

Pitfalls Of The SAFE Tool For Startups

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"SAFEs," short for simple agreements for future equity, quickly became a cornerstone of startup finance, and continue to be a vitally important fundraising tool for young companies.

But while the five-page investment document is ubiquitous, even sophisticated entrepreneurs and venture funds sometimes fail to realize the mathematical risks contained in their SAFEs until it is too late. Put simply, the venture math in the SAFE is opaque.

The SAFE

Stepping back into corporate finance 101:

- Debt is a promise to repay money loaned, with interest, either on a fixed maturity date, or whenever the lender demands it; and
- Equity in its most basic form is a percentage ownership interest in a company. When you hold equity, you're entitled to be paid out of residual amounts left after all debts of a company are paid. When a company succeeds, the value of your equity stake increases, but if the company fails, you're at the back of the line to get paid.

Because investments in startups are risky, and it's difficult to value prerevenue companies, angel investors traditionally invested using debt instruments that were convertible into equity. These debt agreements gave investors the best of both worlds: downside protection using the debt feature, and upside using the equity feature.

Convertible notes offer the right to get paid back on a certain timeline, ahead of other stakeholders — i.e., helpful if the company fails to launch — plus a promise to convert into preferred equity, with its potentially ever-expanding value, as soon as the company is backed by a larger equity investor.

The SAFE was created a decade ago by Y Combinator, the storied startup accelerator in Silicon Valley. The folks at Y Combinator took the idea of a promissory note convertible into equity, cut out its debt features, and then pared it down even more.

Over several years, the SAFE began to be adopted by founders and angel investors as a standardized way to speedily funnel money into a new company.



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The basic terms of a SAFE are that the investor pays a purchase price for the SAFE and then, if and when the company does a preferred equity financing, the SAFE converts into preferred equity, piggybacking on the new investor's terms.

If the company sells or dissolves before it does a preferred equity financing, the SAFE investor gets paid out as if it were a preferred equity holder. If none of those happens, the SAFE is left hanging.

Some of the advantages of a SAFE over a convertible note or a priced round of equity from a founder's perspective are:

- There is no risk that the company will need to pay back the investors before the company liquidates. This is in contrast to convertible notes or simple promissory notes. All forms of debt put the company on the line for the borrowed money either at a fixed maturity date or upon demand by the lender.
- The SAFE is a standard form now familiar in the marketplace. Investors often don't negotiate the substance of the form other than the key blanks to be filled in. Eventually a founder will have to negotiate the rights its equity investors will receive, but the SAFE defers that.
- Being a form that few negotiate heavily, many times a SAFE financing is cheaper and faster to document than a more complex priced equity financing or even a convertible note. SAFEs can introduce issues, however, that can create delay and cost in the future
- The SAFE does not include detailed representations about the business, allowing the company to avoid diligence and disclosures — but all founders should note that whenever you sell securities, you must disclose certain material information to the investors.
- SAFEs allow the company and investor to punt on the key question of how much the company is worth, whereas a priced round sells a definite percentage of the company at a set valuation.
- While the SAFE is treated like equity for most purposes, it does not grant a full set of stockholder rights. During the time a SAFE is outstanding, SAFE holders have no voting or governance rights — they will eventually receive those, but the rights are deferred.

Conversion

The key feature of the SAFE, and its greatest pitfall for founders, is the conversion mechanics that transform the promise of future equity into actual equity. The Y Combinator SAFE offers two basic conversion formulas, using either a discount rate or a valuation cap.

Investors often require a hybrid SAFE that includes both a discount rate and a valuation cap, but for the sake of simplicity, our illustrations will focus on how each works individually.

Discount Rate

When offering a discount rate, a company will issue a SAFE with the promise to convert the investment into preferred equity at a discount to the price at which the company sells equity in the future.

Typically, discounts range from 10% to 30%. For example, if a company receives investment in SAFEs with a 20% discount, and then sells series seed preferred stock at \$10 per share, the SAFE holders will convert into a shadow series of that new preferred stock at \$8 per share instead of \$10 per share.

Converting at a discount means that the SAFE holders receive a larger percentage of the company and its future value for less. This allows the company and investor to punt on how much they believe the company is worth as of the date of the SAFE investment.

Instead, the parties rely on the future lead investor and company to negotiate a price, while baking in a discount to account for the extra risk the SAFE investor has taken on by investing before the company has achieved key milestones.

Valuation Cap

When using a valuation cap, the company issues a SAFE betting that the SAFE will not convert when the company is worth more — or too much more — than the agreed valuation.

From the investor's perspective, this cap can potentially provide a huge windfall if the business increases in value significantly between the time of the SAFE investment and the priced round.

For example, if a company sells SAFEs at a \$10 million valuation cap, and then does an equity financing round that values the company at \$20 million on a pre-money basis, the SAFE could convert at an effective 50% discount.

Pre-Money vs. Post-Money Caps

While discount rates are mechanically simple, valuation caps introduce mathematical complexity that many founders fail to appreciate and that can be challenging to model, due to the iterative math.

Initially, Y Combinator's form SAFE used a pre-money valuation cap. This meant that the valuation cap was setting a price per share for the company's stock only factoring in equity rights outstanding before the new priced equity round, excluding the SAFEs.

Thus, the SAFE investors were buying a piece of a smaller pie than the investors in the following priced equity round, because the priced round investors were baking in the SAFE shares when they set their price.

During the era in which pre-money SAFEs were common, investors were burned when companies raised more money on SAFES than expected, incurring much more dilution than originally advertised.

Y Combinator then changed the conversion mechanics of the SAFE to what is referred to as a post-money cap, meaning that the SAFE shares are included under the cap. This pushed down the price per share conferred upon the SAFE holders, giving those investors more bang for their buck.

Here is a visual to illustrate how the post-money valuation cap prevents dilution against the investors versus the earlier pre-money SAFE:

Post-Money vs. Pre-Money Conversion

Premoney SAFEs: \$5M Principal; \$20M Cap; 0% Discount Priced Round: \$10M New Cash at \$40M Premoney; 15% Available Option Pool						
Series A Pro Forma	Current Capitalization		Premoney Capitalization		Postmoney Capitalization	
Equityholder	Fully Diluted Total	Fully Diluted %	Fully Diluted Total	Fully Diluted %	Fully Diluted Total	Fully Diluted %
Founders	7,000,000	70.00%	7,000,000	47.64%	7,000,000	38.11%
Consultants/Advisors/Employees	2,000,000	20.00%	2,000,000	13.61%	2,000,000	10.89%
Premoney SAFEs; \$20M Cap; 0% Discount	0	0.00%	2,938,775	20.00%	2,938,775	16.00%
Series A Cash Investors	0	0.00%	0	0.00%	0	0.00%
	0	0.00%	0	0.00%	3,673,469	20.00%
SUBTOTAL	9,000,000	90.00%	11,938,775	81.25%	15,612,244	85.00%
Current Available Option Pool	1,000,000		1,000,000		1,000,000	
Increase to Current Available Option Pool	0	10.00%	1,755,102	18.75%	1,755,102	15.00%
TOTAL	10,000,000	100.00%	14,693,877	100.00%	18,367,346	100.00%

Postmoney SAFEs: \$5M Principal; \$20M Cap; 0% Discount Priced Round: \$10M New Cash at \$40M Premoney; 15% Available Option Pool						
Series A Pro Forma	Current Capitalization		Premoney Capitalization		Postmoney Capitalization	
Equityholder	Fully Diluted Total	Fully Diluted %	Fully Diluted Total	Fully Diluted %	Fully Diluted Total	Fully Diluted %
Founders	7,000,000	70.00%	7,000,000	46.11%	7,000,000	36.89%
Consultants/Advisors/Employees	2,000,000	20.00%	2,000,000	13.18%	2,000,000	10.54%
Postmoney SAFEs; \$20M Cap; 0% Discount	0	0.00%	0	0.00%	0	0.00%
Series A Cash Investors	0	0.00%	3,333,333	21.96%	3,333,333	17.57%
	0	0.00%	0	0.00%	3,794,871	20.00%
SUBTOTAL	9,000,000	90.00%	12,333,333	81.25%	16,128,204	85.00%
Current Available Option Pool	1,000,000		1,000,000		1,000,000	
Increase to Current Available Option Pool	0	10.00%	1,846,154	18.75%	1,846,154	15.00%
TOTAL	10,000,000	100.00%	15,179,487	100.00%	18,974,358	100.00%

Series A Price Per Share Detail:				
	Conversion Price		New Money Price Per Share	
	Premoney SAFEs	Postmoney SAFEs	Premoney SAFEs	Postmoney SAFEs
(A) Numerator:	\$20,000,000	\$20,000,000	\$40,000,000	\$40,000,000
Pre-Financing Shares Outstanding (as Converted):	9,000,000	9,000,000	9,000,000	9,000,000
Shares Issuable Upon Conversion of SAFEs:		3,333,333	2,938,775	3,333,333
Existing Available Option Pool:	1,000,000	1,000,000	1,000,000	1,000,000
Increase to Available Option Pool:	1,755,102		1,755,102	1,846,154
(B) Denominator:	11,755,102	13,333,333	14,693,877	15,179,487
(A) / (B) Price Per Share:	\$1.70139	\$1.50000	\$2.72222	\$2.63514

When companies raise money in successive rounds on different forms of SAFEs with different caps, the complexity, and the dilution, can compound. It's essential for founders to model out how the formulas in multiple sets of converting SAFEs will interact.

Up Markets — The Advantage of a Discount Rate

During the long tech boom, as startup valuations rose, high-flying companies with SAFEs that included discount rates and no valuation cap often found themselves with an advantage.

This is because, no matter how high the valuation of the next priced equity round floated, the SAFE investor's valuation floated up with it. In contrast, with a valuation cap, a company is tethered to a set price, which can result in a very large gap between that cap and a later-negotiated price set by an investor bidding competitively to lead the priced round.

Valuation caps in a bull market can thus generate large windfalls for SAFE investors.

Here is an illustration of the conversion prices for a discount rate SAFE and valuation cap SAFE in an equity round with a surprisingly high valuation.

Discount vs. Cap

Postmoney SAFEs: \$2M Principal; \$30M Cap; 0% Discount vs. \$2M Principal; No Cap; 20% Discount Priced Round: \$10M New Cash at \$70M Premoney; 15% Available Option Pool						
Series A Pro Forma	Current Capitalization		Premoney Capitalization		Postmoney Capitalization	
Equityholder	Fully Diluted Total	Fully Diluted %	Fully Diluted Total	Fully Diluted %	Fully Diluted Total	Fully Diluted %
Founders	7,000,000	70.00%	7,000,000	56.95%	7,000,000	49.83%
Consultants/Advisors/Employees	2,000,000	20.00%	2,000,000	16.27%	2,000,000	14.24%
Postmoney SAFEs; \$30M Cap; 0% Discount	0	0.00%	745,642	6.07%	745,642	5.31%
Discount Only SAFEs; \$N/AM Cap; 20% Discount	0	0.00%	438,993	3.57%	438,993	3.13%
Series A Cash Investors	0	0.00%	0	0.00%	1,755,972	12.50%
SUBTOTAL	9,000,000	90.00%	10,184,635	82.86%	11,940,607	85.00%
Current Available Option Pool	1,000,000	10.00%	1,000,000	17.14%	1,000,000	15.00%
Increase to Current Available Option Pool	0		1,107,166		1,107,166	
TOTAL	10,000,000	100.00%	12,291,801	100.00%	14,047,773	100.00%

SAFE Investor	New Cash				
	Investors Price	Valuation Cap Price	Discount Price	Conversion Price	Effective Discount
Postmoney SAFEs; \$30M Cap; 0% Discount	\$5.6949	\$2.6823	N/A	\$2.6823	52.90%
Discount Only SAFEs; \$N/AM Cap; 20% Discount	\$5.6949	\$0.0000	4.5559	\$4.5559	20.00%

	Series A Price Per Share Detail:		
	Conversion Price		New Money Price
	\$30M Cap; 0% Discount SAFEs	\$30M Cap; 20% Discount SAFEs	
(A) Numerator:	\$30,000,000	\$30,000,000	\$70,000,000
Pre-Financing Shares Outstanding (as Converted):	9,000,000		9,000,000
Shares Issuable Upon Conversion of SAFEs:	1,184,635		1,184,635
Existing Available Option Pool:	1,000,000		1,000,000
Increase to Available Option Pool:			1,107,166
(B) Denominator:	11,184,635		12,291,801
(A) / (B) Val. Cap Price Per Share:	\$2.68225		
Discount %:		20.00%	
Discount Price Per Share:		\$4.55588	
Effective Price Per Share:	\$2.68225	\$4.55588	\$5.69485
Effective SAFE Discount %:	52.90%	20.00%	

Down Markets — The Advantage of a Cap

For companies issuing SAFEs in a market in which valuations are falling, a valuation cap alone tends to be better for the founders than a discount.

This is because if the valuation cap is higher than the valuation set in a new priced round, the SAFE investors will simply convert at the exact price paid by the new investors, without any discount, whereas a discount can drop below that new low set by the priced round investors.

It's important to note that, even without a discount, SAFEs never set a floor on the investors' price, and so always present a risk in a down market, as do convertible notes. For this reason, while it can take a

little more time, and it's a little more expensive to paper, doing a priced round instead of a convertible can save founders a lot of equity value.

Here is a model showing how a valuation cap performs versus a discount in a down round:

Cap vs. Discount

Postmoney SAFEs: \$2M Principal; \$30M Cap; 0% Discount vs. \$2M Principal; No Cap; 20% Discount Priced Round: \$10M New Cash at \$20M Premoney; 15% Available Option Pool						
Series A Pro Forma	Current Capitalization		Premoney Capitalization		Postmoney Capitalization	
Equityholder	Fully Diluted Total	Fully Diluted %	Fully Diluted Total	Fully Diluted %	Fully Diluted Total	Fully Diluted %
Founders	7,000,000	70.00%	7,000,000	42.78%	7,000,000	28.52%
Consultants/Advisors/Employees	2,000,000	20.00%	2,000,000	12.22%	2,000,000	8.15%
Postmoney SAFEs; \$30M Cap; 0% Discount	0	0.00%	1,636,366	10.00%	1,636,366	6.67%
Discount Only SAFEs; \$N/AM Cap; 20% Discount	0	0.00%	2,045,458	12.50%	2,045,458	8.33%
Series A Cash Investors	0	0.00%	0	0.00%	8,181,833	33.33%
SUBTOTAL	9,000,000	90.00%	12,681,824	77.50%	20,863,657	85.00%
Current Available Option Pool	1,000,000		1,000,000	22.50%	1,000,000	15.00%
Increase to Current Available Option Pool	0	10.00%	2,681,818		2,681,818	
TOTAL	10,000,000	100.00%	16,363,642	100.00%	24,545,475	100.00%

SAFE Investor	New Cash					
	Investors Price	Valuation Cap Price	Discount Price	Conversion Price	Effective Discount	
Postmoney SAFEs; \$30M Cap; 0% Discount	\$1.2222	\$2.1927	N/A	\$1.2222	0.00%	
Discount Only SAFEs; \$N/AM Cap; 20% Discount	\$1.2222	\$0.0000	0.9778	\$0.9778	20.00%	

	Series A Price Per Share Detail:		
	Conversion Price		New Money Price
	\$30M Cap: 0% Discount SAFEs	No Cap: 20% Discount SAFEs	
(A) Numerator:	\$30,000,000		\$20,000,000
Pre-Financing Shares Outstanding (as Converted):	9,000,000		9,000,000
Shares Issuable Upon Conversion of SAFEs:	3,681,824		3,681,824
Existing Available Option Pool:	1,000,000		1,000,000
Increase to Available Option Pool:			2,681,818
(B) Denominator:	13,681,824		16,363,642
(A) / (B) Val. Cap Price Per Share:	\$2.19269		
Discount %:		20.00%	
Discount Price Per Share:		\$0.97778	
Effective Price Per Share:	\$1.22222	\$0.97778	\$1.22222
Effective SAFE Discount %:	0.00%	20.00%	

Summary

Though SAFEs can be a quick way for startups to paper investments, they aren't always the best answer.

Speed is only good if you're not accelerating toward a crash. A mistake — or bad bet — in setting the SAFE's conversion terms can have a huge impact on a founder's or investor's ultimate stake in a company.

There are also tax issues to keep in mind, corporate approvals to obtain, and an overlay of securities laws to think about.

Our advice is to proceed with caution.

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