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SMART Global Holdings, Inc.

Two Stories – One Truth

Report Date:	**September 25, 2019**
Company:	**SMART Global Holdings, Inc.**
Ticker:	**SGH US**
Industry:	**Semiconductors**
Stock Price (USD):	**$31.28**
Market Cap (USD):	**$722.0 Million**

"This reduction of the Import Tax diminishes the protection of the national industry and, if it comes along with the reduction of the tax benefit that we have today in the Computer Law, it may be big enough that there is no longer interest of a company, multinational company to produce in Brazil" (Translated)

Rogerio Nunes, CEO of SMART Brazil and President of ABISEMI (industry association), June 12, 2019.

INTRODUCTION

SMART Global Holdings, Inc. (SGH US, "**SGH**", the "**Company**") faces an existential threat to its Brazilian memory business, a fact unappreciated by the market due to management's misleading public statements and sell-side credulity. SGH's Brazil business hinges upon a tax incentive that the WTO recently ruled anti-competitive and in violation of WTO principles. The necessary changes to the code have already caused mass confusion among SGH's Brazilian memory customers. Our review of the new laws, with input from Brazilian legal counsel and industry experts, indicates SMART Brazil will not benefit from the subsidy going forward.

Brazil revenues represented 62% of the Company's total in 2018 and regression on SGH's historic financial performance shows that Brazil has been the key driver of its profits. In short, without SMART Brazil, SGH's profitability will continue to fall sharply.

Through our extensive on the ground due diligence in Brazil, we found that management's optimistic guidance conflicts sharply with statements made by SMART Brazil's CEO in his efforts to lobby the Brazilian government against these changes. Instead of providing transparency regarding the dire situation in Brazil, SGH has perpetuated an optimistic outlook while engaging in a CYA exercise, shifting the rhetoric from "growth in Brazil" to "diversification from Brazil."

SGH's diversification strategy raises questions about the Company's long-term vision, as well as management's personal motives. We see no possible way for the companies SGH has acquired to replace the government-aided profitability of SMART Brazil.

SGH recently acquired Inforce Computing, a company that was majority-owned by three of SGH's directors, including Chairman/CEO Ajay Shah. According to filings we pulled in India, we're left pondering a transaction which appears ridiculous at face value. These filings indicate that SGH paid more than 13x last year's revenue of only $865,000. SGH has yet to provide any financial information for this acquisition – anything short of disclosing significant additional revenue from a subsidiary we could not find would expose this as a self-dealing transaction at the expense of shareholders. SGH's Cayman-based corporate structure will make legal recourse extremely challenging for shareholders, if not impossible.

SGH's short life on the public markets has been the classic final scene of a stereotypical private equity venture. Having been taken private by Silver Lake and their associates in 2011, this has been a story of aggressive leverage, asset stripping and cash sweeping. Now, with the returns they needed banked, the husk is being dumped on the public markets.

SUMMARY

1. SMART Brazil

- SMART Brazil has been a core profit driver for SGH but the tax subsidy it relies on has been changed with severely detrimental consequences.

- SMART Brazil has been playing an arbitrage game, taking a significant margin between inflated Brazil memory prices and those of the international market. Their business was built on the Brazilian government's "PPB" subsidy program for local tech manufacturing. The PPB is a "content requirement": SGH's customers received tax benefits worth up to 28% of gross sales for using Brazilian-made memory in the products they sold in Brazil. This massive incentive meant SMART Brazil's memory sold at a significant premium to international prices. Without the PPB to protect it from free market pricing, this niche business will have to face the fierce competition of the commodity memory market, but with no advantage. The arbitrage opportunity has collapsed.

- OEMs no longer have an incentive to pay a premium for SGH's commodity memory products. In June 2018, a WTO panel ruled that the Brazilian PPB was anti-competitive and, therefore, violated WTO principles. On June 26, 2019, the Brazilian government published a new structure for the PPB program, which allocates points based on which parts of the manufacturing process are carried out in Brazil. Under the new structure SGH's assembly operation, by our calculation and according to industry experts, can't earn its OEM customers enough points to qualify for the subsidy. This new structure went into effect on July 1, 2019.

- We have uncovered SGH's own meetings and agendas with the Brazilian authorities: they knew the significance of this change as early as last year, as the following communication between SMART Brazil's President and the Ministries of Technology, Science and the Economy demonstrates:

  "This reduction of the Import Tax diminishes the protection of the national industry and, if it comes along with the reduction of the tax benefit that we have today in the Computer Law, it may be big enough that there is no longer interest of a company, multinational company to produce in Brazil"[1]

- SMART Brazil has been an anomaly in the memory supply chain – a product of an anti-competitive subsidy program. Every other manufacturer of memory we reviewed, such as Samsung, Hynix and Micron, package up their memory chips in house. They operate in a volume game where success is driven by scale and efficiency: this compels vertical integration. In other words, without the PPB scheme, SMART Brazil no longer has any competitive advantage, in one of the most fiercely competitive industries in the world.

- SGH noted in its S-1 that customers only buy as much Brazilian-made memory as they need to qualify for the PPB tax incentives. In other words: no PPB, no customers. The loss of these incentives will crush

[1] http://www.telesintese.com.br/reducao-do-imposto-de-importacao-pode-provocar-fuga-da-industria-de-tic-alerta-empresario/ (Trans. from Portuguese)

SMART Brazil's margins and may eliminate demand for its products altogether. This perhaps explains why SGH has shifted the rhetoric from "growth in Brazil" to "diversification away from Brazil."

2. Diversification Away from Brazil – And from Profitability

- "Leveraging the growth in the Brazilian memory market" has been the sales pitch for this stock for years. On June 27, 2019, SGH's investor presentation continued to tout this line. But, just 12 days later, on July 9th, the narrative shifted to "diversification away from Brazil". This change in commentary coincided with the adverse developments in Brazil. Alongside this change in rhetoric, management continued to put a positive spin on the impact of the new PPB.

- SGH has obfuscated the margins of its segments through simple non-disclosure. However, our analysis shows profits hinged on the sales performance of its Brazilian unit. SMART Brazil required minimal SG&A and R&D expense because the PPB benefit drove demand by itself and its assembly processes do not require much innovation. The same cannot be said about SGH's new "diversified" businesses.

- SGH's June 2018 acquisition of Penguin Computing came shortly after the initial WTO ruling. A cursory review of Penguin's financials might convince some investors that this acquisition is comparable to SGH, due to their similar gross margins. But with high fixed costs and a resulting operating margin of only 6% (as of Q1'18) versus SGH's 14% operating margin, the Penguin acquisition diluted margins and added fixed costs. With gorilla-sized competition in the space, this strikes us as an illogical transaction that was likely a frenzied response to the imminent loss of the Brazilian subsidies.

- SGH announced the acquisitions of Artesyn Embedded Computing and Inforce Computing on July 9, 2019, less than two weeks after the new PPB rules went into effect. This investment is a confusing step backwards, as SGH had been involved in embedded computing previously. They folded their own embedded computing operations in 2010, evidently unable to monetize them by a sale.

- While the trend toward Internet of Things ("IoT") technology has created opportunities for larger embedded computing companies to generate gross margins as high as the mid-40% range, Artesyn is a much smaller company. Management's guidance for a 4Q19 revenue contribution of $10 million between Artesyn and Inforce implies less than $60 million in annual revenue for Artesyn. This leads us to believe that Artesyn is simply too small to generate gross margins anywhere near those of its larger competitors.

- SGH recently acquired Inforce Computing, a company that was majority-owned by three of SGH's directors, including Chairman/CEO Ajay Shah. Based on filings we found in India, this transaction appears ridiculous at face value. These filings indicate that SGH paid more than 13x Inforce's 2018 revenue of only $865,000. SGH has yet to provide any financial disclosure for this transaction, and anything short of significantly more revenue from a subsidiary that we could not find would expose this as a self-dealing transaction at the expense of shareholders.

- The Inforce acquisition raises serious questions about SGH's corporate governance structure, which is dominated by Chairman/CEO, Ajay Shah. Shah is a Founding Managing Partner of Silver Lake Sumeru, who, with Silver Lake, owns over 40% of the Company's shares. He sits as a director on one of the two boards which oversees Silver Lake's investment. Considering that Shah received ~$5 million in SGH stock for his interest in Inforce, this transaction begs for more disclosure than the Company has provided.

- Despite their optimistic public statements, management appears to have no interest in buying this stock themselves. SGH's insiders have sold more than $300 million of stock in the last two years, while making no material purchases.

3. Lobbying in Brazil was Core to SGH's Strategy, and its Profits

- The lead executive of SGH's most substantial business unit, SMART Brazil, is completely absent from their SEC filings and shareholder presentations. Instead, SGH lists KiWan Kim, a resident of California, as President of SMART Brazil.

- In Brazil, Rogério Nunes is calling the shots, where he is known as the CEO and/or President, according to Brazilian filings.[2] This is in stark contrast to SEC filings where he is not mentioned at all. Nunes has full control over SGH's Brazilian subsidiaries and is clearly the lead executive. Indeed, having been instrumental in the business's very foundations, he has led SMART Brazil from well before it was acquired by SGH, over 15 years ago. He is even named as the executor on various credit agreements.

- SEC filings: KiWan Kim, President of SMART Brazil

- Brazilian filings: Rogério Nunes, President of SMART Brazil

- SGH calls Nunes a VP and General Manager, while Nunes calls himself CEO/President, having run the Brazilian operations for the best part of two decades. Nunes fails to mention his trade body directorships on his LinkedIn page, nor are they present in his bio on SGH's website. KiWan Kim makes no mention of Brazil on his LinkedIn page, despite the accolade of "running" his employer's most significant segment.

- This deception offends basic principles of transparency and trust, but the more important point is that Nunes, their key man and CEO, is also a lobbyist. This was the core of their strategy: Nunes leveraged friendly tax policy to the benefit of SGH. That all came to an end with the WTO ruling, and so will SGH's profits.

[2] http://abisemi.org.br/abisemi/arquivosUpload/8E8BF64C6FB8A832.%20Jul04_2....pdf

1. SMART Brazil

SGH's business was built around Brazil's *Processo Produtivo Básico* ("PPB") subsidy program for local technology manufacturing. The PPB is a "content requirement" which gave original equipment manufacturers ("OEMs") significant tax benefits for using Brazilian-made memory in smart phones, tablets and other products sold in Brazil. These benefits were significant – according to the company, the incentive was around 28% of the resale value of the OEM's products:[3]

The PPB's role in SGH's Brazilian memory business was threefold:

- First, the content requirement drove demand for SGH's Brazilian-made memory products – according to SGH's own disclosures, OEMs would buy no more Brazilian-made memory than they needed to qualify for the subsidy.
- Second, because the PPB benefit was so valuable, SMART Brazil could sell its memory products at a significant premium to international prices – an almost unheard-of advantage in a commodity industry like semiconductors.
- Finally, the PPB had built-in growth – the percentage of Brazilian-made components needed to qualify for the PPB increased over time. This meant SGH could reliably forecast demand growth in Brazil, until the rules changed on July 1, 2019. This was pitched as key to the investment thesis in SGH's 2018 10-K but is no longer the case.[4]

Local Content Requirements

PPB/IT Program Requirements for PC and Server Memory	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Notebook DRAM IC Packaging	0%	30%	30%	40%	50%	60%	80%	80%	80%	70%	80%	80%
Desktop DRAM IC Packaging	10%	10%	10%	10%	10%	30%	50%	60%	80%	80%	80%	80%
Server DRAM IC Packaging	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
PPB/IT Program Requirements for Mobile Memory	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Notebook SSD IC Package	0%	0%	0%	35%	40%	30%	40%	40%	35%	50%	50%	50%
SSD Module Flash IC Package	0%	0%	0%	0%	0%	40%	60%	80%	30%	40%	60%	60%
Mobile/Smartphones microSD Cards	0%	0%	0%	0%	5%	5%	10%	20%	40%	50%	50%	50%
All Other Memory Types (1)	0%	0%	0%	0%	0%	0%	5%	20%	30%	30%	50%	60%
PPB/IT Program Requirements for TV	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
TV IC Package	0%	0%	0%	0%	0%	0%	0%	0%	30%	40%	40%	40%

(1) Includes mobile DRAM, eMMC and eMCP.

For years the Brazilian government had allowed SGH to have a loose definition of manufacturing by creating "nested PPBs.": a content requirement within a content requirement. That is, under the old PPB an OEM could qualify for the incentives by having the specified percentage of *one step* of the manufacturing process for *one component* of their end product done in Brazil.

[3] SGH 2018 SEC Form 10-K, p. 7
[4] SGH 2018 SEC Form 10-K, p. 7

PPB/IT Program Requirements for Mobile Memory	2018
Notebook SSD IC Package	50%

For example, Dell (an OEM) sells notebook computers in Brazil. In the table above, you can see that the specified percentage for "Notebook SSD IC Package" was 50% in 2018. This meant that Dell could qualify for the PPB benefits by simply outsourcing to SMART Brazil the packaging of 50% of the integrated circuits ("ICs") used in the solid-state drive ("SSD") component of Dell's Brazil-bound notebook computers. This was easy for Dell, and the value of the PPB benefit made outsourcing this one process to SMART Brazil well worth it.

The nested PPBs were paramount for SGH, as its Brazilian operation only packages ICs for which the components were produced elsewhere, then sold these "Brazilian-made" ICs to OEMs that were seeking to qualify for the PPB. According to SGH's 2018 10-K:

> *"Our manufacturing capabilities in Brazil consist of receiving unmounted ICs in wafer form from third-party wafer fabs, preparing and packaging the ICs into semiconductor components, testing the components, and in some cases placing these components on substrates or printed circuit boards to make modules or multi-chip packages."*[5]

Thanks to the PPB, SMART Brazil could simply buy chips that were designed and manufactured elsewhere at low international prices, package them in Brazil and sell them at a premium to OEMs that wanted the PPB benefit, who would be required to buy more each year. *Seems like a great business model, right?*

Not exactly – SMART Brazil is ***highly dependent*** on the PPB. Its niche business no longer has a competitive advantage now that they are unshielded from the free market – Dell, for example, wouldn't outsource IC packaging to SMART Brazil were it not for the PPB incentive. Furthermore, SMART Brazil accounted for 62% of SGH's total revenue in 2018, making SGH itself highly dependent on the PPB. Any change in the PPB program would be devastating to SGH as a whole. In the 'Risk Factors' section of SGH's 2018 10-K, the company highlights that any change to the PPB "*would have a material adverse effect on our business*",[6]

This risk has now become reality. In June 2018, a World Trade Organization ("WTO") panel ruled that the Brazilian PPB was anti-competitive and that it violated WTO principles. The WTO required the Brazilian government to either eliminate the PPB or change it so that it complied with the WTO's principles within one year of the ruling. SGH's attempts to lobby against these adverse changes failed.

On June 26, 2019, the Brazilian government published the new guidelines for the PPB, effective July 1, 2019. These replaced the old percentage-based requirements with a system that allocates points based on which parts of the manufacturing process are carried out in Brazil. Most importantly for SGH, the new guidelines eliminated the nested PPBs that SMART Brazil relied upon.

[5] SGH 2018 SEC Form 10-K, p. 13
[6] SGH 2018 SEC Form 10-K, p. 7

OEMs need to accumulate 40 points to qualify for the PPB, and according to our research SMART Brazil will not allow its OEMs to qualify. In other words, **SGH's assembly/packaging operation can no longer qualify its OEM customers for the PPB benefits on its own.**

To understand why the new PPB guidelines are going to be so devastating to SMART Brazil, it helps to consider it from the perspective of SGH's OEM customers. Recall our example above: under the old PPB, Dell qualified for the PPB benefits by outsourcing 50% of the assembly of one component of the notebook computers it sold in Brazil.

Under the new PPB, this would earn Dell exactly ***zero*** of the 40 points it needs to qualify for the benefits. Dell must now outsource 100% of the assembly of the ICs it uses in the notebook computers it sells in Brazil….

…. and even **this only earns Dell 16 of the 40 points it needs.**

So, Dell could have SMART Brazil complete the final integration of those ICs into Dell's notebook computers…

…. **this additional step would only earn Dell 5 more points,** bringing its total to 21.

Dell could further have SMART Brazil perform tests on those notebooks…

…. **this earns Dell only 1 additional point, bringing its total to 22**.

At this point, in this fantasy world where Dell disrupts their global supply chain to greatly expand its dependence on SMART Brazil, Dell is still 18 points short of qualifying for the PPB and it has exhausted SMART Brazil's current capabilities.

How does Dell go about earning those other 18 points? Perhaps SMART offers to make a massive capital investment to expand its capabilities so it can assemble control boards and integrate them with the batteries for Dell's notebooks. This would earn Dell 9 more points – still 9 more to go.

Suddenly, earning the PPB benefits has become much more difficult for all SMART Brazil's OEM customers. Most importantly, **the most that any OEM will pay SMART Brazil for these processes is the value of the PPB benefit.** We see two possible outcomes for SGH's OEM customers like Dell:

- Give up on qualifying for the PPB (Brazil is a tiny piece of Dell's business, anyway); or
- Force SMART to invest a significant sum of money to expand its capabilities in Brazil and carry out more complicated manufacturing processes at much lower margins than in the past.
- A revision to the new PPB that doesn't offend WTO principles. However, this would still force SMART Brazil to sell its memory at greatly reduced prices, crushing its margins.

This is a lose/lose situation for SMART Brazil and SGH.

The new PPB for mobile memory allocates points as follows:[7]

Item	Production Stage	Points
I	Development Project in the Country - MCT Ordinance No. 950, of December 12, 2006, or MCTI Ordinance No. 1,309, of December 19, 2013, or MCTIC Ordinance No. 356, of January 19, 2018, or MCTIC Ordinance No. 3,303, June 25, 2018.	8
II	Additional investment in R&D, worth 2 points for every 1% invested additionally in R&D, limited to a maximum of 6 points.	6
III	Development of the board's low-level embedded software (firmware) responsible for the central processing function.	2
IV	Wafer cutting, encapsulation and testing of Main Processors, or substrate cutting, encapsulation and testing of System in Package.	10
V	Lamination and cutting of glass plates and encapsulation of polarized glass cells.	16
VI	Injection, molding or other forming (3D printing) or stamping of the enclosure carcasses.	4
VII	Lamination of printed circuit boards that implement the central processing function.	4
VIII	Assembly and welding of all components on boards that implement the central processing function.	9
IX	Assembly and welding of all components on the boards that implement the wireless network access function.	6
X	Assembly and welding of all components on the boards that implement the cellular network access function.	6
XI	Assembly and welding of all components in the boards that implement the function of AC / DC converters, with the winding of the coils or insertion and welding of the pins in the multilayer boards of the transformers.	7
XII	Stripping and crimping of data cables.	4
XIII	Assembly and welding of all components on the control boards and integration with the electric accumulator load cells.	9
XIV	Wafer cutting and encapsulation and testing of memory integrated circuits.	16
XV	Final integration.	5
XVI	Tests.	1

SGH's OEM customers only purchase as much Brazilian memory as they need to qualify for the PPB tax incentives, according to the Company's SEC filings.[8]

If SMART Brazil's memory products can't qualify its OEM customers for the PPB benefits, they won't buy from SMART. Even if some customers do keep buying memory from SMART Brazil, they won't pay a premium; SGH will have to sell memory at international prices, crushing its margins. According to the Semiconductor Industry Association,

> *"For participants in the supply chain to succeed, they must offer better features or cost advantages. These features or advantages must incorporate continuously evolving consumer preferences and differentiate the participant's contribution to the supply chain."*[9]

SMART Brazil ***used to*** offer a cost advantage in the form of the PPB. Without that, it is just a small player in a brutally competitive industry.

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[7] http://www.mctic.gov.br/mctic/opencms/legislacao/portarias_interministeriais/Portaria_Interministerial_SEPEC_ME_MCTIC_n_7_de_26062019.html
[8] SGH Response to SEC Correspondence Re: Draft Registration Statement on Form S-1, Submitted August 26, 2014
[9] Semiconductor Industry Association: "The Global Semiconductor Value Chain" p. 5

It is extremely unusual for memory producers to outsource assembly of memory chips. The primary manufacturers of memory – Samsung, Hynix, Micron – largely carry out these processes in-house. Success relies on volume, scale and efficiency, compelling vertical integration. In a free market without the Brazilian government's intervention in providing subsidies, SMART Brazil's niche memory business never would have existed.

"A Lie Has Speed, but Truth Has Endurance"

The new PPB guidelines were published on June 26, 2019, the day before SGH's earnings call for fiscal Q3 2019 (ended May 31, 2019). When asked how the new rules would impact SGH's business, Chairman/CEO Ajay Shah said,

> *"And in our conversations with customers that effectively -- the math would come back to effectively the same kind of level of businesses we do today, that's -- I know it's a somewhat high-level explanation, but to take you any deeper would require spreadsheets…"*[10]

Shah's patronizing statement, which seems to imply spreadsheets are beyond the grasp of the financial community, is in sharp contrast with those made by SMART Brazil's CEO, Rogério Nunes, just two weeks earlier. Nunes also serves as President of ABISEMI (the Brazilian Semiconductor Industry Association) and said the following in a letter to the Brazilian Ministries of Economy, Science and Technology on June 12, 2019:

> *"This reduction of the Import Tax diminishes the protection of the national industry and, if it comes along with the reduction of the tax benefit that we have today in the Computer Law, it may be big enough that there is no longer interest of a company, multinational company to produce in Brazil"*[11]

His fears became a reality just three weeks later. We agree with Nunes; he runs SMART Brazil, as well as a number of trade bodies and undoubtedly knows what is happening in-country. The loss of the PPB will be financially devastating for SGH. By downplaying the recent developments in Brazil, management has avoided serious questions about the long-term viability of SGH.

On SGH's fiscal Q3 2019 earnings call (on June 27, 2019), Chairman/CEO Ajay Shah made the following statement, which we believe to be an attempt to redirect investors by downplaying the importance of SMART Brazil, by highlighting some other "*fun samba stuff*" in their business:

> *"Brazil is now going to in our forecast the top one-third of the business. And so, it's not the driver of our business that it was a year back. I understand that everyone was kind of fascinated with the local content requirements in Brazil and all of the fun samba stuff that comes from it. But the -- all I'm trying to say is that it will be an important element of our business and we will continue to communicate that potential. But at the same time, we'd like to make sure that we communicate that*

[10] "SGH Q3 2019 Earnings Conference Call" via Bloomberg LP, accessed September 12, 2019
[11] http://www.telesintese.com.br/reducao-do-imposto-de-importacao-pode-provocar-fuga-da-industria-de-tic-alerta-empresario/ (Translated)

we have other businesses that are doing well, that we're growing, that we're as a result less dependent on memory especially the commodity memory products."[12]

Shah was clearly walking a fine line on this earnings call, putting a positive spin on the impact of the new PPB rules, while emphasizing SGH's efforts to diversify away from Brazil.

Shah's verbal gymnastics on the Q3 call appear calculated; make the news sound good enough to subdue investors' concerns, but downplay management's knowledge of the situation – he is certainly savvy enough (and has been party to enough securities litigation) to understand the protections provided by forward looking statements.[13]

Management Calls it Outlook; We Call it Look Out

While SGH's management is telling investors that everything is fine in Brazil, its actions don't match up with its statements. Based on recent movements in SGH's working capital and aggressiveness on the M&A front, we believe management is either deliberately misleading investors or recklessly mismanaging the company's finances.

Over the last 2 quarters, SGH has boosted its cash flow through a massive working capital unwind. It has collected $97 million in accounts receivable, liquidated $52 million in inventory, paid down $93 million in accounts payable and $14 million in accrued expenses. All told, SGH netted approximately $47 million in additional cash flow by reducing its working capital. On its own, this looks like prudent financial management during a cyclical downturn in an inventory intensive section of the supply chain – reduce working capital and hoard cash during the contraction so that cash can be used to rebuild working capital when the trend reverses.

However, SGH spent ~75% of its cash on hand at the end of Q3 on the acquisition of Artesyn Embedded Computing, instead of keeping it for the promised and expected rebound. This is evidence that SGH's management knows its Brazil business will not rebound, in contrast to what they are telling the market.

Current sell-side estimates for 4Q19 and fiscal 2020 reflect expectations that SGH's Brazil segment will grow revenue and SGH as a whole will significantly grow its margins. Frankly, we consider these expectations to be those of credulous analysts mindlessly lapping up the half-truths of executives.

Even if SMART Brazil manages to reverse its recent trend of 25% sequential revenue declines, this growing revenue would have much tighter margins. As we explained earlier, the old PPB incentive created a premium on Brazilian-made memory, and that premium no longer exists.

If SMART Brazil does completely reverse its downward revenue trends, as the street expects, with realistic margins given the loss of the PPB premium, our analysis shows SGH could find itself in severe financial distress in the short-to-medium term. Below, we will highlight the key assumptions of the model we used to reach this conclusion.

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[12] "SGH Q3 2019 Earnings Conference Call" via Bloomberg LP, accessed September 12, 2019

[13] Walpole v. Smart Modular Technologies Inc. et al., Peters v. Ajay Shah et al., Marder v. Smart Modular Technologies Inc. et al., Wilkes v. Ajay Shah et al.

Revenue:

Although we strongly believe that SGH's Brazil revenue will continue to roll off over the coming quarters, we gave the Company the benefit of the doubt by using sell-side consensus estimates for all three segments' revenue:

SMART Global Holdings Revenue *(USD, Millions)*	Nov-18 1Q19 *Actual*	Mar-19 2Q19 *Actual*	May-19 3Q19 *Actual*	Aug-19 4Q19 *Est.*	Nov-19 1Q20 *Est.*	Feb-20 2Q20 *Est.*	May-20 3Q20 *Est.*	Aug-20 4Q20 *Est.*
INCOME STATEMENT								
Brazil	199.3	147.1	101.0	98.8	106.4	103.4	112.0	125.6
Specialty Memory	139.9	115.6	98.8	111.6	117.2	115.1	120.8	132.9
Specialty Compute and Storage	54.7	41.3	35.9	74.6	86.6	64.9	74.7	104.6
Total Net Sales	**393.9**	**304.1**	**235.7**	**285.0**	**310.2**	**283.4**	**307.5**	**363.0**

The above revenue projections still assume a major reversal in Brazil's downward revenue trend. We do not believe SMART Brazil will reverse its downward revenue trend and we see material downside risk to these numbers.

Gross Margins and OpEx Percent of Sales:

Even given the benefit of an assumed reversal of the declining sales trend, we cannot ignore the facts on the ground. The loss of the PPB will undoubtedly hit margins. While the sell-side optimistically projects a gross margin rebound and a reversal in R&D and SG&A as a percentage of revenue, the changes to tax policy make this scenario absurd. You can't lose this tax subsidy with no hit to Brazilian margins – the premium pricing they used to receive disappears. Our analysis indicates SGH's gross margin will stabilize just above 19% in the best-case scenario, while we generously kept SG&A and R&D as a percentage of revenue at 3Q19 levels, as shown below:

SMART Global Holdings COGS/OpEx *Percent of Sales:*	Nov-18 1Q19A *Actual*	Mar-19 2Q19A *Actual*	May-19 3Q19A *Actual*	Aug-19 4Q19E *Est.*	Nov-19 1Q20E *Est.*	Feb-20 2Q20E *Est.*	May-20 3Q20E *Est.*	Aug-20 4Q20E *Est.*
Wolfpack:								
Gross Margin	***21.6%***	***18.8%***	***18.3%***	***19.4%***	***19.8%***	***19.5%***	***19.6%***	***19.8%***
R&D	*3.0%*	*3.7%*	*4.8%*	*4.8%*	*4.8%*	*4.8%*	*4.8%*	*4.8%*
SG&A	*6.5%*	*7.7%*	*10.3%*	*10.3%*	*10.3%*	*10.3%*	*10.3%*	*10.3%*
Sell Side:								
Gross Margin	***21.6%***	***18.8%***	***18.3%***	***20.4%***	***21.4%***	***21.2%***	***21.9%***	***22.6%***
R&D	*2.8%*	*3.5%*	*4.5%*	*4.0%*	*3.9%*	*4.4%*	*4.1%*	*3.6%*
SG&A	*5.1%*	*6.4%*	*8.4%*	*7.4%*	*7.4%*	*8.2%*	*7.8%*	*6.8%*

Note: We are not incorporating the collapse in margins to which our analysis points. Again, we believe the gross margin estimates we use above are optimistic.

Net Income:

Using the consensus revenue estimates (which, again, we believe to be far too optimistic) together with the gross margins and OpEx structure shown above, this model produced the following GAAP and non-GAAP net income numbers:

SMART Global Holdings Net Income *(USD, Millions)*	Nov-18 1Q19 *Actual*	Mar-19 2Q19 *Actual*	May-19 3Q19 *Actual*	Aug-19 4Q19 *Est.*	Nov-19 1Q20 *Est.*	Feb-20 2Q20 *Est.*	May-20 3Q20 *Est.*	Aug-20 4Q20 *Est.*
Net Income (GAAP)	**31.0**	**12.8**	**1.9**	**3.3**	**5.7**	**4.7**	**5.1**	**6.4**
Non-GAAP Adjustments:	-	-	-					
Other (income) expense, net	3.3	(0.3)	(0.1)	-	-	-	-	-
Share-based compensation	4.1	4.1	4.4	4.2	4.2	4.2	4.2	4.2
Intangible amortization	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0
Net Income (Non-GAAP)	**39.3**	**17.7**	**7.2**	**8.5**	**10.8**	**9.9**	**10.2**	**11.6**

Note that the estimates for SGH's Q4 2019 (ended August 31, 2019) net income are well below the sell-side consensus of $12.4 million on a GAAP basis, and $15.9 million on a non-GAAP basis and reflect our belief that the rebound in SGH's earnings won't happen.[14]

Operating Cash Flow:

Here's where the inventory build required to meet the revenue expectations shown above comes into play. When combined with the negligible net income produced with realistic margin expectations for SMART Brazil (and SGH as a whole), the Company goes cash flow negative as soon as 2Q20. Here are our cash flow projections:

SMART Global Holdings Cash Flows from Operations *(USD, Millions)*	Nov-18 1Q19 *Actual*	Mar-19 2Q19 *Actual*	May-19 3Q19 *Actual*	Aug-19 4Q19 *Est.*	Nov-19 1Q20 *Est.*	Feb-20 2Q20 *Est.*	May-20 3Q20 *Est.*	Aug-20 4Q20 *Est.*
Cash Flows from Operations								
Net income	31.0	12.8	1.9	3.3	5.7	4.7	5.1	6.4
Depreciation & amortization	5.4	5.9	6.8	6.8	6.8	6.8	6.8	6.8
Stock based compensation	4.1	4.1	4.4	4.4	4.4	4.4	4.4	4.4
Non-cash interest expense	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Other	1.3	0.4	0.7	-	-	-	-	-
Changes in working capital:								
Accounts receivable	(89.4)	5.7	91.4	(13.4)	(11.3)	37.5	(13.8)	(47.7)
Inventories	30.6	17.1	35.1	(28.8)	(14.7)	(17.7)	(14.4)	(27.2)
Other current assets	(3.2)	7.4	(2.5)	-	-	-	-	-
Accounts payable	48.6	(17.0)	(76.4)	44.2	23.0	(42.5)	2.7	47.5
Accrued liabilities	6.4	2.0	(16.0)	0.7	(1.8)	2.4	1.1	0.8
Other assets and liabilities	-	-	-	-	-	-	-	-
Cash Flows from Operations	**35.4**	**39.1**	**46.3**	**18.0**	**12.7**	**(3.5)**	**(7.3)**	**(8.3)**

[14] "SGH Consensus Overview" via Bloomberg LP, accessed September 23, 2019

As you can see, even with the unrealistic expectations for a reversal in the declining sales trend, the lower margins and necessary working capital expansion means the Company starts to burn cash.

Current Assets:

Finally, and most importantly, this all has a detrimental effect on SGH's balance sheet. As you can see in the chart below, the cash burn eats into the Company's balance sheet and causes a big problem by fiscal Q4 2020:

SMART Global Holdings Balance Sheet *(USD, Millions)*	**Nov-18 1Q19** *Actual*	**Mar-19 2Q19** *Actual*	**May-19 3Q19** *Actual*	**Aug-19 4Q19** *Est.*	**Nov-19 1Q20** *Est.*	**Feb-20 2Q20** *Est.*	**May-20 3Q20** *Est.*	**Aug-20 4Q20** *Est.*
Assets:								
Cash & Equivalents	**63.0**	**95.2**	**126.1**	**52.6**	**54.2**	**39.0**	**19.5**	**(1.9)**
Accounts receivable	330.5	326.5	230.2	243.6	255.0	217.4	231.2	278.9
Inventories	188.4	171.8	132.8	161.6	176.3	194.0	208.4	235.6

In effect, if revenue meets the Street's projections, but on realistic margin expectations given the loss of the PPB in Brazil, SGH's balance sheet could put a cap on growth. However, we think the most likely scenario is that the rebound simply doesn't happen. Management's behavior, spending all their cash on the Artesyn acquisition, tells you that they know that a rebound, and the subsequent working capital build, isn't going to happen.

Our projections above are not unfair. If anything, they are simply too optimistic:

- The sell-side as well as management are forecasting a massive reversal in the sales trend, despite the macro headwinds of the sector, and the loss of subsidy in Brazil:

  We don't believe it but give them that in the above models.

- The sell side as well as management are forecasting a massive rebound in margins, despite the macro headwinds and the loss of subsidy in Brazil:

  We could not give them that given the loss of the subsidy, but we are willing to model-in their ideal world with no further deterioration of the gross margin.

- And they forecast a decline in R&D and SG&A as a proportion of revenues:

  Again, we don't see how that's possible, and choose instead a more sober outlook of a continuation of the recent trend.

We expect SGH's Brazil revenue to continue to roll off in 4Q19, in addition to declining margins.

Management's guidance for fiscal 4Q19 (ended August 31, 2019) of $285 million in revenue and GAAP EPS of $0.38 suggests significant rebounds on SGH's top and bottom lines. To us, this looks like an unachievable target.

We have noted that the Company's use of its prepaid expenses account has increased since the IPO. Various costs such as "*Prepaid R&D*" have started to pop up as new line-items, held as assets waiting to be expensed in later periods. Our analysis of this prepayments account is suggestive of P&L smoothing, on a quarter-to-quarter basis. When the Company was generating upwards of $50 million a quarter in net income, the effects were not obvious, but given the collapse in earnings, such activity could become significant to reported EPS.

We urge investors and the sell-side to watch for increased capitalization of expenses in the upcoming quarters. Based on historical trends, we believe this could be used to artificially boost EPS by as much as $0.10 per share.

Even with some accounting shenanigans, we see a high likelihood of disappointment over SGH's 4Q19 earnings, given the market's high expectations.

However, we are much more interested to see their guidance. The short-to-medium-term outlook for SGH looks extremely bleak. *Will management come clean or keep peddling?*

2. Diversification Away from Brazil – And from Profitability

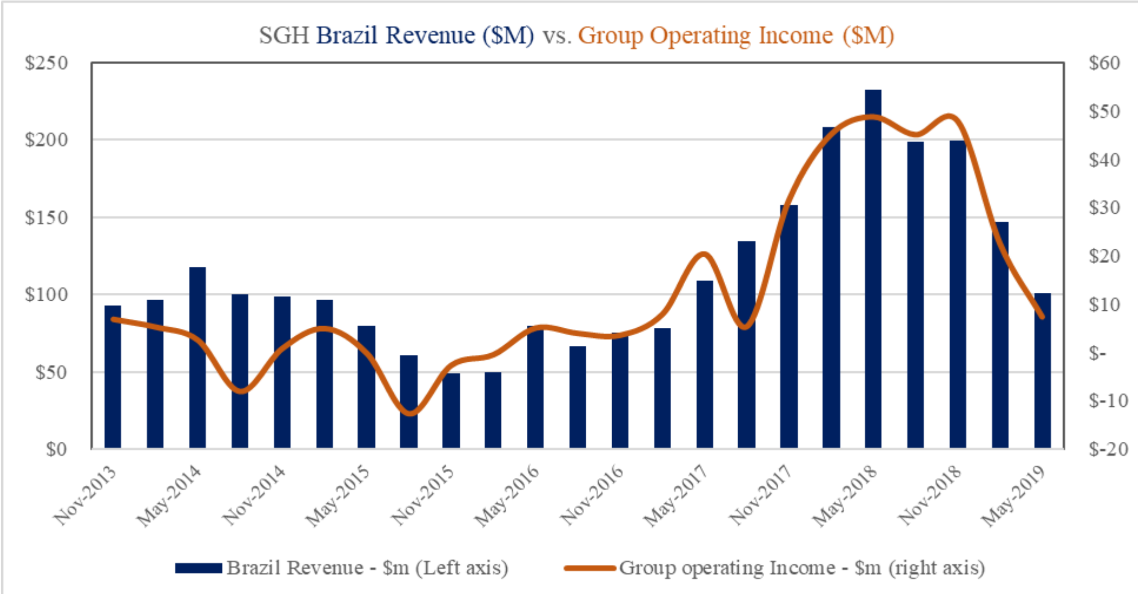
SGH's executives have chosen to obfuscate the Company's profitability by division and geography. However, we have been able to put pieces of the puzzle back together. Our analysis shows that Brazil has been SGH's primary profit generator. In this sense, SGH's baffling diversification strategy since mid-2018, after the WTO ruling became clear, is incapable of back-filling the loss of its subsidy-dependent profitability. They are replacing easy predictable profits with a low-margin grind.

The approach management has taken to change the rhetoric around the investment case is disingenuous. A careful review of how and when they have changed the script indicates a calculated effort on their part to shroud the harsh reality.

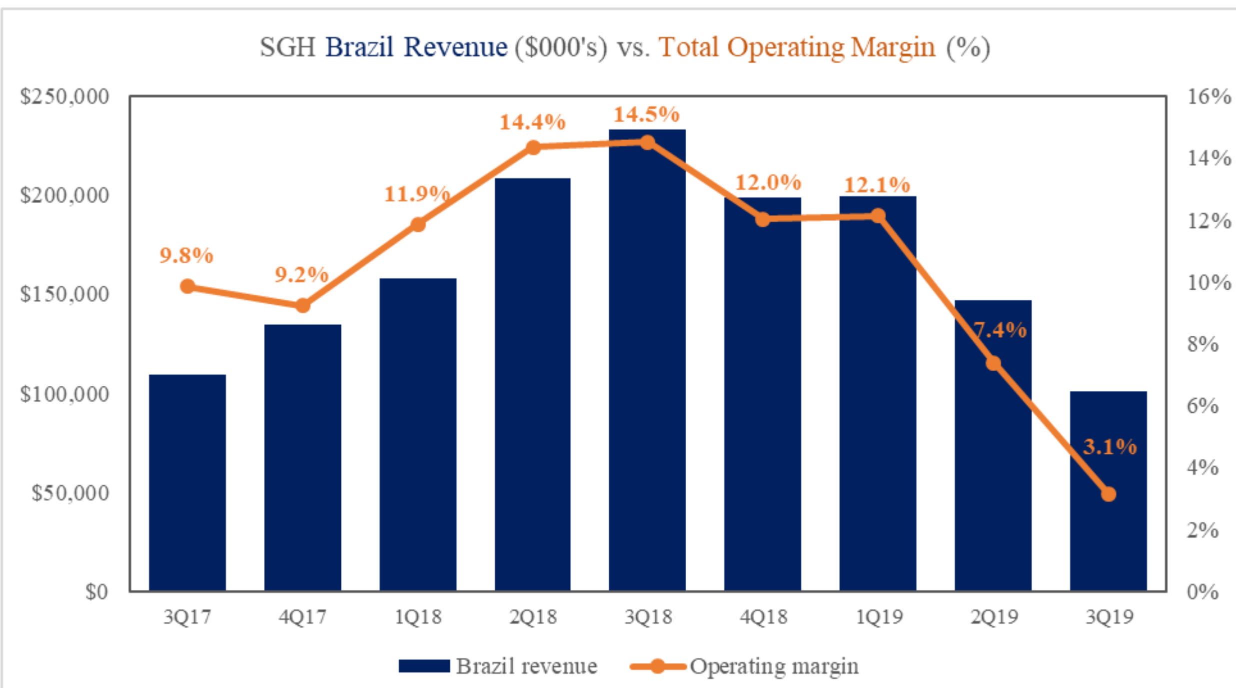
We expect this harsh reality to bite hard.

Brazil Was SMART's Golden Goose:

Even though SGH has chosen not to provide investors with any transparency over segment profitability, it is possible to see how important Brazil has been. The following chart demonstrates the strong correlation between group operating profits and SMART Brazil revenues:



We see it as no coincidence that gross margin, operating margin and net margin all peaked in Q3 2018, the same quarter that Brazil peaked as a percentage of SGH's total revenue. Although management has been able to partially offset its revenue declines in Brazil with acquisitions in the specialty computing space, our analysis points to these acquisitions failing to offset the decline in profitability.



Operating expenses are helpful to understand why SMART Brazil is so important to SGH's financial performance. There should be relatively few fixed costs in SMART Brazil's business. Logically, the gross margin would have been a product of the size of the subsidy, which allowed SMART Brazil to sell its commodity memory products at a significant premium to international prices.

With the OEM deals in place, demand only depended on how many products the OEM customers expected to sell in Brazil and the percentage of Brazilian-made memory required to qualify for the PPB benefits, meaning there should be comparatively less SG&A expense required to grow volume.

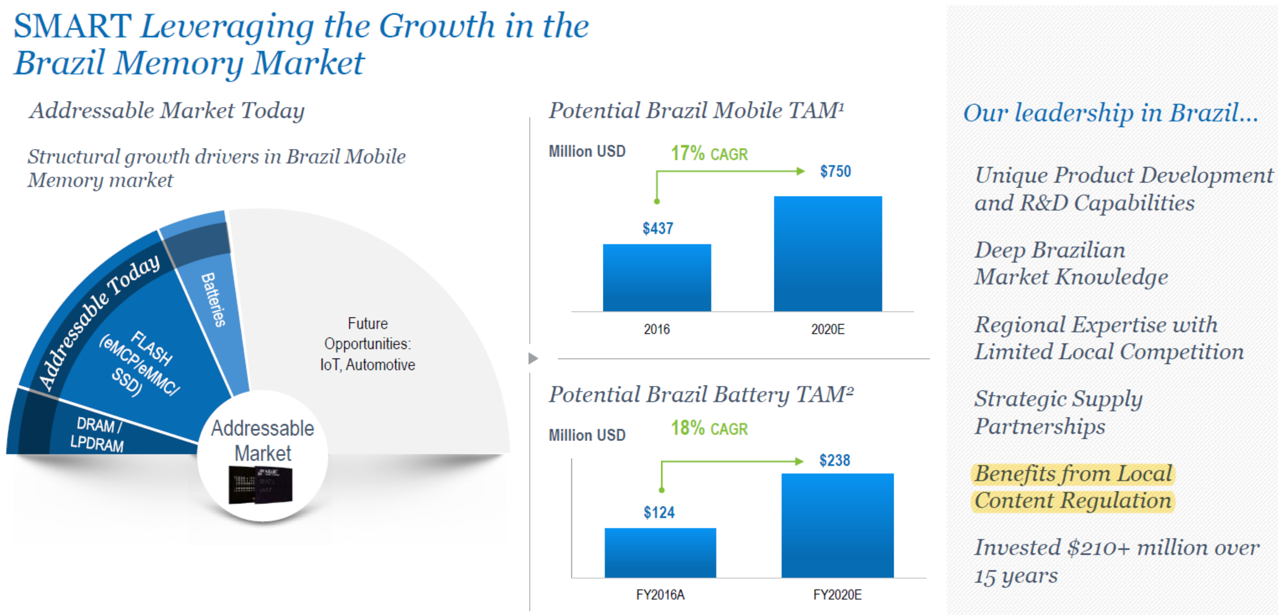
Similarly, we see no reason for significant R&D expense related to packaging these chips – as an outsourced fabricator, SMART likely receives the design specs directly from its OEM customers. As a result, most of SMART Brazil's gross profit should flow through the income statement to operating profit, driving SGH's overall operating margin higher, with the opposite being true when Brazil revenues or gross margins fall.

A Salesman's Pitch Changes Tone:

When the company went public as SMART Global Holdings in 2017, continued growth and opportunity in the Brazilian memory business was pitched as ***the*** investment thesis for SGH. The company's September 2017 investor presentation touts four "*key pillars for sustainable growth*", two of which depend on the Brazilian commodity memory business:

Source: SGH Investor Presentation, September 13, 2017, slide 6

The Brazilian business remained front and center in all investor pitches through 2017, 2018 and well into 2019. Even after publication of the new PPB requirements, SGH's investor presentation for its fiscal Q3 2019 (ending May 31, 2019) reflected management's hopes that its government influencers in Brazil could stop the new rules from going into effect on July 1, still including a slide titled "*SMART Leveraging the Growth in the Brazil Memory Market*":



Source: SGH Investor Presentation, June 27, 2019, slide 12

Nonetheless, the new PPB guidelines were indeed implemented on July 1, prompting SGH's management to shift their diversification plan into overdrive. Just 8 days after the new rules became effective, SGH announced the acquisitions of Artesyn Embedded Computing and Inforce Computing.

The Company's investor call to discuss these acquisitions provided a presentation that had changed from the one presented less than two weeks earlier:

Source: SGH Investor Presentation, July 9, 2019, slide 7

The timing of these acquisitions and the shift in rhetoric suggests management was aware of the impending disaster in Brazil and were now scrambling to dilute its impact. These acquisitions look set to fail.

SMART's Work Becomes Hard Work

SGH's first acquisition after going public in 2017 was Penguin Computing, which closed shortly after the critical WTO ruling in June 2018. A review of the disclosed financials for this acquisition shows that it has already diluted SGH's margins.

SMART Brazil harvested the gains of the tax subsidy, a line of business that was logically high-margin with low fixed costs. The same cannot be said about Penguin, which now forms the core of what SGH calls Specialty Compute and Storage Solutions ("SCSS").

"Specialty Compute" refers to High-Performance Computing ("HPC"). This technology is constantly evolving, demanding significant investment in R&D and human capital. It takes skilled engineers to develop these products and deliver Penguin's services. Indeed, our channel checks point to a significant portion of Penguin's revenues being service related.

SSCS was first reported as a distinct segment in SGH's fiscal Q4 2018 (ending August 31, 2018), after the acquisition of Penguin.

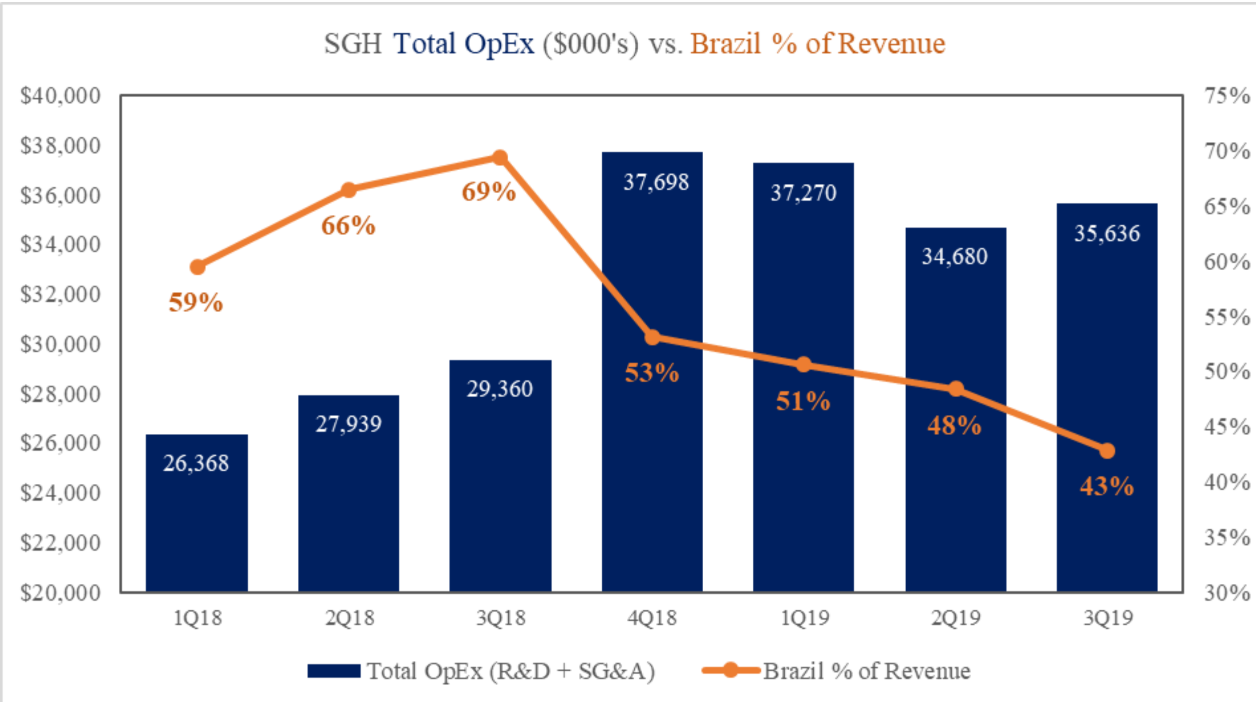
Penguin Computing advertises a wide array of services on its website, including assembly, server management, design, and even financing. It appears that Penguin is a database management company, providing the services a customer needs to host high-performance computing on premise. Providing these services requires a fixed cost and capital base, adding operational leverage to SGH as a group.

Further, Penguin boasts about large public sector customers, such as government agencies and universities. These are notorious for long sales cycles and intense competition to win new accounts. Competition inherently creates margin compression due to constant pricing pressure and consistently heightened SG&A expense.

The HPC industry is dominated by the likes of Nvidia and Xilinx, which act as suppliers to Penguin, providing the primary intellectual property required for supercomputing. While database management itself is highly fragmented, with thousands of small players, the gorilla in the room is HPE. We see Penguin as a mouse in the land of giants, an observation which chimes with its financial performance.

In 2017, Penguin's operating margin was only 4.1% on a gross margin of 18.2%.[15] It went on to produce a net loss of $0.7 million on $52.5 million in revenue between the date of its acquisition by SGH, on June 8, 2018, and August 31, 2018, the end of SGH's fiscal 2018.[16]

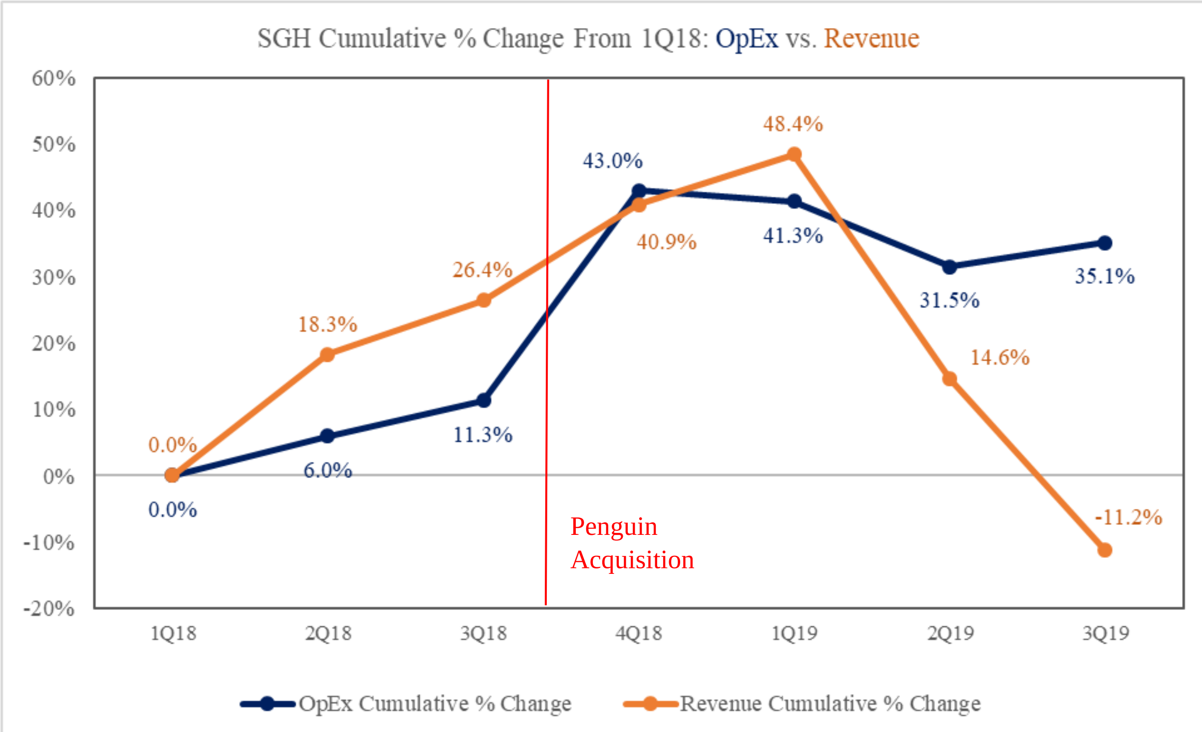
[15] SGH SEC Form 8-K/A filed on 08/24/2018, exhibit 99.1
[16] SGH FQ3 2019 SEC Form 10-Q, p. 22



The chart above shows the relationship between SGH's revenue mix and its total operating expenses (R&D + SG&A). While operating expenses grow marginally with Brazilian revenue between Q1 2018 and Q3 2018, there is a pronounced shift in SGH's unit economics following the Q4 2018 (ending August 31, 2018) acquisition of Penguin Computing.

As the Brazil segment falls as a percentage of revenue, operating expenses remain significantly elevated compared to their pre-Penguin levels. We expect these operating expenses to grow again in Q4 2019 due to the acquisitions of Artesyn Embedded Computing and InForce Computing.

SGH's shift away from Brazil and into the Specialty Computing business has turned SG&A and R&D into fixed costs. This is a fundamental shift away from the flexible, low fixed-cost business model that SGH was able to build around the government-aided Brazil business.



The chart above shows that SGH has begun exhibiting negative operating leverage – its operating expenses remain stable even as revenue declines rapidly. As Brazil revenues continue to fall, this trend will accelerate. Negative operating leverage can devastate a company's financial condition very quickly.

SGH has continued their acquisition "strategy" with the July 2019 acquisitions of Artesyn Embedded Computing and Inforce Computing. Again, like Penguin, this is more evidence that SGH is running from its business in Brazil rather than embracing the change that management says will have no effect.

Based on management's guidance for a 4Q19 revenue contribution of $10 million from Artesyn and Inforce combined, we estimate Artesyn's annual revenue to be around $60 million.[17] While the larger embedded computing companies can generate gross margins in the mid-40% range when producing at scale, Artesyn is clearly a much smaller player in the space. This leads us to believe that Artesyn's gross margins are likely closer to 20%. We would like to see SGH publish historical financials for both Artesyn and Inforce, so shareholders will know what exactly they paid for.

[17] "SGH July 9, 2019 M&A Conference Call" via Bloomberg LP, accessed August 12, 2019

Heads I Win, Tails You Lose

This confusing basket of acquisitions may not restore SGH's profitability, but at least one of them has benefited its executives. Inforce was majority-owned by SGH's Chairman/CEO Ajay Shah and two SGH board members, Paul Mercadante and Mukesh Patel, before SGH bought it. They received nearly 400,000 SGH shares for their stake in Inforce, worth ~$12 million at the current share price, with just over $5 million going to Shah himself.[18] So far, SGH has disclosed no financial information about Inforce.

We went to some length to establish an understanding of Inforce, and what we found does not support a valuation anywhere near the $12 million price that SGH paid. Most of its operations seem to be based out of two locations in India, neither of which look substantial.

Inforce's Youtube channel provides an inside look at one of the company's offices, which looks…. unimpressive, to say the least:[19]

Does that look like the headquarters of a $12 million "leading-edge technology company" to you?

Inforce Computing Inc., of California, owns an Indian company called Inforce Computing (India) Private Limited ("Inforce India"). Our due diligence indicates that the vast majority of Inforce's employees, operations and assets are in the Indian subsidiary, with only a handful of employees in Malaysia and what appears to be only a small sales team in the California office.

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[18] SGH SEC Form 8-K, filed July 12, 2019
[19] https://www.youtube.com/watch?v=4J_wHSJN6VE

Our contacts in India were able to source financial statements for Inforce India from the Indian MCA (Ministry of Corporate Affairs). As shown below, these present a small operation with **annual revenues of only 61 million Rupees, or ~$860,000**:

INFORCE COMPUTING (INDIA) PRIVATE LIMITED
CIN: U72200KA2010PTC052797
Profit and loss statement for the year ended 31st March 2018

(Amount in ₹)

Particulars	Note No.	Figures for the current reporting period	Figures for the previous reporting period
I. Revenue from operations	16	6,10,52,885	5,80,30,669
II. Other income	17	1,98,189	2,05,323
III. Total Revenue (I + II)		**6,12,51,074**	**5,82,35,992**

An apparent low-margin business, Inforce generated annual **net income of only 5.1 million Rupees, or $71,000**:

VII Profit (loss) for the period (V - VI)		**51,22,729**	**37,41,198**
VIII Earnings per equity share:			
Basic & Diluted	21	512.27	374.12

The accompanying notes are an integral part of these financial statements.

As per our Report of even date

For GRSM & Associates
Chartered Accountants
Firm Registration No: 000863S
CHIDAMBARAM GANESAN Digitally signed by CHIDAMBARAM GANESAN Date: 2018.12.26 15:03:17 +05'30'
C Ganesan
Partner
Membership No: 021019

For and on behalf of the Board

JAGAT R ACHARYA Digitally signed by JAGAT R ACHARYA Date: 2018.12.26 14:57:51 +05'30'
Jagat Rasiklal Acharya
Director
DIN: 02267560

SUBRAMANIYAN SHRIDHAR Digitally signed by SUBRAMANIYAN SHRIDHAR Date: 2018.12.26 14:58:13 +05'30'
S Sridhar
Director
DIN: 01578214

Bangalore
01-09-2018

Although these filings show that Inforce India is barely profitable now, it has run losses in the past, resulting in a **negative book value:**

INFORCE COMPUTING (INDIA) PRIVATE LIMITED
CIN: U72200KA2010PTC052797
Balance Sheet as at 31st March 2018

(Amount in ₹)

Particulars	Note No.	Figures as at the end of current reporting period	Figures as at the end of previous reporting period
I. **EQUITY AND LIABILITIES**			
1 **Shareholders' funds**			
Share capital	2	1,00,000	1,00,000
Reserves and surplus	3	(21,15,437)	(72,38,166)

These filings show Inforce India has revenues of only $860,000, net income of only $71,000, and a negative book value, which clearly does not support the $12 million purchase price (i.e., 13x revenue) that SGH paid for Inforce Computing.

To justify the price paid, Inforce Computing would need to have more operations than those of Inforce India. On its website, Inforce reports they have locations in the US, India and Malaysia, but there is little evidence of meaningful operations outside of India.

This transaction begs for more disclosure. It naturally raises questions of self-dealing, and exposes the inherent weaknesses in SGH's corporate governance with Shah at the helm.

We can't help but consider the idea that this may represent a form of payment to Shah. His executive compensation is almost entirely made up of 900,000 stock options with a strike price of $39.82. Given the dire situation in Brazil that has yet to be appreciated by the market, these options have little chance of paying off. It occurs to us that this related-party acquisition might be a back-door method of paying Shah.[20]

This episode of self-dealing puts the spotlight on Shah's complete dominance over SGH's corporate governance. His dual-roles as Chairman/CEO of SGH, and Founding Managing Partner of Silver Lake Sumeru create significant conflicts of interest, which have caused controversy before.

For example, when Silver Lake took SMART Modular ("SMOD") private in 2011, Shah was on both sides of the deal. He was the Chairman of SMOD's board, as well as the Founding Managing Partner of Silver Lake Sumeru (*sound familiar?*). According to a subsequent shareholder class action, Shah abused his position as Chairman of SMOD by coercing SMOD's board into approving the transaction by offering them a favorable deal on their options and restricted stock units.[21] In doing so, Shah was accused of breaching his fiduciary duty to shareholders. The court case was settled, with SMART Modular paying out to the shareholders.

Shah's level of control is extreme for a public company. In this context, the related-party acquisition of Inforce should be subject to much *higher* levels of disclosure than a typical transaction, regardless of size.

[20] SGH 2018 Proxy (DEF14-A), p. 42
[21] Walpole vs. SMART Modular Technologies, et al.

3. Lobbying in Brazil was core to SGH's Strategy, and its Profits

SGH's corporate strategy in Brazil has hit a wall. It focused on influencing government policy and preserving the anti-competitive tax subsidies of the PPB, which was so critical to profitability, but the WTO's ruling has made their strategy worthless.

Their lobbying is evident in the activities of SMART Brazil's key operatives. The most senior executive in Brazil is a director of three trade bodies, including one he founded. The records of his meetings with government officials paint a picture of a sustained and focused campaign to drive benefit for SMART.

Whether there is any corruption in these activities is irrelevant. The key point is that SMART Brazil's profits were reliant on government hand-outs and so their strategy focused on lobbying.

That strategy has been crushed. Their key man in country had influence with Brazilian politicians but is impotent against the might of the WTO.

Investors are likely unaware of how important this has all been to SGH's earnings, because they have been kept in the dark. Allow us to explain.

Who is "Mr. SMART" in Brazil?

SGH lists a Californian SVP as the executive responsible for Brazil. SGH's website and DEF14-A name KiWan Kim as the executive controlling the Brazilian operations.[22] Kim is mentioned eleven times in the most recent DEF14-A. He is consistently identified in SEC filings as President of SMART Brazil.[23]

In the eyes of the investment community, Kim is "Mr. SMART" in Brazil.

And yet his LinkedIn profile has him living in San Francisco and with no mention at all of Brazil.[24]

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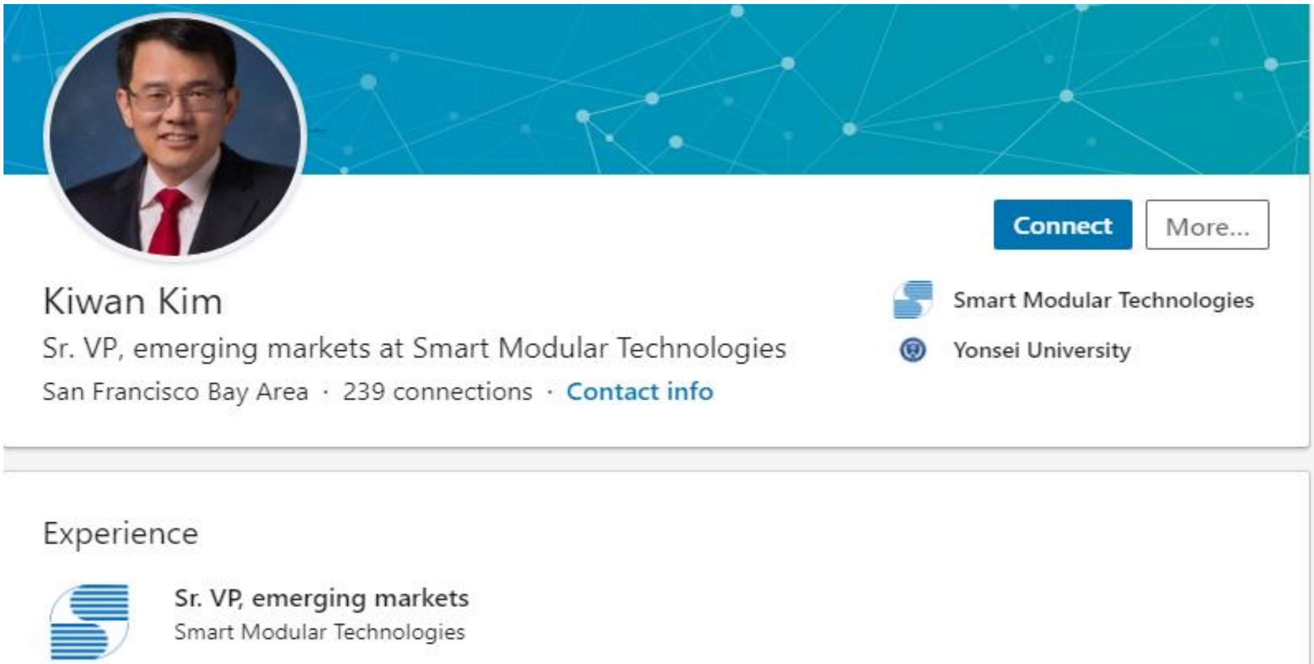
[22] http://ir.smartm.com/management/kiwan-kim
[23] SGH 2018 Proxy (DEF14A), p. 29, 31, 40
[24] https://www.linkedin.com/in/kiwan-kim-3bb9601a/



Why would Kim hide the accolade of running his employer's most significant division?

And, who runs the show if Kim is 6,500 miles away?

A cursory search for "President of SMART Brazil" returns the profile for Rogério Nunes:[25]

[25] https://www.linkedin.com/in/rogerio-nunes-4605aa1/

Neither SGH's 10-K nor its DEF14-A mention Nunes even once. Nor does he appear on SMART's **IR webpage**.[26] Nunes does appear on SMART's **non-IR** webpage, where he can be found beside KiWan Kim, but carrying the title "Vice President and General Manager", not "President Director":[27]

The sparse bio given on SGH's website (below) declares that Nunes 'joined' in 2002, the year of SMART Brazil's founding:

> **Rogerio Nunes**
> **Vice President and General Manager, SMART Brazil**
>
> With more than 27 years of experience in semiconductor and electronic components manufacturing and sales, Rogerio Nunes is the vice president and general manager of SMART Brazil. He originally joined SMART in 2002, serving as marketing and sales senior manager, marketing and sales director, and later project manager for SMART Brazil.
>
> Previous to joining SMART, Rogerio began his career at NEC, where he held numerous positions in engineering, quality assurance and reliability, as well as operations and sales. His final position at NEC was as Sales Director for NEC do Brasil (Elpida) where he was responsible for all global and regional accounts. He holds a Bachelor's Degree in Electronics Engineering and a Business Management MBA.

The above description underplays Nunes's importance. Instead of "joining" the company in 2002, Nunes in fact *formed* and *ran* the venture sold by NEC to SGH in 2002[28]. In other words, this man was instrumental in the very creation of what is now known as SMART Brazil.

On numerous Brazilian websites, in local articles and at presentations given by the Company, Nunes appears as President and/or CEO of SMART Brazil.[29,30]

This is not a confusion in translation or Nunes's local vanity. SGH has clearly empowered him to represent himself as running the operations in Brazil… and indeed he runs those operations. He is empowered to sign, speak, decide and act for SGH in Brazil. He is even signatory on various credit agreements and holds the checkbook for several SGH entities.[31]

Nunes *is* "Mr. SMART" in Brazil.

Yet, SGH presents a Californian SVP as controlling these faraway operations.

A search of Brazilian newspapers barely turns up any mention of KiWan Kim. On the one occasion we found Kim in a SMART Brazil publication, at a ribbon cutting, Nunes is clearly the face of the company. It is Nunes, center-right, who pulled the (small) curtain:[32]

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[26] http://ir.smartm.com/governance/sgh-executive-management
[27] https://www.smartm.com/about/management.asp
[28] http://www.abinee.org.br/programas/imagens/brainfo.pdf (translated)
[29] https://www.en.investe.sp.gov.br/news/post/smart-modular-technologies-inaugurates-lithium-polymer-battery-factory-in-atibaia-sao-paulo/
[30] http://www.sintese.com/noticia_integra_new.asp?id=382542
[31] SGH S-1/A, exhibit 10.8, p. 5, filed May 23, 2017
[32] https://www.facebook.com/pg/InstitutodePesquisasEldorado/photos/?tab=album&album_id=1487054171330104

We keep coming back to the same questions:

"How much is Nunes paid by SGH and on what terms?"

"Does he own stock, and has he been selling it?"

KiWan Kim, the named executive for Brazil, has been selling stock as soon as he receives it. We take that as bearish, but it is Nunes' trading activities that would be of real interest, and these are effectively hidden.

"Why would SGH want to hide Nunes?"

Nunes: Trade Associations and Conflicts of Interest:

The Brazilian technology industry is diversely represented by a bouquet of trade associations, through which a company can lobby the Brazilian government.

Nunes acts as director or president for at least three Brazilian trade associations:

- Brazilian Electrical and Electronics Industry Association (ABINEE)[33]
- São Paulo State Electronic and Similar Electrical Appliance Industry Union (SNAEES)[34]
- Brazilian Association of the Semiconductor Industry – "ABISEMI"[35]

Nunes chooses not to disclose his directorships of these three trade bodies on his LinkedIn page, nor are they mentioned on his bio on SGH's website. His power within these trade bodies is a core part of his activities and key to the success of subsidy-dependent SMART Brazil.

Nunes's responsibilities to these trade bodies where he represents a broad array of Brazilian companies will obviously conflict with his role at SMART Brazil, where his loyalties are to a single foreign company.

[33] http://www.abinee.org.br/
[34] http://www.sinaees-sp.org.br/
[35] http://www.abisemi.org.br/

Nunes's crossovers and conflicts are clearly displayed in the records of his extensive dealings with the government. In Appendix A to this report, we provide a list of some of the meetings held with senior officials.[36] The title and affiliation recorded for him in these meetings shows his hand: at times he is there for SMART and sometimes for ABISEMI. On at least one occasion (July 24, 2018), he represents both simultaneously.

Nunes is sometimes brazen in how he touts his various interlacing roles in Brazil. In the following slides from a 2018 presentation to the Brazilian House of Deputies, Nunes begins by speaking in his role as President of SMART Brazil:

He switches hats repeatedly through the presentation, from SMART, to ABISEMI, to ABINEE… The closing slide rejoices all his various roles:[37]

[36] http://www.mdic.gov.br/index.php/busca
[37] http://abisemi.org.br/abisemi/arquivosUpload/8E8BF64C6FB8A832.%20Jul04_2....pdf

More important than the glaring conflicts is the obvious importance of lobbying in this man's role. Here he is pitching to government with three hats to wear, and two of them are that of a lobbyist. It is clear to us that government handouts are an integral part of SMART Brazil's business.

Nunes was SGH's secret weapon, a man whose influence snaked out across Brazil through his trade bodies and government influence. That same influence is now nullified, impotent against the might of the WTO, and so SGH's long-held strategy is crushed.

Conclusion: What's the Smart Money Doing?

What's the smart money doing? Well, they are not buying, but they are doing a lot of selling:

Executives have sold $26 million of stock in the two years since the listing. This compares to *only one single open-market purchase* of $535k by former President of Artesyn, shortly after it was bought by SGH (when he was presumably somewhat flush with cash). It has been one-way traffic, a firehose of insider equity jammed down the throat of the public market.

Party	Title	Action
Silver Lake and Associates	Major Shareholders, Private Equity	**Sold** $278million
KiWan Kim	"President of SMART Brazil"	**Sold** $5.6million
Iain McKenzie	Former CEO, and 20-year veteran	**Sold** $11.1million
Jack Pacheco	Veteran CFO	**Sold** $4.0million
Bruce Goldberg	Legal/compliance officer and Director of many subsidiaries	**Sold** $1.8million

The absence of Chairman/CEO Ajay Shah from the above list should not comfort investors. He founded the company back in 1988 but has sold almost all his shares along the way, now retaining only 2.2%, which is largely due to grants of restricted stock units ("RSUs") and the outrageous related-party transaction of Inforce Computing. His loyalty now seems to be to Silver Lake and its affiliates, where he is a Founding Managing Partner, rather than to SGH.

Given they still have a large shareholding, Investors might be deluded into thinking they are leaning on the weight of smart money by investing alongside Silver Lake and its affiliates. This would be a mistake. Silver Lake and its affiliates have already extracted far more money from SGH than they invested to buy it.

SMART's history, since the Silver Lake LBO in 2011, is a prime example of stereotypical aggressive PE behavior: massive leverage, asset stripping, cash sweeping and an apparent willingness to leave the public markets holding what's left. In 2013, SMART sold its solid-state drive ("SSD") business for $307 million, allowing Silver Lake and its affiliates to recoup the vast majority of their initial investment in SMART.[38] That move was great for Silver Lake's ROI hurdle (and the partners' carried interest), but it's not so brilliant for current investors. Shareholders now face the prospect of dilution as SGH responds to the disaster resulting from its over-reliance on Brazil, by shifting the Company's strategy to diversification, which SMART's former SSD business likely would have helped with today.

By the time SGH was preparing its IPO, its precarious financial state forced them to pay off their banker, Barclays PLC, with a line of turbo-charged lender warrants worth $17 million at the listing price.[39]

Since then, Silver Lake and associates have dumped a further $278 million of stock, and throughout the history of their investment they have been extracting fees: they were paid $15 million by SMART just for closing their own acquisition. They have made the returns they need.

And then there's the timing of the IPO: just as the WTO ramped up its scrutiny of Brazil's anti-competitive tax giveaway, critical to SGH's profits, Silver Lake moved to list SMART's husk and dump its stock on the public markets.

SGH's executives have obscured the reality in Brazil while peddling their new sales-pitch of diversification; they have hidden key executives and their conflicts of interest; they have engaged in self-dealing in acquiring Inforce at what appears to be a ridiculous valuation; and along the way, they have been selling stock.

You're not leaning on smart money: you're holding their bag.

[38] https://www.businesswire.com/news/home/20130702005530/en/SanDisk-Announces-Definitive-Agreement-Acquire-SMART-Storage
[39] SGH S-1/A, filed May 23, 2017, p. F-36

APPENDIX A:

Record of meetings with Ministry of Economy[40]:

November 22, 2018	Secretary of Industrial Development and Competitiveness Audience: Rogerio Nunes, CEO of Smart Modular Technologies Samir Pires Director of Smart Modular Technologies Request: SMART. Subject: Computer Law.
November 22, 2018	Ministry of Economy Audience: Rogério Nunes - CEO of SMART and Samir Pires - Director of Government Relations (* Accompany Secretary Igor Calvet). Request: Samir Pires - Smart Modular Technologies. Subject: Computer Law and PPB.
October 17, 2018	Ministry of Economy Meeting: Rogério Nunes - President of ABISEMI and Rosana Casais - Institutional Director. Request: Mariangela Biachi - Executive Director of ABISEMI. Subject: Revision of the Computer Law, WTO situation and proposal for the PPB after revision of the Computer Law.
July 24, 2018	Ministry of Economy Meeting with representatives of ABISEMI / SMART Modular Technologies and the Minister's Special Advisor, Mr. Igor Manhães. Agenda: Computer Law.
July 04, 2018	Ministry of Economy Meeting with the company Smart Modular Technologies. Subject: Litigation - WTO on Computer Law and PADIS. Messrs. Rogério Nunes and Samir Pires participated.
May 24, 2018	Ministry of Economy Audience No. 933 - Audience with SMART Modular Technologies Group in Brazil. Request: Mr. Samir Pires - Director of Smart Modular Technologies. Subject: SMART Modular Technologies' investment plans for the country in the coming years in the field of manufacturing semiconductor and other electronic components and in Research, Development & Innovation activities.
April 26, 2018	Ministry of Economy Meeting: Samir Pires - Legal and Compliance Officer. Request: Samir Pires - Smart Modular Technologies Subject: Investments - PADIS.
November 22, 2017	Ministry of Economy Meeting with representatives of Smart Modular Technologies Company. Tariff: PPB's, Public Consultations, Ex-Tariff and WTO.
August 07, 2017	Secretary of Industrial Development and Competitiveness Rogério Nunes CEO and Samir Pires - Chief Legal Officer of SMART Modular Technologies.

[40] http://www.mdic.gov.br/index.php/busca

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