The Voice of the Off-Grid Solar Energy Industry

GOGLA Equity Academy – Briefing Note

Briefing Note Objectives

This briefing note intends to guide users through the typical stages of seed- to early-stage financing in the off-grid solar (OGS) sector, as well as provide insight and examples of key investment terms and equity valuation practices that are most appropriate for early stage companies operating in this industry. The briefing note also walks through a typical investment process, and then focuses on the equity, or equity-like, financing instruments that are most prevalent in the OGS sector today. This note was accompanied by an in-person workshop at the GOGLA Annual General Meeting in June 2019, and the content of that workshop was also presented in a webinar on June 26, 2019. Several interviews were held with investors and enterprises as part of developing the content on this topic; takeaways from those interviews are mainstreamed into the Note content. The Note also includes anecdotes from interviewees.

Background

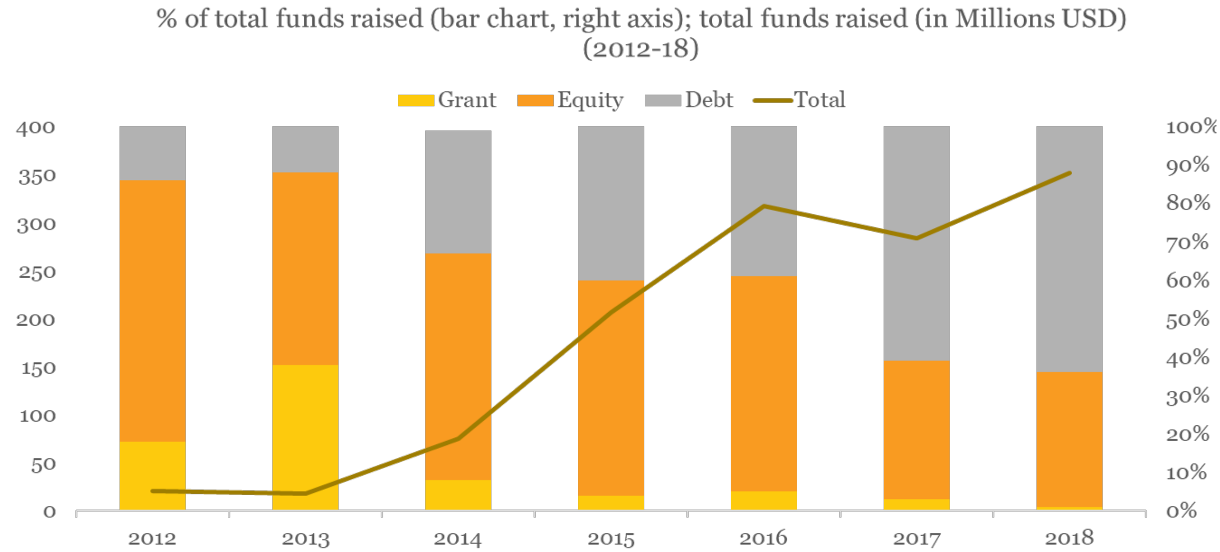
81 percent of financing to date into the OGS sector has gone to 10 companies.

The OGS industry has emerged as a major success story in its contributions toward tackling the global energy access deficit. In 2017 alone, the industry delivered energy access to about 73 million households around the world—or about 360 million people.[1] This impact has been fueled by substantial financing, with over $1.2 billion channeled[2] into the OGS sector between 2012 to 2018 (see Figure 1),

[1] https://www.lightingafrica.org/wp-content/uploads/2018/02/2018_Off_Grid_Solar_Market_Trends_Report_Full.pdf

[2] Authors rendering of GOGLA deal database information.

Figure 1: Total capital provided in off-grid solar (OGS) sector from 2012 to 2018.



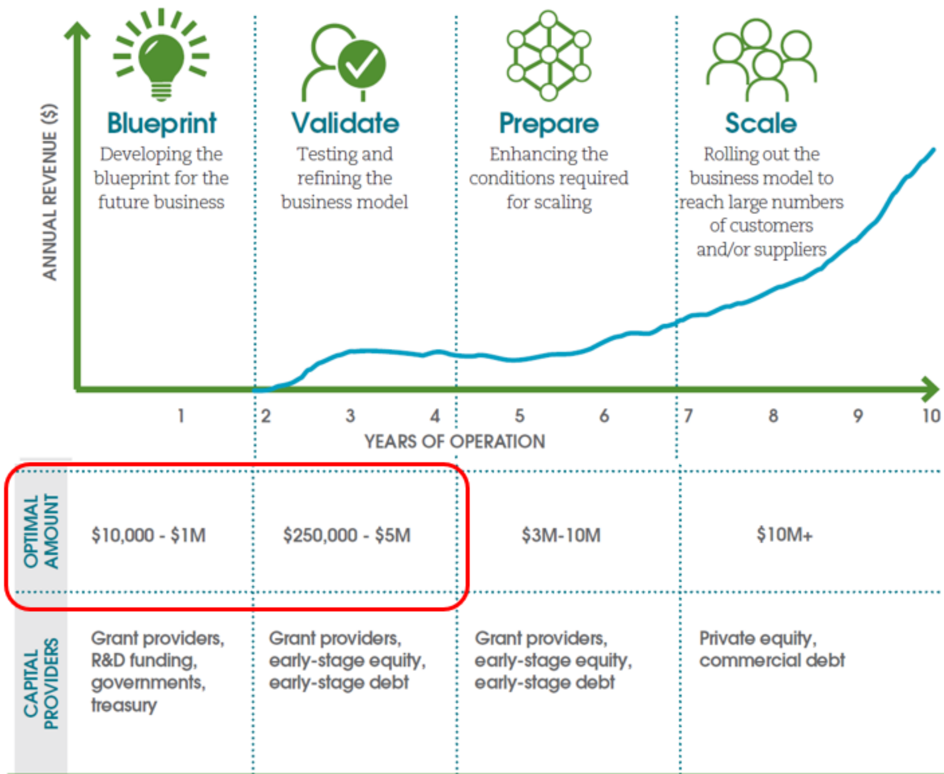
reflecting a nearly fourfold increase in investments in the last five years.[3] The quantum and blend of financing into the OGS sector has evolved considerably as the industry-leading companies have matured. This trend masks a more striking finding, with the risk tolerant grant capital that early-stage enterprises rely upon to develop and prove out their business model becoming increasingly scarce. In 2018, only $3 million in grant commitments were announced (compared to $225 million and $124 million of debt and equity, respectively).

For entrepreneurs who are looking to enter or scale up their early stage OGS business, this reality is a crucial one to keep in mind. The OGS business model, particularly one that utilizes the pay-as-you-go (PAYGO) approach, is tremendously complex and melds together several different businesses-within a business, each of which requires substantial resources to set up and prove out. This includes sourcing (or design and assembly) of hardware; establishing back-end software to intermediate mobile money payments and track customer and portfolio level information; supply chain and logistics to the last-mile consumer; marketing and customer acquisition; consumer credit underwriting and monitoring; and after-sales servicing (including upselling or cross-selling additional devices or services to customers).

The PAYGO model is (at least) six businesses - within-a-business.

[3] Authors rendering of GOGLA deal database information.

Figure 2: Stage of Company Growth and Respective Capital Needs



Source: Acumen; Accelerating Energy Access: The Role of Patient Capital, 2018.

As Figure 2 illustrates, it takes significant amount of capital and time to validate the business model. The resource intensiveness of OGS business models requires entrepreneurs to look for early-stage investors that are: (1) highly motivated by the positive 'social impact' the OGS sector could have on the world's most underserved populations, particularly those without access to energy, and; (2) prepared to have a long time horizon on their return on investment.

Introducing the OGS Investment Process

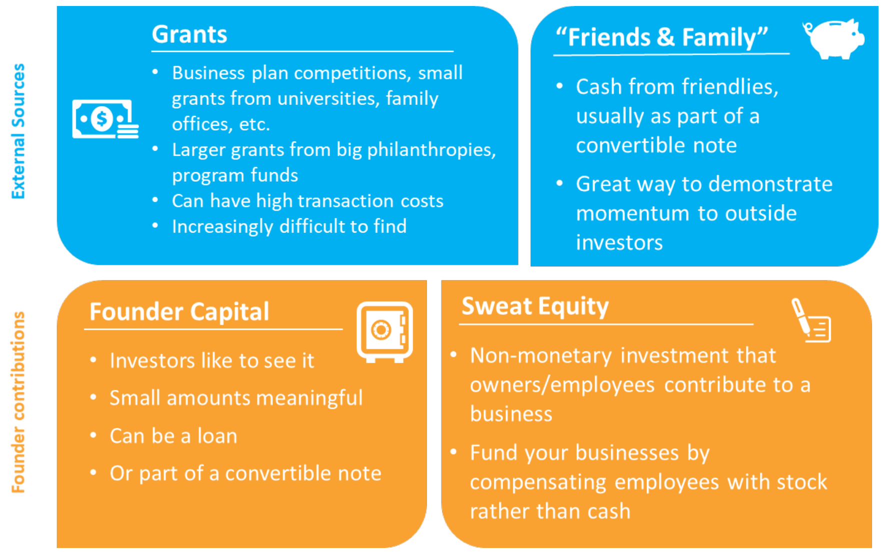
OGS companies fundraising in the "blueprint" or "validate" stages mentioned in Figure 2 tend to be very young – or even still at concept stage. Sourcing the earliest capital often comes from one of four sources, as outlined in Figure 3. Outside financing typically comes from "angel" investors4 or very early stage venture capital5- like investors who are also motivated

[4] Angels are affluent individuals who provide capital for a business start-up, usually in exchange for convertible debt or ownership equity. Angel investors usually give support to start-ups at the initial moments and when most investors are not prepared to back them.

[5] A form of financing that is provided by firms or funds to small, early-stage, emerging firms that are deemed to have high growth potential, or which have demonstrated high growth.

by the social impact that the OGS company can deliver.

Figure 3: Different sources of start-up financing

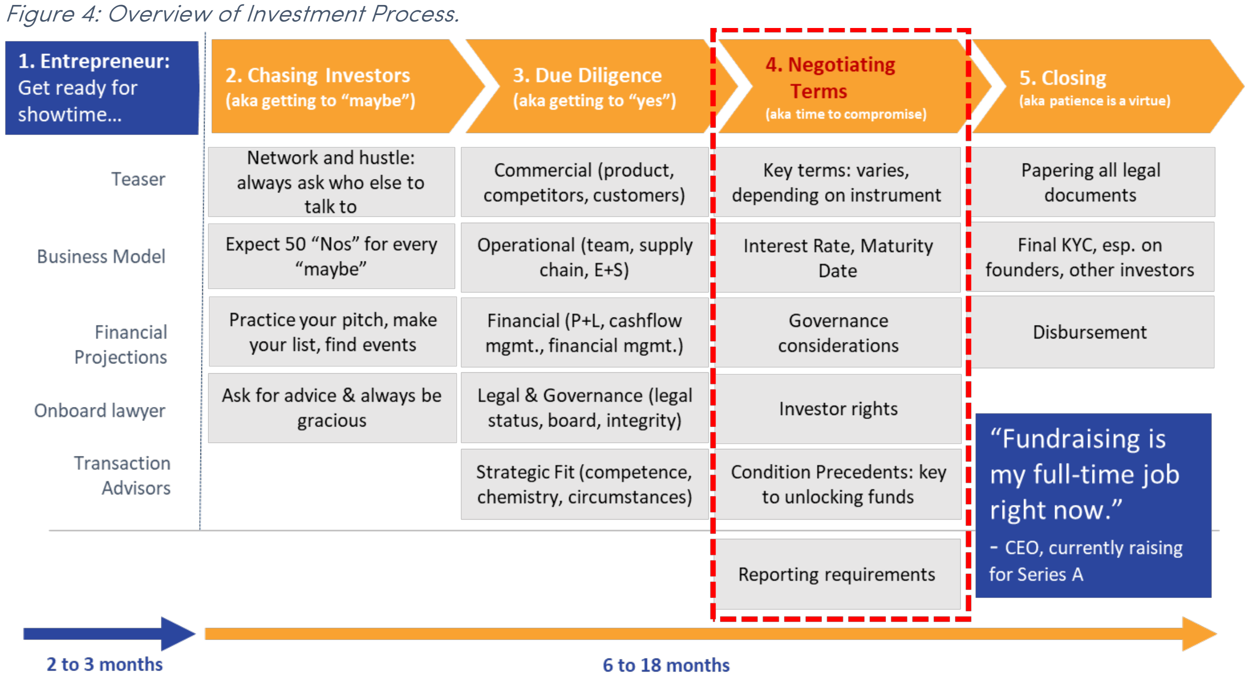


Once the decision has been made by entrepreneurs to seek outside financing, a fundamental consideration relates to the process. Fundraising requires significant time, preparation and most importantly, resilience from both sides of the negotiating table. It is a resource-intensive process that can be best managed by understanding the different steps and time horizon of the usual investment process. Investment instruments and valuations, while crucial for raising capital, represent just a fraction of what is required to successfully secure early-stage capital and build a new OGS company. Figure 4 summarizes these key stages in the fundraising process.

> Interviews revealed a wide variation of founder capital into OGS businesses, ranging from nothing to hundreds of thousands of dollars.

As illustrated in Step 1 below in Figure 4, a number of key documents need to be prepared before kicking off the fundraising process. Investors typically review dozens (or even hundreds) of company proposals a year and may only have time to spend a few minutes analyzing and dissecting each solicitation they receive. This means it is crucial for entrepreneurs to have the full suite of fundraising materials ready prior to reaching out to investors.

Figure 4: Overview of Investment Process.



It can take 2-3 months, or more, to build an investor pack that includes a short 1-2-page summary of the business (the "teaser"), a comprehensive business plan that could range between 15-30 slides and Excel-based financial projections. Entrepreneurs may also want to hire external advisors to support them throughout the capital raise. This includes legal counsel, who can advise throughout the process, and/or specialized transaction advisors, who will take on substantial portions of the fundraising documentation and logistics in exchange for fixed fees and/or a success fee once financial close is achieved.

Once the materials are developed, and investors are compelled by the OGS company's offering (Step 2 above – "Chasing Investors"), a due diligence process is undertaken (Step 3). This process varies by investor, but typically covers topics such as commercial, operational, financial, legal/governance, and strategic fit considerations, as outlined above.

> "More so than a solid pitch deck, we want to see entrepreneurs with dirt under their fingernails."
>
> – OGS investor

Key Focus: Financing Instruments and Terms

The remainder of this briefing note focuses on Step 4 of the investment process, providing an overview of the most common types of financing instruments used in early-stage enterprise financing, which is summarized in Figure 5 below. This note focuses on the two most common early equity-like instruments listed in Figure 5: i) convertible debt, and; ii) equity.

Figure 5: Overview of different equity and equity-like instruments

Type	What it is	When to use it	Cautions
Convertible debt/ SAFE	Debt that can convert to equity at later stage	Pre-seed / seed	Investor: risk of non-conversion, likely holding distressed debt Company: dilution of shares upon conversion
Equity	Ownership interest in a business	Series A & Beyond	Investor: pricing early stage business difficult Company: meeting growth expectations
(Convertible) Grants	Grant that can be converted into equity	Pre-seed / seed	Investor: less incentive and/or pressure for company to succeed Company: dilution may occur upon conversion
Revenue Sharing / Quasi-equity	Contingent and participating loan that acts as equity	Pre-seed / seed	Investor: high risk, high return (less seniority) Company: cap or limited duration may be required
Venture debt / bridge loan	Short-term debt provided; Often secured via warrants on equity	Series A	Investor: high risk Company: high interest rates; expensive
Mini-bonds	Illiquid UK debt security		Investor: unsecured; cannot be traded Company: expensive, high interest payment

Convertible Notes

A convertible note, or convertible debt, is a loan that converts into equity when a company has achieved certain milestones. Convertible notes are favored among investors because they contain terms that allow them to take an early stake in a company they believe has the potential to grow significantly in 12 to 18 months while receiving a premium on their investment for taking this early risk. The note enables investors to convert their loan into an equity stake, usually on agreed terms between the investor and the founder's company, once the company has managed to secure a first round of financing. The terms of the note include a premium that is passed on to investors upon conversion.

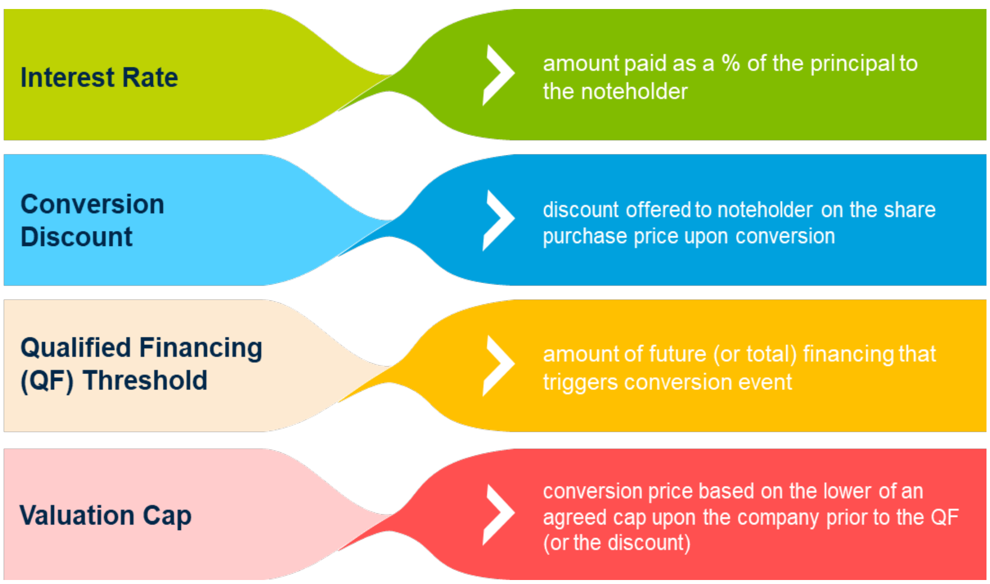
> 64% of interviewed OGS enterprises used a convertible note when doing their first raise of outside capital.

Entrepreneurs typically like convertible notes because it is a common instrument that – relative to other instruments – is simple to structure and negotiate. Most importantly, convertible notes defer the valuation discussion associated with equity investment. This is particularly important when a company lacks traction around key metrics that investors typically use as the basis to ascribe a value to a business. These metrics are discussed in more detail in the "Equity Financing and Valuations" section below.

While a convertible note is often the most appropriate instrument for both investors and entrepreneurs involved in an early-stage financing transaction, it can become problematic if the key terms are not well understood and thus poorly negotiated by the entrepreneurs. Figure 6 below summarizes the key features of the convertible note, which are described in more detail below.

Key Terms

Figure 6: Negotiated 'terms' associated with Convertible Notes



Interest rate. The interest rate, like a regular loan, is the amount paid as a percentage of the principal to the noteholder. Interest rates usually range between 5% – 8% on a convertible note and the accrued interest is typically included in the value of the note upon conversion. Most investors are not looking for an aggressive interest rate, but will rather be more focused on the conversion discount (and the cap, when used).

Conversion Discount. This provides the noteholder with a discount on the price of a company's shares upon conversion. For example, if an early-stage investor negotiated a 20% discount on a convertible note, and the company he or she invested in ended up doing a priced round one year later at $3 per share, the early-stage investor would receive a 20% discount on those shares and receive them at $2.40 per share, instead of its full price at $3 per share. The discount also typically correlates with the expected tenor of the note prior to its conversion. If the note is expected to convert within a couple of months, its discount should be calibrated (and presumably lowered) accordingly.

Qualified Financing Threshold. The qualified financing (QF) is the amount of future or total financing that triggers a conversion event. For example, if the QF threshold was at $500,000 and a new OGS company managed to secure at least $500,000 from a new investor during a priced round, then the convertible note would be triggered, enabling the initial investor to convert his or her loan into equity. The QF threshold is typically calibrated around the expected duration of operations that the note financing is expected to sustain.

Valuation Cap. The valuation cap enables noteholders to convert into equity at the lower valuation cap, or price, once the QF threshold is met. Like the conversion discount, the valuation cap rewards investors for taking early-stage risk. For example, let's imagine that an early-stage investor participated in a convertible note with a $2 million cap. In the subsequent financing that triggers the QF, the valuation of the company is set at $4 million. This would trigger the valuation cap, enabling the initial investor to convert his or her debt into equity *as if* the company's valuation stood at $2 million (in this case, yielding a 2x multiple on their note holding upon conversion).

Equity Financing and Valuations

The second common early-stage investment instrument is equity financing. Entrepreneurs raise equity by selling their company stock (shares) to investors. A company's share price is determined based on the company's 'valuation'. As opposed to debt financing, equity financing enables entrepreneurs to raise capital without having to pay interest or repay the principal. However, it requires the entrepreneur to give a portion of ownership to investors in exchange for cash. It also necessitates that the enterprise be priced via a valuation exercise. The valuation will determine the price at which investors purchase shares in the enterprise, which in turn determines what the shareholders' (including founders and any noteholders) stake in the business will look like once the financing is secured. Figure 8 provides an overview of the most commonly used equity valuation practices.

> "We've seen enough down rounds in the OGS space that we really work hard to manage entrepreneurs' expectations around valuation."
>
> – OGS Investor

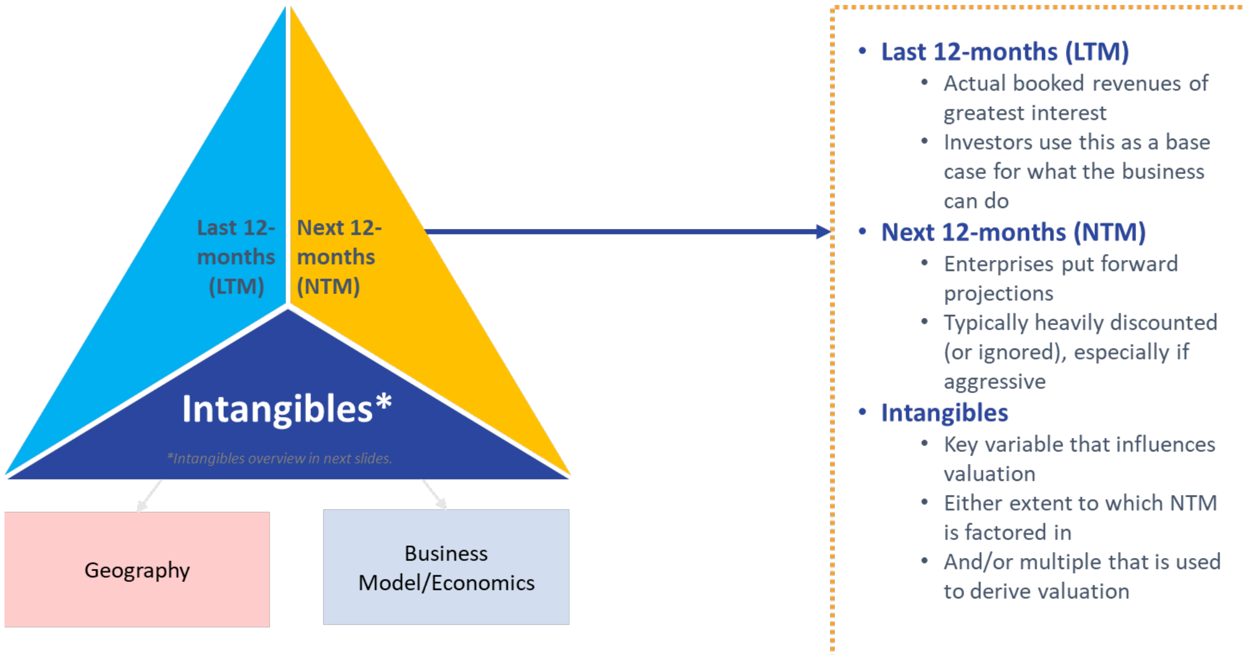
Figure 7: Overview of Most Commonly Used Equity Valuations Practices

Methodology	What it is	When to use it	Cautions
Last 12 months (LTM)	Valuation based on previous 12 months of a **key metric** (e.g., revenues, EBIT, EBITDA) per management accounts and an **appropriate multiplier**	Best for more established businesses with lower growth	Can understate value of high-growth businesses
Next 12 months (NTM)	Valuation based on next 12 months of a key metric (per projections) and an appropriate multiplier	High-growth business with well vetted projections	Heavily dependent on quality of projections
Discounted cash flows (DCF)	Current enterprise valued based on future cash flows and terminal value discounted by a specific cost of capital	Established business with well vetted financial model	Difficult to calculate with certainty given dynamism of PAYG businesses
Venture Capital (VC)	Valuation used to accommodate anticipated dilution by adjusting the pre-money valuation (uses market multipliers and/or DCF; relies **heavily on expected ROI**)	Early stage companies (seed/startup) that do not have historical financials	Relies on projected growth & future revenues (difficult to estimate); discount rate highly subjective
Comparables (Comps)	Enterprise benchmarked vis-à-vis recent transactions involving similar enterprises	Complements above; sense check multiples and valuations	Legacy 'moonshot' valuations can do more harm than good

Factors that Impact Equity Valuation

Most, if not all investors, will use a 'multiplier' to do an equity valuation of a company. A multiplier is a financial metric that amplifies the base value of a scenario, based on a variety of different key inputs, such as a company's financial indicators, geography in which it is operating, sector, and overall level of credibility of the potential investee. With early-stage OGS businesses, revenue is the typical metric that is used as a core variable in the valuation calculus. In the OGS sector, investors typically value a new company based on the last 12-months (LTM) of a company's revenues (see Figure 9). In the industry's earlier days, it was not uncommon for valuations of OGS businesses to be based on next 12-months (NTM) projections, which were frequently very aggressive and that entrepreneurs struggled to deliver on. As such, most seasoned OGS investors today use the LTM as a base case to determine a company's potential growth, and rely very lightly on a company's NTM, particularly if the projections are very aggressive in deriving a valuation. The caveat with investors using the LTM and NTM valuation methods is that they depend heavily on 'intangibles'.

Figure 8: Key factors investors rely on to valuate a company.



The Intangibles: 'Credibility' Reigns

Intangibles are attributes that cannot be quantified on paper, such as a company's management team experience and/or their level of credibility in operating a business. Based on our interviews with key investors in the OGS space, these attributes are crucial to sizing up an investment opportunity. In fact, these intangibles can become a major variable in the valuation exercise, influencing the valuation multiple that is applied to the business.

> "Be transparent. Being perceived as hiding things is going to raise suspicions and undermine development of trust."
>
> – OGS Investor

Why do intangibles matter so much in the OGS sector? New companies in the OGS industry typically operate in emerging and developing markets and cater to a challenging customer base. The OGS business model is complex and massively resource intensive. It therefore becomes crucial for investors to have confidence in the team that will be spending their capital and building the value of their investment.

Summing up

This briefing note focused on some of the key considerations that entrepreneurs should factor in when raising early stage equity for their business. It is by no means comprehensive, and as such readers should access the links below for additional resources and inspiration. The research and conversations that underpinned this Note demonstrate that the OGS early-stage fundraising landscape is a challenging one. Early, patient capital – often in the form of grants – has become increasingly scarce. The growing pains experienced by some more mature OGS businesses have given certain equity investors pause; other investors have topped out their exposure into the OGS space and are moving on to other sectors.

> "Solar home system businesses are by no means played out. The key is for enterprises to demonstrate how they are different from their competitors, and how they can deliver radical affordability to their customers in a sustainable and scalable way."
> – OGS Investor

Given this challenging fundraising context, it is not surprising that each enterprises' fundraising journey is different, and often full of unexpected situations. For this reason, it is crucial that entrepreneurs prepare themselves for the fundraising journey. In addition to the core documentation and concepts that are referenced in this Note, entrepreneurs should also give serious thought to "intangibles". For investors, its arguably the most important factor (if the fundamentals of the business are solid enough) that will guide their investment decision. For entrepreneurs, there are two sides of the intangibles coin to consider: getting to know your prospective investors, understanding their drivers and additionality they can bring to your business beyond capital. At the same time, entrepreneurs need to think hard about what intangible values they want to project to investors, and make sure these are put into practice as you embark on your fundraising journey.

Want to learn more?

The link below provides access to several other external resources related to:

- Early stage equity financing
- Convertible notes
- Company valuation
- Venture capital valuation method

- Podcasts
- Miscellaneous blogs and articles
- Off-grid solar-specific resources

https://docs.google.com/spreadsheets/d/1GScOSynQs_udZDGKk4jsiHIW8AKa4IxtUO1UYd4pBmM/edit?usp=sharing

A webinar on June 26, 2019 covered the Equity Academy material, including a walk through of a detailed case study. The recording of this session can be accessed at the link below:

https://www.youtube.com/watch?v=5sOi2Rhscuo&feature=youtu.be