BENEFITS AND COSTS OF FINANCING ACCOUNTS RECEIVABLE PORTFOLIOS IN THE HEALTHCARE INDUSTRY

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SUMMARY: *Accounts receivable (A/R) financing refers to cash conversion of an organization's eligible portfolio of outstanding invoices for its operating capital requirements. This study investigates why A/R financing is critically important in meeting the short-term cash demand of healthcare organizations, in particular. It distinguishes between two basic conversion methods, namely, invoice pledging for loan collateral, and asset sale through invoice factoring, and their respective benefits and drawbacks. In doing so, the study uncovers a quintessential paradox in healthcare finance: Insurers primarily drive healthcare organizations to seek A/R financing, yet they are often the main reason why many creditors opt to stay out of, or impose greater restrictions on, A/R financing, including how A/R financing agreements are structured. Nonetheless, the study asserts that healthcare organizations may consider A/R financing not just to override cash flow deficiency, but to grow and invest in a healthcare business, provided the anticipated financial outcome is a net gain that outweighs the costs of giving away a portion of organizational cash flow.*

Keywords: Accounts Receivable (A/R), Cash Flow, Factoring, Pledging, Revenue Cycle, Risk Management, Transaction Costs

JEL Classification Codes: G20; I10; I13; M41

Introduction

There is a dearth of literature on accounts receivable (A/R) financing, which most healthcare organizations are unfamiliar to begin with. We investigate why A/R financing is critically important in generating cash flow for healthcare organizations. In doing so, we distinguish between two basic methods of receivable conversion and their respective benefits and drawbacks. We also analyze the efficient uses of A/R for revenue cycle management, financial risk management, and consequently, organizational growth. Theoretical and practical implications are discussed by way of conclusion.

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Revenue Cycle Imperatives

Cash flow requirements

A/R in the healthcare industry refer to payments owed — mostly by insuring third-parties — to a healthcare provider for treatments and services rendered to patients. The payer's debt becomes a receivable after an invoice is sent by the provider to the payer (Needles, Powers & Crosson, 2011). A/R are critical to revenue cycle and financial risk management of healthcare organizations, considering that healthcare in the United States is predominantly paid for by insurance, whether private/commercial, non-profit, or government. In 2018, for instance, 87 percent of hospital care and 82 percent of physician and clinical services were billed to private insurance, Medicare, Medicaid, and other insurers, such as Worker's Compensation and auto insurance (CHCF, 2020). The revenue cycle is a multi-disciplinary effort to reduce the collection period for A/R based on sound credit-and-collection policies and financial risk management.

Most providers face short-term cash needs for various reasons, besides price increases, operational expansion, and current liabilities. Among these is the capital-intensive nature of healthcare. Replenishing working capital is an ongoing need that requires massive infusion of cash, particularly in updating or purchasing new equipment and other inventory and conducting capital-intensive research and development to keep up with medical innovation. Legal and regulatory compliance is another important area that is highly dependent on cash flow in light of its relatively heavy transaction costs (e.g., arising from constantly evolving and changing federal regulations). Health information technology can be equally burdensome to providers. Besides the cost of purchasing and installing an electronic medical record system, which ranges from $15,000 to $70,000 per provider (ONC, 2021), it requires trained staff and regulation-compliant information systems (Mendoza, 2017). The predominant role of insurance in financing healthcare amplifies short-term cash flow requirements, especially because insurers do not typically reimburse for actual cost of care. Rather, they reimburse based on charges minus discounts, price caps, predetermined or prospective reimbursement rates (e.g., Medicare's diagnosis-related groups or DRGs), and negotiated concessions based on patient volume. Because financial institutions are generally reluctant to deal with insurers owing to the financial risk they represent in these instances, most healthcare organizations do not qualify for conventional short-term loans and unsecured line of credit (Mendoza, 2020).

Writing off some outstanding accounts as bad debt does not generally work in the organization's interest, except in instances where the amount involved is negligible or less than collection cost (Nowicki, 2018). Otherwise, it means forfeiting considerable revenue. It also sends the wrong signal to payers, especially in iterated transactions with the provider.

Third-party reimbursements

Healthcare organizations are constantly under pressure from their senior management and governing boards to address cash flow problems arising from delayed or inadequate reimbursement by health insurers. The vast majority of provider insurance claims, with an average payment due date of 30 days, are actually paid between 60 to 120 days. Medicare and Medicaid take 60 days or slightly more, while commercial insurers take 90 to 120 days on average, which means payment for healthcare comes long after a patient is treated (Factor Finders, 2020a). Third-party reimbursements also tend to be much lower than cost of care, presumably in exchange for patient

volume offered by the insurer (Morrisey, 2020). In-network provider classification is another source of bargaining power on the part of the insurer (Mendoza, 2021).

The long time it takes to collect from third-parties and the low reimbursement ratios relative to cost of care are very challenging to most healthcare organizations of any size (Hollis, 2017). Against this backdrop, some organizations that are familiar with receivable financing might seek agreements with certain financial institutions to generate needed cash flow. There are essentially two avenues for conversion: *pledging* and *factoring* their eligible A/R.

Pledging for Loan Collateral

Purpose and advantages

Pledging is more commonly available to healthcare organizations than factoring, if only because the loan is secured and the creditor does not have to go after third-parties, particularly insurers. In pledging, the organization puts up a portfolio of qualified A/R as proof of financial solvency and collateral in backing a loan, which is usually a line of asset-based credit.

In pledging, new receivables become immediately available as security. Another advantage is that the organization retains full title to the receivables, which means it still owns and collects them. And because full title is preserved in favor of the borrowing organization, it is not necessary to notify any payer of the legal security interest that a lender gains in the accounts, unlike in the case of factoring (Needles et al., 2011).

From an accounting standpoint, pledging is considered a form of off-balance sheet financing. This means that the organization does not record A/R along with the corresponding debt. It is sufficient that disclosure is made through a note to the Balance Sheet. This frees up capital, eases creditor concerns, and reduces regulatory bottlenecks (Codjia, 2017).

Process

Pledging typically proceeds from five or six steps, as summarily laid down below:

1. After pledging as a cash conversion strategy is approved by the organizational leadership, the Finance team assembles a portfolio of A/R to commit.

   Note: Medicare and Medicaid A/R may be legally offered as collateral. Given federal anti-assignment provisions, the risk of collateralizing these government accounts may be mitigated in certain ways. One of these is to set up a "double lockbox" arrangement with a "daily sweep" feature. Under this lockbox arrangement, the first lockbox is placed in the borrowing provider's name and solely dedicated to receiving Medicare and Medicaid A/R. The provider directs the disposition and retrieval of funds from this lockbox. The second lockbox is in the name of the lender, for the benefit of the provider, and receives all non-Medicare/Medicaid receivables. Thus, the lender should ensure that the first lockbox is "swept" daily to move all Medicare and Medicaid funds to the second lockbox (Rose, 2016).

2. The committed A/R portfolio is reviewed with potential lenders, who heed the quality of receivables based on payer profile and creditworthiness and the average collection period and other relevant ratios.

3. The lender will typically "demand a haircut" (delimit financial/credit risk) based on one of two options:

   a) The *loan-to-value* (LTV) ratio compares the size of the proposed loan to the pledged value of eligible A/R. The loan amount is presumably much smaller than the pledged A/R portfolio. The lender retains leverage under the LTV approach by advancing only a portion of pledged accounts (Hayes, 2020). Low LTV ratios (usually ≤ 80 percent for healthcare organizations) indicate credit risk manageability.

Hospital ABC seeks a $1.5 million loan. It pledges a $2 million A/R portfolio approved by the lender. Lender grants the loan and offers favorable terms, including its prime rate (e.g., 3.25 percent prime rate + 5 percent for Hospital ABC's creditworthiness). Loan application and other transaction fees apply.

$$LTV = \frac{\text{loan amount}}{\text{eligible A/R}}$$

$$= \frac{\$1{,}500{,}000}{2{,}000{,}000}$$

$$= \mathbf{0.75}$$

   b) A *borrowing base* (BB) formula, which is the other pledging option, represents a predetermined percentage distribution of A/R that changes or declines with the aging of the receivables. The proportion of age-eligible A/R has to be acceptable to the lender. It is considered safer for risk-mitigation on the part of the lender, as it identifies (older) receivables that are least likely to be collected (Bragg, 2019), especially from insurers

Lender disallows A/R of Hospital KLM that are over 90 days old, and requires that less than 70 percent of all A/R are 60 to 90 days old. Lender also excludes any A/R for which KLM has granted unusually long payment terms. All these are lumped under ineligible A/R ($1 million).

After lender accepts the remaining $1 million for collateral (eligible A/R), it sets a portion of those accounts (80 percent) for KLM's loan based on lender's due diligence and portfolio reviews and industry standards. The healthcare industry averages 70 to 80 percent. Lender offers KLM the same prime interest rate+ from the preceding LTV illustration.

• Gross A/R:	$2,000,000
• Minus ineligible A/R:	1,000,000
• Eligible A/R:	1,000,000
• 80% borrowing base:	800,000
• Minus reserve @5% eligible A/R:	50,000
• *Borrowing availability:*	**750,000**
• Interest @prime rate+	8.25%

4. The terms of contract are drawn. The lender gains a lien on the receivables, so that it may collect on them if the borrower defaults, and then charge against the reserve accordingly.

5. The approved loan is released by the lender to the organization pursuant to the borrowing terms and provisions.

6. For the BB option, healthcare organizations will also need to complete and submit to the lender a BB certificate during each reporting period. The certificate itemizes the outstanding invoices at period end into the age brackets prescribed/approved by the lender and (re)calculates step 3-b above for the maximum allowable loan. This allows the lender to monitor the amount of collateral available, and adjust issued debt over time (Bragg, 2019).

Disadvantages

There are certain drawbacks to pledging.

First, A/R are committed to the lender for a given period of time. The secured lender gains control of the deposit account by virtue of the depository agreeing to take instructions from the lender without having to obtain the borrower's (i.e., the healthcare provider's) consent.

Second, using receivables to secure a loan is usually based on an interest rate that is higher than most other sources of short-term financing or conventional loans (Nowicki, 2018). Pledging rates range from 2 percent above prime and up. In addition, a service fee based on the face value of the receivables is charged. Higher LTV ratios (>0.80) in step 3-a, if allowed by the lender, will likely command higher interest rates.

Third, pledging often requires repayment by the borrower in the short-run. Healthcare organizations are often time-constrained and resource-challenged (e.g., due to various working capital needs), and yet pledging tends to have shorter terms compared to long-term loans.

Despite lender risk mitigation schemes that it can devised for the pledging options, banks will usually not lend against insurer A/R owing to their track record of late or partial reimbursements to providers, in addition to the transaction costs of insurance claims resolution (Wallery, 2004).

Invoice Factoring

Purpose and types

Unlike pledging, factoring is a form of asset sale that discounts receivables upon their purchase by a financial institution, provided these are invoiced to third-party insurers and insurance carriers (e.g., physician offices, home health care companies, medical transport companies, labs, etc.). The financial institution purchasing receivable is often called a factor (or medical factor in the case of the healthcare industry). The cash advanced by the factor can be used by the organization for any purpose.

As with other industries, there are two types of medical factoring available to healthcare organizations. It may be done *with recourse* or *without recourse*. The former allows the medical factor to return any A/R to, and demand payment (e.g., at invoice face value) from the organization, if the factor cannot recover payment from the insurer or third-party payer within a stipulated time frame (e.g., 90 days). The latter leaves to the factor the financial risks of debt collection. In exchange, a higher factoring fee, lower cash advance rate, and other safeguards are applied by the factor to compensate for financial risks when factoring is contracted without recourse. A non-recourse validity guarantee is also required of the provider or healthcare organization, enabling the factor to go after it where fraud relative to the accounts it purchased is suspected or proven.

Process

Factoring typically proceeds from six steps, as summarily laid down below:

1. After factoring as a cash conversion strategy is approved by the organizational leadership, the Finance Department assembles a portfolio of A/R to commit.

Note: Factoring Medicare and Medicaid receivables is ideally done through the "double lockbox" previously described in pledging. To the second lockbox these factored receivables are transferred on a daily basis (Heffner, 2020).

2. A medical factor or factoring firm (which could be more than one) is selected, after which a contract is drawn up. The transacting parties indicate in the contract whether to factor with or without recourse. Facility set-up and underwriting fees and a due diligence deposit are subsequently paid by the provider or healthcare organization to the factor.

3. The factor estimates the net collectible value (NCV) of all eligible A/R from each third-party payer based on a predetermined period of time (usually 120 days or less). The NCV is the portion (percentage) of these A/R that the factor expects to collect from each payer relative to invoice face value of their pending invoices. Ineligible accounts, consisting of patient cost-sharing (e.g., copays, co-insurances, etc.), contractual reserves, and aged receivables, are normally excluded from the calculation

Hospital XYZ invoiced Hollis Insurance $2 million in the fourth quarter of 2020 . It collected $1 million from these invoices within 90 days:

$$NCV = \frac{\text{Average Period Collection}}{\text{Average Period Invoices}}$$

$$= \frac{\$1{,}000{,}000}{2{,}000{,}000}$$

$$= \mathbf{0.50}$$

4. The healthcare organization then cedes the eligible A/R titles per payer to the factor. It notifies payers to transmit payments to the factor which now takes over the collection process.

Among the eligible accounts that the medical factor purchased from Hospital XYZ under a *factoring with recourse* scheme is invoice #101 to Hollis Insurance. XYZ is compelled to buy it back at face value ($2,000) if uncollected by the factor after a maximum period of 90 days. At an NCV of $1,000, the factor uses an industry-standard, advance rate of 80 percent and pays XYZ $800. The balance of $200 (20 percent) is set aside as a reserve.

• Eligible A/R #1 (face value):	$2,000
• NCV@50% of eligible A/R:	1,000
• Factor (advance rate) @80%:	**800**
• Reserve@20%:	**200**

5. For invoice payments collected by the medical factor within the initial period (e.g., the first 30 days of the 90-day maximum), the factor retrieves a portion equal to the amount it had previously advanced to the provider or healthcare organization. The factor deducts the factoring fee from the reserve. This service fee is analogous to credit card sales. In a credit card sale, the retailer pays a percentage fee to a financier in order for the financier to pay the account and take on the risk of debt collection. Non-collection and erroneous account fees can also be fully or partially charged against this reserve.

The factor collects payment ($1,000) on invoice #101 within 30 days (collection period is extendible to 90 days with corresponding interest rate increases). Therefore:

• Actual collection from insurer:	$1,000
• Recoupment from cash advance:	800
• Factoring fee@2.0% of NCV:	20
• Reserve balance (minus factoring fee):	180
• Released to Hospital XYZ:	**$ 180**

6. The factor releases the reserve balance to the organization. The organization, in effect, received a total payment from the factor equal to the initial cash advance and the reserve balance. This completes the provider-factor transaction for a particular A/R.

Hospital XYZ receives **$980** net of invoice #101.

If the factor collects less than NCV from Hollis Insurance, the difference is charged against the reserve of another (paid) XYZ invoice. Conversely, if payment collected is greater than NCV (e.g., $1,300), XYZ is then credited for the overpayment.

Advantages

Certain benefits to factoring resemble pledging: 1) It is available to non-bankable providers, with no required compensating balances; 2) It offers the flexibility of converting receivables into instant operating cash for unrestricted (especially working capital) use; and 3) There are no conversion limits, which gives the provider better control of the revenue cycle.

Unlike a bank loan, factoring firms do not offer a fixed credit line, but as new receivables are accounted for, the organization gains access to more working capital. And since the organization is selling an asset, it does not incur debt in factoring its A/R. That is also to say that even if the provider is just starting up its business and/or has encountered credit-related difficulties in the past, it can still be approved for medical factoring without collateral. This is particularly important, considering that many banks and other creditors are unwilling to fund healthcare organizations with only outstanding invoices for their back-up asset. Additional pledging restrictions may, of course, be imposed by creditors if these are insurer invoices. Some banks only focus on large healthcare organizations with substantial history (Sopranzetti, 1998; Codia, 2017).

Assuming a healthcare organization is considering a commercial bank for working capital loans, the table below outlines the main differences between factoring and conventional borrowing:

Aspect	Factoring	Bank Loan
Principal + interest	None	Yes
Credit history	Not applicable	Applicable & analyzed
Assets & liabilities	Not applicable	Applicable & analyzed
Processing time	Factoring account set up w/in a few days	Loan approval: 1-2+ months on average
Required paperwork	Minimal	Extensive documentation
Rates	Adjustible as larger eligible $ amounts are factored	Interest rates locked
Credit line	Unlimited + grows w/ organization & receivables	Borrowing amount limited or capped

It should also be noted that factoring avoids most overhead costs to the provider or healthcare organization, as medical factors typically take over billing and collection. However, there are some factoring contracts where the provider remains responsible for these operations.

Disadvantages

One disadvantage of medical factoring is organizational expense, in the form of transaction and other fees that could end up being more than what other sources of short-term financing usually charge. Secondly, if A/R are sold with recourse (as exemplified by the hypothetical Hospital XYZ in our preceding illustration), the organization would have ongoing financial risk. Finally, the sale of A/R may alienate payers if the factor pursues aggressive collection measures or miscommunication arises between the medical factor and the payer.

While factors doubtless gain from a calculated profit, several choose not to invest in healthcare accounts "due to their volatility and ambiguous nature. This holds even more true for A/R heavy in litigious claims, as these accounts often take longer to settle and factoring is meant primarily as a short-term financing option" (Wallery, 2004, p. 3). Unpredictability of insurer reimbursements often lead medical factors to subjectively lower their advance rates and increase

factoring and other fees relative to NCV, which estimates how much the factor will likely collect at less than invoice face value.

Conclusion

The age-old saying, "cash is king," says it all. Maintaining a healthy and stable cash flow is one of the financial challenges that healthcare organizations face daily. Much of this owes to delayed and less than full reimbursements by third-party payers, notably insurers, whether commercial, non-profit, or government. Contested insurance claims add to these challenges.

Healthcare organizations have immediate cash needs for working capital, and constant cash flow challenges from business expansion, scientific/technological innovation, and regulatory compliance. Inaccessibility of many business loans and unsecured lines of credit, due largely to the reimbursement reputation of insurers, create barriers to cash flow. Here lies the quintessential paradox in healthcare finance: Insurers primarily drive healthcare organizations to seek receivable financing to address liquidity problems. Yet, insurers are also the main reason why many creditors elect to stay out of, or impose greater restrictions on, medical receivable financing, especially factoring. But because over 80 percent of their invoices are billed to third-party payers, notably insurers, providers remain highly dependent on them for their revenue base. Providers thus need to find practical avenues to infuse cash into their operations, as well as financing and investing activities.

We distinguished between two methods of cash conversion for the A/R of healthcare organizations: pledging, which is more commonly available but seldom considered, and factoring, which has a lesser number of financial institutions offering it, but is more often sought by providers. By delivering instant cash to meet short-term cash flow needs, these conversion methods can help sustain longer term efficiencies, especially if part of the cash inflow is invested. Both also contrast from conventional borrowing as a means of raising revenue and capital. Pledging and factoring offer key benefits, as providers become saddled with unpaid invoices and collection problems. They have costs and drawbacks as well.

Besides the practical implications, some theoretical implications can be drawn from financing A/R portfolios in the healthcare industry. A/R constitute one important type of liquid asset used to identify and value a healthcare organization's most liquid assets. The Quick Ratio, in particular, measures for asset liquidity. After all, the underlying strategic assumption in revenue cycle and working capital management is that a balance between adequate cash flows for operations and the productive uses of organizational resources should be kept. This serves to underscore the critical importance of periodically evaluating the cash-to-cash cycle, i.e, the length of time it takes for (a healthcare organization's) income or profit tied up in production and inventory to generate cash through payments for healthcare treatments and services:

$$\textit{Quick Ratio} = \frac{\text{Cash equivalents + Marketable securities + A/R (due 12 months)}}{\text{Current Liabilities}}$$

There is no gainsaying that the effectiveness of working capital can be enhanced if a healthcare provider or organization can reduce the average time it takes to collect a receivable. They might generally regard A/R as burdensome to the revenue cycle, since they are not immediately cash-convertible and require collection efforts (and costs). The highly liquid form of A/R, on the other hand, translates to theoretical value for external lenders and financiers. Banks, medical factors, and other financial institutions have stepped in to address these challenges, with most A/R financing agreements typically structured as loans or asset sales to contain the transaction costs of these A/R to both provider and financial institution. In this sense, lenders and financiers help boost healthcare organizational growth by facilitating low or lower transaction costs, especially compliance costs on the part of insurers.

Transaction costs or expenses are incurred when buying or selling a good or service in the market. Hence, search and information, bargaining and decision-making, and monitoring and enforcement costs are incurred by the transacting parties (Coase, 1937; Pessali, 2006). Of particular importance in A/R conversion are *measurement costs* (e.g., A/R eligibility and value calculation, which form part of search and information costs) and *enforcement costs* (to ensure that neither party in the A/R financing transaction reneges on their part of the deal). There could also be substantial *negotiation costs* (e.g., in discounting and purchasing eligible invoices, setting terms and provisions of recourse or non-recourse factoring, etc.). Because the theory of transaction costs essentially treats property rights and contracts as problematic — epitomized in this study by a track record of delayed or less than full insurer reimbursements — it inevitably leads one to ask what kind of institutions or firms can minimize the transaction costs of producing, delivering, and receiving compensation for healthcare treatments and services. This study suggests that often these processes and transactions are categorized by the kind of contract involved (i.e., between provider and insurer or cash-converting firm). They are also influenced by how a contract is alternatively or creatively enforced when compliance issues arise (e.g, with the involvement of lenders and financiers). It is well to bear in mind that the higher the frequency of transactions between contracting parties, the higher the relative administrative and bargaining costs (Williamson, 1979).

Healthcare organizations should nonetheless consider addressing areas of unnecessary revenue loss, operational processes, and expenditure trends before seeking A/R financing. After all, these tie up to the revenue cycle. By systematically reviewing and valuing A/R, financial risk analysis can establish collection rates and predict future returns before an organization compares between and contracts with lenders, factors, and other financial institutions.

It is from this standpoint that A/R financing could serve a strategic function, and not necessarily as a last resort. If pledging or factoring replenishes cash flow not simply to override temporary cash deficiency, but to enhance healthcare provision and invest strategically, the next thing to consider is whether a net gain is likely within a reasonable period of time. If the net gain from the infusion and uses of additional cash outweighs the costs and expenses of giving away a portion of cash flow to lenders and factors, A/R financing might be effectively pursued. Once an organization improves short-term cash flow in a way that maximizes efficiency, growth naturally follows.

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