



The impact of switching costs on vendor financing ☆

M. Martin Boyer^{a c} , Karine Gobert^{b c}  

Show more 

 Share  Cite

<https://doi.org/10.1016/j.frl.2009.07.001> 

[Get rights and content](#) 

Abstract

We show that vendor financing appears in equilibrium as the result of repeated trade interactions between a buyer and a supplier when changing supplier is costly. Competition between suppliers forces them to offer a rebate before the relationship is initiated and switching costs allow the buyer to borrow from the supplier in the first period and to roll over the debt until the end of the relationship. The sequence of transfers is similar to a long-term financing structure. Our model suggests that switching costs allow small business owners to smooth their dividend income by using vendor financing.

Introduction

Vendor financing occurs when two corporations, a supplier and a buyer, arrange for a schedule of payments that makes one of them the debtor of the other for some period of time. Trade credit is a form of vendor financing that delays the payment of delivered goods. Trade credit is an important source of firm financing, and especially so for small and medium-sized firms. Cuñat (2007) estimates that trade credit represents 17% of the average medium-sized British firm's asset and 40% of its debt financing. He also reports that in the United States, trade credit represents 18% of total assets and 35% of total debt for small and medium-sized firms. Clearly these figures would be higher if all forms of vendor financing are taken into account.

We model in this paper the relationship between a risk neutral supplier, who has perfect access to intertemporal financial markets, and a credit-constrained risk averse buyer who is not indifferent to the timing of his income. In a world where agents have a concave value function (i.e., they are risk averse) they will also have, in a dynamic setting, marked preferences for smoothing their consumption over time. This situation is particularly pertinent to a small business owner where his periodic consumption depends on the dividend generated by the firm. As a result, if a small business owner is risk averse and has limited access to financial institution liquidities that would allow him to smooth his dividend stream, then he

would value any relationship with a trading partner that implicitly promises smoothing of his dividend through a long-term relationship.

An important research question in the past 20 years has addressed the question of why supplier firms would act as a substitute to banks in extending credit to other firms. Petersen and Rajan (1997), using the database on small and medium-sized firms in the United States, find that small firms are most likely to use vendor financing if they are credit constrained.¹ They support the substitution theory that firms use vendor financing only when other sources of borrowing have been exhausted. For Elliehausen and Wolken, 1993, Demirgüç-Kunt and Maksimovic, 2001, however, trade credit should be seen as a complement to bank credit rather than a substitute. Financially sound firms obtain credit from banks that they extend to less healthy firms. This adds efficiency to the financial system when suppliers have a better information about their client's creditworthiness (Smith, 1987, Biais and Gollier, 1997, Jain, 2001), and when they are less vulnerable to cash diversion (Burkart and Ellingsen, 2004) or default (Santos and Longhofer, 2003).

The model we present in this paper builds on the enforcement power theory that is central to vendor financing (see Burkart et al., 2008, Cuñat, 2007). Suppliers have an advantage over banks because they have better ways to enforce repayment. In line with the contract theory result that it is in the agents' best interest *ex ante* to find a way to credibly commit to their contractual relationship, our model introduces adjustment costs to the supplier's input that induce the buyer to enter a relationship in which he is held up by the supplier. The hold-up situation acts as a precommitment mechanism that enables the relationship to last for more than one period. The supplier can then safely make value increasing transfers to the client at the beginning of the relationship. As the result of the transfers' particular timing between the supplier and the client, vendor financing emerges as a byproduct of a contract imperfection.

In contrast to previous literature that concentrates mostly on short term relationships, our approach has the distinct advantage of combining short term financing with long-term relationships between business partners. Our model therefore focuses on the timing of transfers in an economy where the supplier has a negotiation power but no market power. We generate vendor financing as a consequence of trade relationships instead of imposing a relationship where the client needs credit to operate his project as in Cuñat (2007). In a repeated buyer/supplier relationship with no bank and in the presence of imperfect contracting between the parties, we show how vendor financing appears in the equilibrium sequence of transfers. Cuñat (2007) shows that the trade credit pattern of transfers incorporates risk sharing at a premium. We abstract from this issue by removing all uncertainty in the buyer's income. Our contribution is thus to present an extremely simplified contract where adjustment costs are sufficient to make a form of incomplete long term vendor financing self enforceable.

The paper is structured as follows. In the next section we present the basic model and the first best solution to trade relationships. In the last Section, we show how vendor financing appears at the equilibrium of the self-enforcing relationship with switching costs.

Section snippets

The basic model

Suppose a firm that has a widget-producing project that will last for $T + 1$ periods denoted $t = 0 \dots T$. This firm, which we shall refer to as the buyer for the remainder of the paper, produces in each period widgets

that can be sold on the competitive market at some unit price p . The buyer's production function displays constant marginal returns so that his marginal cost is c for all levels of production. Without loss of generality we normalize production to one unit.

To produce this widget in every...

Non-binding relationships

Suppose that the buyer chooses a different supplier in every period. He therefore incurs in each period the adjustment cost a and pays the intermediary good's supplier the competitive price γ . Changing supplier every period is obviously sub-optimal. The incumbent supplier could offer the same price and make the buyer economize on the adjustment cost. Hence, she has an advantage over her competitors so that she can charge higher prices and still supply the good.

We solve for the equilibrium...

Conclusions

For a small business with a restricted access to credit, it is overly important to be able to smooth the first period cost of finding a supplier. Here, competition among suppliers and switching costs allow the buyer to borrow from his supplier in period 0 and to roll over the debt from period to period until a late reimbursement in the final period of the relationship. This loan provides working capital that, in turn, allows the buyer to optimally invest in other projects without having to...

References (15)

- N. Jain
[Monitoring costs and trade credit](#)
The Quarterly Review of Economics and Finance (2001)
- B. Biais *et al.*
[Trade credit and credit rationing](#)
Review of Financial Studies (1997)
- M. Burkart *et al.*
[In-kind finance: a theory of trade credit](#)
American Economic Review (2004)
- Burkart, M., Ellingsen, T., Giannetti, M., 2008. What you sell is what you lend? Explaining trade credit contracts....
- T.S. Campbell *et al.*
[Optimal managerial incentive contracts and the value of corporate insurance](#)
Journal of Financial and Quantitative Analysis (1987)
- V. Cuñat
[Trade credit: suppliers as debt collectors and insurance providers](#)

Review of Financial Studies (2007)

P.M. DeMarzo *et al.*

Corporate incentive for hedging and hedge accounting

Review of Financial Studies (1995)

There are more references available in the full text version of this article.

Cited by (3)

[Do generous trade credit terms provide a competitive edge? ↗](#)

2022, Asia-Pacific Journal of Business Administration

[A Supplier Switching Model with the Competitive Reactions and Economies of Scale Effects ↗](#)

2017, IEEE Transactions on Systems, Man, and Cybernetics: Systems

[Optimization of supplier switching with asymmetric information ↗](#)

2012, Transactions of Tianjin University

Recommended articles (6)

Research article

[The Management of Superior Mesenteric Artery Aneurysm: Experience with 16 Cases in a Single Center](#)

Annals of Vascular Surgery, Volume 42, 2017, pp. 120-127

[Show abstract](#) ✓

Research article

[Negative thermal expansion and low-temperature heat capacity anomalies of \$\text{Ge}_{31}\text{P}_{15}\text{Se}_8\$ semiclathrate](#)

Journal of Alloys and Compounds, Volume 684, 2016, pp. 564-568

[Show abstract](#) ✓

Research article

[New approximations of some expressions involving trigonometric functions](#)

Applied Mathematics and Computation, Volume 283, 2016, pp. 299-315

[Show abstract](#) ✓

Research article

[Effect of \$\text{Al}_2\text{O}_3\$ on the phase composition and structural features of iron pyrophosphate glasses](#)

[Show abstract](#) 

Research article

[Uncertainty analysis of the high pressure closed loop gas flow standard facility in NIM](#)

Flow Measurement and Instrumentation, Volume 78, 2021, Article 101891

[Show abstract](#) 

Research article

[A high order finite strip transfer matrix method for buckling analysis of single-branched cross-section thin-walled members](#)

Thin-Walled Structures, Volume 135, 2019, pp. 1-11

[Show abstract](#) 

☆ This research was made possible by a grant from the Social Science and Humanities Research Council of Canada. The continuing financial support of CIRANO is also appreciated.

[View full text](#)

Copyright © 2009 Elsevier Inc. All rights reserved.



All content on this site: Copyright © 2023 Elsevier B.V., its licensors, and contributors. All rights are reserved, including those for text and data mining, AI training, and similar technologies. For all open access content, the Creative Commons licensing terms apply.

 RELX™