Evaluating Budgeting Apps: Limited Support for Budgeting Compared to Tracking

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Financial behaviour is deeply embedded in our lives, yet for many people its success remains problematic. The need for supporting tools in this space is reflected in the growing number and popularity of budgeting apps, albeit limited research has focused on evaluating them. This paper describes a functionality review from the lens of mental accounting theory of 45 top-rated budgeting apps selected from 1335 apps on Google Play Store and Apple Store. Findings indicate that while all apps support tracking of transactions, one third of the apps do not support budgeting informed by money envelopes. We also report challenges regarding the meaning of key concepts of "accounts" and "transactions" for which we proposed novel design implications including a more nuanced vocabulary to talk about accounts and transaction types, new knowledge to have better support for budgeting through mental accounting theory and grounding budgeting as cognitive process in actual financial behaviour.

Financial behaviours, Budgeting apps, Money envelopes

1. INTRODUCTION

HCI research on money and financial practices has focused mostly on exploratory studies (Kaye *et al.*, 2014; Vines, Dunphy and Monk, 2014; Snow and Vyas, 2015b; Vyas *et al.*, 2016; Lewis and Perry, 2019), whose findings indicate that people tend to use digital tools to a limited extent. As a result, we have little understanding of how digital tools such as mobile apps for personal budgeting could facilitate the tracking and monitoring of financial behaviours such as tracking and budgeting for daily expenditures. In addition to mobile banking, financial management apps supporting users to track expenses and create budgets, have also experienced rapid growth in the recent years as one of the fastest growing categories of finance apps (Bitrián, Buil and Catalán, 2021). In 2018, the global revenue for the such tools was over $1.4 million, and estimated to at least double its value by 2025 (QYResearch, no date). While previous HCI research has explored functionalities of publicly available apps on marketplaces in domains such as fitness (Chung et al., 2018), diet (Zaidan and Roehrer, 2016), depression (Qu et al., 2020) or digital wellbeing (Almoallim and Sas, 2022), limited such work has looked at budgeting apps.

To address this gap, we explored the functionalities of top-rated budgeting apps by employing a mental accounting lens. Mental accounting is a behavioural economics theory (Thaler, 1999) according to which people commonly partition and budget money

separately in mental accounts usually materialized through money envelopes for specific purposes. As the economist Thaler (Thaler, 1999) stated the main purpose of mental accounting is to use labelled categories for sources such as regular income and uses of funds such as food, to help individuals and households organize, track and monitor their spending. Our findings indicate insufficient support for budgeting functionality and important challenges of such apps due to the overlapping meanings and insufficient clarity of the key concepts. We discussed new design implications for addressing them including a more nuanced vocabulary to talk about accounts, transactions and budgeting, better support for budgeting in addition to tracking and in particular for multiple rather than single budgets.

2. BACKGROUND

Most HCI work on financial behaviour has focused on tracking such practices for individuals (Kaye et al., 2014; Vines, Dunphy and Monk, 2014; Lewis and Perry, 2019) and households (Snow and Vyas, 2015b, 2015a; Vyas et al., 2015, 2016) and their preferred tools. To track their spending, most of previous findings emphasize analogue tools such as coin jars (Snow and Vyas, 2015a; Vyas et al., 2016), enabling people to see how much they have spent. In addition to coin jars, envelops (Snow and Vyas, 2015a; Vyas et al., 2015) are also commonly used budgeting tools for monitoring expenses as their

names reflect the purpose of money stored in specific envelopes, such as grocery money. There have been other common analogue tools for budgeting and tracking spending, such as wall organizers, bills attached to refrigerators, folders and handwritten diaries (Kaye et al., 2014; Snow and Vyas, 2015b, 2015a; Vyas et al., 2015, 2016), which tend to be preferred due to their simplicity and efficiency.

In contrast to such rich use of analogue tools, HCI research has reported limited digital tools supporting financial practices and in particular of budgeting apps. For instance, Snow and Vyas's study (Snow and Vyas, 2015a) showed banking apps as more common digital tool for tracking financial transactions, with only one third of the 15 participants having used budgeting apps which they tend to discontinue after a short period of time due to the perceived challenge of entering expense and of lack of adequate control over their spending. Spreadsheets were another common tools mostly for tracking transactions (Kaye et al., 2014; Vyas et al., 2016), rather than budgeting purposes. Despite the growing HCI interest in personal finances, we have seen limited theoretical underpinning of such work, especially from the lens of mental accounting theory, although the value of behavioural economics has been previously suggested (Stockinger et al., 2013) for healthy choices (Lee, Kiesler and Forlizzi, 2011), digital wellbeing (Park, Lee and Park, 2021) or retirement savings (Gunaratne and Nov, 2015).

To summarize, HCI research on financial practices has highlighted mostly the use of analogue tools and limited use of digital ones, especially budgeting apps. Most of such work has also limitedly engaged the mental accounting theory (Thaler, 1999) despite initial acknowledgments of the value of behavioural economics in HCI.

3. METHOD

To identify the budgeting apps, we searched the two marketplaces in the UK: Google Play Store (for Android) and App Store (for iOS) using three keywords: **budget, budgeting and finance**. From the total of 1335 apps, we removed duplicates and retained only the free ones, which were also top-rated apps with an average rating score of four out of five and with at least 1000 reviews. This led to 45 apps being included in the analysis: 21 apps available only on Google Play Store and 24 apps available on both platforms, with 44 apps belonging to Finance category on marketplaces and one app to Business category.

The functionalities of these 45 apps were iteratively reviewed to identify functionalities, firstly through analysing all the apps' descriptions, followed by expert evaluation. The analysis of apps' descriptions, led to the identification of main functionalities such as tracking transactions and monitoring budgets. The limited information available in the apps' descriptions was rather restricted to these broad functionalities.

For the expert evaluation we leveraged key concepts from mental accounting theory (Thaler, 1999) to identify functaionalies pertaining to funds, i.e. sources and uses; expenditures and categories for grouping them and mental accounts or envelopes for allocating budgets to such categories. Additional functionalities identified in the reviewed apps include create transaction accounts, link the app to real bank account, as well as set date,time and currency for transactions. The identification of these functionalities involved iterations that the two authors discussed over several months.

While most functionalities were easily identified, those reflecting transactions and accounts required additional clarification: transactions are to be considered broadly as encompassing income, expense and transfer of money between accounts and transaction accounts as containers holding each of the three types of transactions. Additional functionalities have been also identified through this iterative process, namely linking a transaction to a transaction account and others extended, such as differentiating categories as both income and expense categories. Table 1 (Appendix A) shows the complete set of functionalities and subfunctionalities.

While analysis of the apps' description was completed by the first author, who completed also the expert evaluation of all 45 apps using an Galaxy S21+. Second author also performed expert evaluation of five apps on iPhone 12.

4. RESULTS

Findings indicate different types of accounts and inconsistent terminology for labelling them, two main types of budgeting apps, those that provide functionality of tracking expenses without monitoring (eight apps) and those that provide also, in addition to tracking expenses, the budgeting functionality for monitoring expenses against their allocated budget (33 apps). The latter use either single budget for all expenses irrespectively of their different categories (seven apps) or multiple budgets using a different budget for each expense category such as bills, rent, groceries (26 apps, albeit four of these provide budgeting only as premium, subscription-based functionality). Most of the apps show limited theoretical underpinning, with only two apps Goodbudget (Partners, no date) and SimpleBudget (Tanu, 2011) explicitly mentioning in their description that their design was informed by money envelope systems, albeit specific reference to mental accounting theory (Thaler, 1999) is not

made. Also, no app reports its evaluation though users' studies.

4.1 Accounts: Types and Terminology

A significant finding is the concept of accounts partially employed by our explored apps in order to support the organization of transactions. Mental accounting theory (Thaler, 1999) identifies three types of accounts, namely those for depositing and storing available funds such as monthly income (i.e. money-in), those for depositing and storing assets or wealth such as saving accounts and those for using or spending the available funds (i.e. money-out) . With regard to the latter, the theory also specifies that people create mental accounts for allocating money for specific purposes or in other words for budgeting for specific categories of expenses, similar to money envelopes which will be discussed later. With regard to these three types of accounts proposed by mental accounting theory, findings indicate that most of the apps support depositing funds (44 apps) and paying for expenses (45 apps), with fewer apps support saving (11 apps). However, while most of the apps (41 apps) have accounts for depositing funds or for paying for expenses (41 apps), the remaining four apps (DAILY POCKET (Yjteam, 2017), EasyBudget (Letondor, 2015), Expense Tracker - Money Manager & Budget (Labs, 2019) and Budget App - Expense Tracker (HG Group Inc., 2020)) merely support the depositing of money on the app's home screen rather than in dedicated income account. This is problematic as these four apps also fail to provide the option of linking individual transactions to specific accounts, as they are all stored directly on the home screen. Even for the remaining apps providing the option of creating income, saving or expense accounts, the income and expense, although conceptually distinct, they support the depositing and spending of the funds from the same container, respectively. In other words, for most of the apps, the income and expense accounts, although conceptually distinct, in practice they tend to be one and the same account similar to a bank account or a wallet where money are both deposited in and spent from.

Findings also indicate various terms for referring to such accounts, inconsistently used across the apps. The employed terminology appears to draw from two different sources: banking domain and everyday financial practices. A significant outcome is that most of the apps employed terms from banking domain for naming or labeling accounts.Such terms, used for income, saving or expense accounts, include: virtual bank accounts (nine apps), virtual cash accounts (17 apps), saving accounts (11 apps), investment accounts (seven apps), virtual credit card account (17 apps), virtual debt account (13 apps), with many apps (18 apps) employing more than one of these terms for organizing funds, wealth and expenses. While such terminology for

banking domain can be useful as it builds on users' familiarity with banking practices, the direct association with banking practices is limited since only seven apps support the integration of the budgeting apps with users' online banking services and only as premium feature. This terminology from banking domain also fails to provide specific types of expense accounts such as those for different categories of expenses or the equivalent of money envelopes (Thaler, 1999), since banking accounts capturing spending relate exclusively to debt repayment such as credit or debit card or mortgage, but not for instance to monthly grocery, bills or rent budgets. Other terms to label accounts are borrowed from everyday financial practices and include wallet (three apps: Expense Tracker & Budget App (Estimate, 2019), Easy Home Finance (VoPo, 2015) and Spendee Budget & Money Tracker (A.s., 2013)), financial account (one app: Family budget-spending tracker (DigitLeaf, 2017)), payment account (one app – Money pro (LLC, 2017)) or even budget (two apps: Fudget: Budget and expense tracking app (Connell, 2017) and Home Budget - Money Manager (Softs, no date)). Interestingly, with respect to terms from everyday practices, findings indicate that clear ones for distinguishing among available funds, wealth and expense accounts or between money-in and money-out are not employed by any of the apps except one app: GnuCash which uses multiple accounts such as income, expenses and assets.

4.2 Creating and Tracking Transactions: Income, Expenses, Transfer

Study findings also highlight the important distinction between accounts and transactions. We suggest that accounts are similar to containers for the organization of transactions, while each transaction represents the movement of money from a source to a destination, in other words, transactions are the ones that allow accounts to be replenished with funds or depleted of funds. Findings indicate three types of transactions for (i) depositing funds, (ii) paying for expenses or (iii) transferring money from income to expense accounts which are further detailed. All apps apart from one app (SimpleBudget: Envelope Budget) allow users to deposit funds, through income transactions (44 apps) by specifying the name or label of the transactions, usually referring to the source of money such as salary, together with the specific amount of money being deposited, the date (all but two apps) and time (18 apps) of the income transaction and its currency (40 apps). From the 40 apps supporting the specification of the currency of deposited funds, 12 apps provide a pre-defined list of currencies allowing users to choose different one for each income transaction being created, while 28 apps provide a pre-defined list of currencies albeit in the app settings so each transaction with a different currency requires changing it in the app setting.

These two options prioritize either the ease of changing currency or of keeping it constant across transactions. Unlike the rest of the apps, SimpleBudget app does not support the creation of an income account; instead, it supports users to create multiple envelopes, each with its own budget or available fund, without specifying the total amount of available funds to be allocated across all the envelopes. This can be problematic in terms of the cognitive load needed to ensure that the available funds not captured by the app, do not exceed the cumulative value of the money envelopes.

With respect to expense transactions, all apps support users to create them, by specifying the names or labels of these transactions, usually the destination of money such as grocery expense, together with the specific amount of money being paid (45 apps), the date (45 apps) and time (18 apps) of the expense transaction and its currency (41 apps) with similar ease of changing currency or of keeping constant characterizing income transactions. Finding show that four apps also allow the specification of the payment method for the expense transactions such as cash, credit card, debit card or cheque.

With respect to the mode of entering the transactions, most apps support the creation of both income and expense transactions through the same interaction by tapping on the plus icon on app's home screen (35 apps), by clicking on income button or expense button on the app's home screen (eight apps) or by tapping on "register" button on app's home screen which opens another page to create the income or expense (one app – MoneyWise (North, 2011). One remaining app (CoinKeeper: expense, money manager, budget planner) provides different interactions for entering income, i.e. by tapping on the plus icon on app's home screen and for entering expense, i.e. by dragging a transaction account icon into expense category then specify the expense amount from the dragged account. Arguably, the simple interaction for tapping on the plus icon on app's home screen to enter both income and expense transaction is preferable in terms of increased usability.

In addition to income and expense transactions, findings also indicate the third type, namely transfer transactions (35 apps), which we define as transfer of money from a source (available income) to a destination (for expense or saving). In addition to specifying source and destination accounts (35 apps), transfer transactions could also specify the amount of money being transferred (35 apps), transfer date (30 apps), time (11 apps), currency (25 apps) as well as label or receipt which can be attached to the transfer (five apps and three apps premium). Interestingly, most of the apps supporting transfer transactions allow them without sufficient funds in the source account (33 apps out of 35). Two

exceptions include the Family budget-spending tracker app, where if the transferred amount is larger than the available funds, the message of "insufficient amount" is shown in red colour and the transfer cannot be completed. For the other app (MoneyWise), the transfer transaction is a premium feature.

An important finding is that similar transactions can also be grouped in categories, for both income and expenses transactions. This functionality aligns with the cognitive operations of grouping different income and expenditures into categories mentioned by the mental accounting theory (Thaler, 1999). These categories could be of two types: provided by the app or defined by the user. The former consists of a list of categories for income such as salary, bonus, gift, refund, business and interest (38/45 apps) and for expense (40/45 apps) such as grocery, shopping, transportation, bills, education and rent. The user defined categories allow users to specify new ones if those provided by the app are not adequate, both for income (36/45 apps and two apps premium) and for expense transactions (42/45 apps and one app premium) and once crated, these categories could be re-used later with new transactions. However, some apps provide the limited option of one-off categories for income (four apps) and expense (two apps). Therefore, with each new transaction, the user needs to enter the source of income and the expense name. While most apps provided one level of categories, 15 apps provided option for subcategories of transactions. For example, the main category car expense can have sub-categories such as fines, fuel, parkingand repairs.

Finally, all transactions can be entered manually (45 apps), they can also be automatically imported from online banking accounts linked to the budgeting app (seven apps), with few apps encouraging users to compare their entered transactions with those of their bank statements (seven apps).

4.3 Budgeting: Tracking Balance vs Money Envelopes

Findings indicate that all apps support budgeting functionality and therefore the monitoring of expenses against the allocated budgets (45 apps), although they do so in different ways. While most of these apps support budgeting under mental accounts or money envelopes (26 apps), others do not (19 apps). We called the latter form of budgeting as single budget and the former as multiple budgets, as further detailed.

Apps supporting single budget (19 apps) rely on only one main budget (usually the same amount as the available funds) from which all expenses are to be covered. In these apps, expense transactions are not grouped under specific money envelops with allocated budgets for each envelope, which would

be consistent with mental accounting theory (Thaler, 1999). Although these apps have a single budget, they do support a high-level monitoring of expenses and do so in two ways. While all 19 apps use the account balance to represent the overspent of available funds using the minus symbol, eight apps do not change the colour of this information, albeit seven apps use colour red to provide this information of overspent. Although single budget apps depend on the total funds, some of these apps allow to set that fund as explicit budget for all expense (five out of19 apps). These five apps do not have a specific budget name by the user, it was named by the app as budget and the user can set the budget amount and budget period as daily (one app - Spending Tracker), weekly (two apps - DAILY POCKET - Budget Manager and Spending Tracker), monthly (four apps), yearly (one app - Spending Tracker) or defined by the user (one app - Monny). Four of these 19 apps support also multiple budgets but only as a premium functionality.

In contrast to single budgets, 26 apps support the creation of multiple budgets which aligns with mental accounting theory (Thaler, 1999). These apps support the functionality of creating money envelopes by allowing users to allocate different budgets to distinct expense categories, for instance for groceries, transport or bills. Furthermore, 15 of the 26 apps provide the option to personalize the name of the budget, i.e. budget for bills category can be called for instance household bill budget, while the remaining 11 apps use the name of the expense category as the name the budget, i.e. budget for bills category is bills budget.

In addition, the budget period could be also set for all these 26 apps from predefined periods such as daily (provided by seven apps), weekly (15 apps), fortnight (seven apps), monthly (26 apps), biannually (three apps) and annually (14 apps), with 17 apps providing multiple predefined budgeting periods. The budgeting periods can also be defined by users with six apps providing the option of entering a specific date.

5. DESIGN IMPLICATIONS

We reviewed the functionalities of 45 top rated budgeting apps to explore if and how these functionalities are grounded in the mental accounting theory (Thaler, 1999). Our findings indicate limited clarity regarding the two important terms of accounts and transactions and limited support for budgeting functionality. We suggest for developers to use clearer terminology for defining and differentiating accounts and transactions and their specific types, for supporting budgeting through money envelopes and for grounding budgeting as mental activity in the actual financial practices.

5.1 Defining Accounts and their Types: Available Fund, Wealth, Expenses

Findings show that not all top-rated budgeting apps provide the option of creating each of the three types of accounts advocated by mental accounting theory (Thaler, 1999): available funds, wealth and expenses and those which do use diverse terms for these accounts, informed mostly by banking or everyday financial practices. The lack of support for differentiating among these distinct types of account isproblematic. To address this, we suggest the importance of making clear the distinction between what accounts for storage of income, i.e. money-in, for expenses, i.e. money-out and for saving as supported by mental account theory (Thaler, 1999). We also suggest the use of consistent terminology for such accounts that clearly defines accounts as containers of transactions and distinguishes accounts for available funds, wealth and expenses (Thaler, 1999) .

5.2 Defining Transactions and their Types: Income, Expenses, Transfer

Related to the three types of accounts, findings indicate transactions reflecting the flow of money and their three types for depositing funds, paying for expenses or transferring money from income to expense accounts, which however are not supported by all apps. We suggest defining transactions and providing options to create each of them, with the following details of transaction name, category, amount, currency, date, time, supported by most but not all apps. Based on the mental accounting theory (Thaler, 1999), the funds and expenses should be labelled as such and grouped into categories according to people financial practices. Study findings show limited functionalities supporting the alllocation of income and expenses into specific categories. This is problematic as spending money from a general pot rather than specific pots for different expense categoties, can more easily lead to over expenditure. To address this limitation, both income and expense transactions should be grouped into categories and subcategories, such as income and salary, respectively. These could be both predefined by the system or defined by the user.

For currency, findings indicate two exclusive ways of selecting it: for each transaction or across transactions through app settings. We suggest a flexible approach allowing users to choose between these two modes of selecting the currency. For entering transactions, the most simple interaction that we suggest is tapping on the plus icon on app's home screen, while for transfer transactions, those with insufficient available funds should be consistently prevented.

5.3 Supporting Budgeting through Money Envelopes

While all budgeting apps support the tracking expenses, a few do not support budgeting and from those that do, only 26 apps do that following the mental accounts or money envelopes for specific expense categories as advocated by mental accounting theory (Thaler, 1999) rather than through merely single budgets. This is an important finding indicating limitations of these apps and the value of employing more consistently multiple budgets for each of the expense categories. We also suggest the use of money envelopes for the budgets allocated to specific expense categories, to differentiate them from expense categories which merely track expense transactions of a specific type. Multiple budgets or money envelopes are defined through the amount being budgeted, budget name and budget period using both system- and user-defined periods, although not all apps provide support for each of these details. We suggest that budgeting apps support such a complete definition of budgets and their allocation to specific expense categories. Although the use of envelopes and jars has been noticed in previous HCI work on financial practices (Snow and Vyas, 2015a; Vyas et al., 2015, 2016), this was mostly as a way to store money for specific purposes, rather than for digital materialization of mental accounts. Therefore, we strongly call for better design for budgeting app articulating the concept of mental accounting and support the use of money envelopes with allocated budget to help users organize, track and more importantly keep their spending under control.

5.4 Grounding Budgeting as Cognitive Process in Actual Financial Behaviour

Budgeting apps support the tracking of expenses and monitoring them against available funds or allocated budget. Such functions however prioritize cognitive operations rather than the financial behaviours themselves. This is reflected in the small number of budgeting apps integrating online banking to support for instance automatic import of the real transactions. This indicates limited support for encouraging users to compare their entered transactions with those in bank statements. Such grounding in actual financial behaviours is crucial for infusing practical value and realism to the otherwise cognitive exercise of budgeting. We suggest the use of clear terminology differentiating banking accounts and transactions from those created in the budgeting app.

6. CONCLUSION

We report on functionality review of 45 top-rated budgeting apps. Findings suggest the value of more nuanced vocabulary for describing the key concepts of accounts, transactions and budgets as informed by mental accounting theory and for differentiating between tracking the transactions and monitoring the allocated budgets through money envelopes. We conclude with four design implications for financial technologies such as budgeting apps including clear definitions of accounts and transaction and their different types, supporting budgeting through money envelopes and for grounding budgeting as cognitive process in financial behaviour.

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Appendix A: The main functionalites and subfunctionalities of the 45 reviewed top rated budgetting apps where the * refers to the premium feature in the app

App name	Create funds	Create funds category	Enter funds currency	Create expense	Create expense category	Enter expense currency	Create transaction account	Create saving account	Set date for income	Set time for income
1 Money (PixelRush, 2017)	√	√	√	√	√	√	√	√	√	
Alzex Finance (Anna Shirokova, 2015)	√		√	√		√	√		√	√
AndroMoney (AndroMoney, 2011)	√	√	√	√	√	√	√		√	√
Bills Reminder (TimelyBills, 2015)	√	√	√	√	√	√	√	√	√	
Bluecoins Finance (Mabuhay Software, 2016)	√	√	√	√	√	√	√	√	√	√
Budget App (HG Group Inc., 2020)	√	√		√	√				√	√
Budget planner (DigitLeaf, 2016)	√	√	√	√		√	√	√	√	√
CoinKeeper (LLC, 2015)	√		√	√	√	√	√			
DAILY POCKET (Yjteam, 2017)	√	√	√	√	√	√			√	√
Easy Home (VoPo, 2015)	√	√	√	√	√	√	√		√	
EasyBudget (Letondor, 2015)	√		√	√		√			√	
Expense Manager (Bishinews, 2010)	√	√		√	√		√	√	√	√
Expense Manager (Manager, 2012)	√	√	√	√	√	√	√		√	
Expense Tracker (Labs, 2019)	√	√	√	√	√	√			√	√
Expense Tracker (Estimate, 2019)	√	√	√	√	√	√	√		√	
Expense Tracker (Tracker, 2016)	√		√	√	√	√	√		√	
Family budget (DigitLeaf, 2017)	√	√	√	√		√	√		√	√
Fast Budget (SRL, 2014)	√	√	√	√	√	√	√		√	
Fudget (Connell, 2017)	√		√	√		√	√		√	
GnuCash (GnuCash, 2012)	√	√	√	√	√	√	√		√	√
Goodbudget (Partners, no date)	√			√			√	√	√	
Home Budget (Softs, no date)	√	√		√	√		√		√	
Home Budget (SIRI, 2013)	√	√	√	√	√	√	√		√	
Home Finance (SoftMobile, 2015)	√	√	√	√	√	√	√		√	√
Income Expense (SARAF, 2019)	√	√		√	√		√		√	√
Mobills (M. Inc., 2013)	√	√	√	√	√	√	√	√	√	
Monefy (Reflectly, 2014)	√	√	√	√	√	√	√		√	
Money Manager (R. Inc., 2013)	√	√	√	√	√	√	√	√	√	√
Money manager (Exp, 2020)	√	√	√	√	√	√	√		√	
Money Manager (Apps, 2014)	√	√	√	√	√	√	√		√	√
Money pro (LLC, 2017)	√	√	√	√	√	√	√	*	√	√
Money Tracker (Notes, 2021)	√	√	√	√	√	√	√		√	
Money+ (Studios, 2020)	√	√	√	√	√	√	√		√	
MoneyWise (North, 2011)	√	√	√	√	√	√	√		√	
Monny (Greamer, 2017)	√	√	√	√	√	√	√		√	
Monthly Expenses (Baruah, 2016)	√	√	√	√	√	√	√	√	√	√
My Expenses (Totschnig, 2012)	√	√	√	√	√	√	√		√	√
My Finances (7csolutions, 2015)	√	√	√	√	√	√	√		√	
SimpleBudget (Tanu, 2011)				√		√	√			
Spendee Budget (A.s., 2013)	√	√	√	√	√	√	√		√	
Spending Tracker (Ltd, 2014)	√	√	√	√	√	√	√		√	
Toshl Finance (Inc., no date)	√	√	√	√	√	√	√		√	
Vault (Tubin, 2013)	√	√	√	√	√	√	√		√	
Wallet (BudgetBakers, 2011)	√	√	√	√	√	√	√	√	√	√
YNAB (YouNeedABudget, 2015)	√	√	√	√	√	√	√	√	√	

App name	Set date for expense	Set time for expense	Set date for transfer	Set time for transfer	Transfer attachment	Link transaction to account	Link app to bank account	Transfer between accounts	Create single budget	Create multiple budgets	Enter budget name	Set budget period
1 Money (PixelRush, 2017)	√		√			√		√		√	√	√
Alzex Finance (Anna Shirokova, 2015)	√	√	√	√		√		√		√	√	√
AndroMoney (AndroMoney, 2011)	√	√	√	√		√		√		√		√
Bills Reminder (TimelyBills, 2015)	√		√			√		√		√		√
Bluecoins Finance (Mabuhay Software, 2016)	√	√	√	√	√	√		√		√		√
Budget App (HG Group Inc., 2020)	√	√							√			√
Budget planner (DigitLeaf, 2016)	√	√	√	√		√		√		√	√	√
CoinKeeper (LLC, 2015)	√		√			√		√		√	√	√
DAILY POCKET (Yjteam, 2017)	√	√							√			√
Easy Home (VoPo, 2015)	√					√		√	√			
EasyBudget (Letondor, 2015)	√								√			
Expense Manager (Bishinews, 2010)	√	√	√			√		√		√		√
Expense Manager (Manager, 2012)	√					√		√	√			
Expense Tracker (Labs, 2019)	√	√							√			
Expense Tracker (Estimate, 2019)	√		√			√	*	√		√		√
Expense Tracker (Tracker, 2016)	√		√		√	√		√		√		√
Family budget (DigitLeaf, 2017)	√	√				√		√		√	√	√
Fast Budget (SRL, 2014)	√		√		*	√	*	√		√		√
Fudget (Connell, 2017)	√					√			√			
GnuCash (GnuCash, 2012)	√	√				√			√			
Goodbudget (Partners, no date)	√		√			√		√		√	√	√
Home Budget (Softs, no date)	√					√			√			
Home Budget (SIRI, 2013)	√		√			√		√		√		√
Home Finance (SoftMobile, 2015)	√	√	√	√		√		√		*		
Income Expense (SARAF, 2019)	√	√	√			√		√		√		√
Mobills (M. Inc., 2013)	√		√			√		√		√		√
Monefy (Reflectly, 2014)	√		√			√		√	√			√
Money Manager (R. Inc., 2013)	√	√	√	√	√	√		√		√		√
Money manager (Exp. 2020)	√		√			√		√	√			
Money Manager (Apps, 2014)	√	√	√	√		√		√		√	√	√
Money pro (LLC, 2017)	√	√	√	√		√	*	√		*		
Money Tracker (Notes, 2021)	√		√		√	√		√		√	√	√
Money+ (Studios, 2020)	√		√		*	√		√		√		√
MoneyWise (North, 2011)	√					√		*		√	√	√
Monny (Greamer, 2017)	√					√			√			√
Monthly Expenses (Baruah, 2016)	√	√	√	√		√		√		*		
My Expenses (Totschnig, 2012)	√	√	√	√	*	√		√		*	√	
My Finances (7csolutions, 2015)	√		√			√		√	√			
SimpleBudget (Tanu, 2011)	√					√		√		√	√	√
Spendee Budget (A.s., 2013)	√		√			√	*	√		√	√	√
Spending Tracker (Ltd, 2014)	√		√			√		√	√			√
Toshl Finance (Inc., no date)	√		√			√	*	√		√	√	√
Vault (Tubin, 2013)	√								√			
Wallet (BudgetBakers, 2011)	√	√	√	√	√	√	*	√		√	√	√
YNAB (YouNeedABudget, 2015)	√					√	*	√		√	√	√

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