1 Investment Summary

Magnetis is a Brazilian robo-advisor that promises to be the next generation platform for investing. Similar to all robo-advisors, Magnetis constructs a custom investment portfolio based on the customer’s needs and risk tolerance. It then uses algorithms to monitor the performance and to re-balance the portfolio when necessary. Currently, Magnetis is asking for US$4 million of series A funding to provide a 24 months of runway. Roughly half of the funding will be used to improve the robo-advisor product, and the other half will support customer acquisition. Magnetis is not specifying whether the US$4 million will be provided as a high interest loan or be exchanged for a percentage equity in the company. The main external stakeholders are emergent, established, and affluent Brazilians located in the smaller cities in Brazil’s interior region. In addition, there are two auxiliary stakeholders: the Brazilian government and Easyinvest—the investment brokerage firm that Magnetis uses to execute trades. Magnetis must coordinate its business operations with both of these stakeholders. The main internal stakeholder is the Magnetis team, comprising of a product development, business operations, and marketing division. Magnetis has currently provided very little information on their proposed deal structure. We anticipate that they would like to raise US$4 million in exchange for 28.5% equity in the company.

Deal Recommendation: Do not proceed with investment. Magnetis is still a highly prospective company. While it has growth potential, there are significant hurdles and temporal delays before Magnetis produces any return on investment.

2 Investment Thesis

2.1 Large market potential

Observable trend in an increasing income level coupled by a shift in consumption patterns. Based on current estimates, emergent, established and affluent households will account for 67% of all Brazilian consumption by 2020.

2.2 First mover

Magnetis is the first robo-advisory service company to be established in the Brazilian market, and have acquired 320 customers with a total AUM of R$51 million as of 2016.

2.3 Long Wait to Profitability

Robo-advisors have tremendous upfront costs (software development and customer acquisition). Therefore, it can take over a decade to reach profitability. According to Magnetis’ highly optimistic financial projections, the company is expected to have negative net income until 2021.
2.4 Significant Cash Injections

Currently, Magnetis needs about R$50 million in additional funding to achieve profitability (according to its financial projections). Without these continuous cash injections, Magnetis is a negative cash flow company and will go bankrupt, resulting in 100% loss in investment.

2.5 Lack of Talent Inability To Execute

Magnetis’ financial projections are extremely optimistic. On average, they predict 2.8+ times growth annually for six years straight and a R$5 billion valuation by 2022 (Figure 1 & 6). Additionally, they have an overly large employee headcount that is projected to double over the next few years. **These behaviors indicate a lack of operational experience and financial talent**—skills that are paramount for a financial services company.

3 Summary of Due Diligence Findings

3.1 External Factors

3.1.1 Newfound wealth

There is an increasing number of families transitioning into the emergent, established and affluent categories of households. The number of households in these wealthier segments will increase from 29% in 2010 to 37% in 2020. These emergent, established and affluent households will account for 67% of all Brazilian consumption by the end of 2020.[1]

3.1.2 Shifting Consumption Patterns

Consumer services such as private education, financial services, telecommunication and transportation are projected to grow at an annual compounding rate of 3.5% to 4% in real terms. Additionally, expenditure on products and services linked to the middle class segments, such as health insurance, domestic help and wine, has seen a continuous growth as income rises. These products and services account for nearly 40% of consumer spending.[1]

3.1.3 Larger customer basis as Tech Savvy Population Increases

The median customer age is projected to reach 38 by 2030, compared to 30 in 2013 and 27 in 2006. An increasing tech-savvy population with decent savings will result in a higher demand in wealth management products coupled with technology.[2]

3.1.4 Brick-and-Mortar Costs Restricts Incumbent Competition

Consumer wealth is spreading to the smaller cities and from coastal regions into Brazil’s interior. Incumbents, such as banks, are unlikely to expand into these regions because of high upfront brick-and-mortar costs. In comparison, digital wealth management services can expand into these areas without incurring large fixed costs.

3.1.5 Lower Interest Rates and Inflation

Real interests rates have dropped to less than 2% from over 9% in less than 4 years. In addition, Poupanca—the private savings accounts whose rates are set by the Brazilian Federal Government—has seen a steady decline in yield from more than 10% in the 1990s to just 1% above inflation. This encourages Brazilians to start searching for higher yields and to make more medium-term investment plans.[1][2]

3.1.6 Transition from “Savers” to “Investors”

Over the last five years, retail investors have diversified their portfolio beyond saving accounts to alternative, higher-yield investments. This trend is expected to continue. For example, Real Estate is increasingly becoming popular due to favorable tax exemptions and legal reforms. As more legal and tax exemptions are introduced, alternative investment products will become more attractive compared to savings accounts.

3.1.7 Channel Diversification

Brazilian banks have relatively high cost-income ratios, driven by low productivity and high fixed personnel expenses. It is therefore a challenge to avoid cannibalization of existing products that might be detrimental to the current revenue
model. Consequently, modification to existing offerings is expected to be marginally small. In contrast, non-bank and/or independent players have the means and are more likely to introduce more sophisticated products at a cheaper cost to retail investors.

3.2 Internal Factors

3.2.1 Company strategy
- Management fees are 60% lower than banks. [6]
- Investment product offerings are diverse and have higher yields compared to savings accounts.
- Targeting tech-savvy population (in the mid 30s) with decent savings who are more willing to adopt digital wealth management services.
- Multiple scalable acquisition methods, such as paid ads, email marketing, and upselling pre-existing customers.
- New product developments such as native apps, referral program, and aggregation services that will cultivate more interests in Magnetis robo-advisory services.

3.2.2 The Magnetis Robo-Advisor
- Analyzes more than 20,000 financial products to find the best alternatives in each category (public and private securities, stocks, funds). [6]
- Offers portfolio personalization (e.g. Magnetis 1, Magnetis 2, Magnetis 3, etc.) according to user’s needs and risk-tolerance. [6]
- Robo-advisor service that adopts Marokwitz’s Modern Portfolio Theory (MPT) and investment management strategies such as smart diversification, automatic rebalancing, and tax optimization. [6]

3.2.3 Magnetis Robo-Advisor Performance
- The long term (1 year) trend indicates that portfolio 1 (lowest risk) has a +1% return over treasuries and +6% over savings accounts. [6]
- With the highest risk profile, the returns were approximately +8% over treasuries and +13% over savings accounts. [6]

Note: these performance measures only cover a 1 year period, which is a relatively brief unit of time for long-term investing. For a more accurate measure of robo-advisor performance, we would need to analyze performance based on at least 20 years of historical data.

3.2.4 Magnetis Leadership Talent
- Key members consist of a mixture of technologists and people with financial backgrounds. On average, key members have accumulated at least 10 years of experience in financial related services, with some having stints in major companies such as Accenture and Merrill Lynch.
- Prior to the founding of Magnetis, the CEO, Luciano Tavares has worked in Merrill Lynch as VP of equity derivatives for 7 years, and has a graduate degree in Financial Engineering.
- Out of the 6 key members (excluding the CEO), 3 members have technical degrees with industrial experience in software engineering. 2 members with business/finance background are leading the marketing and sales division within magnetis. The remaining member has a background with experience in UX design and currently leads the product design team.

3.2.5 Research & Development
- There is some emphasis on developments on native apps and aggregation of data. However, there’s no information on major adoption of new algorithms or changes to existing technological framework.

3.2.6 Unit economics and/or financials
- Based on the financials, Magnetis is forecasted to achieve its first positive net income in 2022. In order to reach this milestone, during this period (2015 to 2021), capital investments have to be injected at least 5 times (Figure 5).
• The ratio of AUM to customer is expected to decrease over the same period. Possible reasons may include customers being churned once they reach their financial goals, fierce competition from incumbents or from new players, political and macroeconomic instability, or more investors joining, but with smaller investment capital.

• Despite a high annual average growth rate (2.8+ times) in its revenues, total expenses continue to exceed revenue in the foreseeable future (Figure 6). Possible reasons for these expenses could be linked to scaling up the infrastructure and the hiring of personnel as more potential clients join the service.

4 Investment Risks & Red Flags

4.1 External Risks & Red Flags

4.1.1 Corruption and stifling regulation
• Although regulations exist, corruption is prevalent in the government. In 2015 and 2016, many officials were implicated in the corruption scandal involving Petrobras.
• Strong bureaucracy for foreign companies interested in investing in the country. The federal and state governments have imposed a slew of regulations aimed at controlling foreign direct investments.
• Complex tax system with different criteria at federal, state, and municipal level

4.1.2 Macroeconomic conditions
• A recession in 2015 and 2016 resulted in Brazil’s economy to contract by approximately 7% in Real GDP percentage growth. Economic recovery has been sluggish in 2017 and 2018, with the economy growing at a meagre pace of 1.1% a year.
• Unemployment was accelerated from sub-8% to around 13% during the same period.
• Fiscal deficit has been increasing year-on-year, reaching a debt of 77% of GDP in 2016.

4.1.3 Market Structure
• The merger of Bovespa stock exchange and BMF futures exchange in 2008 resulted in a monopoly over equities and derivatives trading. Consequently, the impact is felt in the high cost in trading fees which eventually led to lower liquidity in the markets and high spreads. Most of the liquidity is concentrated on just 10 stocks in the exchange and spreads can be as high as 70 basis points.

4.1.4 Competition
• Easynvest - Currently, Magnetis provides an intuitive user interface, but relies on Easynvest to execute its trades (Figure 8). Easynvest already has 150,000 clients and robust technology. Therefore, little is stopping them from creating their own robo-advising service and quickly outpacing Magnetis.
• XP Investimentos - Similar to Easynvest, XP Investimentos is a large retail broker with 250,000 active clients with an AUM of $60 billion. As an established and profitable retail broker, it can easily acquire a robo-advisor startup, continue to develop its service, and reach out to existing and new potential clients. In our opinion, XP Investimentos can play the long game since it already has a sustainable core business that can support its side venture (robo-advisory service).

4.2 Internal Risks & Red Flags

4.2.1 Lack of Talent
The financial statement (Figure 1) supplied by Magnetis is concerning optimistic. On average, they predict 2.8+ times growth annually for six years straight. In other words, they predict 132 times growth over a six-year period. In addition, they predict their cost of acquisition will decrease from $2000 a customer to under $150, and their company will have a $5 billion valuation by 2022. These overly optimistic projections are a red flag: the Magnetis team is unable to form sound financial projections, indicating a lack of talent and long-term planning skills amongst their team.
4.2.2 Inaccurate Robo-Advisor Performance

Magnetis measured the performance over a 1 year period, which is too short to accurately measure the robo-advisor performance. Additionally, in this year, they reported returns between 26% and 48%, based on portfolio risk tolerance. These returns are far too high to be sustainable given the unpredictability in the economic and political climate. Since the conditions where the model (robo-advisor) was operated on is very likely to change, a longer period of observation is required. Therefore, this raises a red flag.

4.2.3 Overly Large Headcount

Magnetis has over 20 employees and only 320 customers. Additionally, they project operating expenses to nearly double for the next few years, indicating a dramatic increase in the employee headcount. However, this goes against the nature of a robo-advisor: typically, more employees are needed to develop the initial robo-advisor, and less are needed to maintain it. To mitigate the risk of overspending, Magnetis would need to freeze or reduce their projected operating expenses.

5 Valuation Deal Structure

5.1 Proposed Investment

Magnetis is seeking US$4 million, which is equivalent to R$16 million based on 2016 currency exchange rate. While they do not specify a proposed deal structure, they currently value themselves at R$40 million. Therefore, we assume they are seeking US$4 million in exchange for roughly 28.5% equity in the company.

5.2 Current Risks

- Long road to profitability means that the investment money will be locked up for 5-10 years. Additionally, this opens up the door for uncertainty and a changing market landscape.
- Lack of substantial future funding will result in company bankruptcy and 100% loss in investment.

5.3 Current Reward

5.3.1 Rewards Based on Magnetis Projections

- Magnetis’ predicted valuation in 2022 is R$5 billion, making a 28.5% equity worth R$1.4 billion. This represents a phenomenal 88X return on investment in five years.

5.3.2 Revised Assumptions

- It will take 10 years to hit a valuation of R$5 billion (US$900 million), mirroring that of Betterment and Wealthfront in the United States.
- Currently, Magnetis is boasting a R$5 billion (US$900 million) valuation when it hits R$20 billion in AUM; this is an extremely high valuation. For comparison, Wealthfront—an established robo-advisor with R$60 billion in AUM—has a valuation between US$500 million and US$1 billion (according to PrivCo). Therefore, even after hitting R$20 billion in AUM, Magnetis’ valuation will most likely be less than Wealthfront. For simplicity, we will assume that Magnetis will take the same number of years (i.e. 10 years) to match the valuation of Wealthfront and Betterment.
- Magnetis is anticipating roughly R$50 million in additional funding. This will cause our equity share to be diluted from 28.5% to about 15%.

5.3.3 Rewards Based on Revised Assumptions

- With our revised assumptions, Magnetis will grow to R$20 billion AUM by 2027 and it will have a valuation of R$1.4 billion given our initial equity of 28.5%. Therefore, our initial R$16 million investment would be worth R$754 million (after accounting for dilution). This represents roughly a 46X return on investment in ten years, or a 47% annualized ROI. The calculation of the ROI can be referenced from Figure 9.
6 Risk Reward Analysis

A 47% annualized ROI over a 10 year period is quite attractive; however, this assumes that Magnetis is able to execute their 10 year plan perfectly. Based on our observations, several crucial factors remains uncertain and the current valuation of the company is overly optimistic.

6.1 Unrealistic growth rate

A valuation with annualized growth rate of 62% seems too high given the present economic climate in Brazil. In the recent 2 years (2015 and 2016), Brazil’s GDP growth rate has been negative at -3.2% and -3.5% respectively (Figure 10). Based on a longer trend analysis, the moving average over a 5 years period in 2015 and 2016 indicates a slow growth rate of 1% and -0.1%. If the economy is not growing at a reasonable rate, it is extremely unlikely that Magnetis can achieve their targeted growth rate. We believe the main problem lies with Magnetis calculation of their valuation, which is based on a percentage of AUM in their estimated portfolio. The overly simplification of attributing valuation to AUM could also mean a lack of oversight on other risks such as macroeconomic risks, competition risk and etc, and also the lack of financial sense among the team. Without a credible estimate of the valuation, the risk is high and could result in a 100% loss to our investment.

6.2 Cost of Acquisition

The largest expense and main driver of Robo-advisor success is the cost of acquisition. Currently, Magnetis’ cost of acquisition is $2,000, but they predict a decrease to under $150 by 2022. If Magnetis is unable to achieve this level of cost efficiency, the company will run out of funds and go bankrupt.

6.3 Market Competition

If robo-advisory services are proven to be a lucrative source of profits in the foreseeable future, large retail brokers such as XP Investimentos and Easynvest may decide to enter the robo-advisory market as independent players. Given their reputation and existing customer base, they could easily gain market share in a short period of time (similar to Charles Schwab in the U.S). Moreover, XP Investimentos and Easynvest already have a sustainable core business, which allows them to play the long game until Magnetis becomes operationally sustainable.

7 Deal Team Recommendation

Overall, the risks are far too high for us despite a somewhat promising return. Therefore, our recommendation is to not proceed with investment, regardless of the equity share promised.
Appendix

Financial model - flat margins

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<td>1,464</td>
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<td>41,429</td>
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<td><strong>Revenues</strong></td>
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<tr>
<td>Average (% AUM)</td>
<td>0.38%</td>
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<td>0.38%</td>
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<td><strong>ARR</strong></td>
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<td><strong>Expenses</strong></td>
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<tr>
<td>Operating expenses + taxes</td>
<td>2,247,355</td>
<td>1,756,639</td>
<td>3,394,071</td>
<td>5,773,200</td>
<td>8,773,310</td>
<td>8,534,314</td>
<td>11,511,219</td>
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<td>Operating income (ex-aqi)</td>
<td>(2,208,267)</td>
<td>(1,621,826)</td>
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<td>Acquisition expenses</td>
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<td>Total expenses</td>
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<td>Capital invested</td>
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<td>20,000,000</td>
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<td>Cash (EBOY)</td>
<td>1,722,746</td>
<td>2,188,279</td>
<td>9,864,965</td>
<td>2,778,912</td>
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<td>Bench. multiples (% AUM)</td>
<td>77.57%</td>
<td>78.27%</td>
<td>72.61%</td>
<td>62.79%</td>
<td>41.67%</td>
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<td>Pre Valuation</td>
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Figure 1: Magnets’ Financial Statement

Figure 2: AUM of current (2015/2016) and expected (2017-2022)
Figure 3: Ratio of AUM to customer is decreasing significantly every year

Figure 4: On average, number of customers is growing at 3.4+ times annually compared to 2.6+ times annually for AUM
Figure 5: Based on the financial statement, Magentis is projected to be profitable only from 2022 onwards.

Figure 6: Revenue and ARR growth rate.
Figure 7: Valuation is projected to increase by approximately 2.3 times (on average) annually.

Figure 8: Magnetis’ strategy is to engage a brokerage like Easynvest as a clearing house for trades.
• Current valuation of Magnetis in 2016: R$40,000,000 → 100% equity
• Investment by deal team: US$4,000,000 → R$16,000,000 (in 2016, exchange rate was US$1 to R$4)
• Post-money valuation of Magnetis → R$56,000,000
• Deal team ownership → R$16,000,000/R$56,000,000 = 28.57%
• Investment by others: R$50,000,000
• Post-money valuation of Magnetis → R$106,000,000
• Deal team ownership → R$16,000,000/R$106,000,000 = 15.09% (Dilution due to capital injection by others)
• Estimated valuation in 2022, R$5,000,000,000
• Deal team ownership (in $) → 15.09% x R$5,000,000,000 = R$754,716,981
• Initial R$16,000,000 investment will be worth R$754,716,981 in 10 years
• BOV: R$16,000,000, EOY: $754,716,981, TRR = (754,716,981-16,000,000)/16,000,000 = 46.17
• Annualized return (ROI): (1 + TRR)^(1/N)-1 = (1 + 46.16) ^ (1/10) – 1 = 0.4701 or 47.01%

Figure 9: Calculation of the ROI with a R$16 million investment

The economy is not growing...
Real GDP percentage growth

Figure 10: Recession in 2015 and 2016 saw the country’s economy contract by almost 7
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