance and service delivery. • Mark's core strengths include an ability to envisage a big picture, long-range view, and an appetite for emerging industries.
Mark Lucas CEO and Managing Director	• Mark is an experienced business manager who designs and implements operational business systems throughout Cannasouth. • With strong data system DNA, Mark is a skilled manager who brings a wealth of business knowledge and experience to this role. • Mark's business background spans 25 years. He is an entrepreneur by nature with a passion for business and has been involved in a number of businesses from initial conception through to mature, well-established companies.

Greg Misson Chief Innovation Officer and Executive Director	• Greg is an inventor and entrepreneur with a passion for solving difficult problems. • His first enterprise, launched in 1984, developed innovations for the world's rapidly expanding dairy processing industries. In 2003 he was founding director of New Zealand's first large private dairy manufacturing company. • Greg has also been involved in airlines, architecture, business consulting and investment.
Colin Foster Chief Financial Officer	• He has 36 years of successful accounting and management experience, including 24 years as a Chief Financial Officer, during which time he was actively involved in strategy development and the establishment of a number of off-shore subsidiaries. • Colin has a strong track record in financial modelling, treasury management, information systems management, and developing high-performing finance teams. • Colin is a Chartered Accountant with a Bachelor of Management Studies and a Post-graduate Diploma in Treasury & Financial Management.
David Gill Chief Scientific Officer	• David's expertise is in product development specialising in drug delivery technologies and process development. His career spans 40 years in pharmaceutical research, product development and R&D management. • He has held roles in academia, start-ups, multinational and specialist pharmaceutical companies and has been directly involved in the development and commercialisation of numerous products in both human and veterinary health for global markets. • David has a diploma in Chemistry and a PGDip / MSc in Industrial Pharmaceutical Sciences. He is a Fellow of the Royal Society of Chemistry (FRSC) and a named inventor on several patents.
David Macaskill Chief Commercial Officer	• David is a registered Trans-Tasman patent attorney, and barrister and solicitor of the High Court of New Zealand with a Master of Science (Chemistry) and Bachelor of Law. • He has 17 years' experience in intellectual property strategy spanning a range of industries, including pharmaceuticals, animal healthcare, medical devices and software, artificial intelligence and machine learning, and agri-tech.
Tony Clark Chief of Manufacturing	• Tony has more than 20 years of engineering, manufacturing, and pharmaceutical industry experience, having worked with Pentair Valves & Controls Pacific Pty Ltd and Douglas Manufacturing Ltd. • Tony has worked extensively in GMP environments and is a member of NZPICS (Association for Operations and Supply Chain Professionals).
Pierre Booysen Chief Compliance Officer	• Pierre has extensive knowledge and experience in the medicinal cannabis industry and the New Zealand regulatory system, having worked as a Senior Advisor (GMP audit) with Medsafe and Team Leader with the Medicinal Cannabis Agency. • He is a pharmacist by profession, with a background in various production, regulatory affairs and quality roles in the pharmaceutical industry. • Pierre holds a Bachelor of Pharmacy and Master of Science in Pharmaceutical Chemistry.
Brendon Ogilvy Chief Executive Officer - RestoreMe	• Brendon is an experienced executive with a background in market research and online businesses. • He is the CEO of RestoreMe, having led the business from concept to market launch. • Success for Brendon is about empowering team members to deliver smart, superior service to delight their customers.

Appendix II – Glossary

Active Pharmaceutical Ingredient (API) – It is the biologically active component of a drug product.

Cannabidiol (CBD) – CBD is the second-most prominent compound found in the Cannabis Sativa plant and is non-psychoactive. It can help with anxiety and pain relief among other benefits.

Cannabinoids – A chemical compound that acts on cannabinoid receptors within the endocannabinoid system and affects the release of neurotransmitter into the brain.

Cannabis-Based Ingredient (CBI) – It is an ingredient that is extracted from cannabis and is intended to be used for a dosage product.

Controlled-environment agriculture (CEA) – It is a technology-based approach toward food production which includes indoor agriculture and vertical farming. Production takes place within an enclosed growing structure such as a greenhouse or plant factory.

European Medicine Agency (EMA) – This agency protects and promotes human and animal health by evaluating and monitoring medicines within the European Union and the European Economic Area.

The European Medicines Agency (EMA) is an agency of the European Union (EU) in charge of the evaluation and supervision of pharmaceutical products.

Good Agricultural and Collection Practice (GACP) – It is a set of guidelines covering the quality of medicinal plant materials for processes such as cultivation (from seeds and propagation material), collection, harvest, primary processing, and bulk packaging.

Good Agricultural Practice (GAP) – It is a set of guidelines that address environmental, economic, and social sustainability for on-farm processes, and result in safe, quality food and non-food agricultural products.

Good Manufacturing Practice (GMP) – It is a system for ensuring that products are consistently produced and controlled according to quality standards. It is designed to minimise the risks involved in any pharmaceutical production that cannot be eliminated through testing the final product.

Industrial Hemp – It is an extract of the Cannabis Sativa plant and is used to produce various industrial and consumer products. Hemp is often confused with cannabis but has lower THC levels. Canada and Europe maintain that industrial hemp contains less than 0.3% THC content.

Medicinal Cannabis Agency (MCA) – This government agency is a division of New Zealand's Ministry of Health responsible for overseeing the domestic production of medicinal cannabis and setting up and monitoring the regulatory and quality standards for medicinal cannabis products.

Medicinal Cannabis – Refers to the cannabis or cannabinoids that are prescribed by physicians for various illnesses such as anorexia, arthritis, glaucoma and migraine. Cannabis has a higher concentration of THC that varies between 3% and 30%, according to Canadian and European standards.

Medicinal Cannabis Scheme (MCS) – The MCS in New Zealand enables the commercial cultivation of cannabis for medicinal use only and the manufacture and supply of medicinal cannabis starting material, ingredients, and medicines.

New Zealand Minimum Quality Standard (NZMQS) – The standard implemented by the MCA to assess the quality of the medicinal cannabis

products. This includes analytical testing, validation of analytical methods, manufacturing processes and stability data.

Tetrahydrocannabinol (THC) – THC is the main psychoactive compound in cannabis that produces the high sensation. THC mimics anandamide, a natural chemical in the brain that influences the function of communication.

Therapeutic Goods Administration (TGA) – This organisation is responsible for regulating supply, import, export, manufacturing and advertising of therapeutic goods in Australia via enforcement of standards, compliance and licensing.

Vertical Integration – A business strategy where the firm has control over suppliers, distributors and/or retailers that are involved in the supply chain. It allows the firm to exercise greater control and improve the relative efficiency of its supply chain.

Appendix III – Analyst Qualifications

- Stuart Roberts, lead analyst on this report, has been an equities analyst since 2002.
- Stuart obtained a Master of Applied Finance and Investment from the Securities Institute of Australia in 2002. Previously, from the Securities Institute of Australia, he obtained a Certificate of Financial Markets (1994) and a Graduate Diploma in Finance and Investment (1999).
- Stuart joined Southern Cross Equities as an equities analyst in April 2001. From February 2002 to July 2013, his research speciality at Southern Cross Equities and its acquirer, Bell Potter Securities, was Healthcare and Biotechnology. During this time, he covered a variety of established healthcare companies, such as CSL, Cochlear and Resmed, and numerous other emerging companies. Stuart was a Healthcare and Biotechnology analyst at Baillieu Holst from October 2013 to January 2015.
- After 15 months over 2015–2016 doing Investor Relations for two ASX-listed cancer drug developers, Stuart founded NDF Research in May 2016 to provide issuer-sponsored equity research on ASX-listed Life Sciences companies.
- In July 2016, with Marc Kennis, Stuart co-founded Pitt Street Research Pty Ltd, which provides issuer-sponsored research on ASX-listed companies across the entire market, including Life Sciences companies.
- Since 2018, Stuart has led Pitt Street Research's Resources Sector franchise, spearheading research on both mining and energy companies.

Nick Sundich, lead analyst on this report, is an equities research analyst at Pitt Street Research.

- Nick obtained a Bachelor of Commerce/Bachelor of Arts from the University of Sydney in 2018. He has also completed the CFA Investment Foundations program.
- He joined Pitt Street Research in January 2022. Previously he worked for over three years as a financial journalist at Stockhead.
- While at university, he worked for a handful of corporate advisory firms.

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