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Editors' Pick | Long Ideas

Amyris: Show Us The Money

Dec. 09, 2022 6:22 PM ET | Amyris, Inc. (AMRS), GVDNY | 149 Comments | 42 Likes

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About this article

Ticker	Author rating	Price at publication	Last price	Change since publication	S8
AMRS	Strong Buy	$1.67	$1.98	18.56%	

Summary

- Amyris is on the cusp of closing a record strategic transaction slated to generate ~$500mm in total cash value.
- All indications point to the strategic transaction closing in the next two to three weeks.
- Cash balances by year-end (or shortly thereafter pending funding) are projected to be >$350mm after the strategic transaction close.
- Q4'22 revenue guidance of $100mm is achievable and on track for ingredients, licensing and D2C fronts; with brick & mortar sales bearing further examination.
- Q4'23 revenue and operating income margins, while tight, may be a bit of a stretch goal.

Amyris on the Cusp of Closing a $500MM Cash Value Marketing Rights Transaction for Two Molecules

RapidEye/E+ via Getty Images

New to Amyris (AMRS)? I suggest you read my first and second Seeking Alpha articles as primers on the company.

Now, let's be honest. The Q3'22 earnings call ("EC") was a complete disaster and a "deja vu" moment from exactly one year earlier.

Amyris is viewed by some investors (institutional and retail alike) as a very binary investment: Extremely risky balanced by an unknown speculative reward.

Our goal is not to rehash what happened (there are good articles for that), but to answer the pressing questions regarding the:

1. Status of the Strategic Transaction
2. Achievability of Revenue Targets
3. Understanding of Cash Costs/Burn

NOTE (12/11/22): All the information below is based on my own primary research from public filings, press releases, news, earnings calls and analyst conferences and has not been confirmed with management (and, as a result, could be incorrect).

Molecular Marketing Rights Deals

Amyris announced on their Q1'22 EC a $250MM Strategic Transaction ("ST") involving the Marketing Rights for Two Molecules through a multiparty competitive bid process. The structure and value of the transaction proceeded to expand over the next three quarters culminating in a $500MM ST total cash value ($1Bn if you include the exclusive manufacturing rights).

Amyris' track record on closing these type of ST deals has been 100% over the past decade.

The ST is expected to close by year-end and represents the largest ST in the firm's history:

TWO MOLECULE DEAL: MANUFACTURING RIGHTS / LICENSING

TERMS & STRUCTURE

UPFRONT CASH	
Amount:	$350MM
Timing of Receipt of Cash:	Most likely Q1'23 (possibly Q4'22)
Accounting Treatment:	Cash & Cash Equivalents may reflect this in Q4'22 or Q1'22
	Will likely be treated as revenues for Q4'22 or Q1'22
Announcement:	Company will likely file an 8-K Current Report and/or Press Release upon signing
EARNOUT	
Amount:	$150MM
Timeframe:	Historically, around 3 years (+/- 1 year)
Metrics:	Historically tied to some metric of EBITDA profitability
Annual Earnout:	Estimated at $50MM/annum with range of $37.5MM to $75MM/annum
Start Time Frame:	Q1'23 or Q2'23 (confirmed prior to Q4'23 as it is included in Q4'23 forecasts)
Carveouts:	Likely to have carveouts for Amyris Brands where applicable
	& possibly for applications not related to Beauty and/or Wellness
EXCLUSIVE MFTG RIGHTS	
Revenues:	Annual manufacturing of $30MM to $40MM growing at 30% -40%/year
Gross Profit Margins:	Manufacturing margin between 10% to 20%
Term of Agreement:	Historically 10 (possibly 15) year agreements with options for renewal
Estimated Total Value to AMRS:	Estimated additional ~$500MM of "value" over the life of the contract
TOTAL DEAL VALUE	$1Bn = $350MM Cash upfront + $150MM Earnout + $500MM Manufacturing Rights

Author Compilation

By Q2'22 EC, Amyris had locked on one buyer to proceed into deeper due diligence and deal structuring:

John Melo

Look, we were in a process. I mean, I'm using process loosely. We didn't hire a bank, but we had several people in the process when I first communicated that strategic transaction for ingredients and then since then, we've locked on to a specific buyer. We've advanced the pricing of

/seekingalpha.com/article/4532027-amyris-inc-amrs-ceo-john-melo-on-q2-2022-results-earnings-call-transcript

Likelihood & Time Frame

Many investors question the likelihood and authenticity of the ST despite management's reiteration numerous times in press releases, filings, and verbal statements:

SEC Third Quarter 2022 Filing (page 39):

*"Our cash and cash equivalents were $18.5 million as of September 30, 2022. In October 2022, we secured $75 million of debt financing from DSM Finance. In addition, **we are actively working to secure additional funding from a strategic transaction to meet our spending obligations for the next 12 months** following the issuance of these financial statements. Management currently expects that our cash position combined with cash generated from operations, the expected earnout payments, along with planned price increases, operating expense reduction actions, debt, and, **importantly, the successful completion of the aforementioned strategic transaction, to not raise substantial doubt about our ability to continue as a going concern for the next 12 months.**"*

investors.amyris.com/sec-filings

Third Quarter 2022 Earnings Press Release:

*"$180 million of new funding closed - **strategic transaction on track to self-fund growth**"*

*"Additionally, **we are on track to complete a substantial strategic transaction by year end.**"*

*"Amyris' 2022 goals, including a **potential strategic transaction to self-fund growth and the timing thereof**"*

amyris.com/newsroom

Second Quarter 2022 Earnings Call:

JOHN:
"We expect to close this transaction **before the end of this year**"

JOHN:
"$350 million from a strategic transaction **expected by end of Q4**"

JOHN:
"completing our strategic transaction, which we are also very confident. We made a lot of progress and are now on a **track to close, as communicated earlier before end of year.**"

seekingalpha.com/article/4554999-amyris-inc-2022-q3-results-earnings-call-presentation

With the most recent Q3'22 EC, it was disclosed that the ST was pending approval in front of both Boards:

Third Quarter 2022 Earnings Call:

JOHN: "As we continue to focus our business model and portfolio, we expect near-term strategic transactions from the continued simplification of our portfolio to generate over $500 million of value. That includes $350 million in upfront cash, of which the net proceeds we plan to reinvest in our technology and consumer business."

JOHN: "Our current business performance, current cash, and Fit to Win improvements provide us with the necessary liquidity to self-fund to the closing of our $350 million of expected upfront funding from our large strategic transaction.

Our strategic transaction regarding the marketing rights of two molecules for $350 million of upfront consideration and up to $500 million of total value remains on track for the fourth quarter. and the fourth quarter is tracking toward another record revenue quarter.

The combination of our current growth and operating performance, combined with our Fit-to-Win actions and the successful execution of the strategic transaction enable us to self-fund our growth and deliver on sustained profitability."

HAN: "The Q3 quarter end cash balance of $25 million, combined with $100 million term loan that we just recently closed in the fourth quarter and Fit To Win actions are expected to support our needs until we complete the strategic transaction that John has already referenced."

JOHN: "We completed the necessary short-term funding and the strategic transaction is on track to complete in December."

JOHN: "Yes, Rick, thanks for being on the call. We are still confident it would close by year-end. We are currently in the process. It's pending Board approval by both Boards, and we expect that Board approval to be really in the coming weeks, call it, early December. So, that's where we are in the process."

seekingalpha.com/article/4555043-amyris-inc-amrs-q3-2022-earnings-call-transcript

Since then, John Melo ("JM") reconfirmed the deal status in a 11/30/22 press release:

Amyris "Cyber-Monday" 11/30/22 PR:

JOHN:
"Our "Fit to Win" agenda along with our strategic transaction and portfolio actions remain on track."

investors.amyris.com/2022-11-30-AMYRIS-CONSUMER-BRANDS-DELIVER-80-CYBER-MONDAY-LIKE-FOR-LIKE-GROWTH

There seems to be a great deal of confusion on the timing of the Strategic Transaction as to whether it would close in "early December" or by year-end:

Rick Schottenfeld

Yes. Hi, guys. I wondered if you could give us some color on the molecule sale. You said it would close by year-end on earlier calls. Are you still confident that it will close by year-end? And maybe you can give us a little color on the process and how it's going right now.

John Melo

Yes, Rick, thanks for being on the call. We are still confident it would close by year-end. We are currently in the process. It's pending Board approval by both Boards, and we expect that Board approval to be really in the coming weeks, call it, early December. So, that's where we are in the process. I hope that helps.

seekingalpha.com/article/4555043-amyris-inc-amrs-q3-2022-earnings-call-transcript

A Board Approval is not the same as a Closing Date (i.e., the date of ratification). Companies require time to review/edit/re-draft/ratify Definitive Agreements and/or binding Term Sheets.

To help narrow down an expected time frame, we can look to past STs. Specifically, the last two that were executed in a fourth quarter were announced the week prior to the holidays (i.e., Monday, December 21st, 2020 and Thursday, December 23rd, 2021).

Our research indicates Amyris' Board may likely have already met in mid-November and the next meeting may likely be one month from then (i.e., between 12/12/22 and 12/23/22) to ratify the deal.

As such, we expect an announcement most likely during the week of 12/19/22 through 12/23/22 (or possibly the week before) in advance of the holidays.

"Our Speculation" on What Could be the Two Molecules in Play?

Despite repeated reassurances, the market (as reflected in the current share price that is effectively priced for bankruptcy) remains wary and skeptical with lingering questions:

> *Which molecules are these?*

Who is the Buyer?

Will the Buyer's Board back out in this Macro environment?

We hope to address these questions below through deductive reasoning.

We have gathered the following ST public information from various analyst conferences and earnings calls with management:

Identification of Two Molecules: Piecing the Molecule information Together	
Originally Described as One Molecule:	First mention originally described as One Ingredient in April 2022 at In Q2'22 Earnings Call switched to Two Ingredients with little change in Value *Implication: The two ingredients are somehow related to each other*
Existing Molecules:	"They are existing molecules and they are in current production" (Q1'22 EC) *Implication: Both Molecules are part of Amyris' 13 scaled molecules*
Production:	"annual manufacturing would be somewhere around 30 million to 40 million" (Q1'22 EC) *Implication: The molecule is a significant molecule in Amyris production pipeline*
Timeframe:	Producing Molecules for a decade *Implication: Need to research which molecules were in production in 2012*
Length of Deal Structure:	7 to 8 Month time frame implied a complex structuring issue Implication: *There is something different about the production of these 2 molecule relative to 11 othes*

Author Compilation

"Existing", "In Production", and "One vs. Two" Molecules

Amyris has a library of ~250 existing molecules and ~25 molecules in active development (~20% currently in collaborative partnerships; 80% under in-house development and commecialization).

Only 13 ingredients / molecules were in "existence" and "in production" as of the date of the deal announcement:

Amyris Family of Ingredients (May 2022)
Sclareol
Squalane
HemiSqualane
Squalene
Santalols
Manool
Bisabol
Biofene
Artemesinin
Biosilica
Reb M
Patchouli
CBG

Author Compilation

Of those, only three have a strong relationship with eachother:

Squalene

Squalane

Hemisqualane

We believe the relationship between two of the three molecules caused the correction made by JM when he initially identified the transaction with only "one ingredient", and later adjusted his statement to two.

To clarify, it helps to understand the distinction between all three ingredients:

Squalene

Squalene is a lipid (an unsaturated hydrocarbon) found naturally in our skin's sebum (oil). **Squalene is also found** in shark liver oil or in lower concentrations in vegetable sources such as olives and sugarcane, and plant oils such as amaranth seed, rice bran, wheat germ, and palm fruit oils.

abeautyedit.com/hemi-squalane-vs-squalane/

Squalane

Squalane (with an "a") is the hydrogenated version of squalene. Squalane is a saturated hydrocarbon that is more stable than squalene and lighter in consistency. Squalane is also biocompatible with the skin to reduce the chances of irritation.

abeautyedit.com/hemi-squalane-vs-squalane/

Hemisqualane

Think of hemi-squalane as squalane's cousin or relative. The molecular properties of squalane and hemi-squalane are similar, but per a manufacturer, squalane's molecule has 30 carbons, and hemi-squalane's molecule has 15 carbons.

abeautyedit.com/hemi-squalane-vs-squalane/

Since Squalene was not manufactured in large quantities at the time of the announcement, we can narrow the playing field to Squalane & Hemisqualane.

Let's examine the differences between the two:

> ## What Is the Difference Between Squalane and Hemisqualane?
>
> Both ingredients are sourced from sustainable and renewable sugarcane, and both can be used in nearly every category
>
> We manufacture all of our ingredients using the same initial process: Amyris' patented sustainable technology to convert renewable sugarcane into farnesene, the building block for Neossance™ Squalane and Hemisqualane.
>
> The result is two highly pure, odorless, clear, and stable emollients with similar, but unique molecular properties. For instance, Squalane has 30 carbons and Hemisqualane has 15. Squalane has medium spreadability with a slightly higher viscocity and flashpoint than Hemisqualane.
>
> Both represent ideal sustainable, high performance emollients used in nearly every category.
>
> Squalane is a more stable form of squalene and is a non-polar, fully saturated, and very stable emollient that is easily incorporated into emulsions. Squalane is an excellent moisturizer, keeping our skin and hair properly hydrated and imparting suppleness and flexibility to the skin. It is one of the highest quality and most versatile emollients on the market due to its sensorial profile, biocompatibility and consistently robust composition.
>
> Hemisqualane is Aprinnova's SEPAWA award-winning new cosmetics-grade emollient. Hemisqualane provides excellent sensorial and spreading properties, ideal for replacing silicones in color cosmetics, suncare, haircare, and more. It also has makeup removal benefits. It is a top replacement for isohexadecane, amodimethicone, and cyclomethicones like cyclopentasiloxane (D5)

aprinnova.com/knowledge/what-is-the-difference-between-squalane-and-hemisqualane

Production & Timeframe

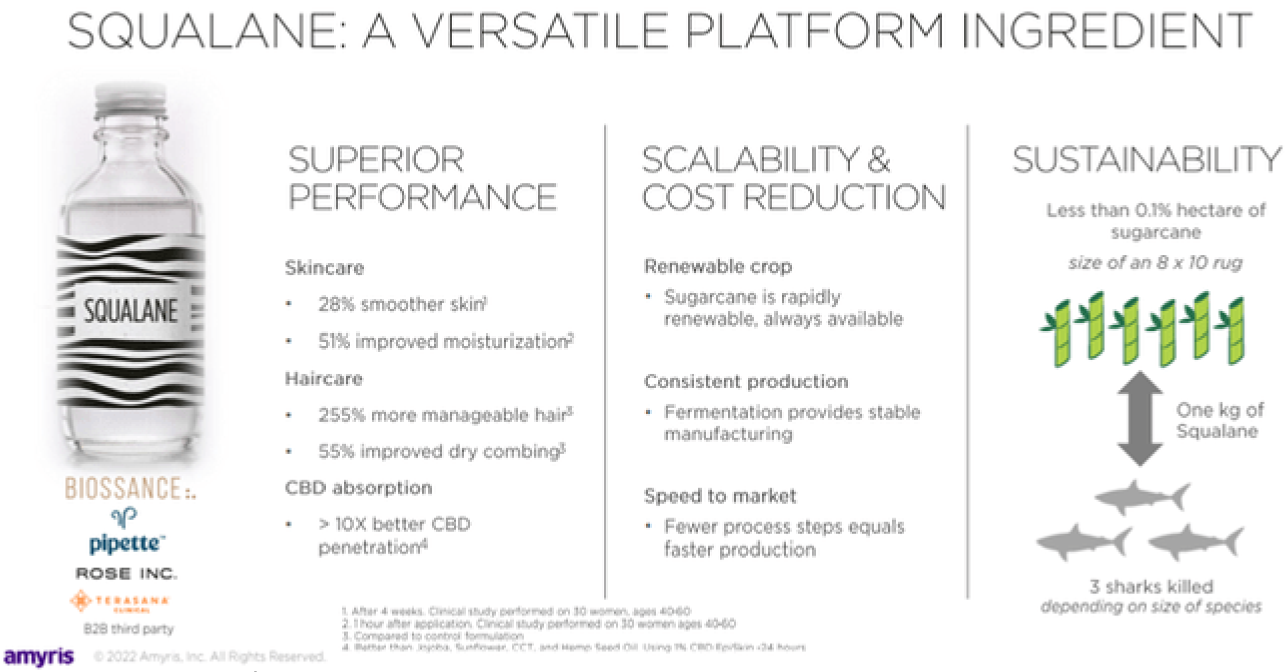
Amyris has disclosed that it has produced large quantities of Squalane for nearly a decade becoming a significant market share leader:

> Look, the other example is Squalane, where we are currently about 70% market share. Squalane took us a lot longer. I think we are now probably eight-years, eight, nine-years into Squalane to get to that market share.

seekingalpha.com/article/4509715-amyris-inc-amrs-ceo-john-melo-on-q1-2022-results-earnings-call-transcript

To help quantify this, according to Sunil Chandran (Chief Science Officer at Amyris), worldwide there is between 2,500-to-4,000 metric tonnes of Squalane produced, of which Amyris produces >2,000 metric tonnes.

Amyris, in recent quarters, has accelerated efforts to highlight these two molecules throughout its investor presentations/and earnings calls:



investors.amyris.com/events-and-presentations#past

investors.amyris.com/events-and-presentations#past

Both molecules appear to be on a significant growth trajectory and are the only two molecules that may be considered as "one set" out of the original thirteen. The volumes and growth estimates match the estimated volumes and 30% to 40% CAGRs referenced by JM earlier:

And if I just give you a few examples. I mean hemisqualane, which farnesene derived since about the middle of the first quarter, demand has just skyrocketed. We've actually sold every drop of hemisqualane in our entire channel.

We've got a backlog of hemisqualane that I've never seen in my life because when we launched Jonathan Veness, just about everybody brand that mattered and every hair care brand that matter started inquiring with us about how they could access hemisqualane, and we're just out of supply. So that is one key driver.

The second is Squalane. We're seeing significant growth in Squalane around the world. that we've not been able to supply in the last few quarters that we see coming through. And the third example, which is also a farnesene-derived molecule is the polymer we supply Kuraray, which is a critical polymer for several tire manufacturers and we've had an order on the books for Kuraray now since the beginning of the year that we finally will be able to fulfill.

seekingalpha.com/article/4532027-amyris-inc-amrs-ceo-john-melo-on-q2-2022-results-earnings-call-transcript

Complexity & Timeframe

This takes us to the final clue which is the complexity of the deal and why it may have required 7-to-8 months to complete.

Both ingredients are derived from a beta-farnesene precursor (aka Biofene) and require "finishing" through a 50/50 Joint-Venture entity known as Aprinnova (established in 2017 and held in partnership with a third party entity, Nikkol Group).

It is unclear whether the Buyer in this ST will assume Amyris' interest in Aprinnova, or Nikkol Group's interest in the JV, or some other alternative structure; however, it may explain why the deal was established from the outset to have an end-of-year completion date resulting from navigating a tri-party deal.

Buyer "Speculation"

Now that we may have possibly identified the molecules, let us see if we can identify the Buyer using the same process of elimination (again, this information is pure speculation based on our deductive reasoning and primary research into public information and has not been confirmed with management).

JM has publicly stated that the winning buyer was an existing partner of Amyris, helping us to narrow the playing field to: DSM, Firmenich, Yifan, Nikkol Group, Takasago, Kuraray, or Givaudan.

JM has elaborated publicly it is not DSM, which, by extension, would eliminate Firmenich who is in the process of a merger with DSM.

Management further indicated publicly that this was a decade's old partner which rules out Yifan who has been a partner with Amyris since 2018.

Four potential partners remain: Kuraray (2011), Takasago (2012), Nikkol Group (2011), and Givaudan (2011)

Kuraray:

Amyris has not been a major supplier to Kuraray, although there are developments underway for commercialization of liquid farnesene rubber. While Kuraray has its own synthetic squalane (using terpene-compound synthesis technology), it is a competitor with Amyris, and does not appear to have worked with fermented Squalane/Hemisqualane in the past. The ST would not be a strategic acquisition for Kuraray as they are focused on the production and sale of functional resins, chemical products, man-made leathers, synthetic fibers, and textiles.

Takasago:

Takasago has focused on fragrances and lacks both commercial familiarity with the Squalene molecule family (other than a patent filing from ~50 years ago) and products in beauty care (i.e., skincare or haircare). Nor does Takasago have the financial strength to support a ST of this magnitude.

Nikkol Group:

The Nikkol Group lacks the financial leverage to support a ST of this size.

Givaudan:

This leaves us with Givaudan as the most likely candidate that matches all of the characteristics of the would-be buyer:

SPECULATION ON WHO IS THE BUYER OF THE TWO MOLECULE MARKETING RIGHTS

What We Know	DSM	Firmenich	Yifan	Nikkol	Takasago	Kuraray	Givaudan
It is NOT DSM per John							
~Decade-long" Relationship with Amyris							
Amyris has been a Major Supplier over the past decade							
The Buyer "knows" the molecules well							
Core Business Segment (i.e., Skincare / Haircare)							
Financially Capable Buyer							

Author Compilation

To understand how this relationship may have evolved, let us unpack the history of their partnership:

On June 23rd, 2010 Soliance and Amyris tied-up to produce Squalane:

Article Entitled: "Soliance and Amyris tie-up to produce squalane"

Relevant Excerpts: "In particular Amyris' technology will be used to produce squalane for use in cosmetics."

"Manufacture of farnesene, or Biofene, has already begun at Soliance's industrial fermentation facilities using Amyris' biotech process. This will be converted to squalane which Soliance will market to the cosmetics industry."

"Amyris' ability to design yeast to produce renewable squalane offers a new opportunity for bio-sourced cosmetic ingredients with two distinct value propositions for our customers"

cosmeticsbusiness.com/news/article_page/Soliance_and_Amyris_tieup_to_produce_squalane/55259

Givaudan and Amyris began their own relationship on 2/24/11, through a collaboration with Beta-Farnesene to develop a key fragrance ingredient.

On 3/14/11, Amyris deepened this relationship by extending it into Squalane (matching the "decade" relationship JM previously referenced):

Renewable Ingredient Firm Signs Givaudan, Boasts $10 Mil. "Pipeline Of Interest"

This article was originally published in The Rose Sheet

14 Mar 2011 | **NEWS**

by Eileen Francis

eileen.francis@informa.com

Executive Summary

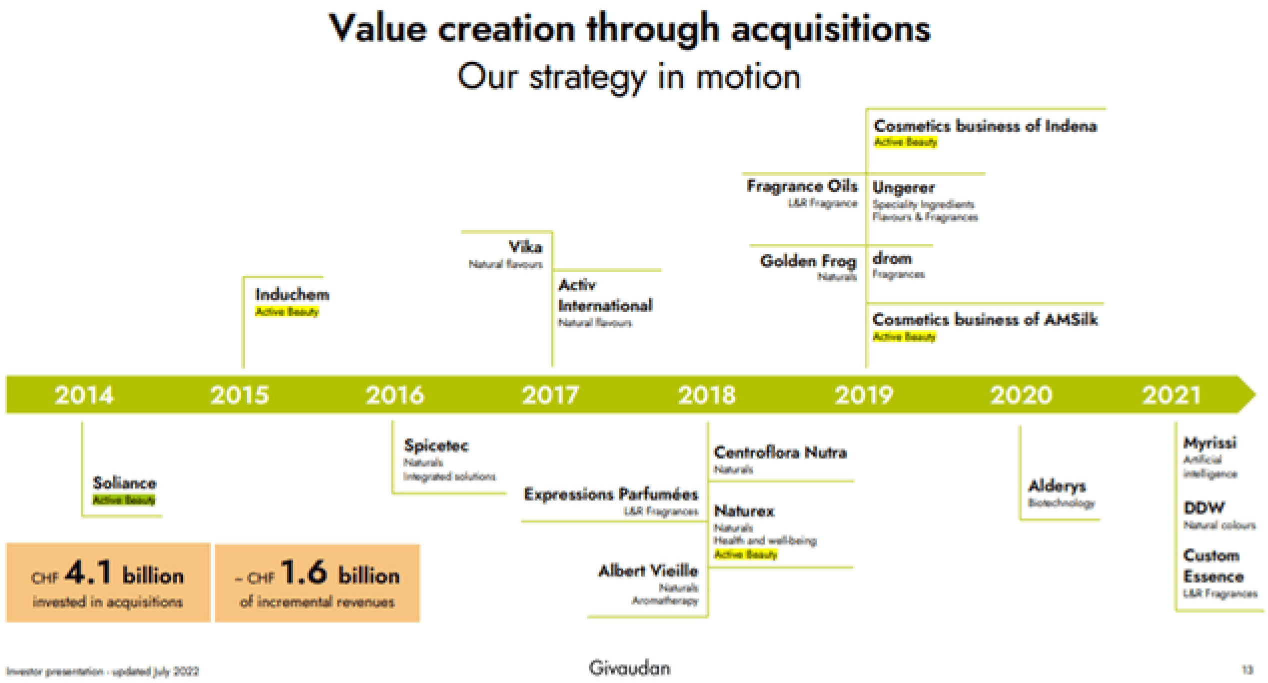
Renewable ingredients supplier Amyris is positioning itself as a go-to player in the sustainable cosmetics arena, projecting nearly $10 million in potential sales of cosmetic emollient squalane and announcing a new deal with Swiss fragrance house Givaudan.

hbw.pharmaintelligence.informa.com/RS017479/Renewable-Ingredient-Firm-Signs-Givaudan-Boasts-10-Mil-quotPipeline-Of-Interestquot

Givaudan went on to acquire Soliance on 12/9/14, along with their Amyris squalane relationship.

Since then, "Givaudan has been engaged in the research and development of proprietary fragrance ingredients with Amyris for several years" and sought to expand into the research, development and production of active cosmetic ingredients as their entrée into Active Beauty.

Givaudan has grown its Active Beauty business through strategic acquisitions with a focus on cosmetics...



givaudan.com/files/giv-2022-investor-presentation-jul.pdf

...keeping an eye towards acquisitions in Fragrance & Beauty to expand product offerings that include natural ingredients and biotechnology:

www.givaudan.com/files/giv-2022-investor-presentation-jul.pdf

Givaudan has indicated that "Health and Wellbeing" and "Active Beauty" are key priorities:

"These results were especially good in the strategic product categories we have chosen for the coming five years confirming our 2025 strategy makes perfect sense and to name a few of those categories, Health and Wellbeing, Naturals, Alternative Proteins, Active Beauty, similar to our strategic focus areas in terms of customers and geographies, local and regional clients have continued to outperform and now account for 56% of our Group sales."

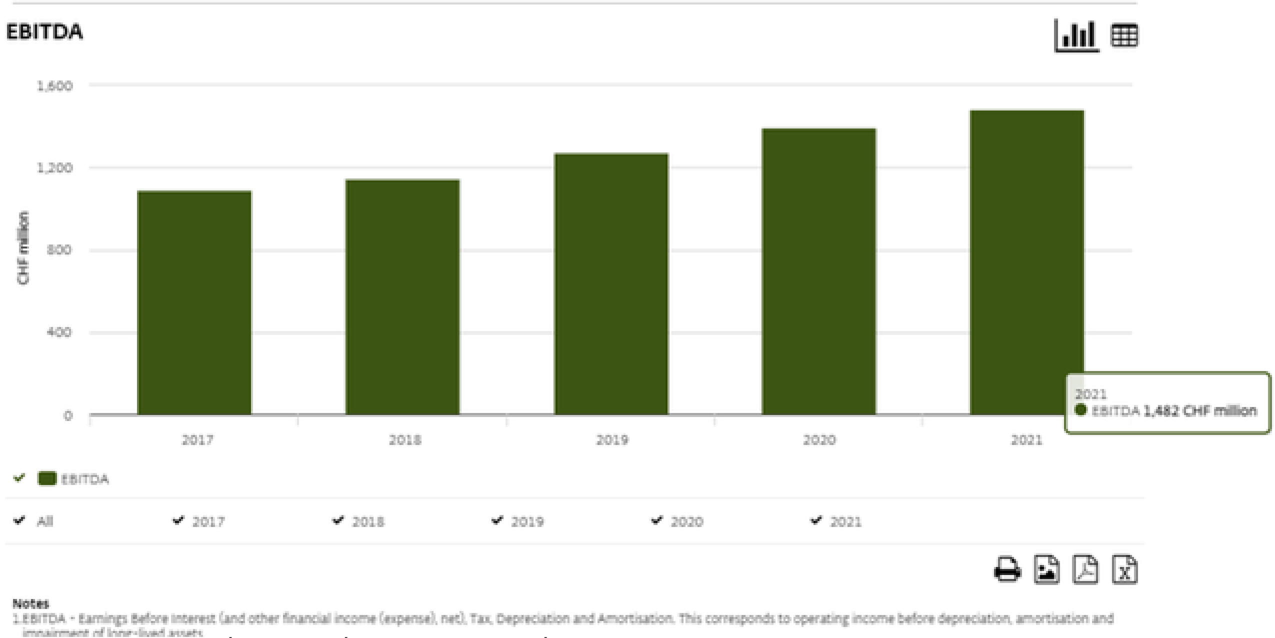
seekingalpha.com/article/4524890-givaudans-gvdbf-ceo-gilles-andrier-on-q2-2022-results-earnings-call-transcript

Acquisitions are a primary method to grow strategic priorities for Givaudan:

- "all our strategic focus areas complemented by acquisitions have contribute to our growth namely Health and Wellness, Naturals, local and regional customers, outperforming sales with our multinational customers, which also showed a very good momentum."
- "On leverage, and then I'll hand back to Gilles really to talk about where we consider bolt-on acquisitions. But if you look historically, we've been up to 4 – 4.5 times net debt to EBITDA. Clearly, if I look at the pipeline today from an acquisition perspective, there is really nothing that drives up the net debt to EBITDA and anything that we would do would be bolt-on acquisitions and very similar size to what we've done in the past."
- " Net debt to EBITDA was 3.45 times, compared to 2.97 at the end of 2021."
  [NOTE: GIVAUDAN will do ~$1.4Bn in USD. Based on the comments above, they can fund up to $1.47Bn in acquisition financing (which, $350MM is no where near that level]
- "We have done 20 acquisitions in the last four years. We have a great, I think, name and reputation in the way we – in the way not only we make friends out of an acquisition but also the way we integrate companies and that has been very successful so far. So, the question is availability. Valuations of companies have gone down.

seekingalpha.com/article/4524890-givaudans-gvdbf-ceo-gilles-andrier-on-q2-2022-results-earnings-call-transcript

To understand if Givaudan has the financial capacity to handle an acquisition of this size, we can reference the metrics noted above and examine Givaudan's 2021 EBITDA performance to determine how much spare "capacity" to finance acquisitions they have remaining:



www.givaudan.com/investors/financial-results/key-figures

From above, we can see that Givaudan generated ~$1.57Bn in EBITDA for 2021 (based on a 1.06 USD to Swiss Franc exchange rate).

Using the 4x-to-4.5x Debt/EBITDA threshold levels referenced in the EC vs. current level of 3.45x, this translates into 0.55x-to-1.05x 2021 EBITDA remaining spare capacity which corresponds to $864MM-to-$1.65Bn (i.e., more than enough to fund this ST).

Will Givaudan's Board Oppose Management on the ST?

In my experience in dealing with Boards (e.g., Fortune 500, Academic, Private/Public, Domestic/International and Venture Backed), Directors often times serve as custodians/advisors but generally do not second guess, interfere or oppose prudent management decisions.

Where it can become dicey is when there is a concentrated ownership among individual board members, (i.e., an "Activist Director").

As such, I thought it would be a useful exercise to investigate if there were any "John Doerr" equivalents on Givaudan's Board of Directors:

Board of Directors: ownership of Givaudan securities

2021 in numbers	Shares	Blocked RSUs
Calvin Grieder, Chairman	947	629
Victor Balli	248	157
Prof. Dr-Ing. Werner Bauer	1,428	157
Lilian Biner	735	157
Michael Carlos	1,260	157
Ingrid Deltenre	365	157
Olivier Filliol	1,200	94
Sophie Gasperment	-	72
Total 2021	**6,183**	**1,580**
Total 2020	6,501	1,962

integratedreport.givaudan.com/#/compensation-and-governance

Unlike Amyris, no single Givaudan Board Member owns more than 0.1% and the amounts owned by any member is <$5MM.

These are relatively small amounts (for a ~$30Bn Market Cap firm) and do not scream "red flags" among any of the Directors that may cause them to derail a 7-month process.

It is important to remember that Givaudan has been working alongside Amyris for over a decade and has their supply chain intertwined with Amyris' supply chain as well.

They need Amyris and the molecules in question just as much as Amyris will need Givaudan's capital and sales & distribution support.

Were Givaudan to walk away, there are other bidders eager to step in and fill the void.

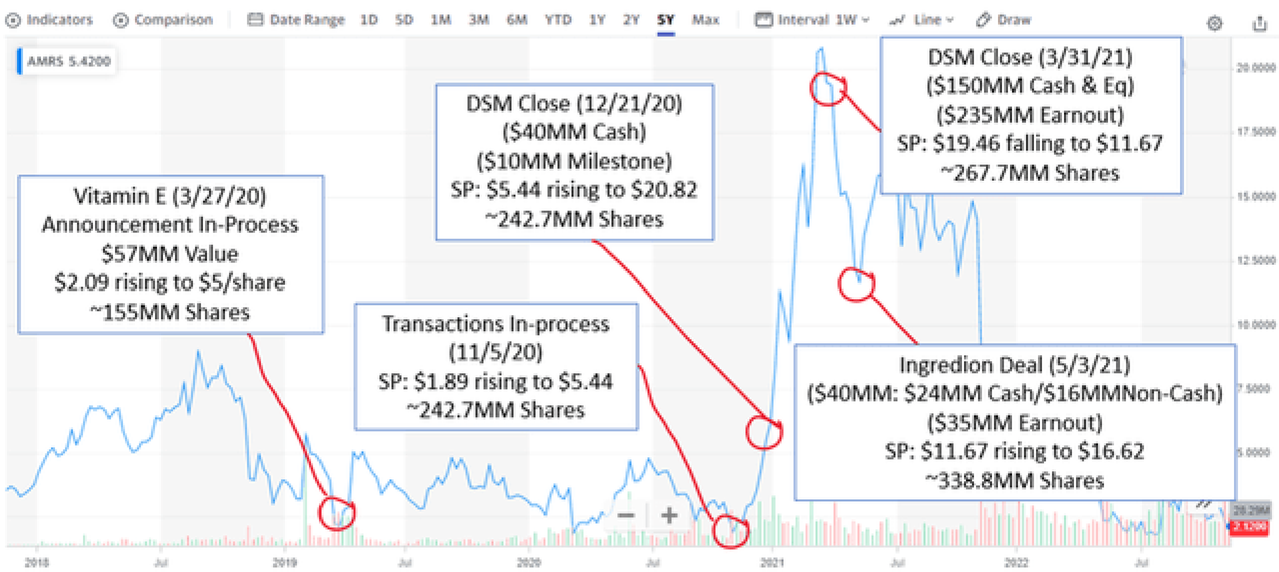
Given the above, we now know the following:

1. As of 11/8/22, the deal was "pending Board approval" from both sides
2. We believe the Boards have met in Mid-November
3. As of 11/30/22, JM announced that the deal remained "on track"

...one may infer that the deal has been reviewed and has likely been approved. We suspect that the deal is now in its final preparation for ratification.

What would the Transaction mean for Amyris' Share Price?

We can look to the past for a glimpse into the future:



Author Compilation

By examining the data from the past four STs above, we can try and gauge the impact on share prices based on the value composition of each deal:

	Cash Value ($MMs)	Earnout/ Milestone Value ($MMs)	Total Transaction Value (Excl. Mftg Rights) ($MMs)	Date of Announcement	Initial Share Price ($/Share)	Peak Price Shortly After ($/Share)	% Incr. in Share Price	Estimated Weighted Average Shares Outstanding	Change in Market Cap ($MM)	Change in Mkt Cap / Total Transaction Value	Change in Mkt Cap / Cash Value
Ingredion	$40	$35	$75	5/3/2022	$11.67	$16.62	42%	338.8	$1,677	2236%	4193%
Vitamin E	$57	$0	$57	3/27/2020	$2.09	$5.00	139%	155.0	$451	791%	791%
DSM (Givaudan & F&F) Announce to Close	$190	$245	$435	11/5/2020	$1.89	$11.67	517%	242.7	$2,374	546%	1249%
Total:	$287	$280	$567								

Author Analyses

From above, we can see that the % increase in share price is directly correlated with the increase in cash value of the ST as one may expect.

It is notable that the cash value of the current pending ST (i.e., $350MM) is larger than the cash value of all four prior STs combined (i.e., $287MM).

However, a better way to refine that estimate, is to focus on the change in market cap relative to the actual Total Transaction Value (excluding manufacturing rights) to estimate a potential range for shares prices to climb.

We can infer a possible multiplier of ~5.5x to ~22x of the Total Transaction Value (although, the larger the ST, the smaller the multiplier applied). This is useful in understanding how powerful an impact a strategic transaction can have on market value (not so much in pegging a definitive share price).

If these ratios were to hold now as they have in the past, this would imply a forecasted share price of between $6.6/share to $20/share (given today's share price of $1.68 and ~390MM fully diluted shares).

This appreciation in share price can be driven by a variety of factors:

Drivers Behind Potential Share Price Appreciation

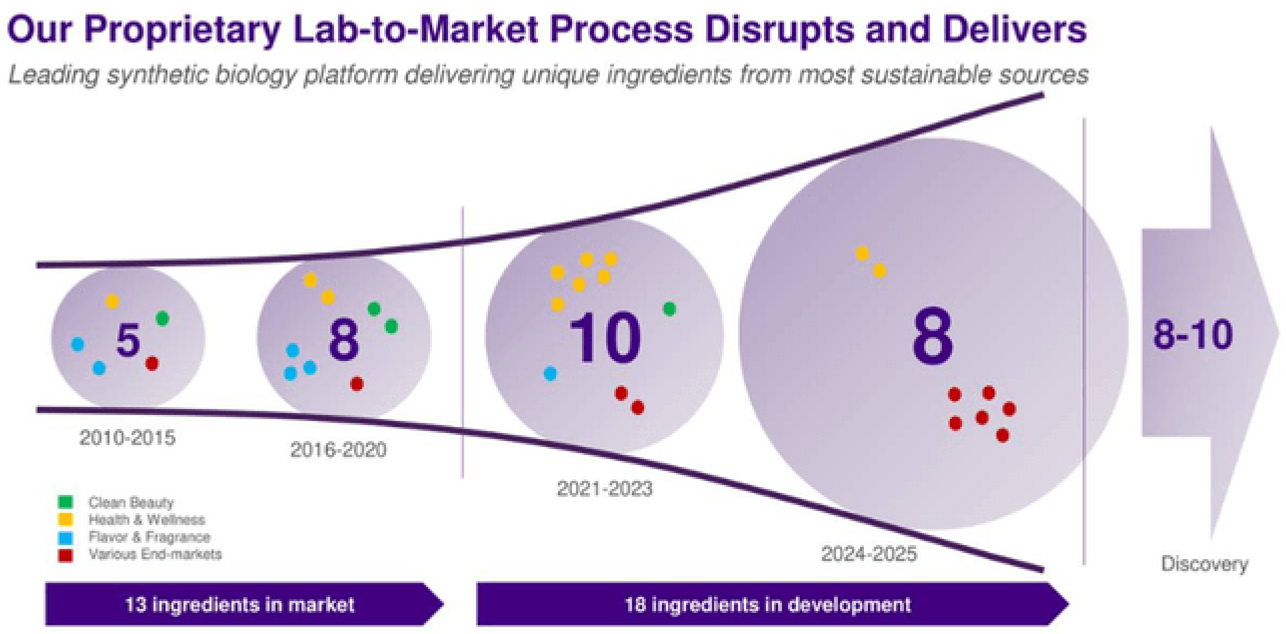
- Upfront Cash of $350MM & Earnout of $150MM translates to a value of ~$1.28/share @390MM FD Shares
- Long-term Annuity of Exclusive Manufacturing Rights
- Self-funded path to profitability
- Validation of Molecular Marketing Rights Sales as a Recurring Revenue Stream
- Elimination of Bankrupty Concerns
- Elimination of Dilution Concerns
- Short-squeeze potential given current >45MM short share overhang
- Ability to relaunch paused capital programs (e.g., Downstream Facility, BB2, some delayed market, etc...)
- Elimination of "going concern" perceived risk by employees, customers, partners, vendors, and suppliers

Author Compilation

This ST is just one of many in the development pipeline.

Management has already identified a second molecule that is slated to close in the next few months and we believe the second one is the Squalene molecule (for Adjuvant applications) based on references made by management regarding applications to the pharma industry and the value of Squalene.

A second ST soon following the current ST will solidify four consecutive years of molecular sales and further validate Amyris' powerful engine of recurring ST revenues with ~25 Active Development molecules in their pipeline and three-to-four others under ST consideration:



seekingalpha.com/article/4414895-amyris-amrs-investor-presentation-slideshow

I see an evolution of thought processes over time on how to view/treat these ST deals:

1. Analysts/Investors are beginning to classify them as recurring revenues, giving credit, for now, only to the upfront cash components;

2. As earnouts are solidified/earned, those same groups will begin to credit and place value on the earnouts in advance at the time of the deal;

3. Eventually, the same groups will begin to see real value in what I believe may be the most valuable portion which the manufacturing annuity streams generated from exclusive manufacturing rights.

In short, the strategic partners that Amyris is choosing are not just based on how much any partner can pay upfront but also on how each partner is posititioned strategically to scale and grow the business over the years to come.

Revenues (Past, Current Quarter and Next Year)

While Consumer Product Revenues have achieved record highs for six consecutive quarters, Ingredients have remained relatively unstable due to global logistics/supply chain, shipping and inflation issues (estimated to have cost Amyris over $150MM to $200MM in unplanned for costs for 2022).

	2021				2022		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3'22
Revenues (Old Convention)							
Renewable Product Revenues	$28,179	$37,172	$36,508	$47,844	$43,465	$54,390	$58,563
Ingredients	*$12,526*	*$16,477*	*$13,524*	*$16,121*	*$10,823*	*$12,171*	*$13,496*
Consumer Product Revenues	*$15,653*	*$20,695*	*$22,984*	*$31,723*	*$32,642*	*$42,219*	*$45,067*
YoY Growth Rate					*109%*	*104%*	*96%*
QoQ Growth Rate		*32%*	*11%*	*38%*	*3%*	*29%*	*7%*
Licenses and royalties	$143,800	$11,000	$6,006	$13,006	$9,313	$6,454	$10,113
Collaborations, grants and other	$4,880	$4,144	$5,352	$3,926	$4,931	$4,363	$2,453
Total Revenues (Old Convention):	**$176,859**	**$52,316**	**$47,866**	**$64,776**	**$57,709**	**$65,207**	**$71,129**
Revenues (New Convention)							
Consumer Revenues	$15,653	$20,695	$22,990	$31,723	$34,551	$42,973	$46,555
Technology Access	$161,206	$31,621	$24,876	$33,053	$23,158	$22,234	$24,574
Total Revenues (New Convention):	**$176,859**	**$52,316**	**$47,866**	**$64,776**	**$57,709**	**$65,207**	**$71,129**

Author Analyses

The growth in Consumer Revenues has come at a tremendous cost as a result of similar unanticipated costs related to the use of third-party manufacturers/CMOs and high shipping costs, both leading to gross profit losses (excluding earnout contributions).

	2021				2022		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3'22
Cost and Operating Expenses							
Costs of Products Sold	$22,659	$30,421	$40,252	$61,807	$48,995	$55,930	$65,818
CPS Margin (% of RP Rev)	*80%*	*82%*	*110%*	*129%*	*113%*	*103%*	*112%*
CPS Margin (% of RP Rev & Lic/Roy Rev)	*13%*	*63%*	*95%*	*102%*	*93%*	*92%*	*96%*
Research and Development	$23,332	$22,424	$23,824	$24,709	$26,358	$26,111	$28,780
Sales, general and administrative	$37,922	$54,340	$70,635	$94,914	$106,916	$126,587	$124,709
Total COE:	**$83,913**	**$107,185**	**$134,711**	**$181,430**	**$182,269**	**$208,628**	**$219,307**

Author Analyses

There are a variety of factors that led to the higher-than-expected Costs of Product Sold ("COPS").

Most notably were the use of third-party manufacturers/CMOs for both ingredients & consumer products as well as Airfreight Charges, resulting primarily from Inbound Airfreight used to ship consumer product parts from China (e.g., caps, pumps) and Ingredients from CMOs (e.g., S.A. Antibioticas from Spain whose cost of production is 3x that of Barra Bonita):

Cost of Products Sold

Cost of products sold represents the direct cost to produce our products and includes the costs of raw materials and related transportation costs, labor and overhead, amounts paid to contract manufacturers, inventory write-downs resulting from applying lower of cost or net realizable value inventory adjustments, and costs related to production scale-up. Due to our product mix of higher-margin, higher-volume consumer products and lower-margin, large-batch fermentation ingredients products, our cost of products sold may not change proportionately with changes in renewable product revenue in any given period.

Cost of products sold increased 64% to $65.8 million for the three months ended September 30, 2022 and 83% to $170.7 million for the nine months ended September 30, 2022, compared to the same periods in 2021, primarily driven by significant increases in sales volume of our consumer products. Our cost of products sold was also directly impacted by significant cost increases in raw material costs, transportation costs, with air freight as a principal driver, and other supply chain logistics costs. We expect that the insourcing of ingredients manufacturing following the full commissioning of the Barra Bonita facility, as well as the consolidation of the consumer production footprint, will mitigate unfavorable supply chain economics in future quarters.

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Reminiscent of the Q3'21 EC, and as a result of unplanned for global disruptions (e.g., China lock-downs, Freight rate increases, high energy costs), Amyris had to make a hard choice between breaking contract obligations and foregoing earnouts or avoiding demand destruction by incurring larger than expected-unanticipated freight costs and increasing burn.

Like many growth-oriented companies, excessive costs to grow the business to scale have always been par-for-course (i.e., much like Tesla before the debut of their Model 3 and the achievement of scale economies).

Amyris is reaching that inflection point of realizing those true scale efficiencies in 2023 (similar to the inflection point of scale economies achieved by Amazon) with large scale volumes, the commissioning of BB1, the transitioning to in-house production at its consumer manufacturing facilities, and the upcoming co-location of downstream production facilities.

A portion of the costs however are non-cash stock-based compensation which can be stripped out to yield a better understanding of true cash burn...

	2021				2022		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3'22
Cost and Operating Expenses							
Costs of Products Sold	$22,659	$30,421	$40,252	$61,807	$48,995	$55,930	$65,818
CPS Margin (% of RP Rev)	*80%*	*82%*	*110%*	*129%*	*113%*	*103%*	*112%*
CPS Margin (% of RP Rev & Lic/Roy Rev)	*13%*	*63%*	*95%*	*102%*	*93%*	*92%*	*96%*
Research and Development	$23,332	$22,424	$23,824	$24,709	$26,358	$26,111	$28,780
Sales, general and administrative	$37,922	$54,340	$70,635	$94,914	$106,916	$126,587	$124,709
Total COE:	**$83,913**	**$107,185**	**$134,711**	**$181,430**	**$182,269**	**$208,628**	**$219,307**
Non-Cash COE Stock Based Compensation							
Costs of Products Sold	$63	$73	$79	$80	$78	$81	$79
Research and Development	$1,062	$1,318	$1,565	$1,646	$1,617	$1,784	$1,606
Sales, general and administrative	$3,156	$7,355	$7,261	$9,735	$9,893	$10,782	$10,624
Total Non-Cash COE:	**$4,281**	**$8,746**	**$8,905**	**$11,461**	**$11,588**	**$12,647**	**$12,309**
Cash COE Incl D&A							
Costs of Products Sold	$22,596	$30,348	$40,173	$61,727	$48,917	$55,849	$65,739
COPS Margin (% of RP Rev)	*80%*	*82%*	*110%*	*129%*	*113%*	*103%*	*112%*
COPS Margin (% of RP Rev & Lic/Roy Rev)	*13%*	*63%*	*94%*	*101%*	*93%*	*92%*	*96%*
Research and Development (infl@5%)	$22,270	$21,106	$22,259	$23,063	$24,741	$24,327	$27,174
Sales, general and administrative (infl@5%	$34,766	$46,985	$63,374	$85,179	$97,023	$115,805	$114,085
Total Adjusted Cash COE:	**$79,632**	**$98,439**	**$125,806**	**$169,969**	**$170,681**	**$195,981**	**$206,998**

Author Analyses

...leading to a better understanding of Adjusted EBITDA over time:

	2021				2022		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3'22
Total Revenues (New Convention):	$176,859	$52,316	$47,866	$64,776	$57,709	$65,207	$71,129
Total Adjusted Cash COE:	$79,632	$98,439	$125,806	$169,969	$170,681	$195,981	$206,998
Adjusted EBIT (Cash Loss from Operations Incl D&A)	$97,227	-$46,123	-$77,940	-$105,193	-$112,972	-$130,774	-$135,869
Depreciation & Amortization	$2,114	$2,186	$2,226	$2,219	$2,400	$2,586	$3,192
Adjusted EBITDA (Cash Loss from Operations Exc D&A)	$99,341	-$43,937	-$75,714	-$102,974	-$110,572	-$128,188	-$132,677

Author Analyses

There are a variety of non-recurring/savings opportunities from a Cash and Operating Expenses ("COE") standpoint that have the potential for reducing Adjusted EBITDA on a go forward basis.

These are currently being implemented in phases through an internal program called "Fit to Win".

The original program, announced in the Q2'22 EC, proffered the following savings opportunities:

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One quarter later, the opportunities were refined in the Q3'22 EC:

FIT TO WIN UPDATE

Q3 product sales were from inventory. Expect to see more benefits to come through in G

PLAN							
Revenue	COGS			SG&A			TOTAL Annualized target
Pricing	Consumer	Ingredients	Freight	Marketing	Shipping and Fulfillment	Other	
$20m	$30m	$30m	$10m	$60m	$10m		$150m+
• Revenue enhancing actions – pricing and product mix	• Better unit cost economics from in-house production at Interfaces • Lower rates at CMO's • Change sourcing of packaging and components • Redesign packaging	• Better unit cost economics from in-house production at Barra Bonita • Shift reliance to in-house versus third party contract manufacturing	• Reduce airfreight expense • Reduce other freight expense from reconfiguration of sourcing network	• Increase ROI on paid media • Leverage shared marketing services across brands • Marketing innovation	• Segment 3PL providers between DTC and Retail • Aggregate and renegotiate shipping rates	• Various actions across G&A functions	

Q3 2022 PROGRESS TO-DATE							
Revenue	COGS			SG&A			TOTAL Annualized target
Pricing	Consumer	Ingredients	Freight	Marketing	Shipping and Fulfillment	Other	
--	--	--	$2.5m	$7.7m	--	$0.2m	$10.4m
• Price increases ingredients as of 7/1/22 • Price increases consumer as of 10/1/22 Biossance and JVN	• Various products now made at Interfaces • Change certain packaging sources from China to Brazil	• Making intermediate and finished product ingredients at Barra Bonita	• Lower inbound freight	• Reduce paid media as % of revenue • Reduce agencies • Drive new revenue from micro/nano influencers		• Reduction in IT licenses and software implementation • Reduction in insurance premiums	

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If we were to apply those savings opportunities to the Q3'22 results, we can obtain an understanding of what would have been the impact to COPS and Adjusted EBITDA on a pro forma basis while also using the same technique to forecast future quarters (using Q3'22 as a baseline):

		2022
	Q3'22	Adj Q3'22
		Incremental Max Savings
Incremental Adjustments to Q3'22 COE for Q4 Forecasting		to Q3'22 COPS
F2W: Consumer Products COGS Improvement		-$7,500
F2W: Ingredient CMO Cancellation COGS Improvement		-$12,000
F2W: Freight - Inbound Airfreight (Total Q3'22: ~$19MM to $21MM)		-$14,000
F2W: Marketing Reduction (Reflects $7.7MM in Q3'22)		-$7,300
F2W: Shipping & Fulfillment (Reflects $2.5MM in Q3'22)		-$2,500
FIFO Inventory Accounting Catchup		-$10,000
Total Adjustments:		**-$53,300**
Cash COE Incl D&A		
Costs of Products Sold	$65,739	$19,739
COPS Margin (% of RP Rev)	*112%*	*34%*
COPS Margin (% of RP Rev & Lic/Roy Rev)	*96%*	*29%*
Research and Development (infl@5%)	$27,174	$27,174
Sales, general and administrative (infl@5%)	$114,085	$106,785
Total Adjusted Cash COE:	**$206,998**	**$153,698**
Adjusted EBIT (Cash Loss from Operations Incl D&A)	**-$135,869**	**-$82,569**
Depreciation & Amortization	**$3,192**	**$3,192**
Adjusted EBITDA (Cash Loss from Operations Exc D&A)	**-$132,677**	**-$79,377**

Author Analyses

Revenue Forecasts for Q4'22 and Q4'23

During the Q3'22 EC, Management provided $100MM Core Revenues guidance for Q4'22 and $200MM Core Revenues with $20MM Operating Income guidance for Q4'23.

We will discuss two Methods to triangulate first on forecasted Q4'22 Consumer Revenues.

Method 1: Management Guidance

Management, on the Q3'22 EC, indicated Q4'22 Consumer Revenues will emulate the YoY growth seen in 9-month YTD Consumer Revenues for 2022 compared to 2021.

Using that implied growth-rate range we can forecast 12-month 2022E Consumer Revenues:

	2022A YTD: 9 months	2021A YTD: 9 months	% YoY Growth
Consumer Revenues - Total	$124,079	$59,589	108.2%
Consumer Revenues - Renewable Product	$119,928	$59,583	101.3%
YTD Total Revenues	$194,045	$277,041	

	2022E 12 months	2021A 12 months	
Consumer Revenues - Total	$191,567	$92,000	108.2%
Consumer Revenues - Renewable Product	$183,274	$91,055	101.3%
Total Revenues		$341,817	

Author Analyses

This provides us with an estimated range for Consumer Revenues of ~$63.3MM to ~$67.5MM reflecting a 40.6% to 45% QoQ growth-rate:

Method 1: Q4'22 Based on John Melo Method Using YTD Growth	2022A	2021A	% QoQ Growth
Implied Q4'22 Consumer Revenues - Total	$67,488		45.0%
Implied Q4'22 Consumer Revenues - Renewable Products	$63,346		40.6%
Q3'22 Consumer Revenues - Total	$46,555		
Q3'22 Consumer Revenues - Renewable Products	$45,067		
Delta Q4'22 vs. Q3'22 Consumer Revenues - Total	$20,933		
Delta Q4'22 vs. Q3'22 Consumer Revenues - Renwable Products	$18,279		

Author Analyses

Method 2: Applying Historic QoQ Seasonality

We shouldn't trust guidance at face value.

We can turn to historic QoQ seasonal growth for the prior two years to sanity-check whether historical seasonal growth rates yield similar results (which they do: 39.1% to 41.7% as derived below):

Method 2: Q4'22 Based on Historical Seasonality	2021	2020
Q3 Consumer Revenues - Total ($MMs)	$23	$12
Q4 Consumer Revenues - Total ($MMs)	$32	$17
Historic Q4/Q3 Consumer Revenue Growth	*39.1%*	*41.7%*
Q3'22 Consumer Revenues - Total	$46,555	$46,555
Q4'22 Consumer Revenues Applying Historic Seasonality Ratio	$64,772	$65,953

Author Analyses

Both methods point to similar revenue range estimates and QoQ growth rates.

To help Amyris achieve those targets, there are elements this year that were not included in the Q3'22 Revenue base, which will lower the bar/hurdle:

1. A preliminary review of cross-border (e.g., T-Mall) transactions in China reflect strong Wholesale Biossance Revenues: Estimated to be >$11MM for Q4'22 (driven in large part by a three-day 'Singles Day' event and likely to be driven by the upcoming "12/12" China sales event as well).
2. 4U by Tia: Estimated Ship-to-Trade Walmart Revenues of between $2MM to $4MM in December.
3. Stripes & Ecofabulous are expected to contribute ~$1MM in revenues for the quarter.

This will drive down the QoQ Like-for-Like growth requirements on pre-existing brands below ~25% (which is very achievable given the seasonality associated with Q4) and confirmed by the strong D2C and B&M performance mentioned in recent press releases:

> 11/28/22: AMYRIS CONSUMER BRANDS DELIVER RECORD BLACK FRIDAY WEEK SALES

Biossance® is expected to achieve its first month of $20 million in retail sales from a combination of strong China Singles' Day (11/11), the largest shopping day in the world, and Black Friday week. Biossance retail sales represents external sales to consumers across physical retail and online e-commerce channels, including Biossance's DTC channel. The latter generated 76% of its November month to-date sales during Black Friday week.

investors.amyris.com/2022-11-28-AMYRIS-CONSUMER-BRANDS-DELIVER-RECORD-BLACK-FRIDAY-WEEK-SALES

> 11/30/22: AMYRIS CONSUMER BRANDS DELIVER 80% CYBER MONDAY LIKE-FOR-LIKE GROWTH

One area of uncertainty remains the Brick & Mortar component. While D2C outperformed expectations in many areas, we do not have clear visibility into Q4'22 B&M sales, however we anticipate record B&M sales as well given the outperformance and contribution of China wholesale results.

INGREDIENTS

Turning to Ingredients, we previously saw that Q3'22 ingredient revenues were only ~$13.5MM (significantly lower than previously guided).

Q3'22 Ingredients Revenue expectations as of 8/9/22 were based on all three main production lines (i.e., six 200k liter tanks) starting production one week later:

> As of about August 15, we'll have the three biggest lines operating and delivering product at Barra Bonita. Those three main lines are super flexible, they're super advanced engineering for fermentation and they are equal to the total manufacturing capacity of our old [indiscernible] facility, just to give you a sense of scale.

seekingalpha.com/article/4532027-amyris-inc-amrs-ceo-john-melo-on-q2-2022-results-earnings-call-transcript

However, the reality was somewhat different as we discovered in the subsequent quarterly filing:

> *"As of September 30, 2022, we have commissioned the first two lines of our new purpose built, large-scale precision fermentation facility in Brazil, which we anticipate will accommodate the manufacturing of products concurrently. The remaining lines are expected to be commissioned during the fourth quarter of 2022. Pending full commissioning of the new facility."*

investors.amyris.com/sec-filings?cat=2

This was a disappointment relative to the original guidance resulting in a significant miss on ingredient revenues. However, as of 11/8/22, all three main lines are producing:

> end of the year. And lastly, the production output where Barra Bonita is now producing five ingredients to increase output and product supply to our customers.

seekingalpha.com/article/4555043-amyris-inc-amrs-q3-2022-earnings-call-transcript

seekingalpha.com/uploads/2022/8/7/11765171-16598821362437603_origin.png

The launch of all three lines of production should accelerate ingredient revenue growth by >50% QoQ going into the fourth quarter:

> As you think about ingredients, look, the ingredient growth is accelerating pretty significantly going into the fourth quarter as a result of us being able to finally get to the production we needed some of the backlog. So you can expect the growth in the fourth quarter for ingredients to be well over 50%. And that will translate into, again, better growth than we've had year-to-date on the ingredient side.

seekingalpha.com/article/4555043-amyris-inc-amrs-q3-2022-earnings-call-transcript

This is because only one line was up and running at the start of Q3'22...

"At the mid-year point, we commissioned the first line of a new purpose-built, large-scale precision fermentation facility in Brazil, which we anticipate will accommodate the production of up to five products concurrently. The other lines are expected to be commissioned during the second half of 2022. Pending full commissioning of the new facility, we continue to manufacture our products at manufacturing sites in Brazil, the United States and Europe."

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...with the second up and running in the middle of Q3'22 requiring ramp-up time for that line to achieve full production.

If you take the Q3'22 ingredients of $13.5MM and increase it by the "well over 50%" you get to >$21MM.

As such, I have set our scenario case range to between $22MM to $24MM.

We now have a relatively tight range forecast for Q4'22 and Q4'23 Consumer Revenues with the following management assumptions for Q4'23:

1. Consumer Revenues for Q4'23 will follow a similar growth trajectory as Q4'22
2. Ingredient Revenues will have achieved max-capacity utilization at $30MM-to-$35MM by Q4'23
3. There will be incremental Q4'23 earnout contributions from DSM, Reb M and the new ST Buyer that will drive higher margin growth

	Q3'22	Est Q4'22 Worst	Est Q4'22 Base	Est Q4'22 High	Est Q4'23 Worst	Est Q4'23 Base	Est Q4'23 High
Revenues (Old Convention)							
Renewable Product Revenues	$58,563	$85,346	$87,772	$91,488	$157,503	$166,515	$175,526
Ingredients	*$13,496*	*$22,000*	*$23,000*	*$24,000*	*$30,000*	*$32,500*	*$35,000*
Consumer Product Revenues	*$45,067*	*$63,346*	*$64,772*	*$67,488*	*$127,503*	*$134,015*	*$140,526*
YoY Growth Rate	*96%*	*100%*	*104%*	*113%*	*101%*	*107%*	*108%*
QoQ Growth Rate	*7%*	*41%*	*44%*	*50%*			
Licenses and royalties	$10,113	$11,000	$11,500	$12,000	$24,750	$26,500	$28,250
Collaborations, grants and other	$2,453	$1,000	$2,000	$3,000	$1,000	$2,000	$3,000
Total Revenues (Old Convention):	**$71,129**	**$97,346**	**$101,272**	**$106,488**	**$183,253**	**$195,015**	**$206,776**
Revenues (New Convention)							
Consumer Revenues	$46,555	$63,346	$64,772	$67,488	$127,503	$134,015	$140,526
Technology Access	$24,574	$34,000	$36,500	$39,000	$55,750	$61,000	$66,250
Total Revenues (New Convention):	**$71,129**	**$97,346**	**$101,272**	**$106,488**	**$183,253**	**$195,015**	**$206,776**

Author Analyses

We can now forecast Q4'22 and Q4'23 COE by allocating a portion of the Adjustments to COE identified previously in various case scenarios:

	Q3'22	Est Q4'22 Worst	Est Q4'22 Base	Est Q4'22 High	Est Q4'23 Worst	Est Q4'23 Base	Est Q4'23 High
Incremental Adjustments to Q3'22 COE for Q4 Forecasting							
F2W: Consumer Products COGS Improvement		-$3,000	-$4,000	-$5,000	-$6,000	-$7,000	-$7,500
F2W: Ingredient CMO Cancellation COGS Improvement		-$5,000	-$6,000	-$7,000	-$10,000	-$11,000	-$12,000
F2W: Freight - Inbound Airfreight (Total Q3'22: ~$19MM to $21MM)		-$8,000	-$9,000	-$10,000	-$12,000	-$13,000	-$14,000
F2W: Marketing Reduction (Reflects $7.7MM in Q3'22)		-$4,500	-$5,000	-$5,600	-$6,000	-$6,500	-$7,300
F2W: Shipping & Fulfillment (Reflects $2.5MM in Q3'22)		-$1,500	-$2,000	-$2,500	-$1,500	-$2,000	-$2,500
FIFO Inventory Accounting Catchup		-$4,000	-$5,000	-$6,000	-$10,000	-$10,000	-$10,000
Total Adjustments:		**-$26,000**	**-$31,000**	**-$36,100**	**-$45,500**	**-$49,500**	**-$53,300**
Cash COE Incl D&A							
Costs of Products Sold	$65,739	$68,470	$67,598	$67,918	$71,252	$66,432	$60,710
COPS Margin (% of RP Rev)	*112%*	*80%*	*77%*	*74%*	*45%*	*40%*	*35%*
COPS Margin (% of RP Rev & Lic/Roy Rev)	*96%*	*71%*	*68%*	*66%*	*39%*	*34%*	*30%*
Research and Development (infl@5%)	$27,174	$27,507	$27,507	$27,507	$28,883	$28,883	$28,883
Sales, general and administrative (infl@5%)	$114,085	$110,985	$110,485	$109,885	$109,485	$108,985	$108,185
Total Adjusted Cash COE:	**$206,998**	**$206,962**	**$205,591**	**$205,311**	**$209,619**	**$204,299**	**$197,778**
Adjusted EBIT (Cash Loss from Operations Incl D&A)	**-$135,869**	**-$109,616**	**-$104,318**	**-$98,823**	**-$26,366**	**-$9,285**	**$8,998**
Depreciation & Amortization	**$3,192**	**$3,417**	**$3,417**	**$3,417**	**$4,000**	**$3,909**	**$3,817**
Adjusted EBITDA (Cash Loss from Operations Exc D&A)	**-$132,677**	**-$106,199**	**-$100,901**	**-$95,406**	**-$22,366**	**-$5,376**	**$12,815**

Author Analyses

This drastically reduces Costs of Products Sold ("COPS") and, while the cash "burn" for Q4'22 is still significant (ranging from ~$95MM to ~$106MM), it remains a significant improvement over Q3'22 results and converges towards breakeven by Q4'23.

I struggle though to see how management will achieve a 10% Operating Margin for Q4'22 without higher top line growth or further reductions in SG&A (e.g., Marketing). However, we do see a path towards EBITDA profitability in Q4'23 which is more than sufficient to demonstrate a path towards profitability.

Working Capital Management

Some Investors are concerned with Amyris' management of working capital components:

Payables

I noted a rapid increase in Accounts Payable balances for the firm:

	Payables $000s
Q3'22 Accounts Payable	$133,819
Q2'22 Accounts Payable	$102,962
Q1'22 Accounts Payable	$88,292
Q4'21 Accounts Payable	$79,666
Q3'21 Accounts Payable	$62,681
Q2'21 Accounts Payable	$48,610
Q1'21 Accounts Payable	$44,154
Q4'20 Accounts Payable	$41,045

Author Compilation

Investigation into this has confirmed that Amyris is extending its credit terms with vendors/suppliers to a 60-to-90 period, thereby providing more liquidity to Amyris (and not defaulting on payments).

While this balance will shrink somewhat going into 2023, we expect levels to remain elevated going forward under the new structural shift in payment terms.

Receivables

Amyris has a few receivables that are owed to them:

A DSM receivable of ~$20MM

An Ingredion Working Capital Contribution estimated @$20MM-to-$30MM for its membership interest in the RealSweet shell-entity related to the production of Reb M and the associated downstream finishing facility

Inventory

Inventory levels have climbed to ~$129MM to maintain an estimated ~two quarters worth of safety stock in anticipation of seasonally high Q4'22 demand as well as potential further supply chain shocks (e.g., China).

Inventories

(In thousands)	September 30, 2022	December 31, 2021
Raw materials	$ 48,268	$ 25,733
Work-in-process	12,473	6,941
Finished goods	68,591	42,396
Inventories	$ 129,332	$ 75,070

investors.amyris.com/sec-filings?cat=2

The high cost of that inventory, sourced from third-party manufacturers, will likely be depleted on a FIFO basis over time resulting in elevated COPS for a portion of the fourth quarter and possibly the first quarter of 2023.

Once that inventory is cleared, margins will improve rapidly under the insourced manufacturing cost structure.

Additionally, Amyris anticipates that they will be able to free up capital from the Inventory liquidation as they will not need to maintain as much inventory going forward and the cost of inventory for similar unit volumes will be significantly lower due to insourcing from their own consumer manufacturing facilities.

Prepayments, Advances and Deposits

Amyris has ~$25MM in prepayments to CMOs.

Prepaid Expenses and Other Current Assets

(In thousands)	September 30, 2022	December 31, 2021
Prepayments, advances and deposits	$ 25,356	$ 25,140
Note receivable[1]	10,000	—
Non-inventory production supplies	4,116	3,956
Recoverable taxes from Brazilian government entities	4,981	1,188
Other	3,545	3,229
Total prepaid expenses and other current assets	$ 47,998	$ 33,513

investors.amyris.com/sec-filings?cat=2

As the transition to Barra Bonita nears completion, the cash conversion of the prepayments will free up additional capital over the next few quarters.

As a notable example of a large prepayment, a final CBGA production run of ~20 tonnes from S.A. Antibioticos (a Spanish CMO) was made shortly after the termination of its relationship with Amyris:

#	1
BILL OF LADING	ZIMUVLC0153669
PRODUCT ACIDO CANABIGEROLICO	
CONSIGNEE	AMYRIS, INC
SHIPPER	ANTIBIOTICOS, S.A.
ARRIVAL DATE	2022-11-28
COUNTRY OF OR...	SPAIN
GROSS WEIGHT ...	19521 KGS
QUANTITY	1 TNK

usimports.info/buyers-amyris/data-1.html

This volume of CBGA was impressive and likely one last advance production run to be used for future new formulations/SKUs contemplated across various skincare brands (e.g., Biossance, Stripes, and Beckham).

Employee Headcounts

While not a working capital item, we thought it important to note that Amyris has entered into a hiring freeze in November for which no new non-critical hires will be allowed and should an employee leave, the vacancy will not be filled unless the role is deemed critical in nature by Amyris. This policy is expected to continue for some time after the closure of the ST.

Cash

Using the earlier estimated Adjusted EBITDA forecasts, we can generate a waterfall of what the cash position of the company may look like over the near future:

	Q2'22	Q3'22	Est Q4'22 Worst	Est Q4'22 Base	Est Q4'22 High
Adjusted EBITDA (Cash Loss from Operations Exc D&A)	-$128,188	-$132,677	-$106,199	-$100,901	-$95,406
Cash and cash equivalents	$99,820				
Restricted Cash, Current	$1,090				
Restricted Cash, Non-Current	$5,633				
Ending Cash & Cash Equivalents Q2'22	$106,543				
John Doerr (9/13/22) Debt Financing Proceeds		$80,000			
Cash and cash equivalents		$18,489			
Restricted Cash, Current		$93			
Restricted Cash, Non-Current		$6,057			
Ending Cash & Cash Equivalents Q3'22		$24,639			
Q3'22 Cash & Cash Equivalent Reduction		$161,904			
Cash Adjustment Items for Q4'22					
Additions:					
Ingredion Working Capital (RealSweet 31% Interest) ($20MM - $30MM)			$5,000	$10,000	$15,000
Inventory/Prepaids to CMOs Net of Payables Cash Conversion (~$154MM)			$10,000	$15,000	$20,000
DSM $20MM Accounts Receivables Due to Amyris (Unverified)			$5,000	$10,000	$20,000
DSM Loan First Tranche (10/11/22)			$50,000	$50,000	$50,000
DSM Loan Second Tranche (11/7/22)			$25,000	$25,000	$25,000
DSM Third Tranche (Likely Q4'22)			$25,000	$0	$0
2 Molecule Licensing/Marketing Rights			$0	$350,000	$350,000
Deductions:					
CapEx Infrastructure (primarily Brazilian Assets)			-$35,000	-$30,000	-$25,000
CapEx ERP Integration (SAP with ~4 external systems)			-$5,000	-$4,000	-$3,000
Quarter's Cash & Cash Equivalent Reduction			-$26,199	$325,099	$356,594
End of Quarter Ending Cash Balance:			-$1,560	$349,738	$381,233

Author Compilation

Molecule Marketing Rights Strategic Transaction Slated for 2023

The typical value generated for molecules in early-stage development (i.e., unproven from a commercial standpoint) is $50MM to $100MM based on historical transactions:

> Last year, we generated $50 million to $100 million in value for each molecule we provided long-term marketing rights for with our strategic transactions. This year, you'll see this value significantly increase, as we sell marketing rights to two molecules to two more of our molecules. We are scaling and commercializing three to five molecules annually and have a pipeline of over 25 in active development.

seekingalpha.com/article/4532027-amyris-inc-amrs-ceo-john-melo-on-q2-2022-results-earnings-call-transcript

RISK FACTORS

AMRS: Near-Term (12-month) Risk Factors	
Down-Side Risks	**Upside Risks**
Strategic Transaction Falls Through	Closing of Strategic Transaction
Supply Chain Disruption	Accelerated adoption of Legacy and/or New Brands
Decline in Consumer Revenue Demand as a result of recession	Monetization of additional Molecules/Ingredients
Inflation driving higher input & construction costs	New R&D/Collaboration/Licensing Agreements
Molecular development and/or launches delayed	Faster Adoption in D2C and BaM Markets
Additional Missed Guidance on Revenues/Margins	Monetization: Novvi or Kuraray Assets
COVID Related Disruptions (e.g., Demand, Supply, Employees)	Accelerated Earnouts from DSM & Ingredion
Capacity Disruption/Downtime (e.g., Spain, Brazil, CMOs)	Accessing Carbon Credits
Failure to meet milestones	IBRX/AMRS Vaccine Approval and Production
Failure to realize anticipated economics in Brazil and/or Reno	Margin Expansion from all facilities
Regulatory Risk regarding genetically modified feedstock	Positive Margin Mix Shift (D2C@70%-80%; BaM@60-70%)
Customer Concentration (e.g., loss of 1 or more key customers)	Margin Expansion from D2C Growth Internationally
Negative Resolution of LAVVAN Litigation	Margin Expansion Accessing lower COGS/Procurement
Partner/Collaboration Disruption	Positive Resolution of LAVVAN Litigation

Author Compilation

Conclusion

The market has erroneously priced Amyris for bankruptcy just as the Company lies on the cusp of closing the largest deal of its existence (i.e., $500MM in cash value).

Our belief is that once the deal is announced, the upfront cash funding of $350MM (which will likely be closed in Q4'22 but funded in Q1'23) will lay-to-rest many of the concerns noted above.

The Company's track record in closing Strategic Transactions like these has been 100% over the past decade and historically, deals of much smaller sizes have catapulted the stock to higher levels than they are today.

In the end, the Amyris shareholder base has gone through a rollercoaster ride of emotion over the past twelve months and there is a sense of fear and distrust as a result. The firm has proven it can drive top-line growth and is now turning its focus towards driving bottom-line profitability having achieved scale.

Regardless of whether I am right or wrong on my speculation of which Molecules are in play or who the Buyer may be, I believe this is a pivotal deal that will eliminate erroneous concerns of bankruptcy and dilution and turn the conversation back towards achieving profitability while maintaining growth.

Management will certainly be scrutinized intensely over the coming quarters, as investors seek confirmation that management is truly focused on cost controls. I remain optimistic that in the next two or three weeks we will have good news on the ST and I look forward to turning the conversation back to the future opportunities ahead.

This article was written by

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Disclosure: I/we have a beneficial long position in the shares of AMRS either through stock ownership, options, or other derivatives. I wrote this article myself, and it expresses my own opinions. I am not receiving compensation for it (other than from Seeking Alpha). I have no business relationship with any company whose stock is mentioned in this article.

Additional disclosure: We truly pride ourselves on conducting extensive primary & secondary research, analyses, and/or interviews with Senior Management, Partners, and/or Customers in order to identify and vet undervalued investment opportunities. That said, we aren't always right and these are just our humble opinions. We always encourage everyone to do their own homework and research and as the saying goes... BUYER BEWARE. In the meantime, Happy investing!

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