BOOK SUGGESTIONS

December, 2020

Dear investors,

Since many people take at least a few days of vacation in December and/or January, we have dedicated this month's letter to suggesting five books related to investing. These are books we like very much, but which may not be so well known to the public.

We should point out that we read these books in their original English. Some of them are available in Portuguese, and we will refer to their Brazilian titles, but we cannot comment on the quality of the translations.

> *"In my whole life, I have known no wise people (over a broad subject matter area) who didn't read all the time — none, zero."*
>
> Charlie Munger

1. A Man for All Markets: From Las Vegas to Wall Street, How I Beat the Dealer and the Market

A fascinating autobiography of Edward O. Thorp, a genius who rose from a poor childhood to excel in several areas of human knowledge: mathematics, computing and finance.

In 1962, then aged 30, Thorp published the book "*Beat the Dealer*," in which he proved mathematically that the house edge in *blackjack* could be overcome by card counting, based on his studies as a professor at MIT. Not only did he prove it, but he also made money in casinos by applying his theory.

As part of his research on games of chance, Thorp helped develop the world's first "*wearable computer*" (partly hidden in a shoe and partly in a pack of cigarettes), which he used to estimate which number would come up on the roulette wheel and thus beat the casinos at this game as well. The inspiration came from the observation that the small ball spinning on a roulette wheel resembles the planetary system – if we can predict the trajectory of the planets, why not that of the roulette ball?

Gradually moving away from academia, Thorp began to apply his advanced knowledge of probability and statistics to the financial markets, discovering and exploiting several price anomalies in the capital markets, such as in options pricing – at the same time that Black and Scholes were developing the research for which they received the Nobel Prize in economics. He can be said to have created the world's first *market-neutral hedge fund*, and he achieved an average annual return of more than 20% per year for over 30 years. [1]

[1] In his investment philosophy, Thorp combined long and short positions to take advantage of relative price anomalies and mitigate market exposure. In this way, his fund could make money regardless of the direction (up or down) of the stock market and of markets in general

The book is highly engaging – a great read for an afternoon at the beach!

In Portuguese: Um homem para qualquer mercado

2. You Can be a Stock Market Genius

Ignore the ridiculous title – this is a fantastic book! It is not a basic book for beginners, as it assumes the reader already has some knowledge (and experience) of investing, but it is written in a light and even humorous style in some passages. It focuses mainly on event-driven investing or "special situations," such as *spinoffs*, corporate restructurings, etc.

The book stands out for the wealth of detail in the cases discussed and for the practical applicability of the knowledge presented, unlike other books that tend to be more abstract ("The Most Important Thing" itself would be a typical example of investment literature). By way of illustration, it is worth briefly mentioning the Sears case described in the book:

> In 1992, Sears announced that it would sell 20% of two of its subsidiaries (Allstate Insurance and Dean Witter) to the public. At a later date, it would distribute the remaining 80% to its shareholders. Before the distribution, one Sears share traded at $54 and entitled its holder to receive 1 share of Allstate (which was listed at $26) and 0.4 share of Dean Witter (listed at $15). Greenblatt shows the simple math he did to conclude that the market was valuing Sears' core business at $5, when it could clearly be worth $15 or $20! More interestingly, he explains why these partial spin-off situations are more likely to offer highly profitable investment opportunities.

The author, Joel Greenblatt, started his *hedge fund* on his own when he was 28 years old. In the first 10 years, he achieved an average gross return of 50% per year (!!), and more than 30% net of management and performance fees. After this period, having already built up a substantial personal fortune, Greenblatt returned all of his investors' money, dedicated himself solely to managing his own assets and began teaching *Value Investing* in the MBA program at Columbia University in New York.

3. Margin of Safety

Books published by great investors are usually written after a successful track record. In the case of *Margin of Safety*, Seth Klarman was at the beginning of his career at the Baupost Group when he decided to write the book. It was published in 1991, when Seth had been working at the investment firm for just over 7 years, and initially sold only 5,000 copies (at US$25 each), being considered a publishing failure at the time.

Klarman was undeterred and, by applying the principles described in the book, became a successful investor, generating a return of close to 20% per year since the beginning of his career and amassing a personal fortune of US$1.5 billion. Because of his extremely private profile, Klarman has been described by The New York Times as "probably the most successful and influential investor you've never heard of."

Because of the successful track record he built after the book was published, attention turned to the teachings he had compiled while still a "beginner." As Klarman has never been interested in publishing a new edition, original copies of the book are rare and can cost as much as US$4,000! University libraries report the book as having one of the longest waiting lists, and also as one of the books most often declared "lost" by the students who borrow it.

We could summarize *Margin of Safety* as follows: "avoiding losses should be the primary goal of every investor. The way to avoid losses is to invest with a significant margin of safety. A margin of safety is necessary because valuation is an imprecise art, the future is unpredictable and investors are human and make mistakes." However, the greatest value of the book lies in its practical discussions of the difficulty of

making the right decisions about the portfolio and the timing of sales, given the human biases and the pressure for short-term returns to which we end up being subject.

4. Algorithms to Live By: The Computer Science of Human Decisions

A surprising book, to be read and reread. The goal of the authors, Brian Christian, a computer scientist, and Tom Griffiths, a professor of psychology and cognitive science, is to show how simple algorithms, originally developed to solve computer science problems, can be applied to help us solve practical questions in our daily lives:

- when buying a house, how many alternatives should you visit before making the "optimal" decision on the best purchase? Answer: To maximize the probability of choosing the best possible house, spend 37% of your search time seeing what is out there, without commitment (say, if you plan to buy within the next 3 months, spend a little over 1 month exploring), but be prepared to accept the first quality offer that is equal to or better than what you have already seen as soon as that time has passed.

Other curious questions include:

- when to try a new restaurant that has opened, and when to decide to go back to your favorite one
- the issue of "*data overfitting*" – don't overcomplicate a problem. In times of "big data," the authors criticize the practice of "data idolatry": a complex model may very well lead to less accuracy rather than more
- what is the acceptable "degree of mess" on your desk? What is the easiest way to find your notes? Is it worth spending time organizing your paperwork?

Their writing style is easy to read and humorous, detailed enough for the reader to gain a good understanding of the content without being overly technical and mathematical. At the end of the day, the book helps us think about how to make better decisions by recognizing our limitations and cognitive biases – something fundamental in investment management.

In Portuguese: Algoritmos para viver - A ciência exata das decisões humanas

5. The Most Important Thing: Uncommon Sense for the Thoughtful Investor

This book distills the knowledge acquired by Howard Marks over his very successful career as an investor. Marks founded Oaktree Capital Management in 1995, and today his investment firm is the world's largest asset manager focused on *distressed* assets, with US$125 billion in assets under management.

His memos to clients, sent periodically for more than three decades, have stood out for the depth and originality of their *insights*, written in a concise and candid manner. Warren Buffett has said that these memos are the first thing he opens and reads whenever he receives them. As an example of his style, we highlight a paragraph from a letter sent in 1990:

> *Simply put (…) in equities, if you can avoid losers (and losing years), the winners will take care of themselves. I believe most strongly that this holds true in my group's opportunistic niches as well -- that the best foundation for above-average long term performance is an absence of disasters. It is for this reason that a quest for consistency and protection, not single-year greatness, is a common thread underlying all of our investment products.*

“*The Most Important Thing*” is a fascinating collection of essays by Howard Marks on investment philosophy. Structured in 20 chapters, it revisits principles that should be basic to any investor, but which are often recklessly ignored in the pursuit of quick and easy gains.

It is worth noting that Marks writes with the authority of an investor who started “from scratch” and amassed a fortune estimated at US$2.5 billion, delivering an average return of more than 17% per year for several decades.

A translation of the book will be released on December 15 of this year under the Portuguese title “O Mais Importante para o Investidor: Lições de um gênio do mercado financeiro.”

Whether you are an experienced investor or just starting out, we believe the books above will provide valuable lessons with a good dose of fun. Without further ado, happy reading!

Fund characteristics

ARCADIA FUNDO DE INVESTIMENTO DE AÇÕES (the "Fund"), managed by Arcádia Participações e Gestão de Recursos Ltda., is an equity investment fund regulated by CVM Instruction 555/2014.

Target audience

The Fund is intended exclusively for qualified investors (under CVM Instruction 554/2015) seeking long-term-focused returns.

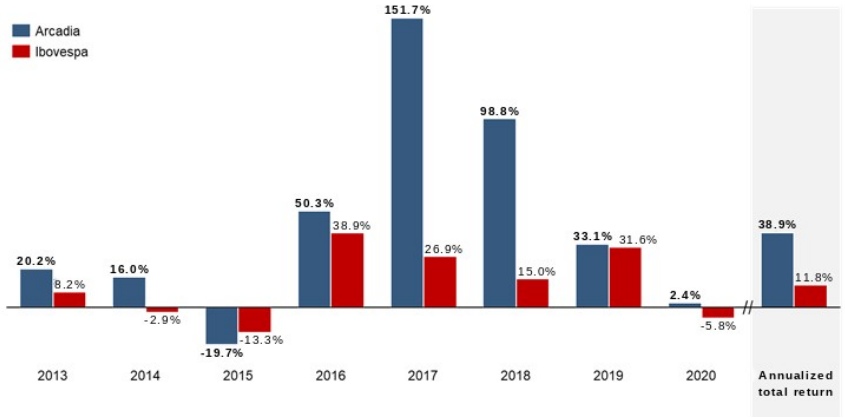
Fund objective

The Fund's objective is to provide its unitholders, over the medium and long term, with capital gains by investing its resources primarily in the stock market, without pursuing a high correlation with any specific equity index available.

ANBIMA classification	Equities (Free)
Manager	Arcádia Participações e Gestão de Recursos Ltda.
Administrator / custodian	BTG Pactual Serviços Financeiros S.A. DTVM
Minimum investment	R$20.0 thousand
Additional investment	R$1.0 thousand
Minimum balance	R$10.0 thousand
Management fee	2% p.a.
Performance fee	20% of excess return over the Ibovespa (high-water mark)
Subscription conversion	D + 1 (business day)
Redemption conversion	D + 89 (calendar days)
Settlement	D + 1 (after conversion)
Taxation (income tax)	15% of gains upon redemption (no come-cotas)

Current net assets	R$100.6 million
12-month average net assets	R$80.3 million
Cumulative return	1,084.4%
12-month return	28.0%
36-month return	167.7%
Fund assets held by partners	57.0%

Annual return



Monthly return

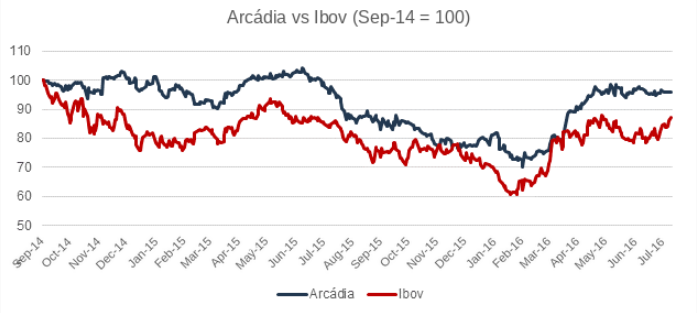
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Cumulative
2013	Arcádia	-	-	-	-	-	2.2%	6.7%	(5.2%)	8.8%	8.3%	(1.0%)	(0.3%)	20.2%	20.2%
	Ibovespa	-	-	-	-	-	(11.3%)	1.6%	3.7%	4.7%	3.7%	(3.3%)	(1.9%)	8.2%	8.2%
2014	Arcádia	(4.5%)	2.9%	2.2%	(0.9%)	4.2%	7.7%	1.2%	0.9%	(1.2%)	(1.2%)	6.2%	(1.7%)	16.0%	39.4%
	Ibovespa	(7.5%)	(1.1%)	7.1%	2.4%	(0.8%)	3.8%	5.0%	9.8%	(11.7%)	1.0%	0.2%	(8.6%)	(2.9%)	5.0%
2015	Arcádia	(4.4%)	(3.6%)	3.4%	5.1%	1.3%	(4.2%)	(10.6%)	(2.9%)	0.2%	(8.7%)	0.5%	3.5%	(19.7%)	12.0%
	Ibovespa	(6.2%)	10.0%	(0.8%)	9.9%	(6.2%)	0.6%	(4.2%)	(8.3%)	(3.4%)	1.8%	(1.6%)	(3.9%)	(13.3%)	(8.9%)
2016	Arcádia	(9.7%)	2.8%	20.9%	4.7%	1.8%	(0.7%)	16.1%	7.8%	(0.3%)	(1.0%)	1.6%	0.6%	50.3%	68.3%
	Ibovespa	(6.8%)	5.9%	17.0%	7.7%	(10.1%)	6.3%	11.2%	1.0%	0.8%	11.2%	(4.7%)	(2.7%)	38.9%	26.5%
2017	Arcádia	2.0%	3.7%	1.4%	2.6%	20.4%	1.7%	27.9%	9.4%	8.7%	8.9%	14.1%	(1.2%)	151.7%	323.7%
	Ibovespa	7.4%	3.1%	(2.5%)	0.7%	(4.1%)	0.3%	4.8%	7.5%	4.9%	0.0%	(3.2%)	6.2%	26.9%	60.5%
2018	Arcádia	22.1%	23.9%	0.8%	2.4%	29.7%	(8.4%)	7.9%	5.1%	(7.8%)	6.5%	(4.7%)	0.9%	98.8%	742.3%
	Ibovespa	11.1%	0.5%	0.0%	0.9%	(10.9%)	(5.2%)	8.9%	(3.2%)	3.5%	10.2%	2.4%	(1.8%)	15.0%	84.6%
2019	Arcádia	10.7%	(1.7%)	(3.4%)	(1.2%)	(5.7%)	(1.5%)	3.6%	1.0%	(7.8%)	14.0%	0.5%	25.0%	33.1%	1021.5%
	Ibovespa	10.8%	(1.9%)	(0.2%)	1.0%	0.7%	4.1%	0.8%	(0.7%)	3.6%	2.4%	1.0%	6.9%	31.6%	142.9%
2020	Arcádia	2.7%	(4.2%)	(24.8%)	8.0%	0.2%	6.7%	9.9%	(2.9%)	(0.2%)	0.1%	12.2%	-	2.4%	1,048.4%
	Ibovespa	(1.6%)	(8.4%)	(29.9%)	10.3%	8.6%	8.8%	8.3%	(3.4%)	(4.8%)	(0.7%)	15.9%	-	(5.8%)	128.7%

* Arcádia began on June 27, 2013 as an "investment club" and, on September 27, 2019, it was converted into an "equity investment fund." Returns shown from inception on June 27, 2013 through October 30, 2020

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Adesão Provisória

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Additional analysis



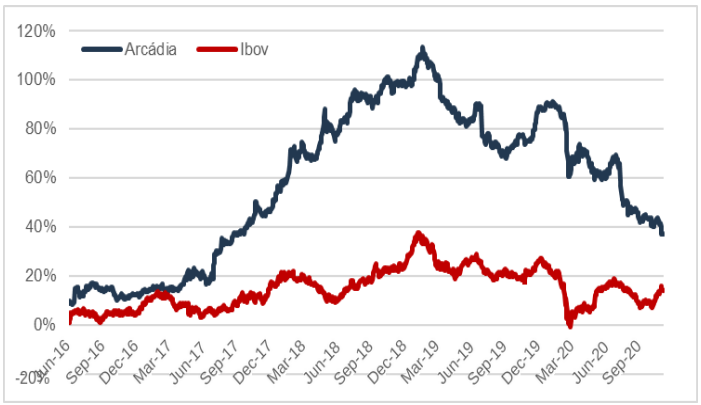
Max drawdown Arcádia: 30%
Max drawdown Ibovespa: 39%



Max drawdown Arcádia: 34%
Max drawdown Ibovespa: 47%

	Arcádia	Ibovespa
Volatility – since inception	24.7%	26.4%
Sharpe – since inception	1.27	0.23
Correlation (Arcádia vs Ibov) – since inception	0.35	-
Volatility – 12 months	30.0%	44.3%
Sharpe – 12 months	1.01	0.18
Correlation (Arcádia vs Ibov) – since inception	0.76	-

Rolling 3-year returns



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