

jambroNotes.sty

Feature Demo

v1.3 — July 13, 2026

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I Typography and Fonts

I.A Body Text

Body text is set in **Roboto** by default. To choose a different body font, pass a single package option: [helvetica], [cabin], or the standard LaTeX serif [modern] (Latin Modern). Whichever body font you pick, section headings, the document title, and captions always use **Fira Sans** (selected by the \firatitle switch) for contrast — so headings and captions look the same even when the body is serif. Math uses the standard Computer Modern math fonts.

A short paragraph: The quick brown fox jumps over the lazy dog. Numbers: 0123456789. Greek: $\alpha, \beta, \gamma, \delta, \epsilon$. Operators: $\sum_{i=1}^n x_i, \int_0^\infty e^{-x} dx$.

I.B Handwriting Font

The Augie font is available for hand-drawn effects. \hand is a font switch (use inside a group {...}); \handbold takes its text as an argument:

```
{\hand This is the Augie handwriting font.}
\handbold{This is handbold (default stroke 0.6).}
\handbold[0.3]{Lighter stroke.} % optional width argument
\handbold[1.0]{Heavier stroke.}
```

renders as:

- This sentence is set in the Augie handwriting font.
- **This sentence uses handbold — a heavier, bolder weight of the Augie font.**
- Stroke width is an optional argument: light (0.2), default (0.6), heavy (1.0).
- Mixed: regular text alongside handwritten words in the same line.

I.C Pencil Underlines

Default underline uses the carandache color (goldenrod). The color is passed as an optional argument:

```
\lapis{default underline}
\lapis[tomato]{custom color}
```

The optional argument accepts any defined color (code → result):

- \lapis{carandache gold} → carandache gold (default)
- \lapis[tomato]{tomato red} → tomato red
- \lapis[note]{note blue} → note blue
- \lapis[cobalt]{cobalt teal} → cobalt teal
- \lapis[BoEpurple]{BoE purple} → BoE purple

Underlines work inside longer sentences too: the model predicts that output falls whenever the borrowing constraint binds.

II Pencil Boxes

II.A Inline Boxes

`\lapisbox` uses no options. The color is set with the `color=` key:

```
\lapisbox{default gold box}
\lapisbox[color=tomato]{custom color}
```

Color variants (code → result):

- `\lapisbox{gold}` → gold (default)
- `\lapisbox[color=tomato]{tomato}` → tomato
- `\lapisbox[color=note]{note blue}` → note blue
- `\lapisbox[color=cobalt]{cobalt}` → cobalt
- `\lapisbox[color=BoEpurple]{BoE purple}` → BoE purple

Boxes work mid-sentence: the key result is that $\beta > 0$ whenever agents are impatient.

II.B Equation Boxes

`\lapisboxeq` draws a pencil box around a piece of math. Write the math straight into its argument, with no \$ of your own — the command enters math mode for you. Use it inside a display (`\[ ... \]`, as below) or inline in a sentence:

```
\[
  \lapisboxeq{Y_t = C_t + I_t + G_t + NX_t}
  \quad
  \lapisboxeq[color=tomato]{r_t = \rho + \phi_\pi \pi_t}
\]
```

renders as:

$$Y_t = C_t + I_t + G_t + NX_t$$

$$r_t = \rho + \phi_\pi(\pi_t - \bar{\pi}) + \phi_y \tilde{y}_t$$

It also works inline: `\lapisboxeq{r = \rho}` → the steady-state condition is $r = \rho$.

II.C Labeled boxes and pencil arrows

Giving a box a `label=` name lets you point a hand-drawn arrow or comment at it afterwards. The name becomes a TikZ node that a later `tikzpicture` (with the `tpstyle` option) can target by name. Compile **twice** so these cross-picture references resolve:

```
The \lapisbox[color=tomato,label=firesale]{firesale} externality
\begin{tikzpicture}[tpstyle]
  \draw[pencil,->,tomato!80] ([yshift=-2pt]firesale.south east)
    to[bend right] +(0.7,-0.5)
    node[anchor=west,opacity=1,tomato] {\hand A comment};
\end{tikzpicture}
```

renders as:

- The aggregate demand externality
- The firesale externality

III Annotations and Notes

III.A Draft Annotations

`\memo{...}` drops a colored draft comment into the text, tagged with a username — handy for leaving yourself or a coauthor a reminder while drafting. The default username and color are set once in the preamble; individual calls override them with the `user=` and `color=` keys:

```
% in the preamble:
\renewcommand{\memo user}{ACB}
\renewcommand{\memo color}{BoEred}
% in the body:
\memo{uses the preamble defaults}
\memo[user=JB,color=note]{override both}
\memo[color=cobalt]{override color only}
```

renders as:

ACB: Default user (ACB, set once in the preamble) and default color (BoEred).

JB: Custom user and color via optional key=value argument.

ACB: Color-only override — username still comes from `\memo user`.

Regular text continues after the annotation without extra spacing.

III.B Note Boxes

A `notebox` is a shaded callout box for highlighting a result or remark; if its content is long, it splits across a page break rather than overflowing. It is an environment, so wrap the content between `\begin{notebox}` and `\end{notebox}`:

```
\begin{notebox}
\textbf{Key result.} Some highlighted text.
\end{notebox}
```

renders as:

Key result. In the Korinek–Simsek (2016) model, competitive borrowers do not internalise that their deleveraging reduces aggregate income. The social planner internalises this and chooses a lower debt level in period 0.

Note boxes accept arbitrary content including math and itemize:

Two externalities.

- **Aggregate demand:** deleveraging $\Rightarrow$ lower income $\Rightarrow$ tighter constraint.
- **Firesale:** forced selling $\Rightarrow$ lower asset prices $\Rightarrow$ lower collateral.

Both generate over-borrowing in equilibrium.

 A comment

Adding `\boxentry{title}` as the first line turns a plain `notebox` into a *numbered* box: it gains a dotted “Box X.Y” header, an entry in the List of Boxes (shown after the table of contents), and a label you can `\ref`. A bare `notebox` (above) stays unnumbered and header-less.

```
\begin{notebox}
  \boxentry{The running example}\label{box:demo}
  Body text of the numbered box ...
\end{notebox}
As shown in Box~\ref{box:demo} ...
```

renders as:

..... **Box 3.A**
The running example. A bivariate VAR(1) keeps every object small enough to write out in full. Box numbers run “arabic-section.alpha” (here 3.A) and reset each section.

..... **Box 3.B**
This box increments the letter within the section, so it is Box 3.B. Cross-references resolve because `\boxentry` calls `\refstepcounter`.

Reference them anywhere: the example is in Box 3.A and the follow-up in Box 3.B.

Although a `notebox` and an `\NB` note share the same note-blue color, they serve opposite purposes. A `notebox` is an environment for *permanent* content you want to keep in the finished document — a highlighted result, definition, or remark; it is lightly shaded, breaks across pages, and holds a body of any length. `\NB{...}` is a single-argument command for *temporary* draft markers (“fix this later”); it renders as a brighter, more prominent inline banner. Unlike `\memo`, `\NB` has no switch to hide it, so remember to remove these markers before finalising.

IV Code Listings

IV.A The code Environment

The `code` environment typesets a verbatim block on a light-gray background. It is deliberately monochrome — all text is black, with no syntax highlighting — and breaks across pages. Content is taken verbatim, so no escaping is needed:

```
\begin{code}
% MATLAB: estimate a reduced-form VAR(1)
[VAR, VARopt] = VARmodel(data, 1);
disp(VAR.Fcomp); % companion matrix
\end{code}
```

renders as:

```
% MATLAB: estimate a reduced-form VAR(1)
root = fileparts(fileparts(mfilename('fullpath')));
addpath(fullfile(root, 'VAR'));
[VAR, VARopt] = VARmodel(data, 1); % equation-by-equation OLS
```

```
disp(VAR.Fcomp); % companion matrix
rmpath(genpath(root));
```

IV.B Inline Code Chips

`\mc` and `\mci` set inline code on the same light-gray background. `\mc` uses a fixed code size; `\mci` follows the surrounding font size:

```
Call \mc{addpath(genpath(root))} to add the toolbox; the
\mci{root} variable holds the install path.
```

renders as: call `addpath(genpath(root))` to add the toolbox; the `root` variable holds the install path.

V Mathematics

V.A Standard Environments

The `\E` shorthand gives the expectations operator (use `\E_t` for a time subscript):

```
\[ \E_t\left[ u'(C_{t+1}) \right] = 1 \]
```

renders as:

$$\mathbb{E}_t \left[\frac{u'(C_{t+1})}{u'(C_t)} \frac{1 + r_{t+1}}{1 + \pi_{t+1}} \right] = 1$$

A multi-line derivation using `align`:

$$C_t^b + B_{t+1} = y_t + (1 + r_t)B_t \tag{1}$$

$$B_{t+1} \leq \phi \tag{2}$$

$$\lambda_t = u'(C_t^b) - \beta^b(1 + r_t)\mathbb{E}_t[u'(C_{t+1}^b)] \geq 0 \tag{3}$$

VI Tables

VI.A Standard Tabularx

The `Y` column type is a centered, auto-width version of `tabularx`'s `X` column. The theme also redefines `\notesize` to give a compact 8.5pt note below the table.

The example below shows the recommended publication-style layout: the table sits inside a fixed-width `minipage` (so the caption and note share the table's width), `\shortstack` builds the two-line column headers, and a `\notesize` note wraps across several lines underneath:

```
\begin{table}[ht!]
\centering
\begin{minipage}[b]{.7\textwidth}
\begin{center}\small
\begin{tabularx}{\textwidth}{lYY}
\toprule
```



```

& \shortstack{Demand\\ Shock} & \shortstack{Monetary\\ Policy Shock} \\
& ($\varepsilon_t^{\text{Demand}}$) & ($\varepsilon_t^{\text{MonPol}}$) \\
\midrule\addlinespace
Output growth ($y_t$) & + & - \\
Short-term Interest Rate ($r_t$) & + & + \\
\bottomrule
\end{tabularx}%
\end{center}
\vspace{0.4cm}
\caption{\scshape{Sign Restrictions for Demand Shock \\ and Monetary Policy Shock}}
\vspace{-.3cm}
\parbox[t]{\linewidth}{\linespread{1.15}\notesize
{\scshape Note.} The signs represent restrictions on the elements ... }
\label{tab:SR}
\end{minipage}
\end{table}

```

renders as:

Table 1: SIGN RESTRICTIONS FOR DEMAND SHOCK AND MONETARY POLICY SHOCK

	Demand Shock ($\varepsilon_t^{\text{Demand}}$)	Monetary Policy Shock ($\varepsilon_t^{\text{MonPol}}$)
Output growth (y_t)	+	-
Short-term Interest Rate (r_t)	+	+

NOTE. The signs represent restrictions on the elements of the structural impact matrix B . ‘+’ and ‘-’ indicate a positive and negative contemporaneous response, respectively. A demand shock raises both output growth and the short-term interest rate, as monetary policy tightens to contain the expansion. A contractionary monetary policy shock lowers output growth and raises the interest rate, consistent with an unexpected tightening of monetary policy.

VI.B Table with Row Colors

The `[table]` option on `xcolor` (loaded by the theme) enables `\rowcolor`, placed at the start of a row:

```

\rowcolor{note!8} Discount factor & $\beta^b$ & 0.90 \\

```

renders as:

Table 2: MODEL PARAMETERS

Parameter	Symbol	Value
Discount factor (borrower)	β^b	0.90
Discount factor (lender)	β^l	0.95
Borrowing limit	ϕ	0.75
Frisch elasticity	φ	1.00
Price rigidity	κ	0.50

NOTE. Illustrative calibration of the borrower–lender model used throughout this demo; the values are not estimated and serve only to exercise the `\rowcolor` shading and the `Y` column type within the same fixed-width `minipage` layout as Table 1.

VI.C Wrapped Table

`\begin{wraptable}{r}{<width>}` allows for wrapped tables, which may be useful when you have a long text and a small table that should sit alongside it. The table is placed on the right (use `l` for the left margin) and the surrounding paragraphs wrap around it. Put it at a paragraph boundary, just before the text that should sit alongside it.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

Table 3: MODEL PARAMETERS

Parameter	Symbol	Value
Discount factor (borrower)	β^b	0.90
Discount factor (lender)	β^l	0.95
Borrowing limit	ϕ	0.75
Frisch elasticity	φ	1.00
Price rigidity	κ	0.50

NOTE. Illustrative calibration of the borrower–lender model used throughout this demo; the values are not estimated and serve only to exercise the `\rowcolor` shading and the Y column type within the same fixed-width minipage layout as Table 1.

VII Figures and Wrapped Floats

The theme loads both `graphicx` and `wrapfig`, so `\includegraphics` and the wrapped environments below are available out of the box; this demo only adds `\graphicspath{{graphics/}}` to point at the image folder. Standard table floats are shown in the previous section (Tables 1 and 2); here we show a standard figure and the `wrapfigure` environment, which lets body text flow around a float (see Section VI.C for `wraptable`).

VII.A Standard Figure

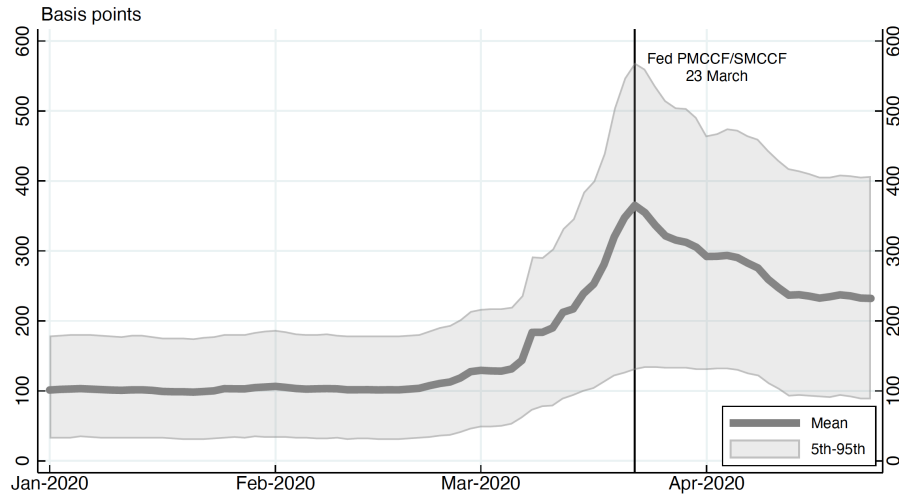
A full-width figure follows the same caption/note pattern as the tables: a small-caps `\caption` and a `\notesize` note, both wrapped in a fixed-width minipage so they share the image’s measure.

```
\begin{figure}[ht!]  
  \centering  
  \caption{\scshape{An Illustrative Figure}}  
  \label{fig:demo}  
  \begin{minipage}[b]{.75\textwidth}  
    \centering  
    \includegraphics[width=\textwidth]{figure.png}  
    \parbox[t]{\linewidth}{\linespread{1.15}\notesize  
      {\scshape Note.} Placeholder image shipped in \texttt{graphics/}, included only to  
      exercise the \texttt{figure} float and \texttt{\string\includegraphics}. Caption and note  
      share the image measure through the fixed-width \texttt{minipage}, matching the table  
      layout of Table~\ref{tab:SR}.}  
    \end{minipage}  
\end{figure}
```

`\end{figure}`

renders as:

Figure 1: AN ILLUSTRATIVE FIGURE



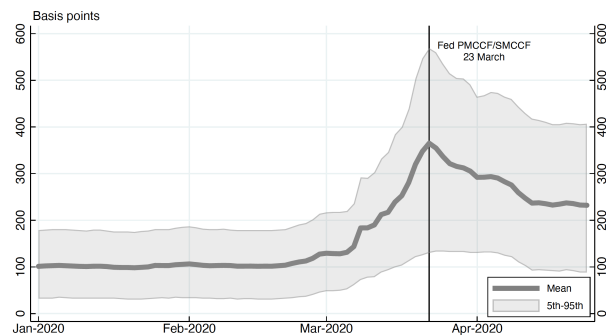
NOTE. Placeholder image shipped in `graphics/`, included only to exercise the `figure float` and `\includegraphics`. Caption and note share the image measure through the fixed-width minipage, matching the table layout of Table 1.

VII.B Wrapped Figure

`\begin{wrapfigure}{r}{<width>}` places a float on the right and lets the surrounding paragraphs wrap around it (use `l` for the left margin). Put it at a paragraph boundary, just before the text that should sit alongside it.

Text set after the `wrapfigure` flows into the space beside it, so a narrow figure can sit next to the discussion it illustrates rather than interrupting the column. This is convenient in notes, where a small chart or schematic often belongs alongside a single paragraph of commentary rather than in a full-width float of its own. Keep the reserved width (`0.55\textwidth` here) a little wider than the image itself so the wrapped text does not crowd the picture, and give the environment enough following prose to fill the vertical space it reserves — otherwise `wrapfig` will warn that the figure is taller than the surrounding text. Figure 2 reuses the same placeholder image as Figure 1.

Figure 2: A WRAPPED FIGURE



NOTE. Placeholder image shipped in `graphics/`, included only to exercise the `figure float` and `\includegraphics`. Caption and note share the image measure through the fixed-width minipage, matching the table layout of Table 1.

VIII Paragraph Numbering

Numbered paragraphs use `\para`. Place it at the start of a paragraph; the counter steps automatically and prints the number followed by a quad (a one-em space):

```
\para This paragraph is automatically numbered.  
\para So is this one, with the next number.
```

renders as:

1. This is the first numbered paragraph. The number is produced by `\para` and counts independently of section numbers. It is useful for notes that cross-reference specific arguments.
2. This is the second numbered paragraph. The borrowing constraint $B_{t+1} \leq \phi$ is assumed to bind in period 1 but not in period 0.
3. This is the third numbered paragraph. The social planner internalises the aggregate demand externality and imposes a tax τ^* on period-0 borrowing.

Because `\para` calls `\refstepcounter`, a numbered paragraph can carry a `\label` and be cited later with `\ref`:

```
\para\label{para:key} The constraint binds in period 1.  
...as assumed in paragraph~\ref{para:key}, the planner...
```

The second paragraph above is labelled `para:bind`; referring to it here resolves to paragraph 2. A fourth paragraph can then build on it explicitly:

4. Building on the assumption introduced in paragraph 2, the planner's tax τ^* restores constrained efficiency.

Cross-references resolve inside environments too: this `notebox` cites paragraph 2 directly, confirming that `\para` labels behave like any other counter and that `\para` coexists with `notebox` without disturbing the count.

IX Pencil Arrows

IX.A Inline Directional Arrows

The `\jarrow*` commands produce small pencil arrows aligned with the text baseline. Follow one with `\` (a backslash and a space) to keep the space after it — otherwise the command swallows the following space and runs into the next word:

```
GDP growth \jarrowup\ accelerated in Q3.  
\jarrowup[color=tomato] % options via key=value  
\jarrowr[len=0.6cm,lw=0.1cm] % \jarrowr = \jarrowright
```

renders as (all four directions are available):

- Up: GDP growth ↑ accelerated in Q3.
- Down: Inflation ↓ fell below target.

- Right: The effect propagates → through the banking sector.
- Left: Demand shifted ← after the shock.

Custom options via key=value: ↑ (tomato), → (long, thick), ↓ (tight blue).

IX.B Overlay Arrows with Marker Nodes

`\marker{name}{text}` prints text as usual but also tags it with a name, so you can point an arrow at a phrase in running text. A later overlay `tikzpicture` draws an arrow-style line to that name. Compile **twice** so the cross-picture references resolve:

```
Consider the \marker{fisherA}{Fisher equation}:
\begin{tikzpicture}[tpstyle]
  \draw[arrow] ([yshift=-3pt]fisherA.south) to[bend right=20]
    +(+0.2,-0.6) node[anchor=north west] {\hand links $r$ and $\pi$};
\end{tikzpicture}
```

renders as:

Consider the Fisher equation and the quantity theory:



X Package Options

This section documents two further options the package accepts at load time, passed in the optional argument of `\usepackage: wobble=<n>` sets the amplitude of the pencil decoration, and `hidememo` suppresses all `\memo` output for a clean final build. (The mutually exclusive body-font options — `roboto` (default), `helvetica`, `cabin`, and `modern` — are load-time options too; they are described under Typography and Fonts above.) Each is demonstrated below.

X.A Wiggle

The pencil amplitude is controlled by the `wobble=` package option:

- `\usepackage{jambrotonotes}` → default amplitude (0.4pt)
- `\usepackage[wobble=0.3]{jambrotonotes}` → subtle
- `\usepackage[wobble=1.5]{jambrotonotes}` → expressive

This document uses the default. Recompile with a different option to compare:

$$Y = \alpha + \beta X + \varepsilon$$

underline at default wiggle

X.B Memo Suppression

Use `\usepackage[hidememo]{jambrotonotes}` when you want the same notes document without draft annotations. In that mode every `\memo` call expands to nothing, while the rest of the style remains unchanged.

XI Front and Back Matter

XI.A TOC Headings and the List of Boxes

The List of Boxes after the table of contents is produced by `\listofboxes`; every numbered box (created with `\boxentry`, Section III) adds an entry. `\tocheading` typesets an unnumbered heading in the TOC font, useful for labelling front-matter sections:

```
\tableofcontents
\listofboxes           % auto-titled "List of Boxes"
\tocheading{Supplementary Material} % unnumbered heading
```

`\tocheading{Example Heading}` renders as:

Example Heading

XI.B Appendix Numbering

`\backmatter` switches `\section` numbering to letters and restarts it at A (and re-prefixes hyperlink anchors so they stay unique), matching the appendix convention of the VAR Toolbox Handbook. Call it before an appendix; the section below uses it, so it is lettered A even though it follows Section X.

```
\backmatter
\section{Appendix: Quick Reference}
```

A Appendix: Quick Reference

This section follows Section X in the source but is lettered A, because `\backmatter` switched section numbering to letters and reset the counter.