



An Economic Analysis of The Criteria Used to Distinguish Legitimate Direct Sellers From Pyramid Schemes

Direct Selling Association

October 21, 2015

CONFIDENTIALITY

We understand that the maintenance of confidentiality with respect to our clients' plans and data is critical to their interests. NERA Economic Consulting rigorously applies internal confidentiality practices to protect the confidentiality of all client information. Similarly, our approaches and insights are proprietary and so we look to our clients to protect our interests in our proposals, presentations, methodologies and analytical techniques. Under no circumstances should this material be shared with any third party without the prior written consent of NERA Economic Consulting.

PROJECT TEAM

Dr. Chetan Sanghvi, Senior Vice-President
Dr. Timothy Watts, Vice-President
Ms. Jennifer Cascone-Fauver, Senior Consultant
Mr. Christopher Grant Willem LaFarge, Analyst
Ms. Lu Yang, Analyst
Mr. Matthew Cronin, Associate Analyst
Ms. Claire Oxford, Research Associate

The opinions expressed herein do not necessarily represent the views of NERA Economic Consulting or any other NERA consultant. Please do not cite without explicit permission from the authors.

© NERA Economic Consulting

Contents

I.	Executive Summary.....	1
II.	What Is Direct Selling and How Does It Benefit Society?	6
III.	Consumer Fraud and How it Harms Society	8
IV.	Considerations Relating to the Identification of Pyramid Scheme Fraud	9
V.	Vander Nat & Keep’s Approach to Pyramid Schemes and "Internal Consumption".....	12
VI.	Economic Analysis of Vander Nat & Keep	16
	A. Overview	16
	B. Failures.....	17
	1. Implements Mechanically the Now Rejected “Retail Sales Criterion”	17
	2. The Logical Failure at the Heart of Vander Nat & Keep	20
	3. Fails to Analyze the Economics of "Upline Rewards"	21
	4. Contradicted by Its Own Numerical Example.....	23
	5. Conclusion	25
VII.	Dr. Vander Nat's Expert Testimony.....	26
	A. Applies Mechanically the Now Rejected “Retail Sales Criterion”	27
	B. Fails to Conform to Basic Precepts of (Consumer) Economics	27
	C. Performs Biased Calculations	30
	1. Conflates Pyramid and Ponzi Schemes.....	30
	2. Makes Invalid Assumptions Regarding Distributors’ Objectives.....	31
	D. Fails to Consider Benchmarks or Evaluate Counter-Factual Alternatives	32
	E. Proposes "Tests" That Always Diagnose a “Pyramid Scheme”	33
VIII.	Summary of the Failures of V&K and Dr. Vander Nat’s Expert Testimony.....	35
IX.	Logical Errors in Dr. Bosley’s Declaration	37
X.	Conclusion (The Costs and Benefits of Regulation)	40

I. Executive Summary

NERA Economic Consulting (“NERA”) has been retained by the Direct Selling Association to conduct an economic analysis of the criteria used to distinguish a legitimate business enterprise from a fraudulent pyramid scheme, especially with regard to the economic implications of certain court rulings, and the publications, public statements and court testimony of other experts, including Drs. Peter J. Vander Nat and William W. Keep, promulgating those rulings. In forming our opinions, we have reviewed the relevant documents and obtained data from the Direct Selling Association and other sources to analyze the logic and economics underlying the conclusions and opinions offered by Drs. Vander Nat and Keep.

We examine expert economic testimony and decisions in certain litigated matters at a level abstracted from the specific allegations; we do not opine on the merits of the litigants’ positions in those matters. To be clear, this is not a study of whether certain specific organizations were pyramid schemes. Rather, we analyze critically the economic and logical reasoning that Dr. Vander Nat utilized in reaching the opinion that they were pyramid schemes, with a view toward determining whether that reasoning can also generate false positives.

Our conclusions are independent of the opinions of the Direct Selling Association.

We begin by providing an overview of legitimate direct selling enterprises and their role in the economy and discuss the welfare implications of different tests that might be used to distinguish a legitimate direct seller from a fraud. We delineate different types of consumer frauds and show that by conflating them, Drs. Vander Nat and Keep bias the calculations and considerations they employ to detect whether pyramid fraud is occurring.

We then provide a detailed analysis of Drs. Vander Nat and Keep's paper (entitled "Marketing Fraud: An Approach for Differentiating Multilevel Marketing from Pyramid Schemes", published in the Spring 2002 issue of the Journal of Public Policy & Marketing, vol. 21, no. 1, pp. 139-151; "V&K paper") and certain declarations that Dr. Vander Nat has offered as expert economic testimony in court proceedings involving claims of pyramid schemes.¹

¹ Drs. Vander Nat and Keep have circulated a follow-up paper that presents no new mathematical analyses and advances *ad hoc* allegations that direct selling is premised on separating uninformed consumers from their money. In this paper, they offer anecdotal support (e.g. a personal email) to advance provocative allegations that direct sellers cause “psychological

The V&K paper presents a mechanical implementation of a legal argument (now rejected by the courts) that it refers to as the “retail sales criterion”, and that it attributes to two court decisions: *In the Matter of Koscot Interplanetary, Inc. et al.* (“Koscot”, FTC Docket 8888, 1975) and *Webster et. al. v. Omnitrition International, Inc. et. al.* (“Omnitrition”, 79 F. 3d 776, Ninth Circuit, 1996). Under the “retail sales criterion”, only third parties with no connection to the selling organization are considered legitimate “ultimate users”. Consequently, the V&K paper deems the consumption of product by distributors² (“internal consumption”) to be illegitimate and simply a cover for fraud.

Even if one were to accept the faulty premise that case law trumps economics when it comes to performing economic analysis, recent developments have made it clear that the premise underlying the V&K paper cannot be sustained. On June 2, 2014 the Ninth Circuit ruled in the matter of *FTC v. BurnLounge et al* that it is simply not the case that “internal consumption” is summarily illegitimate (“*BurnLounge*”, No. 12-55926, Ninth Circuit, 2014). Consequently, and contrary to the arguments advanced by Vander Nat and Keep, even the courts have now stated clearly that determining the identity of the purchasers is not particularly probative to the question of whether a pyramid fraud is in progress. Rather, the key question is to determine whether the purchasers, whoever they may be, actually resell or consume their products. If the sales transactions are thus revealed to be legitimate, as a matter of economic principle, they are also revealed to have increased social welfare (*ex-ante*).

By accepting and adopting without further inquiry the “retail sales criterion”, even though it is contrary to basic principles of economics and logic (and now, also contrary to case law), the V&K paper ignores the consumer surplus that is generated by internal consumption. Consequently, as we show below, the very first step that the V&K paper takes in constructing its proposed test to distinguish legitimate from fraudulent enterprises is to discard direct evidence

damage”, “brainwash (sic) salespeople” and engage in “really nasty human relations”. See “Multilevel Marketing and Pyramid Schemes in the United States: An Historical Analysis”, William W. Keep and Peter J. Vander Nat, forthcoming in *Journal of Historical Research in Marketing*, v. 6, no. 4, Nov. 2014 http://business.pages.tcnj.edu/files/2014/02/Keep-and-Vander-Nat_MLM-and-Pyramid-Schemes_Final.pdf, viewed on April 21, 2014.

² Following the convention established in the literature and industry parlance, we refer to direct selling individuals as “distributors”.

of legitimacy. The V&K paper exacerbates this foundational error by conflating different types of fraud. It invokes the now rejected “retail sales criterion” (i.e. legal rhetoric) to discard inappropriately not just the consumer surplus flowing from, but also the profits that the parent firm earns from selling product to distributors for their internal consumption. This biases the V&K paper’s estimates of the parent firm’s cash inflows relative to its outflows. Drs. Vander Nat and Keep crown this logical error by asserting that the resulting biased estimates of cash flows are sufficient to indicate that a pyramid scheme is in progress.³

Dr. Vander Nat's declarations in court matters (and Dr. Keep's public statements) recapitulate these logical failures and add new errors. Dr. Vander Nat’s testimony assumes consistently that all internal consumption and sales to distributors are illegitimate and thus is contrary to basic precepts of economics (such as consumer surplus and revealed preference).

Because Dr. Vander Nat also conflates pyramid and Ponzi schemes, his testimony regarding pyramid fraud is muddled by the consideration of circumstances unrelated to pyramid fraud, such as his calculations as to whether a parent company’s current cash outflows are "fully funded" by inflows. More troublingly, Dr. Vander Nat's calculations in this regard are biased toward finding fraud because they discard all profits associated with internal consumption and because they assume, without theoretical justification or empirical validation, that all participants in a direct selling enterprise act so as to maximize their cash income. We provide some insight into other reasons why individuals participate in direct selling.

Finally, Dr. Vander Nat's declarations and Dr. Keep's public statements argue that the relatively high rate at which individuals are observed to quit direct-selling is sufficient to conclude that they have been defrauded. Yet, Drs. Vander Nat and Keep do not consider alternative explanations for the rate at which individuals quit direct selling (the “quit-rate”), and provide no economic analysis or empirical inquiry as to the quit-rate those distributors might exhibit outside direct selling. We provide some benchmarks demonstrating that the quit-rate of distributors in direct selling enterprises is comparable to what one might observe in the counter-factual, in which these individuals are employed as wage labor.

³ Even if Drs. Vander Nat and Keep’s calculations were unbiased, they would relate to Ponzi schemes rather than pyramid schemes.

The fallacy inherent in the assertion that a high quit-rate is sufficient to conclude that distributors were defrauded is apparent upon noting that there are also high quit-rates in other, undeniably legitimate, businesses. The assertion that a direct selling enterprise must be fraudulent if only a few distributors are able to build businesses that yield six and seven figure annual incomes is similarly fallacious. Because only a few individuals rise to the level of Chief Executive Officer and because the distribution of salaries at many commercial entities exhibits a pyramidal form, that logic would conclude that all corporations must be considered shams and pyramid fraudsters in the labor market.

In sum, the V&K paper and Dr. Vander Nat and Keep's expert testimony and public statements do not describe an objective approach to determining whether an enterprise is a pyramid scheme. Instead, they advocate in favor of adopting a test that is unrelated to the primary hallmark of pyramid schemes and that is prone to generating false positives. Moreover, they do so without providing an economic analysis of the associated costs and benefits.

Even if they are well intentioned, the policies advocated by Drs. Vander Nat and Keep, and other misinterpretations of *Koscot* and *Omnitrition*, impose costs on consumers, producers and society at large. An objective appraisal of the costs and benefits associated with using tests that are prone to generate false positives represents the first step toward a meaningful analysis of the appropriate public policy. We conclude by providing the economic analysis that Drs. Vander Nat and Keep have failed to provide: an examination of the costs and benefits of regulation and increased enforcement.

Notwithstanding the lip service that the V&K paper, Drs. Vander Nat, Keep and Bosley⁴ pay occasionally to the alternative, the core of their arguments is premised on the assertion that only sales to third-parties constitute legitimate business activity. *BurnLounge* rejects the legalistic rhetoric of the "retail sales criterion". Thus, even as a matter of legal doctrine, the time is ripe for this discussion to move past assertions that are premised on the flawed

⁴ Dr. Bosley is the most recent economist to testify for the FTC as an expert witness in a pyramid scheme court proceeding.

application of logic (and the misinterpretation and misapprehension of prior court rulings) that have biased inquiries into these matters and that hold the potential to generate false positives.

This report does not purport to have the final say on this subject. Rather, we seek to exposit and demystify some of the byzantine discussions and the failures of logic and economics that have characterized prior evaluations of public policy toward pyramid schemes. Our goal is to provide some guiding principles to serve as the starting point for an informed, economically sensible, on-point dialogue regarding how a true pyramid scheme can be identified and the costs and benefits of different approaches as to how fraud should be detected, with a view toward defining the socially optimal approach to consumer fraud law enforcement as it pertains to direct selling and pyramid schemes.

II. What Is Direct Selling and How Does It Benefit Society?

Direct selling involves the sale of goods or services in a face-to-face setting rather than by stocking a product on a shelf in a brick-and-mortar retail outlet.⁵ Direct sellers can be compensated not only in the form of commissions on sales that they themselves close, but can also receive commissions on the sales of their recruits (referred to in the jargon of direct selling as “over-rides”).

Direct selling is a well-established approach to serving customers and growing retail sales that is utilized by businesses providing products that are well-known household names and icons of American culture.⁶ In 2012, an estimated \$31.6 billion in commerce was transacted via direct selling, and an estimated 15.9 million individuals participated in direct selling.⁷

The fact that the share prices of direct selling enterprises that have gone public have remained positive indicates that the market believes that these enterprises have value and that this value will be sustained. In contrast, an enterprise that is perceived as unsustainable (e.g. a pyramid scheme that will collapse inevitably), or always faces the threat of being shut down as a fraud by regulators, would not be able to sustain positive market value.

It is important to note that legitimate direct selling benefits not just the parent firm and distributors, but also consumers and society at large. The parent firm obtains access to a distribution channel that is best suited to its product. A firm’s products may require its salespeople to invest meaningful time and effort in educating the customer as to the benefits of the product, resulting in a long sales cycle before a sale is concluded. Or they might compete against, and have to differentiate themselves from, the products of entrenched incumbents

⁵ See 4:44 to 5:04 of the video of the courtroom testimony of Dr. Keep at the link to part one of Dr. Keep’s testimony found at <http://www.mlmllegal.com/trialvideo.html> (accessed 10/4/15). All seven parts of the video memorializing Dr. Keep’s courtroom presentation, from *voir-dire* to cross-examination, are worth viewing.

⁶ In a paper presented to the 2013 Conference on Historical Analysis and Research in Marketing, Drs. Vander Nat and Keep detail that direct selling has existed since at least Colonial times. They describe a prominent African-American female-owned direct selling enterprise doing business in 1919. See <http://faculty.quinnipiac.edu/charm/CHARM%20proceedings/CHARM%20article%20archive%20pdf%20format/Volume%2016%202013/Keep%20VanderNat%20CHARM%202013%20Proceedings.pdf> accessed on November 25, 2013.

⁷ U.S. Direct Selling in 2012, 2013 Growth and Outlook Report. July 2013, pp. 4-5. Direct Selling Association.

whose franchises have been built over the course of decades on a foundation of millions of dollars of advertising. Others may compete in markets exhibiting a profuse proliferation of brands and product offerings, creating "noise" over which it is difficult for a new product to stand out.

Direct selling provides the opportunity to leverage personal networks to introduce potential purchasers to products while also providing incentives for salespeople to contribute their efforts to the sales process. As a matter of the economic principle of revealed preference (or revealed profitability),⁸ when an enterprise chooses to distribute its products via direct selling, we can conclude that the enterprise found direct selling superior to the alternatives.

Similarly, consumers who choose to purchase from legitimate direct sellers reveal that they perceive more value in purchasing from a direct seller relative to other alternatives. For example, they may value the personal service provided by a direct seller. Or they may value the ability to obtain information from a trusted source within their personal network, so that the direct seller enables them to keep abreast of, and evaluate, the claims of competing products in order to find the best product for themselves.

Finally, participants in a direct selling endeavor can obtain a variety of benefits from their participation in direct selling.⁹ Many distributors join the endeavor simply to purchase a preferred product at a lower price. Other distributors find direct selling a convenient way of supplementing their income on their terms and according to their needs (for example by working only seasonally or part-time). Yet other participants may find that participation in a direct selling endeavor provides them with an entry point into a career or business opportunity, to invest in their human capital and to acquire a network of business connections. And finally, some participants may find that direct selling is the perfect match for their talents and skill sets, so that the endeavor presents them with an attractive business opportunity.

⁸ See Walter Nicholson, Microeconomic Theory (Eighth Edition). Southwestern/Thomson Learning. 2002. p. 136-137.

⁹ See "Individual Direct Sellers and Their Characteristics – Seven Types of Salespeople" within *Comments of the Direct Selling Association On the Notice of Proposed Rulemaking for the Business Opportunity Rule*, filed with the Federal Trade Commission, Project No. R511993, July 17, 2006, pp. 13-14.

III. Consumer Fraud and How it Harms Society

The goodwill accorded to direct selling presents a convenient vehicle to unscrupulous operators. Consequently, consumer protection efforts have focused on identifying (and interdicting) those who merely pretend to be legitimate direct sellers. Because such fraudsters debase the goodwill and trust that legitimate direct selling has established with consumers, direct sellers also have a vested interest in rooting out such fraud (as witnessed by the codes of conduct promulgated by trade associations such as the Direct Selling Association).

The public interest in interdicting such consumer fraud has two substantive cornerstones. The first is that these frauds often have dispersed and disparate victims, so that no single victim may have enough at stake to pursue and police the fraud, even though the collective transfer from victims to the perpetrator(s) may be substantial.

The second is more subtle, but can have a bigger impact on welfare economics. It is the concern that widespread fraud chills economic activity that yields value to society.¹⁰ Our market-based economy hinges on individuals having the confidence to enter into mutually beneficial transactions. That confidence is a critical prerequisite to the realization of economic value that would otherwise remain latent. For example, legitimate direct selling yields value to all stakeholders. But, if fraud is so prevalent that consumers lack confidence in the products they are offered by direct sellers, they will shy away from engaging in even beneficial direct selling transactions. Likewise, if distributors cannot have confidence that direct selling enterprises are legitimate, they will not sign up to be distributors.

There is no doubt that fraud is deleterious to society, so that it should be interdicted when it is found. This conclusion is not in dispute. Rather, the question is how we should distinguish fraudulent from legitimate business activity. A test that claims to catch more fraud may also condemn legitimate businesses. In other words, increasing the rate at which we catch fraud can also increase the rate with which false positives are obtained. Just as tolerating fraud harms society, it also costs society to adopt an interdiction policy that chills legitimate direct selling activity. The trick is to balance the costs and benefits.

¹⁰ Economists refer to this as deadweight loss – an effect that has no benefit, and is purely “deadweight” to social welfare.

IV. Considerations Relating to the Identification of Pyramid Scheme Fraud

Consumer protection efforts relating to direct selling have focused on three types of frauds: pyramid schemes, Ponzi schemes and fraudulent misrepresentation. At first blush, identifying *what type* of fraud is being practiced may not seem relevant to the determination of *whether* fraud is being practiced. But, as we demonstrate below, projecting considerations relating to one type of fraud into the diagnosis of another type of fraud biases the inquiry into whether fraud occurred. Thus, discerning reliably whether fraud is being practiced requires the identification and clear delineation of different types of fraud and the mechanisms through which they are effectuated.

Moreover, while all fraud is illegal, all frauds or deceptive acts are not equally injurious. In this regard, pyramid fraud is dealt with particularly stringently because the very design of a pyramid scheme leads many participants to lose money. But, precisely because an enterprise is condemned summarily once it is deemed a pyramid scheme, one must be particularly careful about false positives when characterizing enterprises as pyramid schemes.

Pyramid schemes are best understood through the metaphor of a chain letter. In the classic chain letter scheme, individuals are recruited into the scheme upon the payment of an entry fee to their sponsor. They recoup their entry fee by recruiting new members, each of whom gives them an entry fee (as their sponsor). Thus, in a classic chain letter/pyramid scheme, an individual transfers money up-front to his sponsor, and obtains authorization to solicit transfers from new recruits.

The pyramid nomenclature rises naturally from tracing the chronological development of membership in the enterprise. The founder is at the apex, and the first tier is composed of the individuals he recruited. The next tier is composed of the individuals recruited by those in the first tier, and is anticipated to be broader than the first tier (as each member recruits several new members). And so on, with each tier getting broader in proportion to the extent to which incumbents recruit new members.

The problem is that if a classic pyramid scheme functions as designed, i.e. each member recruits multiple new members, at some point the scheme runs out of people to enroll as new members. The last cohort to enter the scheme is then unable to recoup its entry fees. It is for

this reason that pyramid schemes are held to be illegal and fraudulent. Whether it is due to market saturation, or even simply because population is finite, the base of the pyramid cannot keep expanding forever (as it must in order to deliver the promised profits).

From the perspective of welfare economics, the problem with a pyramid scheme is that at their core, the transactions defining the scheme are simply transfers of money from one individual (at a lower level of the pyramid) to another individual (at a higher level of the pyramid). That is to say, this is not a case of taking inputs that cost \$X and transforming them through innovation and effort into a product for which consumers are willing to pay more than \$X. No meaningful incremental value is generated or delivered in the course of pyramid scheme transactions.¹¹

This insight is central to discerning whether a given enterprise is a pyramid scheme.

The key diagnostic for a pyramid scheme is whether the transactions defining the commercial enterprise yield incremental value to society.

Ponzi schemes are perhaps even better known than pyramid schemes. Even though they are conflated routinely with pyramid schemes, they are an entirely different type of fraud. The (notorious) recent example of Bernard Madoff illustrates a classic Ponzi scheme. An individual gathers funds from others, promising to invest them in an opportunity that will yield extraordinary returns. The illusion that the perpetrator really does have access to an extraordinary investment is often created by providing rich returns to some investors. But in fact, there is no such investment. The perpetrator intends simply to steal the funds that he gathers.

Thus, discerning a Ponzi scheme involves two key diagnostics. The first issue is whether there actually is an investment yielding the claimed returns. The second issue is whether that investment actually yields returns that are large enough to redeem the returns promised to each investor, or whether the redemptions are just a matter of robbing Peter to pay Paul.

¹¹ The transfer of funds without delivering meaningful value is fundamental to a pyramid scheme. Yet, as the Ninth Circuit noted in *BurnLounge*, it is possible that sales to distributors do not lead to legitimate consumption. Rather, these transactions might be window dressing to conceal a pyramid scheme. Nevertheless, even if a pyramid scheme adopts the sale of purportedly legitimate goods or services as window dressing (as the FTC determined was the case in the matter of Koscot and the Ninth Circuit did in the matter of *BurnLounge*), court decisions confirm that a Potemkin village will be evident as such upon inspection. If that is the concern, the inquiry should simply focus directly on this question.

This insight highlights the differences between pyramid and Ponzi schemes.¹² The former requires participants to recruit so as to transfer funds from new members. In contrast, a Ponzi scheme doesn't involve members recruiting new members. It is simply a matter of one individual stealing from the rest, and occasionally redeeming the investment of one victim with funds stolen from another victim.

Finally, the third type of fraud that has been the focus of consumer protection efforts is the fraudulent misrepresentation of a business opportunity. Misrepresentation is critical to any fraudulent enterprise, because it is necessary to misrepresent the truth in order to induce consumers to give their money to someone who intends to steal it. Nevertheless, even the knowledge that misrepresentation occurred is insufficient to conclude that more serious fraud was taking place.

Without condoning the act of fraudulent misrepresentation in any manner, it bears note that even if deception was utilized to induce someone to pay a higher price for something, this does not necessarily mean that a pyramid scheme is in progress. A pyramid scheme refers to a specific type of fraud, and a particular means of propagating that fraud, that have been deemed intrinsically injurious to society. Invoking the summary condemnation that is accorded to pyramid schemes in order to “crack down” on other fraud dilutes ultimately the gravity accorded to pyramid schemes.

¹² While it may be the case that a particular fraudulent enterprise involves both Ponzi and pyramid schemes, the aspects of the enterprise that indicate a pyramid scheme (i.e. recruits transfer funds to incumbents without receiving meaningful value) differ from those that might indicate a Ponzi scheme (outflows are simply funded by inflows, because no investment actually exists).

V. Vander Nat & Keep's Approach to Pyramid Schemes and "Internal Consumption"

To support their singular focus on sales to third parties, Drs. Vander Nat and Keep begin by citing to *Koscot*. However, they quickly shift their attention to *Omnitrition*, a court decision that they describe as “pivotal” (p. 142, V&K). Drs. Vander Nat and Keep endorse, and use as the launching point for their subsequent arithmetical manipulations, a legal argument that is premised on *Omnitrition*'s misinterpretation of *Koscot* to the effect that (a) an enterprise is a pyramid scheme unless it sells to ultimate users and (b) only sales to unaffiliated third parties qualify as sales to ultimate users (or alternatively, “retail sales”).

While we examine *Koscot* and *Omnitrition* below,¹³ it bears immediate note that *BurnLounge* rejects explicitly the premise underlying the V&K paper: “[the] FTC [’s contention in this case] that internal sales...cannot be sales to ultimate users consistent with *Koscot*...is [not] supported by the case law” (*BurnLounge*, p. 18; internal quotations omitted).

In *Koscot*, the FTC concluded that *Koscot*'s claimed legitimate selling activities were simply window dressing to conceal a pyramid scheme. For example, *Koscot* required participants to purchase significant product on a non-refundable basis.¹⁴ Importantly, the FTC found that, at times, *Koscot* had literally no product to sell – i.e. it required non-refundable

¹³ It is interesting to note that the V&K paper barely refers to *FTC v. Amway*, a seminal 1979 FTC decision on the subject of distinguishing pyramid schemes from legitimate businesses. There is good reason to not overstate, and thus misinterpret, the *Amway* decision. *Amway* was found to be a legitimate business because *inter alia* it required its distributors to comply with certain sales practices (e.g. sell to at least 10 unrelated third-parties each month, and resell 70% of their orders), and because it offered to refund 90% of distributors' unsold purchases. Subsequently, *Amway* has been misinterpreted as indicating that a business is a pyramid scheme unless it hews to the so-called “10-customer” and “70%” rules. As a matter of logic, a business is not necessarily a pyramid scheme just because it fails a condition sufficient to establish legitimacy. On the other hand, the V&K paper elides a deeper consideration of *Amway* (in favor of *Omnitrition*) simply because it had already adopted the position that sales to third parties are the only legitimate activity of a direct selling enterprise and as both *Omnitrition* and the V&K paper note, the *Amway* considerations do not guarantee that all, or even a large portion of, sales are made to third parties. The fact that *Amway*, and other direct selling organizations, have been deemed legitimate even though their distributors enjoy internal consumption makes it all the more remarkable that, notwithstanding occasionally paying lip service to the alternative, Drs. Vander Nat and Keep assert that the only legitimate transactions of a direct selling enterprise are those made to third parties.

¹⁴ See *Koscot*, p. 1109. The requirement of meaningful, non-refundable, up-front purchases can be interpreted as an entry fee for new participants. Requiring parent firms to refund distributors' unsold or unused orders offers relief from these concerns. Yet, assuming that parent firms comply with this requirement, it must also be recognized that the refund requirement enables distributors to effectively transfer risk from their businesses to the parent firm. This distorts incentives and introduces inefficiencies.

purchases from participants and delivered literally no product in return.¹⁵ Nor did Koscot's communications with participants indicate that it engaged in any effort to sell products.¹⁶ Statements by the parent firm rejected explicitly expending resources on efforts to sell product, in favor of directing those resources toward recruiting new participants.¹⁷ Finally, the founder of Koscot was reported to have declared that he would start new pyramid schemes faster than law enforcement could shut them down.¹⁸

Notwithstanding its claims to the contrary, there were significant indications that Koscot met the key hallmark of a pyramid scheme: funds were transferred from recruits to incumbents without the provision of meaningful value (there was literally no product in many time periods). In its order seeking to interdict the fraud, the FTC targeted the transfer of funds and so prohibited Koscot from making payments to participants except where "payment [is] based on actually consummated sales of goods or services to persons who are not participants in the plan or program and who do not purchase such goods or services in order to participate in the plan or program".¹⁹

The FTC determined that Koscot had engaged in "inventory loading", i.e. a scheme to conceal the transfer of funds from recruits to incumbents in which recruits are charged for unsalable, or even non-existent, product. Thus, the FTC allowed Koscot to pay bonuses to participants only to the extent that it could prove that their purchases were subsequently resold to third parties.²⁰

¹⁵ See *Koscot*, pp. 1136, 1139, 1143, and 1144.

¹⁶ See *Koscot*, pp. 1140, 1144, 1148 and 1149.

¹⁷ See *Koscot*, pp. 1150 and 1152.

¹⁸ See *Koscot*, p. 1152.

¹⁹ See *Koscot*, pp. 1168-1169.

²⁰ Thus, the FTC noted that "while the order prevents [Koscot] from requiring an initial payment for participation in a plan, it does not prevent participants from making initial inventory purchases if they so desire. Thus there remain incentives for indiscriminate recruitment by headhunters....By requiring that compensation for recruitment be based in all cases upon retail sales by those recruited, the order provides a readily monitored means to ensure that recruitment of distributors is based on market demand" (see *Koscot*, p. 1184).

Omnitrition also begins with the understanding that the key consideration in discerning whether a pyramid scheme is in progress is to determine whether meaningful value is delivered in exchange for the funds that are transferred from recruits to incumbents.²¹

The court expressed a concern that, regardless of the fact that it claimed to be engaged in the legitimate retail sale of products, *Omnitrition* was actually engaged in nothing more than "inventory loading" to perpetrate a pyramid scheme.²² More pointedly, the court indicated that *Omnitrition* had been unable to rebut the concern that inventory loading was being used to perpetrate a pyramid scheme.²³

It is important to note that in *Koscot*, the FTC did not look to the existence of third party sales as a means of detecting whether a pyramid scheme was in progress. Rather, after having found that *Koscot* was a pyramid scheme, it limited the payments that *Koscot* distributors could receive to commissions realized on consummated third party sales. In other words, the banning of payments for anything other than commissions on sales made to third parties was an attempt to fence-in a known fraudster, as contrasted to an attempt to determine whether a fraud was being practiced. That is to say, the focus on third party sales defined a safe-harbor within which even a known fraudster such as *Koscot* could operate.

In contrast, the V&K paper and *Omnitrition* focus on third party sales as a *diagnostic* for whether the enterprise was legitimate.²⁴ As we discuss further below, the fallacy inherent in

²¹ "The Federal Trade Commission has established a test for determining what constitutes a pyramid scheme. Such contrivances are characterized by the payment by participants of money to the company in return for which they receive (1) the right to sell a product and (2) the right to receive in return for recruiting other participants into the program rewards which are unrelated to sale of the product to ultimate users... The satisfaction of the second element of the *Koscot* test is the sine qua non of a pyramid scheme" (see p. 2, *Omnitrition*; internal quotation marks omitted).

²² "[C]ompensation is facially unrelated to the sale of the product to ultimate users because it is paid based on the ...amount ordered from *Omnitrition*, rather than based on actual sales to consumers... In other words, the people buy exorbitant amounts of products that normally would not be sold in an average market by virtue of the fact that they enroll, get caught up in the process" (see p. 3, *Omnitrition*; internal quotation marks omitted).

²³ "To rebut the pyramid allegations, *Omnitrition* relies heavily on *In re Amway Corp.*...in which the FTC found *Amway* was not a pyramid scheme because its policies prevented inventory loading and encouraged retail sales... *Omnitrition* argues that its formal adoption of policies similar to *Amway's* was sufficient to support summary judgment. We disagree... Where, as here, a distribution program appears to meet the *Koscot* definition of a pyramid scheme, there must be evidence that the program's safeguards are enforced and actually serve to deter inventory loading and encourage retail sales. In *Amway*, the ALJ made that crucial finding of fact, after a full trial... Our review of the record does not reveal sufficient evidence to establish as a matter of law that *Omnitrition's* rules actually work" (see pp. 3-4, *Omnitrition*).

²⁴ The court found that whereas *Omnitrition* had claimed that it should be found to be a legitimate enterprise because it had adopted the criteria that the FTC had earlier found sufficient to accept that *Amway* was a legitimate direct selling

equating “ultimate users” with “third parties” is exposed upon recognizing that not all ultimate consumers are third parties: distributors who consume the product are also ultimate consumers of the product. Yet, both *Omnitrition* and the V&K paper deem summarily (and incorrectly) as pre-textual and illegitimate transactions in which the distributor also happens to be the consumer (i.e. internal consumption).

Even though the attempt to equate “ultimate users” and “third parties” fails as a matter of logic and as a matter of empirical inquiry, the V&K paper defends this approach by claiming that it applies simply what it characterizes as accepted legal doctrine. But *BurnLounge* negates even this attempted rationalization: “[W]hen participants [buy product] ... for internal consumption...participants [a]re the “ultimate users” of the merchandise and ... this internal sale alone does not make [the enterprise] a pyramid” (*BurnLounge*, p. 19). The Ninth Circuit also made clear the relevance of this point: “if internal sales do not count as sales of products to ultimate users for the purposes of calculating rewards, then many legitimate [direct selling enterprises] will be incorrectly characterized as pyramids” (*BurnLounge*, p. 18).

As the *BurnLounge* court noted, this matters because internal consumption is not a trivial issue. Almost all direct sellers are reported to engage in such internal consumption,²⁵ and surveys of distributors indicate that internal consumption accounts for about one-fifth to one-third of direct sales.²⁶ Ignoring the social welfare (and profit streams) generated by a sizeable portion of direct selling biases the conclusions one might reach.

enterprise, the reality was that Omnitrition had not actually practiced or enforced those rules of conduct. That is to say, the court found that Omnitrition claimed innocence by appealing to abstract rules that were never put into practice, while it was actually guilty in the specifics (by engaging in inventory loading). But yet, in misinterpreting *Koscot's* reference to third party sales, the court promulgated erroneously the abstract (i.e. every enterprise's sale to a distributor was judged illegitimate regardless of whether it was legitimately consumed by the distributor) due to a specific circumstance, i.e. simply because there was evidence that Omnitrition had engaged in inventory loading).

²⁵ "Legitimate Direct Selling vs. Illegal Pyramid Schemes: A White Paper", Direct Selling Association, p. 4.

²⁶ *Ibid*, citing to the 2002 National Sales Force Survey; 2008 National Sales Force Survey, Direct Selling Association, p. 72.

VI. Economic Analysis of Vander Nat & Keep

A. Overview

In the title of their paper, Drs. Vander Nat and Keep²⁷ claim to present "An Approach for Differentiating Multilevel Marketing from Pyramid Schemes". Dr. Vander Nat has cited to this paper repeatedly in his expert testimony on pyramid schemes. The V&K paper and Dr. Vander Nat's expert declarations in prior matters are distributed on a website created by a prominent short-seller to convince investors to sell their stock in Herbalife, a direct selling enterprise.²⁸ Dr. Keep maintains an active presence on the internet,²⁹ at which he discusses pyramid schemes and refers to the V&K paper and the cases in which he and Dr. Vander Nat have testified.³⁰

Below, we present a critical evaluation of the V&K paper and Dr. Vander Nat's expert testimony on behalf of the FTC in pyramid cases. Notwithstanding its title, the V&K paper does not offer an economic analysis of how to distinguish a pyramid scheme from a legitimate direct selling enterprise. Instead, it performs arithmetic to implement the now rejected legal argument that it describes as the "retail sales criterion". The V&K paper assumes that only sales to third parties are legitimate, and it does so without economic analysis or discussion, regardless of the logical indefensibility of the assumption, and contrary to subsequent legal rulings repudiating this approach. Consequently, while it claims that its "contribution lies in offering, for the first time, an objective means of measuring the importance of retail sales to [direct selling enterprises]" (V&K, p. 144), it actually compares biased estimates of the parent firm's cash inflows and outflows in an effort to determine whether a firm is generating

²⁷ Dr. Vander Nat was employed by the Federal Trade Commission's Bureau of Economics, and has testified repeatedly as an expert economist on behalf of the FTC in cases involving allegations of pyramid schemes. Dr. Keep is a professor of marketing at The College of New Jersey, and has also testified in conjunction with pyramid scheme cases.

²⁸ See <http://factsabouth Herbalife.com/category/legal-and-sec-filings/federal-and-state-case-law/> and <http://factsabouth Herbalife.com/category/legal-and-sec-filings/ftc-reading-materials/>, accessed on December 5, 2013.

²⁹ See <http://seekingalpha.com/author/william-keep/articles>, accessed on December 1, 2013.

³⁰ Dr. Keep is reported to have discussed these issues with various hedge funds interested in the movement of Herbalife's stock price (see <http://online.wsj.com/news/articles/SB10001424127887324324404579045083805583854> accessed on December 1, 2013 and <http://www.reuters.com/article/2013/08/30/us-herbalife-professor-hedgefunds-idUSBRE97T02B20130830>, accessed on November 23, 2013). At the same time, he is also reported to have stated that he is not consulting with investors in case he is called upon to testify in court on a pyramid scheme (see <http://www.njbiz.com/article/20130110/NJBIZ01/130119980/TCNJ-dean-keeps-eye-on-Herbalife-kerfuffle> accessed on November 23, 2013).

sufficient "legitimate" profit to "fund" the payments to its distributors (as do Dr. Vander Nat's expert testimony and Dr. Keep's public comments). Drs. Vander Nat and Keep thus (a) conflate pyramid schemes with Ponzi schemes; (b) use biased calculations; and (c) fail to ask why over-rides are paid and fail to discern the link between over-rides and internal consumption.

B. Failures

What Drs. Vander Nat and Keep offer in their paper is merely arithmetical manipulation of a parent firm's (mis)estimated cash flows. This is distinct from economic analysis. Critically, the V&K paper never addresses the key characteristic that distinguishes a pyramid scheme from legitimate direct selling: does the enterprise merely transfer funds or does it provide something of value?

The focus of the V&K paper on who buys what is not germane to the central question relating to pyramid fraud. Consequently, the V&K paper does not advance meaningfully our understanding of how to detect whether a pyramid scheme is in progress. Even as it claims to follow *Koscot* and *Omnitrition* (in manners that are contrary to subsequent rulings by the courts), the V&K paper ignores the fact that both those courts sought, and found, significant direct evidence that a pyramid scheme was in progress. For example, there were no actual products (*Koscot*) and there was no evidence that the *Amway* codes of conduct were actually being practiced (*Omnitrition*).

So what does the V&K paper actually do?

1. Implements Mechanically the Now Rejected "Retail Sales Criterion"

The V&K paper lays out a brief series of conceptually simple and highly stylized calculations that can be used to implement mechanically a legal argument that they call the "retail sales criterion". Specifically, they estimate the portion of a parent firm's payments to distributors that can be "funded" by profits associated with sales to third parties. (The argument that only sales to third parties are legitimate has recently been rejected by the courts.)

Drs. Vander Nat & Keep specify certain basic parameters, such as the costs of production, the wholesale price, the retail price, the percentage of sales made to third parties

and total “upline rewards”. The core of the V&K paper presents a series of calculations that describe when over-rides paid by the parent firm (“upline rewards”) are either so low relative to the values of the other parameters that they deem the enterprise “legitimate”, or are so high relative to the values of the other parameters that they assert that the enterprise relies entirely, or “primarily”, on recruitment rather than "retail sales" to "fund" these payments.

The distinguishing characteristic of the V&K paper is its singular focus on the magnitude of “upline rewards” and sales to third parties, i.e. the legal argument they present as the “retail sales criterion”. Yet, a meaningful economic analysis of the issue should not simply and mechanically perform calculations taking a particular legal argument as given. An important principle of consumer decision theory in economics, called “revealed preference”, provides the simple, but powerful, insight that if someone chose to buy something for \$X, they must have received at least \$X worth of satisfaction from that purchase. Drs. Vander Nat and Keep discard this axiom of economics, and assert that while a third party’s purchase from the enterprise leads to the realization of social welfare (the sum of consumer surplus and profits),³¹ exactly the same purchase made by a consumer who is identical to the third party except for the fact that she is affiliated with the enterprise, yields no consumer surplus and no (wholesale) profits.

It is indefensible to hold worthless the consumer surplus of some individuals (in this case, distributors). It is inescapably true that the consumer surplus of distributors has merit, particularly when it comes to the question of whether the sales of a direct selling enterprise are pre-textual cover for a pyramid scheme. Dropping evidence that a direct selling enterprise yields consumer surplus simply assumes the conclusion and thus biases the inquiry into whether a pyramid scheme is in progress.

The solution to the legitimate concern about inventory loading in a pyramid scheme is not to impose a blanket ban on the ability of some consumers (viz., distributors) to purchase and consume, from legitimate businesses, products that they value and desire. A better approach is to determine factually whether a parent firm’s sales to distributors are legitimate. Are distributors either reselling or consuming their purchases? If distributors are found to be

³¹ See Walter Nicholson, Microeconomic Theory (Eighth Edition). Southwestern/Thomson Learning. 2002. pp. 139-143 for a discussion of consumer surplus, and pp. 402-416 for a discussion of social welfare.

consuming the purchases that they do not re-sell, rather than simply "inventory loading", it has to be acknowledged that the parent firm's sales to distributors generate consumer surplus, just as they would if third parties had consumed the product.

It is also important to recognize that the identity of the (legitimate) ultimate consumer does not affect the amount of profit that a parent firm makes on a given sale. The parent firm earns profits based on the difference between the wholesale price at which it sells to its distributors and the costs it incurs to produce (or otherwise procure) the product. Yet, Drs. Vander Nat and Keep dismiss not just the consumer surplus generated by internal consumption, but also the profits generated by legitimate internal consumption.

Ignoring the parent firm's profit from the legitimate sale of products consumed by distributors underestimates systematically the amount of "legitimate" money available to the parent firm to "fund" its payments to distributors.³² Thus, their summary dismissal of internal consumption interacts with their erroneous use of cash-flow calculations and biases them in favor of finding that the parent firm profits only (or primarily) from obtaining transfers from new distributors, rather than through selling them its products.

Drs. Vander Nat and Keep's assumption that internal consumption is illegitimate leads them to conclude that certain commissions paid to distributors are simply elements of a pyramid scheme.³³

Instead, consider an alternative interpretation that is reasonable, empirically validated, and conforms fully to the fundamental axiom of economics that transactions entered into of free will, and bereft of fraud, yield value to all parties to the transaction.

Suppose that distributors join a direct selling enterprise simply because the costs of doing so are minimal, and by joining they are able to purchase for themselves (and perhaps

³² Because they are assumed to be unrelated to legitimate sales that yield profit to the parent firm, in the V&K paper's construction, over-rides earned by distributors tip the scales toward reaching the conclusion that the enterprise is a pyramid scheme. Also, note that at the same time that they discard entirely the revenues associated with internal consumption, when they compute the parent firm's profits, Drs. Vander Nat and Keep continue to deduct from total revenues the production costs of sales for internal consumption, thus lowering further their estimate of the "legitimate" cash flows available to the parent firm to fulfill commission payments to its distributors (see equation 2 in the V&K paper).

³³ If distributors' unsold and unconsumed purchases are refunded when they leave the enterprise, so that distributors' "excess" purchases do not yield profits to the parent firm, it is difficult to see how a parent firm can profit by practicing inventory loading or by "issuing bonuses" to recruit distributors who neither consume nor resell the product.

their circle of relatives and acquaintances), at a wholesale price, products that they value. Suppose further that the wholesale price is greater than the manufacturing cost, so that these wholesale purchases by distributors yield profit to the parent firm. Because the parent firm can expect to earn incrementally (and legitimately) profits when it succeeds in attracting a new distributor who buys product for “internal consumption”, it is economically rational for the parent firm to provide an incentive to its existing distributors to leverage their personal networks and engage in efforts to recruit new distributors.

Thus, commissions paid to distributors on the sales made by their recruits are not necessarily simply the transfer of funds from entrants to incumbents in a pyramid scheme. Rather, they can represent perfectly legitimate means of conducting business, and can reflect the fact that distributors are able to share in the value that they add (legitimately) to the enterprise through their consumption of its products.

2. The Logical Failure at the Heart of Vander Nat & Keep

It is important to recognize that Drs. Vander Nat and Keep reject internal consumption not as a result of economic or empirical analysis, but rather, as a matter of failed logic. We identify the critical logical failure below.

It is indisputable that a stylized fact at the heart of every pyramid scheme is that it transfers money from one member to another, without delivering meaningful value to those from whom it takes money.³⁴ Thus, a pyramid scheme engages in no more than minimal legitimate sales of product to anybody, including to third parties.

As a statement of logic:

If there is a pyramid scheme → Sales to third parties are minimal

As with any true statement, we can also conclude that its contrapositive is true. Thus, as a matter of logic, we can also conclude that:

If sales to third parties are not minimal → There is not a pyramid scheme

³⁴ The fact that the transaction does not yield meaningful value is critical to the determination that a fraudulent pyramid scheme was in effect. Without this modifier, every commercial transaction would satisfy the definition of a pyramid scheme, because it does transfer money from one person to another.

The latter logical statement is the foundation of *Koscot's* construction of third party sales as a safe harbor.

But Drs. Vander Nat and Keep have erred, and have mistaken the logical inverse for the logical contrapositive.

Thus, they assert erroneously that the statement:

If there is a pyramid scheme → Sales to third parties are minimal
also means that the inverse is true:

If sales to third parties are minimal → There is a pyramid scheme.

The error in confusing necessary conditions and sufficient conditions is illustrated in the following example. It is undisputed that all zebras are striped animals. But does that mean that all striped animals are zebras? No. Because tigers (and skunks) are striped, and tigers are not zebras (nor are skunks). It is necessary to have stripes to be a zebra, but having stripes is not sufficient to be a zebra.

Similarly, making minimal third party sales may be necessary to a pyramid scheme, but making minimal third party sales is insufficient to conclude that a pyramid scheme is present. (The counter-example is internal consumption.)

3. Fails to Analyze the Economics of "Upline Rewards"

While the V&K paper focuses keenly on the magnitude and funding of "upline rewards", it does so without considering the economics of why "upline rewards" exist. Not surprisingly then, Drs. Vander Nat and Keep view "upline rewards" as inherently suspicious and fraudulent. Yet, upon examining incentives, it is evident that "upline rewards" represent a crucial economic instrument through which the parent firm can align properly its distributors' incentives.

Direct sellers often sell to a network of family, friends and acquaintances.³⁵ Some of the individuals within a given circle may be interested in starting their own circles.³⁶ Because he

³⁵ 87% of distributors responded to the question "Who do you approach to find new customers?" with "friends and neighbors." Direct Selling Industry 2013 National Sales Force Study (Final, January 20, 2014), p. 30.

³⁶ 75% of distributors responded to the question "Who do you recruit?" with "current customers", Direct Selling Industry 2013 National Sales Force Study (Final, January 20, 2014), p. 41. Similarly, 66% of distributors indicated that they had used the

stands to lose some of his commissions when one of his existing customers becomes a direct seller, *ceteris paribus*, an incumbent distributor does not have the incentive to encourage his customers to become direct sellers themselves. Yet, as long as each individual does not have perfectly overlapping circles, it is in the parent firm's interest to have these individuals create their own circles (because it yields incremental revenues and profits to the organization).

Suppose that each new distributor circle generates \$1,000 in incremental profits to the parent firm and suppose that an incumbent distributor stands to lose \$500 in commissions when one of his existing customers creates her own circle. It is obviously in the parent firm's interest to encourage an existing ultimate purchaser to create her own circle – the parent firm's profits increase by \$1,000 when this happens. But, because the incumbent distributor will lose \$500 in profits, he will not encourage his customers to start their own circles.

There is a way to reach the efficient outcome.

The parent firm can pay the incumbent distributor to compensate him for the loss in the distributor's profits when one of his customers leaves to begin her own circle (presumably, this is what Drs. Vander Nat and Keep characterize as a "recruitment bonus"). As long as the parent firm gains more in profits from the start of a new circle than the incumbent distributor loses at the start of a new circle (i.e. $\$1,000 > \500), the parent firm can "make whole" the incumbent distributor and still realize incremental profits.

Alternatively, suppose that a distributor earns a commission of 20% on sales that he concludes himself. Suppose further that he would be able to make 25% of the sales of each of his recruits (i.e. one-fourth of the recruit's circle overlaps with the incumbent distributors' circle). Rather than putting itself in the position of having to adjudicate which of tens of thousands of transactions would have been concluded by pre-existing distributors and which by recruits, the parent firm can offer pre-existing distributors a commission of 25% of 20%, or 5%, on all the sales of their recruits. This would "make whole" the revenue lost by the pre-existing

company's products before they began representing the company, Direct Selling Industry 2013 National Sales Force Study (Final, January 20, 2014), p. 15.

distributor when he recruits a new distributor from his customer base, and so aligns his incentives with those of the parent firm.³⁷

Thus, contrary to Drs. Vander Nat and Keep's characterization of over-rides as recruitment bonuses or transfers of funds that are the hallmark of pyramid schemes, there are benign economic reasons underlying the existence of over-rides, i.e. commissions paid to distributors on sales made by their recruits. In fact, we would have inefficient outcomes (that is to say, social welfare would be lower) without those over-rides. In the jargon of the economic analysis of incentives, over-rides are critical to satisfying the incentive compatibility constraints required to induce distributors into taking socially efficient actions. Yet, Drs. Vander Nat and Keep assume that all over-rides (or, in the parlance of the V&K paper, "upline rewards") are suspicious, and focus on measuring the "allowable" metes and bounds of "upline rewards", without ever inquiring into why they exist in the first place.

4. Contradicted by Its Own Numerical Example

An example extracted directly from the V&K paper (see the final row of Table 2) illustrates that Vander Nat and Keep's conclusions hinge critically on their (invalid) assumption that internal consumption is illegitimate. In the example constructed by Drs. Vander Nat and Keep, a parent firm earns \$40 in revenues from sales to third parties and incurs \$40 in production costs (including the production costs associated with the 60% of its output that is not sold to third parties) and direct commissions. Because total costs exactly equal "retail revenues", in the V&K framework no "legitimate" funds are available to disburse "upline rewards". But, the example in the V&K paper fails entirely to account for profits earned by the parent firm from legitimate sales to distributors for their internal consumption. Consequently, Drs. Vander Nat and Keep conclude that any "upline reward" made in this situation would be sufficient to conclude that this is a pyramid scheme.

³⁷ As in the prior example, this assumes that the parent firm earns a manufacturing margin greater than 25%, so that its profits increase even after paying a direct sales commission of 20% and an over-ride of 5%.

Yet, in their example, the parent firm makes \$48 worth of wholesale sales to distributors on product that cost only \$19.20 to manufacture. If distributors made these purchases to consume them, i.e. for internal consumption, they would yield a legitimate profit of \$28.80 to the parent firm.³⁸ By comparison, the “upline reward”, or the payment to distributors that is not due to commissions on their direct sales to unrelated third parties, is \$24. It is reasonable to think of the \$24 in “upline rewards” as a commission for legitimate sales that generated \$28.20 worth of profits. To be clear, the parent firm in the example constructed by Drs. Vander Nat and Keep is generating more legitimate wholesale profit from sales to distributors (\$28.80) than it is paying out to distributors in “upline rewards” (\$24). Even though it is both legitimate and economically rational for the parent firm to pay up to \$28.80 in “upline rewards” (or wholesale commissions), the V&K paper ignores (by assumption) the \$28.80 in wholesale profits from "internal sales" and condemns the enterprise as a pyramid scheme if it pays even a penny in “upline rewards”.³⁹

It is ironic that in the name of championing consumers, the V&K paper takes objection to the parent firm rebating some of its legitimate profits to purchasers and consumers.

The problem here is that the V&K paper assumes that all internal consumption is illegitimate. This assumption is in contradiction to the known facts that almost all distributors consume some of their purchases and that internal consumption accounts for a meaningful fraction of parent firms’ business.⁴⁰ It is also at odds with *BurnLounge*. As a result, the V&K paper simply does not investigate direct selling as it actually materializes in the real world, nor

³⁸ Drs. Vander Nat and Keep expoit their example by stating that “[w]e think of product as being bought by the distributors in units called “packages” (p. 145, V&K). In the example from the V&K paper, W , representing the wholesale price of a “package” sold by the parent firm to distributors is set at \$80. At the same time, f , the cost of producing a “package” (expressed as a percentage of the wholesale price), is set at 40%. On p. 145, the V&K paper indicates that the total production costs *for the entire “package”* (i.e., the total sold by the parent firm to the distributor regardless of whether the distributor sells a portion or all of the “package” is sold to third parties) equals $f*W = 40\%*\$80 = \32 . In the last example on Table 2 (p. 146), 40% of the product is sold to third parties, so that 60% is sold to distributors at wholesale prices for internal consumption. Thus, the production cost for the amount sold to distributors for internal consumption is \$19.20 ($60\%*\32). The parent firm’s revenues from distributors’ purchase of product for internal consumption is \$48 ($60\%*\80). Thus, the profits to the parent firm from internal consumption are \$28.80 ($\$48-\19.20).

³⁹ To be clear, because V&K has already deducted the \$19.20 in costs associated with production sold to distributors, if the sales to distributors were for legitimate “internal consumption”, the parent firm has \$48, rather than \$0, of “legitimate revenues” that are in excess of its costs.

⁴⁰ “Legitimate Direct Selling vs. Illegal Pyramid Schemes: A White Paper”, Direct Selling Association, p. 4. 2008 National Sales Force Survey, Direct Selling Association, p. 72.

does it conform to case law as corrected and clarified by *BurnLounge*. Its calculations throw away, without any justification whatsoever, a meaningful portion of a direct selling enterprise's legitimate profit in furtherance of concluding that it is a Ponzi scheme (mis-identified in the V&K paper as a pyramid scheme).

5. Conclusion

Contrary to the claim made in its title, the V&K paper does not conduct a meaningful economic analysis of how we can discern a legitimate direct selling enterprise from a pyramid scheme. The first course of action in constructing a test to differentiate legitimate from fraudulent enterprises is to identify the appropriate criterion for the test to implement. Because the hallmark of a pyramid scheme is the transfer of funds from recruits to incumbents without providing meaningful value, determining whether the enterprise provides meaningful value (i.e. consumer surplus) should assume a central role in determining whether an enterprise is a pyramid scheme. Instead, the V&K paper revolves around the identification and quantification of who buys what.

The V&K paper goes further astray by constructing a biased test to implement an inapposite criterion. On the basis of a legal argument that it calls the "retail sales criterion", an argument that is flawed as a matter of logic and economics and that was recently repudiated by the courts, it discards the profits associated with legitimate internal consumption. Because this assumption lowers systematically their estimate of profits, and their test indicates the existence of a pyramid scheme when profits fall below certain levels, this assumption plays a critical role in biasing the arithmetic that is offered by Drs. Vander Nat and Keep.

In short, the test offered at the core of the V&K paper not only implements the wrong criterion, it does so in a way that is systematically biased in favor of indicating that a pyramid scheme is in progress. The generation of false positives in this manner bears the risk of condemning benign, welfare-enhancing activity.

VII. Dr. Vander Nat's Expert Testimony

In this section we examine the expert declarations that Dr. Vander Nat has filed in three pyramid scheme cases: Equinox, Trek-Alliance and Fortune Hi-Tech.⁴¹ We emphasize again that we do not evaluate the merits of the specific claims made by the litigants in these, or any other, alleged pyramid scheme cases. To be clear, this is not a study as to whether certain specific organizations that Dr. Vander Nat has characterized as pyramid schemes were actually pyramid schemes. Convincing factual evidence may well have been adduced at trial to support the allegations that these operations were pyramid schemes. We have not evaluated that evidence, and take no position as to the validity of such evidence. Rather, we evaluate the economic and logical reasoning that Dr. Vander Nat utilizes in reaching his opinions.

The errors in the V&K paper are transmitted to Dr. Vander Nat's expert declarations: all internal consumption is deemed illegitimate in a mechanical (and uncritical) application of their interpretation of a legal argument (the "retail sales criterion") that has now been rejected by the courts. More broadly, Dr. Vander Nat fails consistently to provide an economic analysis of the germane issues. For example, he does not consider consumer surplus as a measure of consumer welfare and offers normative assertions regarding what consumers *should* value rather than an economic analysis of what they *do* value.

Dr. Vander Nat conflates Ponzi and pyramid schemes, and makes indefensible assumptions (e.g. regarding the objectives of participants) that are contradicted by empirical observations and that bias his cash flow computations in favor of finding Ponzi schemes. Finally, Dr. Vander Nat uses estimates of distributor quit-rates (i.e. the rate at which existing distributors quit) to draw facile inferences as to whether fraudulent misrepresentations were made and whether those distributors were victimized. In short, Dr. Vander Nat's declarations present opinions and conclusions that are contrary to economic reasoning and do not stand up

⁴¹ Federal Trade Commission, et al., v. Equinox International Corporation, et al. Case no. CV-S-99-0969-JBR-RLH, United States District Court, District of Nevada, 1999. Federal Trade Commission v. Trek Alliance, Inc., et al. Case no. 02-9270, United States District Court, Central District of California, Western Division, 2002. Federal Trade Commission et al., v. Fortune Hi-Tech Marketing, Inc., et al. Case no. 13cv578. United States District Court, Northern District of Illinois, Eastern Division. 2013.

to empirical scrutiny. In the matter of Equinox, this culminated in Dr. Vander Nat arguably asserting that every direct selling enterprise must be an illegal pyramid scheme.

A. Applies Mechanically the Now Rejected “Retail Sales Criterion”

While Dr. Vander Nat offers his opinions to the relevant courts as expert economic analysis, his declarations fail to offer an economic analysis of how one might distinguish a pyramid scheme from a legitimate direct selling enterprise. Instead they apply uncritically a legal argument, the “retail sales criterion”, despite the fact that this argument fails as a matter of logic and economics, and has now been rejected explicitly by the courts.

On p. 7 of his declaration in the Trek-Alliance matter, Dr. Vander Nat opined to the court that if there are few “retail” sales (which he defined as sales to third parties) while members still receive commissions on the sales of their recruits, “the organization must certainly be a pyramid scheme.” As a matter of economics, common sense, and now case law, this opinion is simply incorrect. The counter-example is a parent firm that sells product to distributors for their own consumption. Dr. Vander Nat's blanket declarations fail to consider even the possibility that internal consumption is legitimate (see the Fortune Hi-Tech declaration, p. 8; the Equinox declaration, pp. 8, 10, and 21; and the Trek Alliance declaration pp. 2 and 26).

B. Fails to Conform to Basic Precepts of (Consumer) Economics

Dr. Vander Nat's declarations do not adhere to basic economic concepts regarding consumers. He fails to consider consumer surplus as a measure of consumer welfare. Dr. Vander Nat also fails to consider the principle of revealed preference, by which we must conclude that when a consumer willingly makes a legitimate purchase, she reveals that she expects her consumption value to exceed the purchase price. Consequently, Dr. Vander Nat's treatment of internal consumption is flawed as a matter of economics.

For example, on p. 6 of his declaration in the Fortune Hi-Tech matter, Dr. Vander Nat asserts that the injury to consumers was the sum of the payments made by distributors when they signed up with the enterprise. Dr. Vander Nat assumes that distributors did not obtain anything of value from their participation. That is to say, he assumes that they gained no

profits from resale, they realized no consumer surplus from internal consumption, and they did not gain an entry point into a new career or otherwise develop their human capital or acquire a network of new business connections.

The flaw in Dr. Vander Nat's logic is illustrated by the example of an individual who buys an item for \$100, consumes the product, and obtains \$300 worth of value from his consumption. The individual has plainly gained \$200 worth of consumer surplus – i.e. he obtained \$200 worth of value above and beyond what he paid. Indeed, that is why he paid \$100 for the product. But, according to Dr. Vander Nat's logic, upon paying \$100, the individual is simply, and summarily, injured to the tune of \$100.

In his declaration to the Equinox court, Dr. Vander Nat offered normative judgments as to which products consumers should be willing to purchase, and portrays these subjective opinions as economic truisms upon which one can conclude that a pyramid scheme was in progress. For example, on pp. 2-3 of his Equinox declaration, Dr. Vander Nat opines that Equinox could not possibly offer a bonafide retail selling opportunity because the list price of its products was substantially higher than that of other products that he believes to be functionally equivalent, so that no consumers would buy the product. This argument is also articulated on p. 2 of his Trek-Alliance declaration.⁴²

By Dr. Vander Nat's logic, we should never observe products selling at different prices. In this view, there is no differentiation of products, and higher priced products that he deems functionally equivalent to lower priced products would simply be driven out of the marketplace and never purchased. Yet, the argument that all functionally equivalent products can only be sold at the same price is fundamentally at odds with the real world, in which consumers often perceive apparently functionally equivalent products as differentiated and are willing to pay more or less for these products (e.g. brand-name vs. store-brand groceries).

Thus, on p. 13 of his Equinox declaration, one of the reasons why Dr. Vander Nat opines that Equinox must be a pyramid scheme is that he had concluded that there was no possibility

⁴² Here, as in other portions of this report, we speak not to the merits of whether Equinox, Trek-Alliance, Fortune Hi-Tech (or any other enterprise) is a pyramid scheme, but to the broader logical and economic ramifications of the arguments articulated by Dr. Vander Nat.

that Equinox distributors could earn retail commissions. The basis for this conclusion was the argument that consumers would never buy products at a retail markup above wholesale because, at a minimal cost, they could sign up as Equinox distributors and obtain products at the wholesale price. Thus, Dr. Vander Nat concludes that distributors could never make meaningful sales at the retail price.

Dr. Vander Nat assumes here that just because they can sign up as distributors, all ultimate consumers will choose to do so. (Consequently, and ironically, Dr. Vander Nat asserts that there should be widespread legitimate internal consumption – the very phenomenon that he simultaneously holds to be summarily illegitimate.) Yet, some customers may prefer to obtain service from their distributor.

Consider the fact that anyone who owns a car can drive to a pizzeria themselves to pick up their pizza. Pizza delivery customers (analogous to third party consumers) can go to the pizzeria themselves (analogous to signing up as a distributor) in order to obtain pizza (analogous to purchasing the product sold by the direct selling enterprise) without paying a delivery fee (analogous to the retail markup of a direct seller). Thus, according to Dr. Vander Nat's reasoning in Equinox, pizza delivery (analogous to direct selling) is inescapably fraudulent.

Yet, pizza delivery, even to car owners, is plainly a fact of everyday life. It is not fraudulent, and its practice yields value to all the parties. The pizzeria (parent firm) obtains a sale that it would have otherwise missed. Delivery customers (retail consumers) value the ability to have pizza brought to their doors more than the fee they pay to obtain that service. Finally, the pizza-delivery person (direct seller) earns income for providing this service.

None of these economic gains would be realized if Dr. Vander Nat's expert opinions held sway. A world governed according to Dr. Vander Nat's view of consumer economics would be impoverished relative to the world that surrounds us. Product differentiation, value-added services and business opportunities would all be diminished.

C. Performs Biased Calculations

1. Conflates Pyramid and Ponzi Schemes

Dr. Vander Nat's declarations echo the V&K paper's preoccupation with measuring the cash flows of the parent firm relative to the magnitude of sales to third parties. On p. 2 of his Fortune Hi-Tech declaration, Dr. Vander Nat focuses on the extent to which “bonus payments” are “unfunded”. Similarly, on p. 7 of his Trek-Alliance declaration, Dr. Vander Nat focuses on comparisons of the parent firm’s cash inflows and outflows, and on p. 9 he opines that if the parent firm's profits from sales to third parties are smaller than the “upline rewards” it pays out, “the organization must be a pyramid scheme”.

But, the question of whether payments made by the parent firm can be “funded” from legitimate business profits does not speak to whether we have a pyramid scheme. Moreover, as we have already seen, ignoring the profits that the parent firm earns from legitimate internal consumption by distributors introduces systematic bias into the conceptually flawed calculations.

Even if he is interested in comparing the cash outflows and inflows of the parent firm, Dr. Vander Nat needs to measure accurately all the actual (or expected) legitimate flows of cash into the parent firm relative to the magnitude of its cash outflows, instead of discarding the inflows (but not the outflows) associated with some legitimate sales (i.e. internal consumption). Instead, and in contrast to *BurnLounge*, the V&K paper does not recognize the manufacturing margin on internal consumption as legitimate profits available to fund the payouts made by the parent firm.

To be clear, Dr. Vander Nat conflates pyramid and Ponzi schemes, the effect of which is to bias his calculations by lowering artificially the parent firm’s estimated cash flows. At the same time, due to his singular focus on the magnitude of cash flows into and out of the parent firm, Dr. Vander Nat skirts entirely the key question regarding pyramid schemes, which is whether the only meaningful value participants obtain is through the transfer of funds from recruits to incumbents.

2. Makes Invalid Assumptions Regarding Distributors' Objectives

Dr. Vander Nat's cash flow calculations are premised on certain assumptions regarding the conduct of the participants. For example, Dr. Vander Nat makes assumptions regarding the extent to which each distributor will engage in direct selling and recruiting in order to estimate the magnitude of commissions and recruitment rewards that the parent firm will need to pay out (and "fund" from legitimate profits). In his Fortune Hi-Tech declaration, Vander Nat characterizes his assumptions as constituting an "optimal" scenario (*inter alia* at pp. 1, 2, 9, 10).

What Dr. Vander Nat actually assumes is that each distributor takes the actions required to maximize the cash payout that they obtain from the parent firm. But, as discussed earlier, distributors obtain value directly from their participation in the direct selling enterprise in at least three measures. They obtain consumer surplus from internal consumption, they earn the retail margin on sales to third parties and they are paid over-rides when they increase the profits of the parent firm by recruiting new distributors who purchase products (whether for internal consumption or for resale).

At p. 9 and in footnote 21 of his Fortune Hi-Tech declaration, Dr. Vander Nat seeks to justify his interpretation of "optimal" on the basis that economists assume that all individuals are rational and maximize their well-being – i.e. make optimal decisions. While this is true, it begs the question of what consumers are maximizing. Cash income, let alone over-ride based cash income, is just one of the avenues through which distributors obtain value from participating in direct selling. Consequently, Dr. Vander Nat makes a leap of logic when he assumes that utility maximization by direct sellers necessarily requires them to maximize their cash payout.

As it happens, his assumption is also rejected empirically. In fact, only 45% of distributors of direct selling enterprises that are members of the DSA indicate that they participate in direct selling because they want to make a significant amount of money.⁴³ Furthermore, data show that distributors spend a median of only 8 hours a week running their

⁴³ 2008 National Sales Force Survey of the Direct Selling Association, p. 51.

direct selling businesses.⁴⁴ 62% of distributors indicated that they continue to participate in direct selling in order to obtain products at a discount, 52% because they want to meet new people and widen their social circle, and 65% because direct selling gives them flexibility.⁴⁵

These data indicate that distributors participate in direct selling neither merely to recruit new participants nor merely to resell for a profit. Dr. Vander Nat's "optimality" assumption (and the resulting over-estimate of the parent firm's cash outflow), on which basis he concludes that a pyramid scheme is in existence, is thus at odds with the choices that distributors of DSA member companies have actually made and the preferences they have expressed. Because his assumptions over-state cash outflows, and under-estimate cash inflows, they are biased in favor of finding fraud.

D. Fails to Consider Benchmarks or Evaluate Counter-Factual Alternatives

The Direct Selling Association's 2012 Growth and Outlook Survey indicates that in 2012 direct selling distributors turned over at the rate of 52.4%.⁴⁶ Dr. Vander Nat's expert declarations (and Dr. Keep's public statements)⁴⁷ draw the facile inference that because distributors quit at a relatively high rate, they must have been defrauded. First, note that even if a business opportunity was fraudulently misrepresented, this does not imply that pyramid fraud was committed. This, and other, errors found in V&K, and the public statements and testimony of Drs. Vander Nat and Keep are recapitulated in the recent testimony (in the matter of Vemma) of Dr. Bosley, the FTC's new testifying expert economist with regard to pyramid fraud.

But, there is a deeper failure in logic and analysis here. Merely observing a high quit-rate is insufficient to conclude that any kind of fraud, let alone pyramid fraud, was at work.

⁴⁴ Ibid, p. 12.

⁴⁵ Direct Selling Industry 2013 National Sales Force Study (Final, January 20, 2014), p. 22.

⁴⁶ U.S. Direct Selling in 2012 | 2013 Growth & Outlook Report. Direct Selling Association. Appendix p. 7

⁴⁷ See <http://seekingalpha.com/author/william-keep/comments/symbol/hlf>, <http://www.cnbc.com/id/100542685>, <http://www.bloomberg.com/video/college-of-new-jersey-s-bill-keep-on-herbalife-qpkzHwo~R5CKDzLkwmaKKA.html>, (accessed on November 30, 2013) and <http://seekingalpha.com/article/3523496-vemmas-college-cheer-followed-by-investor-worry> (accessed on 10/5/2015).

Noting that a quit-rate is “high” begs the question of the benchmark against which the quit-rate should be assessed. While salespeople would turn over within even clearly legitimate direct selling enterprises, Drs. Vander Nat and Keep fail to consider the counter-factual quit-rate that should serve as a benchmark. If there was no direct-selling, what kind of employment would distributors obtain, and what quit-rates would they exhibit?

The Bureau of Labor Statistics produces data reporting the annual separation rate of employees in various sectors of the economy. It is reasonable to think that in the counter-factual, the direct selling distributors who quit direct selling at a relatively high rate would be likely to work in entry level sales and service positions in the retail trade or in the accommodation and food services sector. The annual separation rate in 2012 in the retail trade is reported at 45.4% and that in the accommodation and food services sector at 60.8%.⁴⁸ Thus, the 52% quit-rate of direct selling distributors is revealed to be consistent with benchmarks for what one might expect from this population even if they did not engage in direct selling.

Furthermore, a quit-rate of 52% is not surprisingly high given the economic context in which it is observed. In order to discourage fraud, direct selling enterprises have been encouraged to not require large or non-refundable upfront purchases. To the extent that direct selling enterprises refund unused/unsold inventory purchased by distributors, it is not costly to experiment with direct selling. So, even though the very steps advocated to guard against pyramid fraud also contribute to high quit-rates, Drs. Vander Nat and Keep point to observed quit-rates at the firms who hew to these guidelines as evidence of pyramid fraud.

E. Proposes "Tests" That Always Diagnose a “Pyramid Scheme”

At p. 13 of his declaration in the Equinox matter, Dr. Vander Nat illustrates the extent to which his conclusions rest on jury-rigged premises and logical flaws. Dr. Vander Nat argued that it is virtually costless to sign up as a distributor when the parent firm does not require new distributors to make large, upfront non-refundable purchases. In this event, Dr. Vander Nat continues, distributors cannot expect to make any sales at meaningful retail margins, because

⁴⁸ See Table 16, Job Openings and Labor Turnover, Bureau of Labor Statistics, January 2013. Non-unionized, entry level and seasonal turnover would tend to be even higher.

the individuals to whom they would try to sell at retail markups would just sign up as distributors themselves. From this, Dr. Vander Nat concludes that the enterprise must be a pyramid scheme, because distributors only obtain rewards through recruitment.⁴⁹

In other words, Dr. Vander Nat argues that if a direct selling enterprise adopts the consumer-friendly policy of not requiring large, up-front, non-refundable payments, it will turn inexorably into a pyramid scheme. And of course, if the direct selling enterprise failed to adopt such a policy, it would be viewed as *prima facie* evidence that the enterprise was already a pyramid scheme.

⁴⁹ We again emphasize that we do not opine as to whether Equinox, or any other particular enterprise, was a pyramid scheme. Rather, we analyze the economic and logical ramifications of the testimony offered by Dr. Vander Nat.

VIII. Summary of the Failures of V&K and Dr. Vander Nat’s Expert Testimony

The V&K paper, Dr. Vander Nat’s declarations, and Dr. Keep’s public statements hinge on a legal argument that is based on the misinterpretation of certain court decisions, and characterize their mechanical application of that legal argument as economic analysis. On that basis, and contrary to basic principles of consumer economics, internal consumption is deemed to provide no value whatsoever. This is particularly remarkable because even the courts have recently rejected explicitly the underlying legal argument. Even V&K and Dr. Keep acknowledge that internal consumption could be legitimate, so that sales to distributors could be sales to ultimate users.

Furthermore, the V&K paper biases its arithmetic by making assumptions based on normative judgments that are rejected empirically and that lead to demonstrably false implications. For example, Drs. Vander Nat and Keep assume that, contrary to the evidence, direct selling distributors act so as to maximize the cash payouts they receive from the parent firm. Dr. Vander Nat effectively asserts that no consumer would buy a name-brand grocery item at a premium price as long as “functionally equivalent” store-brand products are available at a lower price, and that no one will buy from a retailer (perhaps to obtain service or for convenience) if they are able to sign up as a distributor to obtain the product at a wholesale price from the parent firm.

Drs. Vander Nat and Keep conflate Ponzi schemes with pyramid schemes, leading to an inordinate and misguided focus on estimating cash flows into and out of the parent firm (and identifying the sources of those funds). Their adoption of the “retail sales criterion” legal argument, flawed as it is as a matter of logic and economics, rejected as it recently was by the courts, reduces artificially the estimated cash inflows. At the same time, the “optimality” assumption increases artificially the estimated cash outflows, biasing these calculations. Similarly, facile inferences are drawn upon noting that quit-rates in direct selling are relatively high, without considering benchmarks against which direct selling quit-rates should be measured and without recognizing that even if it occurred, the fraudulent misrepresentation of a business opportunity is not the same thing as pyramid fraud.

These opinions fall short of the precepts of economics and fail to stand up to empirical scrutiny. They introduce significant and systematic bias in favor of restricting direct selling, and do so without concern or discussion of the costs associated with chilling direct selling. They revolve around the identification of who is buying the products of direct selling enterprises, rather than determining whether the products are consumed, in which case they generate social welfare and are legitimate.

IX. Logical Errors in Dr. Bosley's Declaration

Dr. Sharon Bosley is the most recent economist to testify on behalf of the FTC in a pyramid scheme court proceeding (in the matter of Vemma, District of Arizona, No. CV-15-01578-PHX-JJT; Dr. Bosley's declaration is part of the FTC's filing in this matter). As with the other legal proceedings discussed in this report, we have not examined the factual allegations in the matter of Vemma, and do not opine as to whether Vemma engaged in pyramid fraud. Regardless of whether or not Vemma actually was a pyramid scheme, i.e. abstracting from the specifics relating to that matter, we examine the logic underlying Dr. Bosley's declaration to the court.

At the end of ¶17, the Bosley declaration identifies the key characteristic of a pyramid scheme: "by the nature of the structure itself", it is simply a scheme to transfer money from one individual to another, without adding any value. This is in fact the key characteristic of a pyramid scheme, and thus has to be at the very heart of any criterion that is capable of determining reliably whether a given enterprise is a pyramid scheme. Unfortunately, the Bosley declaration, following V&K, Vander Nat's declarations and Keep's statements, did not implement this criterion.

Instead, after making a nod to *Burnlounge's* guidance on internal consumption, Dr. Bosley's declaration continues to assume implicitly that internal consumption is illegitimate, and mistakes the logical inverse for the contrapositive in order to reach its conclusions. Even if one were to believe that other evidence showed that Vemma was a pyramid scheme, the larger problem here is that these approaches can lead to erroneous conclusions when applied to other circumstances.

Even though it pays lip service to the possibility that internal consumption represents the sale of product to ultimate users, the Bosley declaration actually assumes that internal consumption is illegitimate. At ¶6, the Bosley declaration notes that "the essential components" of "Vemma's system" include "consistent monthly purchases" and "recruitment of others who will do the same". Yet, at ¶14, the Bosley declaration states that Vemma did not emphasize sales to ultimate users. The only way to reconcile these two statements with one another is to assume that the distributors are not ultimate users. Similarly, the Bosley

declaration states at ¶127 that “incentives are...aligned with recruitment and purchases, rather than retail sales based on market demand”. For this statement to be true, the purchases of distributors referred to in the predicate must be deemed illegitimate.

And again, at ¶139, when the Bosley declaration states that if individuals follow the “Vemma system” of purchasing product and recruiting others who want to purchase the product, the compensation they receive is “not significantly connected to sales to ultimate users, and [is], instead, effectively rewards for recruitment”, it assumes that these individuals’ purchases are not legitimate – i.e. distributors are either not consuming the product, or that the consumption of the product by a distributor does not generate consumer surplus for that distributor (and legitimate profit for the parent firm).⁵⁰

Similarly, just as V&K mistook the logical inverse for the contrapositive, and asserted inaccurately that without “sufficient” sales to third parties, an enterprise must be a pyramid scheme, the Bosley declaration conflates inverses and contrapositives to assert incorrectly that observing distributor churn is sufficient to characterize an enterprise as a pyramid scheme.

In ¶118 and ¶159, the Bosley declaration observes that all pyramid schemes lead to participants losing their money and quitting the scheme. Because the contrapositive of any true statement is also true, upon accepting Dr. Bosley’s assertion, we can also conclude that if many people do not lose their money or quit an enterprise, that enterprise is not a pyramid scheme. Instead, the Bosley declaration asserts mistakenly that the inverse is also true – i.e. if many distributors quit or fail to “make a lot of money”, the enterprise must be a pyramid scheme.

This is incorrect as a matter of logic.

The failure of logic is illustrated by the recognition that there may be distributor churn because the individuals only wanted seasonal work, or only worked when they needed extra income, or they quit when they realize that in this business opportunity, as with any other business opportunity, making money requires hard work, investing in human capital and taking

⁵⁰ The only basis that the Bosley declaration offers in support of its assumption that internal consumption is illegitimate is its statement in ¶157 that distributors can purchase the product for a lower price on e-Bay. But, at ¶142 the Bosley declaration notes that Vemma forbids the resale of its products at web-sites and in a number of other retail venues. Ironically, the Bosley declaration asserts that only gray market transactions can be legitimate.

risk. Simply observing that many distributors quit without making “lots of money” might indicate that a business opportunity was fraudulently misrepresented. But it is insufficient even to conclude that fraudulent misrepresentation occurred (because there are other reasons why the quit-rate might be high). And it is certainly insufficient to conclude that pyramid fraud occurred.

There may be a question as to whether a direct selling enterprise has fraudulently misrepresented a business opportunity, or a question as to whether distributors actually consumed their purchases (i.e. that inventory loading has occurred). These can be legitimate areas of inquiry. However these are questions that can – and should – be answered directly, without resorting to the application of flawed logic to potentially spuriously related phenomena.

At ¶17, these fundamental errors lead the Bosley declaration to state that a pyramid scheme exists when the parent firm provides incentives for distributors to recruit other distributors, and the new recruits are “doomed” to financial loss. This proposed criterion to discriminate between legitimate direct selling and pyramid schemes is flawed, unworkable, orthogonal to the key characteristic of a pyramid scheme, and is prone to generate false positives when there is substantial legitimate internal consumption. With regard to recruiting, recall that over-rides and other incentives provided to distributors to recruit new distributors can be perfectly legitimate, and in fact can be socially efficient. This is because legitimate internal consumption yields profits to the parent enterprise, and because existing distributors may not have the incentive to engage in recruitment that increases legitimately the profits of the parent firm (and increases social welfare) unless they are compensated for the sales that they would lose to the recruits. From an empirical perspective, as demonstrated above, even legitimate wage employment in comparable sectors of the economy exhibits significant churn, so that one cannot conclude that high quit rates imply that fraud is in progress.

X. Conclusion (The Costs and Benefits of Regulation)

There is no dispute that consumer fraud is deleterious, and that it should be interdicted when it is found. The problem, however, is that even if we agree that aggressive intervention is warranted when we know that a fraud is being committed, this tells us absolutely nothing about what test we should employ to determine whether a fraud is being committed. It is this latter question that lies at the heart of this debate.

By deeming summarily illegitimate all internal consumption even though this characterization fails as a matter of logic and economics, the V&K paper, Dr. Vander Nat's expert declarations, Dr. Keep's public statements and Dr. Bosley's expert declaration (notwithstanding the lip service they occasionally pay to the legitimacy of internal consumption) effectively advocate for putting a thumb on the scale when determining whether an enterprise is fraudulent. V&K's proposed test is prone to generate false positives, because internal consumption is a phenomenon widespread in direct selling. Moreover, even case law has come to recognize this risk of false positives and acknowledges that the key question regarding whether a pyramid scheme is being perpetrated is not who consumes the product (see *BurnLounge*, pp. 18-19).

As with any regulatory proposal, there are costs and benefits associated with adopting a test that is prone to false positives. Balancing those costs and benefits is not simply a matter of how strictly we apply a *given* test. It also requires exercising prudence as to *what* test, or diagnostic, we apply to determine whether an enterprise is a pyramid scheme. Some tests yield greater rates of false positives than others. Focusing singularly on the magnitude of sales to third parties imposes asymmetrically costs on enterprises marked by internal consumption.

The benefits of "catching" more fraudulent schemes are generally measured by the injury suffered by the victims of illegal pyramid schemes. While preventing such consumer injury is clearly a valid, and meaningful, benefit associated with adopting a standard that catches more fraud (but also generates more false positives by condemning more legitimate businesses), the economic benefits of interdicting fraud are slightly different. If fraud is allowed to flourish in the marketplace, uncertainty can build to the point that consumers lack confidence that the products, or distribution opportunities, presented to them are bonafide.

As a result, consumers would fail to participate in such transactions even though they represent legitimate business opportunities. The outcome is deadweight loss – an overall reduction in social welfare that impacts all stakeholders.

The costs of adopting a test that catches ostensibly more fraud but also condemns more legitimate business have not been as widely acknowledged or discussed. Yet, they can have serious and deleterious effects on social welfare, including injuring the very consumers that advocates of the now rejected “retail sales criterion” aim to help.

Meaningful costs are imposed on all of society when a fraud detection test generates false positives. It will induce firms to shy away from legitimate direct selling as a means of distributing their product, even when it is the socially efficient means of doing so. For example, some direct selling enterprises will never form, and others will be forced to the second-best means of distribution for fear of being implicated in the overly wide net that is cast by a test that yields false positives. When this happens, the parent firm, ultimate consumers and distributors are injured.

The parent firm loses the profits associated with sales to consumers, and perhaps more importantly, loses access to its first best means of distribution. The choice of direct selling as a means of distribution is not random. Firms who choose to sell directly do so because the products or services they are selling are sold most effectively using this approach. Denying them this choice would force them to their next best, and possibly significantly inferior, means of distribution.

From a competition policy perspective, discouraging the choice of direct selling can have the effect of foreclosing (or raising the costs of) entrants seeking to challenge entrenched incumbents. Importantly, consumers benefit from increased competition when direct selling enables new products to compete against entrenched suppliers. Even more directly, consumers, i.e. those individuals who would have chosen to purchase from direct sellers, lose their first best consumption option, because the fact that they would have bought from the direct seller rather than traditional retailers reveals that they obtain more value from buying through direct sellers.

Finally, a test that yields false positives and so dissuades parent firms from adopting direct selling also hurts distributors, the very individuals whom such a policy seeks to help. At an obvious level, distributors are denied what has been revealed as their first best option for primary or supplemental income. But condemning legitimate businesses may impose a more subtle, and potentially more damaging, cost on these distributors. Direct selling provides individuals with limited skills and opportunities an accessible entry point through which they can develop their business acumen and accumulate human capital, while also earning income. Discouraging the use of direct selling by legitimate business operators puts at risk an avenue through which individuals lacking the benefit of prestigious educational credentials or professional career opportunities can better themselves.

We forsake these social welfare benefits when we make the choice to adopt a test that generates false positives and condemns as fraudulent legitimate direct selling enterprises.

Rather than performing biased arithmetic to compare the magnitude of one artificially decreased cash flow relative to another artificially increased cash flow, or focusing on the identification of who purchases what, the criteria we use to detect pyramid schemes should be grounded in the empirical determination of whether the parent firm provides something of value or whether it simply transfers funds from one person to another without providing meaningful value. For example, are the products that are being purchased actually being consumed? Such a showing would rebut the contention that a pyramid scheme was in progress, as would a showing that the parent firm has provided effective safeguards to ensure that incumbent distributors are not simply transferring funds from recruits to themselves.

It may still be the case that fraudulent misrepresentation is occurring, or even that a Ponzi scheme is being perpetrated. But each of those allegations should be addressed directly, with empirical proof being adduced to demonstrate that those types of fraud are occurring.

The economic lesson is inescapable. Adopting a test that generates false positives that wrongly condemn legitimate businesses comes at a cost: it discourages the adoption of direct selling by legitimate business operators. Consequently, there are non-trivial tradeoffs in the costs and benefits of proposals that we should adopt a test that catches ostensibly more fraud, but that will also condemn legitimate businesses. Enforcement actions that are indicated for

fencing-in known fraudsters do not necessarily constitute the optimal diagnostic for determining whether we are dealing with fraud, and ignore the costs associated with over-detering the choice of direct selling.

This report does not propose a particular, or a definitive, test nor does it advocate a particular level of stringency in applying that test. Rather, this report aims to open a meaningful, and honest, discussion of the costs and benefits associated with deterring pyramid scheme fraud on the one hand, and discouraging legitimate direct selling on the other hand.