



BESSEMER
VENTURE PARTNERS

Venture Debt Analysis

January 2009

Agenda

▶ Venture Debt Analysis

▶ When Does Venture Debt Make Sense?

▶ Venture Debt Model Walkthrough

Startups make use of three types of debt

Inventory or Receivables Line

- **Revolver to purchase inventory assets or bridge receivables**
- **In case of inventory line, often provided by the manufacturer**

Debt Line for CFP Company

- **Usually for one-time event such as paying a dividend or making an acquisition**
- **Servicing principal and interest back from cash flow**

Working Capital Venture Debt

- **Venture debt line for company burning cash**
- **Accredited venture investor usually critical component to securing venture debt line**

Focus of this presentation:

Working Capital Venture Debt

- **Venture debt line for company burning cash**
- **Accredited venture investor usually critical component to securing venture debt line**

Our thinking

- ▶ The interest rate of a venture loan belies the true cost of venture debt
- ▶ Other factors that effect the cost of capital:
 1. How much of the loan the company will have paid back by the time their original (non-debt) cash would have run out
 2. Dilution from warrants
 3. Transaction and facility fees



Venture debt must be evaluated in context of the company's cash balance and burn

Illustrative Company XYZ's venture debt loan

Company's Current Cash Balance	\$7.5M
Monthly Burn	Expects to maintain an average burn of \$500k over the next 18 months, after which they expect to turn CFP in 6 months
Loan Size	\$5M
Draw Limitations	One tranche
Draw Period	6 months
Repayment Terms	36 months principal + interest, equal principal payments
Fees	Borrower agrees to pay all reasonable fees incurred by Bank including cost of loan documentation
Warrant Coverage	6.0%
Interest Rate	14.0%
Reporting Covenant	Standard GAAP reporting within 30 days of month end. Audited financials within 120 days. Operating plan 30 days post-approval
Financial Covenants	None



In a perfect world, XYZ could draw down the debt exactly when they need the cash.

- ▶ XYZ has an ample cash balance to begin with, so they won't actually need the cash from the debt until the 16th month (April 2010)
- ▶ If XYZ could draw down the \$5m April 1st, 2010, their cash flow would look like this:

	1 Jan-09	2 Feb-09	•	•	•	15 Mar-10	16 Apr-10	17 May-10	18 Jun-10
<u>Monthly Burn Scenario</u>	500,000	500,000				500,000	500,000	500,000	500,000
Cash Available Assuming <u>No Debt</u>	7,500,000	7,000,000				500,000	-	-	-
Cash Available <u>with Debt EoM</u>	7,500,000	7,000,000				500,000	4,806,944	4,115,393	3,425,347
Drawdown	-	-				-	5,000,000	-	-
Debt Balance	-	-				-	5,000,000	4,861,111	4,722,222
Principal Payment	-	-	•	•	•	-	(138,889)	(138,889)	(138,889)
Ending Debt Balance	-	-				-	4,861,111	4,722,222	4,583,333

- ▶ This would allow XYZ to extend its runway to CFP, with a cost of capital of 15%.

In reality, companies are compelled to draw down the debt before they actually need the cash.

- ▶ Loan mandates a drawdown period (in XYZ's case, if they don't draw down the loan before the end of the 6th month, they forfeit the loan)
- ▶ A financial covenant requires a minimum cash balance in order to draw down the loan
- ▶ Company is worried that if it tries to draw down the loan at a later date (not to mention the last moment), the loan might not be there anymore
 - ▶ These cases are very rare, but they do happen
- ▶ Company sees value of having the money on their balance sheet immediately (e.g. for customer prospects)

When a company draws down the debt has a big effect on the cost of capital of that debt.

- ▶ To take an extreme example, if XYZ draws down the debt in the first month, the debt extends their runway only four months.

	1	2		15	16	17	18	19	20
	Jan-09	Feb-09		Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10
<u>Monthly Burn Scenario</u>	500,000	500,000	● ● ●	500,000	500,000	500,000	500,000	416,667	333,333
Cash Available Assuming <u>No Debt</u>	7,500,000	7,000,000		500,000	-	-	-	-	-
Cash Available <u>with Debt EoM</u>	12,500,000	11,808,449	● ● ●	2,732,153	2,061,667	1,392,686	725,209	142,570	-
Drawdown	5,000,000	-		-	-	-	-	-	-
Debt Balance	5,000,000	4,861,111		3,055,556	2,916,667	2,777,778	2,638,889	2,500,000	2,361,111
Principal Payment	(138,889)	(138,889)	● ● ●	(138,889)	(138,889)	(138,889)	(138,889)	(138,889)	(138,889)
Ending Debt Balance	4,861,111	4,722,222		2,916,667	2,777,778	2,638,889	2,500,000	2,361,111	2,222,222

- ▶ XYZ would be paying \$1m in interest for the four months of additional runway, not to mention the dilution from the warrants.
- ▶ So if XYZ got a loan This equates to an *Effective* cost of capital of 67%.

The runway extension is the same as if XYZ had been able to draw down \$2m in the “perfect world” scenario.

\$2m Loan: Perfect World

	1 Jan-09	2 Feb-09			15 Mar-10	16 Apr-10	17 May-10	18 Jun-10	19 Jul-10	20 Aug-10	
<u>Monthly Burn Scenario</u>	500,000	500,000	●	●	●	500,000	500,000	500,000	500,000	416,667	333,333
Cash Available Assuming No Debt	7,500,000	7,000,000				500,000	-	-	-	-	-
Cash Available with Debt EoM	7,500,000	7,000,000	●	●	●	500,000	1,892,778	1,316,158	740,139	248,056	-
Drawdown	-	-				-	2,000,000	-	-	-	-
Debt Balance	-	-				-	2,000,000	1,944,444	1,888,889	1,833,333	1,777,778
Principal Payment	-	-	●	●	●	-	(55,556)	(55,556)	(55,556)	(55,556)	(55,556)
Ending Debt Balance	-	-				-	1,944,444	1,888,889	1,833,333	1,777,778	1,722,222

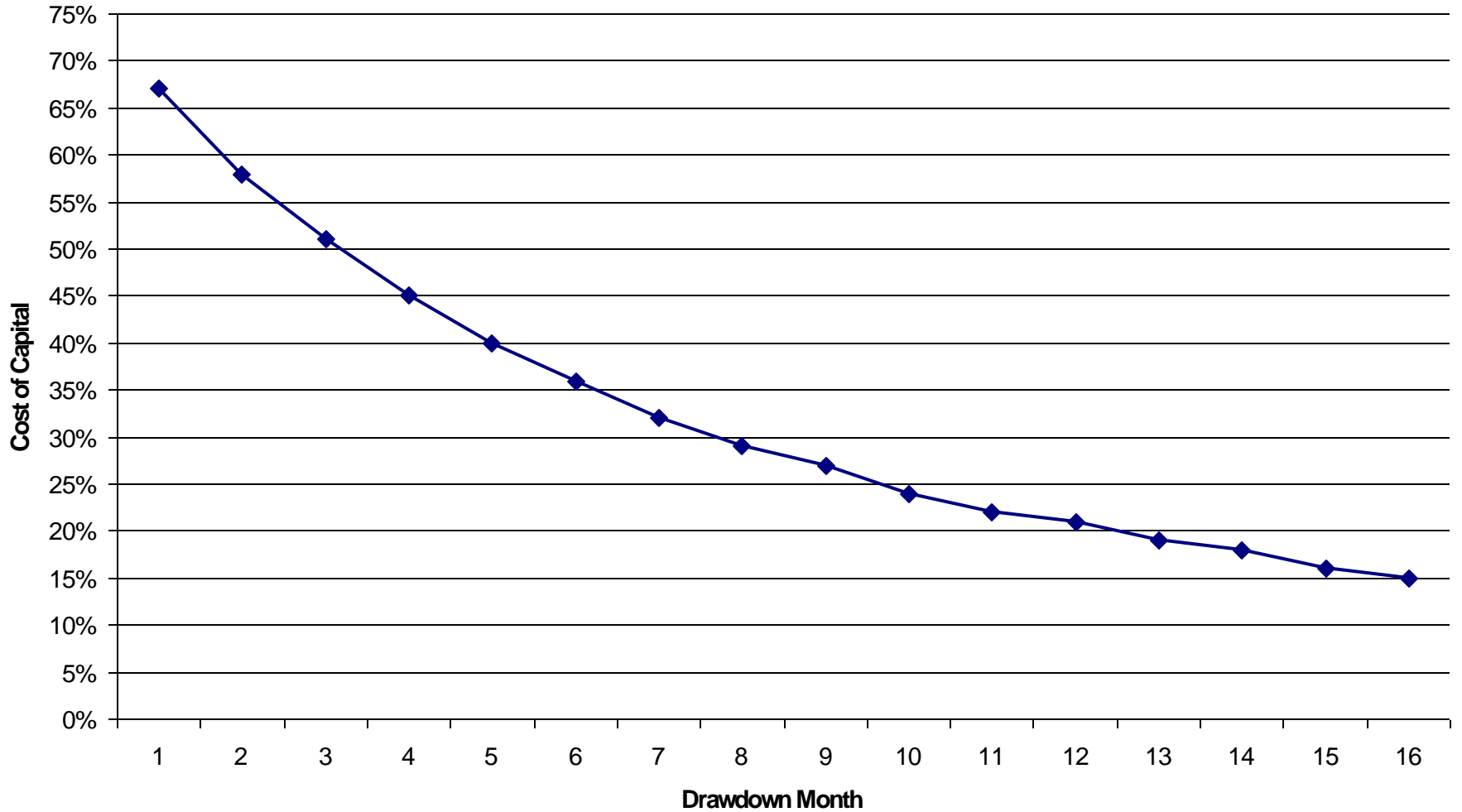
\$5m Loan: Drawn Down Month #1

	1 Jan-09	2 Feb-09			15 Mar-10	16 Apr-10	17 May-10	18 Jun-10	19 Jul-10	20 Aug-10	
<u>Monthly Burn Scenario</u>	500,000	500,000	●	●	●	500,000	500,000	500,000	500,000	416,667	333,333
Cash Available Assuming No Debt	7,500,000	7,000,000				500,000	-	-	-	-	-
Cash Available with Debt EoM	12,500,000	11,808,449	●	●	●	2,732,153	2,061,667	1,392,686	725,209	142,570	-
Drawdown	5,000,000	-				-	-	-	-	-	-
Debt Balance	5,000,000	4,861,111				3,055,556	2,916,667	2,777,778	2,638,889	2,500,000	2,361,111
Principal Payment	(138,889)	(138,889)	●	●	●	(138,889)	(138,889)	(138,889)	(138,889)	(138,889)	(138,889)
Ending Debt Balance	4,861,111	4,722,222				2,916,667	2,777,778	2,638,889	2,500,000	2,361,111	2,222,222

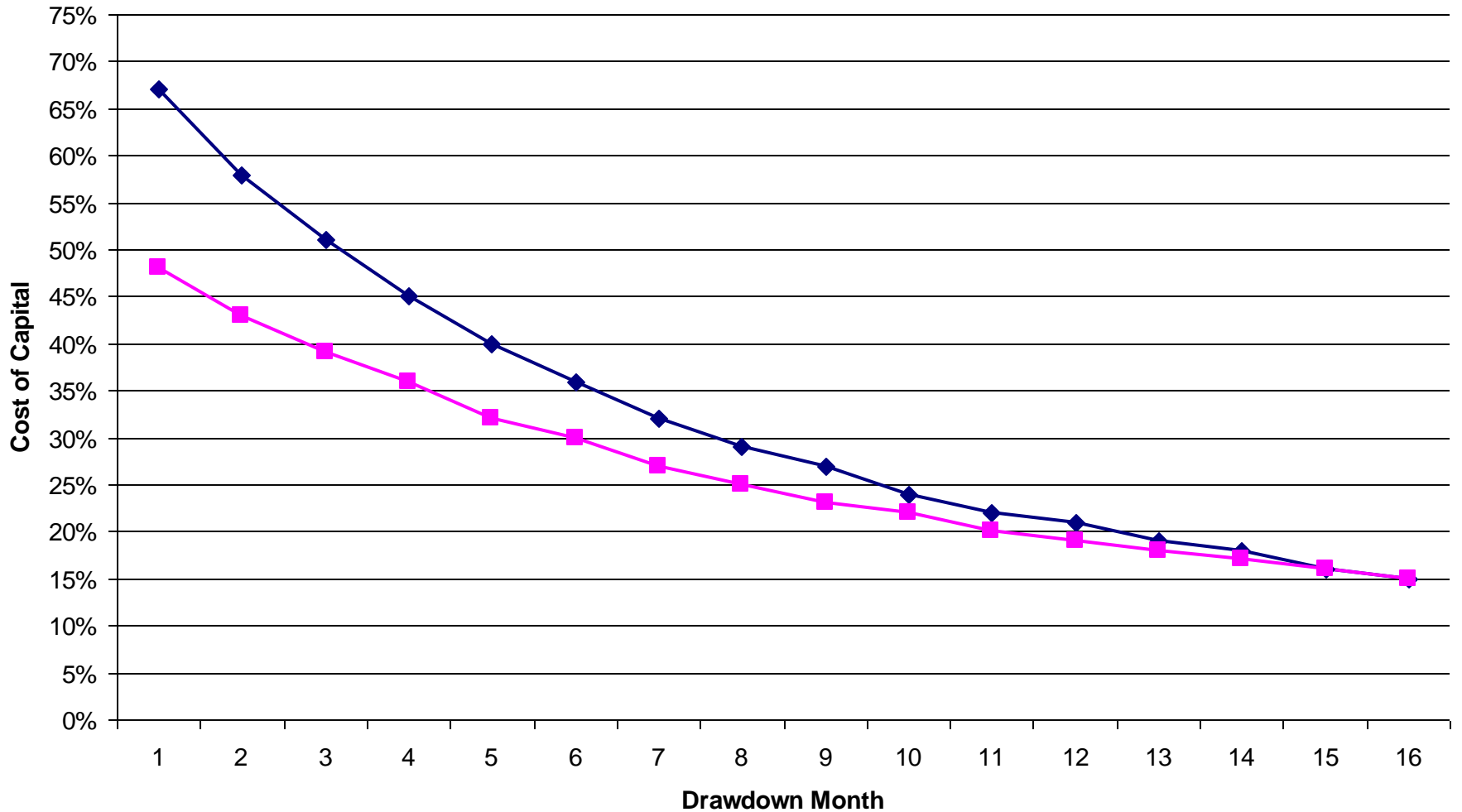
But what do we mean by Effective cost of capital?

- ▶ We tried to think about XYZ's cost of capital on their effective cash flow from the debt:
 - ▶ The day XYZ drew down the \$5m, XYZ started paying the loan down with monthly principal payments
 - ▶ By the time they get to the cash cushion provided by the debt, the company will have already paid the bank 15 monthly installments of \$140k -- 42% of the loan
 - ▶ So by April 2010, instead of having \$5m available from the debt, they only have \$2.9m available.
- ▶ To make matters worse, XYZ will be paying the bank monthly interest payments all along – by April 2010, XYZ would have paid the bank \$700k in interest.
- ▶ So in April 2010, it's as if XYZ is getting a loan of \$2.0m, not \$5m.

Not surprisingly, the longer XYZ can postpone the drawdown, the lower their effective cost of capital.



An interest only bubble can also drive down the cost of capital (pink line below is if XYZ negotiated six-month interest only bubble). It also insures you have the cash on your balance sheet.



To be clear...

Venture debt lenders are not making a 67% IRR on their loan to you – the flipside of the high effective cost of capital to you is a de-risking of the loan the bank is making you; because you will be paying a chunk of the loan back with money you already have on your balance sheet, unless there is a material adverse change (MAC) in your business, that part of the loan is money good for the lender.

Agenda

- ▶ Venture Debt Analysis

- ▶ When Does Venture Debt Make Sense?

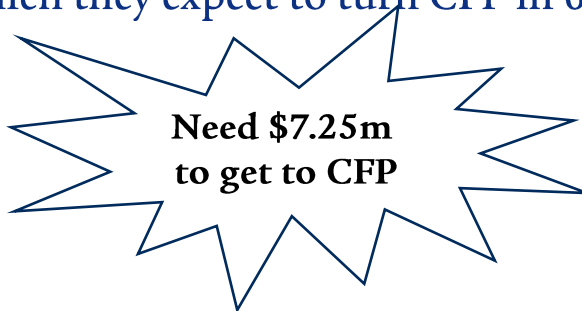
- ▶ Venture Debt Model Walkthrough

When is venture debt an attractive option?

- ▶ When the company can service and repay the debt out of its expected organic cash flow without additional financing
 - ▶ E.g., debt for acquisition or cash dividend
- ▶ Incremental cash gets the company past critical milestone (e.g., chip tape out, new partnership / OEM deal)
 - ▶ This in turn should substantially increase the price at which the company raises equity
- ▶ To establish your company's credit / build a relationship with a bank for a larger loan down the road
 - ▶ Not unlike building your consumer credit with credit cards before taking out a mortgage
- ▶ Sometimes even expensive debt is better than the alternative
 - ▶ Important exercise to run the numbers on the dilution from equity

Example: Company ABC's venture debt loan

Company's Current Cash Balance	\$7.5M
Monthly Burn	Expects to maintain an average burn of \$500k over the next 12 months, after which they expect to turn CFP in 6 months
Loan Size	\$5M
Draw Limitations	One tranche
Draw Period	6 months
Repayment Terms	36 months principal + interest, equal principal payments
Fees	Borrower agrees to pay all reasonable fees incurred by Bank including cost of loan documentation
Warrant Coverage	6.0%
Interest Rate	14.0%
Reporting Covenant	Standard GAAP reporting within 30 days of month end. Audited financials within 120 days. Operating plan 30 days post-approval
Financial Covenants	None



**Need \$7.25m
to get to CFP**

Even if ABC draws down the loan in the first month, they will reach CFP and will be able to repay the loan with their own cash flow.

	1 Jan-09	2 Feb-09	3 Mar-09	•	•	•	17 May-10	18 Jun-10	19 Jul-10
<u>Monthly Burn Scenario</u>	500,000	500,000	500,000				83,333	0	0
Cash Available Assuming <u>No Debt</u>	7,500,000	7,000,000	6,500,000	•	•	•	750,000	750,000	750,000
Cash Available <u>with Debt EoM</u>	12,276,944	11,585,394	10,895,348				2,642,684	2,475,207	2,309,235
Drawdown	5,000,000	-	-				-	-	-
Debt Balance	5,000,000	4,861,111	4,722,222				2,777,778	2,638,889	2,500,000
Principal Payment	(138,889)	(138,889)	(138,889)	•	•	•	(138,889)	(138,889)	(138,889)
Ending Debt Balance	4,861,111	4,722,222	4,583,333				2,638,889	2,500,000	2,361,111

► Cost of capital is 15% (slightly higher than interest rate because of transaction costs)

► Note: This does not include the cost of warrants

Inputs Sheet – model focuses on most common venture debt terms

All inputs denoted in blue

Company Inputs

Current Available Cash/AR	\$	7,500,000
Current Burn Rate	\$	500,000
<i>Due On Signing</i>		
Warrant coverage (assumes full drawdown)		6.0%
Warrant \$	\$	300,000
Price per share	\$	5.00
# of Preferred Series Shares		60,000
Shares outstanding (before warrant issuance)		15,000,000
Warrant represents this % ownership		0.40%
<i>Other Costs</i>		
Transaction Fees	\$	30,000
Commitment Fee	\$	-

Deal Terms

Venture Debt Loan	\$	5,000,000
Interest Rate		14.0%
Interest Only Period		0 months
Repayment term (principal + Int)		36 months
Drawdown Period		6 months
Monthly Facility Fee for Undrawn Portion of Loan		0.000%

Financial Covenants:

Quick Ratio		-
Minimum Available Cash / AR:	\$	-

Assumptions

Amount Drawn Down (model assumes one tranche)	\$	5,000,000
Drawdown Month		Month 1
Six Month CD Rate		1.0%
Burn Rate Step 1: # of Months Current Burn Held Constant		18
Burn Rate Step 2: Afterwhich # of Months to CFBE		6
Burn Scenarios: Burn Scenarios (1=Upside, 2=Base Case, 3=Worst Case)		2
Change Cases By:		25%

Changes company's burn (see Debt Model sheet, rows 65-70). If you are using the model for a specific company, it's MUCH better to plug in the company's actual burn numbers into rows 65-70.

Debt Model Sheet (rows 16-33)

	1	2	3	4	5	6	7	8
	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09
Monthly Burn Scenario	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
If Just Existing Cash	8,500,000	8,000,000	7,500,000	7,000,000	6,500,000	6,000,000	5,500,000	5,000,000
Cash Available with Debt EoM	8,500,000	8,000,000	12,319,032	11,639,302	10,960,811	10,283,559	9,607,545	8,932,770
Drawdown	-	-	5,000,000	-	-	-	-	-
Debt Balance	-	-	5,000,000	4,864,865	4,729,730	4,594,595	4,459,459	4,324,324
Principal Payment	-	-	(135,135)	(135,135)	(135,135)	(135,135)	(135,135)	(135,135)
Ending Debt Balance	-	-	4,864,865	4,729,730	4,594,595	4,459,459	4,324,324	4,189,189
Interest Only Bubble	-	-	-	-	-	-	-	-
Interest Expense	-	-	(58,333)	(56,757)	(55,180)	(53,604)	(52,027)	(50,450)
CD Interest Received on Increments	-	-	12,500	12,162	11,824	11,486	11,149	10,811
Facility Fee	-	-	-	-	-	-	-	-
Cumulative Net Interest Due	-	-	(45,833)	(90,428)	(133,784)	(175,901)	(216,779)	(256,419)

Monthly burn according to monthly burn scenarios (row 65-70)

Company's cash position if company **didn't** raise any debt

Company's cash position assuming debt drawn.

Debt balance company still owes bank

We assume debt is drawn down first day of month, and interest / principal payments are paid at end of month

Bank IRR and Company Cost of Capital (Straight Calculation)

▶ Bank IRR Calculation (rows 35-40):

- ▶ Bank Cash Flow: Calculates bank's net cash flow (loan to company, interest payments and principal payments from company)
- ▶ Bank "CF" with Warrants: Same as Bank Cash Flow, but we used Black-Scholes to calculate the present value of the warrants. We assume the bank gets the benefit of the warrants when the company draws down the loan.
 - You can also do a scenario analysis of your company to value the warrants.

▶ Company Cost of Capital – this is the way companies usually think of the cost of capital for venture debt (rows 42-48):

- ▶ Total Cash Flow: Same as Bank Cash Flow, although we include transaction costs (which are a cost to the company, but do not benefit the bank and therefore are not part of the bank's cash flow), and assume the company receives interest payments on their debt balance. We did *not* include the value of the warrants in the company's cash flow.
 - Warrants result in further dilution, but they aren't really negative cash flow for the company

How We Think About the Company's Cost of Capital (rows 51-63):

- ▶ In Row 53, we calculate the company's "Effective Drawdown" based on logic stated earlier (by the time the company gets to the cash cushion provided by the debt, the company has already paid back a % of the loan... so we calculate what the company's effective drawdown is)
- ▶ In the illustrative example, if the company drew down the loan in the first month, the Effective Drawdown is \$2.9m:

	1 Jan-09	2 Feb-09	● ● ●	15 Mar-10	16 Apr-10	17 May-10	18 Jun-10	19 Jul-10	20 Aug-10
<u>Monthly Burn Scenario</u>	500,000	500,000		500,000	500,000	500,000	500,000	416,667	333,333
Cash Available Assuming No Debt	7,500,000	7,000,000		500,000	-	-	-	-	-
Cash Available with Debt EoM	12,500,000	11,808,449		2,732,153	2,061,667	1,392,686	725,209	142,570	-
Drawdown	5,000,000	-		-	-	-	-	-	-
Debt Balance	5,000,000	4,861,111		-	-	-	-	-	-
Principal Payment	(138,889)	(138,889)		3,055,556	2,916,667	2,777,778	2,638,889	2,500,000	2,361,111
Ending Debt Balance	4,861,111	4,722,222		(138,889)	(138,889)	(138,889)	(138,889)	(138,889)	(138,889)
				2,916,667	2,777,778	2,638,889	2,500,000	2,361,111	2,222,222

Even though the company drew down \$5m in Jan '09, it's as if the company is only drawing down \$2.9m in April 2010

But then you need to take into account interest payments and transaction costs.

- ▶ By April 2010, the company has already paid the bank **\$700k** in interest on the original \$5m loan
- ▶ Taking into account the April principal and interest payments, and the transaction costs of papering the loan, it is as if the company was only getting **\$2.1m** in cash flow from the loan in April 2010
- ▶ To show this “effective cash flow”, we push out all the interest payments and the Effective Drawdown as when the company would have otherwise run out of cash:

2) Company Cost of Capital - Based on Available Debt at Cash Out

Total Cash Flow	-	-	-	2,061,667	(168,981)	(167,477)
<u>Effective</u> Drawdown	-	-	-	2,916,667	-	-
Transaction Costs	-	-	-	(30,000)	-	-
Company Principal Payments	-	-	-	(138,889)	(138,889)	(138,889)
Company Net Interest Payments	-	-	-	(686,111)	(30,093)	(28,588)

- ▶ The XIRR equation calculates the cost of capital on this effective cash flow.



Questions? Feedback?

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